

**STATUS OF THE DTV TRANSITION: 370 DAYS  
AND COUNTING**

---

---

**HEARING**  
BEFORE THE  
SUBCOMMITTEE ON TELECOMMUNICATIONS AND  
THE INTERNET  
OF THE  
COMMITTEE ON ENERGY AND  
COMMERCE  
HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

—  
FEBRUARY 13, 2008  
—

**Serial No. 110–88**



Printed for the use of the Committee on Energy and Commerce  
*energycommerce.house.gov*

**STATUS OF THE DTV TRANSITION: 370 DAYS AND COUNTING**

# STATUS OF THE DTV TRANSITION: 370 DAYS AND COUNTING

---

---

## HEARING BEFORE THE SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET OF THE COMMITTEE ON ENERGY AND COMMERCE HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

FEBRUARY 13, 2008

**Serial No. 110-88**



Printed for the use of the Committee on Energy and Commerce  
*energycommerce.house.gov*

U.S. GOVERNMENT PRINTING OFFICE

55-219 PDF

WASHINGTON : 2008

---

For sale by the Superintendent of Documents, U.S. Government Printing Office  
Internet: bookstore.gpo.gov Phone: toll free (866) 512-1800; DC area (202) 512-1800  
Fax: (202) 512-2104 Mail: Stop IDCC, Washington, DC 20402-0001

COMMITTEE ON ENERGY AND COMMERCE

JOHN D. DINGELL, Michigan, *Chairman*

HENRY A. WAXMAN, California	JOE BARTON, Texas
EDWARD J. MARKEY, Massachusetts	<i>Ranking Member</i>
RICK BOUCHER, Virginia	RALPH M. HALL, Texas
EDOLPHUS TOWNS, New York	J. DENNIS HASTERT, Illinois
FRANK PALLONE, JR., New Jersey	FRED UPTON, Michigan
BART GORDON, Tennessee	CLIFF STEARNS, Florida
BOBBY L. RUSH, Illinois	NATHAN DEAL, Georgia
ANNA G. ESHOO, California	ED WHITFIELD, Kentucky
BART STUPAK, Michigan	BARBARA CUBIN, Wyoming
ELIOT L. ENGEL, New York	JOHN SHIMKUS, Illinois
ALBERT R. WYNN, Maryland	HEATHER WILSON, New Mexico
GENE GREEN, Texas	JOHN B. SHADEGG, Arizona
DIANA DeGETTE, Colorado	CHARLES W. "CHIP" PICKERING,
<i>Vice Chairman</i>	Mississippi
LOIS CAPPS, California	VITO FOSSELLA, New York
MIKE DOYLE, Pennsylvania	STEVE BUYER, Indiana
JANE HARMAN, California	GEORGE RADANOVICH, California
TOM ALLEN, Maine	JOSEPH R. PITTS, Pennsylvania
JAN SCHAKOWSKY, Illinois	MARY BONO, California
HILDA L. SOLIS, California	GREG WALDEN, Oregon
CHARLES A. GONZALEZ, Texas	LEE TERRY, Nebraska
JAY INSLEE, Washington	MIKE FERGUSON, New Jersey
TAMMY BALDWIN, Wisconsin	MIKE ROGERS, Michigan
MIKE ROSS, Arkansas	SUE WILKINS MYRICK, North Carolina
DARLENE HOOLEY, Oregon	JOHN SULLIVAN, Oklahoma
ANTHONY D. WEINER, New York	TIM MURPHY, Pennsylvania
JIM MATHESON, Utah	MICHAEL C. BURGESS, Texas
G.K. BUTTERFIELD, North Carolina	MARSHA BLACKBURN, Tennessee
CHARLIE MELANCON, Louisiana	
JOHN BARROW, Georgia	
BARON P. HILL, Indiana	

---

PROFESSIONAL STAFF

DENNIS B. FITZGIBBONS, *Chief of Staff*  
GREGG A. ROTHSCHILD, *Chief Counsel*  
SHARON E. DAVIS, *Chief Clerk*  
DAVID L. CAVICKE, *Minority Staff Director*

SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET

EDWARD J. MARKEY, Massachusetts, *Chairman*

MIKE DOYLE, Pennsylvania

*Vice Chairman*

JANE HARMAN, California

CHARLES A. GONZALEZ, Texas

JAY INSLEE, Washington

BARON P. HILL, Indiana

RICK BOUCHER, Virginia

EDOLPHUS TOWNS, New York

FRANK PALLONE, JR., New Jersey

BART GORDON, Tennessee

BOBBY L. RUSH, Illinois

ANNA G. ESHOO, California

BART STUPAK, Michigan

ELIOT L. ENGEL, New York

GENE GREEN, Texas

LOIS CAPPS, California

HILDA L. SOLIS, California

JOHN D. DINGELL, Michigan (ex officio)

FRED UPTON, Michigan

*Ranking Member*

J. DENNIS HASTERT, Illinois

CLIFF STEARNS, Florida

NATHAN DEAL, Georgia

BARBARA CUBIN, Wyoming

JOHN SHIMKUS, Illinois

HEATHER WILSON, New Mexico

CHARLES W. "CHIP" PICKERING,

Mississippi

VITO FOSELLA, New York

GEORGE RADANOVICH, California

MARY BONO, California

GREG WALDEN, Oregon

LEE TERRY, Nebraska

MIKE FERGUSON, New Jersey

JOE BARTON, Texas (ex officio)



## CONTENTS

---

	Page
Hon. Edward J. Markey, a Representative in Congress from the State of Massachusetts, opening statement .....	1
Hon. Cliff Stearns, a Representative in Congress from the State of Florida, opening statement .....	3
Hon. Jane Harman, a Representative in Congress from the State of California, opening statement .....	4
Hon. Bart Stupak, a Representative in Congress from the State of Michigan, opening statement .....	5
Hon. Lois Capps, a Representative in Congress from the State of California, opening statement .....	6
Hon. Hilda Solis, a Representative in Congress from the State of California, opening statement .....	7
Hon. John D. Dingell, a Representative in Congress from the State of Michigan, opening statement .....	8
Prepared statement .....	9
Hon. Anna G. Eshoo, a Representative in Congress from the State of California, opening statement .....	10
Prepared statement .....	11
Hon. Gene Green, a Representative in Congress from the State of Texas, opening statement .....	11

### WITNESSES

Kevin J. Martin, Chairman, Federal Communications Commission, Washington, DC .....	13
Prepared statement .....	17
Answers to submitted questions .....	198
Meredith Baker, Acting Assistant Secretary for Communications and Information, Department of Commerce, Washington, DC .....	37
Prepared statement .....	39
Answers to submitted questions .....	191
Ronald J. Bruno, President, Community Broadcasters Association, President, Bruno-Goodworth Network, Inc., Pittsburgh, Pennsylvania .....	68
Prepared statement .....	70
Answers to submitted questions .....	194
Kyle McSlarrow, President and CEO, National Cable & Telecommunications Association, Washington, DC .....	71
Prepared statement .....	73
Answers to submitted questions .....	316
David K. Rehr, President and CEO, National Association of Broadcasters, Washington, DC .....	79
Prepared statement .....	81
Answers to submitted questions .....	320
Chris Murray, Senior Counsel, Consumers Union, Washington, DC .....	113
Prepared statement .....	115
Tom Romeo, Director, Federal Services, Global Business Service, IBM Corporation, Bethesda, Maryland .....	119
Prepared statement .....	120
Laurance Harris, Vice President of Merchandising, RadioShack, Fort Worth, Texas .....	122
Prepared statement .....	124
Mark Jackson, President, Echostar Technologies Corporation, Englewood, Colorado .....	134
Prepared statement .....	135
Answers to submitted questions .....	318

VI

SUBMITTED MATERIAL

Page

Graph entitled "Coupon Statistics" .....	146
LPTV station list .....	152
Coupon Eligible Converter Boxes (CECB), list of .....	189

**STATUS OF THE DTV TRANSITION: 370 DAYS  
AND COUNTING  
WEDNESDAY, FEBRUARY 13, 2008**

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON TELECOMMUNICATIONS  
AND THE INTERNET,  
COMMITTEE ON ENERGY AND COMMERCE,  
*Washington, DC.*

The subcommittee met, pursuant to call, at 9:30 a.m., in room 2123 of the Rayburn House Office Building, Hon. Edward J. Markey (chairman) presiding.

Members present: Representatives Markey, Harman, Gonzalez, Inslee, Boucher, Eshoo, Stupak, Green, Capps, Solis, Dingell (ex officio), Stearns, Upton, Deal, Shimkus, Walden, Terry, Barton (ex officio), and Blackburn.

Staff present: Amy Levine, Mark Seifert, Tim Powderly, Maureen Flood, Colin Crowell, David Vogel, Philip Murphy, Neil Fried, Courtney Reinhard, and Garrett Golding.

**OPENING STATEMENT OF HON. EDWARD J. MARKEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MASSACHUSETTS**

Mr. MARKEY. Good morning, ladies and gentleman, and before I start I just want to note for the members that last night Congressman Pickering and I introduced legislation to preserve Internet freedom for consumers and innovators. It is a bill which enshrines the broad principles of openness and safeguarding the Internet's vital role in our economy. It tasks the FCC with conducting an assessment of broadband practices and consumer rights including public hearings and a report back to Congress. We would welcome members who wish to co-sponsor to join us in this bipartisan initiative.

Today we are 370 days away from a significant milestone in the history of television. This morning's hearing will give us an important status check on our progress towards a successful consumer friendly transition. The government's coupon program has begun and already this year some 2.5 million consumers have requested coupons toward the purchase of converter boxes valued at roughly \$190 million. Retailers are stocking such converter boxes on shelves for coupon redemption imminently. The broadcasting cable industries have stepped up to air public service announcements and engage in consumer outreach as well. The details of the national plan to effectuate this transition were embodied in a budget act in the last Congress and were not endorsed by many members on the Democratic side of the aisle, including myself and Chairman Dingell.

Nevertheless, we are committed to trying to make this plan work. Toward that goal, this subcommittee intends to continue vigorous oversight of the DTV transition and to work closely with our Republican colleagues to insure success. Today there are several issues at the moment that merit our attention. First, we are eager to be reassured that the converter box program and redemption process is working smoothly. Second, because the signal characteristics of digital transmission and the anticipated geographic coverage area for individual broadcasters are different than for analog television many consumers may not receive the digital version of channels they currently receive after the switch.

It is important to know how many such households will be affected by this and the extent to which households may need to adjust or acquire antennas to receive digital signals. Third, there are hundreds of low power television stations and thousands of translators that will not be converting to digital in February of next year. It is still unclear how many communities and how many television households will be affected by this. In addition, only a small percentage of the approved converter boxes permit the so-called pass through of the analog signals so that consumers can easily see both digital and analog television in markets where some broadcasters will convert and others won't. It is vital to insure that steps are taken by the FCC and the NTIA to coordinate on these matters with the affected industries so that the consumer education and outreach efforts effectively guards against widespread consumer confusion in these communities.

And finally I want to commend several major retailers for taking action to limit consumer confusion. It has been my concern that analog only televisions remains on the shelves of major retailers and could result in consumers unwittingly purchasing a TV set due to need additional equipment in little over one year. Best Buy has already voluntarily removed its analog inventory from the shelves, and RadioShack is poised to do so by March 1. In addition, I have this announcement to read from Wal-Mart today. "Although retailers are not prohibited from selling TVs with an analog tuner, Wal-Mart believes it is important consistent with congressional concern and counsel from Chairman Markey to remove the very small number of TVs with an analog tuner from our inventory. This is consistent with Wal-Mart's early commitment to the NTIA converter box program and to otherwise facilitating transition to all digital television broadcasting. We are currently working with return centers and the Wal-Mart Foundation to determine the best way to handle the remaining inventory, which was extremely small, approximately 1/10th of 1 percent of existing television inventory." This statement is effective as of yesterday, so I want to commend Wal-Mart, Best Buy, RadioShack, and other retailers who are taking this welcome step.

And I urge all retailers to take the same step and to take it immediately so the consumers are not misled that the television set, the analog television set, that they may be buying will work next year without additional help. Again, we have many issues to discuss and examine, and I want to thank all of our witnesses for their willingness to attend this hearing, and I look forward to their testimony. And now I will turn and recognize the ranking member

of the Telecommunications and the Internet Subcommittee, the gentleman from Florida, my good friend, Mr. Stearns.

**OPENING STATEMENT OF HON. CLIFF STEARNS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA**

Mr. STEARNS. Thank you, Mr. Chairman, and I am pleased to be here as the ranking member and I always look forward to working with you. I hope with this net neutrality bill that you adopted will have many hearings to vet the language so we can all understand how it is enshrined. So we will look forward to that. I think by setting the date of February 17, 2009, as the date for full power broadcasters to transmit exclusively the digital format, the DTV legislation gave industry I think the needed incentives to prepare for the transition. And I think the results, as you briefly mentioned, are working well. With over a year to go manufacturers have already designed 37 coupon-eligible converter boxes. The NTIA has certified 250 retailers with a total of 15,000 stores ready to accept these coupons.

Consumers have requested almost 5 million coupons suggesting awareness is not necessarily a big problem. The National Telecommunication and Information Administration will start sending coupons to consumers next week, and RadioShack, Best Buy, Circuit City, and Wal-Mart have already announced they are ready to accept them. A Consumer Electronics Association survey of 2,000 U.S. adults indicates consumer awareness of the transition has grown 80 percent since the year 2006. According to the CEA survey, the joint educational efforts of government and the private sector are working, and the digital television transition will be a success. CEA's research revealed that the top sources consumers are using to learn about the transition includes television, about 72 percent, family and friends, about 40 percent, and the Internet about 25 percent. This shows that the educational campaigns by the industry and the government are working indeed.

The National Association of Broadcasters has spent more than \$1 billion on a comprehensive consumer education drive. Included in their campaign are public service announcement in both English and Spanish, DTV messages running across programming on local stations, and a media blitz to promote the DTV transition. Cable operators have launched a \$200 million public education campaign and committed to carrying both the analog and digital signals of both a full power commercial must carry broadcasters for 3 years to help smooth the DTV transition. My colleagues, these examples demonstrate that a market based approach works. All these groups and many others should be commended for their efforts. The benefits of the DTV transition extends far beyond that of clearer pictures and more choices about what program to watch.

The real benefits will come from what is done with the radio spectrum once the TV broadcasters are cleared including providing public safety with the resources they need to insure reliable, interoperable communications now and into the future. Although the number of people using over the air signal is decreasing there still needs to be in place a system to help consumers who may wish to use analog television with over the air antennas after the transition. The DTV legislation gives the NTIA up to \$1.5 billion for a

digital to analog converter box program. The statute directs DTIA to use \$990 million to enable U.S. households to request up to 2 \$40 coupons for use towards purchase of converter boxes. If the NTIA certifies to Congress as the program progresses that it needs more money there is available another \$510 million.

So it is important that we don't make any rash changes today. Doing so will only recreate the uncertainty that was delaying the transition in the first place and preventing us from clearing spectrum for public safety in advance wireless service, the third generation. For example, low power broadcasters are now demanding that NTIA require all converter boxes to include an analog pass through and that the FCC give them must carry rights. Neither is necessary. There are already 4 coupon-eligible converter box with low power pass through features and there is more on the way. The market is taking care of this. Changing the box requirements now by contrast could lead retailers and manufacturers to withdraw from the program altogether, and expanding must carry could force programming off of cable system right as we are going through this very delicate transition.

We are much better off keeping the current course and assessing as we move along. Wholesale changes could put the transition in jeopardy, and I don't think any one of us want that. These are important issues, Mr. Chairman. We thank you for this hearing, and I look forward to hearing from our witnesses.

Mr. MARKEY. I thank the gentleman. The chair recognizes the gentlelady from California, Ms. Harman.

Ms. HARMAN. Thank you, Mr. Chairman. I see a former colleague of ours, Ron Klink, in the audience, and I thought I would acknowledge him. And I thank you for holding this hearing on what I believe is a critical subject. I would like to address a few comments to Chairman Martin. Good morning.

Mr. MARTIN. Good morning.

**OPENING STATEMENT OF HON. JANE HARMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Ms. HARMAN. Chairman Martin, your appearances before this subcommittee give many of us the chance on a regular basis to tell you what you are doing wrong but today I thought we might acknowledge or I would like to acknowledge what you are doing right. This 700 megahertz auction began on time. It has largely succeeded. And the open access conditions that many of us argued for have stuck. Congratulations. Though the D block, which the commission set aside for a nationwide public safety network has not yet sold and likely will not, something that troubles me greatly, I still think we should applaud you for your boldness in pursuing a multi-faceted plan and that applause obviously extends to the other members of the commission. But as the ranking member just said, and as you know I agree, the point of the DTV transition is not converter boxes. The point of it is to satisfy a 6-year quest for a nationwide public safety broadband network that gives us true interoperable communications for emergency responders.

That need has been apparent since 9/11, maybe even before 9/11, and we are not much closer to meeting that need now than we were six years ago. As I often say, we have a regional operability

but we do not have national interoperability, and we won't have it until this spectrum becomes available. I think a public-private partnership using 700 megahertz spectrum is still our best hope. I think that the failure of the D block auction if it has failed or if it does fail does not signal the failure of the public-private partnership concept. If the auction ends without a D block winner, I hope that you and we will not only meet informally but then we will have a series of hearings which the chairman has said he will hold to review next steps and to come up quickly with a new plan D. Do I have that right? Not a plan B, a plan D.

Mr. MARKEY. D for do over.

Ms. HARMAN. That is the chairman's humor. D for do over. OK. Whatever we come up with, a new plan to reach true interoperability by the appropriate deadline. The goal should be a new option with a new set of rules that addresses the faults of the current auction but protects public safety's needs. I think we should, as I said, get on with this quickly once we determine for certain what the future, if any, is of the D block part of the auction. The DTV transition must yield a solution to first responders emergency communications needs, not just the budget converter boxes. A nationwide solution is long overdue. We still have time to get it right, and I urge us to get it right. Thank you, Mr. Chairman, I yield back.

Mr. MARKEY. The gentlelady's time has expired. The chair recognizes the gentleman from Texas, Mr. Gonzalez.

Mr. GONZALEZ. Waive opening.

Mr. MARKEY. The chair recognizes the gentleman from Virginia, Mr. Boucher. The chair recognizes the gentleman from Michigan, Mr. Stupak.

**OPENING STATEMENT OF HON. BART STUPAK, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN**

Mr. STUPAK. Thank you, Mr. Chairman, for holding this hearing, and thank you for attending the O&I hearing yesterday afternoon. You added to it. Thank you. 370 days from now America will officially stop all of its analog broadcasts for full power television stations but approximately 2,100 low power television stations and 4,700 translator stations will still be broadcast in analog. Many parts of America will be receiving their over the air signals in both analog and digital. This information has not been clearly provided to the American public. Many don't even know that there will be stations that still broadcast in analog, let alone that they need to purchase a specific converter box with an analog pass through or they will lose channels.

Out of the 35 converter boxes available on the market only 3 carry this essential component so this makes effective consumer education even more important. Until the morning of this hearing if you want to the National Telecommunications and Information Administration's DTV coupon web site and clicked on the link entitled questions about low power translator stations you viewed a 1-page with 1 sentence stating that "information about the impact of the digital transition on low power stations coming soon." Conveniently thought I checked and now it has some low power TV information and several options for consumers. This is unacceptable. 1.6 million Americans have already signed up for coupons on this web

site, and a valuable opportunity to provide them with key information was missed.

Ms. Baker, as head of the NTIA I want to know what you will do in order to improve consumer education. Many of those who will be affected will come from rural districts like mine but many will also come from urban districts. I look forward to learning how you plan to inform my constituents that many of them will need an analog pass through converter box, not just a converter box but a pass through converter box. Chairman Martin, you recently circulated some proposals to be addressed by the FCC later this month regarding satellite providers, and I wanted to focus on one of them, Liberty Media's acquisition of News Corp's stake in DirecTV.

In 2004 News Corp acquired DirecTV and pledged to provide local into local carriage in all 210 designated market areas by 2008. Commissioner Adelstein at the time called News Corp pledge to provide universal local to local a sham. Sadly enough, the News Corp efforts to sell their share of DirecTV we are seeing his prediction come true. Satellite subscribers in rural America are tired of being ignored. I urge the FCC to work towards insuring rural television markets are created equally to their urban counterparts. It is time for Congress and the FCC to look at a hard date for mandatory local to local carriage in all 210 designated market areas.

I am quite tired of hearing pledges that go unfulfilled. Mr. Chairman, thank you again for holding this hearing. I look forward to the testimony of the witnesses as there are some very important issues we must discuss. Thank you, Mr. Chairman.

Mr. MARKEY. The gentleman's time has expired. The chair recognizes the gentlelady from California, Ms. Capps.

**OPENING STATEMENT OF HON. LOIS CAPPS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Ms. CAPPS. I will be brief, Mr. Chairman. I want to thank you for holding this hearing, and thank you also for your vigilant oversight of the DTV transition which has resulted in a greater focus on consumer concerns and a greater understanding of the challenges we face as we move ahead. Today's hearing promises to be a bit more technical in nature. We will talk about class C television stations, analog pass through, and the technical specs of converter boxes. And I look forward to the testimony of our witnesses and our conversation with them. During this discussion it is my hope we keep sight of the reason we are transitioning to digital television and the reason we are all here today in the interest of the American people. Even as we move toward a single digital signal over our public air waves, we are sending mixed signals to consumers about how they can continue to receive the same local and cultural content.

I am particularly concerned about my Spanish-speaking constituents, many of whom enjoy Spanish language channels brought to them via translator or low power stations. These folks may be completely shut out during this transition so I look forward to this testimony, as I said, and the proposals that Chairman Martin and Acting Assistant Secretary Baker will bring us to further discussion about how we can avoid this kind of break down, how will we

streamline this transition for low power television stations. I want to also hear more about how and where converter boxes will be made available, some of which had already come from our chairman, what labeling procedures make the best sense for all kinds of consumers. So thank you, Chairman Markey, and to our witnesses today. I yield back.

Mr. MARKEY. The gentlelady's time has expired. The chair recognizes the gentlelady from California, Ms. Solis.

**OPENING STATEMENT OF HON. HILDA SOLIS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Ms. SOLIS. Thank you, Mr. Chairman, and good morning. Thank you also for being here, Commissioner Martin, and Ms. Baker. I want to thank the witnesses for being here that will also be testifying. With just more than a year left before our full power broadcast television stations transition to digital we are learning about the new challenges and must work very hard to address all of these issues. I am particularly concerned, as you know, about the DTV transition along the U.S.-Mexican border. With ample analog Spanish language programming originating in Mexico it is still available. After the transition along the border low cable and satellite penetration and language barriers could leave thousands and thousands of households behind in DTV transition.

That is why I am introducing the DTV Border Fix Act to provide full power broadcasters within 50 miles of the U.S.-Mexican border the opportunity to continue analog broadcasts for 5 years after the DTV transition. The bill insures that border area viewers will continue to receive emergency information and use over the U.S. television broadcast system. The bill is limited in scope and would work in cooperation with the FCC so that such broadcasts do not interfere with the public interest or spectrum auctions.

I also have concerns about the challenges facing low power TV and how the need for analog pass through boxes can be met for both low power TV and the border region. We need to work together, both the government and the private sector, to make sure that the right boxes are stocked in appropriate areas. In addition, I am concerned about potential problems existing over the air antennas receiving digital television signals. If consumers are to receive fewer channels in digital and even if the picture quality is superior as compared to analog services because of inadequate antennas consumers may be less inclined to transition to DTV and feel they need to subscribe to cable or satellite service.

We must make sure that all consumers regardless of their income level continue to receive expected services, so I look forward to hearing your testimony, and again want to hear comments regarding the transition that will occur along the U.S.-Mexican border because I really do believe that we are going to disenfranchise a very large population. And with that, I yield back the balance of my time.

Mr. MARKEY. The gentlelady's time has expired. The chair recognizes the chairman of the full committee, the gentleman from Michigan, Mr. Dingell.

**OPENING STATEMENT OF HON. JOHN D. DINGELL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN**

Mr. DINGELL. Mr. Chairman, I thank you for your kindness. I commend you for holding this meeting, which is an important one, on a very important subject, and I commend you for the vigor with which you are going into this matter. I want to begin by welcoming Meredith Baker, who is the new acting head of NTIA. I want to say that I appreciate her willingness to work with the Congress and her leadership and her effort to help achieve a successful transition on digital TV service. This is very important, and quite frankly it represents something of a welcome change in some of the policies we have seen from this Administration, so congratulations and welcome.

Mr. Chairman, today we address an issue that is soon going to affect millions of American households, and I commend you for your leadership and vigorousness in this matter. I refer to the digital TV, or DTV, transition. We are just a little over a year away from the end of the transition, at which time a lot of television sets around the country are going to go dark, and much remains to be done. Consumers must be properly educated, and they are not. Both the Federal Communications Commission and a number of industries stand to benefit handsomely from this matter and they all have responsibilities of the most serious sort with regard to these matters. As February 17, 2009 nears, we must learn of new steps that must be taken, and I note that time is running short and the American consuming public has little appreciation of what lies before them.

The FCC has recently requested \$20 million for DTV consumer education in fiscal year 2009. I still find this amount, however, woefully short and inadequate for an educational campaign that is to reach some 300 million Americans. Chairman Martin has also circulated an order regarding consumer education in response to a letter sent by you, Mr. Chairman, and by me. I commend you for moving forward on this important matter, and I look forward to the cooperation and assistance of Chairman Martin and to hearing from and seeing vigorous agency action on this question. This week, Mr. Chairman, you and I, joined by 19 of our colleagues, sent a letter to NTIA concerning reissuing converter box coupons to consumers whose original coupons have expired.

This 90-day coupon expiration date is cause for concern because consumers might not be able to find stores with boxes in stock before the coupons expire. I understand, Ms. Baker, NTIA, along with their vendor, IBM, are working to resolve this problem, and I thank them for their efforts.

We must be mindful of the situation confronting low power broadcasters. Only full power broadcasters are required to transition to digital next year. Low power and translator stations may take more time. This means that in some markets some stations will be broadcasting only in digital after February 17, 2009, while other stations will continue to broadcast in analog. This could lead to some very serious complications and complexities.

The potential for confusion here appears high for those consumers that acquire a digital converter box and then are not able

to receive analog channels. This has the potential for more mischief and confusion. I want to applaud those manufacturers who have included an analog pass through feature in their converter boxes to address this problem, as well as those who are in the process of adding this feature. I urge NTIA to quickly approve these boxes. I also expect low power and translator stations to do their part to educate their viewers about the need to purchase a converter box with analog pass through capabilities, and of course we need those kinds of boxes at an early time. Finally, some of the biggest beneficiaries of the DTV transition are the nation's retailers. The converter box coupon campaign and program will plow more than \$1 billion into the stores of eligible retailers.

Some consumers will choose to buy new televisions instead of converter boxes and many will purchase other items, such as CDs or video games, while they are in the store using coupons. For retailers, the DTV transition will certainly be profitable. I therefore urge the industry to be vigorous in its efforts to properly educate consumers. I am told as of yesterday that Wal-Mart no longer has analog only televisions on its shelves, and last year Best Buy pulled all analog stock from its stores. RadioShack has agreed to ship converter boxes to consumers free of charge and remove all analog sets from its stores by March 1. I applaud these decisions. They are pro-consumer. I thank you, Mr. Chairman, for your leadership in this matter, and I look forward to the testimony today. Thank you. I yield back the balance of my time.

[The prepared statement of Mr. Dingell follows:]

#### STATEMENT OF HON. JOHN D. DINGELL

Today we again address an issue that will soon affect millions of American households—the digital TV (DTV) transition. We are just over a year away from the end of the transition, and much remains to be done. Consumers must be properly educated. Both the Federal Communications Commission (FCC) and the several industries that stand to benefit handsomely have responsibilities in this regard. As February 17, 2009, nears, we learn of new steps that must be taken, and time is running short.

The FCC has recently requested \$20 million for DTV consumer education in fiscal year 2009. I still find this amount, however, woefully inadequate for an educational campaign that must reach more than 300 million Americans.

Chairman Martin has also circulated an Order regarding consumer education in response to a letter sent by Chairman Markey and me. I commend the Chairman for moving forward on this important matter and look forward to agency action on this question.

This week, Chairman Markey and I, joined by 19 of our colleagues, sent a letter to the National Telecommunications and Information Administration (NTIA) concerning reissuing converter box coupons to consumers whose original coupons have expired. The 90-day coupon expiration date is a cause for concern because consumers might be unable to find stores with boxes in stock before their coupons expire. I understand that Ms. Baker and the NTIA, along with their vendor IBM, are working to solve this problem, and I thank them for their efforts.

We must be mindful of the situation confronting low power broadcasters. Only full power broadcasters are required to transition to digital next year - low power and translator stations may take more time. This means that in some markets, some stations will be broadcasting only in digital after February 17, 2009, while other stations will continue to broadcast in analog. The potential for confusion appears high for those consumers that acquire a digital converter box and then are not able to receive analog channels.

I applaud those manufacturers who have included an analog pass-through feature in their converter boxes to address this problem, as well as those who are in the process of adding this feature. I urge NTIA to quickly approve these boxes. I also

expect low power and translator stations to do their part to educate their viewers about the need to purchase a converter box with analog pass-through capabilities.

Finally, some of the biggest beneficiaries of the DTV transition are the Nation's retailers. The converter box coupon program will plow more than one billion dollars into the stores of eligible retailers. Some consumers will choose to buy new televisions instead of converter boxes, and many will purchase other items, such as CDs or video games, while they are in a store using their coupons. For retailers, the DTV transition will certainly be profitable. I therefore urge the industry to be vigorous in its efforts to properly educate consumers. I am told that as of yesterday, Wal-Mart no longer has analog-only televisions on its shelves, and last year Best Buy pulled all analog stock from its stores. Radio Shack has agreed to ship converter boxes to consumers free of charge and will remove all analog sets from its stores by March 1. I applaud these pro-consumer decisions.

Thank you again Mr. Chairman, and I look forward to the testimony.

Mr. MARKEY. Thank you, Mr. Chairman. The chair recognizes the gentlelady from California, Ms. Eshoo.

**OPENING STATEMENT OF HON. ANNA G. ESHOO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Ms. ESHOO. Thank you, Mr. Chairman, for creating another excellent opportunity for our subcommittee to assess the progress on the digital transition. There are many issues. Of course members have raised them, and we know that there are still some that are left unresolved as we approach the 2009 deadline. It is nice to see you, Mr. Klink. I wish you were still up here. Today many members are going to be visited by their constituent public television stations, and the stations are going to express their concern that access to local public television stations digital programming is denied to almost half of all direct broadcast satellite households. Now that represents nearly 12 million households because one major DBS provider has failed to negotiate a long-term deal with public television.

Last November I introduced a bill, H.R. 4121, to require DBS carriage of public television digital signals, and I am pleased that a little more than a month ago DirecTV, the Association for Public Television stations, and PBS announced that they had reached an agreement whereby DirecTV would carry public television stations digital signals. As we move closer to February 17, 2009, I think it is unacceptable for any household in the country to be denied access to public television's digital programming. The American people love PBS, and we have done a lot of battles here over the years to help protect it so I don't think this is a small item on the agenda. I am anxious to hear from Mr. Jackson, who is going to testify why EchoStar carries HD programming for all the major commercial networks but doesn't provide HD programming produced by public television stations.

And I will have more questions to ask in this particular area as well as other questions, so we are moving along. I think that there is some progress. I am disturbed most frankly, Mr. Chairman, not Chairman Markey but Chairman Martin, about the treatment of cable by you. I don't know what cable has done to so enrage you but I think we need to have a conversation about that because we have important providers throughout the country and I think the relationships are really very important and I want to hear more

about what is so troubling you about them. So thank you, Chairman Markey, and I look forward to the testimony today.

[The prepared statement of Ms. Eshoo follows:]

STATEMENT OF HON. ANNA G. ESHOO

Mr. Chairman today is another excellent opportunity for this Subcommittee to assess our progress on the digital transition. There are several issues that are still left unresolved as we approach the 2009 deadline.

Today many Members will be visited by their constituent public television stations. The stations will express their concern that access to local public television stations' digital programming is denied to almost half of all Direct Broadcast Satellite (DBS) households - that's nearly 12 million households because one major DBS provider has failed to negotiate a long term deal with public television.

Last November, I introduced H.R. 4121 to require DBS carriage of public television stations' digital signals. I'm very pleased that, a little more than a month later, DIRECTV, Association for Public Television Stations (APTS) and PBS announced they reached an agreement whereby DIRECTV would carry public television stations' digital signals. As we move closer to February 17, 2009, it is unacceptable for any household to be denied access to public television's digital programming.

I'm anxious to hear from Mr. Jackson why Echostar carries HD programming for all the major commercial networks but does not provide HD programming produced by public television stations. I'd also like to know the status of the negotiations between Echostar and public television stations on signing a long term agreement for the carriage of public television's HD programming.

I'm also interested to hear from Mr. Rehr of NAB about what commercial 11 broadcasters are planning for their multicast stations. Right now in my District not one commercial broadcaster produces additional content on these extra channels, except some who air the weather radar 24 hours a day, but public television stations across the country are using their additional channels. In my District KQED has five new channels they are broadcasting today. KQED has a channel dedicated to children's programming, and another 24 hour Spanish language channel.

I'd like Mr. Rehr to explain why commercial broadcasters are not producing content for these extra channels. Why is public television able to produce and air this content while commercial broadcasters are leaving these channels fallow?

Mr. MARKEY. I thank the gentlelady. The chair recognizes the gentleman from Washington State, Mr. Inslee.

Mr. INSLEE. I will waive, Mr. Chair. Thank you.

Mr. MARKEY. The chair recognizes the gentleman from Texas, Mr. Green.

**OPENING STATEMENT OF HON. GENE GREEN, A  
REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS**

Mr. GREEN. Thank you, Mr. Chair, for having this hearing, and I hope over the next year we will continue to have these hearings and hopefully bring attention to the transition. In fact, maybe the folks who are responsible whether it be the news media or anyone else maybe we ought to treat the transition to DTV like we are seeing the presidential primaries. So much coverage on them, a lot more interest than in the past, and so for the next year I would hope we would do that because none of us want our constituents or your customers not to be able to watch TV. We are just over a year away from the transition date and there are still many questions and preparations and outreach efforts made by various government entities involved in the transition.

Last week Wired News and Technology web site magazine ran an article to point out many of the same concerns that the subcommittee has been raising over the last year, lack of coordinated

consumer education program, having consumers apply for coupons before converter boxes were on the shelves. The 90-day expiration date of the coupons are major problems the article said, as well as members of the subcommittee have raised. Yesterday I joined Chairman Dingell and Chairman Markey and several members of our committee in sending a letter to Assistant Secretary Baker asking her to address one of these issues.

Currently without boxes widely available it is unclear how readily consumers will be able to find an affordable coupon-eligible box. The 90-day expiration date could be a major complication for consumers if there is a disruption in production, shipping or stocking these boxes. Additionally, the article stated the Best Buy spokesman said their stores are only planning to carry one model converter box that sells for \$59.99. Up selling has been a serious concern. I am afraid consumers will not be as prepared as they need to be or as many as the government thinks they will when they walk into the store looking for a converter box. The letter sent yesterday clarifies and under the statute creating these coupon programs NTIA can allow households to apply to have expired coupons reissued if there are sufficient funds. This would allow consumers more flexibility in finding converter boxes and address many supply problems that are out of their hands.

I am concerned, however, that many consumers do not know about the program and how to apply for these coupons. Most estimates indicate 14 million to 20 million households allowing over the air broadcasts, yet according to NTIA stats earlier this week only 2.8 million households have applied for the coupons. Some households may go ahead and purchase a new set with the digital tuner whether than applying for converter box coupons but the number of the applications still seem low given that the program has been up and running for a month and a half, and I think more needs to be done to raise the awareness of the program.

After the hearing last November Congressman Gonzalez and I sent a letter to the House Administration Committee, and we received certification that as members we can include coupon applications in our newsletters to our constituents, which I plan to do in one this spring. As far as I am concerned, public education is the most critical and least coordinated component of the transition, and we are relying too heavily on the private sector to address that component along with the 800 help lines need to be staffed so operators can help consumers when they call in. I understand there were problems with the Spanish language help line at the FCC earlier this year and I hope to hear Chairman Martin explain to us what you have done to correct that problem, and I will have some questions later on that issue. I thank you and yield back my time.

Mr. MARKEY. The gentleman's time has expired. The chair recognizes the gentleman from Illinois, Mr. Shimkus.

Mr. SHIMKUS. Mr. Chairman, I think I feel like Groundhog Day, our fourth or fifth DTV hearing, so I think I will just yield back and wait for the testimony. I was just being a little jovial, Mr. Chairman.

Mr. MARKEY. No, it is Groundhog Day, and we are going to have Groundhog Day over and over again on this transition because the consequences of not getting it right are catastrophic. So all time for

opening statements from members has expired. So we turn to our panel, and we welcome them to the subcommittee. We welcome you back, Chairman Martin. You have been a frequent guest before us over the last year. We thank you for that. And we congratulate you, Ms. Baker, for your promotion, and congratulations to you and thank you for joining this team to insure that this transition occurs on time and without a glitch, so we thank you both. Chairman Martin, the last time you were here I said that you were the Tom Brady of the transition. I would like to now say I would like you to be the Eli Manning of the transition, and my hope is that we can put a plan in place that will work. Whenever you are comfortable, please begin.

**STATEMENT OF KEVIN J. MARTIN, CHAIRMAN, FEDERAL COMMUNICATIONS COMMISSION, WASHINGTON, D.C.**

Mr. MARTIN. Thank you. Good morning, Chairman Markey, and Ranking Member Stearns, and all the members of the committee. Thank you for once again inviting me to be here today to update you on the status of the digital transition. A little over one year from today all television stations will stop broadcasting in analog and only broadcast in digital. This transition will be a historic moment in the evolution of television. Television viewers will be able to enjoy movie quality picture and sound and potentially a wealth of new programming choices. It will also allow us to significantly improve public safety communications and will usher in a new era of advanced wireless services such as widespread deployment of wireless broadband.

As I have testified previously successful digital transition will depend upon minimizing the burdens placed on consumers and maximizing their ability to benefit from it. Today's hearing is a welcome opportunity to discuss the commission's work both in terms of consumer outreach and education and the necessary regulatory steps, which we are taking so that all Americans can enjoy the benefits of this historic digital transition. The commission is working to put in place the rules and policies to enable broadcasters to technically complete the conversion from analog to digital. Last August we adopted the final DTV table of allotments based on the channel elections made by all the full power broadcast stations. This order provides virtually all, over 99 percent of television stations across the country with their final digital channel assignments.

At the end of last year we also concluded our third DTV periodic review. In that order the commission established the procedures and rules that will guide the broadcasters through the end of the transition. We adopted procedures that will allow broadcasters to adjust their build out according to their needs and the needs of their viewers. Currently more than 95 percent of full power television stations are broadcasting a digital signal. Nearly two-thirds of the full power stations will remain on the same channel they are currently using for the digital services and most of these stations have already completed the construction and already providing full service to their viewers.

We recognize it is important for the commission to continually monitor the broadcaster's progress towards the transition, and accordingly we required each station to file periodic updates on the

status of the construction of the post-transition facility and in fact the first of such updates is due next week. The commission has before it an item that would enable satellite subscribers to receive digital broadcast signals. The pending item clarifies that when broadcasters make the transition it is the digital signal that their satellite operator must carry. Last fall the commission adopted an order that guarantees that all cable customers will be able to watch all broadcast stations after the digital transition. Specifically, the commission took action to insure that cable operators continue to make signals of all broadcast stations viewable after the transition as the statute requires.

These items should help reduce the burden on consumers and thereby fostering a smooth transition. The commission's DTV related enforcement efforts have focused on protecting consumers from unknowingly buying televisions that won't receive broadcast stations following the transition. With respect to the commission's labeling requirements, the commission has as of February 11, today, 2008, inspected 1,829 retail stores and web sites and issued 316 citations notifying those retailers of violations for failing to comply with our requirements. We also have 14 NALs with \$4 million total aggregate pending before the commission.

In addition to our labeling investigations, we are continuing to insure that no manufacturers are importing and shipping analog only television receivers. We are also insuring that the digital tuners comply with the V-Chip regulations. Thanks to information referred to us by you, Mr. Chairman, we began investigating allegations that some manufacturers were not complying with these V-Chip rules. As a result of these investigations, we released an NAL against Funai Corporation for \$7.7 million and NALs against 9 other manufacturers for over \$6.5 million are also on circulation.

The swift enforcement of all these DTV-related rules is critical to protecting consumers and reducing potential confusion. Our activities in this area will continue to be a priority during the next 12 months. According to data from the Consumer Electronics Association and the National Association of Broadcasters there has been some success in making consumers aware of the transition. Recent surveys published by the NAB and Consumers Union found that 79 percent and 64 percent of consumers were aware of the transition, respectively.

While this increased awareness is a step in the right direction too many Americans remain confused about what they need to do to prepare for it. For instance, the Consumers Union reported that 74 percent of consumers have major misconceptions about the impact that this conversion will have on them. Now that many consumers are aware of the transition, we need to focus our efforts and our outreach on sending them a clear and consistent message about how to get prepared. At the suggestion of Chairman Dingell and Chairman Markey the commission is considering a proposal to require the industry to use public service announcements, bill inserts, and other techniques to educate consumers about the transition. Just last Friday we received a proposal from the National Association of Broadcasters setting forth alternative actions as a safe harbor that broadcasters could take to educate consumers about the transition.

We are currently in the process of evaluating this new proposal and hope to finalize this item quickly. In addition to our DTV consumer education item, the commission is actively and directly promoting consumer awareness of the upcoming transition. Nearly every bureau and office of the commission has been involved in this effort including our field offices around the country. At the suggestion of several other commissioners, I have asked the Media Bureau Chief Monica Desai and Consumer and Government Affairs Bureau Chief Cathy Seidel to jointly lead an intra-agency task force of staff from the various bureaus and offices who are primarily working to facilitate the DTV transition over the next year.

We are also utilizing commission staff located around the country. FCC field offices and FCC field agents are continuing to distribute information at senior centers, libraries, and other local venues. They have already distributed information to over 3,100 senior and community seniors, made 385 presentations, and have 106 scheduled in just the days ahead. We have also been forging new partnerships and participated in media events, attending conferences, and continuing to do whatever we can to get the word out. For example, DTV education posters will be displayed in all 34,000 post offices around the country. The United States Postal Service estimates that an average of 9 million people pass through their retail lobbies each day.

We have also secured commitments from 24 states, the District of Columbia, and Puerto Rico to display DTV materials in 1,100 Department of Motor Vehicle locations. The FCC's consumer efforts and outreach continue to place emphasis on consumers that receive their television signals over the air on those who are hard to reach including senior citizens, non-English speaking and minority communities, people with disabilities, and low income individuals and people living in rural areas. We have been taking several specific steps to reach each of these groups. For example, the AARP has agreed to disseminate digital transition information through its tax aid program that makes volunteers available to assist AARP members in preparing their taxes. We also know that the Hispanic community disproportionately relies on over the air television. Of the 15 million broadcast only homes one-third is occupied by primarily Spanish-speaking homes.

The Hispanic Chamber of Commerce and Univision have agreed to join the commission in conducting DTV awareness sessions at the Hispanic Chamber of Commerce and member chambers in the 10 biggest cities nationwide which are home to 80 percent of the Hispanic population. The first of these sessions will be held later this month in Chicago. The commission is also taking steps to inform low income consumers about the transition to all digital broadcasting. For example, the Department of Health and Human Services has made a commitment to assist the FCC in disseminating DTV materials through at least 6 of their agencies to target populations including low income consumers. For example, through their administration for children and families they will distribute information through their approximately 1,500 Head Start grantees covering more than 6,000 locations throughout the country.

And their Health Resources and Services Administration will distribute flyers and information through their 4,000 community

health centers. This morning I am also pleased to announce that today the commission's contract and purchasing center were awarded a contract at Ketchum. Under this contract Ketchum is going to be responsible for assisting the FCC's efforts to promote consumer awareness of the DTV transition. Specifically in the area of media services Ketchum provides full service production of multiple versions of TV and radio PSAs, web videos, educational videos, podcasts, and satellite media tours. The material developed will be produced in multiple languages and formats.

In addition, Ketchum is planning to support advertising on transit systems in 18 cities in over 300 locations. Having awarded this contract, we are working with Ketchum to jump start our efforts by arranging a satellite media tour next week to highlight the switch to digital one year before the deadline. We are also asking Ketchum to develop specific plans for using grocery stores and other retail outlets frequented by our target audiences. Although I believe that a lot of progress has been made to facilitate a smooth transition there is obviously still more work to be done. For example, one of the areas that the commission has recently been spending a lot of time on is how to best insure that consumers will continue to be able to view low power television stations which are not required in transition to digital next year.

I have proposed a goal of 2012 for all low power stations to transition to digital. In the mean time I have asked that the leaders of several industry organizations to take voluntary steps to help consumers continue to watch all broadcast television programming after the transition.

Mr. MARKEY. Mr. Chairman, right now you are 4 minutes over so if you could reach that summary.

Mr. MARTIN. Sure. Certainly the next 12 months will be challenging. Nevertheless, it is my hope that through all the combined efforts of the government, industry, and consumer groups we will reap the rewards of the digital transition and the benefits it has to offer, and I look forward to continuing to work with this committee and all the members of Congress to answer their questions and work to make this a successful transition next year.

[The prepared statement of Mr. Martin follows:]

**Written Statement  
Of**

**The Honorable Kevin J. Martin  
Chairman  
Federal Communications Commission**

**Before the  
Committee on Energy and Commerce,  
Subcommittee on Telecommunications and the Internet  
U.S. House of Representatives**

**February 13, 2008**

Good morning Chairman Dingell, Chairman Markey, Ranking Member Barton, Ranking Member Upton, and Members of the Committee. Thank you for inviting me here today to update you on the status of the digital transition.

A little over one year from today, on February 17, 2009, all full power television stations in this country will stop broadcasting in analog, and broadcast exclusively in digital, as mandated by Congress in the Digital Television and Public Safety Act of 2005. A successful digital transition will depend upon minimizing the burdens placed on consumers and maximizing their ability to benefit from it.

The DTV transition will be a historic moment in the evolution of TV. Television viewers will be able to enjoy movie quality picture and sound and potentially a wealth of new programming choices. It also will allow us to significantly improve public safety communications and will usher in a new era of advanced wireless services such as the widespread deployment of wireless broadband.

According to data from the Consumer Electronics Association and the National Association of Broadcasters, consumer awareness of the transition has grown in recent years. It is up 80% since 2006, according to CEA, and has more than doubled since 2007, reports NAB. And recent surveys published by NAB and Consumers Union found 79% and 64% of consumers were aware of the transition respectively. That more and more viewers are aware of the transition is a step in the right direction. However, the Consumers Union also found that 74% of consumers have "major misconceptions" about

the impact of the transition on them. In other words, too many Americans remain confused about what they need to do to prepare for it. Taken together, these surveys are valuable research tools to better guide our education and outreach efforts over the next twelve months.

This recently released data also demonstrates that facilitating a successful DTV transition is an enormous undertaking. And it is one which no single entity, public or private, can achieve alone. Rather it requires the commitment and cooperation of government, industry and consumer groups. We have made that commitment and are actively working with these important stakeholders.

Last week I participated in an event marking one year before the transition at a local Best Buy store which sells digital televisions and will be selling digital to analog converter boxes. Commerce Secretary Gutierrez, Meredith Baker and I were joined there by top representatives of the nation's broadcasters, cable operators, and the consumer electronics industry. We are working together, along with others inside and outside of government, in an unprecedented public-private partnership to educate consumers throughout the country about what they need to do to be able to watch TV following the transition as they did before. Today's hearing is a welcome opportunity to discuss our work with all of our DTV partners both in terms of outreach and education and necessary regulatory steps to ensure all Americans can share the benefits of this historic digital transition.

**UPDATE ON POWER BROADCASTERS TRANSITION TO DIGITAL**

Currently, more than 95 percent of full power television stations are broadcasting a digital signal. Nearly two-thirds of full power stations (1180) will remain on the same channel they are currently using for digital service. The majority of these stations, over 850, have completed construction and are providing full service to their viewers. The remainder, roughly 300, are working on completing construction of their full service facilities. One-third of full power stations, (roughly 600, are changing channels for their operation after the transition), and are currently filing construction permit applications with the Commission, ordering equipment, and scheduling tower crews.

The Commission has adopted the final DTV table of allotments based on the channel elections made by the full power broadcast stations. This order provided virtually all (over 99%) of these television stations across the country with their final channel assignments for broadcasting in digital following the DTV transition. By finalizing broadcasters' channel allotments, the Commission helped ensure that the analog spectrum the broadcasters are vacating will be available as planned by 2009.

We also concluded the Third DTV Periodic Review, which adopted the procedures and rules to guide broadcasters through the end of the transition. Among other important decisions, this order adopted the interference standard for post-transition applications and forecast the date, later this year, when the Commission will consider requests from broadcasters to expand their station facilities.

In the Third DTV Periodic Review, the Commission recognized that stations will need flexibility to complete the transition. Consequently we adopted procedures that will allow broadcasters to adjust their buildout according to their needs and the needs of their viewers. We will consider requests from broadcasters that find it necessary to reduce analog service before the transition date, but they will be required to inform their viewers well in advance of any reductions.

In addition to getting the proper rules in place, it is important that progress be carefully monitored. Accordingly, to enable the Commission to closely track broadcasters' progress toward completing their transition, we required each station to file and update with the Commission by next week the status of the construction of its post transition facility. The Commission will make this information available to Congress, to the broadcast industry, and to the public. In addition to earlier updates, broadcasters must report their status again by October 20, 2008.

#### **CARRIAGE OF DIGITAL SIGNALS**

Last fall, the Commission adopted an order that guarantees that all cable customers will be able to watch all broadcast stations after the digital transition. Specifically, the Commission took action to ensure cable operators continue to make signals of all broadcast stations viewable after the transition, as the statute requires. As a result, we significantly reduced the number of Americans potentially needing a converter box to watch broadcast stations post-transition. Making sure the almost 35 million households that subscribe to analog cable will be able to continue to watch broadcast television after

the transition as they did before allows us to focus our energies on assisting the nearly 15 million households that rely exclusively on over-the-air signals.

The Commission now has before it an item that would enable satellite subscribers to receive digital broadcast signals, as well. Currently, the law requires that when a satellite operator chooses to carry any local broadcast signals, it must carry all full power local broadcast signals in that market. The pending item clarifies that, in such a “local-into-local” market, where a full power television station is broadcasting only in digital, it is the digital signal that the satellite operator carries. This clarification is critical to ensuring that satellite customers, like cable customers, will continue to receive the same broadcast stations they saw the day before the transition on the day after the transition.

Finally, I also recently circulated an item that would clarify the process for when and how broadcasters will elect carriage of their digital signals. Specifically, consistent with existing rules, broadcasters must decide by October 1, 2008 whether they want to assert their must carry rights or negotiate for carriage of their broadcast signal for the years 2009-2011. We propose to clarify in the pending item that whichever decision they make, it will apply to their analog signal before the transition date and their digital signal after that date.

These items should help reduce the burden on consumers thereby fostering a smooth transition.

**ENFORCEMENT**

The Commission's DTV-related enforcement efforts have focused on protecting consumers from unknowingly buying televisions that won't receive broadcast stations following the transition. Specifically, we are enforcing three rules: 1) the requirement to label any remaining televisions with analog-only tuners; 2) the prohibition on the importation and shipment of television receivers without integrated digital tuners; and 3) the requirement that the V-Chip functions with the digital technology.

With respect to the Commission's labeling requirement, the Commission has, as of February 11, 2008, inspected 1829 retail stores and websites and issued 316 citations notifying retailers of violations for failing to comply with our requirements. Because retailers are not licensees, we must give them a citation prior to issuing a Notice of Apparent Liability (NAL).

We currently have NALs pending against 14 retailers. These fines in the aggregate total almost \$4 million. In addition, the Enforcement Bureau has issued another seven NALs. It is my hope that through our vigorous enforcement actions, retailers will take concrete actions to avoid consumer confusion as the digital transition draws near.

In addition to our labeling investigations, we are continuing to ensure that no manufacturers are importing and shipping analog-only television receivers and equipment. We have issued NALs against two companies - Syntax Brilliant Corp. (approx. \$2.9 million) and Regent USA, Inc. (\$63,650) - for apparent violation of our rules in this area. One of these companies has already paid the fine and a forfeiture order

with respect to the other company is on circulation. In addition, we are in the process of investigating potential violations against several other companies. I hope to quickly bring these matters to resolution.

Finally, we are ensuring that the digital tuners comply with the V-Chip regulations. As you know, the Commission's rules require digital television manufacturers to include the V-Chip in their equipment and to ensure that their devices can adjust to changes in the content advisory system. Thanks to the information referred to us by Chairman Markey, we began investigating allegations that some manufacturers were not complying with our rules. As a result of these investigations we released an NAL against Funai Corporation for \$7.7 million. NALs against nine other manufacturers, totaling over \$6.5 million are also on circulation.

Swift enforcement of all our DTV-related rules is critical to protecting consumers and reducing potential confusion. Our activities in this area will continue to be a priority during the next 12 months.

#### **CONSUMER EDUCATION AND OUTREACH**

In order to educate consumers properly, all parties involved in the transition - - the FCC, NTIA, the broadcasters, the cable industry, satellite, manufacturers, retailers, consumer groups - - need to put forth correct, clear and consistent messages about how to get prepared.

I commend the industry for the consumer education campaigns that they have initiated. Specifically, the National Association of Broadcasters (NAB) launched a \$697 million campaign that includes, among other things, television spots, 30 minute education programs about DTV and a 100-day countdown to the February 17, 2009 deadline. In addition, the National Cable and Telecommunications Association (NCTA) launched a \$200 million campaign that includes, among other things, sending customer communication “tool kits” to all their cable systems nationwide, and distributing brochures about the transition at community and public events.

At the suggestion of Chairmen Dingell and Markey, the Commission initiated a DTV Education Notice of Proposed Rulemaking (NPRM). This NPRM sought comment on whether to require the industry to use bill inserts, public service announcements, and other techniques to educate consumers about the transition.

As you suggested, I have circulated a proposal to my colleagues that requires broadcasters to use PSAs and screen crawls throughout the day, including during the prime time hours, to inform viewers about the transition and to publicly report on these education efforts on a quarterly basis. The item also requires MVPDs to provide monthly inserts about the DTV transition in their customer billing statements. The item also requires manufacturers of television receivers and related devices to provide notice to consumers of the transition’s impact on that equipment. In addition, we require the partners listed on the Commission’s [www.dtv.gov](http://www.dtv.gov) website to provide the Commission with quarterly updates on their consumer education efforts. Finally, the item states that

we will work with the National Telecommunications and Information Agency (NTIA) to ensure that the retailers participating in the converter box program are appropriately training their employees and informing consumers.

Just last Friday we received a proposal from NAB setting forth alternative actions as a safe harbor that broadcasters could take to educate consumers about the transition. We are currently in the process of evaluating this new proposal and hope to finalize this item quickly.

In addition to our DTV Consumer Education item, the Commission is actively and directly promoting consumer awareness of the upcoming transition through its own education and outreach efforts.

The FCC's consumer outreach effort places an emphasis on consumers who receive their television signals "over-the-air" and on those who are hard to reach and may be unaware of the upcoming transition, including senior citizens; non-English speaking and minority communities; people with disabilities; low-income individuals; and people living in rural and tribal areas.

We have been forging partnerships, participating in media events, attending conferences, and doing whatever we can to get the word out. For example, DTV education posters will be displayed in all 34,000 post offices across the nation. The United States Postal

Service estimates that an average of 9 million people pass through their retail lobbies each day.

We have also secured commitments from 24 states, the District of Columbia and Puerto Rico to display DTV materials in 1100 Department of Motor Vehicle locations. Specifically, we have secured commitments with Arizona, Colorado, District of Columbia, Hawaii, Idaho, Louisiana, Maine, Massachusetts, Missouri, Montana, Nebraska, Nevada, New Hampshire, North Dakota, Ohio, Oklahoma, Puerto Rico, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Washington, West Virginia, Wisconsin and Wyoming.

You will also be seeing billboards about the transition on buses and in subway stations in large metropolitan areas such as here in the DC Metro transit system.

The FCC also distributed DTV transition awareness information that will be provided to all federal government employees. We estimate that this message will reach over 2.5 million people around the country.

We also know that some consumers will be disproportionately impacted by the transition or are harder to reach than the population at large. Therefore we have been taking specific steps to reach these groups. Specifically, we have been focusing our resources on three primary activities: attending conferences and hosting workshops, disseminating information via the news media, and partnering with industry, consumer, and other

groups. I would like to take a few minutes to describe our efforts targeted at each of these five communities.

Senior Citizens:

Senior citizens are more likely to have older television sets relying exclusively on over the air broadcasting. We have partnered with organizations that specifically serve this harder to reach population such as the AARP.

For example, we are working with AARP to disseminate digital transition information through their Tax Aid Program that makes volunteers available to assist AARP members in preparing their taxes. As part of this program, FCC-prepared DTV information sheets, in English and Spanish, are being made available to 32,000 volunteers across the country for distribution as they visit low and moderate income taxpayers, with special attention to those individuals 60 and older. And, last September, we presented two DTV education sessions at the national AARP convention in Boston and we have plans to make similar presentations at this year's convention in Washington, DC. In addition, late last fall, I was interviewed about the transition on AARP radio which is broadcast on 170 outlets nationwide reaching more than 1,000,000 people.

In addition to working with AARP, we have also been working with other senior organizations as well. For example, I taped a PSA to be aired on Retirement Living TV which reaches nearly 30 million homes nationwide and participated in a story about the transition for a newsletter read by the 6.4 million residents of Erikson retirement

communities. We are also pleased to be partnering with The National Association of Area Agencies on Aging (N4A) to cosponsor DTV awareness sessions during the coming year in conjunction with their 655 area offices throughout the nation. This is a useful opportunity to educate caregivers, social workers and others who care for the elderly.

In addition to working with these organizations, we have also set up partnerships with the State Aging Offices in Rhode Island, Massachusetts, Michigan, Louisiana, Arizona, Colorado, Washington, D.C., and Tennessee. These states are including information about the DTV transition in outreach materials, and at conferences. We are optimistic that in the coming weeks we will have similar commitments from additional state offices.

We are also putting to work on this issue Commission staff located around the country. FCC field agents are continuing to distribute information materials to senior centers, libraries and other local venues frequented by older Americans. Through the work of our field agents, we are able to reach these consumers in a total of 36 states – ranging from Alaska to Florida. We have already distributed information to over 3133 senior centers, senior organizations, and community groups and given nearly 385 presentations with 106 more scheduled in the days ahead.

The FCC also held a DTV Workshop focusing on seniors at FCC Headquarters on November 8, 2007. It consisted of two panels discussing the transition's effect on seniors plus exhibits by industry. Based on the discussions at that Workshop, we reached out to

faith-based organizations, provided them with consumer education materials on the transition, and continue to follow up with them to answer questions on the transition.

Non-English Speakers and Minorities:

The Hispanic community disproportionately relies on over-the-air television. Of the 15 million broadcast only homes, one-third are occupied by primarily Spanish speakers. Indeed, almost half (43%) of homes where Spanish is the primary language rely exclusively on over-the-air broadcasting for their television.

The Hispanic Chamber of Commerce has agreed to join the Commission in conducting DTV awareness sessions at member chambers in the 10 biggest cities nationwide which are home to 80% of the Hispanic population. The first of these sessions will be held later this month in Chicago. Similarly, we have also partnered with Univision to hold DTV awareness sessions at Town Hall meetings designed to educate members of its Spanish speaking audience. Additionally, we have taped several on-air interviews regarding the digital transition for Univision's news and public affairs programs airing both in local markets and nationally. These interviews were done by Keyla Hernandez-Ulloa the Commission staffer hired to spearhead outreach to the Hispanic community. We have been discussing the switch to digital on other Hispanic media outlets as well. For example, I did an interview with the Hispanic Communications Network, which produces material for radio, television, print and Internet, that will be distributed to its 230 member radio network in the United States and Puerto Rico.

We want to work with other foreign language media outlets as well. To that end we have partnered with KTSF, a major Asian TV station in San Francisco, to put 5,000 English and Chinese DTV one page flyers at their booth during the Chinese New Year celebration events in late February. Last year approximately 100,000 people attended this festival.

The FCC held a DTV Workshop focusing on non-English speakers and minorities on December 4, 2007. As a result of that Workshop, we will be conducting a nationally available Internet seminar or “webinar” about the DTV transition on April 8th for librarians in the Webjunction Spanish Outreach Program. These librarians provide library services to Spanish speakers. We will also be providing them with a Spanish version of the presentation on DVD for distribution to libraries. Finally, following the workshop, we translated our DTV one page flyer into Hmong and Arabic (in addition to English, Spanish, Vietnamese, Chinese, Tagalog, French and Russian).

In addition, we plan to participate in a number of national conventions representing non-English speaking and minority consumers in 2008. They include the 78<sup>th</sup> Annual Conference for League of United Latin American Citizens, the Annual National Hispanic Leadership Conference and the National Council of La Raza Conference, the NAACP Convention, the National Urban League Conference and the Organization of Chinese Americans National Conference.

People with Disabilities:

The Commission is also taking specific steps to inform people with disabilities about the transition to all digital broadcasting. On February 28, 2008, the FCC is sponsoring a DTV Consumer Education Workshop designed to build upon these efforts. Also, later this month the Commission's DTV website, DTV.gov, will feature a video in American Sign Language for the deaf and hard of hearing community. Our most commonly utilized publications are available in Braille and audio format and all our fact sheets and advisories are available in large print. In addition, we have two specific publications addressing DTV and closed captioning, "Closed Captioning for Digital Television," and Closed Captioning and Digital-to-Analog Converter Boxes for Viewing Free Over-the-Air Programming on Analog Televisions." The Commission also has a dedicated email box for closed captioning questions at [closedcaptioning@fcc.gov](mailto:closedcaptioning@fcc.gov).

Commission staff continues to attend conferences to distribute DTV educational materials to people with disabilities. For example, the FCC has attended and provided DTV materials at the National Black Deaf Advocates Conference, the Vocational and Educational Services for Individuals with Disabilities Conference and the Emergency Planning and Response for Special Needs and Disabilities Conference.

In all, we have collaborated with disability advocacy groups and outreach organizations. For instance, the Hearing Loss Association of America ("HLAA") is already linking to our DTV informational materials on its website, which receives approximately one million hits per month. In addition, HLAA has committed to publish an article on DTV

and closed captioning in *Hearing Loss Magazine*, which is estimated to reach a readership of 200,000 people. Furthermore, HLAA has 200 local and regional chapters around the country, and we plan to conduct DTV Awareness Sessions at their monthly meetings throughout the course of the year. We also plan to utilize our Enforcement Bureau's Field Office staff and CGB staff to distribute DTV informational and educational materials at HLAA's "Walk4Hearing" events across the country taking place this spring through the fall.

Low Income Consumers:

The Commission is also taking specific steps to inform low-income consumers about the transition to all digital broadcasting. For example, the Department of Health and Human Services has made a commitment to assist the FCC in disseminating DTV material to target populations, including low-income consumers.

In addition, on April 1, 2008, the FCC will sponsor a DTV Consumer Education Workshop that will focus on reaching low-income consumers.

Rural and Tribal Consumers:

The Commission is also taking specific steps to inform people living in rural and tribal lands about the transition to all digital broadcasting. For example, the Commission recently established a partnership with the United States Department of Agriculture's 4-H office. We will be providing DTV information at approximately 150 state and county fairs and will be conducting "Train the Trainer" workshops at 4-H leadership

conferences. After attending these training sessions 4-H members can help spread the word to their families and communities about getting ready for February 17, 2009.

We also have forged a partnership with the Bureau of Indian Affairs. This collaboration has resulted in the distribution of DTV materials throughout Indian Country, utilizing all 50 of their nationwide area offices. Commission staff has attended and provided DTV materials at the National Conference of American Indians, and the Rural TeleCon Conference, with many additional events planned for this year such as participation in the National Association of Development Organizations in Alaska Conference and the Affiliated Tribes of Northwest Indians Annual Conference.

Finally, on January 31, 2008, we held a workshop at Commission headquarters focused on reaching rural consumers and consumers on tribal lands. We received many useful suggestions at this workshop on how to better reach these communities and intend to implement them as soon as possible.

Since the last time I testified, Congress has allocated the Commission money to spend on our consumer education efforts. We intend to put these resources to good use.

Additional funds will allow the Commission to expand upon its current consumer outreach and education plan. Last month, we initiated a procurement seeking support for a broad range of consumer education services, including media services, publications, and distribution networks, that will assist and complement the FCC's ongoing work on

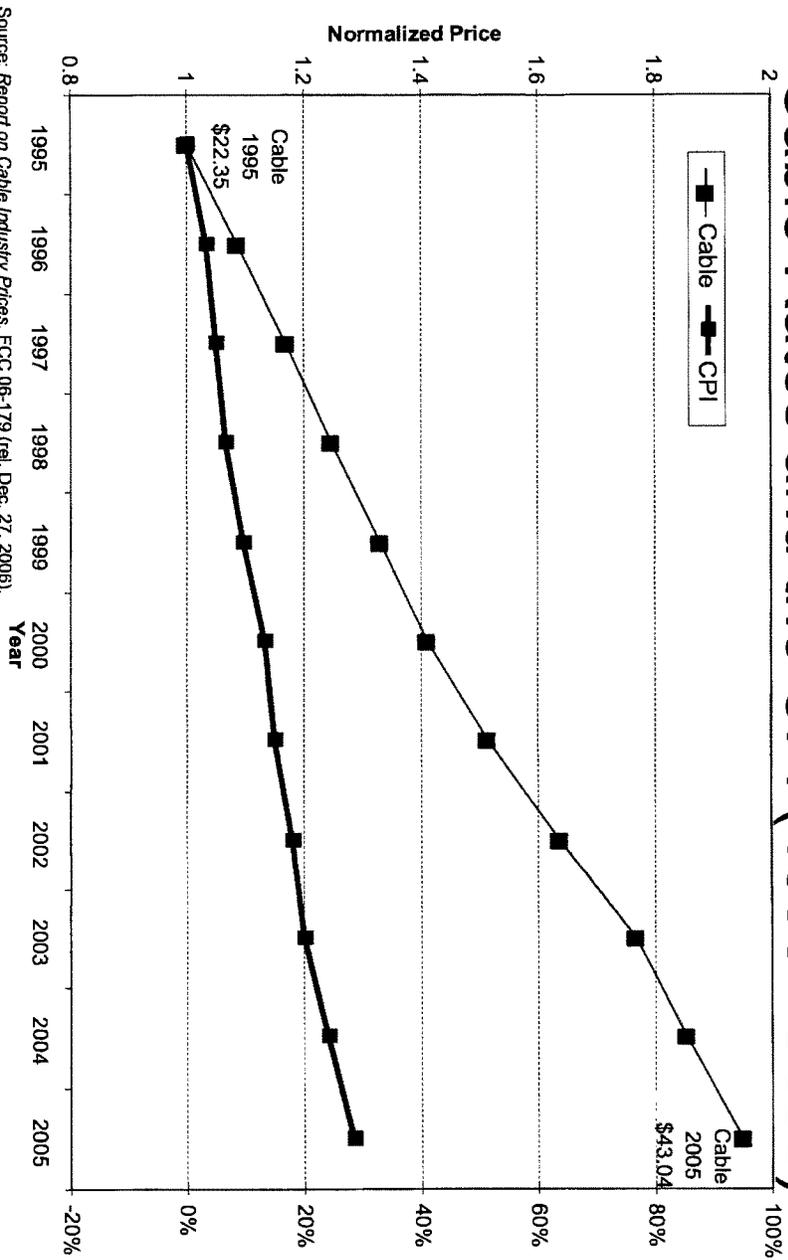
educating all American consumers about the digital television transition. The procurement closed last week and FCC staff is currently reviewing these proposals.

#### **CONCLUSION**

The Commission is devoting significant resources to facilitate a smooth transition. Nearly every Bureau and Office at the Commission has been involved in this effort including our field offices across the country.

We intend to take whatever actions are necessary to minimize the potential burden the digital transition could impose on consumers and maximize their ability to benefit from it. The next 12 months will undoubtedly be challenging. Nevertheless, it is my hope that through the combined efforts of government, industry and advocacy groups American consumers will reap the rewards that the digital transition has to offer.

# Cable Rates and the CPI (1995 - 2005)



Source: Report on Cable Industry Prices, FCC 06-179 (rel. Dec. 27, 2006).

Mr. MARKEY. Thank you so much. I remember when I was a kid, Dick Tracey was my favorite comic strip and he hired this guy, Sam Ketchum, to be his assistant and we hope that your hiring of Ketchum will help you as well to solve this problem. So our next witness in her first appearance before the committee, the Honorable Meredith Baker, Acting Assistant Secretary for Communications and Information from the Department of Commerce. We welcome you, and whenever you feel comfortable please begin.

**STATEMENT OF MEREDITH BAKER, ACTING ASSISTANT SECRETARY FOR COMMUNICATIONS AND INFORMATION, DEPARTMENT OF COMMERCE, WASHINGTON, D.C.**

Ms. BAKER. Good morning, Mr. Chairman, and members of the subcommittee. Thank you for the opportunity to be here before you today and to discuss NTIA's successful launch of the TV converter box coupon program and our strong commitment to continued public education and outreach efforts so that this historic and important transition can take place and no American television viewer is unprepared on February 18, 2009. On January 1 consumers across the nation successfully and efficiently began to order coupons by phone, mail, fax, and on line. Consumers from every state in the nation applied on the first day. By the end of the first week NTIA had received over 1.1 million requests for 2.1 million coupons. While this initial volume was high all systems continued to handle requests.

To date, NTIA has accepted more than 2.4 million household requests for more than 4.8 million coupons. Approximately 47 percent of these households have identified themselves as reliant on over the air television. On the average, 64.5 percent are applying on the web, 34.9 percent by phone, only 0.5 percent by mail, and .1 percent by fax. The overwhelming majority have been able to complete the application process in minutes with ease. We have made some adjustments and improvements as we learn about consumer experiences. For example, we have added more Spanish language operators and a Spanish language IBR. Those Spanish and English languages now have a wait time of less than 20 seconds for a live operator. Interest in the TV converter box program and demand for coupons indicate that consumers are becoming increasingly aware of the DTV transition and the program.

Thanks go to NAB, CTA, CEA, and other members of the DTV coalition. By our estimate our consumer education efforts have attracted upwards of 350 million print and broadcast media impressions related to the program since September of last year. While we at NTIA have done over 60 interviews since the beginning of this year Secretary Gutierrez himself has done 25, actually over 25, because he did Good Morning America this morning, interviews on the transition in both Spanish and in English since January 1. NTIA's consumer education campaign focuses on the role of the coupon program during the transition and leverages opportunities for partnership. We, with Ketchum, which is a good choice by the FCC, have developed a comprehensive tool kit which is information to make participation of partners easy such as flyers, enclosures, and sample PSAs.

NTIA's consumer education partners currently include over 130 social service and community organizations which serve our vulnerable communities, the low income, the seniors, the rural residents, the minorities, and the disabled Americans. More than 15 Federal agencies have committed to use their existing channels to get the word out about the coupon program. Chairman Martin outlined some of these. Some other examples are the VA. The VA is leveraging their incredible network that touches 24 million veterans. The Department of Agriculture will distribute information with their food stamps program and their school lunch program, and HHS will be activating the Administration on Aging.

NTIA has been greatly encouraged by the robust participation of manufacturers and retailers in the coupon program. As of yesterday we had certified 37 converter boxes that meet our specifications. These boxes are priced between \$40 and \$70. We are continuing to review and certify boxes as manufacturers come into this program, and we have offered expedited recertification for the version 2.0 boxes that are submitted with added analog pass through feature. We received notices of intent from more than half a dozen manufacturers with approved converters that claim to produce a converter box with an analog pass through. NTIA will begin mailing coupons to consumers next week. They look like this.

NTIA and IBM have been working closely with participating consumer electronics to calibrate the release of the coupon with the supply of the converter boxes. The agency has certified more than 615 retailers at this point to participate in the program which represents 16,000 outlets nationwide. To assist these retailers in ordering their inventory NTIA has made available on the web as well as to the retailers a number of coupons requested by each state within their 3 digit zip code. We have also made employee training materials available and tested the process in a limited 2 market pilot program. When the coupons are mailed next week, we will have 9,000 retailer locations that will be participating in the program throughout all 50 states, Puerto Rico, and the U.S. Virgin Islands.

I would like to thank Wal-Mart, Best Buy, RadioShack, and Circuit City for their leadership and participation. These stores have completed the certification program. Their employees are trained. The converter boxes are in their stores and their systems are ready to redeem coupons. More retailers will be activated and more boxes will be available in the coming weeks. We will carefully monitor and assess the process as it rolls out and will take any further necessary actions to insure the consumer experience remains favorable with the coupon program. I received your letter, Chairman Markey, and others of the committee on the issue of the 90-day expiration of coupons, and I will be happy to work with you and your staff to address this issue. NTIA is aware of concerns that have been raised about the impact of the DTV transition of low power and translator stations and on residents of nursing homes, and we are taking steps to address these matters.

I would like to thank NTIA's staff for their hard work in getting this program off to such a successful start. Thank you again for the opportunity to testify before you today. I have enjoyed working with your staffs and the DTV caucus, and I look forward to more

collaboration as we work together to make this transition successful. I will be happy to answer your questions.

[The prepared statement of Ms. Baker follows:]

#### STATEMENT OF MEREDITH A. BAKER

Mr. Chairman and Members of the Subcommittee, thank you for the opportunity to appear before you today to discuss the progress made by the National Telecommunications and Information Administration (NTIA), Department of Commerce, in assisting Americans to prepare for the digital television (DTV) transition. In particular, I am pleased to report to you on NTIA's successful launch six weeks ago of the Television Converter Box Coupon Program (Coupon Program). Although the Program is off to a good start, this is only the beginning. In this statement, I will share with you the additional steps NTIA is taking to implement the Coupon Program and the agency's ongoing efforts to expand public education and outreach on the DTV transition and the Coupon Program.

As I indicated, NTIA successfully launched the Coupon Program on January 1, 2008. Across the Nation, consumers have begun ordering their coupons through one of four convenient channels: via a toll-free number (1-888-DTV-2009), online at [www.DTV2009.gov](http://www.DTV2009.gov), by mail or by fax (1-888-DTV-4ME2). The phone line is available to consumers 24 hours a day, seven days a week, with live agents available at all times and an Interactive Voice Response system available for English and Spanish-speaking callers. The phone line can accommodate requests in more than 150 different languages. There is also a special assistance line for the hearing impaired in English and Spanish. Braille application forms are also available. To date, approximately 65 percent of the requests have been received through our Web site, 34 percent through our telephone channel, and less than 1 percent of the requests by mail and fax. Approximately 89 percent of the household requests are for the maximum number of two coupons.

On January 1, NTIA with its partner IBM took requests from over 249,000 applicants requesting 475,000 coupons. Consumers from every state in the nation applied on that first day. By the end of the first week, NTIA had received over one million requests for two million coupons. To date, NTIA has accepted more than 2.4 million household requests for more than 4.7 million coupons, representing 20 percent of the program's base funding. Approximately 47 percent of these households identified themselves as fully reliant on over-the-air television. During this first six weeks, the Coupon Program obtained more than 83 million print and broadcast media impressions. NTIA's daily efforts working with the media has helped generate awareness of the DTV transition and Coupon Program. This initial surge of interest in the Program and the correspondingly high application rate indicate that consumers are becoming increasingly aware of the DTV transition and are ready to take action.

One of the keys to the success of this program is its voluntary nature, which has fostered strong public-private partnerships. As I have discussed this issue with other federal officials, non-profit leaders, and private sector partners, I have witnessed their willingness to work together to make the transition a success. The industries most directly affected by the transition have initiated significant educational efforts with real financial commitments to ensure that no household is caught unprepared on February 18, 2009. The DTV Coalition is also making great strides in educating the American public about their options for making the transition.

As a complement to these efforts, NTIA has instituted a proactive consumer education campaign about the role of the Coupon Program in the DTV transition, leveraging opportunities to partner with consumer groups, community organizations, federal agencies, and industry to inform consumers of their options. To date, NTIA's consumer education partners include over 130 social service and community organizations with ties to the senior citizens, rural, minority, and disabled communities as well as a variety of federal agencies with direct communications with other constituent groups. NTIA is reaching out to trusted institutions, such as the NAACP, AARP, and the Native American Journalists Association to reach populations most likely to be affected by the transition.

In addition, information about the Coupon Program is being made available in numerous foreign languages - - Spanish, French, Chinese, Vietnamese, Korean, Filipino, and Tagalog. On December 1, 2007, Secretary of Commerce Carlos M. Gutierrez was featured in the first of a series of public service programs entitled, "TV Digital...Que Tal?" aired throughout the United States and Puerto Rico by the Spanish-language Univision Television Network. The program discussed the benefits of digital television broadcasting and provided detailed information about the need for

viewers that rely on over-the-air broadcasting to obtain digital-to-analog converter boxes to continue to use their analog television sets, and how to access the Coupon Program to obtain coupons for the purchase of boxes.

In addition, NTIA hosted a meeting on January 24, 2008 with more than 15 other federal agencies, including the Federal Communications Commission, the Departments of Veterans Affairs, Health and Human Services, Agriculture, and Homeland Security, the Administration on Aging, and the Federal Emergency Management Agency, to further coordinate federal efforts to educate the nation about the February 17, 2009 deadline to transition to digital television. During the meeting, NTIA outlined its current and upcoming consumer education efforts and the agencies discussed their strategies and existing communications efforts to raise consumer awareness of the DTV transition and the Coupon Program.

In collaboration with IBM and Ketchum, NTIA has developed a comprehensive toolkit of information to provide guidance to its partners that are playing a critical role in educating their members, constituents and customers about the Coupon Program. Available for use by partners since January 1, 2008 and continuing through early July 2009, the Toolkit attempts to offer simple tips and recommendations to help each organization reach its members with information about the Coupon Program in a way that will resonate best with them. The Toolkit includes a set of materials, including fact sheets, a poster, a mailer, sample presentations and other materials that can be co-branded for use by partners. The Toolkit also contains specific tools and strategies that can be used to reach the media to effectively deliver the Coupon Program message, and ideas and resources for informing consumers through community and in-store events or other activities.

The Toolkit includes four sections, each of which can be used on its own, or in conjunction with other parts of the Toolkit:

- **Program Background.** This section includes background information on the DTV transition and the TV Converter Box Coupon Program. Partners are strongly encouraged to familiarize themselves with the Coupon Program and with what consumers told us they want to know.

- **Development and Dissemination of Messages and Materials.** This section includes a series of tailored messages about the Coupon Program that partners can incorporate into their own materials to explain how to apply for and redeem coupons. The messages have been tested in consumer focus groups to ensure that they are easily understood and have been reviewed by NTIA for accuracy and consistency. This section also outlines the ready-made materials available for downloading, co-branding and use by all partners.

- **Communicating Through the Media.** This section provides guidance and ideas for generating "earned media" coverage through television, radio, print or online information sources. The information in this section ranges from ideas for conducting proactive media outreach, to placing public service announcements and tips on conducting a solid media interview.

- **Conducting Outreach Activities.** The Toolkit includes creative ideas for communicating about the Coupon Program through existing organizational resources, as well as developing events and activities that focus specifically on the TV Converter Box Coupon Program.

NTIA has been greatly encouraged by the robust participation of manufacturers and consumer electronic retailers in the Coupon Program. As part of this effort, NTIA has been working with manufacturers to ensure that converter boxes are timely available for viewers and contain the necessary functions and features. Voluntary industry efforts by consumer electronics manufacturers to educate consumers about the DTV transition and the Coupon Program are clearly having an impact as demonstrated by the number of requests for coupons NTIA has received to date.

As of February 1, 2008, NTIA had certified over 34 converter boxes containing the required minimum features as well as permitted features, including three boxes which include the capability to pass through an analog broadcast signal. A complete list of converter boxes certified to date is available on NTIA's website. These boxes demonstrate a range of consumer options and are priced between \$40 and \$70. We are continuing to review and certify boxes as manufacturers come into this Program.

NTIA continues to work on one issue with the Federal Communications Commission (FCC), consumer electronics manufacturers, and the broadcasting community to ensure that there are converter boxes that will serve the needs of viewers of Class A, low-power television, and television translator stations. As you know, these stations are not subject to the February 17, 2009 analog broadcasting cutoff deadline. Viewers of these stations who wish to continue receiving these analog broadcasts as well as the new digital signals after the February 17, 2009 deadline may want a converter box that includes an analog signal pass through feature. When the Coupon Program regulations were issued, NTIA asked manufacturers to take this into

consideration in the development of certified converter boxes. At the same time, NTIA asked manufacturers interested in including this feature to investigate options that would provide an acceptable analog signal pass through with minimal signal loss. On February 5, 2008, I sent a letter to each of the manufacturers involved in the certification process to once again encourage them to consider the needs of all viewers, including the viewers of Class A, low-power television, and television translator stations, in the development of converter boxes for the Coupon Program. NTIA is committed to an expedited review and recertification process for any box to which a manufacturer adds an analog signal pass through feature.

I was very pleased by the recent announcement of the National Association of Broadcasters (NAB) that it will be taking steps to help resolve this issue. NAB has said that it will also request that manufacturers incorporate the pass-through feature. In addition, it will urge broadcasters to let their viewers know that low-power stations and translators will not necessarily discontinue broadcasting in analog at the deadline, will help to identify locations where large numbers of viewers might still be getting analog signals after the transition, and will produce television spots that directly address the issue and what viewers need to do to still receive the signals.

In addition, NTIA began accepting grant applications in October 2007 from eligible Class A, low-power television, and television translator stations to enable them to continue analog broadcasts. This grant program will provide \$1,000 to eligible stations that must purchase a digital-to-analog conversion device to convert the incoming digital signal of a full-power television station to analog for transmission on the station's analog channel. Applications will be accepted until February 17, 2009.

Of course, stations that operate at less than full power will also eventually convert to digital broadcasts, and by statute NTIA is directed to assist this effort through a program that provides \$65 million for necessary equipment upgrades in eligible rural communities. To implement this program, a technical correction to the program authorization is required to permit the agency to begin making funds available during fiscal year 2009. S. 2607, recently introduced in the Senate, provides the correction necessary to enable NTIA to implement the program. NTIA will continue to work with the FCC, industry and the broadcast community to assist low-power television stations and their viewers during the transition to digital broadcasting.

NTIA will begin mailing coupons to consumers at the beginning of next week - one year from the date of the transition. NTIA and IBM have been working closely with retailers in anticipation of this day. The agency has certified more than 615 retailers, representing more than 16,475 outlets nationwide, to participate in the program. Eight of the largest consumer electronics retailers -- Best Buy, Circuit City, Kmart, RadioShack, Sam's Club, Sears, Target, and Wal-Mart - as well as many smaller retailers are among the 615 retailers certified by NTIA to participate in the Coupon Program.

At the request of many of these retailers that have reported the need for assistance in ordering stock, NTIA has made information available about the number of coupons requested on a per State basis as well as with greater granularity (by first 3-digit zip code). NTIA and IBM have made employee training materials available to all participating retailers so that they will be ready to answer consumers' questions about certified boxes and the use of the coupon for payment. NTIA and IBM have tested the coupon application and redemption process in a limited pilot program in two markets to identify and correct any issues prior to full scale deployment of the coupons to consumers. When the Coupons are mailed next week, over 9,000 retailer locations will be participating in the program, including locations in all 50 states, Puerto Rico, and the U.S. Virgin Islands. Participating stores will have completed certification in the Coupon Program and will have indicated that their employees are trained, they have converter box inventory in their stores and their systems are prepared to redeem coupons. Participating retailers can be found on [www.DTV2009.gov](http://www.DTV2009.gov).

Thank you again for this opportunity to testify before you today. I will be happy to answer your questions.

---

Mr. MARKEY. The gentlelady's time has expired, and we will now turn to members of the subcommittee for questions of the panel. And the chair will recognize himself for a round of questions. Chairman Martin, I want to talk to you about the fact that the geographic coverage area for broadcasters may not be exactly the same in digital as it is in analog. In other words, some customers may

find themselves newly outside the reception area of a channel they currently receive or they may need to adjust or to put up antennas to get the digital signal. What is your estimate of the number of households that may find themselves outside the reception area for channels they have historically received and what is your estimate of the number of households that will need new antennas as a result of this transition?

Mr. MARTIN. Let me say first that our estimate is that all of the viewers within their predicted contour of the broadcast stations will continue to receive the broadcast signals after the transition just as they do today so there is going to be a change potentially for some consumers who are outside that predicted contour. Those are consumers today who are not within where we expect the broadcasters to be able to serve but maybe on the rural areas or in other communities who still pick up some of those other broadcast signals, and there could be some change on that. I asked our engineers that question in response to this interest survey that was released earlier this week which they had some questions about and think there are some flaws in. But they estimate that that will be 5 percent or less change, and this would only be on consumers who are outside where we say broadcasters must serve today.

Mr. MARKEY. We are in situation where people may receive the signal in those areas and perhaps they are not expected to but they do today, and beginning next year they won't any longer, so I think it is important for us to deal with how people actually do relate to these signals in the analog era.

Mr. MARTIN. We don't have any way to know for sure because those would be people that are receiving broadcast signals and they are not expected to be, and the broadcasters are not expected to be serving those. They are picking up signals beyond where the broadcasters—

Mr. MARKEY. It is just important for us to know how many of those people will need antennas so that there is an understanding of what will happen on that day in terms of the number of people who will be complaining that they have always received a signal during the analog era and they are now not even though under our historical guidelines perhaps they weren't expected to receive it but they did receive it and now they won't receive it any longer.

Mr. MARTIN. And as I said the only estimate I have from our engineers is they think it will be less than 5 percent of the consumers who would be impacted because again everyone who is in the predicted contour will continue to be.

Mr. MARKEY. So do you think antennas will be a big problem? In other words, in that area do you think that we might be talking about millions of people who will have to purchase antennas that today would not necessarily need to use an antenna in order to receive a signal?

Mr. MARTIN. Well, let me try to explain the way the engineers explained to me the concerns. For example, with the Centra survey that was released this week that said that, they said that the Centra survey, the flaw in that study as it compared the analog broadcasting today to digital broadcasting tomorrow and it assumed analog consumers today have an antenna on their roof as our model assumes, and it has for years, and then compared that

to digital signals tomorrow and assumed that consumers did not have an antenna on the roof and only had rabbit ears, so you are comparing and contrasting different consumers with different antenna structures so what we would say is consumers should be all except for that 5 percent should be continued to be able to receive broadcasting tomorrow as they do today with no change in the antenna as they do today so there shouldn't be any difference between a roof top or a new antenna.

Mr. MARKEY. Congress is a stimulus response institution and there is nothing more stimulating than millions of people on February 17, 2009, calling to say they no longer can get Channel 4, and I have had it since 1949 in our households so we don't have to worry about the successful part of it. We have to worry about the part that is going to cause disruption. One final question. Hundreds of low power stations and thousands of translators will remain in analog form and just 4 converter boxes reportedly possess the so-called analog pass through capability. How are the two of you coordination consumer education efforts in affected communities, and are you working with retailers to insure that appropriate boxes are stocked in stores in those communities, and if you could give me a brief answer that would be very helpful.

Mr. MARTIN. We are certainly trying to work to coordinate to make sure that the message is communicated effectively to consumers about the concern. We are taking a variety of other steps including trying to encourage LPTV stations with a hard deadline to transition to digital, working with consumer—I sent letters to the Consumers Electronic Association and the Consumers Electronics Retailers Association asking them to make sure each manufacturer produces at least one box that has a pass through and that each retail outlet contain and sell at least one box with a pass through. And we have also proposed that we try to provide some additional assistance to the class A low power stations and provide them the opportunity to become full power stations and be at the front of the line, so to speak, after the digital transition, which I think will be essential to the low power community.

And they have indicated to me that that would be a very important opportunity for them to ease their transition, and so I have taken a variety of steps and will continue.

Mr. MARKEY. Ms. Baker, very quickly.

Ms. BAKER. We are working with the FCC obviously on the education program with the CBA. On our coupon mail out we will identify the boxes. We will asterisk which boxes have low power pass through and send them to the web site with coordinated fact sheets. We also want to make sure that everyone knows that they don't all need it so we want to clarify that and work with again the education effort, the joint industry education effort.

Mr. MARKEY. OK, great. This is going to be a big issue. We have to make sure that this part of it works. The chair recognizes the gentleman from Florida, Mr. Stearns.

Mr. STEARNS. Thank you, Mr. Chairman, and I welcome the opportunity to work with Chairman Martin. He has always been a good friend, and I look forward to working with him. Secretary Baker, in your opening statement and mine we both talked about the huge number of people that are requesting these coupons, and

flat out wouldn't you say that this program is working, that industry and government and consumer education is working, would you say so?

Ms. BAKER. I think the word is definitely getting out.

Mr. STEARNS. Definitely. Would you say it is working?

Ms. BAKER. Yes.

Mr. STEARNS. OK. Some people are asking to require all converter boxes to include a low power pass through. Are you concerned that the manufacturers and retailers suddenly might drop out of the program altogether if we change the requirements at this late date?

Ms. BAKER. Yes. I think it is a voluntary program and as I mentioned not all people need this pass through so I think it would stifle the retailer participation and the manufacturers if this were required.

Mr. STEARNS. Thank you. And with that, Chairman Martin, it seems that you are talking about low power issue, and I guess a lot of us are wondering what all the facts are. I believe you have already started providing some data. It needs to be cross referenced staff tells me before we can take action. Can you obviously work with the committee, particularly our staff, to create a list of all low power stations and their location breaking out those that are class A or translators, those that will be digital by February 17, 2009, whether they are an affiliate of one of the top 4 networks, whether all the stations in their market are analog, low power, and how many people are actually watching them. I say this as an overlay because as I talked to Secretary Baker there is a perception that this low power—to include a low power pass through it is going to create some kind of detriment so towards the end if we had all those facts and we could cross reference them that would be helpful. So if you would be so kind as to address some of the items that I have requested that you provide our staff.

Mr. MARTIN. Of course we will work with your staff to provide any of the information that you end up needing and that we have and have available. I think we have already tried to provide some of those numbers. I can give you a brief overview if you would like. And the only problem, the only issue that I see with any of the requests you have made is Nielsen doesn't actually keep track of the number of people that are watching the low power television stations. They focus on the full power television stations. So we may not be able to get you—we will provide you whatever we can obtain.

Mr. STEARNS. Can you provide us a list of all the low power stations and their locations?

Mr. MARTIN. Absolutely.

Mr. STEARNS. That is no problem.

Mr. MARTIN. Yes.

Mr. STEARNS. Breaking out those that are class A or translators, can you provide that?

Mr. MARTIN. Yes. That is no problem.

Mr. STEARNS. Those that will be digital by February 17, 2009?

Mr. MARTIN. All the information we have about anybody who will be digital, absolutely.

Mr. STEARNS. Whether they are an affiliate of one of the top 4 networks, can you provide that?

Mr. MARTIN. Yes.

Mr. STEARNS. And whether all the stations in the market are analog, low power.

Mr. MARTIN. Yes.

Mr. STEARNS. And how many people is the one you say you can't provide?

Mr. MARTIN. We will provide whatever we can gather but I am not sure we will be able to provide that.

Mr. STEARNS. Thank you, Mr. Chairman.

Mr. MARKEY. The gentleman's time has expired. The chair recognizes the gentleman from Michigan, Mr. Stupak.

Mr. STUPAK. Thank you, Mr. Chairman. Chairman Martin, in 2004 as I said in my opening News Corp acquired DirecTV and pledged to provide local carriage in all 210 DMAs, yet here we are in February, 2008, and DirecTV only covers 142 DMAs and EchoStar 170 DMAs. You testified at this committee that it would be a win for consumers' perspective and policy perspective. Later this month you are urging the commission to approve Liberty Media's request to acquire News Corp stake in DirecTV without a similar pledge of working to provide universal local to local. Why not?

Mr. MARTIN. First, let me say I do continue to think it would end up being a win from a consumer perspective, and I support trying to make sure that we move forward. I think you asked it in your opening statement to have the commission work with Congress to have a deadline that we would insure that all local to local actually occurs. I went back after the last hearing and looked at the commitment that was made in 2004 and it was a commitment that was made not to deliver all those local to local using satellite but to use a hybrid system in which they delivered local to local, and some communities via satellite and some using an over the air signal that would be obtained and then integrated in.

Mr. STUPAK. And that hasn't worked either?

Mr. MARTIN. No, but we have required—they committed to do that by 2008 and 2004, and we are requiring them again in this order that I circulated to the commissioners that they do have to integrate all of those in all 210 by the end of this year.

Mr. STUPAK. How many have they integrated thus far if you have 10 months left this year? Very few, if any.

Mr. MARTIN. Very few. Absolutely.

Mr. STUPAK. So they are not realistically going to get done by the end of 2008, are they? If this merger goes through they are no longer required to do it, right?

Mr. MARTIN. No, no, no. We are making if the merger goes through they are still required to. We are not eliminating that obligation of being required to.

Mr. STUPAK. So realistically are they going to get it done even if the merger goes through?

Mr. MARTIN. They are saying that they will be able to roll that out to offer that to consumers in all 210 markets this year using this integrated solution, not using the satellite into satellite solution, which is an imperfect solution but that is—

Mr. MARKEY. The gentleman from Michigan, just so that he knows, there are 3 minutes left to vote on the floor. We could suspend here and come back and then I will recognize the gentleman.

Mr. STUPAK. Why don't we do that, why don't we suspend, and get back my time.

Mr. MARKEY. There is only one roll call, a Republican motion to adjourn the Congress for the day, which we are going to go over and oppose. I think we will be successful and that will allow for the continuation of the hearing. We will take a brief recess. Thank you.

[Recess.]

Mr. MARKEY. The committee will reassemble and we will once again recognize the gentleman from Michigan with an extra 30 seconds on the clock because of the disruptive time at which we suspended the hearing, and the gentleman is recognized once again for that purpose.

Mr. STUPAK. Thank you, Mr. Chairman, and thank you for your courtesy. Mr. Martin, we were talking about local to local, and I still want to ask you about that. Why don't we just, FCC just put a hard date much like we do with DirecTV. Why don't we just say by February 17, 2009, this will be done, the last remaining 40 areas will be covered because this hybrid system that you are speaking of still would not work in areas like Marquette, Michigan, Alpena, Michigan because of topography.

Mr. MARTIN. And I was able to confirm during the break the hybrid system that they are offering to do is what they had committed to do in 2004 they are saying they will have done by October of this year.

Mr. STUPAK. And I am telling you the hybrid system won't work because of the topography of some areas especially in Minnesota, northern Michigan, so that still doesn't solve our problem. Why not just put a hard date and say, OK, by February 17, 2009, we got to go to DirecTV. Let us make sure we have all local to local and all the DMAs.

Mr. MARTIN. The reason why is because actually Congress made the decision to require instead of requiring all the satellite operators—

Mr. STUPAK. Congress did not say it had to be done. We encouraged it to be done. We had hoped the FCC would follow through so I am urging the FCC to do it. So if we introduce legislation saying local to local must be completed by February 19, 2009, would you be supportive of that?

Mr. MARTIN. I would. I mean I have been very supportive of carriage in every context, and so I would and I would continue to say that I think that is a good thing and would be supportive of it, yes. I would be happy to work with you on it.

Mr. STUPAK. OK. So why don't you just do it as part of this merger here, require it to be done? If you are looking at this merger later today.

Mr. MARTIN. I believe the fact that Congress was very specific in saying that the satellite operators didn't have to do it they were going to do it market by market. If they did it for one station in the market they would do it everywhere, but they did not require it to be done nationally and so I think that them coming forward

saying that they would assume it through other technology is probably the extent to which that I think is reflective of what I understood Congress' intention on that. I certainly support is as a policy matter and would support legislation if it was introduced.

Mr. STUPAK. So why don't you have the commission do it as part of the merger. If DirecTV covers 142 now they would have about 60, 80, almost 70 more to go so why not just make it part of that agreement you are looking at later this month?

Mr. MARTIN. I think what is important is if we required that that way it would take away the capacity to provide the carriage for other signals because of the one limited nature of their capacity.

Mr. STUPAK. Well, that is the argument but has the FCC ever inquired, done a feasibility study or looked at the cost due to local to local? What is the cost? We hear that excuse all the time but yet we see new channels coming on all the time.

Mr. MARTIN. No, what I was saying is I agree. I think it is probably a higher priority to carry the broadcast signals. I support that. I was meaning that I deferred to Congress' decision if they weren't going to require that of the satellite operators unlike the cable operators, and so it was out of that deference that I was concerned about whether we should do that, but I support it and would support the legislation if that was introduced. And I think I would support working with you on anything else we can come up with to try to solve the problem.

Mr. STUPAK. It will be introduced, hopefully soon. We are looking at it right now. Thank you, Mr. Chairman. Thank you, Mr. Martin.

Mr. MARKEY. The gentleman's time has expired. The chair recognizes the gentleman from Michigan, Mr. Upton.

Mr. UPTON. Thank you, Mr. Chairman. Welcome, both of you. Chairman Martin, one year to go before the transition my understanding is that the broadcasters are still waiting on the FCC's seventh reconsideration order and some other items so that they can finish constructing their digital facilities. It seems to me that in terms of media issues the FCC should be focusing its attention on that rather than other TV related items. Would you be able to send us a list of all the pending and planned media related rulemakings that you anticipate that the commission might address between now and February 17 of next year?

Mr. MARTIN. I would be happy to, and I believe the seventh DTV order we did at the end of the year and the only thing that I know from a technical standpoint there is individual petitions for recon that were filed that said I don't want the channel you gave me, I want a different one, and that is actually on circulation already at the commission. But I will be happy to give you a list of the remaining technical items that would need to be done but I believe all of them are already on circulation and we anticipate being able to move through all of them. Several of them are on the agenda for this month and all of them are in circulation before the commission now.

Mr. UPTON. Great. Thank you. Secretary Baker, will you be able to track and share the coupon requests and redemption date rate data to help the manufacturers and retailers allocate their resources in proportion to levels of demand across the country?

Ms. BAKER. Absolutely. IBM has designed a system that will electronically track as we have already shared with the retailers the applications down to the zip code where they have been asked for. We will also give that information both to the Congress as well as to the retailers as to where these coupons are redeemed.

Mr. UPTON. Great. And I know that you recently received a letter from Chairman Dingell and others asking to let you get people that get back in line after their coupons expire. The letter asked you to do so. However, only if it won't cause us to run out of coupons. But my sense is that we are going to have to wait a couple of months to see if the redemption and the expiration rates occur before. We will know whether there in fact is going to be a risk so I am not necessarily against that at all but I think that we are going to need to see some data before we get there.

Ms. BAKER. I agree with you. I think as we move from the theoretical design of this program to when it is more real and we have real people and real constituents we start to get a little bit more sympathetic, and I think this is one of those things that we can be very sympathetic on. I do think that we need to wait and see the redemption rates but I have gone ahead and asked IBM to price out what the cost of this would be, what would the cost of the application, fielding another application, making another card, mailing it out to another constituent so we have the data as to how much it cost and so we can compare that with the redemption rates and see if there is money to do such a thing.

Mr. UPTON. Thank you. I yield back.

Mr. MARKEY. The gentleman's time has expired. We have another—Mr. Shimkus earlier made reference to the movie Groundhog Day, and there is now another motion to adjourn on the House floor. If it goes on all day there will be a more contemporary movie, There Will Be Blood will be what happens by the end of the day. But at this point we are all still in good humor and I think we have enough time actually for 5 minutes to recognize one member, and that would be the gentlelady from California, Ms. Eshoo.

Ms. ESHOO. Thank you, Mr. Chairman. What I want to do is just put my questions out there and then give you time to respond to them. My first question is directed to Ms. Baker. Thank you for being here. Congratulations on your position. On August 3 of last year the President signed the 9/11 Commission Implementation Act into law, and contained in that was a grant program for the PSAPS. I along with Mr. Shimkus co-chaired the E-911 caucus in the House and so we are very interested in the capabilities relative to E-911. So I would like to know what the status of the funding is for those grants and how the dollars are going to be distributed. To Chairman Martin, I would like to know if you have decided if you are going to auction the advanced wireless services spectrum, and if so when you plan to do so. That is fallow as you well know, and I think that this auction, the auction of this spectrum, should be as soon as possible but I would like to know where you are on that.

I would also like to query on the whole issue of cable. When one looks at the decisions that you have taken, it kind of—it says to me that there is a deep chasm between you and cable, the manipulation of the data in the 7070 proceeding, and I use the word ma-

nipulation because I think the data was manipulated. I don't think in that re-regulation that the consumers win. The franchising regime should allow it to work, and I don't think that that is consumer friendly. The multicast must carry, I think that that raises rates. I don't know where you are coming from on that. The slashing of the rates cable can charge for leased access. Now I understand that people can fall on either side of that issue but I think that that is on the list as well.

The eradication of existing contracts with the multi-dwelling units, the continued pressure to implement ala carte which I think raises rates, and there is a lot that seems to drive you on that. I don't see broad support for that but you seem to stay on it, and then the 30 percent cap. I am not happy with the—that is one of them but I don't know whether I disagree with you on that or not. But that is a long list and I think that the commission really needs to be working better with cable. I think that the consumers are hurt in some of these decisions but I don't want the decisions to just stand on their own. I mean it is a long list and I think it is troubling to me and I think that it is to others. So those are my questions, and maybe we can start with Ms. Baker on the PSAPS and the funding and the grants.

Ms. BAKER. Right. Well, we are glad that the E-911 program has finally been funded. We have had a joint program office with NITSA now for I think over a year, and we have just received a draft joint work program. I am happy to share it with you and your staff.

Ms. ESHOO. What does that mean, how you are going to distribute the funding?

Ms. BAKER. Yes. And so we are working with them, and I am happy to share the draft with you.

Ms. ESHOO. Do you have a date by which the funding will be out?

Ms. BAKER. I think that that is still in development.

Ms. ESHOO. OK. Chairman Martin.

Mr. MARTIN. Sure. I am happy to end up answering your concerns about the—my concerns with cable, and I would say that first just very briefly in direct response to some of the concerns, multicast must carry doesn't raise rates. It is the carriage of free programming so it can't raise rates. Leased access, decreasing rates for leased access can't again raise rates. We were decreasing rates for leased access. On the apartment building issue and the franchise reform, I continue to believe everyone deserves to have the benefit of competition, not just people that don't live in apartments. An overwhelming number of minorities in this country do—more minorities live in apartment buildings than others and I think they deserve to have the benefits of competition.

Ms. ESHOO. Do you think minorities are hurt by your overall media consolidation? I mean it seems you support minorities on one thing and then on one of the largest things that the commission could ever take up minorities are, well, I don't want to use the term, but they are hurt by it.

Mr. MARTIN. Well, I was glad that maybe you agreed with the 30 percent cap but overall when you talk about the list, I think this is the reason why, the list, and if I can have this entered into the record, Mr. Chairman, I would appreciate it. What we have seen

is a dramatic increase in cable rates compared to every other sector the commission regulates. Cable rates have dramatically increased. In 1996 when the Telecommunications Act was passed cable rates were \$22 a month for expanded basic. Today they are over \$50 a month. The reason why I am concerned about cable is because I believe consumers are concerned about cable. Eighty percent of consumers say they think they are paying too much, and I believe we need to do something about the ever expanding cable rates.

Mr. MARKEY. There is only 3 minutes left on the roll call on the floor.

Ms. ESHOO. Can he answer on the auction?

Mr. MARTIN. We have been very busy with the 700 megahertz auction. As soon as we finish that, I plan to move forward on the—

Ms. ESHOO. When do you anticipate that to be?

Mr. MARTIN. The 700 megahertz auction could close when people stop bidding on it and so I am waiting for that to conclude, and I can't give you an exact time frame but that will be the next priority for the commission as soon as we finish the 700 megahertz auction.

Ms. ESHOO. Thank you. Thank you, Mr. Chairman.

Mr. MARKEY. Again, the committee will stand in recess, and we will reconvene in another 6 to 10 minutes.

[Recess.]

Mr. MARKEY. The committee will please reassemble, and once people are settled down a little bit the chair will recognize the gentleman from Illinois, Mr. Shimkus.

Mr. SHIMKUS. Thank you, Mr. Chairman. I finally got lucky on a hearing for a change so let me go with Secretary Baker. According to Nielsen only 11.7 percent of the households representing 13 million homes rely exclusively on the over the air television as of January, 2008. What percent of coupon requests have come from such homes?

Ms. BAKER. Right now we are at 47 percent have been over the air only.

Mr. SHIMKUS. When we have had other of these hearings what I have always focused on is the amount of consumers out there, and I focused on how many have cable, how many have satellite TV, try to address the cost, do we have enough money budgeted and the issue, so that is kind of where my line of questionings have continued to focus on. And this is for both Chairman Martin and you, Secretary Baker. I know there has been an overwhelming interest in the converter box coupon since the public was able to start requesting them. Over 3.4 million converter box coupons will be mailed out starting next week. If the public has requested such an overwhelming number of coupons over a year before the transition date doesn't that demonstrate that the consumer education plan is working, and a follow-up question, how should consumer education change as we get closer to February 17, 2009? We will go first with Chairman Martin.

Mr. MARTIN. I certainly think that is evidence that the education campaign is beginning to work, and I think the most important thing that we need to recognize as some of the recent surveys have been done about consumers by Consumers Union that as more and

more people become aware of the transition our education focus needs to change to not only just saying the transition is coming but what they need to do to prepare for it, and more and more the focus on what actions they need to take as opposed to just the transition is coming.

Mr. SHIMKUS. Secretary Baker.

Ms. BAKER. I do. I think the fact that we had such a large demand the first week means that the consumer education campaign is working. The spike really is it goes up the first week and then it kind of levels off. I think we are at an average of 61,000 coupons now a day being asked for. I think that we will have spikes. We will probably have a spike at the year out as we have all this great interest in a year out and the events of the year out. I think we will have different spikes throughout the summer. I think we are looking for spikes so that we can get the consumer education campaign out there particularly to the elderly, the disabled, the rural, the low income, and the minorities.

I also think what will be more telling is not the demand for the coupons but how they are redeemed and I think we will start seeing those. Obviously since we are mailing the coupons out starting next week, we will start seeing redemption rates shortly and we will see what the redemption rate is on the coupons and that will be more telling.

Mr. SHIMKUS. Great. And since I have you here, Chairman Martin, let me just focus briefly on the WARN Act and the FCC has pending before it a rulemaking to implement the voluntary alert warning system on commercial mobile networks. This is part of your execution of the act which also detailed a process based on industry recommendations for its implementation. You have raised questions about the industry's detailed recommendations especially with respect to the alerting geographic granularity. That is tough. I usually don't try to go into multi-syllable words. Granularity is one of the toughest ones I have had to use today but since the involved parties worked to provide a consensus and set of recommendations that can be implemented broadly across commercial networks, can you speak to what concerns you may have? As you know, Congress worked its will and permitted carrier participation to be voluntary and for the FCC rules to be consensus driven.

We obviously want carriers to participate or consumers won't have access to the alerts. Do you worry that your process underway may prove a disincentive for carriers to participate and thus reduce the availability of alerts to consumers as outlined in the recommendations presented by the WARN Act advisory committee?

Mr. MARTIN. No. I think the process has actually been very conducive. Out of all the recommendations made by the joint committee that contained both consumer interest, public safety interest, and the wireless industry's interest there was only one concern that I raised on the recommendation and it was on the geographic area. I didn't think that we should require anything smaller in terms of geographic area but I was contacted by several public safety agencies and by the mayor of New York about concerns that if we require—the geographic area that was being discussed would not be conducive to extremely dense urban areas like New York City, and trying to find a way that we would make sure that the

residents of New York were also able to get the benefits of the WARN Act and try to either get some of the industry players to participate in something on a smaller geographic area or to try to make sure that we allowed individual public safety entities and/or local communities to come forward and say we need it on a smaller area because it is so densely populated in our urban areas I think was important.

I am still trying to work with the industry on trying to figure out a way to voluntarily try to address this issue, and obviously I am going to be very sensitive to what concerns the Congress members may have about this one focus. I think that some Congress members had raised a concern with me about this but some of their offices have but I think more of them are comfortable with it now, and so we will continue going forward and work on this, but I think it is a voluntary program. I think we need to be very sensitive to all the issues that are raised by the whole organization. And as I said except for this one issue that was really raised predominantly by New York City, I think everything else has all been worked out.

Mr. SHIMKUS. Thank you, Mr. Chairman. And just for me to close, this is kind of tied in to digital transition because the whole debate of date certain and getting the spectrum freed up for the first line responders is something that a lot of us have worked very diligently to—the last thing we want, Mr. Chairman, is another major catastrophe where we have people not able to communicate with each other. The public broadcasters are on the Hill today, and the ones I talked to have been very strongly in support of the date certain based upon their plans and procedures and what they are trying to do. And I hope we can continue to move in that direction for what has been my focus, and I know my colleague, Congresswoman Eshoo's, is the first line responders and the public safety communities. So with that, thank you very much, Mr. Chairman, and I yield back the balance of my time.

Mr. MARKEY. The gentleman's time has expired. To the gentleman from Texas, we were going to recognize Mr. Boucher before the last roll call but he decided to pass so that we could go so if you don't mind we will recognize Mr. Boucher out of order and then we will come back to you. The gentleman from Virginia, Mr. Boucher, is recognized for 8 minutes.

Mr. BOUCHER. Well, thank you very much, Mr. Chairman, and Mr. Martin and Ms. Baker, welcome to the committee. We appreciate your advice this morning. In November of last year I had the opportunity to visit White Haven in the United Kingdom. That is the community where the digital television transition was first completed in the UK. And I was very interested to learn about that experience. It was a good experience for them. They had no surprises. On the day of the transition everyone was aware of it. They had taken the steps to prepare themselves. That of course is the goal we hope to achieve in the U.S.

They did, however, encounter some issues that I don't think we have given much consideration to with regard to our transition, and I would welcome your thoughts about these issues. There were two in particular. They discovered that 10 percent of the external antennas had to be replaced in order to accommodate the digital signal. These were outdoor antennas that were adequate to get an

analog signal, probably a snowy one, not a very good one, but at least these outdoor antennas could get analog signals. They were not sufficient, however, to get a digital signal at all, and so 10 percent of the antennas had to be replaced.

Now in putting together a program for converter boxes and the subsidy program for that, we really thought that would be the only hardware need. We were not aware that possibly outdoor antennas would also have to be replaced. And I don't know how many that will be but there are about 70 million analog sets in the U.S. that are over the air dependent. If you took 10 percent of that figure, we would be talking about 7 million homes. It probably won't be that many but that is the outer edge of the potential problem. So my first question to you, and I have a second one and I will just have you answer both at once, my first question to you is what thought have we given to this, and how are we going to address that concern when it arises here in the U.S.? Is this just going to have to be a cost that the TV viewer has to bear or alternately should we consider legislation in order to provide the funding necessary to accommodate this just as we have accommodated the need for converter boxes.

The second challenge was this. They found that a very large percentage of the people had to have technical assistance. They got their converter boxes but they didn't know to install them. They had a need to replace outdoor antennas in some places but didn't know how to replace them or even really what the problem was. They might have had their converter box properly installed but still couldn't get a signal. Their problem was that their outdoor antenna wasn't adequate but they really had no way to know what that problem was. So in the UK their help program actually financed a broad range of technical assistance, and people employed through this program were made available to help with the converter box installation at the home and to assess other technical difficulties, including possibly the need to replace an outdoor antenna.

Now we do not have as I understand our program a technical assistance component. I guess we are thinking that the retail store that sells a converter box for \$50 or \$60 is going to provide that advice. Somehow I don't have confidence that is really going to work. I don't think that store, Wal-Mart perhaps, is going to have an ongoing interest in perhaps sending somebody to the person's home in order to solve these problems. And so I am wondering if we don't need to rethink our program in light of also providing some financing for technical assistance. So I have a couple other questions but those are the two main ones, and I just welcome your advice about to what extent we thought about this and how we might meet these needs. Mr. Martin.

Mr. MARTIN. In response to the first question you have got about the replacement of outdoor antennas, I think that our engineers would say because of what they call the cliff effect of digital broadcasting in which the people that are able to get it receive a better picture but those that are on the edges there will be a point at which you used to be able to get not a very good picture or a snowy picture outside of the contours of where the broadcaster is supposed to be operating but that you would no longer be able to, our engineers estimate it is probably closer to around 5 percent of those

outdoor antennas would end up needing to potentially be replaced in those situations.

Mr. BOUCHER. So your estimate is about 5 percent of our outdoor antennas?

Mr. MARTIN. This is what our engineers were saying, and that was what I referenced earlier in response to a question from Chairman Markey. And whether Congress decides to provide any additional support for that or not, I obviously would leave up to Congress to decide about the use of its resources, but we do estimate that it will be small but about 5 percent of those people using outdoor antennas would be what we would estimate, not as high as 10. In response to the second question about the technical assistance, I would say obviously there is already some response in the marketplace to these kinds of issues. Best Buy, for example, has their D squad that comes out, and we were at Best Buy last week for an event and they offered technical assistance in setting up any of the products that you can purchase there.

But we have also in response to some of the concerns that have been raised by this technical assistance have contacted some groups and some organizations that target particular groups that I think might need that technical assistance like the elderly or the disabled. We have been in contact with Meals on Wheels and have asked them, for example, to help distribute information about the upcoming transition. One of the concerns they raised, initially they said yes, and then they raised a concern that they then thought they would be asked to participate and do provide that technical assistance if they start telling people about the transition. So we have actually gone back to them and said, well, that will be positive, not negative.

And they said that they would need resources, and we said how much would you need to be able to participate. We have gotten some estimates on that. I probably should share that privately with folks, but they said that potentially they would be willing to help participate, and that would be targeting the kind of audiences that I think—targeting some of the consumers that might be most in need of assistance, and that would be one of the things that assuming Congress provides us additional resources that we have asked for this year in our budget that I have asked my staff to take into account to try to provide for the ability to try to target some of these consumers who we know will be needing some assistance.

Mr. BOUCHER. Are you asking for the resources that your evaluations suggest would be necessary in order to provide that technical assistance?

Mr. MARTIN. The only organization that I have been able to identify that could provide that directly would be the kind of, as I said, Meals on Wheels, which is we talked—

Mr. BOUCHER. Well, but they said they would need some funding to do it. Are you going to be asking us to provide the funding?

Mr. MARTIN. I have discussed—we have asked for additional appropriations this year of \$20 million, and I have talked to my staff about making sure we include the estimates for that program in our estimates of what we would do with that \$20 million.

Mr. BOUCHER. Well, the \$20 million leads me to the second question, and, Ms. Baker, I don't mean to exclude you. My time is run-

ning out, however. And that is that in the United Kingdom about \$1.2 billion in total was made available for their assistance program and their public education. They have got 1/5 of the population of the United States. Until now we have allocated \$5 million for our public education campaign. Just splitting their total appropriation in half, let us say that \$500 million went to public education there. You know, we are at 1 percent of that here. \$20 million doesn't really fill the gap very well. I remain deeply concerned that we still have not allocated enough for that, and now you are suggesting part of that \$20 million might even get diverted into a help scheme of some sort for technical assistance perhaps.

So, Mr. Chairman, my time is up. Let me just leave the thought that I think we need to do something on this subject. We are clearly going to need resources beyond the \$20 million that has been requested, and I hope that we can respond to that and do so, so we can prevent serious problems from occurring. Thank you. I yield back.

Mr. MARKEY. The gentleman's time has expired. The chair recognizes the gentleman from Texas, the ranking member of the full committee, Mr. Barton.

Mr. BARTON. Thank you, Mr. Chairman. I was a little bit late because I had to go use the hotline to call for my coupons. I wanted to make sure that there wasn't a shortage, you know, since they are going to start mailing them out next week, so I had to do that little errand. It is good to have our commissioner here. It is good to have Ms. Baker here. I know her and several members of her family very well. We got Commissioner Adelstein here. We are glad to have him here, and former Congressman Klink. The front row is just kind of an all star group of people. It is our, I guess, bi-weekly DTV transition update hearing so things are moving along pretty well.

I am always tempted when we have our chairman of the FCC to ask a totally extraneous issue but I won't do that today. On the good side, it looks to me like the coupon program is moving along pretty well. Over 4 million have been requested. You are going to start mailing them out next week. Not you, but the agency that is responsible for it. Do you see any problems in the coupon program as it currently exists, and I am asking that to Chairman Martin. And if Ms. Baker wants to answer, she can too.

Mr. MARTIN. No. I think the coupon program seems to be on track. There seems to be a high demand for it, and I think that we are moving forward in a positive way on that. I think as I said before it seems like there are a lot of consumers who are aware of the transition. We need to target our message to make sure we are telling them what they need to do but it seems like we are on track.

Mr. BARTON. OK. Ms. Baker.

Ms. BAKER. I would say that I am very happy with the retailers that are participating as we roll this out. We are going to be tracking very carefully as the coupons go out what the redemption is. There will be more retailers who are actually participating. We have certified a bunch more than those that are participating. Participating means they have boxes on the shelves. There will be more and more in the coming weeks. There will be more boxes with

more features in the coming weeks, so I think things look good. We will be monitoring it closely and sharing all that information with your staff.

Mr. BARTON. OK. Very good. Mr. Chairman, on the D block auction part of the reason we are doing the DTV transition is to clear up the spectrum so it can be used for other purposes, and one of the real supposed stars in the auction was supposed to be the D block, and so far the reserve price has not been met. There are many people, and I am one of those people, that thinks the commission has put so many encumbrances on it that the private sector is not really comfortable proposing a bid. If you don't make the reserve price, and it doesn't appear that you are going to, what is the commission's plan B on that D block spectrum?

Mr. MARTIN. Well, I think that the most important thing to put in context for all the encumbrances on the D block were that they were all done at the urging and the request of public safety to try to resolve the problems they have on interoperability, trying to find a way that the local police and local fire department are going to be able to communicate using the next generation of wireless services. And I think that we need to continue to end up having their concerns at the forefront of these issues going forward, but obviously the encumbrances and the expectations that they work with public safety if no one ends up bidding on that piece of spectrum were too great the commission will have to continue to go back and re-evaluate what we should put in place to try to resolve these public safety concerns.

I am pleased that the rest of the auction all went forward and we were able to meet the reserve price and all the other pieces. I think there were concerns that were raised about some of those encumbrances in terms of build out or openness on the C block. All of those have been met, and we have been able to successfully raise despite the fact that the D block has not met the reserve price, successfully raise significantly more revenue than anyone had anticipated, almost twice, and more revenue than we have ever raised in the auction in the past for even less spectrum than we have auctioned off in the past. So I think in general it has been very successful, but I do recognize the concerns that public safety raised seem like they are too great for at this point anyone being willing to put in place a bid that would be able to work with public safety.

I would hope that someone would come forward and be willing to work with public safety but if no one is then we are going to have to go back to the drawing board and consider how to—

Mr. BARTON. Well, I am going to encourage Chairman Markey and Chairman Dingell to squeeze in a hearing outside of the DTV transition on that issue because that spectrum, A, is valuable, and, B, is very important for public safety and first responders, and we need to figure out a way to get it sold in a way that meets the goals of the legislation that we all supported. And with that, Mr. Chairman, I yield back, and thank you for your courtesy.

Mr. MARKEY. I thank the gentleman, and I would say to the gentleman that when this auction is completed assuming that the D block does not have any bidders our intention is to have a hearing and then to do a top to bottom evaluation of what we should do

going forward. The chair recognizes the chairman of the full committee, the gentleman from Michigan, Mr. Dingell.

Mr. DINGELL. Mr. Chairman, I thank you for that courtesy. I ask unanimous consent that I be permitted to insert into the record a letter which we will be sending to the Chairman of the Commission and the Secretary and their responses.

Mr. MARKEY. Without objection.

Mr. DINGELL. Madam Secretary and Chairman Martin, are you concerned that there will be sufficient funds to meet the demand for converter box coupons, yes or no?

Mr. MARTIN. When I testified last October I said that I was obviously concerned and if Congress provided more I am sure the program would make sure that that had been implemented but that I would defer to NTIA on their expectations with what is going on with the program.

Mr. DINGELL. Does that mean you are concerned or not concerned?

Mr. MARTIN. I am always concerned to make sure that enough people have the opportunity to take advantage of the program.

Mr. DINGELL. Madam Secretary.

Ms. BAKER. Would you like to hear my calculations? Using the first phase of the money which is \$890 million for coupons, we have 152 days at the average base. Now that includes the first spike, and that is 5 months and that would be July 13. We have 286 days at the last 3 weeks pace, which is an average of 61,000 coupons a day, and that puts us—that 260 days puts us at November 24. We have 571 days at the lowest pace. So we are tracking it very closely. I would expect that you would receive a request for additional funds, not that I think that we are necessarily going to get to it but because I think that there should be no disruption between phase 1 and phase 2 of this program.

Mr. DINGELL. Would you each, please, for the record submit calculations indicating whether the committee should be concerned, including whatever calculations you have already made and such further calculations as you deem appropriate to inform the committee? Now, Madam Secretary and Mr. Chairman, will you commit to giving the Congress all the notice you can when and as soon as you come to believe that the converter box program will run out of funds?

Mr. MARTIN. Yes.

Ms. BAKER. Yes, absolutely.

Mr. DINGELL. Now these questions are to Chairman Martin. I am very much troubled by the discussions now going on with regard to allowing some low power stations to upgrade to full power status. My first question, has the Commission conducted any sort of background analysis to ensure that a transition would not cause harmful interference to full power broadcasters?

Mr. MARTIN. The proposal that I have put forth would say that they have to meet the same interference standards that are required now of anyone else who wants a full power station. There could be no interference caused—

Mr. DINGELL. I understand that, but can you give us the assurance that there will be no interference?

Mr. MARTIN. We can give you an assurance because we would not grant any that created an interference, so, yes, we can give you that assurance.

Mr. DINGELL. Now will this create problems with regard to the availability of channels and space on both satellite and on cable?

Mr. MARTIN. I would say that I am not sure what it would end up having on the implications for cable and/or satellite. I can say that I think that some of those cable and satellite companies carry low power, more cable does than satellite, satellite doesn't even carry all the full power stations. So I think it would be more of a problem on satellite than on cable.

Mr. DINGELL. All right. But these are matters of concern to the committee, and I would appreciate in the communication which I will send you if you would respond as fully as you can to the concerns that I have and I think the committee has with regard to the potential for mischief here if this becomes a problem, which I think it is very liable to do. Now, Chairman Martin, you have requested \$20 million for consumer education in the 2009 budget. Did you request more money for that or is that the number that was your request to the Office of Management and Budget?

Mr. MARTIN. That was the number that was requested at the Office of Management and Budget.

Mr. DINGELL. So you got every cent that you asked for, is that right?

Mr. MARTIN. In this budget request, yes, and that was a number that actually I consulted with all my colleagues and it was one the commission unanimously asked of O&B.

Mr. DINGELL. Now do you have plans on how you will spend that money?

Mr. MARTIN. We do have some tentative plans on how we would end up spending the money in terms of additional PSAs that would be broadcast and created, additional information that would be distributed, and we have also been trying to work—we have just announced utilizing the resources that were just provided to us at the end of last year, we have just announced the contracting with the public relations firm, Ketchum, who will help us put together the plan, not only for the money that Congress has already provided to us but how we would best utilize that money going forward but we do have tentative plans that I can provide.

Mr. DINGELL. In my letter, Mr. Chairman, I will be submitting 2 questions as to this matter. Would you please give us in that response as full answers as you can as to the plans with regard to spending that money?

Mr. MARTIN. Sure.

Mr. DINGELL. Is this going to be sufficient money to insure that there is adequate awareness on the part of the consuming public of these coupons and of the impending problems with regard to the changeover from analog to digital?

Mr. MARTIN. I think that you have to put in context this money alone would not be enough but you have to put in context with the education efforts that are ongoing both by NTIA about the converter box program and the industry. Both the broadcasters and the cable operators and the Consumer Electronics Association have

all put forth additional educational efforts, and I think in that context I think that it could be enough. If Congress thinks that we need more, we would obviously welcome additional resources.

Mr. DINGELL. Madam Secretary, have you requested any funds in the budget for consumer education, or are you relying on the budget of the FCC on this matter?

Ms. BAKER. We are relying on the FCC's budget as well as the public-private partnerships of which we already have. We had \$5 million for consumer education. We have hired Ketchum and we have done a pretty outstanding reach at this point. We have 15 Federal partners and 130 social organization partners, and we are part of the DTV coalition which is over 200 members strong, so we have not requested any additional funds.

Mr. DINGELL. Do you regard that \$5 million as being sufficient?

Ms. BAKER. At this point we are very encouraged with the consumer education program and we are not requesting any further money.

Mr. DINGELL. Very well. Mr. Chairman, I thank you for your courtesy.

Mr. MARKEY. Thank you, Mr. Chairman. The chair recognizes the gentleman from Georgia, Mr. Deal.

Mr. DEAL. Thank you, Mr. Chairman. Chairman Martin, I have just a few questions for you as it relates to the white space technology as that issue of technology pertains to the DTV transition. Is it your opinion that continued testing of these devices by the FCC will interfere with the DTV transition?

Mr. MARTIN. I don't think any testing of the devices will interfere, no. Whether or not the devices will demonstrate that they can operate or not operate, we will have to wait and see. The testing is ongoing now. The engineers and the labs are doing it. It is open so that any broadcaster and/or any technology company can come watch but the testing alone won't interfere. The question is whether the devices themselves would, and we will have to wait and see.

Mr. DEAL. And that is the purpose of the testing obviously.

Mr. MARTIN. That is right.

Mr. DEAL. And if you were to issue a rulemaking allowing these devices to be used is it true that these devices could not even come to the marketplace until after the DTV transition date has passed and therefore could not interfere with DTV transition?

Mr. MARTIN. At this point I think practically that is correct. Originally, I had committed to Congress based on the testing of the devices we had already received, we would try to put them in place and allow for them to come into the marketplace by the end of this year, but because the first round of testing was not successful to show that it wouldn't interfere we asked for additional devices and we are undergoing testing now, and I think practically that is the case.

Mr. DEAL. And of course if the FCC determines that these devices can operate without interference, do you see that this is a new marketplace from which consumers would benefit?

Mr. MARTIN. Oh, absolutely. I think so.

Mr. DEAL. Thank you, Mr. Chairman. I will yield back my time.

Mr. MARKEY. The gentleman's time has expired. The chair recognizes the gentleman from Texas, Mr. Gonzalez.

Mr. GONZALEZ. Thank you very much, Mr. Chairman, and I have to comment on your announcement that you have introduced the Markey-Pickering bill, and I hoping that we are going to have a full discussion, a good faith debate in it because of course I have some concerns, and I am going to ask Chairman Martin for his assistance to this committee that all the members fully understand the implications or the need for the legislation. Again, I really mean this in good faith that we understand what the Internet really represents and what it is, the difference between the network and ISP, content aggregators, search engines, operating software applications, device manufacturers. We also, I think, need a good education on delivery systems whether it is going to be copper, coaxial, fiber optic, power line, and of course wireless.

I think we need to understand the relationships among all of the different participants in providing this access to the Internet because I think we all have the same goal at the end of the day, and that is to make sure that we have a robust build out, maintenance and improvement of our broadband capacity, so when is broadband capacity management legitimate or illegitimate, appropriate or inappropriate, necessary and sometimes unnecessary, so I am hoping in the search for truth that we end up evaluating and analyzing again the need and of course the implications for the proposed legislation. I am going to ask Secretary Baker a question so I can sort of understand what is going on. Starting January 1, 2008, was when the request for coupons took place. It is going to end on March 31, 2009, correct? They will be mailed on February 17 in about 4 days or so, right?

Ms. BAKER. We are going to start mailing.

Mr. GONZALEZ. You are going to start mailing them in about 4 days.

Ms. BAKER. Correct.

Mr. GONZALEZ. And they will be able to be redeemed obviously, and there is going to be an expiration date, and I am going to ask you about the expiration date. My concern is, and I think as much as we prepare for it and work for it and so on, that you are still going to have a tremendous demand after February 17, 2009, when the television sets go dark. Do you anticipate at that point a tremendous spike in the demand, and you are only going to have a window of about 90 days, I guess, or less, about a month and a half, I am sorry, from the time that the coupons will no longer be available. Do you anticipate a demand at that point when we reach a crisis state and people obviously are made aware because they can't watch their television sets, and if you do anticipate a tremendous demand how does the expiration of the coupons play into that but more so do you have a contingency plan in case demand will out pace the resources that are available to you?

Ms. BAKER. Well, first of all, the way the coupon program is set up, Congress set it up so we started accepting coupons on January 1, 2008. We have been testing our systems to make sure that they work, and we thought clarity was important so we set the date of February 17 to start mailing out the coupons or to start the processing of the coupons. February 17 is a Sunday. That is probably why we are not having this hearing on February 17. So the first batch of coupons will go out that week. We are going to monitor

it carefully. We are going to send out probably not as many as we could the first week so that we can make sure the systems are up and running. I think you are right. As we work through this, as there are more coupons out there, as there are more boxes and manufacturers, particularly as we get towards the end of this program, February 17, 2009, at midnight when all full power broadcasting is turned off, and people go on February 18, February 19, maybe February 22 because they don't watch much TV and they turn on their television and it doesn't work, I think that we will see a spike there. I think we will see—we had always anticipated the largest number of coupon applications would be towards the end of the year, the Christmas season, and also in the January-February range of next year.

We were able to allow accepting coupons until March 31, 2009, so there is a window there of about a month and a half for people who turn on their television and it doesn't work, that they can still apply for a coupon. As far as the 90-day expiration goes, I think I have mentioned that we are interested in looking into that after all of the coupons have been—after we see the redemption rate on the coupons we will be getting back to you in Congress and consulting with you as to what the redemption rate is and how much it would cost to put people back in the line at the end of the line.

Mr. GONZALEZ. When these coupons are sent out, this first wave which I know is almost like a test wave of the coupons then we will actually know how it is really working with the retailers and such. My understanding, you have about 34 different converter boxes that have been approved that would have the added feature, the analog pass through feature, is that correct?

Ms. BAKER. Yes. There are 37 that are approved at this point and 4 of them which have the analog pass through.

Mr. GONZALEZ. And I guess when we have our next hearing you will be reporting the results of this initial mailing of the coupons and the redemption rates, and I think we will start hearing maybe from our constituents as to again the application, the installation, and the problems with that. I do want to point one thing out that I think is very important as you go through your list of qualified or certified retailers. In the San Antonio area they are not listed on here because their appeal was actually granted, and that is going to be ATB, which is a very prominent, prominent grocery store chain in all of South Texas. It is a huge endeavor. But I assure you that you probably will have more consumers in those impacted neighborhoods that feel more comfortable and will be obviously visiting the ATB store much more so than many of the large electronic outlets which I appreciate their contribution.

The last question, I have 2 minutes. The coupons can be for \$40. I think your testimony was that the converter boxes are going to be selling anywhere from \$50 to \$70?

Ms. BAKER. Correct. \$40 to \$70. Actually I think Consumer Electronics, one of the manufacturers, announced a \$39.99 box.

Mr. GONZALEZ. OK. But we are not going to know that until after they go to redeem these particular coupons. There is no definite price that we could say that is what is going to happen on February 18-19 when people receive their coupons. We will have to wait, is that correct?

Ms. BAKER. That is right. There are certain permissive features in the boxes such as smart antennas, BTSC audio output, enhanced program guide, Energy Star. Some of them are Energy Star qualified. So I think that boxes are not all the same so that they were priced differently.

Mr. GONZALEZ. And, forgive me, what is part of the criteria? Do you have any on price when you—when you certified a converter box manufacturer what is the parameters, I guess, of pricing?

Ms. BAKER. We don't have any parameters on pricing. The pricing is up to the market.

Mr. GONZALEZ. OK. Is there any other criteria that you would have?

Ms. BAKER. Well, we are testing for 24 features in the testing of the boxes. We want to make sure the boxes work when they plug them in so we have had in conjunction with the FCC labs we have been testing these boxes to make sure that they work. There are closed captioning requirements. There are parental control requirements that are written into the statute. We want to make sure those things work so we have had pretty rigid testing going on at the FCC labs.

Mr. GONZALEZ. And the converter box that will meet the minimum requirements for certification whether it had additional features, will people still be able to use their vouchers?

Ms. BAKER. As I mentioned, there are several permissive features but there are also disqualifying features. I think if it had a DVD in it, it would not be qualified. The parameters that Congress gave us is for a very simple box that has a remote control.

Mr. GONZALEZ. Thank you very much, and I yield back my 10 seconds, Mr. Chairman.

Mr. MARKEY. The gentleman's time has expired. The gentleman from Oregon, Mr. Walden, is recognized.

Mr. WALDEN. Thank you very much, Mr. Chairman. In Oregon we are running about 2-1/2 times the national rate for filing for the coupons. We appreciate the updates we get from NTIA. Realizing we also have a lot of translators in low power but especially translators given the mountainous areas of the state. I know realizing it was going to take some extra time to get these translators upgraded to digital the DRA—we created a fund and reimbursed low power TV and translator station licensees in rural communities was set up to provide them reimbursement. I am concerned about the timing of that reimbursement. This isn't your issue. It is our issue because we wrote the statute and set the time lines but now in retrospect it looks like to me there is a problem in the disconnect there in that you were originally supposed to make the payments during fiscal year 2009, but not actually put the checks in the mail until, this will shock you, the next fiscal year, October 1, 2010.

I know Senator Snow has put a bill 2607 aimed at moving up the date that NTIA is permitted to put the checks in the mail and allow for you to disburse the reimbursement sooner, in fact, fiscal year 2009 through 2012. Do you think this is needed? Are you hearing from low power folks?

Ms. BAKER. I think it is—we strongly support the bill that Senator Snow as well as Senator Stevens have introduced, and I think it is \$65 million which I think the goal is the digital transition so

it would be helpful to assist these low power stations to actually go digital, and I think that was the intention of this.

Mr. WALDEN. Thank you. That is good to know. Chairman Martin, a couple of things. First, as an old broadcaster, I am now out of the business, I am concerned about your rulemaking related to mandating that broadcasters have to air public service, so-called public service announcements on a fairly regimented schedule, and the effect that can have. I don't know that you have ever done that before at the FCC. Has the FCC ever mandated other than perhaps on the emergency alert system requirements and on relicensing issues, I think, we had to run announcements.

Mr. MARTIN. Yeah. Yeah.

Mr. WALDEN. Have you ever taken this step before?

Mr. MARTIN. No, there has never been another step that we have taken to mandate these kind of public service announcements.

Mr. WALDEN. It seems a rather slippery slope, frankly, to me.

Mr. MARTIN. Well, I think it reflected the gravity and the concern that many people had to make sure that broadcasters were doing all they could to educate consumers. Chairman Markey and Chairman Dingell had sent us letters last summer encouraging us to open the rulemaking and consider that requirement to make sure that broadcasters and all the industries the commission regulates were taking all the steps they could to inform consumers. As I said in my opening statement the broadcasters have recently filed an alternative plan where they would have some more flexibility but make some voluntary commitments of what they would end up doing as a safe harbor potentially and so the commission is currently evaluating that, and I hope that the commission will act on that soon.

Mr. WALDEN. I hope you will take the voluntary effort into consideration. Let me move on to a different topic and that is the timing issue. Having been not in the TV business but the radio business, I know during certain times of the year it is easy to send engineers up and down your tower and at other times it is not, and at certain times you can't push to a certain date and have an engineer available at every station necessarily. A lot of these are consulting engineers that get brought in.

Given that the statute calls for a specific one-day change, do you anticipate any problems with stations being able to accommodate that change on a given day in the winter?

Mr. MARTIN. What we do anticipate is that will require, as you said, some of the broadcasters to begin to work people earlier in the year to make sure that they are capable of making that change, and that may require some temporary disruptions of service. One of the things that the commission did in the order we adopted at the end of last year was put in place that kind of flexibility for the broadcasters and which we allowed them to come forward and say that I can only schedule a construction crew on a certain date prior to that date so I need to be able to move my antenna at that time so I need to have flexibility.

Mr. WALDEN. So you got that built into your—

Mr. MARTIN. We have got a streamlined process for approval for any kind of flexibility that is needed to make sure that they can make that transition on that day.

Mr. WALDEN. And I think that is important for the committee and for the consumers to know that in some markets the date may actually be different than February 17, '09.

Mr. MARTIN. That is right, and one of the aspects of providing them that flexibility is we said that they would have to inform their viewers in those markets to make sure that viewers understood that they could have this implication. At times it could be a temporary change as they are going through the construction but at times it could be more permanent but either way we have different flexibility for those two circumstances, but either way we have required them to inform their viewers.

Mr. WALDEN. Secretary Baker, quickly as I am running out of time here, we heard from Mr. Boucher about the transition funding and all in England and the way that worked. Do you believe that given the voluntary contributions by various industry groups, cable and others, that there is sufficient resource there coupled with the taxpayer money? Very quickly, please.

Ms. BAKER. Given the outstanding public-private partnerships that we have seen, I think people are stepping up. I think the funding is sufficient.

Mr. MARKEY. Thank you. The gentleman's time has expired. The chair recognizes the gentlelady from California, Ms. Solis.

Ms. SOLIS. Thank you, Mr. Chairman.

Mr. MARKEY. There are 12 minutes left to go until the vote on the floor.

Ms. SOLIS. I have basically two questions. My first question is for Administrator Baker, and it is regarding the challenges that I think we are going to be foreseeing here along the U.S. and Mexican border, particularly the low power TV stations and DTV transition, and I understand that the NTIA has only certified 4 converter boxes thus far analog pass through technology out of 37, and we know that right now there are communities that are going to be disadvantaged, so is the NTIA able to pinpoint where these geographical areas are in the U.S.? Do we have any of that data?

Ms. BAKER. We are able to tell—are you asking where the low power stations are? Yes, absolutely. And I do know that your district in particular is higher—it is 17.5 percent over the air viewers so I do think it is particularly important for education. You are right, we only have 4 certified boxes at this point. In our final rule, we encouraged the permissive feature of the analog pass through. I sent out a letter to all of the manufacturers and asked them again to consider this important audience. In response we have visited with several of the major manufacturers, and we have notices of intent from more than half a dozen for more boxes that will be analog pass through so I think there will be sufficient boxes on the market to serve these markets that need these boxes.

Ms. SOLIS. Are you also willing to work with retailers along the U.S.-Mexican border because I am up in Los Angeles but obviously in Texas and other important states that is where I think we are really not seeing a lot of involvement with the retail industry there, and I would ask what outreach is happening if you could give us that information, and would encourage you to do that.

Ms. BAKER. We will be glad to do so.

Ms. SOLIS. And then my next question is for both of you. Can the FCC or NTIA require appropriate labeling for analog pass through technology in the form of some information like a sticker that could be placed on the product. One of the questions or concerns I have is that so many people in our communities don't even know what that means. And I think that it can be very misleading in terms of what they have to purchase or what they should be purchasing, and I think we have to do a better job at providing not just relying on the retailers to give that information but having something that is certified from the FCC or NTIA that can do that. Is that something that we can maybe plan on?

Ms. BAKER. We do not have the labeling authority. Originally we thought it might be a bad idea just because we thought we might have all sorts of boxes that might claim it when they didn't have it but we have since changed our position on that and we think that the manufacturers should label their boxes and I think that many of them are labeling their boxes for the analog pass through and we are encouraging that now.

Mr. MARTIN. I think that certainly trying to encourage both the manufacturers of the boxes and the retailers to be identifying the boxes that have the pass through is going to be important. I have encouraged both the manufacturers that tried to put this capability in all their boxes but certainly in some of them, and I have encouraged the retailers to make sure that they carry at least one that has an analog pass through but I think labeling is a good idea. I hope the commission has complimentary role with the converter box program, but I am not sure that we would have the authority to require labeling of those but certainly we can do all we can to encourage that.

Ms. SOLIS. And just going back to concerns that members of the committee have had about giving information publicly and the broadcasters providing PSAs to give information to our communities, I think that is great. However, just in the last 2-month cycle, I have been getting a lot of phone calls in my office and many Spanish speakers are not fully aware of what this means. Congresswoman, do I have to buy a converter box? I have cable, do I need to do this? So I think there still has to be a lot more clarification in detail so it isn't just enough to say that in February, 2009 this is what is going to happen to you. People are getting worried and scared and they are calling our offices. I don't know if other members are picking that up but I certainly am especially with the senior community, Spanish language senior community, so I think there still has to be some testing that goes on out there about what and how we phrase these words and technology.

So many people still are thinking what do I need to purchase to make sure that we don't go black, that we are out, and I really think that we have a responsibility and maybe we do need to beef up your budgets to do that, and I would like to just get a response.

Ms. BAKER. I think you are right. It is a very important outreach. Secretary Gutierrez himself has done several Spanish language. He has done CNN Espanol, Washington Hispanic, La Penun, Radio Hispanica—

Ms. SOLIS. But they are very short. They are 30 seconds. In that sound bite you don't get the full gist of what has to happen here

and what takes place. People have to have things explained to them in more detail so that is what I am asking for.

Mr. MARTIN. I agree. The Consumers Union survey recently indicated that we need to do more in educating people, not just that it is coming but what they have to do, and I think that will be the challenge of the consumer education efforts from us and the industry.

Mr. MARKEY. The gentlelady's time has expired. There are 6 minutes and 42 seconds left to go on the roll call on the House floor. If I recognize the gentleman from Texas for 5 minutes that will leave us all a minute and a half to make it over to the House floor. The gentleman is recognized to ask a round of questions.

Mr. GREEN. Thank you, Mr. Chairman, and after I am finished you all get to leave and we go vote, so this will be quick. Chairman Martin, I learned earlier this year, I learned the problems that the Spanish language DTV help line at the FCC. Can you tell us what has been done to correct that, someone calling in to the help line in Spanish?

Mr. MARTIN. We do end up having an opportunity for someone calling in and asking for direction in Spanish and provide that assistance. I am not sure what the problem was that was identified but I will look into it, and we will certainly work to correct it if there was a problem with our Spanish help line at the time.

Mr. GREEN. Well, generally they couldn't get through the line, and when they did the people on the line were not Spanish speakers.

Mr. MARTIN. Well, then that would be a problem so I didn't—I wasn't aware of that, but we will certainly correct it. I think it has already been corrected but I will certainly make sure it has been corrected.

Mr. GREEN. We will follow up with you, and I know our chair will continue to have hearings and we will follow up with the members who are interested. Secretary Baker, I mentioned in my opening statement about the expiration date of 90 days, and also that some of our retailers are only carrying the higher end cost. I know there will be converter boxes as low as \$39.99 coming out, but they may not be here until June or July. If someone gets something next month are they going to have to come and get another coupon to be able to get the cheaper one that they might be able to afford in low income areas instead of paying 20 bucks more?

Ms. BAKER. I think we are seeing the market do different things with the prices of the boxes so I think that we will still be watching that. As far as the 90 days, I am committed to look at that with the Congress as soon as we see the redemption rates on these coupons.

Mr. GREEN. OK. Is there a way that that could be extended much easier than having them send it back and go through that mechanism again?

Ms. BAKER. It really is a valuable tracking mechanism at this point so we can see which coupons are being redeemed.

Mr. GREEN. Well, that gets me to my next question. I know the stats show that NTIA sends out—that 9 percent of the total applications have been denied. What are some of the common reasons for being denied aside from being duplicates, and I have also no-

ticed a number of phone applications being denied labeled as invalid. And you know why that is, and I guess looking at information Senator Nelson sent yesterday that there was a decision not to send coupons to multi-family locations. Now I have to admit my area of Houston may not have as many as South Florida but we do have folks who live in senior citizen centers, assisted living centers, and they all have their own TV. It may not be attached to cable to that facility. Is that part of the reason that we are seeing some of the denials?

Ms. BAKER. That is part of the—the largest amount of denials are from duplicate submissions. Second to that are PO boxes. I think we made PO boxes not eligible if you were not in a rural or tribal Alaskan situation because of some of the fraud that had gone on with the FEMA Katrina cards.

Mr. GREEN. So you are requiring a fixed address but they may only get their mail at a PO box, is that—

Ms. BAKER. You have to have a physical U.S. household address to get a—

Mr. GREEN. OK. Does it have to be mailed at that address?

Ms. BAKER. The box needs to be mailed to that address at this point, yes, or the coupons.

Mr. GREEN. The problem we have though is that I have seniors that I suggest not to get any mail at home because of the theft of mail in some neighborhoods. You know, you might revisit that and look at it, and if they put a physical address on there that is able to be audited then you might want to check on that and see if their mailing address, maybe a PO box.

Ms. BAKER. I agree. Congress gave us a definition of household and we just looked down the hall and used the census definition of household which does exclude group quarters, and we realized this problem and we are looking into fixing it, particularly as far as the nursing home situation goes, and possibly dealing with exceptions on a case by case basis.

Mr. GREEN. Mr. Chairman, my last question is I noticed in an article in CQ yesterday that patent holders, for example, for the ATSE technology part of the cost of this is there is a large percentage, in fact, 20 percent of the cost may be paying for patent. Believe me, if I had invented something, I would want 20 percent but is that a high percentage cost say for \$69.99 or \$59.99 that converter boxes available at Best Buy that patent holders are being reimbursed much more than normal?

Ms. BAKER. Well, coming from the Commerce Department we are big fans of IP, intellectual properties, and patents so I understand that that is a high—it is the same as a DVD that costs about \$59.95 so it is in line with other consumer electronics—those prices.

Mr. GREEN. OK. What about something that may be needed? I don't need a DVD but if I am going to be able to see TV over the air something that is actually more mandated like a TV set, what would be the patent cost or percentage cost for that? I assume it would be very low because of the mass production.

Ms. BAKER. Unfortunately, I don't have that figure. I would be happy to get back to you on that.

Mr. GREEN. Well, that is one of the concerns, I think, when people are realizing that they might be paying much more percentage wise for something that is mandated or something that they have to have instead of something if I don't—that \$59.95 for DVD, I don't want it, I don't need it. Thank you, Mr. Chairman.

Mr. MARKEY. The gentleman's time has expired. There is a minute and 11 seconds left to get over to the House floor. There are 2 votes that are pending. We will probably take a 15-minute break at this time at least. It could go a little bit longer, so we will then hear from the second panel. And with the thanks of the subcommittee the first panel has completed its testimony.

[Recess.]

Mr. MARKEY. Ladies and gentlemen, thank you so much. I apologize for the extended break. There were several unanticipated roll calls. We continue to have a highly contentious atmosphere out on the House floor. Here, however, we are working together in harmony to find a solution to the problems which are raised by the transition from analog to digital television by February 17, 2009. And we have for our second panel a very, very distinguished group of people, who reflect just about every perspective that needs to be heard from in the resolution of the remaining issues.

We are going to begin, and I am going to ask each of you to keep your opening statement to 5 minutes, no more than 5 minutes. We are already deep into the afternoon, but I promise you that there will be much interest on the part of the members of the subcommittee to probe more deeply into your testimony. So with that, I am going to recognize Ron Bruno, who is the President of Community Broadcasters Association. Mike Doyle, who is the congressman from western Pennsylvania on this subcommittee, cannot be here at this moment. I think there is an ice storm which has affected travel from Pittsburgh to come down here. But he wanted me to extend his best to you, sir, and whenever you are ready, you are recognized to address the Subcommittee on Telecommunications for 5 minutes.

**STATEMENT OF RONALD J. BRUNO, PRESIDENT, COMMUNITY BROADCASTERS ASSOCIATION, PRESIDENT, BRUNO-GOODWORTH NETWORK, INC., PITTSBURGH, PA**

Mr. BRUNO. Thank you, Mr. Chairman, Mr. Ranking Member and distinguished members of the subcommittee. I am honored to be here today to discuss how the converter digital box program and the transition generally will affect our industry. I applaud and appreciate your opening remarks, Mr. Chairman, and Chairman Dingell's comments, as well as the other ladies and gentlemen that have commented positively on our issue and seem to understand it. More than 10 years ago, Congress and the FCC gave full power stations second channels on which to operate their digital stations. Low power stations were not given a second channel. Our industry has been told for the last 10 years that we would get digital channel assignments when all the full power stations were "taken care of."

Only 6 months ago LPTV stations started to get their digital channels granted. To date, only 35 percent of LPTV stations have been granted a digital station, a second channel. To put this into

perspective there are 567 class A stations, 2,227 low power stations, and 4,418 translators that will not be making the transition in February of next year. To be clear, that is 80 percent of the stations in the country will continue to be broadcasting in analog after February, 2009. Our industry was under the impression that adequate time would be provided for our stations to make the transition once our second channels were received. Unfortunately, the digital converter box program currently in use funded by taxpayer dollars and administered by a government agency cuts our conversion time to zero to the point where bankruptcy is the only logical result for most of our stations.

Not long ago, Congress mandated NTIA to develop rules for manufacturers to follow to build these boxes. Despite the CBA and the translator stations commenting to NTIA about the continued analog operations of our stations, NTIA determined that including an analog tuner in a box was in violation of the congressional mandate. Therefore, all boxes that have been certified by the NTIA and manufactured do not have an analog tuner. And as we heard today, only 4 of 37 certified boxes, even pass through analog signals, in a manner that we call user hostile that will lead to consumer confusion in its installation and use. In a few days the public will start to receive \$40 coupons from NTIA for a DTV conversion box.

These people will go out to buy a box. If they have purchased one of the vast majority of boxes certified by the NTIA once they get home and plug it in they will realize that they will lose their ability to receive the analog broadcast continuing to be transmitted from 80 percent of the nation's TV transmitter facilities. This will cause confusion and anger among the general public when they can no longer watch the local programming that they have previously enjoyed and relied upon, and with each block sold that is one less viewer for class A and low power stations. With the expectation of sales being in the vicinity of 30 million boxes without a speedy and effective remedy our industry is simply out of business, Mr. Chairman.

With the extinction of class A stations goes the only mandated locally produced programming on television. The CBA believes that the manner in which NTIA implemented this program is in violation of the longstanding requirements mandated in the All Channel Receiver Act, and while we have filed a Petition for Declaratory Ruling to this effect at the FCC, we indeed may have no choice but to take our case to the courts. We remain cautiously optimistic that Congress, the NTIA, and the FCC will do the right thing for our industry. We understand that Chairman Martin and his staff have a comprehensive proposal to help our stations. We applaud Chairman Martin and all his staff for working so hard with us on this issue. We also applaud other industry groups like the NAB for their help to get educational efforts out to consumers that they will not get stuck with these bad TV converter boxes.

And while we look forward to the actions of the commission and others, the steps needed to take to insure the survival of these 7,212 stations will need your help. First, the CBA requests that Congress mandate the NTIA going forward to only authorize boxes that are equipment with both an analog and digital tuner. We also request that the 90-day expiration date on the coupon is overly

burdensome to our consumers and should be changed to 180 days. In stores where boxes with analog and digital tuners are not available consumers should be allowed to use coupons for other devices that have analog and digital tuners. And because our industry is being effectively forced into the transition significantly faster than anticipated and much faster than the full power transition took, we accordingly respect and request that the NTIA be provided additional funds to assist class A and low power stations with the transition and any said funding should be made available to the station this year.

In closing, Mr. Chairman, I just want to say that we have had for 3 years our proposal here for very limited class A must carry where we would convert to digital on channel and forego our analog channels, and that has not gone anywhere. Mr. Chairman, I look forward to working with you. Thank you.

[The prepared statement of Mr. Bruno follows:]

#### STATEMENT OF RON BRUNO

Mr. Chairman, Mr. Ranking Member and distinguished Members of the Subcommittee:

My name is Ron Bruno, and I am President of the Community Broadcasters Association (CBA), the trade association of the nation's Class A and low power television stations (LPTV). Our stations provide important programming to audiences throughout the country, including local news, sports and public affairs to underserved communities, as well as religious, Spanish language and other ethnic programming. I am honored to be here today to discuss how the digital converter box program, and the transition generally, will affect our industry.

More than 10 years ago, Congress and the FCC gave full power stations second channels on which to operate their digital stations. Low power stations were not given a second channel at that time because LPTV stations are a secondary service. Our industry has been told for the last 10 years that we would get our digital channel assignments when all of the full power stations were "taken care of". Only 6 months ago, LPTV stations started to get their digital channels granted by the FCC. To date, only 35% of LPTV stations have been granted a second channel.

To put this in perspective, there are 567 Class A Stations, 2227 Low Power stations and 4,418 translator stations that will not be making the transition in February of next year. To be clear, that is 80% of the stations in the country will continue to broadcast in analog after February of 2009. Our industry was under the impression that adequate time would be provided to our stations to make the transition once our second channels were received. Unfortunately, the digital converter box program currently in use, funded by tax payer dollars and administered by a government agency, cuts our industry's conversion time to zero and to the point where bankruptcy is the logical result for most of our stations.

Not that long ago, Congress mandated NTIA to develop rules for manufacturers to follow to build these boxes. Despite the CBA and the translator stations commenting to NTIA about the continued analog operation of our stations, NTIA determined that including an analog tuner in the box was a violation of the mandate. Therefore all boxes that have been certified by the NTIA and manufactured do not have an analog tuner. Only three of the over 30 boxes certified by the NTIA even "pass through" analog signals, albeit in a manner that will likely lead to consumer confusion in installation and use.

In a few days the public will start to receive \$40 coupons from NTIA for a DTV conversion box. These people will go and buy a box. If they have purchased one of the vast majority of the boxes certified by the NTIA, once they get home and plug it in they will realize that they will lose their ability to receive analog broadcasts continuing to be transmitted from about 80% of the nation's TV transmitter facilities. Local programming, religious services, high school sports, foreign language channels and political debates carried locally will not be able to be seen in these homes with the bad converter box. This will cause confusion and anger among the general public when they can no longer watch the local programming that they have previously enjoyed and relied upon.

And with each such box sold, that is one less viewer for a Class A, low power or translator station. With the expectation of sales being in the vicinity of 30 million

boxes, without a speedy and effective remedy, our industry is simply out of business Mr. Chairman. And with the extinction of Class A television stations goes the only mandated locally produced programming on television.

The CBA believes that the manner in which NTIA implemented this program is in violation of long standing requirements mandated by Congress in the All Channel Receiver Act; and while we have filed a Petition for Declaratory Ruling to this effect at the FCC and may indeed have no choice but to take our case to the courts, we remain cautiously optimistic that Congress, the NTIA and the FCC will do the right thing for our industry.

We understand that FCC Chairman Martin and his staff have a comprehensive proposal to help our stations. We applaud Chairman Martin and all of his staff for working so hard with us on this issue. We also applaud other industry groups like the NAB for their help to get educational efforts out to consumers so that they will not get stuck with the bad DTV Converter boxes that only receives digital signals. And while we look forward to the actions of the Commission on issues relating to our industry, other steps need to be taken to ensure the survival of these 7,212 stations and the important service they provide to the public.

First, the CBA requests that the Congress mandate the NTIA, going forward, to only authorize converter boxes that are equipped with both analog and digital tuners. We also suggest that the 90 day expiration date on the coupon is overly burdensome to consumers and should be changed to 180 days. In stores where boxes with analog and digital tuners are not available consumers should be allowed to use coupons for other devices that do have analog and digital tuners. Because our industry is being effectively forced into the transition significantly faster than anticipated, and much faster than full power stations, which had 10 years and much greater resources than we do to make this transition, we respectfully request that the NTIA be provided additional funds to assist Class A, low power and translator stations with the transition and any such funding should be made available to stations this year.

Lastly, and I can't stress this enough, the CBA has put forth a proposal to the Congress for the last three years that would have expedited and will expedite our industry's transition to digital. Specifically, our proposal calls for Class A stations to be given limited cable carriage rights on the basic digital tier in exchange for foregoing the second channel to which we are entitled, thus freeing up spectrum and avoiding interference issues. The proposal is reasonable and it is fair, and I only hope that this Committee will seriously consider this proposal in the very near future. Our industry's existence may very well depend on it.

Mr. Chairman I appreciate your time today and look forward to answering all of your questions.

---

Mr. MARKEY. Thank you, Mr. Bruno, very much. Our second witness, Kyle McSlarrow, is the President and CEO of the National Cable & Telecommunications Association. Welcome, sir. Whenever you are ready, please begin.

**STATEMENT OF KYLE MCSLARROW, PRESIDENT AND CEO, NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION, WASHINGTON, D.C.**

Mr. MCSLARROW. Thank you, Mr. Chairman, Ranking Member Stearns. I am pleased to be here. Earlier today Chairman Martin had a chart on cable prices with a few data points, which I think is his version of the American Express card because he never leaves home without it. In the narrowest sense the data points he used were accurate but uses to which they are put are false and deceptive, and rather than take time now with your permission, Mr. Chairman, I will send you a letter and explain why. On the digital transition first let me just compliment all my colleagues in the industry and at the FCC and NTIA for working together so well. I think that has actually been a real success story.

The issue that Mr. Bruno raises is a legitimate one. This morning I received, as I am sure some of my colleagues did, a letter from Chairman Martin addressed to us urging us to work in vol-

untary ways to address—to insure that low power stations are still seen by the viewers after the transition. And as regards cable what was put in the letter were voluntary ideas that I wouldn't quibble with. We in fact carry hundreds of low power stations voluntarily today. We will do so in the future and I am certainly happy to work with that community to see if we can do even more of that and we are certainly supportive of making sure the analog pass through feature is in as many boxes as possible and participating in education campaign for consumers so that they know about them, know where they can get them, and actually get them.

What is a little dismaying is that both in Chairman Martin's testimony and in this letter there was no mention of an item that has been reported as circulating at the FCC which would go further and actually inject must carry for low power stations into this process, and I am troubled by it in two respects. One, just process once again. There is an item that no one has ever seen. So far as I could tell no one actually asked for it and so I don't know exactly what is in it. Number 2, as you know, Mr. Chairman, you and others, Commissioner Adelstein and others on the commission urged the cable industry several years ago to reach a deal, a voluntary agreement with the public broadcasting stations to help them with their business plans after the digital transition, and we did. This committee, and I testified before you and made this commitment, asked us to step up and engage in a consumer education campaign which we launched last year, and we took many of the ideas if not all of the ideas that you suggested as part of that campaign, and this committee, and we worked with you and your staff and we appreciate it, urged us even though the legislation didn't cross the finish line in 2005 because it was put in reconciliation to voluntarily figure out a plan to make the transition seamless for our customers and so working with you we came up with a 3-year dual carriage plan, which has now been incorporated into an FCC rulemaking.

We are happy to do all that, but we are now a year out, and I would suggest, Mr. Chairman, and urge you to use your good offices to send a message to the FCC that this is a time for all of us to be working together to solve real problems and not raise red herrings that are probably just going to engender more confusion and greater possibility of litigation. Thank you, Mr. Chairman.

[The prepared statement of Mr. McSlarrow follows:]



**TESTIMONY OF KYLE MCCLARROW  
PRESIDENT & CEO  
NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION**

on

**STATUS OF THE DTV TRANSITION: 370 DAYS AND COUNTING**

before the

**COMMITTEE ON ENERGY AND COMMERCE  
UNITED STATES HOUSE OF REPRESENTATIVES  
WASHINGTON, DC**

**FEBRUARY 13, 2008**

Chairman Markey, Ranking Member Stearns and Members of the Committee, my name is Kyle McSlarrow and I am President and CEO of the National Cable & Telecommunications Association. NCTA represents cable operators serving more than 90 percent of the nation's cable TV households and more than 200 cable program networks. The cable industry is also the nation's largest broadband provider of high speed Internet access after investing \$110 billion to build out a two-way interactive network with fiber optic technology. Cable companies also provide state-of-the-art digital telephone service to millions of American consumers.

One year from now, this country will embark on a dramatic change in over-the-air broadcast television. A successful transition to an all digital broadcast system will make valuable spectrum available for public safety, increase choice and competition through wireless broadband services, and deliver significant benefits to television viewers. And although this is a broadcast television transition, the hard date of February 17, 2009 represents a unique challenge, and to meet that challenge, cable has consistently committed to do its part to ensure the transition's success in two significant ways.

First, despite our firm and long-held view about the constitutional infirmities of a government-mandated regime that requires cable operators to carry all must carry broadcast stations in both digital and analog formats, we committed to this Committee that cable would provide a seamless transition for all of its consumers, analog and digital alike. As you will recall, in late 2005 we worked with this Committee on a legislative proposal which addressed the carriage of commercial must carry stations after the digital transition. While that plan passed the House, it was not included in the final version of the Deficit Reduction Act of 2005.

Since that time, Mr. Chairman, we worked with you and other Members of this Committee to craft a three year voluntary carriage commitment. The FCC last September

approved an order the outline of which mirrors our voluntary three year plan. The FCC's order is, however, deficient in one major respect. Instead of taking into account the circumstances of small systems with an exemption as this Committee did on a bipartisan basis in 2005, the FCC order largely punts this question to a further notice of proposed rulemaking.<sup>1</sup> This Committee has previously recognized that the imposition of dual carriage mandates on small systems adversely affects other important goals like the continued rollout of broadband to rural America. The FCC should act now to approve a simple exemption that takes into account the circumstances of operators of systems with low capacity or that serve few customers.

Mr. Chairman, our second commitment was that we would help lead, not just participate in, a nationwide consumer campaign to alert all Americans about the digital transition and educate consumers about the tools available to help manage the transition.

Together with the NAB, CEA, consumer retailers, public broadcasters, and other key groups, NCTA is proud to be a founding member of the DTV Transition Coalition established a year ago. And we remain committed to working with this Coalition and with many other consumer and interested organizations to educate the millions of Americans who will be affected by the digital transition.

In addition, last September the cable industry launched its own extensive consumer education campaign, which includes public service ads that will continue through February 2009. In fact, cable was the first industry to air such ads, both in English and Spanish, valued at \$200 million. These spots have already reached millions of cable and non-cable viewers and provided

---

<sup>1</sup> The FCC did include a process whereby operators with systems of 552 MHz or less of capacity could apply for waivers, but given the FCC's poor record on waiver requests in other contexts, this is little more than window dressing and unnecessarily burdensome.

useful information about the upcoming transition and NTIA's coupon program for digital to analog converter boxes.

But again, Mr. Chairman, our commitment extends far beyond just simply running television ads. Thus, we have already revamped NCTA's website ([www.ncta.com](http://www.ncta.com)) which now focuses predominantly on the digital transition. And we have created English and Spanish-language websites linked to our homepage that provide consumers with easy-to-understand information, advice and other information about the transition, including links to other government, consumer and industry websites focused on the transition.

In addition we have created and distributed to all of our companies a customer communication "tool kit" ([www.ncta.com/dtvtransitionindustrytoolkit](http://www.ncta.com/dtvtransitionindustrytoolkit)) which includes:

- invoice messages to be included on billing statements;
- electronic messages for digital cable boxes;
- on-screen scrolls for local origination channels;
- telephone "on-hold" messaging for customer call centers;
- sample emails to be sent to broadband customers; and
- website "banners" for MSO and network websites.

Cable companies also committed to sending educational messages and reminders about the transition to all cable customers through statements on invoices and "bill stuffers" in cable bills, including information about NTIA's coupon program. Also, as an example of our collaborative efforts with other industries, NCTA recently distributed to cable operators a 9-minute video produced by the Consumer Electronics Association (CEA) which informs consumers of their options in the DTV transition and describes its many benefits. We invited

cable systems to place this CEA video on their video-on-demand platforms, in order to provide easy access to millions of cable customers.

Our industry also plans to create local origination and on-demand programming to provide tutorials on the benefits of the digital transition, and how cable can help customers navigate through it.

I would note that many of these ideas came from Members of this Committee. And we remain open to other ideas on how we can help. Thus, we are currently working with a variety of consumer groups and grassroots organizations with varied memberships and constituencies to see how we can help through other media, such as print or other forms of communication.

Finally, with regard to concerns that have been raised regarding the inability of some NTIA certified converter boxes to pass through the signals of low power television stations and TV translators that will continue to broadcast in analog after the transition, the cable industry believes there is a straightforward solution to the problem – namely, encouraging affected consumers to obtain a digital converter box that passes through analog signals. It is my understanding that three models of the boxes have already been certified by NTIA and more are on the way.

However, according to press reports, the FCC Chairman has proposed a new and unprecedented must carry mandate for low power television stations injecting new uncertainty and potential litigation at a critical time in the DTV transition. Obligating cable operators to carry upwards of 2,800 LPTV signals – which Congress determined were not entitled to must carry unless they meet specific statutory criteria – imposes an unacceptable, unconstitutional new burden. While there is very limited must carry for some LPTV stations and hundreds are and will continue to be voluntarily carried, most LPTVs have never been carried on cable. To force

the LPTV stations on to cable, instead of making sure their over-the-air viewers can continue to receive the signals, does nothing to help the LPTV viewers at risk.

Instead, LPTV stations need to launch an information campaign to inform their viewers that they should: (1) request an NTIA voucher for a converter box and (2) make sure that they buy one of the models that pass through the analog signals. All industries and government agencies involved in the transition effort can help get the word out. And the cable industry stands ready to help in that effort.

Chairman Markey, Ranking Member Stearns, I would like to thank you, and all the Members of this Committee who have worked so hard to keep this issue in the forefront. I am proud of all that the cable industry is doing voluntarily to help ensure that the transition to digital broadcasting is a success, and I look forward to continuing to work with this Committee as we approach the date of the transition. I would be pleased to answer any questions you may have.

Mr. MARKEY. Thank you, Mr. McSarrow. Our next witness, David Rehr, is the President and Chief Executive Officer of the National Association of Broadcasters. Welcome back, Mr. Rehr. Whenever you are ready, please begin.

**STATEMENT OF DAVID K. REHR, PRESIDENT AND CEO, NATIONAL ASSOCIATION OF BROADCASTERS, WASHINGTON, D.C.**

Mr. REHR. OK. Thank you, Chairman Markey, and Ranking Member Stearns. Thank you for inviting me to testify on behalf of the National Association of Broadcasters on our number 1 television priority, a successful digital television transition. I would like to make 4 points today. One, NAB aggressively constructed a comprehensive and empirically based DTV education effort. Broadcasters are committed to insuring that no viewer anywhere is left uninformed. After all, over the air viewers are our life blood. In constructing our campaign, we have turned to experts in advertising, marketing, and consumer research to develop a program designed to reach every corner of America, and to determine the best way to educate consumers, particularly those most impacted such as senior citizens and minority in rural populations.

This explains why every broadcast network in nearly 1,500 television stations nationwide have chosen to participate in NAB's massive, multi-faceted, multi-platform campaign. NAB is committed to a comprehensive program of DTV action spots, 30-minute education programs, informational messages through crawls, snipes, and/or news tickers and other features such as a 100-day count down. All told the value of this campaign is estimated at more than \$1 billion and will generate 132 billion audience impressions. We anticipate each household will either hear, see, or be exposed to this message some 642 times before February 17, 2009.

Two, broadcasters have turned to the air waves to educate America about the transition. NAB is executing a disciplined and focused campaign. The first phase launched last fall drove the fact home that the transition was happening. Results of our January survey showed that consumer awareness has jumped dramatically to 79 percent up from 38 percent just one year ago. We anticipate continued forward momentum. The second phase of our effort will be to focus on the converter box coupon program. NAB has produced 4 new action spots and we would like to take the opportunity to show one now. Please play the spot.

[Video.]

Three, NAB and broadcasters have unleashed their creative talents which go beyond the air waves. A speaker's bureau, we are on track to deliver more than 8,000 plus speeches to community groups nationwide. DTV trekkers, these customized trucks designed to look like giant televisions on wheels are crisscrossing America making more than 600 stops at local events. Today the trekkers are in Noel, Missouri and Orlando, Florida. Retailer outreach, we are teaming up with Wal-Mart and other retailers to air the DTV action spots on their in-store channels to educate shoppers to take action. Community outreach, NAB is partnered with a variety of organizations, including the leadership conference on civil

rights, the National Black Church Initiative, and Univision to name just a few to amplify our outreach efforts.

And, finally, point 4. We must continue to build on our public-private partnership. Clearly this is not a project broadcasters can tackle alone. From the beginning we knew this effort would require everyone's cooperation and involvement. The DTV coalition, a broad-based group of 207 organizations, including the FCC and NTIA, is taking the lead to insure a smooth transition. We look forward to working with all of our partners, including cable, electronics manufacturers, retailers, community broadcasters, consumer advocates, and the government as we go forward. The upcoming transition is a historic event for America. Crystal clear pictures, phenomenal sound, more programs and services, and it is free. I pledge that NAB and our broadcasters will do all we can to make the switch successful.

We welcome the committee's input. We thank you for your leadership. Thank you for inviting me here today, and I am happy to answer any questions.

[The prepared statement of Mr. Rehr follows:]



**Testimony of David K. Rehr  
President and CEO,  
The National Association of Broadcasters  
Before the  
House Subcommittee on Telecommunications and the Internet  
Of the  
House Committee on Energy and Commerce**

**Status of the DTV Transition: 370 Days and Counting**

**February 13, 2008**

Good morning Chairman Markey, Ranking Member Stearns and subcommittee members. My name is David Rehr and I am the president and CEO of the National Association of Broadcasters (NAB). NAB is a trade association that advocates on behalf of more than 8,300 free, local radio and television stations and also broadcast networks before Congress, the Federal Communications Commission (FCC) and other federal agencies, and the courts.

The topic of today's hearing is the digital television (DTV) transition. In 370 days, television as we all know it will change for the better when full-power television stations nationwide make the switch to digital broadcasting. Digital broadcasting offers crystal-clear pictures and sound, more channels and more services than ever before. And it's free.

I would also like to take this opportunity to express the broadcasters' appreciation for the leadership that has been provided by Capitol Hill and in particular the members and staff of the House Energy and Commerce Committee. We also applaud FCC Chairman Kevin Martin for his leadership and the other Commissioners for their efforts to date to adopt technical rules and changes necessary to implement the transition. We look forward to working in a cooperative effort with Chairman Martin, the other Commissioners and the FCC's professional staff in the coming months to complete this important task.

**I. Broadcasters Are Committed to a Comprehensive Consumer Education Plan.**

Broadcasters are leading the way to educate consumers about the DTV transition. Every broadcast network and nearly 1,500 television stations nationwide are participating in a massive, multifaceted campaign that includes DTV action television spots, local speaking engagements, a road show that will visit 200 markets across the country and a variety of other grassroots initiatives. To help give you an idea of our efforts, our NAB DTV transition team has produced a DVD which each of you should have received, entitled *Local Station Activities*.

Broadcasters are fully committed to making certain that television viewers understand what they need to do to continue to receive their local television signals after the switch to digital-only broadcasting on February 17, 2009.<sup>1</sup> It is in our business self-interest to do so and to assure that no consumer – no viewer anywhere – is left behind due to a lack of information about the transition. Currently, there are 19.6 million U.S. households that receive over-the-air, broadcast-only signals, equating to 17% of total U.S. households. There are, on average, 2.27 television sets in these households, or approximately 45 million television sets that will be affected when analog signals are shut off in 2009. In addition, an estimated 24 million broadcast-only televisions in households also have cable, satellite or Internet connections. In total, nearly 69 million television sets may be affected.

Local television stations that today keep their communities informed and connected will remain a vibrant part of the media landscape in the 21<sup>st</sup> century. We all desire a smooth transition to digital with minimum disruption to TV viewers. For this to happen, the American public must understand what all-digital broadcasting means for them, including the many benefits it will bring, the options available to be ready for the transition and the appropriate steps to take. To that end, the broadcast industry has embarked on an unparalleled and unprecedented consumer education campaign. This is a multifaceted, multi-platform education campaign that uses all of the tools available to achieve success.

---

<sup>1</sup> Deficit Reduction Act of 2005, Pub. L. No. 109-171, Title III, §§ 3002(a), 3003, 3004, 120 Stat. 21, 22.

NAB and the DTV Transition Coalition (Coalition) have been working closely with both the National Telecommunications and Information Administration (NTIA) and the FCC to ensure that consumers have the information they need to prepare for the transition from analog to digital broadcasting. Please see the list of the Coalition's members (Attachment A). Through the hard work and continuous efforts of the Coalition, whose membership includes more than 200 organizations, we are reaching out to local communities nationwide, particularly those communities that are most impacted by the transition.

And it's working. According to our most recent survey, seventy-nine percent of households are already aware of the DTV transition.<sup>2</sup> But there is more to be done, and television broadcasters are committed to ensuring that every American is not only aware of the pending switch to digital, but understands the steps they must take to upgrade.

Our DTV action spots are airing in nearly every market in America and during all parts of the day, including prime time. And later this month, we will be distributing new television spots to stations that will focus on the converter box

---

<sup>2</sup> The survey, which was conducted in January 2008, includes a national sample of television households including those that rely solely on over-the-air television signals. Seventy-nine percent of respondents reported that they have "seen, read or heard something about the February 17, 2009 transition to digital television." Awareness was even greater among exclusively over-the-air households, where 83 percent of respondents reported they are aware of the transition. Overall consumer awareness has more than doubled since January 2007 when an NAB survey asking the same question found that only 38 percent of consumers were aware of the transition.

coupon program and will include the 800-number and Web site consumers can visit to apply for the coupons.

We'll also be distributing a 30-minute educational program in English and Spanish about the DTV transition. All of our television spots are available in English and Spanish and are close-captioned. And we have helped to produce TV spots in several Asian languages as well, including Mandarin, Korean and Vietnamese. We are confident that we will reach every household in America with DTV messages, and as broadcasters, we are uniquely positioned to do so. Television stations have a long history of serving their local communities, and no one knows more about how to reach viewers than broadcasters.

Our consumer education plan was developed with the input of Starcom MediaVest Group, the largest media services organization in the United States. Starcom represents some of the largest and most dynamic marketers in the country, including General Motors, Proctor & Gamble, Coca-Cola and Kraft. They are experts in advertising and have helped broadcasters fine tune our consumer education plan to take full advantage of all the commercial inventory and other assets broadcasters have at our disposal. We have also visited the United Kingdom, Sweden and Belgium and opened up relationships with broadcasters transitioning to DTV in those countries. We have also gone to Puerto Rico, which has a high population of over-the-air television homes, and met with stations to check on progress there. Our education awareness efforts have not only been recognized nationwide, but globally as well. Just two weeks ago at a European switchover strategies conference in London, Beatrice

Covassi, the head of the European Commission Digital Broadcasting Sector, acknowledged the enormity of our education awareness campaign.

Our plan includes a variety of on-air, online and grassroots initiatives as well as advertising and other media components. We want to reach consumers everywhere they are—from their living rooms, to their computers to their radios—to deliver the message about the DTV transition.

## **II. The One-Year Countdown and 132 Billion Impressions.**

To mark the one-year countdown to the transition, broadcasters nationwide are taking a number of creative approaches to informing viewers. This week the NAB Speakers Bureau, which is the largest speaker's bureau on the DTV transition, is conducting a nationwide speaking blitz. Our speakers will address local communities at planned events in all 50 states in five days. They will provide information and answer questions directly from consumers about the DTV transition.

The combined elements of the DTV campaign will reach nearly all television viewers and generate 132 billion audience impressions<sup>3</sup> during the course of the campaign, which will run through February 17, 2009. And to date, all of the broadcast networks and 330 companies and groups representing 1476 stations have dedicated themselves to making this campaign a success. Please

---

<sup>3</sup> Impressions: The number of times an advertising schedule is seen over time. The number of gross impressions may exceed the size of the population since audience members may be duplicated. Webster, James G., Phalen, Patricia F. and Lichty, Lawrence W. (2000). Ratings Analysis The Theory and Practice of Audience Research (2<sup>nd</sup> ed.) Mahwah, NJ: Lawrence Erlbaum Associates.

see the attached list of companies (Attachment B). More are joining the effort every week. Together, we will work to inform every American about the transition and the steps individuals must take to ensure they can watch their favorite programs on February 18, 2009.

The plan fully leverages all of the assets of the member stations, including commercial inventory, online offerings, community events, talent and outdoor advertising. Many facets of the campaign have already begun, with encouraging results.

Specialists in media planning and buying, public relations and event marketing have developed programs that will surround the TV viewing public with informative communications, many of which will be hands-on in nature. NAB has crafted communications materials, including:

- DTV action spots, in English and Spanish, and other languages.
- Video packages for the stations and their news departments, including B-roll footage and other graphic elements that can be used by the stations in the development and editing of their stories regarding the digital transition.
- Action spots specifically to be aired on low power television (LPTV) and Class A stations that will inform their viewers that their station may still be broadcasting in analog even after the February 17, 2009 transition date. The spots will also inform viewers as to what actions they will need to take to continue watching their low power stations.
- Tool kits for federal and state policy makers, which include:
  - (1) A PowerPoint presentation on the DTV transition;
  - (2) A newsletter insert for newsletters in English and Spanish;
  - (3) A DTV handbill in English and Spanish;
  - (4) A consumer resource guide in English and Spanish;
  - (5) A sample press release in English and Spanish;
  - (6) A sample Op Ed on the DTV transition;
  - (7) Key points on DTV;

- (8) Banner Web site ads that may be linked to the broadcasters consumer-friendly [DTVanswers.com](http://DTVanswers.com) Web site;
- (9) A sample speech on DTV; and
- (10) A DTV background sheet.

These have been mailed to all members of Congress, gubernatorial offices, lieutenant governors, leadership of state houses, all state aging directors, state municipal association executive directors and state county association directors (including U.S. Territories).

- Toolkits have been sent to 7,661 legislators, all secretaries of state and the mayors of the top 200 populated cities. Please see attached sample letter sent with each tool kit and accompanying materials (Attachment C).
- Brochures and collateral materials have been distributed through coalition partners, at trade shows and sent to TV stations.

We encourage all members of Congress to post DTV transition information on their congressional Web sites and in their newsletters, hold town hall meetings to discuss the digital switch and use your platform as an elected official to help educate your constituents. Your local broadcasters can be a great resource during this time.

In order to seed the campaign message, member stations and networks have committed to a comprehensive program of DTV action spots, air time and other on-air features. The program is based upon a combination of quarterly DTV action spot commitments, airing of 30-minute educational programs, airing of informational messages through crawls, snipes and/or news tickers, and other impactful features, such as a 100-day "count down" program.

Despite the comprehensive nature of this multi-platform campaign, the value of this effort is a very conservative estimate, given that many elements that will be utilized to reach consumers were not included in the impression and value quantification. The more than \$1 billion value of this multi-faceted television

campaign does not even take into account the broad reach of other platforms that television broadcasters will utilize to reach all consumers with information about the transition to digital television. Not included in the campaign valuation is the invaluable reach of local news programming. Numerous local television news teams throughout the country are covering the transition to digital as part of their effort to ensure their viewers are aware of news that personally affects their day to day activities. In addition to this, broadcasters will be working with their network and syndication partners to include messages about the digital transition in story lines and content of the most popular television shows.

Broadcasters will also be working with their counterparts at college television and radio stations to ensure messages about the mandatory upgrade to digital penetrates all audiences. Radio broadcasters will also join the effort to educate America's consumers about the transition to digital television.

NAB will harness the power of outdoor media by working closely with outdoor media providers to reach consumers with information about the transition and drive them to the Web site: [www.dtvanswers.com](http://www.dtvanswers.com) for additional information in preparing to upgrade. The more than \$1 billion effort will reach into every corner of this nation, and will ensure that come February 2009, no consumer is left behind in the analog era. We are 100 percent committed to this campaign. And we welcome your ideas to make it more effective. We believe that a plan that relies on a public/private partnership is the best method to ensuring a smooth transition.

### **III. Grassroots and Multimedia Initiatives.**

Word-of-mouth and other techniques that can spread the word “virally” are critical for the success of educational campaigns. NAB has developed a program of grassroots initiatives that will provide community-level activities to drive the message home. NAB’s 730-person speaker’s bureau has a goal of providing over 8,000 speaking engagements to local high schools, senior centers, religious institutions, community centers and other groups at the local level. In fact, more than 1,200 speaking engagements have been booked. In addition, two customized tour trucks, the “DTV Trekkers,” designed to look like a television on wheels, are criss-crossing the country, stopping at more than 600 local events in over 200 markets. Today the trekkers are in Noel, Missouri and Kissimmee, Florida. Hands-on, one-on-one education and instruction regarding digital converter boxes will be conducted at these events, such as the NBC Health Fair in DC just a few weeks ago.

We have also recently teamed up with diverse organizations to help spread the word. On Sunday, December 2, 2007, the National Association of Broadcasters and the National Black Church Initiative (NBCI) hosted a press conference to announce collaboration on a DTV transition educational outreach effort targeted to African American church congregations. The overall effort targeted 100 African American churches in Wards 7 and 8 in southeast Washington, D.C., and reached an estimated 25-30 thousand congregants. This area was targeted because of its high concentration of residents who will be adversely impacted by the February 17, 2009 switch to digital broadcasting. In Washington, D.C., 20.1 percent of television viewers receive free, over-the-air

television through antennas and are at risk of losing their local stations' signals, compared to 10.1 percent in Virginia and 12.3 percent in Maryland.

NAB staff gave DTV presentations at the four key churches and the pastors of the remaining 96 delivered the DTV consumer message to their individual congregations. Additionally, all 100 churches inserted a DTV question and answer document in their December 2 church bulletins and made available the DTV information sheet showing an African American family watching TV and emphasizing the date of the switch. Our press conference was covered by local stations WJLA, WUSA, WTTG and Channel 19 from the D.C. office of Cable TV. NAB Executive Vice President of Television Marcellus Alexander, NBCI President Rev. Anthony Evans, Reverend Dr. C. Matthew Hudson, the pastor of the host church, Matthews Memorial Baptist Church and U.S. Representative Eleanor Holmes-Norton participated in the press conference. Children from the church's Sunday school department also participated and wore DTV t-shirts and released DTV balloons, which made for a wonderful energy and excitement.

We've also partnered up with Univision to ensure reach to the Spanish-speaking community. On Saturday, December 8, Chicago's Univision affiliate WGBO, in partnership with Telefutera affiliate WXFT, hosted a Spanish-language televised town hall meeting on the DTV transition at Little Village high school in Southwest Chicago.

After the stations promoted the event on air, it drew over 700 people, which overflowed the 550 person auditorium. WGBO news anchor Enrique Rodriguez moderated the meeting, which included guests from Comcast (which

sponsored the event) and two representatives from NAB. The stations also turned the event into an item for the evening news, and are editing a version that will run as public affairs programming.

Given the reach of the event through broadcast television – in promotion, the ensuing news item and airing of the taped audience, the crucial audience (over 40 percent of primary Spanish speakers are broadcast-only) and in-depth personal contacts from a grassroots community event, Univision's town hall was a great success by any measure. The network is partnering with NAB to bring this format to markets across the country in 2008.

Additionally, NAB's DTV staff has been teaming with our Coalition partners to exhibit and distribute information at their annual conferences and trade shows. These grassroots efforts will be extremely important to provide further context to the transition message and will enhance the understanding of the on-air campaign. Starcom MediaVest Group endorsed these efforts, recognizing that they will provide incremental activities to some of the disproportionately affected groups: senior citizens, minority populations, lower-income constituents and rural populations. Media coverage of the transition story, in addition to coverage of many of the grassroots components, is anticipated to be significant. This transition affects many Americans and is duly newsworthy. To make sure that the DTV transition is being covered both accurately and ubiquitously by America's reporters, NAB has briefed reporters from major news organizations and plans to facilitate reporter briefings in all 50 states. We have identified and are in contact with 16,000 reporters all across the country who are

covering the DTV transition. NAB will push local news “hooks” into stories in major metro areas, suburban areas and into the heartland. We anticipate significant news coverage across local television, radio, newspaper and TV, as well as radio and newspaper Web sites. As the media marketplace continues to evolve to meet consumer needs, we will leverage stations outdoor and online assets.

Mega-retailer Walmart requested a copy of our DTV action spots to air in Wal-Mart stores, on TV screens in the video department and on in-store channels. They have also used NAB spots for training employees.

Starcom proposed that a combination of streaming and display advertising be donated on the station’s Web sites to support the transition campaign. Significant exposures are anticipated from this component of the campaign, extending the overall reach of the message.

Finally, paid media will be utilized to supplement activities in key markets where public awareness of the transition lags. Newspaper activities, efforts at public transportation hubs and at key retailers have been recommended in these areas.

NAB’s plan will drive the message of digital transition across numerous consumer media touch-points. By engaging consumers via television, in the news media, online, through outdoor efforts and in direct, grassroots events, the message will be seeded and communicated much more effectively than through television advertising alone.

**IV. Commitment with Accountability**

Broadcasters understand that policymakers share our concern about the upcoming transition. For that reason, we want to make clear that ours is a commitment with accountability. Our education approach that I have outlined above is aggressive and comprehensive. It also includes an element of flexibility necessary to ensure effectiveness. And, we believe that it is the best way to achieve our mutual goal of a successful transition.

Given the immense differences between communities across the country, it is imperative that broadcasters utilize a number of different tools to educate their viewers about the transition to digital. No one-size-fits-all approach to consumer education could ever efficiently educate viewers whose composites differ from market to market. Moreover, no one knows how to reach television viewers about their viewing experience better than their local broadcasters. This education initiative is an important part of broadcasters' ongoing commitment to our viewers and our communities.

We want to work with policymakers. To that end, we will commit to report our progress on the education on a quarterly basis. We will also work with and coordinate our efforts with you and the FCC to modify our plan, as needed, to ensure that consumers are fully informed about the transition and what they need to do.

**V. Low Power Television (LPTV)**

Full power stations are fully committed to the DTV transition. Full power stations have purchased expensive equipment, switched out cameras, built towers and taken the necessary steps to migrate to digital. Although these upgrades have cost upwards of \$5 billion, they were necessary expenses to realize the goal of going fully digital. But these investments only take us so far. To make the transition to digital complete, LPTV stations must also make the transition. NAB believes that LPTV stations can accomplish a digital transition for anywhere between \$40,000 - \$200,000 per station. Hopefully, most LPTV stations have prepared for these expenses and created business plans to accomplish these upgrades.

NAB is willing to assist LPTV stations in making a successful shift to digital television. In fact, NAB swiftly created a LPTV Task Force to specifically address LPTV issues and promote viewer access to LPTV stations after the digital transition. To ensure that the viewers of LPTV stations are protected and have the information they need to navigate the upcoming transition, we have created an action plan to help them:

1. Help FCC and other interested parties determine the scope of the impact on television viewers:
  - a. Help identify geographic areas where viewers only receive television via translators and LPTVs.
  - b. Help determine how many Americans live in "mixed" areas that will receive both digital channels and analog signals after the transition in February 2009.

2. Have NAB LPTV Task Force work closely with the Community Broadcasters Association (CBA) to develop further solutions to the analog bypass issue.
3. Urge FCC to move forward immediately to complete LPTV digital proceeding, and assign companion digital channels for LPTV and translators.
4. Educate potentially affected viewers via the DTVAnswers.com Web site and other outreach methods.
5. Create spots that will air on low power television to alert viewers that they may need to purchase either: (a) a converter box that includes an analog pass-through feature, or (b) an A/B switch route-around kit (that we hope to make available).
6. Create for the FCC, NTIA, Community Broadcasters Association and others, a kit for affected viewers that includes an A/B switch, extra cable, and instructions so that those who have purchased digital-only converter boxes can access analog stations.
7. Encourage accelerated NTIA certification and FCC review of converter boxes that include the analog pass-through feature.
8. Advise CBA on how to create a user-friendly Web site and Hotline that will answer consumer questions about the analog bypass issue. NAB is prepared to provide technical assistance.

We are committed to helping all viewers, including LPTV viewers with the information they need to successfully navigate the upcoming transition.

**VI. Don't Jeopardize the Transition to Digital Television with Unlicensed Devices in the Television Broadcast Spectrum**

We caution that opening up the digital broadcast spectrum to portable, unlicensed devices at this time would turn the DTV transition on its head. It could create unacceptable interference—as the FCC's recent technical tests suggest. We are deeply concerned that allowing these devices in the television band will jeopardize the success of the transition and interfere with digital television

reception. It would be unfair to consumers to jeopardize the transition. Some Silicon Valley companies want to allow millions of portable, unlicensed transmitting devices to operate on television frequencies without a license. Consumers deserve better. Policies to facilitate the fullest and most efficient use of the digital spectrum and the deployment of rural broadband are, indeed, appropriate. However, I believe you will agree those policies must be fully developed and the equipment must be tested in the field under "real world conditions" to assure that new devices operating in this spectrum will not endanger viewer reception of digital television. It would be premature to authorize these devices until the testing confirms that they work in "real world conditions," the digital transition is complete, and viewers have new reception equipment in place to receive digital television signals. In fact, the most recent round of testing has raised additional concerns about the viability of these new unlicensed devices. NAB will continue to work to protect the integrity of the broadcast spectrum for the benefit of the television viewing public.

#### **VII. Conclusion**

In conclusion, I emphasize, again, that no one has a greater stake in a successful DTV transition than we, as broadcasters. It would be a disservice to the American people for you, the FCC or our industry to jeopardize the transition. We assure you that broadcasters will spare no effort to fully inform our viewers about the transition. We urge Congress and the FCC to move carefully and cautiously to protect the technical integrity of the digital spectrum and assure that television reception will not be impaired by other spectrum users. Our interests

are aligned with yours. We fully understand the timelines and importance of our mutual challenge. We don't want to lose a single viewer in the transition, and we do not intend to.

I leave you with four final thoughts: one, broadcasters are fully committed to ensuring that no consumer—no viewer anywhere—is left uninformed about the DTV transition. Two, broadcasters accept their responsibility for a massive, unprecedented on-air consumer DTV information and education campaign. Three, we stand ready to work in partnership with Congress and the FCC for additional ideas and efforts to ensure that the transition on February 17, 2009 is seamless. And four, we urge Congress to protect, for consumers, the technical integrity of the new digital television service and defer the authorization of new uses of the spectrum until Congress is assured that digital television reception will not be impaired.

The most watched shows on television come from America's broadcasters. The DTV transition will bring more excitement, more energy, more creativity and more quality than we all experienced when we went from black and white to color TV, and Americans will be wowed by this.

Chairman Markey, Ranking Member Stearns and members of the Subcommittee, thank you for inviting me to participate in this hearing, and I am happy to answer any questions.

<b>Attachment A</b>
---------------------

<b>DTV Transition Coalition Members</b>	
ORGANIZATION	City/State/Zip
AARP	Washington, DC 20049
Advanced Television Systems Committee	Washington, DC 20006
Affinity Marketing	Ft. Wayne, IN 46804
Alabama Broadcasters Association	Hoover, AL 35226
Alaska Broadcasters Association	Washington, DC 20006
Alliance for Public Technology	Washington, DC 20006
Alliance for Rural Television (ART)	
American Association of People with Disabilities (AAPD)	Washington, DC 20006
American Cable Association (ACA)	Brisbane, CA 94005
American Legislative Exchange Council (ALEC)	Toledo, OH
American Library Association (ALA)	Washington, DC 20009
Archway Marketing Services	Rogers, MN 55374
Arizona - New Mexico Cable Communications Association	Suite 100
Arizona Broadcasters Association	Phoenix, AZ 85008
Arkansas Broadcasters Association	Little Rock, AR 72212
Asian American Justice Center	Washington DC, 20036
Association for Maximum Service Television, Inc. (MSTV)	Washington, DC 20016
Association of Cable Communicators	Washington, DC 20001
Association of Public Television Stations (APTS)	Washington, DC 20001
Audio Quest	
Best Buy	Washington, DC 20003
Black Leadership Forum Inc.	Washington, DC 20006
Broadband Cable Association of Pennsylvania (BCAP)	Harrisburg, PA 17101
Broadcast Education Association	Washington, DC 20036
Broadband Solutions and Testing, Inc	Elmhurst, IL 60126
Broadcom	Irvine, CA 92617
Cable and Telecommunications Association for Marketing (CTAM)	Alexandria, VA 22314
Cable Telecommunications Association of New York, Inc.	Albany, New York 12207
Cable Television Association of Georgia	Atlanta, GA 30328
California Broadcasters Association	Sacramento, CA 95814
Call For Action	Bethesda, MD 20843
Care2	Washington, DDC 20005
CENTRIS	Columbia, MD 21044
Circuit City	Richmond, VA 23233
Cisco Systems, Inc.	Washington, DC 20004
CNET	Cambridge, MA 02142
Colorado Broadcasters Association	Breckenridge, CO 80424
Communications Workers of America	
Community Broadcasters Association	Marietta, GA 30066
Congressional Black Caucus	Washington, DC 20515
Congressional Hispanic Caucus	Washington, DC 20001
Connecticut Broadcasters Association	Willimantic, CT 06226

Consumer Action	San Francisco, CA 94105
Consumer Electronic Retailers Coalition (CERC)	Washington, DC 20006
Consumer Electronics Association (CEA)	Arlington, VA 22202
Consumers for Competitive Choice	Greenwood, IN 46143
Corporation for Public Broadcasting	Washington, DC 20004
Councilmember Mary Cheh's Office	Washington, DC
Crosby Volmer International	Washington, D.C. 20036
Custom Electronic Design & Installation Association (CEDIA)	
DIRECTV	Washington, DC 20001
Disney	Washington, DC 20036
District of Columbia Office of Cable Television	
EchoStar Satellite LLC	
Edison Group	Atlanta, GA 30309
Effros Communications	Clifton, VA 20124
Electronic Industries Alliance (EIA)	Arlington, VA 22201
Entertainment Industries Council, Inc. (EIC)	Reston, VA 20190
Entertainment Publicists Professional Society	Santa Monica, CA 90403
Fmily, Career and Community Leaders of America, Inc. (FCCLA)	Reston, VA 20191
Federal Citizens Information Center	Cedar Rapids, IA 52403-7000
Federal Communications Commission	Washington, DC 20554
Florida Association of Broadcasters	Tallahassee, FL 32301
Georgia Association of Broadcasters	Atlanta, GA 30350
Goodwill Industries International	Rockville, MD 20855
Greater New Orleans Broadcasters Association (GNOBA)	Metairie, LA 70002
Hawaii Association of Broadcasters	Honolulu, HI 96817
High Tech DTV Coalition	Washington, DC 20005
Home Theater Specialists of America (HTSA)	Chester Springs, PA 19425
Idaho State Broadcasters Association	Boise, ID 83702-4741
Illinois Broadcasters Association	Carterville, IL 62918
Indiana Broadcasters Association	Indianapolis, IN 46280
Information Technology Industry Council (ITIC)	Washington, DC 20005
Iowa Broadcasters Association	Des Moines, IA 50325
Iowa Cable & Telecommunications Association, Inc.	Clive, IA 50325
Isis Video and Editing Services	
KA6UTC	Florence, OR 97439
Kansas Association of Broadcasters	Topeka, KS 66611
KCET	Los Angeles, CA 90027
Kentucky Broadcasters Association	Frankfort, KY 40601
KGTV	
Kinsella/Novak Communications, LLC	Washington, DC 20037
K Mart	Hoffman Estates, IL 60179
KTSF	San Francisco, CA 94105
Latinos in Information Sciences and Technology Association	Decatur Ga 30034
Leadership Conference on Civil Rights (LCCR)	Washington, DC 20006
League of United Latin American Citizens	Pierre, SD 57501

LG Electronics	Washington, DC 20006
Louisiana Association of Broadcasters	Baton Rouge, LA 70801
Louisiana Cable & Telecommunications Association	Baton Rouge, LA 70802
Maine Association of Broadcasters	Augusta, ME 04330
Maryland/D.C./Delaware Broadcasters Association	Baltimore, MA 21208
Massachusetts Broadcasters Association	Manchester, NH 03104
Meals on Wheels Association of America (MOWAA)	Alexandria, VA 22314
Media Freedom Project	
MediaTides LLC	Highlands Ranch, CO 80130
Mexican American Opportunity Foundation	Montebello, CA 90640
Michigan Association of Broadcasters	Lansing, MI
Microtune	Plano, TX
Minnesota Broadcasters Association	Minneapolis, MN 55416
Minority Media Telecommunications Council	Washington, DC 20010
Mississippi Association of Broadcasters	Ridgeland, MS 39157
Missouri Broadcasters Association	Jefferson City, MO 65109
Mitsubishi Digital Electronics	Irvine, CA 92618
Mobile Media Enterprises	
Montana Broadcasters Association	Bonner, MT 59823
NAACP	Baltimore, MD 21215
National Alliance of State Broadcast Associations (NASBA)	Chesapeake, VA 23320
National Association of Area Agencies on Aging	Washington, DC 20036
National Association of Black Journalists (NABJ)	Norfolk, VA 23510
National Association of Black Owned Journalists	Washington, DC 20004
National Association of Broadcasters (NAB)	Washington, DC 20036
National Association of Consumer Agency Administrators (NACAA)	Brentwood, TN 37203
National Association of Counties (NACo)	Washington, DC 20001
National Association of Hispanic Journalists	Washington, DC 20045
National Association of Latino Elected Officials	Washington, DC 20003
National Association of Latino Independent Producers	Santa Monica, CA 90406
National Association of Manufacturers (NAM)	Washington, DC 20004
National Association of Neighborhoods	Washington, DC 20004-3024
National Association of Regulatory Utility Commissioners	Washington, DC 20005
National Association of Residential Property Managers (NARPM)	Healdsburg, CA 95448
National Association of Telecommunications and Advisors (NATOA)	Alexandria, VA 22314
National Black Church Initiative	Washington, DC 20035
National Cable & Telecommunications Association (NCTA)	Washington, DC 20001
National Coalition of Black Civic Participation	Washington, DC 20036
National Consumer's League	Washington, DC 20036
National Consumer Voice for Quality Long-Term Care (NCCNHR)	Washington, DC 20036
National Council of LaRaza	Washington, DC 20036
National Education Association	Washington, DC 20036

National Fair Housing Alliance	Washington, DC 20005
National Grange	Washington, DC 20006
National Grocers Association (NGA)	Arlington, VA 22201
National Hispanic Media Coalition	Las Angeles, California 90017
National Newspaper Publishers Association News Service	Washington, DC 20010
National Organization of Black County Officials	Washington, DC 20005
National Religious Broadcasters (NRB)	Washington, DC 20002
National Urban League (NUL)	Washington, DC 20036
Navigant Consulting, Inc.	
National Council on Aging	Washington, DC 20036
Nebraska Broadcasters Association	Omaha, NE 68154
Nevada Broadcasters Association	Vegas, NV 89119
New Hampshire Association of Broadcasters	Manchester, NH 03104
New Jersey Broadcasters Association	Monroe Township, NJ 08831
New Mexico Broadcasters Association	Albuquerque, NM 87110
New York State Broadcasters Association	Albany, NY 12203
Nielsen Company	New York, NY 10003
North American Retail Dealers Association (NARDA)	Glenview, IL 20025
North Carolina Association of Broadcasters	Raleigh, NC 27602
North Dakota Broadcasters Association	Bismark, ND 58502
Northern Virginia Resource Center for Deaf and Hard of Hearing Persons	
Ohio Association of Broadcasters	Columbus, OH 43215
Ohio Cable Telecommunications Association (Stoddard)	
Oklahoma Association of Broadcasters	Oklahoma City, OK 73116
Oregon Association of Broadcasters	Portland, OR 97223
Panasonic Corporation of North America	Washington DC, 20036
PCIA -- The Wireless Infrastructure Association	Alexandria, VA 22314
Pennsylvania Association of Broadcasters	Hummelstown, PA 17036
Philips Consumer Electronics	Atlanta, GA 30346
Piedmont Triad Council of Governments	Greensboro, NC 27407
Plasma Display Coalition	Wyckoff, NJ
Public Broadcasting Service (PBS)	Arlington, VA 22202
Qualcomm	Washington, DC 20006
RADD	Studio City, CA 91604
RadioShack	Fort Worth, Texas 76179
Rainbow PUSH Coalition	Washington, DC 20005
RCA/Audio Video	
Retail Industry Leaders Association	Arlington, VA 22209
Retirement Living TV	Columbia, MD 21045
Rhode Island Broadcasters Association	Cranston, RI 02920
Samsung Electronics	Washington, DC 20036
Sanyo Fisher	Chatsworth, CA 91311
Sanyo Manufacturing Corporation	Forrest City, AR 72335

Satellite Broadcasting and Communications Association (SBCA)	Washington, DC 20036
Sears	Hoffman Estates, IL 60179
Signals Unlimited	
Society of Motion Picture & Television Engineers	
South Carolina Broadcasters Association	Columbia, SC 29212
South Dakota Broadcasters Association	Pierre, SD 57501
Southern Growth Policies Board	
Target	Minneapolis, MN 55403
Telecommunications Industry Association (TIA)	Arlington, VA 22201-3834
Tennessee Association of Broadcasters	Nashville TN 37203
Terrestrial Digital	
Texas Association of Broadcasters	Austin, TX 78701
Texas Cable & Telecommunications Association	Austin, TX 78701
Texas Instruments	Washington, DC 20004
THAT Corp.	Milford, MA 01757
Thomson	
TitanTV Media	Cedar Rapids, IA 52403-7000
U.S. Chamber of Commerce	Washington, DC 20062
United Front Media	Los Angeles CA 90068
Universal Remote Control	Riderwood, MD 21139
Utah Broadcasters Association	Salt Lake City, Utah 84115
Verizon	Washington, D.C. 20005
Vermont Association of Broadcasters	St. Johnsbury, VT 05819
Virginia Association of Broadcasters	Charlottesville, VA 22911-8835
Voices of September 11 <sup>th</sup>	New Canaan, CT 06840
Wal-Mart	Washington, DC 20004
Washington State Association of Broadcasters	Olympia, WA 98501
Washington Urban League	Washington, DC 20009
WBAL	Baltimore, MA 21211
Wineguard Company	Burlington, IA 52803
Wisconsin Broadcasters Association	Madison, WI 53703.
Wisconsin Cable Communications Association	Madison, WI 53703
WLMB TV40	
WUSA	Washington, DC 20016
Wyoming Association of Broadcasters	Cheyenne, WY 82003
Zenith Electronics LLC	

## Endorsements

While all broadcasters will be engaged in digital television transition consumer education efforts, the following companies have specifically endorsed this multifaceted campaign and are committed to working with our private and public sector partners to lead the way to ensure that no consumer is left without access to television due to a lack of information about the transition to digital.

<b>Company</b>	<b>Stations Represented</b>
ABC Owned Television Stations	10
ABC Television Network	
ACME Communications	7
Alabama ETV Commission	9
Alaska Public Telecommunications Inc	1
Allbritton Communications Company	8
Amarillo Jr. College District	1
Arkansas Educational Television Network	5
Atlanta Board of Education	1
Azteca America Network	
Bahakel Communications Television	6
Ball State University	1
Banks Broadcasting, Inc.	1
Barrington Broadcasting Co., LLC	18
Bates Technical College	2
Belo Corporation	20
Block Communications Inc.	5
Bonneville International Corp.	1
Bonten Media Group	8
Brazos Valley Public Bcstg Foundation	1
Brechner Management Company	1
Brigham Young University	1
California Oregon Broadcasting Inc	3
Capitol Broadcasting Co., Inc.	4
CaribeVision Station Group, LLC	7
CBS Television Network	
CBS Television Stations	29
Central Michigan University	4
Central Texas College	1
Central Wyoming College	2
Cerberus Capital Managment LP	5
Chambers Communications Corp.	4
Christian Faith Broadcast Inc.	2
Christian Television Network, Inc.	10
Citadel Communications Co. Ltd.	4
Clear Channel Television	36

Cocola Broadcasting Company	2
College of Southern Idaho	1
Commonwealth Public Broadcasting Corp.	4
Communications Corp. of America	10
Connecticut Public Broadcasting	4
Cordillera Communications	11
Cox Television	14
CW Network	
Davis Television	1
Daystar Television	10
Dispatch Broadcast Group	2
Diversified Communications	2
Drewry Group	5
Duhamel Broadcasting Entprses.	4
Eastern New Mexico University	1
Educational Broadcasting Corp.	2
Emmis Communications Television	1
Entravision Communications Television	17
Equity Media Holdings Corporation	18
Esteem Broadcasting LLC	3
Evangelistic Alaska Missionary Fellowship	1
Fisher Communications, Inc. - Television	13
Florida State University Board of Regents	2
Fox Television Network	
Fox Television Stations Inc.	37
Freedom Broadcasting, Inc.	8
Gannett Broadcasting	23
Georgia Public Television	9
GOCOM Media of Illinois	3
Granite Broadcasting Corporation	10
Grant Communications	2
Gray Television	33
Greater Dayton Public TV, Inc.	2
Greater Wash. Educ. Telecomm. Assn.	1
Griffin Communications	3
Hampton Roads Educational Telecomm Association Inc	1
Hawaii Public Television Foundation	2
Hearst-Argyle Television, Inc.	36
Heritage Broadcasting	2
Hoak Media, LLC	15
Holston Valley Broadcasting Corp.	1
Hour of Harvest, Inc.	1
Howard University	1
Hubbard Television Group	13

Idaho Public Television	5
Independent Communications Inc	2
Indiana University	1
InterMedia Partners	3
International Media Group	2
ION Media Network	
ION Media Networks	57
Iowa Public Televison	8
Jackson TV, LLC	1
Journal Broadcast Group Television	9
KAET AZ State University	1
KAIL Trans-America B/Casting Corp.	1
KAME Broadcast Development Corp.	1
KBDI Front Range Educational Media	1
KBFD The Allen Broadcasting Corp.	1
KCET Community TV of S California	1
KCHF Son Broadcasting Inc.	1
KCOS El Paso Public TV Foundation	1
KCPT Public TV 19 Inc	1
KCSD SD Bd. of Dir. Ed Telecomm.	1
KCTS Television	2
KCWL The Omaha World Herald	1
KCWX Belo San Antonio, Inc.	1
KECY Pacific Media	1
KEDT South Texas Public Bcstg. Systems Inc.	1
KEET Redwood Empire Public TV Inc.	1
Kentucky Authority for ETV (KET)	15
KFXA Second Generation of Iowa Ltd.	1
KFXP Compass Communications of Idah	1
KGEB University Broadcasting	1
KGTF Guam Educ. Telecomm Corp.	1
KHCE San Antonio Community Education TV Inc.	1
KHCV North Pacific International TV	1
KIXE Northern CA Educ TV Assoc Inc.	1
KLCS Los Angeles Dist Unif Schools	1
KLEP Newark Public Schools	1
KLRN Alamo Public Telecom. Council	1
KLRU Capitol of TX Telecom Council	1
KLVX Clark County School District, Board of Trustees	1
KMCT Louisiana Christian Bctg. Inc.	1
KMTP Minority Television Project	1
KNVA 54 Broadcasting, Inc.	1
KNXT Diocese of Fresno Educ. Corp.	1
KPBT Permian Basin Public Telecommunications	1

KPTS	Kansas Public Telecom Serv Inc	1
KSMQ	South Minnesota Quality Broadcasting, Inc.	1
KSNB	Colins Broadcasting Company	1
KSPR	Perkin Media, LLC	1
KSPS	Spokane School District No. 81	1
KTBY	Coastal Television Broadcasting Company LLC	1
KTLN	Christian Communications of Chicagoland	1
KTRG	Hispanic Television Network	1
KTUU	Channel 2 Broadcasting Co.	1
KTVG	Hill Broadcasting Company	1
KTWU	Washburn University of Topeka	1
KUHT	University of Houston	1
KVCT	Surtsey Media, LLC	1
KVHP	National Communications, Inc.	1
KVIE	KVIE, Inc.	1
KVIQ	Raul Broadcasting	1
KVPT	Valley Public Television, Inc.	1
KXVO	Mitts Telecasting Co.	1
	Landmark Communications, Inc.	2
	Lilly Broadcasting, LLC	2
	LIN Television Corporation	28
	Lincoln Financial Media	3
	Local TV, LLC	9
	Lockwood Broadcasting	3
	Louisiana ETV Authority	6
	Malara Broadcast Group	2
	Maryland Public Broadcasting	6
	Max Media Television	7
	McGraw-Hill Broadcasting Co.	4
	McKinnon Broadcasting Company	3
	Media General Bcst. Group	23
	Mel Wheeler, Inc.	2
	Meredith Corporation Broadcasting Group	11
	Michigan State University	1
	Mid-South Public Communication	1
	Mission Broadcasting, Inc.	1
	Mission TV, LLC	2
	Mississippi Public Broadcasting	11
	Montana State University	1
	Morgan Murphy Media	5
	Morris Multimedia Inc.	5
	MPS Media	3
	Multicultural Television Broadcasting	5
	My Network TV	

National Minority TV	2
NBC Local Media Division	12
NBC Universal Television Network	
Nebraska Educational Telecommunications Comm	8
New Jersey Public Broadcasting Authority	4
New Vision Group	8
New York City Board of Education	1
NewAge Media Broadcast Group	6
News-Press & Gazette Co.	6
NexStar Broadcasting Group, Inc.	31
North TX Public Broadcasting	1
Northeastern Educational Television of Ohio	2
Northern California Public Broadcasting	3
Northwest Broadcasting, Inc.	5
Ohio State University	2
Ohio University	2
Oklahoma Educational TV Authority	4
Oregon Public Broadcasting	5
Ottumwa Media Holdings LLC	1
Pacifica Broadcasting Company	2
Pappas Telecasting Companies	17
Parker Broadcasting Inc.	2
Pennsylvania State University	1
Post-Newsweek Stations, Inc.	6
Prairie Public Bcstg. Inc.	7
Prime Cities Broadcasting	2
Prime Time Christian Bcstg Inc	5
Public Broadcasting of Northwest Pennsylvania	1
Quincy Newspapers, Inc.	12
Ramar Communications	4
Raycom Media Inc.	35
Red River Broadcast Company LLC	7
RGV Educational Broadcasting	1
Roberts Broadcasting Company	4
Rocky Mountain Public Broadcasting Network, Inc.	4
Rogers State University	1
Saga Communications, LLC	3
SagamoreHill Broadcasting, LLC	8
Sage Broadcasting	2
Sainte Partners II, L.P.	2
San Bernardino Community College	1
San Diego State University	1
San Mateo County Community College District	1
Sarkes Tarzian Television	2

Schurz Communications, Inc.	9
Shenandoah Valley Educational TV Corp.	2
ShootingStar Broadcasting	1
Sinclair Broadcast Group Inc.	53
SJL Broadcast Management Corp	6
Smith Media, LLC	1
Smoky Hills Public Television	3
South Carolina ETV Commission	11
South Dakota Bd. of Directors	8
Southeastern Media Holdings LLC	3
Southern Broadcast Corporation	3
Southern Illinois University	2
Southern Oregon Public Television	2
St Lawrence Valley ETV Council	2
Sunbeam Television Corporation	3
Sunbelt Communications Company	15
TCT Ministries	5
Telemundo Group, Inc.	15
Telemundo Network	
Texas A&M University	1
Texas Tech University	1
The E.W. Scripps Company	10
The Victory Television Network	3
Tribune Broadcasting Company	24
Trinity Broadcasting Network	24
Tri-State Public Teleplex, Inc.	1
Twin Cities Public Television	2
United Communications Corp.	2
University of Alaska	1
University of Arizona	2
University of Central Missouri	1
University of Florida	1
University of Illinois	1
University of Michigan	1
University of Montana	1
University of Nebraska	1
University of New Hampshire	3
University of New Mexico	2
University of North Carolina	11
University of South Florida	1
University of Utah	4
University of Wisconsin	1
Univision Communications, Inc.	40
Univision Network	

Venture Technologies Group, LLC	4
Vermont ETV	4
WACY Ace TV, Inc.	1
Washington State University	2
WBCC Brevard Community College	1
WBNA Word Broadcasting Network Inc.	1
WBNX Winston Broadcasting Network, Inc.	1
WCAX Mt Mansfield Television Inc	1
WCET Greater Cincinnati TV ED Foun	1
WCEU Daytona Beach CC	1
WCFE Mountain Lake Public Telecommunications Council	1
WCNY Public Broadcasting Council of Central New York, Inc.	1
WCTE Upper Cumberland Bdcst Council	1
WCVN Kentucky Authority for ETV	1
WEDU FL West Coast Public Bcstg Inc	1
WEHT Gilmore Broadcasting Corp	1
WEIU Eastern Illinois University	1
West Central Minnesota Educational TV Inc	2
West Virginia Educ. Bcg. Auth.	3
West Virginia Media Holdings	4
Western NY Public Broadcasting Assoc.	1
WFGX WPGX Licensee, LLC	1
WFMJ WFMJ Television, Inc.	1
WFYI Metropolitan Indiana Public Broadcasting, Inc.	1
WGBH Educational Foundation	3
WGPU Florida Gulf Coast University	1
WGGB Gormally Broadcasting LLC	1
WGTE Public Broadcasting Foundation of NW Ohio	1
WGVK Grand Valley State University	1
WGVU Grand Valley State Univ.	1
White Knight Holdings Inc.	1
WHYY Incorporated	2
Wisconsin Public Television	5
WITF, Inc	1
Withers Broadcasting Company	3
WJCT Inc.	1
WLAE Educ Bcg Foundation	1
WLJT West Tennessee Public Television Council	1
WLNE Global Broadcasting LLC	1
WLNY WLNY-TV Inc	1
WLOV Lingard Broadcasting Corp.	1
WLRN School Board of Dade Cnty FL	1
WLVT Lehigh Valley Public Telecomm	1
WMHT Educational Telecomm.	1

WMTJ	Ana G Mendez Ed Foundation	1
WMYA	Anderson License Inc.	1
WNPT	Nashville Public Television, Inc.	1
WNYS	RKM Media, Inc.	1
Woods	Communication Corporation	2
WPSD	Paxton Media Group, Inc.	1
WQPT	Black Hawk College	1
WQTO	Ana G. Mendez Educat'l Found'n	1
WSBE	RI Public Telecom Authority	1
WSKG	Public Telecommunications Council	1
WSRE	Dist Bd Trust/Pensacola Jr Col	1
WTCE	Jacksonville Educators Bcstg.	1
WTCI	Grtr Chattanooga Public TV Corp	1
WTJX	Virgin Islands Public TV Sys	1
WTVP	Illinois Valley Public Telecom	1
WTVS	Detroit ETV Foundation	1
WUFX	Mississippi Television LLC	1
WUJA	Community TV of Caguas	1
WVIZ	ideastream	1
WVNY	Lambert Broadcasting	1
WWCP	Peak Media of Pennsylvania LLC	1
WXEL	Barry Telecommunications, Inc.	1
WXXI	Public Broadcasting Council	1
WYBE	Independence Public Media	1
WYCC	Bd Trustees-City Coll/Chicago	1
WYES	Greater New Orleans Educational Television Foundation	1
WYIN	Northwest IN Public Bstg Inc.	1
WYLE	ETC Communication Inc.	1
Young	Broadcasting Inc.	14
		<hr/>
		1476

Endorsements received as of 5.00 p.m. ET February 1, 2008

David K. Rehr  
President and CEO



DATE

MEMBER NAME  
MEMBER ADDRESS

Dear MEMBER:

Television will change dramatically on February 17, 2009, when the federally mandated transition from analog to digital television (DTV) broadcasting is complete. And while consumers have much to gain, millions of households risk losing television reception unless they take easy steps to upgrade.

In **(MEMBER STATE)**, there are approximately **(X NUMBER)** households that receive free over-the-air television and are at risk of losing television reception if they do not take the necessary steps to transition to digital. Those most disproportionately affected by the DTV transition will be seniors, minorities, the economically disadvantaged and those living in rural areas.

The National Association of Broadcasters (NAB) is meeting the exciting challenges of the transition head on: our member stations have spent over \$5 billion updating their equipment and infrastructure for the transition.

The NAB has developed a tool kit to help explain the transition to your constituents. All of the information is available electronically and contained on the disk inside this packet. The disk includes: (1) a PowerPoint presentation on the DTV transition that can be used during a town hall meeting with your constituents; (2) a newsletter insert for congressional newsletters in English and Spanish; (3) a DTV handbill in English and Spanish; (4) a consumer resource guide; (5) a sample press release; (6) a sample Op-Ed; (7) key points on DTV; and (8) banner Web site ads whereby members of Congress can link to the broadcasters consumer-friendly [DTVanswers.com](http://DTVanswers.com) Web site.

For more information on the DTV transition, I encourage you to contact me at 202.429.5301.

Best wishes.

Sincerely,

**David K. Rehr**

1771 N Street NW  
Washington DC 20036 2800  
Phone 202 429 5449  
Fax 202 429 5410  
[www.nab.org](http://www.nab.org)

Mr. MARKEY. Thank you, Mr. Rehr, very much. Our next witness, Chris Murray, is Senior Counsel for the Consumers Union. We welcome you today, sir. Whenever you are ready, please begin.

**STATEMENT OF CHRIS MURRAY, SENIOR COUNSEL,  
CONSUMERS UNION, WASHINGTON, D.C.**

Mr. MURRAY. Thanks again for having me, Chairman Markey, and Ranking Member Stearns. I appreciate your attention in sitting through a long hearing today. So February 17 is more than just Paris Hilton's birthday, we have learned today. It is the day at which in Mr. Barton's district more than a half a million households without some sort of intervention or education between now and then those TVs will go blank. That is nearly 1 in 4 households in his district. In Mr. Green's district we got nearly half a million households, about 23 percent. In the Los Angeles DMA, we have got nearly a million over the air households. It is my firm hope that the DTV transition is going to go absolutely swimmingly but it is my job to worry, and today I am here to express the fear that a few consumers are going to be left in the dark when the analog switch off occurs.

There is good news and bad news for consumers today. Our Consumer Reports National Research Center conducted a survey which had some troubling findings. They found that 3 in 4 consumers who are aware of the transition actually have major misconceptions about it. Half of them, nearly half of them, believe that every TV needs to be digital and those consumers are probably more likely to go out and buy a new TV set, not the worst thing in the world but it is important that they know what the least cost migration path to digital transition is for them. One in 4 consumers aware believe that they have to throw all their analog sets in the trash. Obviously, this generates concern from electronics waste perspective.

And of those aware, nearly 3 in 4 don't know about NTIA's program for converter box coupons. One finding that I actually omitted in my written testimony is that 42 percent of consumers who have no functioning TV set after February 17, 2009, have no plans to do anything about it. Let me underscore that, 42 percent, nearly half of people, who will have no over the air signals, have no plans to do anything about it yet. I really hope this is going to change but right now I think there is cause for concern, 370 days and counting. Awareness is good but it is accurate information that we actually care about. We can be aware that a city bus is barreling towards us but it is a lot more important to know where that sidewalk is and to know how to side step that bus.

Citizens and consumers didn't ask for the digital transition and I believe since it is the result of a federal mandate it is the obligation of the Federal government to provide consumers good information to help them sort through some of the noise and find out what the least cost path is to switch to digital. So the FCC and NTIA who were in charge of the transition have consumer education budgets of \$2.5 million and \$5 million, respectively, at the moment. FCC has requested an additional \$20. Just as a base line, I will note as Congressman Boucher did earlier, that in the UK, which has about 1/5 the population of the U.S., they are spending \$400

million educating consumers on a per capita basis. That is about 265 times more than we are presently planning to spend. Perhaps that is too big a number. Perhaps they are spending too much money. Perhaps we don't need to go and knock on doors like they did, but should we be concerned that we are not doing these things that perhaps there will be consumers who might not get reached. I believe that is the case.

It is great that industry is spending a lot of money. I think the campaigns that are out there are excellent. I think the NAB's commercials are informative. But in the end everybody does have a bias. Somebody is always looking to sell a product or service. Consumer electronics industry would like you to buy a new television set. Cable would like you to buy cable service. These are all good things but I do believe the government has an obligation to help consumers sort through the noise and find that least cost transition path.

I will leave you with a couple of quick recommendations. First for consumers who want to get their converter boxes, they should apply early. Don't wait to buy the box since it will expire 90 days from the date that that coupon gets put in the mail. And test your signal as early as you can because these digital signals are already out there, and you don't need to wait until February 17 to run a test. Second, NTIA and the FCC, the agencies in charge of this program, need to keep their hands on the steering wheel, and as I said help consumers find that least cost path to make the switch. I wish we had perhaps run the clock back and find some test markets to do this. You see in other countries where they have done it in the UK and Italy, in Germany especially. They have done this in a phase-in basis. They haven't done one flash cut switchover, and I believe that we need to find some test markets so that we know what is going to come.

Finally, community leaders can't exclusively rely on government, and we need a localized action plan. I do think that is a place where Congress can have a role in helping make their community leaders aware and helping them find some plans. So again on February 17 we are going to make the switch to digital, and unless adequate public education takes place millions of consumers will wake up that morning and find a blank TV screen, and it is my hope that this will all go swimmingly.

[The prepared statement of Mr. Murray follows:]



*Testimony of*

**Chris Murray**  
Senior Counsel  
Consumers Union

*Regarding*

**Status of the Digital Television Transition:  
370 Days and Counting**

*Before the*

U.S. House of Representatives Subcommittee on  
Telecommunications and the Internet, Committee on  
Energy and Commerce

*On*

February 13, 2008

Chairman Markey, Ranking Member Stearns, Vice Chairman Doyle, and members of the Committee, I am grateful for the opportunity to testify before you today representing Consumers Union (CU), the non-profit publisher of Consumer Reports magazine.<sup>1</sup> We're a publication with a 72-year history of bringing consumers independent information on products, services, and marketplace developments that affect them. With over 8 million subscribers to our content in print and online, we are a consumer-supported, independent publisher that accepts no money from retailers or manufacturers.

We're here today because one year from Sunday, due to a federal mandate, full power television stations will stop broadcasting in analog and begin broadcasting exclusively in digital (DTV transition). This matters a great deal to consumers, because for millions of "over the air only" households (at least 13.5 million according to a Consumer Electronics Association estimate), their televisions are going to go black on the conversion date unless they take action. And because of the attention the DTV transition will receive, virtually every American will likely be asking him or herself the question: What do I need to do to ensure I keep getting TV signals? Do I need a new television? A converter box? Perhaps a new antenna?

Data on consumer awareness of the DTV transition is mixed. The good news is that more consumers are becoming "aware" that something is going to happen on February 17, 2009. The bad news is that most of them are confused about what they need to do.

It seems like nearly every consumer that owns a TV is going out to spend money they don't have to on equipment that they don't need. Let's remember that consumers didn't ask for the digital television transition—this is the result of a federal mandate—so government has a responsibility to sort through the noise and help consumers find the least-cost path to switch to digital.

Our Consumer Reports National Research Center conducted a survey<sup>2</sup> on the DTV transition which had some troubling findings. Here are a few highlights:

- Three of every four consumers (74%) have major misconceptions about what the transition is and what they should do to prepare—and one in three (36%) doesn't know about it at all.
- Nearly half (48%) of consumers believe every TV has to be a digital TV—those consumers are more likely to go out and buy a new TV set when they don't need to do that. It's not necessarily a bad thing to buy those new TV sets as long as consumers know they have lower-cost options.
- One in four consumers (24%) believe they have to throw out all their analog TV sets; this is of course totally wrong, and we hope we'll see better education to change this perception, and better information about what consumers can do with old TV sets.

---

<sup>1</sup> Consumers Union is a nonprofit membership organization chartered in 1936 under the laws of the State of New York to provide consumers with information, education and counsel about goods, services, health, and personal finance. Consumers Union's income is solely derived from the sale of *Consumer Reports*, its other publications and from noncommercial contributions, grants and fees. In addition to reports on Consumers Union's own product testing, *Consumer Reports* regularly carries articles on health, product safety, marketplace economics and legislative, judicial and regulatory actions that affect consumer welfare. Consumers Union's publications carry no advertising and receive no commercial support.

<sup>2</sup> The Consumer Reports National Research Center conducted a telephone survey of a nationally representative probability sample of telephone households. 1,013 interviews were completed among adults aged 18+. Interviewing took place over Dec. 13-16, 2007.

- Of those aware of the transition, most (73%) don't know about the National Telecommunications and Information Administration's (NTIA's) converter box program. Given that the program just kicked off January 1, it wouldn't be fair to criticize NTIA for this low awareness—we anticipate it will increase significantly, but we will continue to monitor.
- Most consumers (61%) that will have at least one TV set affected by the transition either 1) wrongly believe they're not affected, 2) do not know if they're affected, or 3) have no idea the transition is taking place.

“Awareness” is good, but it's accurate information that really matters for consumers. It's one thing to be “aware” that one is standing in the path of a careening bus, but a different matter to know which direction to sidestep the oncoming impact. While other surveys are finding an up tick in consumer awareness—that's progress from a year ago—it would be more heartening if more consumers knew in practical terms what steps they could take towards the least-cost switchover to digital.

The digital television transition creates unique vulnerabilities for consumers and therefore unique opportunities for businesses to mislead them. Along with the technical complexities of the transition, there are strong incentives by a variety of market players to “digital up sell” to consumers.

Cable companies have an incentive to encourage non-subscribers to purchase their service, and to up sell current subscribers to digital cable. Retailers and manufacturers have an incentive to sell high-end HDTVs rather than more affordable, smaller-screen digital sets. And they have little incentive to inform consumers that their analog sets will continue to receive digital broadcasts as long as they have a converter box.

This combination of consumer confusion, technological complexity, and financial incentives to up sell creates a situation ripe for confusion and mischief. In closing, CU would like to offer some recommendations to consumers and the Committee to help cut through the confusion:

1. For consumers who intend to get a converter box, we suggest you apply early and don't delay more than 90 days to buy the box, since funds are limited and the coupon expires 90 days from the application date.
2. We suggest people try tuning into a digital station in their area right now to see where they stand with reception, and not wait until analog shuts down. Stations are already broadcasting in digital, so don't wait until the last minute to test your signal.
3. NTIA and the FCC, the agencies in charge of the digital transition, need to keep their hands on the steering wheel. So far, these agencies are in large measure relying on industry to educate consumers about the transition, but we believe they have a responsibility to help consumers filter through the noise to find unbiased information, and determine what the “least-cost” path to digital will be.
4. Policymakers should try to enroll some test markets in making the jump to digital early. We're not the first country to switch to digital—the UK, Italy, Germany, and others have already begun the digital switch—but in a gradual fashion so that they can iron out the kinks as they go. Consumers Union believes we should have a similar phased-in approach here in the U.S. No communities have thus far volunteered to do the switch early, and the

FCC doesn't have the authority to force anyone to transition early. We need some mayors or governors to consider stepping up early as test markets, and perhaps the FCC or NTIA could provide financial incentives for them to do so.

5. Policymakers should develop localized action plans that focus on strategic outreach to the most affected communities. Special attention needs to be paid to getting seniors good information about the least-cost digital switch, and assistance installing any new devices. The DTV transition will also create disproportionate effects on Latinos; further leadership from the CHC is critical, as is targeted outreach to Latino media.
6. For members of Congress who want more detailed data about your districts and who may be affected, Nielsen has been willing to provide such data. Knowing who is affected is the first step to developing a meaningful localized action plan.

On February 17, 2009, the U.S. is going to make the jump to digital. Unless adequate public education takes place to minimize transition hiccups, millions of Americans may wake up that morning and find their TVs don't work anymore. If we're going to avoid that scenario, I humbly submit to the Committee that we're going to have to get our act together, and fast.

Thank you Mr. Chairman once again for the opportunity to appear before your Committee.

---

Consumer Reports has some good materials available on the DTV transition which can be found at:

- [www.consumersunion.org/dtv](http://www.consumersunion.org/dtv)
- [www.hearstnow.org](http://www.hearstnow.org)

Below are other good resources for consumers:

- NTIA's Converter Box Program Web site - [www.DTV2009.gov](http://www.DTV2009.gov)
- FCC DTV Transition page - [www.DTV.gov](http://www.DTV.gov)
- FCC DTV "Frequently Asked Questions" page - [www.dtv.gov/consumercorner.html](http://www.dtv.gov/consumercorner.html)
- FCC DTV Shopping Guide (En Español) - [www.fcc.gov/cgb/consumerfacts/spanish/DTVShopperGuide\\_sp.pdf](http://www.fcc.gov/cgb/consumerfacts/spanish/DTVShopperGuide_sp.pdf)
- AARP "Get Ready for Digital TV" - [www.aarp.org/money/wise\\_consumer/telephones/digital\\_tv.html](http://www.aarp.org/money/wise_consumer/telephones/digital_tv.html)

Mr. MARKEY. Thanks, Mr. Murray, very much. Our next witness, Tom Romeo, is the Director for Federal Services, Global Business Service or IBM Corporation, a very important person in this whole project, and we welcome him and please begin.

**STATEMENT OF TOM ROMEO, DIRECTOR, FEDERAL SERVICES,  
GLOBAL BUSINESS SERVICE, IBM CORPORATION, BE-  
THESDA, MARYLAND**

Mr. ROMEO. Chairman Markey and Ranking Member Stearns, thank you for the opportunity to testify before you today, and to provide you an update on the progress the IBM team has made in implementing the NTIA TV converter box coupon program. As Assistant Secretary Baker mentioned earlier on January 1 the consumer support center officially opened for business. It started taking orders from consumers across the nation for TV converter box coupons. On that first day over 249,000 applications came in from consumers in all 50 states. Over 475,000 coupons were requested on day one. While initial volume was higher than expected, all systems continued to handle requests and our team reacted quickly to pinpoint needed adjustments and implement solutions.

For example, the volume of Spanish language callers to the consumer support center exceeded our initial projections. We moved quickly on two fronts to accommodate this fact. First, we added additional Spanish language agents to match the volume and minimize wait times for those needing assistance in Spanish. Second, we added an automated, interactive voice response system for Spanish language callers. Our experience with the English language IVR system shows that approximately 78 percent of the calls are successfully completed within the IVR system. We expect similar results for the Spanish language IVR. The high percentage of calls which are fully handled with the IVR system speaks to the ease of applying for coupons over the phone. Our experience with high demand during those first few weeks in January underscores the unique nature of this program.

The IBM team has been able to react quickly and make adjustments to the system as unanticipated developments arise. The flexibility built into the system architecture will allow for continued rapid response and adjustments going forward. The next step is to begin mailing coupons to consumers. That will get underway next week starting February 17. Our roll out plan includes continuing to work closely with our retail partners to confirm sufficient inventory of converter boxes to meet consumer demand. If necessary we can adjust the rate of coupon distribution to match as closely as possible projected retail inventory so consumers are able to purchase a converter box within the 90-day expiration period for the coupons.

In 118 days since I last came before this committee, we have made great progress in recruiting the voluntary participation of both large national retailers and smaller local retailers. Over 615 retailers representing more than 16,475 stores nationwide are currently certified to participate in the program. Eight of the largest consumer electronic retailers, Best Buy, Circuit City, K-Mart, RadioShack, Sam's Club, Sears, Target, and Wal-Mart are among the 615 retailers certified to participate in the coupon program. Re-

tail recruitment efforts will continue until the March 31, 2008 deadline. In preparation for coupon distribution to consumers, we completed a pilot program in two markets. This pilot program conducted during January and early February allowed for testing of all components of the system and their integration.

Based on the results from the pilot program, we have made some updates to the system in the process, including the use of secret shoppers to validate the readiness of individual retail stores and revising language that appears on the coupon card to make for a consistent consumer experience. Although we are entering the operational phase of the coupon program, we remain focused on the driving force of consumer education. Our partner, Ketchum Public Affairs, continues to lead the consumer education effort focused on the 5 communities who most likely rely more heavily on over the air broadcasting than the general population. They are senior and older Americans, the economically disadvantaged, rural residents, people with disabilities, and minorities.

We continue to build and leverage a network of committed partners who already have access to many of the population segments we are targeting. The NTIA TV converter box coupon program requires innovative thinking, leading technology, and flexibility. The IBM team is pleased to be part of this vital program and recognizes that many challenges remain along the way to February 17, 2009. Our team is ready to continue to meet those challenges and work to insure that consumers across the United States have continued access to free television broadcasting, including educational, entertainment, emergency, and homeland security information.

Thank you for the opportunity to testify, and I am happy to answer any questions.

[The prepared statement of Mr. Romeo follows:]

#### STATEMENT OF TOM ROMEO

Mr. Chairman and Members of the Subcommittee, thank you for this opportunity to testify before you again on the status of the DTV Transition. My name is Tom Romeo and I am Director of Federal Services for IBM's Global Business Services, Public Sector. I am here today to update you on the progress the IBM Team has made implementing the National Telecommunications and Information Administration (NTIA) TV Converter Box Coupon Program.

NTIA awarded IBM the contract to provide services for the TV Converter Box Coupon Program on August, 15, 2007. IBM and its business partners, Ketchum Public Affairs, Epiq Systems and Corporate Lodging Consultants are providing services in four areas:

- Consumer education
- Coupon distribution to consumers and redemption
- Support for retail store participation
- Financial processing to reimburse retailers, and to maintain records.

The Coupon Program, authorized by the Digital Television Transition and Public Safety Act of 2005, provides for distribution and redemption of coupons that consumers may apply toward the purchase of digital-to-analog converter boxes. Households using analog televisions will not be able to receive digital broadcasts after February 17, 2009, unless the analog television is connected to a converter box that switches the digital signal to an analog format, or the analog television is connected to cable or satellite service.

Between January 1, 2008 and March 31, 2009, all U.S. households may request up to two coupons, worth \$40 each to be used toward the purchase of up to two digital-to-analog converter boxes until the initial \$990 million allocated for the program has been exhausted. After this initial phase of the program, NTIA may request an additional \$510 million already authorized by Congress. During this "contingent

period”, coupons will be available exclusively to households that rely on over-the-air broadcasting as their sole source of television programming.

#### PROGRAM GOALS

With these parameters, IBM designed the NTIA TV Converter Box Coupon Program to be consumer-focused, easy to use, and provide maximum choice and access for both consumers and retailers. Ensuring high retailer participation and satisfaction are essential elements to the overall success of the program. Our goal continues to be to successfully communicate the details of the TV Converter Box Coupon Program to targeted consumers, distribute coupons, and complete the redemption process efficiently.

#### PROGRAM LAUNCH

On January 1, 2008 the Consumer Support Center opened for business and began to take orders from consumers across the nation for their TV Converter Box Coupons. Consumers were able to order coupons using any of the four available options. The toll-free phone number (1-888-DTV-2009) is operational 24x7 with live agents available to callers at all times. Operators can accommodate requests in more than 150 languages. The toll-free phone option also provides a TTY solution for use by the hearing impaired community. Other options to apply for coupons include online at [www.DTV2009.gov](http://www.DTV2009.gov), by mail (P.O. Box 2000, Portland, OR 97208-2000), and via fax (1-888-DTV-4ME2). To date, approximately 65% of the requests received have come in via the Internet, 35% via the telephone, and less than 1% for the mail and fax channels combined.

On January 1, 2008, over 249,670 applications came in from consumers in all 50 states for a total of 475,652 coupons requested. High demand continued through the first week of the program resulting in over 1,131,795 application requests for 2,144,632 coupons by week’s end. While this initial volume was higher than expected, all systems continued to handle requests, and our team reacted quickly to pinpoint needed adjustments and implement solutions quickly. For example, the volume of Spanish-language callers to the Consumer Support Center exceeded our initial projections. We moved quickly on two fronts to accommodate this fact. First, we added additional Spanish-language agents to match the volume and minimize wait times for those needing assistance in Spanish during times of peak call volume. Second, we expedited implementation of an automated Interactive Voice Response (IVR) system for Spanish-language callers to assist in handling the high volumes of Spanish-language requests in a timely manner. Our experience with the English-language IVR system shows that approximately 78% of calls are successfully completed within the IVR system. We expect similar results for the Spanish language IVR. The high percentage of calls which are fully handled within the IVR system speaks to the ease of applying for coupons over the phone.

As the Coupon Program moves into the next phase, we will continue to closely monitor all aspects of the system and make adjustments as needed in a timely fashion.

#### COUPON DISTRIBUTION

As of February 12, 2008, 4,801,777 coupons have been requested via 2,767,519 applications from consumers across the country. We will begin mailing these coupons out to consumers the week of February 17, 2008 distributing them in the order in which they were received. This roll out plan also includes continuing to work closely with our retail partners to confirm a sufficient number of converter boxes available at retail outlets to meet consumer demand. If necessary, we will adjust the rate of coupon distribution to match as closely as possible projected retail inventory so consumers are able to purchase a converter box within the 90-day expiration period for the coupons.

Included in the coupon mailing to consumers is information about where they can purchase a coupon-eligible converter box in their local area, and what they need to do to use the coupon. Consumers can also search for participating retailers near their address using a “Retailers Near You” feature on the Coupon Program website (<https://www.dtv2009.gov/VendorSearch.aspx>).

#### RETAILER PARTICIPATION

In the 118 days since I last came before this Committee, I am pleased to report that we have made great progress in recruiting the voluntary participation of both large national retailers and smaller, local retailers. We project that when coupons

are mailed starting the week of February 17, 2008, over 9,000 retail locations will be ready to fully participate in the program. This includes locations in all 50 states, Puerto Rico, and the U.S. Virgin Islands. These stores will have completed certification in the Coupon Program, indicated that their employees are trained, have converter box inventory in their stores, and have their point-of-sale systems prepared to redeem coupons.

#### TEST PHASE

In preparation for coupon distribution to consumers, we have completed the Open Operational Capabilities Demonstration (OCD) phase of the program. This pilot program, conducted during January and early February, allowed for testing of all components of the system and their integration - coupon ordering, distribution, redemption at a participating retailer, and reimbursement to the retailer. The pilot program provided valuable insight into how well our technical systems are performing and identified necessary adjustments. Based on the results from the pilot program, we have made some updates to the system and the process, including the use of "secret shoppers" to validate the readiness of individual retail stores, and revising language that appears on the coupon card to make for a consistent consumer experience.

#### CONSUMER EDUCATION

Although we are entering the operational phase of the Coupon Program, we remain focused on the driving force of Consumer Education. Our partner, Ketchum Public Affairs, continues to lead the consumer education effort focused on the five communities who most likely rely more heavily on over-the-air broadcasting than the general population: 1) senior and older Americans; 2) the economically disadvantaged; 3) rural residents; 4) people with disabilities; and 5) minorities. Focus groups, which included significant representation from these groups, were used to develop the branding and key messages for the Coupon Program. We continue to build and leverage a network of committed partners who already have access to many of the population segments we are targeting. A Partnership Toolkit was developed and includes DTV and Coupon Program background material, fact sheets, posters, sample public service announcements, and presentations. The materials can be co-branded for use by partners. Also included are specific strategies on how to reach the media to effectively deliver the Coupon Program message, and ideas and resources for informing consumers through community and in-store events. In addition, our work with the media to place stories about the Coupon Program is heavily focused not only on national media, but also the television markets that have the largest estimated number and percentage of over-the-air reliant households. We believe the strong demand for coupons indicates we are on the right track educating consumers about the Coupon Program.

#### CONCLUSION

The IBM Team is pleased to be part of implementing this vital program and recognizes that many challenges remain on the way to February 17, 2009. Our team continues to be ready to meet those challenges and work to ensure that consumers across the United States have continued access to free television broadcasting, including educational, entertainment, emergency and homeland-security information.

Thank you for the opportunity to testify today and I am happy to answer any questions.

---

Mr. MARKEY. Thank you, Mr. Romeo, very much. Our next witness, Laurance Harris, is the Vice President for Merchandising for RadioShack. Welcome, sir.

#### **STATEMENT OF LAURANCE HARRIS, VICE PRESIDENT MERCHANDISING, RADIOSHACK, FORT WORTH, TX**

Mr. HARRIS. Good afternoon, Chairman Markey, and Ranking Member Stearns. I am Vice President of Merchandising at RadioShack Corporation. I am pleased to be here even more so when I saw the equipment we are using for recording is RadioShack equipment, so it was good news. I am here on the op-

portunity to speak on behalf of RadioShack and the Consumer Electronics Retailers Coalition to discuss the essential role of RadioShack and the retail industry are playing in NTIA's converter box program. RadioShack has 4,400 owned and operated stores, an additional 1,500 dealer stores throughout the country. Even with our long experience, the digital transition presents unique challenges to RadioShack and other retailers and the consumer. We worked diligently over the last 3 years to help make this transition as smooth as possible for consumers.

More recently retailers have worked closely with NTIA and its vendors. RadioShack is pleased to announce it will have converter boxes available in all of its corporate stores and through Direct-to-You program by February 22, in time for the initial distribution of the converter box coupons. We believe that RadioShack and CERC's other brick and mortar members are prepared for the start of the program. Let me outline specific steps taken and planned by RadioShack and other retailers regarding the implementation. Retailers appreciate the steps taken by the NTIA to insure use of electronic coupons that work in a manner similar to plastic pre-paid, private label cards, so each retailer participating in the converter box program must in some manner adopt its core point of sale systems.

CERC members are proud that several of us were able to initiate work on the necessary changes during the 4th quarter which is of course our busiest sales period. We are on scheduled to complete the modifications in time for the coupon distribution. The adoption of a hard date for the DTV transition has provided certainty for retailers. They know when consumers will need to buy any necessary equipment. Nevertheless, no one knows how many households will need a converter box. Indeed, no one anticipated the request to exceed \$4.8 million within the first month of the program. In reality, we anticipate that some of the coupons requested will not be redeemed for some customers will just simply not need a box. Even so RadioShack and other participating CERC members are creating distribution systems that will handle millions of converter boxes over the next 18 months.

We are all working to insure we have inventory in the right place at the right time. We are pleased that the NTIA is providing us timely information regarding where consumer demand for coupons exist. We hope to receive even more granular detail on data and coupon redemption rates once the coupons are distributed. This information is critical so we can target inventory exactly where it is needed. We believe the retailers will be prepared to respond with initial coupon demand. As I mentioned, RadioShack will have stock ready when consumers receive their coupons. In the event that a RadioShack's own store's inventory is temporarily depleted, our sales associate can order the product from stock located in our Fort Worth distribution center.

The converter box will then be shipped to the customer's home at no additional shipping charge through our Direct-to-You program. We are also pleased to announce today for the first time we will be taking coupon orders by phone at RadioShack, 877-RSD-TV4U beginning March 1.

Mr. MARKEY. What was that number again?

Mr. HARRIS. Do you want to order a box? 877-RSD-TV4U. Again, it is our first announcement. That will be ready by around March 1. The boxes will be shipped to the customer's home, again free of shipping charges. Pricing the converter box even with its simple features presented challenges. We only recently became aware of one issue in December, 2007, as orders were being placed retailers learned that U.S. Customs had imposed a 5 percent import tax on these boxes. Retailers feel this duty on a product that the government has subsidized will serve to impede distribution and burden the consumers. We hope this committee will join in seeking a legislative waiver on this import duty as surely as Congress could not have intended this result.

Regarding low power television, we think NTIA was right not to require the inclusion of a signal pass through feature in the converter box. In our own decision we focused in providing the price, quality, and features that the vast majority of customers would need. We decided not to include a pass through feature for all boxes for the same reasons because we know the private sector prepared solutions already for this issue for the households that need them. Perhaps the most important success is the private sector's planning to educate customers about the digital transition. CERC applauds the efforts of our industry partners. We know these efforts are working. CA just announced last week that consumer awareness of the digital transition has grown 80 percent since 2006.

We also recognize that retailers have the most direct role in consumer education. We are the end game. We are the place where customers go to ask the questions. RadioShack's consumer education plans are the following, an updated RadioShack web site, notifications in tens of millions of RadioShack direct mail flyers, on February 19 any receipt printed by a RadioShack store will alert the customer of the digital transition, in store window signs and banners, national advertising, radio advertising in both English and Spanish, and various public relations practices.

RadioShack and all CERC members also recognize the critical importance of having trained sales associates to answer questions regarding the transition. RadioShack headquarters—

Mr. MARKEY. If you could please summarize your statement, sir.

Mr. HARRIS. In conclusion, as we embark on this program, we want the committee to understand the extraordinary efforts retailers have undertaken. RadioShack, along with 4,400 stores and more than 30,000 retail employees and support staff will insure training throughout the program. We are confident we have the necessary training systems in place. Our employees will be ready for transition. Thank you again for the opportunity to testify. I look forward to answering any questions.

[The prepared statement of Mr. Harris follows:]

#### STATEMENT OF LAURANCE HARRIS

Good morning. My name is Larry Harris. I am Vice President of Merchandising at RadioShack Corporation. With the DTV transition date just over one year away, I appreciate the opportunity to appear today at this important hearing to discuss the essential role that RadioShack and the retail industry are playing in the National Telecommunications and Information Administration's (NTIA) converter box program. I am here this morning to speak on behalf of both RadioShack and the

Consumer Electronics Retailers Coalition (CERC), which in addition to RadioShack, includes as its members, Amazon.com, Best Buy, Circuit City, Sears, Target, and WalMart, as well as three major retail associations - the North American Retail Dealers Association (NARDA), the National Retail Federation (NRF) and the Retail Industry Leaders Association (RILA).

#### BACKGROUND ON RADIOSHACK AND RETAIL INVOLVEMENT IN THE TRANSITION TO DATE

RadioShack sells a wide variety of consumer electronics products and is one of the largest retailers of consumer electronics equipment in the United States, with 4,400 owned and operated stores and an additional 1,500 dealer stores throughout the country. RadioShack is a primary resource to consumers for devices and accessories that assist in household connectivity and networking. Even with significant experience in the consumer electronics retail business, the transition to digital transition presents unique challenges to RadioShack, other retailers and to the consumer.

RadioShack and the other members of CERC have understood for years the unique role retailers play in the transition to digital television. This role, of course, includes having the right products available at the right time for consumers. But equally important is the critical role retailers play in educating and assisting consumers in making purchasing decisions that best satisfy their needs. We have worked diligently over the last few years to help make this transition as smooth as possible for all consumers. At this time, there are approximately 250 certified retailers in the converter box coupon program. Each of the retailers participating in the coupon program is working closely with NTIA and its vendors, IBM and CLC, on the program's implementation. RadioShack is pleased to announce that it will have converter boxes available in all of its corporate stores by February 22nd, to coincide with the initial distribution and receipt of coupons. In addition, all stores will be able to accept coupons beginning on February 19th, through our Direct-to-You program which I will discuss later. Several other CERC members have similarly announced their intentions to have stock in stores by the time coupons are received by consumers.

The converter box program as created by Congress presents unique challenges to retailers, but we believe that RadioShack and CERC's other brick-and-mortar members are prepared for the start of the program. And like the other industry groups involved - the broadcast, cable and manufacturing companies - the retail industry is investing millions of its own dollars and, equally important, significant human resources to facilitate a smooth transition. This public-private sector balance is purposeful and is proving to be an effective means by which to make the digital transition.

During the rest of my testimony, I outline specific steps taken and planned by RadioShack and other retailers regarding the implementation of the coupon program, including the implementation of new point-of-sale (POS) functionality, inventory plans, pricing issues and consumer education. In addition to discussing these steps, I also highlight some specific challenges presented as we embark on the distribution of converter boxes.

#### MODIFICATION OF POS SYSTEMS

Each retailer participating in the converter box coupon program must in some manner adapt its core POS functionality if it elects to electronically authorize the government issued coupon. Retailers appreciate the steps taken by NTIA to ensure use of electronic coupons that authorize in a manner similar to plastic pre-paid private label cards. NTIA's contractor, IBM, and its sub-contractor CLC have also provided options that address the requirements of the automated systems used by larger retailers, as well as systems solutions to accommodate smaller retailers. Still, even with the flexibility provided, each retailer has its own unique POS systems and implementing the ability to process government issued coupons has presented each retailer with its own challenges. The cost of changing POS systems to support NTIA requirements in this manner is being incurred by each retailer - the government has not provided funding for any part of this process. In addition, CERC members are proud that several of us were able to initiate project work on these system changes during the 4th quarter of the year, our busiest sales period. Prior to roll-out of the systems later this month, a number of participating retailers are currently participating in NTIA's pilot programs in Kansas and D.C.

## DISTRIBUTION AND MAINTENANCE OF CONVERTER BOX INVENTORY

The creation of a hard date for the DTV transition has provided certainty for retailers as to when they needed to be ready to offer consumers any necessary equipment. However, even with the hard date, some uncertainty remains as to how many households will need or want a converter box and at what point those households will request and redeem the coupons. Indeed, no one anticipated that requests for coupons would exceed 4.4 million within the first month of the program!

In reality, we anticipate that a portion of the coupons requested will not be redeemed as some consumers decide that they do not need a converter box. For example, according to the Consumer Electronics Association (CEA), 50 percent of U.S. households currently have a digital television and it forecasts that another 32 million digital televisions will be sold in 2008. Many consumers making a digital television purchase may do so after they requested a coupon. We also know that many households will decide to connect their televisions, or any sets that weren't connected already, to cable or satellite which will also reduce demand for converter boxes. There are also indications from NTIA data that many consumers who have applied for coupons may be cable or satellite customers, meaning that they may not actually need a converter box. Part of our role in educating consumers will be to make sure that subsidized converters are obtained by consumers who actually have a use for them.

Regardless of these uncertainties, RadioShack and the other participating CERC members are creating distribution systems that collectively will handle the distribution of millions of converter boxes over the next 18 months. Each retailer's plan is of course different and is tailored to its own business model and the customer base, but collectively the retail industry is confident that the demand for converter boxes will be met.

With 4,400 owned and operated stores and another 1,500 dealer stores throughout the 50 states, D.C. and Puerto Rico, RadioShack will play an essential role in the distribution of converter boxes. To that end, we and other retailers are working closely with NTIA, IBM and CLC to help ensure that we have inventory in the right place at the right time. We are pleased that NTIA is working with retailers to provide us timely information regarding where consumer demand for coupons exists. We encourage NTIA to provide this information in as granular detail as possible and with the rates of returns for these same areas once the coupons are distributed. This information is critical in helping ensure all retailers are able to use their distribution systems to target inventory where it is needed. As the only major consumer electronics retailer with thousands of both its own stores and dealer stores, this is perhaps uniquely challenging for RadioShack. Despite the challenge, we are committed to having each of our stores prepared to respond to consumer interest. Under the regulations and our existing contractual arrangements, our dealer stores must each seek their own certification from NTIA for participation. However, RadioShack understands the importance of having these stores, most of which are small businesses in rural settings, involved in the transition. Therefore, in addition to preparing our own stores, we have worked closely with NTIA to promote dealer participation and to educate dealers about the program and the digital transition generally.

With the initial demand of 4.4 million coupons, I am sure the Subcommittee is interested in knowing whether retailers will be prepared over the next few months to respond to this initial demand. We believe that through the combined efforts of all participating retailers and with full cooperation from NTIA and CLC, the answer will be yes. As I mentioned, RadioShack intends to have stock in all of its stores by February 22. With 4,400 stores, we cannot guarantee that each store will have stock at all times due to the ebb and flow of customer demand. However, in the event that a RadioShack-owned store's inventory is temporarily depleted, our sales associates are being trained to offer to order the product for the customer from stock located in our Fort Worth Distribution Center. The converter box will then be shipped to the customer's home at no additional charge through our Direct-to-You (D2U) program. This D2U program will be available for coupon-eligible converter box purchases in all of our stores beginning February 19th and RadioShack plans to hold some stock in our Fort Worth Distribution Center for the length of the program for D2U purposes. Other retailers will also provide solutions when store locations are out of stock or for those coupon-holders who are infirm or otherwise unable to come to a store. For example, retailers, like EchoStar here with us today, will be able to offer the converter boxes for sale online. Other retailers will have 1-800 numbers to respond to these requests.

## ISSUES AFFECTING PRICE OF THE CONVERTER BOX

I know that this Subcommittee is hopeful that the consumer's contribution to the purchase of the converter box will be as low as possible. RadioShack understands this concern and recognizes the need for an affordable solution to all consumers. I would like to spend a few minutes addressing issues affecting the price of the converter box to the consumer. This is an area in which, of course, each retailer has worked through its own issues and considerations. My comments here reflect RadioShack's experience regarding price considerations.

Although the coupon-eligible converter box has simple features and its sole function is to convert a digital television signal to analog format, keeping the price low still presents challenges. First, as mentioned above, the level of demand is unclear so that it is difficult to take full advantage of quantity-dependent pricing from manufacturers. Second, its shelf life - 18 months - is uniquely short. For these reasons, manufacturers are not able to amortize the upfront price of production over a long period of time. Normally, the price of a consumer electronics product would drop steadily over its market life of potentially several years; the coupon-eligible converter box product will not benefit from this effect.

In addition, any single technology rich consumer electronics product may be covered by literally hundreds or even thousands of patents, and the converter box is no different. Whether it is the manufacturer or retailer who actually pays the patent license royalties for such essential patents, this dynamic may also add cost to the box.

Each retailer (and manufacturer) also has had to make difficult choices about which permissible optional features, if any, to include in the box. The added cost that results must be balanced against the likelihood that such features will be required by a broad number of consumers. For example, manufacturers and retailers each confront this issue with regard to the inclusion of signal pass-through technology which would benefit those households who receive low-power television signals or wish to receive analog signals across international borders. NTIA made an appropriate decision to permit the signal pass-through feature as an optional, but not mandated feature. A reason for this decision related to concerns over the loss of signal strength in the converter box that might occur and affect the reception of the digital signal. Based on this and other information RadioShack had when making our initial orders, we prioritized the cost, quality and features that the vast majority of our customers would need and did not include the pass-through feature in those orders.

Given manufacturing and distribution lead times, we believe that any decision at this late date to mandate such a requirement would jeopardize the coupon program and is unnecessary. There will be solutions to this problem in the marketplace. There are currently three approved converter boxes that include the pass through technology, including EchoStar's. While the products that RadioShack plans to sell at this time do not include pass-through technology, we are exploring solutions for LPTV viewers. At a minimum, RadioShack and others intend to offer LPTV consumers a discount on the external devices (such as an A/B switch and splitter) necessary to provide an external pass-through to connect their converter box and television. As one of the largest national retailers and manufacturer of antennas, we will also carry a variety of outdoor antennas. And, of course, the viewer could also purchase a dual tuner television if this makes economic sense.

In its role as a retailer, RadioShack intends to help its LPTV customers with the transition and we will explore all possible solutions. However, it is critical that the Community Broadcasters educate their LPTV viewers on the problem and inform them of their options. In addition, RadioShack encourages the Community Broadcasters to provide retailers with specific information about the number of households affected and their locations. Such information will be particularly helpful in ensuring the delivery of appropriate solutions to the degree they are needed.

Before leaving the issue of cost, I would like to raise an issue that only recently came to retailers' attention, but that has a significant effect on the price of the box. In December 2007 as orders were being placed for converter boxes, retailers learned that U.S. Customs has imposed a five percent import tax on converter boxes. Retailers fear that this duty on a product that the government has subsidized through the coupon program for the purposes of helping U.S. households will serve to impede distribution and may needlessly burden consumers. We hope that this Committee will join us in seeking a legislative waiver of this import duty, as surely the Congress could not have intended this result.

## CONSUMER EDUCATION

Perhaps most important to the success of the transition is the role that the private sector is playing to educate consumers about the digital transition. CERC applauds the efforts of NAB, NCTA, CEA, the consumer groups and our government partners for their efforts to alert consumers. We know that these efforts are working. CEA just announced last week that consumer awareness of the transition to digital television grew 80 percent since 2006.

But, we recognize that retailers have perhaps the most direct private sector role in consumer education. We are the end game - we are the place where consumers will go to ask questions to learn more about the transition and its effect on their household. Like each of the private sector industries involved, retailers are investing significant funds to communicate information about the transition through print and other media. However, retailers are also making significant investments in human capital - training hundreds of thousands of sales people to assist consumers. For a transition that is short term and product that is not relevant to everyone in the same manner, this is a challenging task. Let me provide some perspective on what RadioShack and other CERC members are doing regarding our media communications efforts and our sales associates' training.

### *Consumer Education through Advertising, the Internet and Signage*

RadioShack, and other CERC members, are implementing detailed public education plans to notify consumers of the digital transition generally and to inform them of the possible need to purchase a converter box. RadioShack's plan includes the following activities during just the first quarter of this year:

- We are updating RadioShack's website by February 17th to include dedicated space at [www.radioshack.com/dtv](http://www.radioshack.com/dtv) to explain the transition, the coupon program and to answer frequently asked questions (including information for LPTV viewers). It will also include links to the relevant government websites and CERC/CEA/FCC's DTV tip sheet. This site highlights the information we have provided on [RadioShack.com](http://RadioShack.com) for many months already.

- We are including notifications about both the transition and the coupon program in tens of millions RadioShack's direct mail flyers and newspaper inserts throughout the year.

- By February 19th, all stores will print notifications on every receipt printed in a RadioShack store on any purchase alerting customers about the digital transition, the availability of converter boxes at RadioShack and both websites [www.radioshack.com/dtv](http://www.radioshack.com/dtv) and [www.dtv2009.gov](http://www.dtv2009.gov).

- We are placing window signage in each store in March announcing the availability of coupon eligible converter boxes once stock is in place. There will be window signs on the transition, at times, throughout the program. We will also have bilingual educational brochures in our stores.

- The packaging on most of our converter boxes will indicate that they are coupon eligible; and,

- We will be placing advertising in national print media to notify consumers, as well as radio advertising on both English and Spanish language stations.

- We will use various public relations tactics to ensure the conversion is effectively communicated to news media and customers alike. This includes the use of audio and video podcasts, news releases and staged store events throughout the year announcing news and milestones relating to our participation in the transition process. RadioShack is also the focal point for many local market media outlets looking to explain technical issues to their viewers and readers, and the digital transition process is a perfect example. We will continue to actively promote and facilitate news media requests to visit local stores and interview our knowledgeable sales staff.

Similar efforts by several other CERC members have been outlined in recent filings with the Federal Communications Commission (FCC). In addition, CERC has updated its Consumer Guide on its website and the Converter Box Coupon Program's site includes a prominent link to CERC's site as well.

### *Training of Sales Associates*

RadioShack and all CERC members recognize the critical importance of having trained sales associates who can answer specific questions regarding the digital transition and the coupon program. While media efforts will call consumers to action, our sales associates may be the only face-to-face opportunity that a consumer will have to ask specific questions and to solve their particular needs relating to the transition. Training our sales associates on the specifics of the transition and the

converter box program is a Herculean task. Each retailer is making significant efforts to accomplish this task effectively - these efforts are underway at RadioShack and will continue throughout the next 12-18 months.

RadioShack headquarters trains and communicates with its store managers and employees through several different means. Let me provide you some specifics. First, RadioShack provides online training for all employees on many different product lines and technologies. We have a number of training sites dedicated to the digital transition, digital television products, and the coupon eligible converter box. At the end of the online training course for the converter box, our employees are required to take a test. We monitor the test completion rate for each store and each store employee must pass with a 90 percent or higher in order to be considered a completion. Second, in addition to our online training program, RadioShack conducts RadioShack TV broadcasts with its store managers and sales associates. We have already completed a number of segments on the transition and coupon program with our store managers and have additional segments scheduled for both store managers and sales associates to coincide with the appearance of coupons in the marketplace.

Third, RadioShack distributes articles on issues of importance directly to its stores on a daily and/or weekly basis. This includes our daily store bulletin, RadioShack Today, as well as our store intranet site that stores use daily to access news, information and required tasks. Again, we have already provided significant information to our stores through these communications channels and will continue to do so throughout the transition.

All of these forms of communication emphasize to the store managers and sales associates the complexities of the transition and the coupon program. We emphasize to our employees the need to ask customers the right questions in order to make sure the consumer makes the best purchase decision for their particular television viewing needs. I would also like to mention that RadioShack also provides all of its training and educational materials to its dealer stores. Each dealer then makes its own determination as to how they are used.

As we embark on the introduction of coupons and converter box sales, we want the Committee to understand the extraordinary level of the retailers' undertaking. RadioShack alone has 4,400 stores and more than 30,000 retail employees and support staff who must be trained. This is in addition to our independent dealer base with thousands of their own employees who they must separately train as well. In addition, no retailers' employee base is static. This means that RadioShack and other retailers must have a continuous loop of training for all new employees throughout the coupon program period and provide refresher courses for current employees. RadioShack is confident that we have the necessary systems in place. We will monitor our efforts, and continue to proactively educate our retail employee base.

#### CONCLUSION:

For several years, RadioShack has committed significant energy to the digital transition. This year and into next, RadioShack's commitment will remain strong and we look forward to playing our part in the effort to make the transition as smooth as possible for all consumers. Thank you again for the opportunity to testify and I look forward to answering your questions.

---

### Consumer Electronics Retailers Coalition



www.ceretailers.org

#### WHAT CONSUMERS NEED TO KNOW ABOUT THE FEBRUARY 17, 2009 “DTV TRANSITION” AND THE NTIA “TV CONVERTER BOX COUPON PROGRAM”

**(1) WHEN WILL THE TRANSITION FROM ANALOG TO DTV BROADCASTING OCCUR?**

The last day that major full power local broadcasters can send out conventional “analog” television signals will be *February 17, 2009*. After that date, your major local television broadcasters will broadcast exclusively digital television (“DTV”) signals that can be received only by digital TVs or converters. *If you use a TV antenna with one or more TVs, you should consider what this means to you.*

**(2) WHAT ABOUT “LOW POWER” OR “COMMUNITY” BROADCASTERS?**

While the major commercial and public broadcasters are going all-digital by February 17, 2009, there are some specialized low power or “community” broadcasters that are not required to convert to digital in 2009. If you are accustomed to watching one of these stations, you will likely hear from *them* about how to maintain your viewing. *(As to your equipment options, see question #10 below.)*

**(3) WHAT IS THE NTIA “TV CONVERTER BOX COUPON PROGRAM”?**

Because many U.S. households still rely on antennas (indoor or outdoor) for all or some of their TV viewing, the Congress, when it enacted the DTV Transition law, set aside up to \$1.5 billion dollars to fund a “TV Converter Coupon Program” administered by the Department of Commerce’s National Telecommunications and Information Administration (NTIA).

Each consumer household can apply for up to two \$40 electronic coupons that can be used at participating retailers toward the purchase of coupon-eligible converter boxes that will convert digital TV broadcasts to analog signals that can be received by the older TVs.

- You can apply for these coupons **now** on-line at [www.dtv2009.gov](http://www.dtv2009.gov) or by calling toll-free **1-888-DTV2009 (888-388-2009)**. The web site and the coupon packaging will also have information about the models of certified converters and the local and on-line or telephone service retailers who will accept the government-issued coupons.
- The coupons cannot be combined to buy a single product or to pay for sales tax or shipping. **Each coupon will expire 90 days from the date of issuance.** The deadline to apply for coupons is March 31, 2009.

**(4) I NOW SUBSCRIBE TO CABLE OR SATELLITE – DO I NEED TO BE CONCERNED ABOUT LOSING A TV SIGNAL TO MY TVs THAT ARE HOOKED UP TO THESE SERVICES?**

No. Cable operators pick up most local broadcasts at a central location and send them to homes over cable; satellite services increasingly are able to do this as well. Through at least 2012 **they will be required to provide the sort of free local broadcast programming they currently offer.**

- Local major broadcasters will be able to offer additional digital channels, some or all of which might not be carried, or carried in HDTV, by your service. If you want to see such *additional* channels, you would need an antenna, and your set would need an HDTV or DTV tuner built-in or added on via a converter. For local information, see [www.antennaweb.org](http://www.antennaweb.org).
- In the future, cable operators might *also* move to “all digital” means of delivery, which *could mean that even for your TVs that are hooked up to cable, you would need to procure a “set top box” from your cable company* or have a TV with a *digital cable tuner* (such as one with a “CableCARD” slot) – but for most cable systems this is likely a future consideration.

(5) **WHAT IS “DTV,” ANYWAY?**

While many signals are already sent and displayed digitally, the “transition” refers to the change in the broadcasting of local “over the air” TV (not cable or satellite), *as you receive it using a “rabbit ears” or roof-top antenna*. A tuner for a digital broadcast signal may be called a “DTV” tuner.

(6) **WHAT IS “HDTV?”**

HDTV (“High Definition Television”) is the highest quality version of digital television. Not all digital broadcast, cable, or satellite signals are in HDTV and not all “DTV” receivers can display HDTV. *Analog HDTV broadcasts in the U.S. are not possible.*

(7) **DOES MY PRESENT TV HAVE A DTV TUNER? WHAT ABOUT MY VCR, DVD RECORDER, PVR, DVR, ETC.?**

The only televisions that have DTV tuners are those that have been sold – since about 1998 – as having an *“integrated”* or *“built-in”* DTV or HDTV broadcast tuner. (An HD set sold as a “monitor” or “HD-ready” is capable of *displaying* HDTV but does *not* have a built-in HDTV tuner.)

- Newer TVs still have “analog” tuners (useful in receiving signals from cable and satellite boxes, game players, and low power TV stations), but they also have built-in DTV or HDTV tuners as well.
- There are very few if any “analog only” TVs left in stores, and these should be accompanied by the “Consumer Alert” label that is required by the FCC.

(8) **I NOW RELY ON AN ANTENNA FOR AT LEAST ONE TV THAT DOES NOT HAVE A DTV TUNER. WHAT ARE MY OPTIONS?**

- You could *subscribe to a cable, satellite, or other program delivery service* that carries the broadcast programming in which you are interested.
  - To continue to rely on an *antenna*, you will need an external *DTV Broadcast Converter product such as the Coupon-Eligible TV Converter Box*.
  - You could purchase a new digital television.
- If your set is an *HD Monitor* (sometimes called *“HD-ready”*) you are likely to want a tuner that can receive HDTV broadcasts in full HDTV resolution (rather than *“downconverting”*)

them to a lesser format). TV converter boxes that are coupon-eligible do not have HDTV outputs, so you may want a product that is not eligible for the coupon program

- If your set is a regular analog television, you will likely want to obtain a TV Converter through the NTIA coupon program. You can apply for these coupons **now** on-line at [www.dtv2009.gov/](http://www.dtv2009.gov/) or by calling 1-888-DTV2009 (888-388-2009).

**(9) I SUBSCRIBE TO CABLE OR SATELLITE SERVICE, BUT NOT ALL MY TVs ARE HOOKED UP. WHAT DOES THE FEBRUARY 17, 2009 SHUTOFF OF THE MAJOR ANALOG CHANNELS MEAN TO ME?**

- If some of your TVs rely on an *antenna*, you *will* need a converter box if they are not DTV sets. (As noted above, you might still want an antenna and a DTV or HDTV tuner in order to receive all local channels.)
- If a TV is not currently hooked up to an antenna (for example, it is being used to play video games, or to watch DVDs or camcorder movies, *etc.*), nothing will change, because only *free over the air broadcasts* will be affected by this DTV broadcast transition.

**(10) I WATCH A LOW POWER “COMMUNITY” BROADCASTER THAT IS NOT REQUIRED TO CONVERT TO DIGITAL ON FEBRUARY 17, 2009, BUT I ALSO WATCH THE MAJOR STATIONS THAT WILL BE ALL-DIGITAL. HOW CAN I KEEP WATCHING BOTH ON MY “ANALOG” SET?**

Some of the Converters listed with an \* in NTIA information have an “analog pass-through” feature that facilitates switching of the antenna between your analog TV tuner and your coupon-eligible converter box.

- This “pass-through” feature is not mandatory in TV Converters because there is a tradeoff in slightly reduced signal strength due to the switching circuitry. This might or might not be a factor in your viewing location.
- Initially, only a few of the NTIA-certified Converters will have this “pass-through” option but additional Converter manufacturers and retailers may be adding this feature at the request of low power stations. If you are alerted that a station you watch is “low power” you may wish to check on the local or on-line availability of a “pass-through” Converter before applying for your coupon(s) from the NTIA.
  - Alternatively, you could use a non-pass-through Converter and buy an accessory kit to do the switching between it and your analog TV.

**(11) IF I AM SHOPPING FOR A NEW TV, WHAT DOES THE FEBRUARY 17, 2009 SHUTOFF OF THE ANALOG CHANNELS MEAN TO ME?**

Almost all TVs available in stores today will now have built-in digital and analog TV tuners, and the few that do not should be accompanied by “consumer alert” labels. However, stores also sell display products that are “monitors” that do not have *any* tuner at all. Monitors can only be used with converter boxes for broadcast, cable, satellite, and competing services; or with DVD players, game players, computers, *etc.*

**(12) WHAT ELSE DO I NEED TO KNOW ABOUT HDTV?**

High Definition Television, or “HDTV,” is the more general name for showing video in a newer and better format – **a wider screen with about 5 times the picture information**. All types of video displays – conventional picture tubes, projection TVs, and Plasma or LCD “flat panels” – can show HDTV *if* they are designed to display this video information in this format. **You can expect a product to tune and display HDTV only if it was sold or advertised as such.**

- If your existing set is *not* HD-capable (an “**HDTV Monitor**” or “**HDTV**” television) it will not display an HDTV signal in full quality, even if it receives an HDTV signal from some other source.
- If your existing set *is* HD-capable it should display an HDTV quality picture from its own tuner or and external HDTV tuner (cable, satellite, broadcast, etc.) or disc or game player, but will display only a standard quality picture from a coupon-eligible converter box or other non-HD source.
- For an existing TV that cannot display an HDTV picture, your coupon-eligible converter box will *tune* the HDTV broadcast channels, but provide them to your set **in a standard quality format that your set can display**.
- For further information on display formats, see the Consumer Electronics Association’s HDTV Consumer Guide at <http://www.mycenknowhow.com/digitaltelevision.cfm>.

**(13) WHY WILL OVER-THE-AIR TV STATIONS STOP BROADCASTING ON THE “ANALOG” CHANNELS, ANYWAY?**

After decades of study, Congress passed a law in late 2005 requiring this change. For more than half a century, TV broadcasts have used and improved on basic **analog** technology that was invented in the 1920s and 1930s. These signals take up a lot of radio “spectrum” that is now urgently needed for emergency communications and new **broadband** services. (Finding new frequencies for emergency communications became a high priority after September 11, 2001.)

Congress found that we can support these essential communications, and new digital services, by moving TV to much more efficient digital transmission, while offering **more** locally broadcast channels, plus HDTV programming, in less overall spectrum space.

---

*For more information contact:*

Robert Schwartz – CERC Legal Counsel  
[rschwartz@ceretailers.org](mailto:rschwartz@ceretailers.org)

Marc Pearl – CERC Executive Director  
[pearl@ceretailers.org](mailto:pearl@ceretailers.org)

Mr. MARKEY. Thank you, Mr. Harris. And our final witness is Mark Jackson, who is the President of EchoStar Technologies Corporation. We welcome you, sir.

**STATEMENT OF MARK JACKSON, PRESIDENT, ECHOSTAR TECHNOLOGIES CORPORATION, ENGLEWOOD, CO**

Mr. JACKSON. Thank you, Chairman Markey and Mr. Stearns. As you mentioned, I am the President of EchoStar Technology Corporation, a company that designs and markets what we believe are the best set top boxes and video equipment in the world. On behalf of EchoStar and our sister company, DISH Network, thanks for inviting me to discuss the digital television transition, and in particular our low-cost digital-to-analog converter box. EchoStar and DISH Network are committed to doing our part to make next year's digital transition a big success. DISH Network, as many others here, has an ongoing education campaign aimed at current subscribers to explain what the digital transition will mean to them. Among our many initiatives, we have aired public service announcements to DISH Network's roughly 14 million subscribers as part of that awareness campaign, so they can try to get the word out to their friends and neighbors and family who may not have digital equipment.

On the equipment side of the business, EchoStar Technologies has developed the lowest priced coupon eligible converter box, the TR-40. We think that making the TR-40 available to the public will have a very positive impact on the digital transition. Earlier this year, to get the word out, we made an announcement at the consumer electronics show that we would make our basic converter box available to consumers for about \$39.99. That is one penny less than the \$40 Congress authorized for each converter box coupon. In other words, not counting sales tax a consumer who obtains a government—

Mr. MARKEY. Did you say your box is \$39.99?

Mr. JACKSON. \$39.99 retail price.

Mr. MARKEY. And you get a \$40 coupon?

Mr. JACKSON. So it is a penny less.

Mr. MARKEY. I would go to EchoStar Technologies Corporation if I could to be honest with you.

Mr. JACKSON. We hope that a lot of people decide to do that.

Mr. MARKEY. I am sorry, but that sounds like that is the right price.

Mr. JACKSON. So Congress made it clear its intent not to leave anyone behind when broadcasters go digital in February, 2009, especially families of lesser means who rely on free, over the air TV for their news and information. By providing a digital-analog converter box at no cost to the consumer fundamentally, EchoStar is doing its part to bring this policy goal to fruition. Our announcement has generated a lot of excitement in the government and consumer communities, along with many questions. I will address one of the major questions now, and, of course, will answer any additional questions you may have after the opening statements.

We have been asked, how is EchoStar able to offer a device at such a low price point and still make a good business out of it? Well, first of all, we specialize in low cost equipment. As mass pro-

ducers of set top boxes with over 65 million EchoStar boxes sold worldwide, we bring economies of scale to this project. We can draw on our volume-based deals with suppliers and order the product at the lowest possible cost. We also know something about how to build converter boxes for the digital transition, as our British division has gone through this process in the U.K. This group has helped us come up with many useful feature, like the pass through of analog signals from broadcasters who might not yet have gone digital.

Second, we are willing to subsidize the cost of the box where necessary to drive brand awareness for our core DISH business. Many of these boxes will be used in households that do not subscribe to DISH Network today. If people have a good experience with our box, they are more likely to think of us when they want to become a satellite TV subscriber. Finally, with the split of EchoStar into two separately traded public companies, the company I head, EchoStar Technologies, will not just sell DISH Network but to any and all companies and consumers who would like to get out technology and products. Therefore, we have a big incentive to get our brand name into as many households as possible. So these attributes, a devotion to low cost products, a pay TV service, and a technology company working in tandem make us very unique in the marketplace for converter boxes and allow us to offer the low cost product that you see today.

We know that the Federal government is working on educating the public on the digital transition, and we are participating in this effort with respect to DISH subscribers, as I mentioned earlier. But when it comes to the population at large, I think we can all agree that nothing gets the word out in America like a company with something to sell, and we intend to use our marketing expertise to get the word out about our TR-40. Finally, I want to make the subcommittee aware that we have notified the NTIA of our intent to submit other converter boxes for approval. For example, we have devised means of lowering the cost even further so we are hopeful that the NTIA and the FCC will test the devices and approve them quickly as there is no time to lose. So in closing I look forward to your questions and thanks for your time.

[The prepared statement of Mr. Jackson follows:]

#### STATEMENT OF MARK JACKSON

##### SUMMARY

- EchoStar is committed to a successful digital transition.
- EchoStar's digital-to-analog converter box (TR-40) is priced at \$39.99, once cent less than the \$40 coupon value, and is the lowest-cost converter box on the market.
- EchoStar specializes in low-cost video equipment and leverages its vendor relationships and expertise to reduce the cost of the TR-40.
- The TR-40 contains analog pass-through, allowing reception of stations that have not yet gone digital-a feature we included based on our experience with the digital transition in the U.K.
- EchoStar sees the digital converter box initiative as an opportunity to build our brand and perhaps add new customers; we are willing to subsidize the cost of converters if necessary.
- We will be submitting improved, lower-cost converter models to NTIA soon and are hopeful for a rapid approval.

## TESTIMONY

Chairman Markey and members of the Subcommittee, my name is Mark Jackson and I am the President of EchoStar Technologies Corporation, a company that designs and markets what we believe are the highest quality, best value digital set top boxes and video equipment in the world. On behalf of EchoStar Technologies and our sister company, DISH Network, thank you for inviting me to discuss the digital television transition, and in particular our low-cost digital-to-analog converter box.

EchoStar and DISH Network are committed to doing our part to make next year's digital transition a success.

DISH Network has an ongoing education campaign aimed at current subscribers to explain what the digital transition will mean to them. Among our many initiatives, we have aired public service announcements to DISH Network's roughly 14 million subscribers as part of that awareness campaign.

On the equipment side of the business, EchoStar Technologies has developed the lowest-priced coupon eligible converter box, the TR-40. We think that making the TR-40 available to the public will have a very positive impact on the digital transition.

Earlier this year, at the Consumer Electronics Show, EchoStar announced that it would make our basic converter box available to consumers for \$39.99. That's one penny less than the \$40 Congress authorized for each converter box coupon.

In other words, not counting sales taxes, a consumer who obtains a government coupon will be able to get a converter box free of charge.

Congress made clear its intent to not leave anyone behind when broadcasters go digital on February 19, 2009, especially families of lesser means who rely on free, over-the-air TV for their news and information. By providing digital-to-analog converter boxes at no cost to the consumer, EchoStar is doing its part to bring that policy goal to fruition.

Our announcement has generated a lot of excitement in the government and consumer communities, along with many questions. I will address one of the major questions now and, of course, will answer any additional questions you might have after opening statements.

We have been asked, how is EchoStar able to offer a device at such a low price point and still make a good business out of it?

First, we specialize in low-cost equipment.

As mass producers of set-top boxes, with over 65 million EchoStar boxes sold worldwide, we bring economies of scale to this project. We can draw on our volume-based deals with suppliers in order to produce a low-cost converter box.

We also know something about how to build converters for a digital transition, as our British division is going through this process in the U.K. Those employees helped us come up with useful features, like the pass-through of analog signals from broadcasters who might not yet have gone digital.

Second, we are willing to subsidize the cost of the box where necessary to drive brand awareness for our core businesses.

Many of these boxes will be used in households that do not subscribe to DISH Network today. If people have a good experience with our box, they are more likely to think of us if and when they want to become satellite TV subscribers.

Finally, with the recent split of EchoStar into two separately traded public companies, the company I head—EchoStar Technologies Corporation—will sell not just to DISH Network but to any and all companies and consumers. Therefore, we have an incentive to get our brand name into as many households as possible.

These attributes—a devotion to low-cost products, a pay-TV and a technology company working in tandem—make us unique in the marketplace for converter boxes and allow us to offer the low-cost product you see before you today.

We know that the federal government is working on educating the public on the digital transition. We are participating in that effort with respect to DISH subscribers, as I mentioned earlier.

But when it comes to the population at large, I think we can all agree that nothing gets the word out in America like a company with something to sell. And we intend to use our marketing expertise to get the word out about the TR-40.

Finally, I want to make the Subcommittee aware that we have notified NTIA of our intent to submit other converter boxes for approval. For example, we have devised a means of lowering the cost even further by separating out the power components. We are hopeful that NTIA and the FCC will test the devices and approve them quickly. There is no time to lose.

I look forward to your questions.

Thank you.

Mr. MARKEY. Thank you. Thank you, Mr. Jackson. The chair will recognize himself for a round of questions. So you are saying, Mr. Jackson, that you might even have one below \$39.99?

Mr. JACKSON. We are working very hard on getting one below \$39.99.

Mr. MARKEY. That would be so great, and I can see you actually on TV like it was a vegematic or something, you know, selling it to people. If someone could come up with like the vegematic version of why you need to switch over and why you need a converter box, I think we wouldn't have a problem at all. I haven't seen those types of ads yet but I imagine if you get make a buck doing it that ad will be made. That will be the break through moment. I am going to go to you, Mr. Murray. You seem a little bit pessimistic about where we are right now just to be honest with you. You had a fairly high percentage of people who have misconceptions and confusion about what the digital revolution means for them and their television sets and whether or not—

Mr. MURRAY. Mr. Chairman, it is my job to be a pessimist.

Mr. MARKEY. And you are very good at it. And I want to say of all the witnesses you capture our attention because obviously our names are on the ballot and so pessimism is something we have to identify early so it is not manifested in another kind of a box, a secret ballot box, that no one knows how anyone voted. So my question to you is Chairman Martin said he had a \$20 million fund for public education. If you were going to spend it, Mr. Murray, where would you spend that \$20 million in order to insure that the most vulnerable population was given the information they need to avoid a catastrophic February 17, 2009.

Mr. MURRAY. Well, sir, we have got pretty good demographic information from Nielsen about who is affected here. It does seem to be disproportionately elderly, disproportionately Latino, and so that is a good place to start is find those communities, find a way to reach nursing homes with some scale, find a way to help people with a sort of geek squad kind of outfit that can actually—I think part of the problem here is people may be aware of it, they may even know where to go get their boxes but they get home, they get that box in their hands, they start messing around with their television set, and they are a little bit clueless about how to put the thing together. So I think part of it would go into materials to actually effectively educate people about, OK, you got a box in your hands, how do you actually hook it up.

But I think really localized action plans tailored to the demographic information that we have from the excellent people at Nielsen is a good place to start. And as to whether or not I am overly pessimistic, I would be happy to take wagers for anyone who wants to bet on how this is going to go February 17.

Mr. MARKEY. And you would be betting on?

Mr. MURRAY. I am going to bet on there is going to be enough displaced consumers to light up the switchboard on both the House and Senate side.

Mr. MARKEY. Thank you. Thank you for saying that. That is important testimony to hear. Let me ask you, Mr. Romeo, there is a

letter that Mr. Dingell and I and other members of the subcommittee sent to the NTIA asking that consumers could reapply after 90 days for a coupon, and my question to you is, is there a technical reason why that wouldn't be possible, and for IBM to insure that people who do reapply in fact can receive the coupon and as a result of the converter box they would need in order for their TV set to work?

Mr. ROMEO. There is no technical reason that we couldn't implement the policy change if that were decided.

Mr. MARKEY. OK. That is great because the NTIA agrees that there is no technical problem so I think we should begin to work towards dealing with that issue. I just heard from Mr. Murray, so why don't I give all the rest of you an opportunity. We will begin with you, Mr. Jackson, over here. What do you lie awake at night worrying about that could go wrong on February 17, 2009? What is the nightmare scenario from your perspective?

Mr. JACKSON. Well, I found with great interest on session one a lot of the members' concerns that they have. I think they are well-founded. I think we share Mr. Murray's concern that there are a lot of issues that we have to work through. The biggest thing I would recommend for the government to implement is that perhaps a test nationwide is warranted 4 months before the program comes out like I would ask the broadcasters to go digital from one day or a few hours. I think that would generate a lot of awareness of what is going to happen, and that would be my biggest recommendation for you. I think some of the members' concerns about antennas not working are well founded, so much so I think you will see us at EchoStar set up a service that consumers could pay for and we will go out and set them up because we will have a lot of issues there.

So I think those are our two biggest concerns but I think the test and get the awareness out will make consumers go to the retail stores. I think it will make the broadcasters be prepared. I think it would force a lot of people to wake up.

Mr. MARKEY. Thank you, Mr. Jackson. Mr. Harris.

Mr. HARRIS. Our concerns when you are really dedicated to customer service is what level the customer understands what they need, and that is the role that RadioShack fills, but we don't know when you ask a customer a question are you watching low power, they won't know so we would ask the community broadcasters to inform their viewing public that they are watching low power because that is one of our concerns. The other concern that I think we have covered is spikes in demand. No one expected 4 million coupons so we moved up a lot of orders. Also, when the program ends as far as merchants and retailers, we are concerned about inventory residue because we want to have the inventory covered as it is needed but after the program ceased how much more demand is there.

We at RadioShack always carry legacy products so we will have the product quite a bit after the coupons end but we are just worried about residue inventory as well because that is substantial.

Mr. MARKEY. Mr. Romeo, what is your greatest fear?

Mr. ROMEO. As someone who cares about the program's success obviously not leaving people outside the sphere of educating them so that they know that they need to act is a major concern for me.

From a technical and parochial view having 20 million orders on February 16, 2009, would be a concern that it all comes late.

Mr. MARKEY. Mr. Murray, do you think you have already expressed your deepest pessimistic fears for that day or do you have additions that you would like to make to the list?

Mr. MURRAY. I do think I have fully expressed myself, Mr. Chairman.

Mr. MARKEY. Thank you. I appreciate it. Mr. Rehr, how about you at the broadcasters, what is your nightmare scenario?

Mr. REHR. I scribbled down 5. Number 1, if our program works the way we envision it, we could run out of coupons and we will need to come back to Congress and the FCC and the NTIA for additional funds. Number 2, that senior citizens who are difficult to reach, we somehow won't be able to touch them and we will miss some of them. Number 3, we will have some isolated antenna issues although we will be announcing soon a partnership with the Consumer Electronics Association to insure that people understand the antennas that they will need to make the digital transition successful, and we want to applaud CEA for all their great work on that end.

Number 4, technical issues, snow, heavy rain, sleet, fog, maybe a lack of engineers to do the final conversions the day before. And then number 5—

Mr. MARKEY. Does that go over to Mr. Jackson's recommendation that we have like a 1-day trial 4 months in advance just so everyone can experience in some form what might happen 4 months later permanently?

Mr. REHR. Well, we actually have a thousand plus stations that are running analog and digital systems today. These are stations that are going to just make the switch over, and I am not quite sure how many they are that has to do with channel selection and getting to a different channel, but if we can minimize those through the FCC allocation of channels that would be good. And then finally number 5, since my cell phone is on all my business cards, I personally worry that I will be held responsible by you and every other member of the committee. I am just kidding.

Mr. MARKEY. No, you are actually dead on that. That is a given. Bipartisanship at its best.

Mr. REHR. That is right. We at the NAB take this extremely seriously and I take this extremely personal.

Mr. MARKEY. Mr. McSlarrow.

Mr. MCSLARROW. Well, I have now decided to put David's cell phone on my card so I have taken care of my biggest problem. I think it is the same thing that we have been talking about before. I worry that despite great efforts across the board that the most sophisticated, wide ranging consumer education campaign in the world is still going to miss people, and it just is. And obviously we need to narrow that pool to the smallest possible pool we can but there is going to be some disruption.

And the second point that has been made earlier even if—and I think we are well on our way to get the coupon program to get the boxes out there, even if all that works seamlessly we are basically talking about a universe of people who either don't or chose not to have boxes in their home, and this is a new thing and hooking

them up, and someone mentioned the geek squad, but somehow there is that last little step to actually making the box work that I am not sure we are completely on top of and we will have to think through.

Mr. MARKEY. Would you recommend for February 17 that like on election day we all have these get out the vote operations that every one of the entities that is here on quadruple alert and that everyone is ready to go because as you are saying, Mr. McSlarrow, perhaps there are inevitable problems that are going to be there and that we should have almost like a D day like operation ready to go to deal with what is left over. Do you think that is advisable?

Mr. MCSLARROW. I do. It is a lot like a political campaign with the advantage you don't actually have somebody on the other side pushing back. If we are all rowing in the same direction we should be able to do it. I think we ought to treat it with the seriousness with which it deserves, and I think we can do it and we are off to a good start, but particularly when you think through the elections coming up here there is going to be a 3- or 4-month period of time where no one is focused on the DTV transition. It is all about the election, and after that period to February is sort of the forced march.

Mr. MARKEY. And, Mr. Bruno, your nightmare scenario?

Mr. BRUNO. Yes, sir. Mr. Chairman, our nightmare is not going to start on February 17 of '09. Our nightmare will start 5 days from now when those coupons are passed out. I want to try to explain something as easily as I can. There are 3 types of boxes. There is the bad box that is digital only. When you buy that box and you bring it home and you plug it in, you will lose 80 percent of your transmission, and you will say, well, gee, I don't get this channel anymore, I don't get that channel. So you go back to the retailer, you turn it in, big mess. It is confusing. It is very, very confusing for the consumer. The other box that we have heard about—both of these boxes, by the way, are not compliant with the All Channel Receiver Act. The other box we call a user hostile box, and that is because—

Mr. MARKEY. The user—

Mr. BRUNO. User hostile is what we call it, and here is why. You take this box home with what we have been hearing all day today with a pass through. You plug the box in and hopefully you can get it right because there are a lot of wires.

Mr. MARKEY. Which is worse, bad or user hostile?

Mr. BRUNO. The bad box blocks out all analog. The user hostile box passed through analog. Both are not compliant with the All Channel Receiver Act. Now when you use the user hostile box and you plug you in, you flick through your channels and you get analog but you go to Channel 3 typically on these boxes, and then you get another remote that came with the box and now you have to flick around and try to see all your digital channels on Channel 3, and if you want to plug in a VCR or a DVD recorder or something else, I don't think you can. I haven't tried it yet. I am fairly technical but I don't think you can do this.

Now the boxes that aren't approved, the good boxes, the user friendly boxes, pass analog and digital, and that is why we need these boxes available to the consumer. They are not that expensive.

For around \$100 you can buy a user friendly box with analog and digital that has a DVD recorder in it, so we are not talking about the manufacturers——

Mr. MARKEY. Do you think RadioShack is going to be selling bad boxes and user hostile boxes?

Mr. BRUNO. Sir, they are bad to us because we lose our viewers. We don't have cable carriage rights for the most part, and we have heard today that Nielsen says there is 11 percent of the population that watches over the air signals. Every time one of these non-compliant boxes are being sold, and remember 37 of them have been approved and only 4 have the user hostile analog pass through. Every time one of these boxes are plugged in, we lose a viewer. We are out of business over this program, 7,212 television stations. Mr. Chairman, we need help.

Mr. MARKEY. Help is on the way. So my time has expired, and I will recognize the ranking member for as much time as he may consume.

Mr. STEARNS. Thank you, Mr. Chairman. Mr. Bruno, I understand what you are saying but I think let me just ask Mr. Harris and Mr. Jackson, don't viewers using over the air antennas have several options regarding how to continue watching analog low power stations, and do you think manufacturers and retailers will simply respond to the demands that they were talking about?

Mr. JACKSON. Well, we have a couple of conflicts here. First of all, one of the things that is talked about is that we don't have the feature that we would like. Just so you understand, the rules to be coupon eligible prohibit us from having that functionality. If we added that functionality it would not pass the FCC's testing to make us coupon eligible. So the other thing is that in the user hostile method, we will call it, we try to make it as easy as possible for consumers to be able to look at these low power stations, you basically just turn off the box and the signal gets passed through. You pick up your TV remote. You would have to do that, and channel up or down to get those channels, but we have tried to make it so that they can't be able to participate and not get left behind.

Mr. STEARNS. Mr. Harris, anything you want to add?

Mr. HARRIS. Yeah, I agree with Mr. Jackson, and the note that even if a box does not have a pass through it is a pretty simple device of just using a splitter and a coaxial cable to split the signal before it gets to the box. We have on our web site several diagrams that are really consumer friendly plus some very good tools that are on their web site as well as retailers web sites to explain how to do this. So besides a pass through it is a simple splitter and if someone doesn't have the proper hookups in the box——

Mr. STEARNS. What is a splitter? What is a simple splitter?

Mr. HARRIS. A simple splitter—in fact, I think we have one here. We happen to have a sample here.

Mr. REHR. I am sorry. This is a whole kit that we had——

Mr. STEARNS. Well, that is more than a splitter though. I mean that is a little bit more——

Mr. HARRIS. The splitter is just right here.

Mr. STEARNS. And we all go to RadioShack to buy the splitter. We understand that.

Mr. HARRIS. So it is a splitter that splits the signal before it gets to the box and lets it really pass through the box so it is like a pass through but it is a simple about that big. It is all you need. Now if a customer doesn't have a box that has composite inputs and RF, if their TV is over 15 years old, they may not have both inputs so if they don't have that they can use a splitter, the coax, and a B switch. It is still a very low price situation, pretty easy to install. We intend to explain it as other retailers can.

Mr. STEARNS. Mr. Murray indicates there are going to be lots of people that will not be able to follow these directions but isn't it simply if you are not dealing with low power you are just putting together your box on your analog TV. Isn't it pretty much like you just hook one end of the box up to the antenna and the other up to the television?

Mr. HARRIS. Yeah, a very simple hook up.

Mr. STEARNS. It is just like hooking a toaster up.

Mr. HARRIS. It is very simple.

Mr. STEARNS. So Mr. Murray has created this impression that when they get this box it is going to be very difficult for them to figure out how to do that. I assume most people understand that. You just put the box between the antenna and the television. It is that simple.

Mr. HARRIS. It is very simple.

Mr. STEARNS. That is pretty much simple.

Mr. HARRIS. Yes, it is.

Mr. STEARNS. Let me ask a quick question. We have heard, and I think Chairman Markey has made a good point in asking what the down side, what is your biggest fear, so to speak, but I guess the question is, I will ask all of you, do you have all the incentives that we provided to you and all the resources to take care of those problems you mentioned, and I will just start to my right down. Just yes or no, and if you don't have them just very briefly say what you want.

Mr. JACKSON. I don't know what we are missing. I think we are going to see things that we just don't anticipate when it comes—

Mr. STEARNS. But right now you say you have the resources and the incentives to do it?

Mr. JACKSON. Under the plan that is there, we can get the job done.

Mr. STEARNS. OK. Mr. Harris.

Mr. HARRIS. Yes, I would have to concur with that. Also, I will have to say that the NTIA, IBM, and CLC have been extremely accessible and available even on an hour notice to us. We have been very happy with that. Also, it wasn't mentioned before, NTIA put out a very good welcome dealer kit that is extremely strong. It has video and has brochures, so I have all the tools that we need to make this successful.

Mr. STEARNS. Mr. Romeo.

Mr. ROMEO. Yes, I believe we have everything we need to implement the program successfully.

Mr. STEARNS. Mr. Murray, you hear all these people saying they have all the incentives and resources so what do you think? Do you think there is—

Mr. MURRAY. Well, at Consumer Reports we have actually spent a lot of time trying to figure out how can we provide real information, not just at the high level but how can you actually get into the back of your television set and hook this stuff up for most consumers. And I will tell you it is difficult to do.

Mr. STEARNS. I don't think it is that complicated. You don't have to get into the back of the TV.

Mr. MURRAY. Sir, that is why you are a member of Congress and—

Mr. STEARNS. Even my son knows how to hook up a cable to the television, and he knows how to just screw it on.

Mr. MURRAY. Right, but I mean if you look at how many millions of consumers in the United States VCRs are still flashing 12:00. Mine is. I don't know about yours.

Mr. STEARNS. Yeah, but I am capable of stopping it. I am just not interested in stopping it.

Mr. MURRAY. So the materials that we have tried to produce, we have got some good things on line at [hearusnow.org](http://hearusnow.org). Consumer Reports is doing more materials but it is really difficult to do this in a drill down fashion that actually tells people here is how you are going to meet the complications of your individual television set, and I understand it seems like it is just this wire to that wire, but for a lot of people who aren't accustomed to this wire to that wire it is a little more drama than this. And they didn't ask for it. That is the problem.

Mr. STEARNS. You keep saying this is sort of a government mandate and no one asked for it, and you say it is a bus coming down the road and they are getting ready to see it and they don't know what to do. I think that is a pretty dramatic draconian example of what we have. I mean this is like your son saying I don't want to go to high school, it is a mandate, Dad. And I say, well, if you go to high school you are going to make a lot more money, you will be able to go to college and all the benefits. And if we sat here without this February 17, '09 the benefits would not occur, not just dealing with third generation and first responders. Under the old law broadcasters are required to convert to digital under this formula, and it turns out that there are 50 markets that would not actually be able to conform and ultimately would not be able to move ever in this position.

So to use it as a mandate it is really like my son who said why do I have to go to high school and if you go to high school because then you get more money and a satisfying life, and I say to the constituents this is not a mandate, this is an opportunity to get and auction off more of the spectrum and so much benefits, a cornucopia of benefits.

Mr. MURRAY. But do you think those benefits were clear to consumers? I am not so sure that those benefits are clear to most consumers. I think most people, this will come down the pike at them and maybe they will get a better television set but most people know, they get TV today, they are pretty happy with it, and they don't really want to have to go to the store to do anything else to continue to receive television tomorrow.

Mr. STEARNS. Dr. Rehr, let me just ask you, do you have all the incentives and research to make this successful?

Mr. REHR. Yes, however, it would be nice if we could fully use the government's resources to insure we are educating people. What do I mean by that? We are glad that we are putting—that the FCC is going to put posters up in post offices. If we are sending checks to senior citizens, veterans, if there is a way that we could do additional piece of information in there about the DTV transition so we don't miss anybody. If we could have the President or the presidency's bulley pulpit on the DTV transition, that could be huge in order to make sure Americans understand this.

The one area of need I think going down the pike is perhaps having a phone center which people could call and talk to a real live human being about a problem either in English or Spanish. That is immensely costly. We at the NAB have committed tens of millions of dollars of our trade association resources towards this but that would be—you know, if I had a wish list that would be an additional wish list. Let me also say that unlike my colleague, I think when people see the crystal clear picture, the amazing audio quality, the fact that there will be multi-cast channels and more programs and more services they go wow.

Mr. STEARNS. Yeah, I agree. Mr. McSlarrow, resources and incentives you have in place?

Mr. MCSLARROW. I think largely yes. One exception, that is the FCC has before proceeding to do what this committee actually did which is have a small system exemption for very small operators to the dual carriage requirement. They need to get on with that, get it done, and I think what we need most now is certainty. We have a plan. We don't have much time. Let us just go execute.

Mr. STEARNS. Mr. Bruno.

Mr. BRUNO. Yes. Thank you for asking that question. I appreciate that. The NTIA has set aside \$65 million for translators in towns less than 20,000 people. Full powers as we all know spent 10 years on this transition. Believe it or not, class A stations and low power stations are a progressive group of folks. We actually want to transition to digital but we find ourselves being squeezed by this time line so what we need for the class A and the low power industry, we need the NTIA to be provided with additional funds so we can quickly build out our digital signals.

Mr. STEARNS. \$65 million is not a help, enough help?

Mr. BRUNO. It doesn't go to us, sir. It is for the translators with less than 20,000 people in their coverage area.

Mr. STEARNS. But isn't it true that we exempted low power from the transition originally because you folks requested it?

Mr. BRUNO. No, I don't recall that, sir. No.

Mr. STEARNS. OK. OK. I would just conclude, Mr. Chairman, and say all of us went through the Y2K discussion in which we were worried, immensely worried, about everything possibly happening, and some of this discussion was very helpful. We did have a presidential task force for that. You folks are the presidential task force. And we think based upon the incentives and the resources that are available we should be successful. And I am optimistic and I think the benefits to the consumer are so immense that members of Congress and others have to explain that to them so that they realize it takes a little effort to get good things in life. You can't get them

for free and you have to learn to be able to hook up your box from Echo and save a penny and do it. So I thank you, Mr. Chairman.

Mr. MARKEY. I thank the gentleman, and I will recognize myself for some additional questions. I first wanted to let you each know that we are going to have each one of you back here on February 17, 2009. There is a hearing that I am announcing is scheduled for that date, and we are going to ask you all to come back and sit here as we are on the transition day, and so I just want you to clear the—a lot of times you don't get enough notice so I just want you all to know that on that day we will see quite clearly what the holes are in the system.

So let me thank you. It was I think a highly illuminating hearing. I remember back years ago my old buddy, Mark Fowler, when he was the chairman of the Federal Communications Commission back in the 1980's, he used to say that really a television is nothing more than a toaster with pictures. And as the public tries to figure out how to attach with splitters this converter box to their TV it will very much be like trying to attach a toaster to a TV set turning it into a toaster with pictures. And I don't know who will be toast that day. That still remains to be seen, but I do know that the most vulnerable part of the American population are the minorities, are the senior citizens, and are poor people, and there is a very heavy responsibility which all of us share to insure that there is the minimal amount humanly possible of disruption to their lives that occurs on that day.

And if there are holes that there is a program in place on that day that will insure that everything is rectified in a very brief period of time after February 17. But our goal is, as it is at RadioShack, zero defects. So we want to put in place the best plan that we can and execute it. Life is 20 percent concept, 80 percent execution. So the execution of this plan will ultimately determine how effective respectively all of the planning is viewed. And I just want to finish just by again thanking you, Mr. Harris, and RadioShack for removing the remaining analog inventory from your store shelves.

Mr. HARRIS. You are very welcome.

Mr. MARKEY. And I would urge all of the other retail stores across the country to do the same. I think it would be in the public interest if they did so, and we are going to be continuing to monitor that situation. So with the thanks of the committee this hearing is adjourned. Thank you.

[Whereupon, at 2:30 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

February 11, 2008

As of

12:00 AM EST

**Approved Applications**

Count	Status	Source		OTA Only	%
2,435	Complete	Fax	0.1%	1,236	50.8%
13,565	Complete	Mail	0.5%	7,201	53.1%
866,871	Complete	Phone	34.7%	421,681	48.6%
1,615,521	Complete	Web	64.7%	747,087	46.2%
<b>2,498,392</b>	<b>91.6%</b>				

**Denied Applications**

334	Duplicate	Fax
243	Incomplete	Fax
1	Review	Fax
1,132	Duplicate	Mail
1,236	Incomplete	Mail
30,313	Duplicate	Phone
65,748	Invalid	Phone
9,934	Closed	Web
57,782	Duplicate	Web
49,018	Invalid	Web
12,333	Review	Web
<b>228,074</b>	<b>8.4%</b>	

**2,726,466 Total Applications**

**Coupons Ordered**

Count	Amount	Fund Source	Application Source
4,542	181,680	Base	Fax
24,842	993,680	Base	Mail
1,642,902	65,716,080	Base	Phone
3,059,990	122,399,600	Base	Web
<b>4,732,276</b>	<b>\$ 189,291,040.00</b>	<b>Base</b>	<b>Total Coupons</b>
		<b>21.3%</b>	<b>Percentage of Base Fund</b>

**Daily Summary**  
**February 10, 2008**

Approved Applications	21,353
Denied Applications	2,562
<b>Total Applications</b>	<b>23,915</b>
Base Coupons	40,475
Contingency Coupons	0
<b>Total Coupons</b>	<b>40,475</b>
Base Coupon Amount	\$1,619,000.00
Contingency Coupon Amount	\$0.00
<b>Total Coupon Amount</b>	<b>\$1,619,000.00</b>

February 11, 2008

As of

12:00 AM EST

State	All Apps	Complete Apps	Coupons
	3	0	0
AA	4	2	4
AE	51	2	4
AK	4,141	3,455	6,435
AL	33,113	30,332	57,382
AP	26	3	6
AR	23,192	20,753	38,875
AS	11	5	10
AZ	52,316	47,641	90,364
CA	240,581	220,630	418,547
CO	46,210	43,156	81,095
CT	17,153	15,915	29,769
DC	4,480	4,079	7,533
DE	7,260	6,715	12,725
FL	131,991	121,272	230,196
GA	57,276	52,454	99,247
GU	23	17	32
HI	3,406	3,073	5,792
IA	43,831	40,502	76,988
ID	18,400	16,935	32,117
IL	136,614	124,742	237,785
IN	83,412	77,499	148,239
KS	24,060	22,306	42,068
KY	33,699	31,064	58,697
LA	38,762	35,398	67,846
MA	43,739	40,506	75,838
MD	44,833	41,846	79,331
ME	12,569	10,946	20,143
MH	1	1	1
MI	131,391	122,971	234,384
MN	70,724	66,266	126,314
MO	78,977	72,484	137,138
MP	2	0	0
MS	16,189	14,780	28,004
MT	6,355	5,582	10,477
NC	76,399	70,001	132,414
ND	5,410	4,893	9,269
NE	19,322	17,800	33,597
NH	6,145	5,521	10,361
NJ	45,302	41,920	79,315
NM	13,711	12,024	22,776
NV	13,733	12,411	23,447
NY	126,045	115,252	217,592
OH	131,716	122,852	233,842
OK	60,003	52,837	100,676
ON	1	0	0
OR	85,213	76,329	137,222



**TV Converter Box Coupon Program**  
**Applications Received as of 12:00 AM EST on 2/11/2008**

State	Complete Applications	OTA Service = True	OTA Percentage of Complete Applications
AA	2	1	50.0%
AE	2	1	50.0%
AK	3,455	1,886	54.6%
AL	30,332	11,942	39.4%
AP	3	3	100.0%
AR	20,753	9,770	47.1%
AS	5	2	40.0%
AZ	47,641	21,797	45.8%
CA	220,630	114,034	51.7%
CO	43,156	22,596	52.4%
CT	15,915	5,556	34.9%
DC	4,079	2,336	57.3%
DE	6,715	2,277	33.9%
FL	121,272	49,644	40.9%
GA	52,454	23,359	44.5%
GU	17	10	58.8%
HI	3,073	1,074	34.9%
IA	40,502	20,714	51.1%
ID	16,935	9,991	59.0%
IL	124,742	61,066	49.0%
IN	77,499	37,348	48.2%
KS	22,306	10,635	47.7%
KY	31,064	14,217	45.8%
LA	35,398	12,342	34.9%
MA	40,506	15,262	37.7%
MD	41,846	18,576	44.4%
ME	10,946	5,653	51.6%
MH	1	1	100.0%
MI	122,971	55,277	45.0%
MN	66,266	34,719	52.4%
MO	72,484	38,583	53.2%
MS	14,780	5,857	39.6%
MT	5,582	2,947	52.8%
NC	70,001	31,796	45.4%
ND	4,893	2,335	47.7%
NE	17,800	7,563	42.5%
NH	5,521	1,881	34.1%
NJ	41,920	15,449	36.9%
NM	12,024	6,425	53.4%
NV	12,411	5,563	44.8%
NY	115,252	51,968	45.1%
OH	122,852	56,956	46.4%
OK	52,837	23,525	44.5%

OR	76,329	45,339	59.4%
PA	121,992	48,996	40.2%
PR	20,528	8,723	42.5%
RI	10,631	4,426	41.6%
SC	29,814	13,450	45.1%
SD	5,593	2,782	49.7%
TN	40,785	17,906	43.9%
TX	218,000	108,953	50.0%
UT	26,068	15,558	59.7%
VA	55,750	24,409	43.8%
VI	37	16	43.2%
VT	2,789	1,392	49.9%
WA	50,135	24,388	48.6%
WI	76,625	41,608	54.3%
WV	13,142	5,733	43.6%
WY	1,331	589	44.3%
	<b>2,498,392</b>	<b>1,177,205</b>	<b>47.1%</b>

CALL	CITY	LPTV STATIONS	
		ST	
K13SH	ADAK	AK	STATE OF ALASKA
K09UD	AKHIOK	AK	STATE OF ALASKA
K10MV	AKIAK	AK	STATE OF ALASKA
K09RH	AKUTAN	AK	STATE OF ALASKA
K08KD	ALAKANUK	AK	STATE OF ALASKA
K13RP	ALEKNAGIK	AK	STATE OF ALASKA
K09QL	ALLAKAKET, ETC.	AK	STATE OF ALASKA
K11QI	AMBLER	AK	STATE OF ALASKA
K09RS	ANAKTUVUK PASS	AK	STATE OF ALASKA
K51AF	ANCHOR POINT	AK	STATE OF ALASKA
K45HQ	ANCHORAGE	AK	KETCHIKAN TV, LLC
KOAN-LP	ANCHORAGE	AK	FIREWEED COMMUNICATIONS LLC
K09QF	ANGOOD	AK	STATE OF ALASKA
K02KY	ANIAK	AK	STATE OF ALASKA
K07RE	ANVIK	AK	STATE OF ALASKA
K09RV	ARCTIC VILLAGE	AK	STATE OF ALASKA
K09RX	ATKA	AK	STATE OF ALASKA
K09TZ	ATKASUK	AK	STATE OF ALASKA
K12NP	ATMAUTLUAK	AK	STATE OF ALASKA
K04KS	BARROW	AK	STATE OF ALASKA
K09QQ	BEAVER	AK	STATE OF ALASKA
K15AV	BETHEL	AK	BETHEL BROADCASTING, INC.
K21AO	BETHEL	AK	BETHEL BROADCASTING, INC.
K09TE	BETTLES	AK	STATE OF ALASKA
K09TD	BIRCH CREEK	AK	STATE OF ALASKA
K09RI	BUCKLAND	AK	STATE OF ALASKA
K09SI	CANTWELL	AK	STATE OF ALASKA
K13SD	CAPE POLE	AK	STATE OF ALASKA
K09QG	CHALKYITSIK	AK	STATE OF ALASKA
K02LO	CHEFORNAK	AK	STATE OF ALASKA
K02KX	CHEVAK	AK	STATE OF ALASKA
K10MT	CHICKALOON	AK	STATE OF ALASKA
K07RY	CHIGNIK	AK	STATE OF ALASKA
K09SO	CHIGNIK LAGOON	AK	STATE OF ALASKA
K02MR	CHIGNIK LAKE	AK	STATE OF ALASKA
K07QZ	CHIISTOCHINA	AK	STATE OF ALASKA
K13SB	CHITINA	AK	STATE OF ALASKA
K08LG	CHUATHBALUK	AK	STATE OF ALASKA
K13SI	CIRCLE	AK	STATE OF ALASKA
K06LP	CIRCLE HOT SPRINGS	AK	STATE OF ALASKA
K03GO	CIRCLE HOT SPRINGS	AK	STATE OF ALASKA
K12NL	CLARKS POINT, ETC.	AK	STATE OF ALASKA
K09TV	COFFMAN COVE	AK	STATE OF ALASKA
K07TM	COLD BAY	AK	STATE OF ALASKA
K08KO	COOPER LANDING	AK	STATE OF ALASKA
K12MO	COPPER CENTER	AK	STATE OF ALASKA
K15AK	CORDOVA	AK	STATE OF ALASKA
K09UK	COUNCIL	AK	STATE OF ALASKA
K61DE	CRAIG	AK	STATE OF ALASKA
K07RZ	CROOKED CREEK	AK	STATE OF ALASKA
K13TG	CUBE COVE	AK	STATE OF ALASKA
K09RN	DEERING	AK	STATE OF ALASKA
K17AF	DELTA JUNCTION	AK	STATE OF ALASKA
K10OB	DELTA JUNCTION	AK	R.E. ANDREASSEN
K05KF	DILLINGHAM	AK	ALASKA CORP OF SEVENTH DAY ADVENTIST
K10LD	DILLINGHAM	AK	STATE OF ALASKA

K13UX	DIOMEDE	AK	STATE OF ALASKA			
K13RM	DOT LAKE	AK	STATE OF ALASKA			
K1AL-LP	DUTCH HARBOR	AK	UNALASKA COMMUNITY BROADCASTING, INC.			
K09RF	EAGLE VILLAGE	AK	STATE OF ALASKA			
K09TN	EEK	AK	STATE OF ALASKA			
K04KR	EGEGIK	AK	STATE OF ALASKA			
K09TA	EIGHT FATHOMS BIGHT	AK	STATE OF ALASKA			
K11QW	EKWOK	AK	STATE OF ALASKA			
K09QS	ELIM	AK	STATE OF ALASKA			
K05IH	EMMONAK	AK	STATE OF ALASKA			
K31AG	ENGLISH BAY	AK	STATE OF ALASKA			
K11RI	ERNESTINE	AK	STATE OF ALASKA			
K28ES	FAIRBANKS	AK	TANANA VALLEY TELEVISION COMPANY			
K62FB	FAIRBANKS	AK	DENALI TELEVISION			
K60FQ	FAIRBANKS	AK	DENALI TELEVISION			
KDMD-LP	FAIRBANKS	AK	KETCHIKAN TV, LLC			
K54EW	FAIRBANKS	AK	DENALI TELEVISION			
K56FX	FAIRBANKS	AK	DENALI TELEVISION			
K52EY	FAIRBANKS	AK	DENALI TELEVISION			
K64EU	FAIRBANKS	AK	DENALI TELEVISION			
K66FG	FAIRBANKS	AK	DENALI TELEVISION			
K68EZ	FAIRBANKS	AK	DENALI TELEVISION			
K22EY	FAIRBANKS	AK	TANANA VALLEY TELEVISION COMPANY			
K09RP	FALSE PASS	AK	STATE OF ALASKA			
K07RC	FORT YUKON	AK	STATE OF ALASKA			
K09TP	FRESHWATER BAY	AK	STATE OF ALASKA			
K11RG	GAKONA	AK	STATE OF ALASKA			
K04LZ	GALENA	AK	STATE OF ALASKA			
K09QR	GAMBELL	AK	STATE OF ALASKA			
K10MB	GIRDWOOD	AK	STATE OF ALASKA			
K07QS	GLENNALLEN	AK	WRANGLE MOUNTAIN TV CLUB, INC			
K13UB	GLENNALLEN & COPPER	AK	STATE OF ALASKA			
K07QX	GOLOVIN	AK	STATE OF ALASKA			
K04KT	GOODNEWS BAY	AK	STATE OF ALASKA			
K04NC	GRAVINA ISLAND, ETC	AK	STATE OF ALASKA			
K11QH	GRAYLING	AK	STATE OF ALASKA			
K02LW	GUSTAVUS	AK	STATE OF ALASKA			
K07RF	HAINES	AK	STATE OF ALASKA			
K12NW	HALIBUT COVE	AK	STATE OF ALASKA			
K58BI	HEALY	AK	STATE OF ALASKA			
K09TB	HOBART BAY	AK	STATE OF ALASKA			
K08KP	HOLLIS	AK	STATE OF ALASKA			
K12NT	HOLLIS	AK	STATE OF ALASKA			
K07RJ	HOLY CROSS	AK	STATE OF ALASKA			
K11RK	HOMER, ETC.	AK	STATE OF ALASKA			
K07QV	HOONAH	AK	STATE OF ALASKA			
K04MC	HOOPER BAY	AK	STATE OF ALASKA			
K09RY	HUGHES	AK	STATE OF ALASKA			
K09OD	HUSLIA	AK	STATE OF ALASKA			
K09QI	HYDABURG	AK	STATE OF ALASKA			
K02MJ	HYDER	AK	STATE OF ALASKA			
K09SP	IGIUGIG	AK	STATE OF ALASKA			
K09SN	IVANOF BAY	AK	STATE OF ALASKA			
KATH-LP	JUNEAU-DOUGLAS	AK	DAN ETULAIN			
K09QP	KAKE	AK	STATE OF ALASKA			
K09QY	KAKTOVIK	AK	STATE OF ALASKA			
K09TR	KALSKAG	AK	STATE OF ALASKA			
K09TX	KAL TAG	AK	STATE OF ALASKA			
K09QK	KARLUK	AK	STATE OF ALASKA			

K09SM	KASAAN	AK	STATE OF ALASKA			
K09UE	KASIGLUK	AK	STATE OF ALASKA			
K23AF	KENAI, ETC	AK	STATE OF ALASKA			
K10NC	KENAI, ETC	AK	CHANNEL 2 BROADCASTING COMPANY			
K21AH	KETCHIKAN	AK	STATE OF ALASKA			
K09RW	KIANA	AK	STATE OF ALASKA			
K04KN	KING SALMON	AK	STATE OF ALASKA			
K04LM	KIPNUK	AK	STATE OF ALASKA			
K09QZ	KIVALINA	AK	STATE OF ALASKA			
K07TI	KLAWOCK	AK	STATE OF ALASKA			
K04KQ	KLUKWAN	AK	STATE OF ALASKA			
K02KZ	KOBUK	AK	STATE OF ALASKA			
K17GQ	KODIAK	AK	GREENTV CORP			
KMXT-LP	KODIAK	AK	KODIAK PUBLIC BROADCASTING CORP.			
KUBD-LP	KODIAK	AK	KETCHIKAN TV, LLC			
K07QW	KOLIGANEK	AK	STATE OF ALASKA			
K09RG	KONGIGANAK	AK	STATE OF ALASKA			
K09SL	KOTLIK	AK	STATE OF ALASKA			
K13UE	KOTZEBUE	AK	STATE OF ALASKA			
K02MB	KOYUK	AK	STATE OF ALASKA			
K03FZ	KOYUKUK	AK	STATE OF ALASKA			
K09UJ	KWETHLUK	AK	STATE OF ALASKA			
K13UK	KWIGILLINGOK	AK	STATE OF ALASKA			
K11RJ	LAKE LOUISE, ETC.	AK	GREATER COPPER VALLEY COMMUNICATIONS, INC.			
K09QE	LARSEN BAY	AK	STATE OF ALASKA			
K07TT	LEVELOCK	AK	STATE OF ALASKA			
K11RW	LIME VILLAGE	AK	STATE OF ALASKA			
K05IR	LONG ISLAND	AK	STATE OF ALASKA			
K07RX	MANLEY HOT SPRING	AK	STATE OF ALASKA			
K09TQ	MANOKOTAK	AK	STATE OF ALASKA			
K02KV	MARSHALL	AK	STATE OF ALASKA			
K03GK	MCKINLEY PARK	AK	STATE OF ALASKA			
K04MD	MEKORYUK	AK	STATE OF ALASKA			
K09QJ	MENTASTA LAKE	AK	STATE OF ALASKA			
K07SL	METLAKATLA	AK	STATE OF ALASKA			
K09TI	MEYERS CHUCK	AK	STATE OF ALASKA			
K09SZ	MINCHUMINA	AK	STATE OF ALASKA			
K13TK	MINTO	AK	STATE OF ALASKA			
K15AP	MOOSE PASS	AK	STATE OF ALASKA			
K13UM	MOSQUITO LAKE	AK	STATE OF ALASKA			
K13TJ	MOUNTAIN VILLAGE	AK	STATE OF ALASKA			
K13TZ	NAKNEK	AK	STATE OF ALASKA			
K10MR	NAPAKIAK	AK	STATE OF ALASKA			
K07SJ	NAPASKIAK	AK	STATE OF ALASKA			
K09TJ	NAUKATI BAY	AK	STATE OF ALASKA			
K09QM	NELSON LAGOON	AK	STATE OF ALASKA			
K55DE	NENANA	AK	STATE OF ALASKA			
K09QV	NEW STUYAHOK	AK	STATE OF ALASKA			
K02LN	NEWTOK	AK	STATE OF ALASKA			
K04MB	NIKOLAI	AK	STATE OF ALASKA			
K39AA	NINILCHIK	AK	STATE OF ALASKA			
K07RI	NOATAK	AK	STATE OF ALASKA			
K13UG	NOME	AK	STATE OF ALASKA			
K11TH	NOME	AK	THREE ANGELS BROADCASTING NETWORK, INC.			
K09RQ	NONDALTON	AK	STATE OF ALASKA			
K04KP	NORTHWAY	AK	STATE OF ALASKA			
K09RT	NUIQSUT	AK	STATE OF ALASKA			
K02KW	NULATO	AK	STATE OF ALASKA			
K07QY	OUZINKIE	AK	STATE OF ALASKA			

K09JE	PALMER	AK	CHANNEL 2 BROADCASTING COMPANY		
K11QV	PAXSON	AK	STATE OF ALASKA		
K13SV	PEDRO BAY	AK	STATE OF ALASKA		
K09RM	PELICAN	AK	STATE OF ALASKA		
K04MA	PERRYVILLE	AK	STATE OF ALASKA		
K21CK	PETERSBURG	AK	STATE OF ALASKA/DIV OF TELE. OPER.		
K02LI	PILOT POINT	AK	STATE OF ALASKA		
K15AU	PILOT STATION	AK	STATE OF ALASKA		
K02LV	PITKAS POINT	AK	STATE OF ALASKA		
K13UJ	PLATINUM	AK	STATE OF ALASKA		
K09SY	POINT BAKER	AK	STATE OF ALASKA		
K09QN	POINT HOPE	AK	STATE OF ALASKA		
K09UC	POINT LAY	AK	STATE OF ALASKA		
K09TL	PORT ALICE	AK	STATE OF ALASKA		
K13SC	PORT GRAHAM	AK	STATE OF ALASKA		
K07RG	PORT LIONS	AK	STATE OF ALASKA		
K07SQ	PORT MOLLER	AK	STATE OF ALASKA		
K11QX	PORT PROTECTION	AK	STATE OF ALASKA		
K07TU	PORTAGE CREEK	AK	STATE OF ALASKA		
K09SX	QUINHAGAK	AK	STATE OF ALASKA		
K09RD	RAMPART	AK	STATE OF ALASKA		
K02LA	RED DEVIL	AK	STATE OF ALASKA		
K09TC	ROWAN BAY	AK	STATE OF ALASKA		
K04KU	RUBY	AK	STATE OF ALASKA		
K09SH	RUSSIAN MISSION	AK	STATE OF ALASKA		
K07RD	SAVOONGA	AK	STATE OF ALASKA		
K02LS	SCAMMON BAY	AK	STATE OF ALASKA		
K09RL	SELAWIK	AK	STATE OF ALASKA		
K55DD	SEWARD	AK	STATE OF ALASKA		
K04KY	SHAGELUK	AK	STATE OF ALASKA		
K07QU	SHAKTOOLIK	AK	STATE OF ALASKA		
K12NO	SHEEP MOUNTAIN	AK	STATE OF ALASKA		
K11QR	SHELDON POINT	AK	STATE OF ALASKA		
K09RZ	SHISHMAREF	AK	STATE OF ALASKA		
K07RA	SHUNGNAK	AK	STATE OF ALASKA		
KSCT-LP	SITKA	AK	DAN ETULAIN		
K03GJ	SITKA	AK	STATE OF ALASKA		
K11QE	SKAGWAY	AK	STATE OF ALASKA		
K13SM	SLANA	AK	STATE OF ALASKA		
K07SX	SLEETMUTE	AK	STATE OF ALASKA		
K09RE	ST. GEORGE	AK	STATE OF ALASKA		
K13SX	ST. MARYS	AK	STATE OF ALASKA		
K09QX	ST. MICHAEL	AK	STATE OF ALASKA		
K09RB	ST. PAUL	AK	STATE OF ALASKA		
K09RR	STEBBINS	AK	STATE OF ALASKA		
K13SE	STONY RIVER	AK	STATE OF ALASKA		
K04LN	TAKOTNA	AK	STATE OF ALASKA		
K07RB	TANANA	AK	STATE OF ALASKA		
K09SW	TANUNAK	AK	STATE OF ALASKA		
K13SJ	TATITLEK	AK	STATE OF ALASKA		
K13RO	TELIDA	AK	STATE OF ALASKA		
K09RO	TELLER	AK	STATE OF ALASKA		
K07RH	TENAKEE SPRINGS	AK	STATE OF ALASKA		
K11QU	TETLIN	AK	STATE OF ALASKA		
K07SN	THORNE BAY	AK	STATE OF ALASKA		
K13RR	TOK	AK	STATE OF ALASKA		
K11QG	TOKSOOK BAY	AK	STATE OF ALASKA		
K24AG	TRAPPER CREEK	AK	STATE OF ALASKA		
K08ID	TULUKSAK	AK	STATE OF ALASKA		

K09TF	TUNTUTULIAK	AK	STATE OF ALASKA		
K09FC	UNALAKLEET	AK	STATE OF ALASKA		
K04KV	UNALASKA	AK	STATE OF ALASKA		
K15AI	VALDEZ	AK	STATE OF ALASKA		
K09TW	VENETIE	AK	STATE OF ALASKA		
K02LT	WALES	AK	STATE OF ALASKA		
K07SI	WHALES PASS	AK	STATE OF ALASKA		
K11QT	WHITE MOUNTAIN	AK	STATE OF ALASKA		
K09UB	WHITTIER	AK	STATE OF ALASKA		
K02ME	WOMENS BAY	AK	STATE OF ALASKA		
K21AF	WRANGELL	AK	STATE OF ALASKA		
K09UA	YAKUTAT	AK	STATE OF ALASKA		
WAXC-LP	ALEXANDER CITY	AL	VENTURE TELEVISION, LLC		
WKNI-LP	ANDALUSIA	AL	SILVER WINGS BROADCASTING, INC.		
W65CW	ANDALUSIA	AL	DAVID M. LOFLIN		
W40BE	ANDALUSIA	AL	ERICA C. HAWSEY		
W36BQ	ANDALUSIA	AL	LOFLIN CHILDREN'S TRUST 4		
W19BV	ANDALUSIA	AL	LOFLIN CHILDREN'S TRUST 4		
W57CC	ANDALUSIA	AL	LOFLIN CHILDREN'S TRUST 4		
W59CQ	ANDALUSIA	AL	LOFLIN CHILDREN'S TRUST 4		
W50BO	ASHVILLE	AL	BOWLIN AND JOHNSON		
WBMA-LP	BIRMINGHAM	AL	TV ALABAMA, INC		
W34BI	BIRMINGHAM	AL	VENTANA TELEVISION, INC		
WCOT-LP	CULLMAN	AL	FIRST CULLMAN BROADCASTING, INC.		
W23DJ	DOTHAN	AL	EQUITY MEDIA HOLDINGS CORPORATION		
WDTH-LP	DOTHAN	AL	EQUITY MEDIA HOLDINGS CORPORATION		
WGHA-LP	GULF SHORES , ETC.	AL	TIGER EYE BROADCASTING CORPORATION		
W46DF	HAMILTON	AL	WMTY, INC		
W24DC	HAMILTON	AL	WMTY, INC		
W55BJ	JASPER	AL	COMBS BROADCASTING, INC.		
W23AK	JASPER	AL	WMTY, INC.		
WWBH-LP	MOBILE	AL	TIGER EYE BROADCASTING CORPORATION		
W30BX	MOBILE	AL	VENTANA TELEVISION, INC.		
WMOE-LP	MOBILE	AL	TIGER EYE BROADCASTING CORPORATION		
WFRZ-LP	MONTGOMERY	AL	FRAZER MEMORIAL UNITED METHODIST CHURCH		
W06BH	PHENIX CITY, ETC.	AL	GREENE COMMUNICATIONS, INC		
WYAM-LP	PRICEVILLE	AL	DECATUR COMMUNICATION PROPERTIES, LLC		
W45CW	RUSSELLVILLE	AL	UNITY BROADCASTING, INC		
W63CK	TALLADEGA	AL	BOWLIN BROADCAST NETWORK, INC.		
W46CF	TUSCUMBIA	AL	UNITY BROADCASTING, INC.		
WETU-LP	WETUMPKA	AL	VENTURE TELEVISION, LLC		
K30EC	BATESVILLE	AR	MS COMMUNICATIONS, LLC		
K46EM	BATESVILLE	AR	MS COMMUNICATIONS, LLC		
K22ES	BATESVILLE	AR	MS COMMUNICATIONS, LLC		
K61FP	BATESVILLE	AR	MS COMMUNICATIONS, LLC		
K53FM	BATESVILLE	AR	MS COMMUNICATIONS, LLC		
K35EA	BATESVILLE	AR	MS COMMUNICATIONS, LLC		
K57FV	BATESVILLE	AR	MS COMMUNICATIONS, LLC		
K40DS	BATESVILLE	AR	MS COMMUNICATIONS, LLC		
K67GR	BATESVILLE	AR	MS COMMUNICATIONS, LLC		
K69GT	BATESVILLE	AR	MS COMMUNICATIONS, LLC		
K65FN	BATESVILLE	AR	MS COMMUNICATIONS, LLC		
K59FB	BATESVILLE	AR	MS COMMUNICATIONS, LLC		
K20EX	BATESVILLE	AR	MS COMMUNICATIONS, LLC		
K08KF	DE QUEEN	AR	FIRST ASSEMBLY OF GOD		
K40EF	EL DORADO	AR	MS COMMUNICATIONS, LLC		
K66EX	EL DORADO	AR	MS COMMUNICATIONS, LLC		
K57GF	EL DORADO	AR	MS COMMUNICATIONS, LLC		
K59FJ	EL DORADO	AR	MS COMMUNICATIONS, LLC		

K29DC	EL DORADO	AR	MS COMMUNICATIONS, LLC			
K69HO	EL DORADO	AR	MS COMMUNICATIONS, LLC			
K53FB	EL DORADO	AR	MS COMMUNICATIONS, LLC			
K48EP	EL DORADO	AR	MS COMMUNICATIONS, LLC			
K63FX	EL DORADO	AR	MS COMMUNICATIONS, LLC			
K46DT	EL DORADO	AR	MS COMMUNICATIONS, LLC			
K36DR	EL DORADO	AR	MS COMMUNICATIONS, LLC			
K50EK	EL DORADO	AR	MS COMMUNICATIONS, LLC			
K27FF	EL DORADO	AR	MS COMMUNICATIONS, LLC			
K47JG	EL DORADO	AR	EQUITY MEDIA HOLDINGS CORPORATION			
KCIB-LP	EL DORADO	AR	IMMANUEL BAPTIST CHURCH			
K22HS	EUREKA SPRINGS	AR	CHRISTIANS INCORPORATED FOR CHRIST			
KEGW-LP	FAYETTEVILLE	AR	FORT SMITH 46, INC			
K32GH	FORT SMITH	AR	FORT SMITH 46, INC.			
KXUN-LP	FORT SMITH	AR	FORT SMITH 46, INC.			
K48FL	FORT SMITH	AR	FORT SMITH 46, INC.			
K14JJ	FORT SMITH	AR	ELLERBECK FAMILY PARTNERS II LTD			
KUFS-LP	FORT SMITH	AR	FORT SMITH 46, INC			
KWFT-LP	FORT SMITH	AR	TV 34, INC.			
K36EH	FORT SMITH	AR	ELLERBECK FAMILY PARTNERS II LTD.			
K33HE	FORT SMITH	AR	FORT SMITH 46, INC			
K54FH	GREEN FOREST	AR	NEW LIFE EVANGELISTIC CENTER, INC			
K23DU	HARRISON	AR	CHRISTIANS INCORPORATED FOR CHRIST			
KTKO-LP	HARRISON	AR	TKO, INC.			
KTSS-LP	HOPE	AR	ARTEX TV, LLC			
K55GE	LITTLE ROCK	AR	THREE ANGELS BROADCASTING NETWORK, INC.			
K34FH	LITTLE ROCK	AR	NATIONAL MINORITY T V , INC			
KHUG-LP	LITTLE ROCK	AR	LITTLE ROCK TV-14, L L C.			
KLRA-LP	LITTLE ROCK	AR	EQUITY MEDIA HOLDINGS CORPORATION			
KHTE-LP	LITTLE ROCK	AR	EQUITY MEDIA HOLDINGS CORPORATION			
KZJG-LP	LITTLE ROCK, ETC.	AR	COWSERT FAMILY, L L C.			
K07XL	MOUNTAIN HOME	AR	REYNOLDS MEDIA, INC.			
KIPB-LP	PINE BLUFF	AR	IMMANUEL BROADCASTING CORPORATION			
KWBK-LP	PINE BLUFF	AR	ARKANSAS 49, INC.			
KWBF-LP	SHERIDAN	AR	EQUITY MEDIA HOLDINGS CORPORATION			
KVAQ-LP	SPRINGDALE	AR	CHRISTIANS INCORPORATED FOR CHRIST			
KTEV-LP	TEXARKANA	AR	SANDRA A. MAY			
K11UU	PAGO PAGO	AS	PACIFIC CHANNEL SAMOA			
K19FD	CAMP VERDE	AZ	GEORGE YOUNG d/b as CENTRAL STATES COMMUNICATIONS			
KCAB-LP	CASA GRANDE	AZ	CENTRAL ARIZONA BROADCASTING			
K64BV	CASAS ADOBES	AZ	KVOA COMMUNICATIONS, INC.			
K49CH	DUNCAN	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC			
K47DA	DUNCAN	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC.			
K43CN	DUNCAN	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC.			
K51DG	DUNCAN	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC			
K53DL	DUNCAN	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC			
K69DG	DUNCAN, ETC	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC.			
K65CM	DUNCAN, ETC.	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC			
K67CP	DUNCAN, ETC	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC.			
K41CV	DUNCAN, ETC.	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC.			
K57CU	DUNCAN, ETC	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC.			
K39CM	DUNCAN, ETC	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC			
K33DA	DUNCAN, ETC.	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC.			
K35CP	DUNCAN, ETC	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC.			
K55DM	DUNCAN, ETC	AZ	SOUTHERN GREENLEE COUNTY TV ASSOCIATION, INC.			
K50HU	FLAGSTAFF	AZ	MEREDITH CORPORATION			
K35FH	FLAGSTAFF	AZ	JERRY MARTH			
K23HB	FLAGSTAFF	AZ	PRISM BROADCASTING NETWORK, INC.			
K20HS	FLAGSTAFF	AZ	MARCIA T. TURNER D/B/A TURNER ENTERPRISES			

KBFY-LP	FORTUNA	AZ	POWELL MEREDITH COMMUNICATIONS COMPANY
K30ES	GLOBE	AZ	GLOBE LPTV L.L.C.
K16FB	GLOBE	AZ	TELEFUTURA TELEVISION GROUP, INC
KDOS-LP	GLOBE	AZ	TELEFUTURA TELEVISION GROUP, INC
KPCE-LP	GREEN VALLEY	AZ	WORD OF GOD FELLOWSHIP, INC
KKAX-LP	HILLTOP	AZ	TRI-STATE BROADCASTING, L L.C.
KNJO-LP	HOLBROOK	AZ	KM COMMUNICATIONS, INC
K16GB	KINGMAN	AZ	SMOKE AND MIRRORS, LLC
K25HU	KINGMAN	AZ	TELECOM WIRELESS, LLC
K23BJ	LAKE HAVASU CITY	AZ	TRI-STATE BROADCASTING, L L.C.
KBBA-LP	LAKE HAVASU CITY	AZ	SMOKE AND MIRRORS, LLC
K57HX	MESA	AZ	KAZT, L.L.C.
K02MT	PARKER	AZ	HALE COMMUNICATIONS, INC
KPSN-LP	PAYSON	AZ	MULTIMEDIA HOLDINGS CORPORATION
KDTP-LP	PHOENIX	AZ	COMMUNITY TELEVISION EDUCATORS, INC
K25DM	PHOENIX	AZ	MAKO COMMUNICATIONS, LLC
KDTP-CA	PHOENIX	AZ	COMMUNITY TELEVISION EDUCATORS, INC.
KPHE-LP	PHOENIX	AZ	LOTUS TV OF PHOENIX LLC
KVPA-LP	PHOENIX	AZ	KDMA CHANNEL 25, INC.
K53GF	PHOENIX	AZ	SPANISH INDEPENDENT BROADCAST NETWORK, LLC
KTVP-LP	PHOENIX	AZ	MAKO COMMUNICATIONS, LLC
KDFQ-LP	PRESCOTT	AZ	UNA VEZ MAS PRESCOTT LICENSE II, LLC
K0BN-LP	PRESCOTT	AZ	UNA VEZ MAS PRESCOTT LICENSE I, LLC
KZOL-LP	SAFFORD	AZ	TELEFUTURA TELEVISION GROUP, INC
K21GC	SAFFORD	AZ	TELEFUTURA TELEVISION GROUP, INC.
KWKM-LP	SHOW LOW	AZ	KM COMMUNICATIONS, INC.
K20FO	SIERRA VISTA	AZ	KVOA COMMUNICATIONS, INC.
K33CG	SIERRA VISTA	AZ	RICHARD RICHARDS
KWSJ-LP	SNOWFLAKE	AZ	KM COMMUNICATIONS, INC.
KUDF-LP	TUCSON	AZ	UNA VEZ MAS TUCSON LICENSE, LLC
K48GX	TUCSON	AZ	KTVW LICENSE PARTNERSHIP, G P.
KWTA-LP	TUCSON	AZ	VENTURE TECHNOLOGIES GROUP, LLC
K21CX	TUCSON	AZ	VENTANA TELEVISION, INC.
K44BB	WINDOW ROCK	AZ	THE NAVAJO NATION
K52EG	YUMA	AZ	THREE ANGELS BROADCASTING NETWORK, INC.
KESE-LP	YUMA	AZ	GULF-CALIFORNIA BROADCAST COMPANY
K28FM	YUMA	AZ	BROADCAST GROUP, LTD
KYUM-LP	YUMA	AZ	CENTRO CRISTIANO VIDA ABUNDANTE, INC
KVFA-LP	YUMA	AZ	KM COMMUNICATIONS, INC.
KTAV-LP	ALTADENA	CA	ALMA VISION HISPANIC NETWORK, INC
KSSY-LP	ARROYO GRANDE	CA	IGLESIA JESUCRISTO ES MI REFUGIO, INC.
K24GS	BAKERSFIELD	CA	THREE ANGELS BROADCASTING NETWORK, INC
KABE-LP	BAKERSFIELD	CA	TELEFUTURA BAKERSFIELD LLC
KBFK-LP	BAKERSFIELD	CA	COCOLA BROADCASTING COMPANIES LLC
KZKC-LP	BAKERSFIELD	CA	MCGRAW-HILL BROADCASTING COMPANY, INC.
K18HD	BAKERSFIELD	CA	VALLEY PUBLIC TELEVISION, INC.
KEBK-LP	BAKERSFIELD	CA	VENTURE TECHNOLOGIES GROUP, LLC
KNXT-LP	BAKERSFIELD	CA	DIOCESE OF FRESNO EDUCATION CORP.
KKEY-LP	BAKERSFIELD	CA	BEL MEADE BROADCASTING COMPANY, INC
K16GE	BARSTOW	CA	DAVID PRIMM
K28IE	BARSTOW	CA	JEFF CHANG
KPCD-LP	BIG BEAR LAKE	CA	WORD OF GOD FELLOWSHIP, INC.
K06MU	BIG BEAR LAKE	CA	BEAR VALLEY BROADCASTING, INC.
K36BT	BLUE LAKE	CA	BLUESTONE LICENSE HOLDINGS INC
K36FO	CALEXICO	CA	BROADCAST GROUP, LTD.
KZVU-LP	CHICO	CA	SAINTE PARTNERS II, L.P
KXVU-LP	CHICO	CA	SAINTE PARTNERS II, L.P.
KUCO-LP	CHICO	CA	SAINTE PARTNERS II, L.P
KEFM-LP	CHICO	CA	VENTURE TECHNOLOGIES GROUP, LLC

KSGO-LP	CHICO	CA	VENTURE TECHNOLOGIES GROUP, LLC		
KKTF-LP	CHICO	CA	SAINTE PARTNERS II, L P.		
KDAS-LP	CLARKS CROSSING	CA	WORD OF GOD FELLOWSHIP, INC.		
K22DS	CRESCENT CITY, ETC	CA	CALIFORNIA OREGON BROADCASTING, INC.		
K39EO	CRESCENT CITY, ETC	CA	THREE ANGELS BROADCASTING NETWORK, INC.		
K15DP	CROWLEY LAKE-LONC	CA	MONO COUNTY SERVICE AREA NO. 1		
K27DV	CROWLEY LAKE-LONC	CA	MONO COUNTY SERVICE AREA NO. 1		
K58BN	CROWLEY LAKE-LONC	CA	MONO COUNTY SERVICE AREA NO. 1		
K25EB	CROWLEY LAKE-LONC	CA	MONO COUNTY SERVICE AREA NO. 1		
KTSK-LP	DAGGETT, ETC.	CA	COUNTY OF SAN BERNARDINO AREA 40		
K13IU	EAGLEVILLE	CA	SURPRISE VALLEY UNIFIED SCHOOL DISTRICT		
K33DI	EAST WEED	CA	BLUESTONE LICENSE HOLDINGS INC.		
K27FX	EUREKA	CA	MS COMMUNICATIONS, LLC		
K48GP	EUREKA	CA	MS COMMUNICATIONS, LLC		
KEMY-LP	EUREKA	CA	SAINTE PARTNERS II, L P.		
K67GU	EUREKA	CA	SAINTE PARTNERS II, L.P.		
KEUV-LP	EUREKA	CA	SAINTE PARTNERS II, L P		
K41FD	EUREKA	CA	MS COMMUNICATIONS, LLC		
K63GK	EUREKA	CA	MS COMMUNICATIONS, LLC		
K50EQ	EUREKA	CA	MS COMMUNICATIONS, LLC		
K69IE	EUREKA	CA	PATRICK MBABA		
K52FK	EUREKA	CA	SAINTE PARTNERS II, L P		
K59FW	EUREKA	CA	MS COMMUNICATIONS, LLC		
KUVU-LP	EUREKA	CA	SAINTE PARTNERS II, L P		
K57HB	EUREKA	CA	MS COMMUNICATIONS, LLC		
K20CN	FORTUNA/RIO DELL	CA	BLUESTONE LICENSE HOLDINGS INC.		
KJKZ-LP	FRESNO	CA	COCOLA BROADCASTING COMPANIES LLC		
KJEO-LP	FRESNO	CA	COCOLA BROADCASTING COMPANIES LLC		
KHSC-LP	FRESNO	CA	COCOLA BROADCASTING COMPANIES LLC		
KSDI-LP	FRESNO	CA	COCOLA BROADCASTING COMPANIES LLC		
KBID-LP	FRESNO	CA	COCOLA BROADCASTING COMPANIES LLC		
K56DZ	FRESNO	CA	NATIONAL MINORITY T.V., INC		
KMSG-LP	FRESNO	CA	COCOLA BROADCASTING COMPANIES LLC		
K03HK	FRESNO	CA	THREE ANGELS BROADCASTING NETWORK, INC.		
KVHF-LP	FRESNO	CA	COCOLA BROADCASTING COMPANIES LLC		
KOTR-LP	GONZALES	CA	MIRAGE MEDIA 2, LLC		
K16CX	GRASS VALLEY	CA	SIERRA JOINT JR. COLLEGE DISTRICT		
KVPS-LP	INDIO	CA	VALCOM BROADCASTING LLC		
K25GW	INDIO	CA	DESERT SPRINGS, INC.		
K19DH	INDIO	CA	DESERT SPRINGS, INC		
KUNA-LP	INDIO	CA	GULF-CALIFORNIA BROADCAST COMPANY		
KHTV-LP	INLAND EMPIRE	CA	VENTURE TECHNOLOGIES GROUP, LLC		
K19CL	INYOKERN	CA	VICTOR A. GARCIA		
K14JT	JOSHUA TREE, ETC.	CA	MORONGO BASIN TV CLUB, INC.		
K25CI	KLAMATH	CA	BLUESTONE LICENSE HOLDINGS INC		
K27BH	LAKE SHASTINA	CA	BLUESTONE LICENSE HOLDINGS INC		
K68AL	LAKEPORT	CA	THE LAKE COUNTY TELEVISION CLUB		
K64AZ	LAKEPORT	CA	THE LAKE COUNTY TELEVISION CLUB		
K58AW	LAKEPORT	CA	THE LAKE COUNTY TELEVISION CLUB		
K54CY	LAKEPORT	CA	THE LAKE COUNTY TELEVISION CLUB		
K26GK	LAKEPORT	CA	THE LAKE COUNTY TELEVISION CLUB		
K15FJ	LAKEPORT	CA	THE LAKE COUNTY TELEVISION CLUB		
K58AW	LAKEPORT	CA	THE LAKE COUNTY TELEVISION CLUB		
K52AJ	LAKEPORT, ETC.	CA	THE LAKE COUNTY TELEVISION CLUB		
KEDD-LP	LANCASTER	CA	ROBERT D. ADELMAN		
K48DI	LITCHFIELD	CA	HONEY LAKE COMMUNITY TV CORP.		
K13RZ	LITCHFIELD	CA	HONEY LAKE COMMUNITY TV CORP.		
K56BS	LONG VALLEY	CA	MONO COUNTY SERVICE AREA NO. 1		
K60BR	LONG VALLEY REGION	CA	MONO COUNTY SERVICE AREA NO. 1		

KNLA-LP	LOS ANGELES	CA	VENTURE TECHNOLOGIES GROUP, LLC		
K50EW	LUCERNE VALLEY	CA	COUNTY OF SAN BERNARDINO AREA 29		
KSRW-LP	MAMMOTH LAKES, ET	CA	BENETT KESSLER		
K49HV	MARTINEZ	CA	VERONICA O. FARIAS		
KAZV-LP	MODESTO	CA	FRANK & LINDA AZEVEDO		
KACA-LP	MODESTO	CA	WORD OF GOD FELLOWSHIP, INC.		
KMUV-LP	MONTEREY	CA	CLEAR CHANNEL BROADCASTING LICENSES, INC.		
KRMV-LP	MORENO VALLEY	CA	VENTURE TECHNOLOGIES GROUP, LLC		
K32EM	MORONGO VALLEY	CA	COUNTY OF SAN BERNARDINO AREA 70		
K34EU	MORONGO VALLEY	CA	COUNTY OF SAN BERNARDINO AREA 70		
KJHP-LP	MORONGO VALLEY	CA	SAN BERNARDINO COMMUNITY COLLEGE DISTRICT		
KHIR-LP	MORONGO VALLEY	CA	DELTA MEDIA GROUP, INC		
K61GH	NATIONAL CITY	CA	INTERNATIONAL COMMUNICATIONS NETWORK, INC.		
K15CX	OROVILLE	CA	BLUESTONE LICENSE HOLDINGS INC.		
KDUO-LP	PALM DESERT	CA	LOUIS MARTINEZ FAMILY GROUP, LLC.		
KODG-LP	PALM SPRINGS	CA	BILTMORE BROADCASTING PALM SPRINGS, INC.		
KVES-LP	PALM SPRINGS	CA	ENTRAVISION HOLDINGS, LLC		
KPSE-LP	PALM SPRINGS	CA	MIRAGE MEDIA LLC		
K20HZ	PALM SPRINGS	CA	HOWARD MINTZ		
KYAV-LP	PALM SPRINGS	CA	U-DUB PRODUCTIONS, LLC		
KCWQ-LP	PALM SPRINGS	CA	GULF-CALIFORNIA BROADCAST COMPANY		
K23ED	PASO ROBLES	CA	J B BROADCASTING, INC.		
KJCN-LP	PASO ROBLES	CA	CENTRAL COAST GOOD NEWS, INC.		
KVVG-LP	PORTERVILLE	CA	COCOLA BROADCASTING COMPANIES LLC		
KUAN-LP	POWAY, ETC	CA	KSLs, INC		
KGEC-LP	REDDING	CA	COOPER COMMUNICATIONS, LLC		
KRVU-LP	REDDING	CA	SAINTE PARTNERS II, L.P		
K33HH	REDDING	CA	NORTHERN CALIFORNIA CONFERENCE ASSOC OF SDA		
KMCA-LP	REDDING	CA	MARK C. ALLEN		
KFMD-LP	REDDING	CA	VENTURE TECHNOLOGIES GROUP, LLC		
KMSX-LP	REDDING	CA	RANDALL A WEISS		
K46HI	REDDING	CA	SAINTE PARTNERS II, L.P.		
KRHT-LP	REDDING	CA	COCOLA BROADCASTING COMPANIES LLC		
KVFR-LP	REDDING	CA	EICB-TV WEST, LLC		
KRDN-LP	REDDING	CA	KM COMMUNICATIONS, INC.		
KLAU-LP	REDLANDS	CA	GERALD BENAVIDES		
KCWB-LP	REEDLEY	CA	COCOLA BROADCASTING COMPANIES LLC		
K43AG	RIDGECREST	CA	HISPANIC CHRISTIAN COMMUNITY NETWORK, INC		
KZSW-LP	RIVERSIDE	CA	KZSW TELEVISION, INC		
KBLM-LP	RIVERSIDE/PERRIS	CA	LOUIS MARTINEZ FAMILY GROUP, LLC		
KMMK-LP	SACRAMENTO	CA	CABALLERO TELEVISION TEXAS, L L C.		
KCSO-LP	SACRAMENTO	CA	SAINTE 51, L.P		
KSTV-LP	SACRAMENTO	CA	BUSTOS MEDIA OF CALIFORNIA LICENSE, LLC		
KSAO-LP	SACRAMENTO	CA	COCOLA BROADCASTING COMPANIES LLC		
K22FR	SACRAMENTO	CA	NATIONAL MINORITY T.V., INC.		
KRJR-LP	SACRAMENTO	CA	WORD OF GOD FELLOWSHIP, INC.		
KLFB-LP	SALINAS	CA	LIVING FAITH BROADCASTING		
K15CU	SALINAS	CA	NBC TELEMUNDO LICENSE CO.		
KSGA-LP	SAN BERNARDINO	CA	KJLA, LLC		
K63EN	SAN DIEGO	CA	CIVIC LIGHT, INC.		
KDTF-LP	SAN DIEGO	CA	ENTRAVISION HOLDINGS, LLC		
KTCD-LP	SAN DIEGO	CA	ENTRAVISION HOLDINGS, LLC		
KZSD-LP	SAN DIEGO	CA	MCGRAW-HILL BROADCASTING COMPANY, INC		
KMMC-LP	SAN FRANCISCO	CA	CABALLERO ACQUISITION INC.		
KFUL-LP	SAN LUIS OBISPO	CA	KJLA, LLC		
KPXA-LP	SAN LUIS OBISPO	CA	TOMAY TELEVISION INC.		
KCCE-LP	SAN LUIS OBISPO	CA	ANET COMMUNICATIONS, INC.		
KBAB-LP	SANTA BARBARA	CA	BILTMORE BROADCASTING SANTA BARBARA, INC.		
KZDF-LP	SANTA BARBARA	CA	UNA VEZ MAS SANTA BARBARA LICENSE, LLC		

KLFA-LP	SANTA MARIA	CA	KJLA, LLC		
KWSM-LP	SANTA MARIA	CA	COCOLA BROADCASTING COMPANIES LLC		
KKDJ-LP	SANTA MARIA	CA	COCOLA BROADCASTING COMPANIES LLC		
KORM-LP	SANTA ROSA	CA	MARK W LEITCH		
KTJV-LP	SANTA ROSA	CA	FIORI MEDIA, INC		
K47DV	SOUTH YREKA	CA	CALIFORNIA OREGON BROADCASTING, INC		
KMMW-LP	STOCKTON	CA	CABALLERO ACQUISITION INC		
KDTS-LP	STOCKTON	CA	WORD OF GOD FELLOWSHIP, INC.		
KREN-LP	SUSANVILLE	CA	RENO LICENSE, LLC		
K61EN	SUSANVILLE, ETC.	CA	HONEY LAKE COMMUNITY TV CORP		
K69FS	SUSANVILLE, ETC.	CA	HONEY LAKE COMMUNITY TV CORP		
K36HH	SUSANVILLE, ETC.	CA	HONEY LAKE COMMUNITY TV CORP.		
K63CM	SUSANVILLE, ETC	CA	HONEY LAKE COMMUNITY TV CORP		
K42GV	SUSANVILLE, ETC	CA	HONEY LAKE COMMUNITY TV CORP.		
K12PO	TEMECULA	CA	CHANNEL 51 OF SAN DIEGO, INC.		
K18FH	TWENTYNINE PALMS	CA	MORONGO BASIN TV CLUB, INC.		
K47AL	UKIAH	CA	TELEVISION IMPROVEMENT ASSOCIATION		
K43AF	UKIAH	CA	TELEVISION IMPROVEMENT ASSOCIATION		
KTJH-LP	UKIAH	CA	JEFF CHANG		
KWJD-LP	VAN NUYS	CA	FRIENDLY BROADCASTING COMPANY		
K55KD	VAN NUYS	CA	ALMA VISION HISPANIC NETWORK, INC.		
KIMG-LP	VENTURA	CA	EBC LOS ANGELES, INC		
K31AD	VICTORVILLE, ETC.	CA	VICTOR VALLEY PUBLIC TRANSLATOR, INC.		
K27AE	VICTORVILLE, ETC	CA	VICTOR VALLEY PUBLIC TRANSLATOR, INC		
K51AN	VICTORVILLE, ETC	CA	VICTOR VALLEY PUBLIC TRANSLATOR, INC		
K55CW	VICTORVILLE, ETC.	CA	VICTOR VALLEY PUBLIC TRANSLATOR, INC.		
K21AC	VICTORVILLE, ETC	CA	VICTOR VALLEY PUBLIC TRANSLATOR, INC		
K25AD	VICTORVILLE, ETC	CA	VICTOR VALLEY PUBLIC TRANSLATOR, INC.		
KMCF-LP	VISALIA	CA	COCOLA BROADCASTING COMPANIES LLC		
KHAX-LP	VISTA	CA	ENTRAVISION HOLDINGS, LLC		
K26FA	VISTA	CA	RICK D'AMICO		
K34BW	WILLOW CREEK	CA	BLUESTONE LICENSE HOLDINGS INC.		
KENY-LP	ALAMOSA	CO	KENNETH SWINEHART		
K18FS	ASHCROFT	CO	PITKIN COUNTY TRANSLATOR DEPARTMENT		
K19FH	ASHCROFT	CO	PITKIN COUNTY TRANSLATOR DEPARTMENT		
KSZG-LP	ASPEN	CO	ASPEN TELEVISION, LLC		
K28GY	BRECKENRIDGE	CO	RESORT TELEVISION USA, LLC		
K28HI	BRECKENRIDGE/DILL	CO	RESORT SPORTS NETWORK, INC.		
K14MH	BROADMOOR	CO	TUCK PROPERTIES, INC. C/O LEE PELTZMAN		
K59BZ	BROADMOOR	CO	TUCK PROPERTIES, INC. C/O LEE PELTZMAN		
KJCS-LP	COLORADO SPRINGS	CO	BETA BROADCASTING, INC.		
K43CG	COLORADO SPRINGS	CO	FULL GOSPEL OUTREACH, INC.		
K30AA	COLORADO SPRINGS	CO	SANGRE DE CRISTO COMMUNICATIONS, INC		
K49CJ	COLORADO SPRINGS	CO	NBC TELEMUNDO LICENSE CO		
KWHS-LP	COLORADO SPRINGS	CO	LE SEA BROADCASTING CORPORATION		
K24CH	CORTEZ	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K16CT	CORTEZ	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K31CT	CORTEZ	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K29GO	CORTEZ	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K39EY	CORTEZ	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K27IG	CORTEZ	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K09DM	CORTEZ	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K07UY	CORTEZ	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K14JS	CORTEZ	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K28EB	CORTEZ, ETC.	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K51DB	CORTEZ, ETC	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K22CU	CORTEZ, ETC	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K30HJ	CORTEZ, ETC.	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K49EQ	CORTEZ, ETC.	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		

K18DR	CORTEZ, ETC	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K24HY	CORTEZ, ETC	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K41DE	CORTEZ, ETC.	CO	SAN JUAN BASIN AREA VOC.-TECH.SCH.
K11LP	CORTEZ, ETC.	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K35CH	CORTEZ, MANCOS, ET	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K27FA	CRAIG	CO	TIA SHAW
K30IK	CRIPPLE CREEK, ETC	CO	TUCK PROPERTIES, INC. C/O LEE PELTZMAN
K07KB	DEL NORTE	CO	PARKER HILL TV ASSOCIATION
K13CB	DEL NORTE	CO	PARKER HILL TV ASSOCIATION
K11EG	DEL NORTE	CO	PARKER HILL TV ASSOCIATION
K04JA	DEL NORTE	CO	PARKER HILL TV ASSOCIATION
K41DJ	DEL NORTE-SOUTH F	CO	SOUTH FORK TV ASSOCIATION
KDVT-LP	DENVER	CO	ENTRAVISION HOLDINGS, LLC
KDEO-LP	DENVER	CO	SANDE FAMILY TRUST
KZCO-LP	DENVER	CO	MCGRAW-HILL BROADCASTING COMPANY, INC.
K57BT	DENVER	CO	TRINITY BROADCASTING OF DENVER, INC.
KMAS-LP	DENVER	CO	NBC TELEMUNDO LICENSE CO.
K04NK	DOLORES	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K13AT	DOLORES	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K10MZ	DOLORES	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K05GA	DOLORES	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K02OG	DOLORES	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K08LL	DOLORES	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K06NT	DOLORES	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K12QH	DOLORES	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K32EY	DOVE CREEK	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K19GB	DOVE CREEK	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K23GF	DOVE CREEK	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K34IA	DOVE CREEK	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K15GU	DOVE CREEK	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K17GE	DOVE CREEK	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K21GT	DOVE CREEK	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K48BK	DOVE CREEK, ETC	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K44DF	EAGLE, ETC	CO	COLORADO TV MARKETING, LLC
KCXP-LP	EAGLE, ETC.	CO	COLORADO TV MARKETING, LLC
K47EC	ESTES PARK	CO	SYNCOM MEDIA GROUP, INC.
K26HQ	ESTES PARK	CO	VENTURE TECHNOLOGIES GROUP, LLC
K39JT	ESTES PARK	CO	VENTURE TECHNOLOGIES GROUP, LLC
K42GS	ESTES PARK	CO	VENTURE TECHNOLOGIES GROUP, LLC
KDNF-LP	FORT COLLINS	CO	WORD OF GOD FELLOWSHIP, INC
K08IS	GLEN HAVEN	CO	SYNCOM MEDIA GROUP, INC.
KKHD-LP	GRAND JUNCTION	CO	PIKES PEAK TELEVISION, INC
K14LS	GRAND JUNCTION	CO	MARCIA T. TURNER tr/as TURNER ENTERPRISES
K13EL	GRAND LAKE	CO	GRAND LAKE METRO RECREATION DIST.
K04PJ	HESPERUS	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K13XX	HESPERUS	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K02QI	HESPERUS	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K02OU	ISMAY	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K05JW	ISMAY CANYON	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K10NY	ISMAY CANYON	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K04OO	ISMAY CANYON	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K13XG	ISMAY CANYON	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K26CI	MANCOS, ETC.	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION
K34FB	PUEBLO	CO	NBC TELEMUNDO LICENSE CO.
K18DE	SOUTH FORK, ETC	CO	SOUTH FORK TV ASSOCIATION
K57BW	SOUTH FORK, ETC.	CO	SOUTH FORK TV ASSOCIATION
K02EX	SOUTH FORK, ETC.	CO	SOUTH FORK TV ASSOCIATION
K20HR	THOMASVILLE	CO	PITKIN COUNTY TRANSLATOR DEPARTMENT
K45IE	VAIL	CO	VAIL ASSOCIATES, INC D/B/A TV 8

KSPK-LP	WALSENBURG	CO	MAINSTREET BROADCASTING CO., INC		
K08MB	WEBER CANYON	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K04ON	WEBER CANYON	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K02OS	WEBER CANYON	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K10OD	WEBER CANYON	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K13XH	WEBER CANYON	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
K05LI	WEBER CANYON	CO	SOUTHWEST COLORADO TV TRANSLATOR ASSOCIATION		
W65DZ	BRIDGEPORT	CT	PAGING ASSOCIATES, INC		
W22BN	DANBURY	CT	IT COMMUNICATIONS, INC		
WRNT-LP	HARTFORD	CT	R AND S BROADCASTING LLC		
WHTX-LP	HARTFORD	CT	ENTRAVISION HOLDINGS, LLC		
WHCT-LP	HARTFORD, NEW HAVEN	CT	VENTURE TECHNOLOGIES GROUP, LLC		
WNHX-LP	NEW HAVEN	CT	IT COMMUNICATIONS, INC		
W17CD	STAMFORD	CT	K LICENSEE, INC.		
W27CD	STAMFORD	CT	WLNY LIMITED PARTNERSHIP		
WIAV-LP	WASHINGTON	DC	ASIAVISION, INC.		
WDDN-LP	WASHINGTON	DC	WORD OF GOD FELLOWSHIP, INC.		
W2DC-LP	WASHINGTON	DC	ONDA CAPITAL, INC.		
WWTD-LP	WASHINGTON	DC	DC BROADCASTING, INC.		
WLWP-LP	MILLSBORO, ETC	DE	OCEAN 4 BROADCASTING ASSOCIATION		
WWEV-LP	SUSSEX COUNTY	DE	OCEAN 60 BROADCASTING ASSOCIATION		
WXXU-LP	ALTAMONTE SPRINGS	FL	RAMA COMMUNICATIONS		
W16CA	BIG PINE	FL	CAYO HUESO NETWORKS, LLC		
W33BL	CHIEFLAND	FL	SUNCOAST BROADCASTING OF LAFAYETTE COUNTY		
W29CW	DUCK KEY	FL	PRISM BROADCASTING NETWORK, INC.		
WTLE-LP	FORT MYERS	FL	EBC SOUTHWEST FLORIDA, INC.		
WLZE-LP	FORT MYERS	FL	EBC SOUTHWEST FLORIDA, INC.		
WTPH-LP	FORT MYERS	FL	TU PROGRAMMACION HISPANA, LLC		
W22CL	FORT MYERS	FL	U.S. TELEVISION, L.L.C.		
WFPI-LP	FORT PIERCE, ETC	FL	EBC SOUTHWEST FLORIDA, INC.		
W29CV	GAINESVILLE	FL	ROBERT A. NAISMITH		
WLUF-LP	GAINESVILLE	FL	BOARD OF TRUSTEES, UNIVERSITY OF FLORIDA		
WNFT-LP	GAINESVILLE	FL	BUDD BROADCASTING CO., INC.		
W45BZ	JACKSONVILLE	FL	DEEPAK VISWANATH		
W50CO	JACKSONVILLE	FL	THREE ANGELS BROADCASTING NETWORK, INC.		
WPXJ-LP	JACKSONVILLE	FL	PAXSON COMMUNICATIONS LICENSE COMPANY, LLC		
WWRJ-LP	JACKSONVILLE	FL	U.S. TELEVISION, L.L.C.		
W54CS	JACKSONVILLE	FL	VENTANA TELEVISION, INC.		
WUBF-LP	JACKSONVILLE	FL	UMMAT BROADCASTING CORPORATION INC		
W25DQ	KEY WEST	FL	PRISM BROADCASTING NETWORK, INC.		
WGAY-LP	KEY WEST	FL	PARADISE TV, LLC		
WEYW-LP	KEY WEST	FL	NEW COLONIAL BROADCASTING, LLC		
W05CJ	KEY WEST	FL	JAMES J. CHLADEK		
W10CQ	KEY WEST	FL	JAMES J. CHLADEK		
WMYG-LP	LAKE CITY	FL	NEW AGE MEDIA OF GAINESVILLE LICENSE, LLC		
WPDS-LP	LARGO, ETC.	FL	PINELLAS COUNTY SCHOOLS		
W43CE	LEALMAN	FL	MAKO COMMUNICATIONS, LLC		
WSSH-LP	LIVE OAK	FL	BUDD BROADCASTING CO., INC.		
W03AO	MADISON	FL	T. H. GREENE, JR. & M. E. GREENE		
WDFL-LP	MARATHON	FL	FRANCOIS LECONTE		
WUJF-LP	MAXVILLE	FL	EBC JACKSONVILLE, INC		
WSCF-LP	MELBOURNE	FL	JAMES J. CHLADEK		
W46DB	MELBOURNE	FL	ENTRAVISION HOLDINGS, LLC		
W26BN	MELBOURNE	FL	WIRELESS BROADBAND SERVICES/AMERICA		
WLMF-LP	MIAMI	FL	PAGING SYSTEMS, INC.		
WFUN-LP	MIAMI, ETC.	FL	CARIBEVISION STATION GROUP, LLC		
WXDT-LP	NAPLES	FL	GUENTER MARKSTEINER		
WZDT-LP	NAPLES	FL	GUENTER MARKSTEINER		
W07BP	OCALA	FL	MARION COUNTY PUBLIC SCHOOLS		

WVCI-LP	ORLANDO	FL	ENTRAVISION HOLDINGS, LLC		
WOTO-LP	ORLANDO	FL	WORD OF GOD FELLOWSHIP, INC		
W21AU	ORLANDO	FL	CENTRAL BROADCAST COMPANY		
W47AL	ORLANDO	FL	CONCILIO MISSION CRISTIANA FUENTE		
WOKB-LP	ORLANDO	FL	RAMA COMMUNICATIONS		
W50BP	PANAMA CITY	FL	TIGER EYE BROADCASTING CORPORATION		
WGOM-LP	PANAMA CITY	FL	GLOBAL OUTREACH MINISTRY NETWORK, INC.		
W26BV	PANAMA CITY	FL	BREEZE BROADCAST CORP., L.L.C.		
WPCY-LP	PANAMA CITY	FL	TIGER EYE BROADCASTING CORPORATION		
W40BU	PANAMA CITY	FL	RALPH FYTTON		
WGOX-LP	PANAMA CITY	FL	GLOBAL OUTREACH MINISTRY NETWORK, INC.		
WPAF-LP	PANAMA CITY	FL	MARCIA T. TURNER D/B/A TURNER ENTERPRISES		
W19CO	PENSACOLA	FL	VENTANA TELEVISION, INC.		
WSFD-LP	PERRY	FL	DOCKINS COMMUNICATIONS, INC.		
W18DB	PORT RICHEY, ETC	FL	WMOR-TV COMPANY		
W5LF-LP	PORT ST LUCIE	FL	EBC SOUTHWEST FLORIDA, INC		
W48CN	SARASOTA	FL	NATIONAL MINORITY T.V., INC.		
W05CO	SARASOTA	FL	THREE ANGELS BROADCASTING NETWORK, INC.		
W33CC	ST. PETERSBURG	FL	VENTANA TELEVISION, INC.		
W35BN	TALLAHASSEE	FL	DEEPAK VISWANATH		
W7BC-LP	TALLAHASSEE	FL	TEMPLE BAPTIST CHURCH, INC		
WACX-LP	TALLAHASSEE	FL	ASSOCIATED CHRISTIAN TELEVISION SYSTEM, INC		
WVEA-LP	TAMPA	FL	ENTRAVISION HOLDINGS, LLC		
WTAM-LP	TAMPA	FL	LOTUS TV OF TAMPA LLC		
WSWF-LP	UNION PARK	FL	SPECIALTY BROADCASTING CORPORATION		
WBWP-LP	WEST PALM BEACH	FL	H&R PRODUCTION GROUP, LLC		
W63DB	WILLISTON	FL	EQUITY MEDIA HOLDINGS CORPORATION		
W56EJ	WILLISTON	FL	EQUITY MEDIA HOLDINGS CORPORATION		
WGCT-LP	YANKEETOWN	FL	BUDD BROADCASTING CO., INC.		
WTBS-LP	ATLANTA	GA	PRISM BROADCASTING NETWORK, INC		
W23DN	ATLANTA	GA	VENTANA TELEVISION, INC		
WUVM-LP	ATLANTA	GA	UNA VEZ MAS ATLANTA LICENSE, LLC		
WAAU-LP	AUGUSTA	GA	THOMAS J. PIPER		
W02CI	CAIRO/THOMASVILLE	GA	CEE, INC.		
W69DO	COLQUITT	GA	MS COMMUNICATIONS, LLC		
W51CQ	COLQUITT	GA	MS COMMUNICATIONS, LLC		
W45BL	COLQUITT	GA	MS COMMUNICATIONS, LLC		
W26BM	COLQUITT	GA	MS COMMUNICATIONS, LLC		
W22BV	COLQUITT	GA	MS COMMUNICATIONS, LLC		
W30BO	COLQUITT	GA	MS COMMUNICATIONS, LLC		
W47BX	COLQUITT	GA	MS COMMUNICATIONS, LLC		
W08DM	COLQUITT	GA	MS COMMUNICATIONS, LLC		
WANX-LP	COLUMBUS	GA	PRISM BROADCASTING NETWORK, INC.		
WDDA-LP	DALTON	GA	WORD OF GOD FELLOWSHIP, INC.		
WWPD-LP	DOUGLAS	GA	KM COMMUNICATIONS, INC.		
WDTA-LP	FAYETTEVILLE	GA	WORD OF GOD FELLOWSHIP, INC.		
WVOH-LP	HAZLEHURST	GA	JEFF DAVIS BROADCASTERS, INC.		
WPDW-LP	PEARSON	GA	KM COMMUNICATIONS, INC.		
WPNG-LP	PEARSON	GA	KM COMMUNICATIONS, INC.		
WHDS-LP	SAVANNAH	GA	CAROLINA CHRISTIAN BROADCASTING, INC		
WGCW-LP	SAVANNAH	GA	SOUTHERN TV CORPORATION		
W25CQ	STATESBORO	GA	SOUTHERN TV CORPORATION		
W62DE	TIFTON	GA	BILLY RAY WASHINGTON		
W12DA	TIFTON	GA	RICHARD C & LISA A GOETZ		
KEQI-LP	DEDEDO	GU	SORENSEN TELEVISION SYSTEMS, INC.		
KUAM-LP	TAMUNING	GU	PACIFIC TELESTATIONS, INC.		
KTKB-LP	TAMUNING	GU	KM COMMUNICATIONS, INC.		
K06NC	HANAMAULU	HI	CHANG BROADCASTING HAWAII, LLC		
KHOH-LP	HILO	HI	RICHARD C & LISA A. GOETZ		

KHHB-LP	HILO	HI	HILO LP TV, LLC		
K26HL	HOLUALOA	HI	PRISM BROADCASTING NETWORK, INC		
K42CO	HONOLULU	HI	OCEANIA BROADCASTING NETWORK, INC		
K56EX	HONOLULU	HI	VICTOR AGMATA, JR.		
K19FV	KULA	HI	PRISM BROADCASTING NETWORK, INC.		
K17GR	KULA	HI	PRISM BROADCASTING NETWORK, INC		
KOIW-LP	MT. VIEW	HI	ESI BROADCASTING CORPORATION		
KAMN-LP	WAILUKU	HI	JULIET R YANKLOWITZ		
KAUI-LP	WAILUKU	HI	WORD OF GOD FELLOWSHIP, INC.		
K56GD	AMES	IA	TV-45, INC		
K48FZ	AMES	IA	TV-52, INC		
KHHH-LP	CEDAR RAPIDS	IA	TIGER EYE BROADCASTING CORPORATION		
KCDR-LP	CEDAR RAPIDS	IA	TIGER EYE BROADCASTING CORPORATION		
KRUB-LP	CEDAR RAPIDS	IA	TIGER EYE BROADCASTING CORPORATION		
KCDE-LP	CEDAR RAPIDS	IA	TIGER EYE BROADCASTING CORPORATION		
K52GP	COUNCIL BLUFFS	IA	DOUGLAS SHELDAHL		
K54GL	COUNCIL BLUFFS	IA	TV-45, INC		
WBQD-LP	DAVENPORT	IA	FOUR SEASONS PEORIA, LLC		
K16EL	DAVENPORT	IA	THREE ANGELS BROADCASTING NETWORK, INC		
K29EA	DES MOINES	IA	TV-45, INC.		
K46EY	DES MOINES	IA	TV-45, INC.		
K41DD	DES MOINES	IA	VENTANA TELEVISION, INC.		
K53FD	IOWA FALLS	IA	ROBERT M. CAMPBELL		
K47EK	IOWA FALLS	IA	ROBERT M. CAMPBELL		
K25FA	IOWA FALLS	IA	ROBERT M. CAMPBELL		
K55GV	IOWA FALLS, ETC	IA	ROBERT M. CAMPBELL		
K60CL	KEOKUK	IA	CHRIST VISION, INC.		
K21EM	OTTUMWA	IA	MS COMMUNICATIONS, LLC		
K45EE	OTTUMWA	IA	MS COMMUNICATIONS, LLC		
K49DX	OTTUMWA	IA	MS COMMUNICATIONS, LLC		
K58ER	OTTUMWA	IA	MS COMMUNICATIONS, LLC		
K53FC	OTTUMWA	IA	MS COMMUNICATIONS, LLC		
K51FJ	OTTUMWA	IA	MS COMMUNICATIONS, LLC		
K67GH	OTTUMWA	IA	MS COMMUNICATIONS, LLC		
K31ED	OTTUMWA	IA	MS COMMUNICATIONS, LLC		
K65GA	OTTUMWA	IA	MS COMMUNICATIONS, LLC		
K55GS	OTTUMWA	IA	MS COMMUNICATIONS, LLC		
K0TT-LP	OTTUMWA	IA	RICHARD P. JACKSON, JR.		
K55FL	SPENCER	IA	WAITT BROADCASTING, INC		
KBVK-LP	SPENCER	IA	PAPPAS TELECASTING COMPANIES		
K40CO	STORM LAKE	IA	WAITT BROADCASTING, INC.		
KCWL-LP	STORM LAKE	IA	PAPPAS TELECASTING COMPANIES		
K40GO	WATERLOO	IA	MS COMMUNICATIONS, LLC		
KZAK-LP	BOISE	ID	COCOLA BROADCASTING COMPANIES LLC		
KCBB-LP	BOISE	ID	COCOLA BROADCASTING COMPANIES LLC		
KIWB-LP	BOISE	ID	COCOLA BROADCASTING COMPANIES LLC		
KUNB-LP	BOISE	ID	FISHER BROADCASTING COMPANY		
KBTI-LP	BOISE	ID	COCOLA BROADCASTING COMPANIES LLC		
KKIC-LP	BOISE	ID	COCOLA BROADCASTING COMPANIES LLC		
KITL-LP	BOISE	ID	TODD A. LOPES		
KBSE-LP	BOISE, ETC	ID	COCOLA BROADCASTING COMPANIES LLC		
K51IN	BONNERS FERRY	ID	THREE ANGELS BROADCASTING NETWORK, INC.		
K61AP	BURLEY, ETC.	ID	NPG OF IDAHO, INC		
KOUP-LP	COEUR D'ALENE	ID	PULLMAN BROADCASTING, INC		
KTYJ-LP	COEUR D'ALENE	ID	CHRISTIAN BROADCASTING OF IDAHO, INC		
K18DT	COEUR D'ALENE	ID	KHQ, INCORPORATED		
K30HK	HOLLISTER	ID	MARCIA T. TURNER tr/as TURNER ENTERPRISES		
K39HJ	IDAHO FALLS	ID	MARCIA T. TURNER tr/as TURNER ENTERPRISES		
K13AP	KAMIAH	ID	KAMIAH VALLEY TV, INC		

K11KO	KAMIAH	ID	KAMIAH VALLEY TV, INC		
K07AQ	KAMIAH	ID	KAMIAH VALLEY TV, INC		
K09AL	KAMIAH	ID	KAMIAH VALLEY TV, INC.		
KSVT-LP	KETCHUM	ID	SUN VALLEY TELEVISION, LLC.		
K61CI	LEADORE	ID	NPQ OF IDAHO, INC.		
KIDQ-LP	LEWISTON	ID	JPI WORLDWIDE, INC.		
K31HS	MALAD	ID	ONEIDA SCHOOL DISTRICT #351		
K20HW	MCCALL	ID	SUN VALLEY TELEVISION, LLC.		
K08EZ	MINK CREEK	ID	FRANKLIN COUNTY TV DISTRICT		
K10FF	MINK CREEK	ID	FRANKLIN COUNTY TV DISTRICT		
KPPP-LP	POCATELLO	ID	FISHER BROADCASTING COMPANY		
K61FO	POCATELLO	ID	NPQ OF IDAHO, INC.		
K51HU	POCATELLO	ID	MARCIA T TURNER D/B/A TURNER ENTERPRISES		
K07XM	PRESTON	ID	FRANKLIN COUNTY TRANSLATOR DISTRICT		
K48DX	SANDPOINT	ID	KHQ, INCORPORATED		
K18HQ	SANDPOINT	ID	THREE ANGELS BROADCASTING NETWORK, INC.		
KBAX-LP	TWIN FALLS	ID	CHRISTIAN BROADCASTING OF IDAHO, INC		
KTFF-LP	TWIN FALLS	ID	KING BROADCASTING COMPANY		
KCTF-LP	TWIN FALLS	ID	CHRISTIAN BROADCASTING OF IDAHO, INC.		
KTWT-LP	TWIN FALLS	ID	NEUHOFF FAMILY LIMITED PARTNERSHIP		
KCJY-LP	TWIN FALLS	ID	TWIN BROADCASTING, INC		
KSAW-LP	TWIN FALLS	ID	JOURNAL BROADCAST CORPORATION		
KYTL-LP	TWIN FALLS	ID	TODD A. LOPES		
KTID-LP	TWIN FALLS, ETC.	ID	NEUHOFF FAMILY LIMITED PARTNERSHIP		
WRDH-LP	ASHTON	IL	CHN MEDIA, L L C		
WCRD-LP	CARTHAGE	IL	FXM BROADCASTING, L L C		
W39BH	CHAMPAIGN	IL	VENTANA TELEVISION, INC.		
W07DD	CHAMPAIGN	IL	THREE ANGELS BROADCASTING NETWORK, INC		
W48CU	CHAMPAIGN/URBANA	IL	MS COMMUNICATIONS, LLC		
W52BR	CHAMPAIGN-URBANA	IL	MARCIA COHEN		
WBKM-LP	CHANA	IL	BKM BROADCASTING, L L C		
WEIL-LP	EFFINGHAM	IL	BELIEVER'S BROADCASTING CORP		
WNOI-LP	FLORA	IL	H & R COMMUNICATIONS, INC.		
WCJT-LP	MOUNT CARMEL	IL	WABASH COMMUNICATIONS, INC.		
W40BY	PALATINE	IL	TRINITY BROADCASTING NETWORK		
W53BP	QUINCY	IL	MS COMMUNICATIONS, LLC		
W45BM	QUINCY	IL	MS COMMUNICATIONS, LLC		
W69DF	QUINCY	IL	MS COMMUNICATIONS, LLC		
W65CZ	QUINCY	IL	MS COMMUNICATIONS, LLC		
W67DR	QUINCY	IL	MS COMMUNICATIONS, LLC		
W49BS	QUINCY	IL	MS COMMUNICATIONS, LLC		
W36BS	QUINCY	IL	MS COMMUNICATIONS, LLC		
W61CO	QUINCY	IL	MS COMMUNICATIONS, LLC		
W18CJ	QUINCY	IL	THREE ANGELS BROADCASTING NETWORK, INC		
WLFM-LP	ROCHELLE	IL	VENTURE TECHNOLOGIES GROUP, LLC		
WCHU-LP	ROCHELLE	IL	VENTURE TECHNOLOGIES GROUP, LLC		
WMKB-LP	ROCHELLE	IL	DILIGENT BROADCASTING, L L C.		
WFBN-LP	ROCKFORD	IL	WEIGEL BROADCASTING COMPANY		
W33AY	SPRINGFIELD	IL	VENTANA TELEVISION, INC.		
W54BE	SUGAR GROVE	IL	WAUBONSEE COMMUNITY COLLEGE		
W07CL	AUBURN	IN	THE RAYMOND S. AND DOROTHY N. MOORE FOUNDATION, INC.		
W36DF	EVANSVILLE	IN	EVANSVILLE LOW POWER PARTNERSHIP		
WTSN-LP	EVANSVILLE	IN	EVANSVILLE LOW POWER PARTNERSHIP		
WIKY-LP	EVANSVILLE, ETC.	IN	ROBERTS BROADCASTING COMPANY OF EVANSVILLE, IN, LLC		
WJPS-LP	EVANSVILLE, ETC.	IN	ROBERTS BROADCASTING COMPANY OF EVANSVILLE, IN, LLC		
WHNW-LP	GARY	IN	LESEA BROADCASTING CORPORATION		
WDNI-LP	INDIANAPOLIS	IN	RADIO ONE OF INDIANA, LLC		
WSOT-LP	MARION	IN	SUNNYCREST BAPTIST CHURCH		
WREP-LP	MARTINSVILLE	IN	METROPOLITAN SCHOOL DISTRICT OF MARTINSVILLE		

WMUN-LP	MUNCIE	IN	FULL GOSPEL FELLOWSHIP, MUNCIE IND.		
WODN-LP	PORTAGE	IN	STUDIO 5, INC.		
W06BD	PRINCETON	IN	NORTH GIBSON SCHOOL CORPORATION		
WCWW-LP	SOUTH BEND	IN	WMWB-TV LIMITED PARTNERSHIP		
WMYS-LP	SOUTH BEND	IN	WEIGEL BROADCASTING COMPANY		
WBND-LP	SOUTH BEND	IN	WBND-TV LIMITED PARTNERSHIP		
WVGO-LP	SULLIVAN	IN	KM COMMUNICATIONS, INC.		
WKMF-LP	SULLIVAN	IN	KM COMMUNICATIONS, INC.		
WHFE-LP	SULLIVAN	IN	KM COMMUNICATIONS, INC.		
WIIB-LP	SULLIVAN	IN	KM COMMUNICATIONS, INC.		
WHVI-LP	VALPARAISO	IN	LESEA BROADCASTING CORPORATION		
WUVI-LP	WEST LAFAYETTE	IN	HISPANIC CHRISTIAN COMMUNITY NETWORK, INC		
WAAA-LP	WESTVILLE	IN	AQUA-LAND COMMUNICATIONS, INC		
K39HI	CHANUTE	KS	MARCIA T. TURNER tr/as TURNER ENTERPRISES		
KSAS-LP	DODGE CITY	KS	CLEAR CHANNEL BROADCASTING LICENSES, INC.		
K50HS	DODGE CITY	KS	MARCIA T. TURNER D/B/A TURNER ENTERPRISES		
KAAS-LP	GARDEN CITY	KS	CLEAR CHANNEL BROADCASTING LICENSES, INC.		
K34GG	GARDEN CITY	KS	ENRIQUETA GARZA		
K30GD	GREAT BEND	KS	GRAY TELEVISION LICENSEE, INC		
K58CX	LAWRENCE	KS	NORTHEAST KANSAS BROADCAST SERVICE, INC		
KUJH-LP	LAWRENCE	KS	UNIVERSITY OF KANSAS		
KLKT-LP	LIBERAL	KS	MARCIA T. TURNER tr/as TURNER ENTERPRISES		
K130V	LURAY	KS	CITY OF LURAY		
KKSU-LP	MANHATTAN	KS	KANSAS STATE UNIVERSITY		
K38GZ	MANHATTAN	KS	MARCIA T. TURNER D/B/A TURNER ENTERPRISES		
K11NS	NATOMA	KS	CITY OF NATOMA, KANSAS		
K130M	NATOMA	KS	CITY OF NATOMA, KANSAS		
K27FR	OVERLAND PARK	KS	UNIVERSITY OF KANSAS		
K33HW	PARSONS	KS	MARCIA T. TURNER D/B/A TURNER ENTERPRISES		
KFJO-LP	PITTSBURG	KS	PITTSBURG/JOPLIN TV, LLC		
K51GC	SALINA	KS	GRAY TELEVISION LICENSEE, INC.		
KSKV-LP	SALINA	KS	MARCIA T. TURNER D/B/A TURNER ENTERPRISES		
KFVT-LP	WICHITA	KS	FAMILY BROADCASTING GROUP, INC.		
KCTU-LP	WICHITA	KS	RIVER CITY BROADCASTERS, INC		
KSMI-LP	WICHITA	KS	NEWMARK COMMUNICATIONS, L.L.C.		
K15DD	WICHITA	KS	VENTANA TELEVISION, INC.		
K26AE	WICHITA	KS	WASHBURN UNIVERSITY OF TOPEKA		
WVTN-LP	CORBIN	KY	VICTORY TRAINING SCHOOL CORP.		
W06AY	LEBANON	KY	GARY WHITE		
WBLU-LP	LEXINGTON	KY	EBC NASHVILLE, INC.		
W50CI	LOUISVILLE	KY	SOUTH CENTRAL COMMUNICATIONS CORPORATION		
WVVK-LP	MARTIN	KY	PARKER W. TILLER		
WQTV-LP	MURRAY	KY	KFVS LICENSE SUBSIDIARY, LLC		
W12BJ	OWENSBORO	KY	UNIVERSITY OF KENTUCKY		
WQWQ-LP	PADUCAH	KY	KFVS LICENSE SUBSIDIARY, LLC		
W20BO	TALBERT	KY	MS COMMUNICATIONS, LLC		
W26BK	TALBERT	KY	MS COMMUNICATIONS, LLC		
W51CK	TALBERT	KY	MS COMMUNICATIONS, LLC		
W66DA	TALBERT	KY	MS COMMUNICATIONS, LLC		
W31BU	TALBERT	KY	MS COMMUNICATIONS, LLC		
W53BQ	TALBERT	KY	MS COMMUNICATIONS, LLC		
W24BT	TALBERT	KY	MS COMMUNICATIONS, LLC		
W54CI	TALBERT	KY	MS COMMUNICATIONS, LLC		
W64CM	TALBERT	KY	MS COMMUNICATIONS, LLC		
W16BI	TALBERT	KY	MS COMMUNICATIONS, LLC		
W69ED	TALBERT	KY	MS COMMUNICATIONS, LLC		
K66EY	ALEXANDRIA	LA	TIGER EYE BROADCASTING CORPORATION		
KWCE-LP	ALEXANDRIA	LA	POLLACK/BELZ COMMUNICATION COMPANY, INC		
K07WE	BATON ROUGE	LA	LOUISIANA CHRISTIAN BROADCASTING, INC		

KPBN-LP	BATON ROUGE	LA	PELICAN BROADCASTING NETWORK, L.L.C		
K61GO	HICKS	LA	COMCORP OF ALEXANDRIA LICENSE CORP.		
KLAF-LP	LAFAYETTE	LA	COMCORP OF LOUISIANA LICENSE CORP		
K51EC	LAKE CHARLES	LA	NATIONAL MINORITY T.V., INC		
K45HY	LAKE CHARLES	LA	WINDSONG COMMUNICATIONS, INC.		
K63HF	LAKE CHARLES	LA	WINDSONG COMMUNICATIONS, INC.		
KYHT-LP	LAKE CHARLES	LA	WINDSONG COMMUNICATIONS, INC		
K51FO	LEESVILLE	LA	COMCORP OF ALEXANDRIA LICENSE CORP.		
KNYS-LP	NATCHITOCHES	LA	MARY GILL LEE		
KAIN-LP	NATCHITOCHES	LA	MARY GILL LEE		
KNTS-LP	NATCHITOCHES	LA	RICHARD GILL		
W08DT	NEW IBERIA	LA	NATIVE COUNTRY BROADCASTING CORPORATION		
K47JO	NEW ORLEANS	LA	VENTANA TELEVISION, INC.		
K39JV	OPELOUSAS	LA	NATIONAL MINORITY T.V., INC		
K42FE	SHREVEPORT	LA	THREE ANGELS BROADCASTING NETWORK, INC.		
K67FD	SHREVEPORT	LA	VENTANA TELEVISION, INC		
W44CE	VIDALIA	LA	KM TELEVISION OF EL DORADO, L.L.C.		
KWMS-LP	WEST MONROE	LA	SONRISE COMMUNICATIONS, INC.		
K16FH	WINNFIELD	LA	CRANFORD L. JORDAN		
KCDH-LP	WINNFIELD	LA	CRANFORD L. JORDAN		
WCEA-LP	BOSTON	MA	CHANNEL 19 TV CORPORATION		
WHDN-LD	BOSTON	MA	GUENTER MARKSTEINER		
WTMU-LP	BOSTON	MA	ZGS BOSTON, INC		
WMPX-LP	DENNIS	MA	PAXSON BOSTON-68 LICENSE, INC		
WCRN-LP	LEICESTER	MA	CARTER BROADCASTING CORPORATION		
W35BK	PLAINFIELD	MA	LYDIA SYLVANE STOCKWELL		
WDMR-LP	SPRINGFIELD	MA	ZGS HARTFORD, INC.		
WSHM-LP	SPRINGFIELD	MA	MEREDITH CORPORATION		
WRZB-LP	ANNAPOLIS	MD	DC BROADCASTING, INC.		
W28BY	BALTIMORE	MD	INFORMATION SUPER STATION, L.L.C		
W22DA	FREDERICK	MD	THREE ANGELS BROADCASTING NETWORK, INC.		
W42CK	HAGERSTOWN	MD	THREE ANGELS BROADCASTING		
WQAW-LP	LAKE SHORE	MD	UNA VEZ MAS LAKE SHORE LICENSE, LLC		
WBLP-LP	OCEAN CITY	MD	OCEAN 22 BROADCASTING ASSOCIATION		
WRAV-LP	OCEAN CITY	MD	ASIAVISION, INC.		
W23CX	SALISBURY	MD	PRISM BROADCASTING NETWORK, INC		
WNGA-LP	SALISBURY	MD	HISPANIC CHRISTIAN COMMUNITY NETWORK, INC		
WFVX-LP	BANGOR	ME	ROCKFLEET BROADCASTING III, LLC		
W42BZ	BANGOR	ME	MS COMMUNICATIONS, LLC		
W50BX	BANGOR	ME	MS COMMUNICATIONS, LLC		
W58CM	BANGOR	ME	MS COMMUNICATIONS, LLC		
W66CL	BANGOR	ME	MS COMMUNICATIONS, LLC		
WBAN-LP	BANGOR	ME	BANGOR MEDIA GROUP, LLC		
W39CC	BANGOR	ME	MS COMMUNICATIONS, LLC		
W54CG	BANGOR	ME	MS COMMUNICATIONS, LLC		
WCKD-LP	BANGOR/DEDHAM	ME	J. McLEOD, MAINE FAMILY BROADCASTING, INCORPORATED		
W29CA	BRUNSWICK	ME	CRAIG MINISTRIES		
W57AQ	CALAIS	ME	PACIFIC AND SOUTHERN COMPANY, INC		
WFW-LP	FAIRFIELD/WATERVILLE	ME	THREE ANGELS BROADCASTING NETWORK, INC.		
W57AP	FALMOUTH	ME	SHERWOOD H. CRAIG		
WLLB-LP	PORTLAND	ME	WORD OF GOD FELLOWSHIP, INC		
W32CA	PORTLAND	ME	NATIONAL MINORITY T.V., INC		
W64BY	ROCKLAND	ME	CRAIG MINISTRIES, INC.		
WGCI-LP	SKOWHEGAN	ME	PACIFIC AND SOUTHERN COMPANY, INC		
W18BT	ALPENA	MI	TRINITY BROADCASTING NETWORK		
WYGN-LP	BERRIEN SPRINGS	MI	GOOD NEWS TELEVISION		
W36BZ	CADILLAC	MI	MS COMMUNICATIONS, LLC		
WLLZ-LP	CEDAR	MI	P & P CABLE HOLDINGS, L.L.C		
W09CK	FLINT	MI	P & P CABLE HOLDINGS, L.L.C		

WXON-LP	FLINT	MI	P & P CABLE HOLDINGS, L L C.			
WHNE-LP	FLINT	MI	THOMAS T TAIT			
WUHQ-LP	GRAND RAPIDS	MI	MARQUETTE BROADCASTING, INC.			
W48CL	GRAND RAPIDS	MI	THREE ANGELS BROADCASTING NETWORK, INC			
W85DJ	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
W67DN	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
W24CG	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
W50CD	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
W63CH	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
W61CS	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
W57CQ	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
W59DC	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
W18CB	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
W21BS	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
W31BN	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
W36CE	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
W52CO	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
W55CH	HOUGHTON LAKE	MI	MS COMMUNICATIONS, LLC			
WUHO-LP	KALAMAZOO	MI	P & P CABLE HOLDINGS, L L C			
W34BZ	LUDINGTON	MI	MS COMMUNICATIONS, LLC			
W48BY	LUDINGTON	MI	MS COMMUNICATIONS, LLC			
W31BK	MENOMINEE	MI	JOURNAL BROADCAST CORPORATION			
W44BQ	MOUNT PLEASANT	MI	NTN/SAGINAW, INC			
WBWM-LP	MOUNT PLEASANT	MI	P & P CABLE HOLDINGS, L L C.			
W61DK	MOUNT PLEASANT	MI	NTN/SAGINAW, INC			
W60CO	MOUNT PLEASANT	MI	NTN/SAGINAW, INC.			
W57CP	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W31BI	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W36CD	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W39CB	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W18BX	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W41CK	PETOSKEY	MI	FRANK J. CATZ, LIVING TRUST			
W34CR	PETOSKEY	MI	FRANK J. CATZ, LIVING TRUST			
W62CR	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W64CK	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W25CD	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W66CY	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W23BM	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W68DH	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W51CR	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W20BQ	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W55CL	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W53BN	PETOSKEY	MI	MS COMMUNICATIONS, LLC			
W44BO	PINCONNING	MI	P & P CABLE HOLDINGS, L L C			
WTCF-LP	PINCONNING	MI	NTN/SAGINAW, INC.			
WKNX-LP	PINCONNING	MI	P & P CABLE HOLDINGS, L L C.			
W15BP	PINCONNING	MI	P & P CABLE HOLDINGS, L L C.			
WKJF-LP	PINCONNING	MI	P & P CABLE HOLDINGS, L L C.			
W46CR	SAGINAW/MIDLAND	MI	YONEIDE S. DINZEY			
W52CB	SAULT STE MARIE	MI	MS COMMUNICATIONS, LLC			
W21BN	SAULT STE MARIE	MI	MS COMMUNICATIONS, LLC			
W32BN	SAULT STE. MARIE	MI	MS COMMUNICATIONS, LLC			
W48BZ	SAULT STE MARIE	MI	MS COMMUNICATIONS, LLC			
W50CA	SAULT STE. MARIE	MI	MS COMMUNICATIONS, LLC			
W58CO	SAULT STE. MARIE	MI	MS COMMUNICATIONS, LLC			
W56DI	SAULT STE. MARIE	MI	MS COMMUNICATIONS, LLC			
W36BV	SAULT STE. MARIE	MI	MS COMMUNICATIONS, LLC			
W39BY	SAULT STE. MARIE	MI	MS COMMUNICATIONS, LLC			
W56DF	TRAVERSE CITY	MI	MS COMMUNICATIONS, LLC			

W48CC	TRAVERSE CITY	MI	MS COMMUNICATIONS, LLC			
W52CP	TRAVERSE CITY	MI	MS COMMUNICATIONS, LLC			
W25CU	TRAVERSE CITY	MI	EDWARD J HESS AND/OR MADGE E HESS			
W23BL	TRAVERSE CITY	MI	MS COMMUNICATIONS, LLC			
W34CE	TRAVERSE CITY	MI	MS COMMUNICATIONS, LLC			
W58CN	TRAVERSE CITY	MI	MS COMMUNICATIONS, LLC			
W62CQ	TRAVERSE CITY	MI	MS COMMUNICATIONS, LLC			
W66CX	TRAVERSE CITY	MI	MS COMMUNICATIONS, LLC			
W68DD	TRAVERSE CITY	MI	MS COMMUNICATIONS, LLC			
W15BM	TRAVERSE CITY	MI	MS COMMUNICATIONS, LLC			
K50DB	ALEXANDRIA	MN	SELECTIVE TV, INC.			
K48DV	ALEXANDRIA	MN	SELECTIVE TV, INC			
K30AF	ALEXANDRIA	MN	SELECTIVE TV, INC			
K18DG	ALEXANDRIA	MN	SELECTIVE TV, INC			
K52DZ	ALEXANDRIA	MN	SELECTIVE TV, INC			
K65HD	ALEXANDRIA	MN	SELECTIVE TV, INC			
K58DS	ALEXANDRIA	MN	SELECTIVE TV, INC.			
K60EJ	ALEXANDRIA	MN	SELECTIVE TV, INC			
K67HI	ALEXANDRIA	MN	SELECTIVE TV, INC.			
K16CO	ALEXANDRIA	MN	SELECTIVE TV, INC.			
K38AC	ALEXANDRIA	MN	SELECTIVE TV, INC			
K55ID	ALEXANDRIA	MN	SELECTIVE TV, INC.			
K62AU	ALEXANDRIA	MN	SELECTIVE TV, INC			
K34AF	ALEXANDRIA	MN	SELECTIVE TV, INC			
K26CL	ALEXANDRIA	MN	SELECTIVE TV, INC			
K32EB	ALEXANDRIA	MN	SELECTIVE TV, INC.			
K44GH	ALEXANDRIA	MN	THREE ANGELS BROADCASTING NETWORK, INC.			
K14LZ	ALEXANDRIA, ETC	MN	SELECTIVE TV, INC.			
K23DF	APPLETON	MN	PRAIRIEVIEW TV, INC			
K58EO	APPLETON	MN	PRAIRIEVIEW TV, INC.			
K17CS	APPLETON	MN	PRAIRIEVIEW TV, INC			
K19CW	APPLETON	MN	PRAIRIEVIEW TV, INC.			
K25EI	APPLETON	MN	PRAIRIEVIEW TV, INC.			
K15DC	APPLETON	MN	PRAIRIEVIEW TV, INC			
K60AB	APPLETON	MN	PRAIRIEVIEW TV, INC			
K52AH	APPLETON	MN	PRAIRIEVIEW TV, INC.			
K56BZ	APPLETON	MN	PRAIRIEVIEW TV, INC			
K49ED	APPLETON	MN	PRAIRIEVIEW TV, INC			
K29CC	APPLETON	MN	PRAIRIEVIEW TV, INC.			
K33CR	APPLETON	MN	PRAIRIEVIEW TV, INC			
K21AK	APPLETON	MN	TELEVIEW SYSTEMS OF MINNESOTA, INC.			
K13HA	BEMIDJI	MN	FRANKLIN COUNTY TV DISTRICT			
K70DR	BLUE EARTH	MN	KTTC TELEVISION, INC.			
KLKS-LP	BREEZY POINT	MN	LAKES BROADCASTING GROUP, INC.			
K45DP	DONNELLY	MN	FEDERATED TELEPHONE COOPERATIVE			
K27EN	DONNELLY	MN	FEDERATED TELEPHONE COOPERATIVE			
K53DX	DONNELLY	MN	FEDERATED TELEPHONE COOPERATIVE			
K61BJ	DONNELLY	MN	FEDERATED TELEPHONE COOPERATIVE			
K55FW	DONNELLY	MN	FEDERATED TELEPHONE COOPERATIVE			
K39DZ	DONNELLY	MN	FEDERATED TELEPHONE COOPERATIVE			
K51EJ	DONNELLY	MN	FEDERATED TELEPHONE COOPERATIVE			
KWMM-LP	DULUTH	MN	DULUTH BROADCASTING PARTNERS, G.P.			
KDUL-LP	DULUTH	MN	DULUTH TV PARTNERS, GP			
K43CS	ERHARD	MN	RURAL SVCS OF CENTRAL MINNESOTA, INC			
K31CH	ERHARD	MN	RURAL SVCS OF CENTRAL MINNESOTA, INC			
K41CS	ERHARD	MN	RURAL SVCS OF CENTRAL MINNESOTA, INC			
K51DC	ERHARD	MN	RURAL SVCS OF CENTRAL MINNESOTA, INC			
K39CJ	ERHARD	MN	RURAL SVCS OF CENTRAL MINNESOTA, INC			
K49FA	FERGUS FALLS	MN	WEST CENTRAL MINNESOTA EDUCATIONAL TV CORP			

K62FH	FROST	MN	BLUE EARTH-NICOLLET FARIBAUT COOPERATIVE ELECTRIC ASSN.
K39JI	FROST	MN	BLUE EARTH-NICOLLET FARIBAUT COOPERATIVE ELECTRIC ASSN.
K49JG	FROST	MN	BLUE EARTH-NICOLLET FARIBAUT COOPERATIVE ELECTRIC ASSN
K36FI	FROST	MN	SOUTH CENTRAL ELECTRIC ASSOCIATION
K51KB	FROST	MN	SOUTH CENTRAL ELECTRIC ASSOCIATION
K27FI	FROST	MN	SOUTH CENTRAL ELECTRIC ASSOCIATION
K31EF	FROST	MN	SOUTH CENTRAL ELECTRIC ASSOCIATION
K14KD	FROST	MN	SOUTH CENTRAL ELECTRIC ASSOCIATION
K23FY	FROST	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K44HE	GENEVA	MN	THREE ANGELS BROADCASTING NETWORK, INC
K24CS	GRANITE FALLS	MN	MINNESOTA VALLEY TV IMPROVEMENT
K16CP	GRANITE FALLS	MN	MINNESOTA VALLEY TV IMPROVEMENT
K26DG	GRANITE FALLS	MN	MINNESOTA VALLEY TV IMPROVEMENT
K18DI	GRANITE FALLS	MN	MINNESOTA VALLEY TV IMPROVEMENT
K63AU	GRANITE FALLS	MN	MINNESOTA VALLEY TV IMPROVEMENT CORP
K22DO	GRANITE FALLS	MN	MINNESOTA VALLEY TV IMPROVEMENT
K47EA	GRANITE FALLS	MN	MINNESOTA VALLEY TV IMPROVEMENT
K35DK	GRANITE FALLS	MN	MINNESOTA VALLEY TV IMPROVEMENT
K45DJ	GRANITE FALLS	MN	MINNESOTA VALLEY TV IMPROVEMENT
K32DR	GRANITE FALLS	MN	MINNESOTA VALLEY TV IMPROVEMENT
K69DP	GRANITE FALLS	MN	MINNESOTA VALLEY TV IMPROVEMENT CORP
K67AN	GRANITE FALLS	MN	MINNESOTA VALLEY TV IMPROVEMENT CORP
K61AU	GRANITE FALLS	MN	MINNESOTA VALLEY TV IMPROVEMENT CORP
K39GT	INTERNATIONAL FALL	MN	THREE ANGELS BROADCASTING NETWORK, INC.
K16GL	JACKSON	MN	BLUE EARTH-NICOLLET FARIBAUT COOPERATIVE ELECTRIC ASSN.
K61GE	JACKSON	MN	BLUE EARTH-NICOLLET FARIBAUT COOPERATIVE ELECTRIC ASSN.
K45EH	JACKSON	MN	FEDERATED RURAL ELECTRIC ASSOCIATION
K23FO	JACKSON	MN	FEDERATED RURAL ELECTRIC ASSOCIATION
K51EN	JACKSON	MN	FEDERATED RURAL ELECTRIC ASSOCIATION
K57IX	JACKSON	MN	FEDERATED RURAL ELECTRIC ASSOCIATION
K53HR	JACKSON	MN	FEDERATED RURAL ELECTRIC ASSOCIATION
K41EG	JACKSON	MN	FEDERATED RURAL ELECTRIC ASSOCIATION
K18HP	JACKSON	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K19FO	JACKSON	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K18GF	LITTLE FALLS	MN	THREE ANGELS BROADCASTING NETWORK, INC.
K43HB	MINNEAPOLIS	MN	VENTANA TELEVISION, INC.
WDMI-LP	MINNEAPOLIS	MN	WORD OF GOD FELLOWSHIP, INC.
K45FR	OLIVIA	MN	RENVILLE COUNTY TV CORPORATION
K23FP	OLIVIA	MN	RENVILLE COUNTY TV CORPORATION
K47JE	OLIVIA	MN	THREE ANGELS BROADCASTING NETWORK, INC.
K62AA	REDWOOD FALLS	MN	REDWOOD TV IMPROVEMENT CORPORATION
K39CH	REDWOOD FALLS	MN	REDWOOD TV IMPROVEMENT CORPORATION
K48GQ	REDWOOD FALLS	MN	REDWOOD TV IMPROVEMENT CORPORATION
K19CV	REDWOOD FALLS	MN	REDWOOD TV IMPROVEMENT CORPORATION
K52GU	REDWOOD FALLS	MN	REDWOOD TV IMPROVEMENT CORPORATION
W56EL	REDWOOD FALLS	MN	REDWOOD TV IMPROVEMENT CORPORATION
K46FY	REDWOOD FALLS	MN	REDWOOD TV IMPROVEMENT CORPORATION
K17BV	REDWOOD FALLS	MN	REDWOOD TV IMPROVEMENT CORPORATION
K66BB	REDWOOD FALLS	MN	REDWOOD TV IMPROVEMENT CORPORATION
K50KF	REDWOOD FALLS	MN	REDWOOD TV IMPROVEMENT CORPORATION
K68BJ	REDWOOD FALLS	MN	REDWOOD TV IMPROVEMENT CORPORATION
K25II	REDWOOD FALLS	MN	REDWOOD TV IMPROVEMENT CORPORATION
K58AS	REDWOOD FALLS	MN	REDWOOD TV IMPROVEMENT CORPORATION
K52HH	ROCHESTER	MN	MS COMMUNICATIONS, LLC
K58GC	ROCHESTER	MN	THREE ANGELS BROADCASTING NETWORK, INC.
WCMN-LP	ST. CLOUD-SARTELL	MN	STARCOM, LLC
K24CP	ST JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K16CG	ST JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K50AB	ST JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA

K21DG	ST JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K44AD	ST JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K14KE	ST. JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K46AA	ST JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K52AB	ST. JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K42AV	ST JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K26CS	ST JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K39DC	ST. JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K41IZ	ST. JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K40BU	ST. JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K48AA	ST. JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K49HE	ST JAMES	MN	COOPERATIVE TELEVISION ASSOCIATION OF SOUTHERN MINNESOTA
K19ER	ST. PAUL	MN	CATHOLIC VIEWS BROADCASTS, INC.
K51GL	VESTA	MN	THREE ANGELS BROADCASTING NETWORK, INC.
K47JC	WADENA	MN	THREE ANGELS BROADCASTING NETWORK, INC
K25JZ	WALKER	MN	LEECH LAKE TV CORPORATION
K34HO	WILLMAR	MN	UHF TV, INC.
K28IF	WILLMAR	MN	WILLMAR ASSEMBLY OF GOD CHURCH
K62EV	WINONA	MN	KTTC TELEVISION, INC
K53IS	ANDERSON, PINEVILL	MO	GARY M /DEBORAH R. KENNY
KJOM-LP	ASBURY	MO	MARCIA T TURNER D/B/A TURNER ENTERPRISES
K61GJ	AURORA	MO	NEW LIFE EVANGELISTIC CENTER, INC.
KNJE-LP	AURORA	MO	EBC HARRISON, INC
K25BD	BRANSON	MO	CHRISTIANS INCORPORATED FOR CHRIST
K17DL	BRANSON	MO	KY3, INC.
KNJD-LP	BRANSON	MO	NEW LIFE EVANGELISTIC CENTER, INC.
K05JQ	BRANSON	MO	MILLER FAMILY BROADCASTING, L.L.C.
K65GP	CAPE GIRARDEAU	MO	MS COMMUNICATIONS, LLC
K33EQ	CAPE GIRARDEAU	MO	MS COMMUNICATIONS, LLC
K55HL	CAPE GIRARDEAU	MO	MS COMMUNICATIONS, LLC
K67HF	CAPE GIRARDEAU	MO	MS COMMUNICATIONS, LLC
K47FB	CAPE GIRARDEAU	MO	MS COMMUNICATIONS, LLC
K58FD	CAPE GIRARDEAU	MO	MS COMMUNICATIONS, LLC
K69HT	CAPE GIRARDEAU	MO	MS COMMUNICATIONS, LLC
K02NQ	COLUMBIA	MO	JW BROADCASTING, LLC
KZOU-LP	COLUMBIA	MO	JW BROADCASTING, LLC
K43EU	JAMESTOWN	MO	ROGER E. HARDERS
K63FW	JAMESTOWN	MO	ROGER E. HARDERS
KLMC-LP	JEFFERSON CITY	MO	PRISM BROADCASTING NETWORK, INC.
K38II	JEFFERSON CITY	MO	JW BROADCASTING, LLC
KGCS-LP	JOPLIN	MO	BOARD OF GOVERNORS-MISSOURI SOUTHERN STATE UNIVESITY
KJPX-LP	JOPLIN	MO	GARY M /DEBORAH R. KENNY
K55HU	JOPLIN	MO	MS COMMUNICATIONS, LLC
K64FW	JOPLIN	MO	NEW LIFE EVANGELISTIC CENTER, INC.
K52FC	JOPLIN	MO	MS COMMUNICATIONS, LLC
K04OV	JOPLIN	MO	MS COMMUNICATIONS, LLC
K45IO	KANSAS CITY	MO	VENTANA TELEVISION, INC.
KCDN-LP	KANSAS CITY	MO	WORD OF GOD FELLOWSHIP, INC
KUKC-LP	KANSAS CITY	MO	EBC KANSAS CITY, INC.
K64FQ	LEBANON	MO	NEW LIFE EVANGELISTIC CENTER, INC.
K17FU	MARSHFIELD	MO	NEW LIFE EVANGELISTIC CENTER, INC.
K38DD	MONETT	MO	PEGGY L. DAVIS AND DEBORAH R KENNY
K07SD	ROLLA	MO	THE CURATORS OF THE UNIVERSITY OF MISSOURI
K54FX	SPRINGFIELD	MO	NEW LIFE EVANGELISTIC CENTER, INC.
K15CZ	SPRINGFIELD	MO	KY3, INC.
K08MA	SPRINGFIELD	MO	METROPOLITAN RADIO GROUP, INC
KUMO-LP	ST LOUIS	MO	WPXS, INC.
K38HD	ST. LOUIS	MO	VENTANA TELEVISION, INC.
KDTL-LP	ST LOUIS	MO	WORD OF GOD FELLOWSHIP, INC.

KPTN-LP	ST. LOUIS	MO	MAKO COMMUNICATIONS, LLC		
K32FH	WARRENSBURG	MO	ROGER E. HARDERS		
K38HE	WEST PLAINS	MO	UNITY BROADCASTING, INC.		
KPPI-LP	GARAPAN,SAIPAN	MP	SORENSEN TELEVISION SYSTEMS, INC		
W07BN	BRUCE	MS	BRUCE INDEPENDENT TV, INC.		
WPRQ-LP	CLARKSDALE	MS	DAVID ELLINGTON		
WHCQ-LP	CLEVELAND	MS	DAVID ELLINGTON		
W36BT	GRENADA	MS	MS COMMUNICATIONS, LLC		
W46CK	GRENADA	MS	MS COMMUNICATIONS, LLC		
W28BP	GRENADA	MS	MS COMMUNICATIONS, LLC		
W41BV	GRENADA	MS	MS COMMUNICATIONS, LLC		
W13CS	GRENADA	MS	DEWEY SANFORD		
W12CR	GRENADA	MS	MS COMMUNICATIONS, LLC		
W42CW	HATTIESBURG	MS	PRISM BROADCASTING NETWORK, INC		
WHPM-LP	HATTIESBURG	MS	HATTIESBURG TV, LLC		
W50CX	HATTIESBURG	MS	MARCIA T. TURNER D/B/A TURNER ENTERPRISES		
WJXF-LP	JACKSON	MS	EQUITY MEDIA HOLDINGS CORPORATION		
WJMF-LP	JACKSON	MS	EQUITY MEDIA HOLDINGS CORPORATION		
W23BC	JACKSON	MS	JACKSON STATE UNIVERSITY		
WJKO-LP	JACKSON	MS	WORD OF GOD FELLOWSHIP, INC.		
W46CW	JACKSON/BRANDON	MS	MISSISSIPPI TELEVISION, LLC		
W53CE	LAUREL	MS	MS COMMUNICATIONS, LLC		
W68DX	LAUREL	MS	JOHN R POWLEY		
W20BS	MERIDIAN	MS	MS COMMUNICATIONS, LLC		
W26BR	MERIDIAN	MS	MS COMMUNICATIONS, LLC		
W46CL	MERIDIAN	MS	MS COMMUNICATIONS, LLC		
W52CS	MERIDIAN	MS	MS COMMUNICATIONS, LLC		
W35CQ	MERIDIAN	MS	MS COMMUNICATIONS, LLC		
W36BY	MERIDIAN	MS	MS COMMUNICATIONS, LLC		
W54CD	MERIDIAN	MS	MS COMMUNICATIONS, LLC		
W27DD	MERIDIAN	MS	MS COMMUNICATIONS, LLC		
W59DE	MERIDIAN	MS	MS COMMUNICATIONS, LLC		
W65DE	MERIDIAN	MS	MS COMMUNICATIONS, LLC		
W69DJ	MERIDIAN	MS	MS COMMUNICATIONS, LLC		
W24CR	NATCHEZ	MS	LOUISIANA CHRISTIAN BROADCASTING, INC.		
WKFK-LP	PASCAGOULA	MS	FRANCES S. SMITH DBA NCN CABLE ADVERTISING		
W15CG	PONTOCOC	MS	UNITY BROADCASTING, INC.		
W05BV	STARKVILLE	MS	FIRST UNITED METHODIST CHURCH		
W22BS	TUPELO	MS	WTVA, INC.		
W32BH	TUPELO	MS	WTVA, INC.		
W49BK	TUPELO	MS	MS COMMUNICATIONS, LLC		
W40BZ	TUPELO	MS	PRISM BROADCASTING NETWORK, INC		
W26BB	VICKSBURG	MS	THREE ANGELS BROADCASTING NETWORK, INC.		
WEBU-LP	WEBB	MS	DAVID ELLINGTON		
K69CM	BIG TIMBER, ETC	MT	KTVQ COMMUNICATIONS, INC		
K25BP	BILLINGS	MT	NEXSTAR BROADCASTING, INC		
K36EZ	BILLINGS	MT	COMANCHE ENTERPRISES		
K14IS	BILLINGS	MT	YELLOWSTONE VALLEY COMMUNITY TV, INC.		
K23HI	BILLINGS	MT	PRISM BROADCASTING NETWORK, INC.		
K30IB	BILLINGS	MT	MARCIA T. TURNER D/B/A TURNER ENTERPRISES		
K48IQ	BILLINGS	MT	WESTERN FAMILY TELEVISION, INC		
K27CD	BOULDER	MT	BOULDER TV TRANSLATOR ASSOCIATION		
KBTZ-LP	BOZEMAN	MT	MONTANA LICENSE SUB, INC.		
K26DE	BOZEMAN	MT	KXLF COMMUNICATIONS, INC.		
KWYB-LP	BOZEMAN	MT	MMM LICENSE LLC		
K15HI	BOZEMAN	MT	EQUITY MEDIA HOLDINGS CORPORATION		
K11UJ	BOZEMAN	MT	MURRAY DUFFY		
K45EB	BOZEMAN, ETC.	MT	GALLATIN VALLEY COMMUNITY TV ASSO.		
K57FM	BROWNING	MT	BROWNING PUBLIC SCHOOL		

K22HD	BUTTE	MT	MARCIA T. TURNER D/B/A TURNER ENTERPRISES		
K64EM	CASTLE ROCK, ETC	MT	KTVQ COMMUNICATIONS, INC		
K18CR	CIRCLE, ETC.	MT	CIRCLE TV BOOSTER CLUB, INC.		
K36CX	CLANCY	MT	BOULDER TV TRANSLATOR ASSOCIATION		
K44DI	CLYDE PARK, ETC.	MT	SHIELDS VALLEY TV TAX DISTRICT		
K28CB	COLSTRIP	MT	COLSTRIP PUBLIC SCHOOLS		
K09OY	COLSTRIP	MT	COLSTRIP TV TAX DISTRICT		
K13PV	COLSTRIP	MT	COLSTRIP TV TAX DISTRICT		
K61BL	COLSTRIP, ETC.	MT	COLSTRIP TV TAX DISTRICT		
K21AN	DARBY	MT	BITTERROOT VALLEY PUBLIC TELEVISION		
K23DJ	EKALAKA	MT	PLEVNA PUBLIC SCHOOL TRUSTEES DISTRICT #55		
K27DL	EMIGRANT	MT	PARADISE VALLEY TV ASSOCIATION		
K19CO	EMIGRANT	MT	PARADISE VALLEY TV ASSOCIATION		
K05EH	EMIGRANT, ETC	MT	PARADISE VALLEY TV DISTRICT		
K10AH	EMIGRANT, ETC.	MT	PARADISE VALLEY TV DISTRICT		
K30GH	GLASGOW	MT	VALLEY PUBLIC TELEVISION		
KBGF-LP	GREAT FALLS	MT	BEARTOOTH COMMUNICATIONS COMPANY		
K33HN	GREAT FALLS	MT	MARCIA T. TURNER tr/as TURNER ENTERPRISES		
K24GD	HARDIN	MT	KTVQ COMMUNICATIONS, INC.		
KQHD-LP	HARDIN	MT	SARGENT COMMUNICATIONS, INC.		
KHBB-LP	HELENA	MT	MMM LICENSE II LLC		
K44GE	HELENA	MT	WIRELESS ACCESS, L.L.C		
KJJC-LP	HELENA	MT	WESTERN FAMILY TELEVISION		
K13YD	JORDAN	MT	GARFIELD TV CLUB		
KTMF-LP	KALISPELL	MT	MMM LICENSE LLC		
KMMF-LP	KALISPELL	MT	MONTANA LICENSE SUB, INC.		
KEXI-LP	KALISPELL	MT	MONTANA BROADCASTING GROUP, INC.		
K17BT	LIVINGSTON	MT	SHIELDS VALLEY TV TAX DISTRICT		
K55CF	LIVINGSTON, ETC.	MT	PARADISE VALLEY TV DISTRICT		
K66BR	LIVINGSTON, ETC	MT	MMM LICENSE II LLC		
K10GF	MILES CITY	MT	KTVQ COMMUNICATIONS, INC.		
KMTM-LP	MISSOULA	MT	NORTH ROCKY MOUNTAIN TELEVISION, L.L.C		
K42EO	MISSOULA	MT	TRINITY BROADCASTING NETWORK		
K50CP	MISSOULA, ETC.	MT	DAVID A. TUCKER		
K21CA	PLAINS, ETC	MT	PLAINS-PARADISE TV DISTRICT		
K24DD	PLEVNA	MT	PLEVNA PUBLIC SCHOOL TRUSTEES DISTRICT #55		
K13PZ	POPLAR	MT	POPLAR TV DISTRICT		
K05KK	POPLAR	MT	POPLAR TV DISTRICT		
K36BW	THOMPSON FALLS	MT	THOMPSON FALLS TV DISTRICT		
K57CX	WHITE SULPHUR SPR	MT	MEAGHER COUNTY PUBLIC TV, INC.		
K52CE	WHITEHALL	MT	WHITEHALL LOW POWER TELEVISION, INC.		
K40HL	WHITEHALL	MT	WHITEHALL LOW-POWER TELEVISION, INC.		
WAEN-LP	ASHEVILLE	NC	WORD OF GOD FELLOWSHIP, INC.		
WJJV-LP	ASHEVILLE	NC	CAROLINA CHRISTIAN BROADCASTING, INC.		
W50CZ	ASHEVILLE	NC	NATIONAL MINORITY T.V., INC		
W41BQ	ASHEVILLE	NC	THREE ANGELS BROADCASTING NETWORK, INC.		
W23BQ	ASHEVILLE, ETC	NC	CAROLINA CHRISTIAN BROADCASTING, INC.		
W06AQ	BAT CAVE, ETC.	NC	WLOS LICENSEE, LLC		
W12AQ	BLACK MOUNTAIN	NC	WLOS LICENSEE, LLC		
W05AP	BRASSTOWN, ETC.	NC	WLOS LICENSEE, LLC		
W08AN	BRYSON CITY, ETC.	NC	WLOS LICENSEE, LLC		
W12AU	BURNSVILLE	NC	WLOS LICENSEE, LLC		
WRZY-LP	BUXTON	NC	RAY H. LIVESAY		
WPDZ-LP	BUXTON	NC	RAY H. LIVESAY		
W38CN	CHARLOTTE	NC	NATIONAL MINORITY T.V., INC.		
WDMC-LP	CHARLOTTE	NC	WORD OF GOD FELLOWSHIP, INC.		
W05AF	CHEROKEE	NC	WLOS LICENSEE, LLC		
W24CP	DURHAM	NC	THREE ANGELS BROADCASTING NETWORK, INC.		
WTNC-LP	DURHAM	NC	WUVC LICENSE PARTNERSHIP, G.P.		

W18BB	ELIZABETH CITY	NC	ELIZABETH CITY STATE UNIVERSITY		
W11AJ	FRANKLIN	NC	WLOS LICENSEE, LLC		
W31AZ	HENDERSONVILLE	NC	CAROLINA CHRISTIAN BROADCASTING, INC.		
W12CI	HOT SPRINGS	NC	WLOS LICENSEE, LLC		
W06AP	MAGGIE VALLEY, ETC	NC	WLOS LICENSEE, LLC		
W28CJ	MANTEO	NC	LAWRENCE F. LOESCH		
W17CT	MANTEO	NC	LAWRENCE F. LOESCH		
W56EC	MANTEO	NC	LAWRENCE F. LOESCH		
W45CL	MANTEO	NC	LAWRENCE F. LOESCH		
W51DF	MANTEO	NC	LAWRENCE F. LOESCH		
W59EE	MANTEO	NC	LAWRENCE F. LOESCH		
W10AP	MARION, ETC	NC	WLOS LICENSEE, LLC		
W06AL	OTTEEN/WARREN	NC	WLOS LICENSEE, LLC		
W58CD	RALEIGH	NC	VENTANA TELEVISION, INC		
W68BK	RALEIGH	NC	SAINT AUGUSTINE'S COLLEGE		
WACN-LP	RALEIGH	NC	WORD OF GOD FELLOWSHIP, INC.		
WWIW-LP	RALEIGH	NC	WORD OF GOD FELLOWSHIP, INC.		
WGSR-LP	REIDSVILLE	NC	STARNEWS CORPORATION		
W11AQ	ROBBINSVILLE, ETC.	NC	WLOS LICENSEE, LLC		
WHIG-LP	ROCKY MOUNT	NC	ACTION COMMUNITY TELEVISION BROADCASTING NETWORK, INC		
W67CD	SANFORD	NC	CENTRAL CAROLINA BROADCASTING, INC		
W06AN	SAPPHIRE VALLEY, ETC	NC	WLOS LICENSEE, LLC		
W06AD	SPRUCE PINE	NC	WLOS LICENSEE, LLC		
WNCR-LP	TARBORO	NC	ON THE MAP, INC.		
W05AC	TRYON, ETC.	NC	WLOS LICENSEE, LLC		
WMTQ-LP	WANCHESE	NC	RAY H LIVESAY		
W12AR	WAYNESVILLE, ETC	NC	WLOS LICENSEE, LLC		
WFTB-LP	WILLIAMSTON, ETC.	NC	FREE TEMPLE MINISTRIES, INC		
WILM-LP	WILMINGTON	NC	WILM, INC.		
K55FH	BELCOURT	ND	SCHINDLER COMMUNITY TV SERVICES		
K59DM	BELCOURT	ND	SCHINDLER COMMUNITY TV SERVICES		
K61EF	BELCOURT	ND	SCHINDLER COMMUNITY TV SERVICES		
K53DH	BELCOURT	ND	SCHINDLER COMMUNITY TV SERVICES		
K57EY	BELCOURT	ND	SCHINDLER COMMUNITY TV SERVICES		
K46DY	BISMARCK	ND	TRINITY BROADCASTING NETWORK		
KVNJ-LP	FARGO	ND	G.I.G., INC.		
K17HG	GRAND FORKS	ND	THREE ANGELS BROADCASTING NETWORK, INC.		
K11QD	HAZEN	ND	CITY OF HAZEN		
K09JR	HAZEN	ND	CITY OF HAZEN		
K07JA	HAZEN	ND	CITY OF HAZEN		
K63ER	TURTLE MOUNTAIN IN	ND	SCHINDLER COMMUNITY TV SERVICE		
K65FE	TURTLE MOUNTAIN IN	ND	SCHINDLER COMMUNITY TV SERVICE		
K51EX	TURTLE MOUNTAIN IN	ND	SCHINDLER COMMUNITY TV SERVICE		
KCSI-LP	WINDSOR, ETC.	ND	CABLE SERVICES, INC.		
K17CI	BEATRICE	NE	COLINS BROADCASTING CORPORATION		
K21ES	COLUMBUS, ETC	NE	DAVID C. BRODAHL		
K31EN	COLUMBUS, ETC	NE	DAVID C. BRODAHL		
K48FF	COLUMBUS, ETC	NE	DAVID F. HARDERS		
K33EM	COLUMBUS, ETC.	NE	DAVID C. BRODAHL		
K46EE	COLUMBUS, ETC.	NE	DAVID F. HARDERS		
K63FQ	COLUMBUS, ETC.	NE	MARY E. HARDERS		
K59FT	COLUMBUS, ETC	NE	MARY E. HARDERS		
K55HX	COLUMBUS/FREMONT	NE	ROGER E. HARDERS		
K28EN	COLUMBUS-FREMONT	NE	GLENDA R. HARDERS		
K52EX	COLUMBUS-FREMONT	NE	GLENDA R. HARDERS		
K54EU	COLUMBUS-FREMONT	NE	GLENDA R. HARDERS		
K45II	GOTHENBURG	NE	MARCIA T. TURNER D/B/A TURNER ENTERPRISES		
K56FC	GRAND ISLAND	NE	HALL COUNTY		
K67CV	LINCOLN	NE	CHANNEL AMERICA LPTV LIC. SUBSIDIARY		

K18CD	LINCOLN	NE	COLINS BROADCASTING CORPORATION		
K27GX	LINCOLN	NE	THREE ANGELS BROADCASTING NETWORK, INC		
WCWH-LP	MCCOOK	NE	PAPPAS TELECASTING COMPANIES		
KBVZ-LP	MCCOOK	NE	PAPPAS TELECASTING COMPANIES		
K40HB	NELIGH, ETC.	NE	KTIV TELEVISION, INC		
K48CH	NORFOLK	NE	KTIV TELEVISION, INC		
KPTP-LP	NORFOLK	NE	KPTH LICENSE, LLC		
KAZJ-LP	NORFOLK	NE	TV AMERICAS DE OMAHA, LLC		
KAZO-LP	OMAHA	NE	TV AMERICAS DE OMAHA, LLC		
K53EY	OMAHA	NE	TV-45, INC.		
K61GA	OMAHA	NE	THREE ANGELS BROADCASTING NETWORK, INC.		
K51CC	O'NEILL	NE	KTIV TELEVISION, INC.		
KAZK-LP	O'NEILL	NE	PAPPAS TELECASTING COMPANIES		
KOAZ-LP	O'NEILL	NE	PAPPAS TELECASTING COMPANIES		
KAZS-LP	SOUTH SIOUX CITY	NE	TV AMERICAS DE OMAHA, LLC		
KSXC-LP	SOUTH SIOUX CITY	NE	VENTURE TECHNOLOGIES GROUP, LLC		
W27BL	BERLIN	NH	HEARST-ARGYLE PROPERTIES, INC		
WVBQ-LP	CHARLESTOWN, ETC.	NH	VISION 3 BROADCASTING, INC.		
W26CQ	COLEBROOK	NH	HEARST-ARGYLE PROPERTIES, INC		
W39AR	CONCORD	NH	CENTER BROADCASTING CORP. OF NEW HAMPSHIRE		
W38CB	LITTLETON	NH	HEARST-ARGYLE PROPERTIES, INC		
WMUR-LP	LITTLETON	NH	HEARST-ARGYLE PROPERTIES, INC.		
W28CM	MANCHESTER	NH	CENTER BROADCASTING CORP. OF NEW HAMPSHIRE		
W33AK	NASHUA	NH	CENTER BROADCASTING CORP. OF NEW HAMPSHIRE		
WMGM-LP	ATLANTIC CITY, ETC.	NJ	ACCESS 1 NEW JERSEY LICENSE COMPANY		
WFXO-LP	EAST ORANGE	NJ	CARIBEVISION STATION GROUP, LLC		
W23AZ	HACKETTSTOWN	NJ	CENTENARY COLLEGE		
W54CZ	MORRISTOWN	NJ	WLNY LIMITED PARTNERSHIP		
WNAI-LP	SPRINGVILLE	NJ	MARCIA COHEN		
W36AZ	SUSSEX	NJ	NEW JERSEY PUBLIC BROADCASTING AUTHORITY		
K24CT	ALAMOGORDO	NM	ACME TELEVISION LICENSES OF NEW MEXICO, LLC		
K28HB	ALAMOGORDO	NM	ACME TELEVISION LICENSES OF NEW MEXICO, LLC		
K63GU	ALAMOGORDO	NM	VISION BROADCASTING NETWORK, INC.		
KTVS-LP	ALBUQUERQUE	NM	ALPHA OMEGA BROADCASTING OF ALBUQUERQUE, INC		
KODF-LP	ALBUQUERQUE	NM	UNA VEZ MAS ALBUQUERQUE LICENSE, LLC		
KTFA-LP	ALBUQUERQUE	NM	ENTRAVISION HOLDINGS, LLC		
K38IM	ALBUQUERQUE	NM	THREE ANGELS BROADCASTING NETWORK, INC		
KTEL-LP	ALBUQUERQUE	NM	RAMAR COMMUNICATIONS II, LTD.		
KFAC-LP	ALBUQUERQUE	NM	RAMAR COMMUNICATIONS II, LTD.		
K43BU	CLOVIS	NM	BARRINGTON AMARILLO LICENSE LLC		
KFCL-LP	CLOVIS	NM	FAITH CHRISTIAN CHURCH, INC.		
K38AU	CROWNPOINT	NM	THE NAVAJO NATION		
K35GY	CUBA	NM	KOB-TV, LLC		
K24DU	DORA	NM	BARRINGTON AMARILLO LICENSE LLC		
K47DR	FARMINGTON	NM	CHRISTIAN BROADCASTING COMMUNICATIONS		
K14MJ	FARMINGTON	NM	NATIONAL MINORITY T.V., INC.		
K50GM	HOBBS	NM	LIN OF NEW MEXICO, LLC		
K27GL	HOBBS	NM	LIN OF NEW MEXICO, LLC		
K16EB	HOBBS	NM	COMMUNITY TELEVISION DEVELOPMENT CORP		
KCWF-CA	LAS CRUCES	NM	KDBC LICENSE, LLC		
KAEP-LP	LAS CRUCES	NM	KOB-TV, LLC		
KLCP-LP	LAS CRUCES	NM	PRIME TIME CHRISTIAN BROADCASTING, INC		
K46GY	SANTA FE	NM	RAMAR COMMUNICATIONS II, LTD.		
KSIL-LP	SILVER CITY	NM	JAMES S BUMPUS		
KOOT-LP	SILVER CITY	NM	COMMUNITY ACCESS TELEVISION OF SILVER		
K32CA	BATTLE MOUNTAIN	NV	LANDER COUNTY GENERAL IMPROVEMENT DISTRICT #1		
K20HX	BEOWAWE	NV	EUREKA COUNTY TV DISTRICT		
K18GW	BEOWAWE	NV	EUREKA COUNTY TV DISTRICT		
KNCV-LP	CARSON CITY, ETC.	NV	ENTRAVISION HOLDINGS, LLC		

K15EE	ELKO	NV	ELKO TELEVISION DISTRICT		
K13WI	HAWTHORNE	NV	VIRGINIA M. BECKER		
K14AJ	INCLINE VILLAGE	NV	PLANETARY VOICES INSTITUTE, INC		
KLVS-LP	LAS VEGAS	NV	BILTMORE BROADCASTING LAS VEGAS, INC.		
KVPX-LP	LAS VEGAS	NV	MAKO COMMUNICATIONS, LLC		
KEGS-LP	LAS VEGAS	NV	NEVADA CHANNEL 3, INC		
KELV-LP	LAS VEGAS	NV	ENTRAVISION HOLDINGS, LLC		
KVTE-LP	LAS VEGAS	NV	MOUNTAIN RIDGE HOLDINGS, INC		
KGNG-LP	LAS VEGAS	NV	KING KONG BROADCASTING, INC.		
KLVD-LP	LAS VEGAS	NV	WORD OF GOD FELLOWSHIP, INC.		
KNTL-LP	LAUGHLIN	NV	ENTRAVISION HOLDINGS, LLC		
K67HO	LAUGHLIN	NV	SMOKE AND MIRRORS, LLC		
K57JO	LAUGHLIN	NV	9TH ISLAND BROADCASTING, INC		
K14KO	LOVELOCK	NV	PERSHING COUNTY SCHOOL DISTRICT		
KWWWB-LP	MESQUITE, ETC.	NV	ENTRAVISION HOLDINGS, LLC		
K45HV	MINA-LUNING	NV	MINERAL TELEVISION DISTRICT #1		
K24BY	PAHRUMP	NV	TOWN OF PAHRUMP		
K19BU	PAHRUMP	NV	TOWN OF PAHRUMP		
KPVVM-LP	PAHRUMP	NV	VERNON VAN WINKLE tr/as KPVM-TV		
K17CL	PAHRUMP	NV	TOWN OF PAHRUMP		
K31HV	PAHRUMP	NV	MARCIA T. TURNER D/B/A TURNER ENTERPRISES		
KPVT-LP	PAHRUMP	NV	HILLTOP CHURCH		
KHMP-LP	PAHRUMP	NV	HILLTOP CHURCH		
KNVV-LP	RENO	NV	ENTRAVISION HOLDINGS, LLC		
KELM-LP	RENO	NV	NEVADA CHANNEL 3, INC		
KRRI-LP	RENO	NV	EQUITY MEDIA HOLDINGS CORPORATION		
K52FF	RENO	NV	NBC TELEMUNDO LICENSE CO		
K42EK	ROUND MOUNTAIN	NV	SMOKEY VALLEY TV DISTRICT		
K45EY	ROUND MOUNTAIN	NV	SMOKEY VALLEY TV DISTRICT		
K55HQ	ROUND MOUNTAIN	NV	SMOKEY VALLEY TV DISTRICT		
K38FW	STATELINE	NV	RSN WEST, LLC		
K59GM	STATELINE	NV	RSN WEST, LLC		
KPMP-LP	WINNEMUCCA	NV	RENO LICENSE, LLC		
WPXU-LP	AMITYVILLE	NY	PAXSON COMMUNICATIONS LPTV, INC		
W54AK	AUBURN	NY	SONNY PERSAD		
W48AO	AUBURN	NY	SONNY PERSAD		
W20BL	BATH	NY	WYDC, INC.		
WBPN-LP	BINGHAMTON	NY	STAINLESS BROADCASTING, L P		
W06CC	BINGHAMTON	NY	JOHNSON BROADCASTING COMPANY, INC.		
WFHW-LP	BUFFALO	NY	CITIZENS TELEVISION SYSTEM, INC.		
WBXZ-LP	BUFFALO	NY	RENARD COMMUNICATIONS CORP		
W31BP	BURLINGTON, ETC.	NY	NEXSTAR BROADCASTING, INC		
WYBN-LP	COBLESKILL	NY	ADULLAM GOSPEL CHURCH		
WUCB-LP	COBLESKILL	NY	ADULLAM GOSPEL CHURCH		
WJKP-LP	CORNING	NY	VISION COMMUNICATONS, LLC		
W49BI	ELLENBURG	NY	NEWMONT BROADCASTING CORPORATION		
W26BF	ELMIRA	NY	WYDC, INC.		
W21BW	ELMIRA	NY	THREE ANGELS BROADCASTING NETWORK, INC.		
W59DG	ELMIRA	NY	TRINITY BROADCASTING NETWORK		
WMYH-LP	ELMIRA, WTKNS GLN	NY	VISION COMMUNICATIONS, LLC		
W04BD	GLENS FALLS	NY	WMHT EDUCATIONAL TELECOMMUNICATIONS		
WDTB-LP	HAMBURG	NY	WORD OF GOD FELLOWSHIP, INC		
W27CB	HEMPSTEAD	NY	K LICENSEE, INC.		
W29CF	HEMPSTEAD	NY	7TH DAY ADVENTIST COMMUNITY HEALTH		
W16BE	HORNELL, ALFRED	NY	WYDC, INC		
WSSN-LP	HUDSON ET AL	NY	HUDSON VALLEY TELEVISION, INC		
W20BT	ITHACA	NY	NATIONAL MINORITY T V., INC.		
W14BU	MASSENA	NY	DAVID WELCH		
WNYF-LP	MASSENA	NY	UNITED COMMUNICATIONS CORPORATION		

W20BA	MASSENA	NY	NATIONAL MINORITY T.V., INC.		
W36BN	MASSENA	NY	NELLIE GAJESKI		
WLIG-LP	MINEOLA	NY	WLNY LIMITED PARTNERSHIP		
W27AL	MONTICELLO	NY	JOHN MESTER INCOME FAMILY TRUST		
WXNY-LP	NEW YORK	NY	ISLAND BROADCASTING COMPANY		
WNXY-LP	NEW YORK	NY	ISLAND BROADCASTING COMPANY		
WNXX-LP	NEW YORK	NY	ISLAND BROADCASTING COMPANY		
W26CE	NEW YORK	NY	ATLANTIC COAST COMMUNICATIONS, INC.		
WKOB-LP	NEW YORK	NY	NAVE COMMUNICATIONS, LLC		
WNYZ-LP	NEW YORK	NY	ISLAND BROADCASTING CO.		
W60AI	NEW YORK	NY	VENTANA TELEVISION, INC		
WNYN-LP	NEW YORK	NY	ISLAND BROADCASTING COMPANY		
WRNN-LP	NYACK	NY	LP NYACK LIMITED PARTNERSHIP		
W20AB	OLEAN	NY	CHOICE OLEAN TELEVISION STATION, INC		
W15F LP	ONEONTA	NY	RASTUS BROADCAST		
W34DI	PORT JERVIS	NY	VENTURE TECHNOLOGIES GROUP, LLC		
W42CX	PORT JERVIS	NY	VENTURE TECHNOLOGIES GROUP, LLC		
W32DC	PORT JERVIS	NY	VENTURE TECHNOLOGIES GROUP, LLC		
W46DQ	PORT JERVIS	NY	VENTURE TECHNOLOGIES GROUP, LLC		
W59EA	PORT JERVIS	NY	VENTURE TECHNOLOGIES GROUP, LLC		
W52DW	PORT JERVIS	NY	VENTURE TECHNOLOGIES GROUP, LLC		
W55DK	PORT JERVIS	NY	VENTURE TECHNOLOGIES GROUP, LLC		
WASA-LP	PORT JERVIS	NY	VENTURE TECHNOLOGIES GROUP, LLC		
W42AE	POUGHKEEPSIE	NY	DUTCHESS COMMUNITY COLLEGE		
WAWW-LP	ROCHESTER	NY	SQUIRREL BROADCASTING, LLC		
W58CX	SARATOGA SPRINGS	NY	THREE ANGELS BROADCASTING NETWORK, INC.		
W04AJ	SCHOHARIE, ETC.	NY	WMHT EDUCATIONAL TELECOMMUNICATIONS		
WSTQ-LP	SYRACUSE	NY	BARRINGTON SYRACUSE LICENSE LLC		
W38CY	SYRACUSE	NY	NATIONAL MINORITY T.V., INC.		
WMBO-LP	SYRACUSE, ETC	NY	METRO TV, INC.		
WNGN-LP	TROY	NY	BRIAN A LARSON		
W69AN	UNION SPRINGS, ETC	NY	SONNY PERSAD		
WPNY-LP	UTICA, ETC.	NY	NEXSTAR BROADCASTING, INC		
WBOZ-LP	WATERTOWN	NY	ANTHONY DIMARCANTONIO		
W51BN	WHITE LAKE	NY	JOHN MESTER INCOME FAMILY TRUST		
W33BW	ASHLAND	OH	CHRISTIAN FAITH BROADCAST, INC		
W1VM-LP	CANTON	OH	LUCINDA DEVAUL-TONGES		
WOTH-LP	CINCINNATI	OH	ELLIOTT B. BLOCK		
WCDN-LP	CLEVELAND	OH	WORD OF GOD FELLOWSHIP, INC.		
WXOX-LP	CLEVELAND	OH	VENTURE TECHNOLOGIES GROUP, LLC		
WCSN-LP	COLUMBUS	OH	CSN INVESTMENT CO., LLC		
W23BZ	COLUMBUS	OH	NATIONAL MINORITY T.V., INC.		
W43BZ	COLUMBUS	OH	VENTANA TELEVISION, INC.		
W66AQ	DAYTON	OH	WSTR LICENSEE, INC.		
WDFM-LP	DEFIANCE	OH	CITICASTERS LICENSES, L.P.		
WFND-LP	FINDLAY	OH	METRO VIDEO LICENSING, LLC		
WLQP-LP	LIMA	OH	METRO VIDEO LICENSING, LLC		
WLMO-LP	LIMA	OH	METRO VIDEO LICENSING, LLC		
W61CZ	LIMA	OH	THREE ANGELS BROADCASTING NETWORK, INC.		
W1VN-LP	NEWCOMERSTOWN	OH	IMAGE VIDEO TELEPRODUCTIONS, INC.		
W1JOS-LP	POMEROY	OH	WILLIAM A BARNHARDT		
W41AP	SANDUSKY	OH	REGISTER TV NEWS		
W17AY	SEAMAN	OH	TRANQUILITY COMMUNITY CHURCH		
W5SS-LP	STEBENVILLE	OH	ABACUS TELEVISION		
WBTL-LP	TOLEDO	OH	VENTURE TECHNOLOGIES GROUP, LLC		
W22CO	TOLEDO	OH	NATIONAL MINORITY T.V., INC.		
W38DH	TOLEDO	OH	VENTANA TELEVISION, INC.		
KKTM-LP	ALTUS	OK	ADELANTE TELEVISION LIMITED PARTNERSHIP		
K17FB	ARDMORE	OK	FAMILY BROADCASTING GROUP, INC.		

KCYH-LP	ARDMORE	OK	ARDMORE COMMUNITY HEALTH AND EDUCATION ORGANIZATION INC.
K25EG	BALKO	OK	VICTORY CENTER, INC
K66EK	BARTLESVILLE, DEWE	OK	WASHINGTON COUNTY TELEVISION, INC
K28DJ	BROKEN BOW	OK	TRUSTEES OF J.B CALLAHAM R.T.
KOKJ-LP	ELK CITY	OK	WELLSPRINGS TELEVISION NETWORK, INC
KXOK-LP	ENID	OK	ME3 COMMUNICATIONS COMPANY, LLC
KOKQ-LP	GLENCOE	OK	WELLSPRINGS TELEVISION NETWORK, INC.
K53BE	GUYMON	OK	VICTORY CENTER, INC.
K20HO	LAWTON	OK	FAMILY BROADCASTING GROUP, INC
K38GL	LAWTON	OK	THREE ANGELS BROADCASTING NETWORK, INC
K64GJ	LAWTON	OK	EQUITY MEDIA HOLDINGS CORPORATION
K25IC	LAWTON	OK	MOSELY ENTERPRISES, L.L.C
K11VJ	LAWTON	OK	MARCIA T TURNER D/B/A TURNER ENTERPRISES
K51EK	McALESTER	OK	FAMILY BROADCASTING GROUP, INC
KELF-LP	MIAMI	OK	FAMILY MEDIA, INC.
K14LD	MUSKOGEE	OK	FAMILY BROADCASTING GROUP, INC.
KT0U-LP	OKLAHOMA CITY	OK	MAKO COMMUNICATIONS, LLC
KWDW-LP	OKLAHOMA CITY	OK	EQUITY MEDIA HOLDINGS CORPORATION
KXOC-LP	OKLAHOMA CITY	OK	FAMILY BROADCASTING GROUP, INC.
KWEM-LP	STILLWATER	OK	WESTWOOD MEDIA GROUP, INC.
KOKG-LP	STILLWATER	OK	WELLSPRINGS TELEVISION NETWORK, INC
KOKM-LP	STILLWATER	OK	WELLSPRINGS TELEVISION NETWORK, INC.
K04DY	TAHLEQUAH	OK	NORTHEASTERN STATE UNIVERSITY
K57IP	TULSA	OK	MS COMMUNICATIONS, LLC
K15DA	TULSA	OK	FAMILY BROADCASTING GROUP, INC.
KOPE-LP	TULSA	OK	LAS AMERICAS SUPERMERCADO, INC.
K39CW	TULSA	OK	VENTANA TELEVISION, INC
K20DD	ALBANY, ETC.	OR	MEREDITH CORPORATION
K39EF	ASHLAND	OR	WATCHTV, INC.
K28FP	ASTORIA	OR	GREGORY J HERMAN
K05LE	ASTORIA	OR	MICHAEL MATTSON
K04PH	ASTORIA	OR	KENNETH E. LEWETAG
K59EJ	BAKER	OR	MEREDITH CORPORATION
KUBN-LP	BEND	OR	MEREDITH CORPORATION
KBND-LP	BEND	OR	COMBINED COMMUNICATIONS, INC
K07YM	BEND	OR	NVT PORTLAND LICENSEE, LLC
K27DO	BEND, ETC.	OR	NPG OF OREGON, INC
KBSC-LP	BROOKINGS	OR	OREGON COAST MEDIA INC
K57GP	BROOKINGS	OR	THREE ANGELS BROADCASTING NETWORK, INC.
K31GP	BROOKINGS, ETC.	OR	BROADCASTING LICENSES, L P.
K32ET	CANYONVILLE	OR	THREE ANGELS BROADCASTING NETWORK, INC.
K43DI	CANYONVILLE, ETC.	OR	CALIFORNIA OREGON BROADCASTING, INC.
K17DU	CHRISTMAS VALLEY	OR	THREE ANGELS BROADCASTING NETWORK, INC.
K44FH	COOS BAY	OR	BETTER LIFE TELEVISION
K30BN	COOS BAY	OR	CALIFORNIA OREGON BROADCASTING, INC.
K36BX	COOS BAY	OR	CALIFORNIA OREGON BROADCASTING, INC.
K63DO	COOS BAY	OR	CALIFORNIA OREGON BROADCASTING, INC
K49DM	COOS BAY	OR	WATCHTV, INC
K14GW	CORVALLIS	OR	CALIFORNIA OREGON BROADCASTING, INC.
KWVT-LP	EOLA	OR	MICHAEL MATTSON
K36FJ	EUGENE	OR	THREE ANGELS BROADCASTING NETWORK, INC.
KAMK-LP	EUGENE	OR	ROSEBURG BROADCASTING, INC
KMOR-LP	EUGENE	OR	ACKERLEY BROADCASTING OPERATIONS, LLC
K59DJ	EUGENE	OR	HIS WORD BROADCASTING CO.
K04DR	EUGENE	OR	FISHER BROADCASTING - OREGON TV, L L C
K65ER	EUGENE, ETC	OR	CALIFORNIA OREGON BROADCASTING, INC
K48GC	FLORENCE	OR	THREE ANGELS BROADCASTING NETWORK, INC
K34IC	GLIDE	OR	THREE ANGELS BROADCASTING NETWORK, INC.
K50FW	GRANTS PASS	OR	CALIFORNIA OREGON BROADCASTING, INC.

K20DT	GRANTS PASS	OR	WATCHTV, INC.		
K48DZ	HERMISTON	OR	THREE ANGELS BROADCASTING NETWORK, INC		
K20EH	HOOD RIVER	OR	MEREDITH CORPORATION		
K02PK	JOHN DAY	OR	THREE ANGELS BROADCASTING NETWORK, INC		
K08NP	JOHN DAY	OR	THREE ANGELS BROADCASTING NETWORK, INC		
K09PB	JORDAN VALLEY	OR	JORDAN CREEK VIEWERS, INC.		
K13MF	JORDAN VALLEY	OR	JORDAN CREEK VIEWERS, INC.		
K48HV	KLAMATH FALLS	OR	BETTER LIFE TELEVISION		
K39DP	KLAMATH FALLS	OR	WATCHTV, INC.		
K41ID	KLAMATH FALLS	OR	SAINTE PARTNERS II, L P		
K23DB	LA GRANDE	OR	MEREDITH CORPORATION		
K31GN	LA GRANDE	OR	BLUE MOUNTAIN TRANSLATOR DISTRICT		
K02PJ	LA GRANDE	OR	LA GRANDE 7TH DAY ADVENTIST CHURCH		
K05KY	LINCOLN CITY	OR	MICHAEL MATTSON		
K04AE	LONG CREEK	OR	F.L.C.R. COMMUNITY TV		
K06AB	LONG CREEK	OR	F.L.C.R. COMMUNITY TV		
K25IM	MEDFORD	OR	BETTER LIFE TELEVISION		
K28GG	MEDFORD	OR	WATCHTV, INC.		
KMCW-LP	MEDFORD	OR	SAINTE PARTNERS II, L P		
K18GB	MEDFORD	OR	BETTER LIFE TELEVISION		
KFBI LP	MEDFORD	OR	SAINTE PARTNERS II, L.P.		
K33GJ	MERLIN	OR	BETTER LIFE TELEVISION		
K23FH	MILTON-FREEWATER	OR	CITIZENS T.V., INC.		
K30EW	MONUMENT, ETC.	OR	MEREDITH CORPORATION		
K18EL	NEWBERG/TIGARD	OR	MEREDITH CORPORATION		
KDLN-LP	NEWPORT	OR	KENNETH E. LEWETAG		
K15DS	NEWPORT, ETC	OR	MEREDITH CORPORATION		
K24DX	PENDLETON, ETC	OR	TRIBUNE BROADCAST HOLDINGS, INC.		
K20ES	PENDLETON, ETC.	OR	TRIBUNE BROADCASTING HOLDINGS, INC.		
KPXG-LP	PORTLAND	OR	PAXSON COMMUNICATIONS LICENSE COMPANY, LLC		
KRCW-LP	PORTLAND	OR	TRIBUNE BROADCASTING HOLDINGS, INC.		
K23CU	PRINEVILLE	OR	CHRIST LOVES YOU BROADCASTING		
K25GA	REDMOND, ETC	OR	WATCHTV, INC.		
K47HT	ROSEBURG	OR	BETTER LIFE TELEVISION		
K33FE	ROSEBURG	OR	CALIFORNIA OREGON BROADCASTING, INC.		
K62DR	ROSEBURG	OR	CALIFORNIA OREGON BROADCASTING, INC		
K25FG	ROSEBURG	OR	WATCHTV, INC.		
K50GG	SALEM	OR	MEREDITH CORPORATION		
K21GX	SALEM	OR	NORTHWEST CHRISTIAN BROADCASTING		
KXPD-LP	SALEM	OR	CHURCHILL MEDIA II, LLC		
KSLM-LP	SALT CREEK	OR	MICHAEL MATTSON		
K21DE	SEASIDE/ASTORIA	OR	MEREDITH CORPORATION		
K51EH	THE DALLES	OR	MEREDITH CORPORATION		
K06NI	THE DALLES	OR	MICHAEL MATTSON		
K26HS	TILLAMOOK	OR	BETTER LIFE TELEVISION, INC.		
K05KX	TILLAMOOK	OR	MICHAEL MATTSON		
KPWC-LP	TILLAMOOK	OR	KENNETH E. LEWETAG		
K35CR	TILLAMOOK, ETC	OR	MEREDITH CORPORATION		
K39CL	YONCALLA	OR	CALIFORNIA OREGON BROADCASTING, INC.		
K32FI	YONCALLA	OR	CALIFORNIA OREGON BROADCASTING, INC.		
WNNB-LP	BEAVER	PA	BRUNO GOODWORTH NETWORK, INC.		
WJMB-LP	BUTLER	PA	BRUNO GOODWORTH NETWORK, INC.		
WWBP-LP	FREEDOM	PA	ABACUS TELEVISION		
WEMW-LP	GREENSBURG	PA	BRUNO GOODWORTH NETWORK, INC.		
W35BT	HARRISBURG	PA	CTVN HARRISBURG, LLC		
WWPS-LP	HAWLEY, ETC.	PA	ROBERT G. NEUHAUS		
W54BO	KINGSTON	PA	KATHY POTERA		
WBOA-LP	KITTANNING	PA	ABACUS TELEVISION		
W18BC	MIDDLEBURG	PA	HEIRLOOM MINISTRIES, INC.		

WPCL-LP	NEW CASTLE	PA	BRUNO GOODWORTH NETWORK, INC		
WELL-LP	PHILADELPHIA	PA	WORD OF GOD FELLOWSHIP, INC		
WZPA-LP	PHILADELPHIA	PA	MAKO COMMUNICATIONS, LLC		
WWJT-LP	PHILADELPHIA	PA	PHILADELPHIA TELEVISION NETWORK, INC		
WPTG-LP	PITTSBURGH	PA	ABACUS TELEVISION		
W61CC	PITTSBURGH	PA	THE VIDEOHOUSE, INC		
WBGN-LP	PITTSBURGH	PA	BRUNO GOODWORTH NETWORK, INC.		
W18BN	SCRANTON	PA	COMMONWEALTH TELECASTERS		
W07CD	STATE COLLEGE	PA	WPXI, INC.		
WHVL-LP	STATE COLLEGE, ETC	PA	CHANNEL COMMUNICATIONS, LLC		
W69CE	TOWANDA	PA	LOCAL TV PENNSYLVANIA LICENSE, LLC		
W63BF	AGUADA	PR	ASOCIACION EVANGELISTICA CRISTO VIENE, INC		
WSJP-LP	AQUADILLA	PR	STOREFRONT TELEVISION		
WPRU-LP	AQUADILLA	PR	STOREFRONT TELEVISION		
WSJX-LP	AQUADILLA	PR	STOREFRONT TELEVISION, LLC		
W44CK	BAYAMON, SAN JUAN	PR	THREE ANGELS BROADCASTING NETWORK, INC.		
WXWZ-LP	GUAYAMA	PR	JB MEDIA GROUP		
WVQS-LP	ISABEL SEGUNDA	PR	JUAN G PADIN		
W51DJ	MAYAGUEZ	PR	SEAN D. MINTZ		
WTPM-LP	MAYAGUEZ-ANASCO	PR	CORP. OF THE SEVENTH DAY ADVENTISTS OF WEST PR		
W36DB	PONCE	PR	HOWARD MINTZ		
WWKQ-LP	QUEBRADILLAS	PR	CMCG PUERTO RICO LICENSE LLC		
WWXY-LP	SAN JUAN	PR	HECTOR MARCANO MARTINEZ		
W26DK	SAN JUAN	PR	HOWARD MINTZ		
W54AQ	YAUCO, ETC.	PR	ASOCIACION EVANGELISTICA CRISTO VIENE, INC.		
W32BJ	BEAUFORT, ETC.	SC	SOUTHERN TV CORPORATION		
W21CA	COLUMBIA	SC	DOVE BROADCASTING, INC.		
W67DP	COLUMBIA	SC	DOVE BROADCASTING, INC.		
W51DI	FLORENCE	SC	CAROLINA CHRISTIAN BROADCASTING, INC.		
W35AY	HILTON HEAD ISLAND	SC	MYRON K. HINES		
W65DS	HONEA PATH	SC	CAROLINA CHRISTIAN BROADCASTING, INC.		
W49AN	MYRTLE BEACH	SC	DOVE BROADCASTING, INC		
WJNL-LP	NORTH CHARLESTON	SC	THOMAS B DANIELS		
WAZS-LP	NORTH CHARLESTON	SC	THOMAS B. DANIELS		
W31BS	ORANGEBURG	SC	DOVE BROADCASTING INC		
W05AO	PICKENS	SC	WLOS LICENSEE, LLC		
WSQY-LP	SPARTANBURG	SC	WORD OF GOD FELLOWSHIP INC.		
W26CF	SUMMERVILLE	SC	DOVE BROADCASTING, INC.		
K50DG	BROOKINGS	SD	INDEPENDENT COMMUNICATIONS, INC		
K34GM	PIERRE	SD	THREE ANGELS BROADCASTING NETWORK, INC.		
K32FW	PIERRE	SD	THREE ANGELS BROADCASTING NETWORK, INC		
KKRA-LP	RAPID CITY	SD	RAPID BROADCASTING COMPANY		
KWBH-LP	RAPID CITY	SD	RAPID BROADCASTING COMPANY		
K40GS	RAPID CITY	SD	RAPID BROADCASTING COMPANY		
KAUN-LP	SIOUX FALLS	SD	J.F. BROADCASTING, LLC		
KCWS-LP	SIOUX FALLS	SD	J.F. BROADCASTING, LLC		
K53EG	SIOUX FALLS	SD	SIOUXLAND CHRISTIAN BROADCASTING		
K48DK	SIOUX FALLS	SD	STUART MOEN		
KCPO-LP	SIOUX FALLS	SD	G I G., INC.		
W69DB	ACTON	TN	MS COMMUNICATIONS, LLC		
W43BH	ACTON	TN	MS COMMUNICATIONS, LLC		
W62CK	ACTON	TN	MS COMMUNICATIONS, LLC		
W56DA	ACTON	TN	MS COMMUNICATIONS, LLC		
W14BW	ACTON	TN	MS COMMUNICATIONS, LLC		
W66CG	ACTON	TN	MS COMMUNICATIONS, LLC		
W27CL	ACTON	TN	MS COMMUNICATIONS, LLC		
W34BU	ACTON	TN	MS COMMUNICATIONS, LLC		
W20BJ	ACTON	TN	MS COMMUNICATIONS, LLC		
W32BG	ACTON	TN	MS COMMUNICATIONS, LLC		

W46CE	ACTON	TN	MS COMMUNICATIONS, LLC		
WKRP-LP	ALEXANDRIA	TN	RICHARD C & LISA A GOETZ		
W26BE	CHATTANOOGA	TN	THREE ANGELS BROADCASTING NETWORK, INC		
W26CJ	CLARKSVILLE	TN	MS COMMUNICATIONS, LLC		
WCKV-LP	CLARKSVILLE, ETC	TN	TN MEDIA GROUP, INC.		
WCTD-LP	DUCKETOWN	TN	WORD OF GOD FELLOWSHIP, INC.		
W14CX	FARRAGUT/KNOXVILL	TN	THREE ANGELS BROADCASTING NETWORK, INC.		
WJDP-LP	GATLINBURG	TN	RICHARD C & LISA GOETZ		
W14AQ	HARROGATE	TN	LINCOLN MEMORIAL UNIVERSITY		
W18AN	HARROGATE	TN	LINCOLN MEMORIAL UNIVERSITY		
W52CZ	JACKSON	TN	MS COMMUNICATIONS, LLC		
W38BY	JACKSON	TN	MS COMMUNICATIONS, LLC		
W62CJ	JACKSON	TN	MS COMMUNICATIONS, LLC		
W54BU	JACKSON	TN	MS COMMUNICATIONS, LLC		
W22BR	JACKSON	TN	MS COMMUNICATIONS, LLC		
W64BZ	JACKSON	TN	MS COMMUNICATIONS, LLC		
W25BY	JACKSON	TN	MS COMMUNICATIONS, LLC		
W46CG	JACKSON	TN	MS COMMUNICATIONS, LLC		
W49CG	JACKSON	TN	TIGER EYE LICENSING, LLC.		
WJTD-LP	JACKSON	TN	WORD OF GOD FELLOWSHIP, INC.		
WDTT-LP	KNOXVILLE	TN	WORD OF GOD FELLOWSHIP, INC		
W56CM	KNOXVILLE	TN	VENTANA TELEVISION, INC.		
W11BD	LEBANON	TN	JOE F. BRYANT, MD		
W34DB	LEWISBURG	TN	BOB SMARTT		
W15CH	MEMPHIS	TN	GEORGE S. FLINN, JR.		
W26CX	MEMPHIS	TN	GEORGE S. FLINN, JR		
WDNM-LP	MEMPHIS	TN	WORD OF GOD FELLOWSHIP, INC.		
WJNK-LP	NASHVILLE	TN	THREE ANGELS BROADCASTING NETWORK, INC		
WNUT-LP	NASHVILLE	TN	EBC NASHVILLE, INC		
WIIW-LP	NASHVILLE	TN	U S TELEVISION, L L C		
WNFX-LP	NASHVILLE	TN	PAXSON COMMUNICATIONS LPTV, INC.		
WRMX-LP	NASHVILLE	TN	SOUTH CENTRAL COMMUNICATIONS CORPORATION		
W06AW	SELMER	TN	UNITY BROADCASTING		
KTES-LP	ABILENE	TX	BLUESTONE LICENSE HOLDINGS INC.		
KKAB-LP	ABILENE	TX	UNA VEZ MAS ABILENE LICENSE I, LLC		
KJTN-LP	ABILENE	TX	HISPANIC CHRISTIAN COMMUNITY NETWORK, INC.		
K49HT	ABILENE	TX	C DOWEN JOHNSON		
KTXF-LP	ABILENE	TX	KM COMMUNICATIONS, INC		
KAEU-LP	ALICE	TX	UNA VEZ MAS ALICE LICENSE, LLC		
KCPN-LP	AMARILLO	TX	MISSION BROADCASTING, INC		
KEAT-LP	AMARILLO	TX	BORGER BROADCASTING, INC.		
KAMT-LP	AMARILLO	TX	BORGER BROADCASTING, INC		
KTXD-LP	AMARILLO	TX	UNA VEZ MAS AMARILLO LICENSE II, LLC		
K25GI	AMARILLO	TX	NATIONAL MINORITY T V., INC.		
K56DF	AMARILLO	TX	SPECTRUM MEDIA		
KTMO-LP	AMARILLO	TX	ADELANTE TELEVISION LIMITED PARTNERSHIP		
KAMM-LP	AMARILLO	TX	UNA VEZ MAS AMARILLO LICENSE I, LLC		
K46HQ	AMARILLO	TX	MICHAEL MINTZ		
K18HL	AMARILLO	TX	PRISM BROADCASTING NETWORK, INC.		
K45IQ	AMARILLO	TX	PRISM BROADCASTING NEWORK, INC.		
K39HF	AMARILLO	TX	MARCIA T TURNER D/B/A TURNER ENTERPRISES		
K64GK	AMARILLO	TX	MICHAEL MINTZ		
K69IH	AMARILLO	TX	MICHAEL MINTZ		
KEYU-LP	AMARILLO	TX	BORGER BROADCASTING, INC.		
K38IP	AMARILLO	TX	EQUITY MEDIA HOLDINGS CORPORATION		
K59HG	AMARILLO	TX	BORGER BROADCASTING, INC.		
KDAX-LP	AMARILLO	TX	WORD OF GOD FELLOWSHIP, INC.		
KAQC-LP	ATLANTA	TX	AQC PRODUCTIONS		
KADF-LP	AUSTIN	TX	JOSEPH W. SHAFFER		

K09VR	AUSTIN	TX	THE UNIVERSITY OF TEXAS AT AUSTIN		
K39HG	BEAUMONT	TX	TURNER ENTERPRISES		
KPPY-LP	BEAUMONT	TX	KM COMMUNICATIONS, INC		
K69IY	BEAUMONT	TX	WINDSONG COMMUNICATIONS, INC.		
KUIL-LP	BEAUMONT	TX	BLUE BONNET COMMUNICATIONS, INC.		
K47IO	BEAUMONT	TX	C. DOWEN JOHNSON		
KEBQ-LP	BEAUMONT	TX	FOUNTAIN TELEVISION CORPORATION		
K49DV	BEEVILLE-REFUGIO	TX	KVOA COMMUNICATIONS, INC.		
K63GN	BOVINA, ETC.	TX	PANHANDLE TELECASTING CO		
K05EF	BRADY, ETC	TX	FOSTER CHARITABLE FOUNDATION, INC.		
K04GI	BRADY/ROCHELLE	TX	FOSTER CHARITABLE FOUNDATION, INC.		
K02GM	BRADY/ROCHELLE	TX	FOSTER CHARITABLE FOUNDATION, INC.		
KODF-LP	BRITTON	TX	MAKO COMMUNICATIONS, LLC		
KBDF-LP	BROWNSVILLE	TX	UNA VEZ MAS BROWNSVILLE LICENSE, LLC		
KXIV-LP	BROWNSVILLE	TX	FAITH PLEASES GOD CHURCH CORP.		
KMAY-LP	BRYAN	TX	CHANNEL 6, INC.		
KSCM-LP	BRYAN	TX	MIDESSA BROADCASTING LIMITED PARTNERSHIP		
KSPG-LP	CARRIZO SPRINGS	TX	ARACELIS ORTIZ CORPORATION		
KJIB-LP	CLEAR LAKE CITY	TX	FAR EASTERN TELECASTERS		
KUTW-LP	COLLEGE STATION	TX	BORGER BROADCASTING, INC		
KLAO-LP	CORPUS CHRISTI	TX	DANIEL GOMEZ		
KTMV-LP	CORPUS CHRISTI	TX	MINERVA R LOPEZ		
K68DJ	CORPUS CHRISTI	TX	KVOA COMMUNICATIONS, INC.		
KCCX-LP	CORPUS CHRISTI	TX	MAKO COMMUNICATIONS, LLC		
K54JS	CORPUS CHRISTI	TX	HOWARD MINTZ		
KT0V-LP	CORPUS CHRISTI	TX	GH BROADCASTING, INC		
KVVC-LP	CORPUS CHRISTI	TX	WINDSONG COMMUNICATIONS, INC		
KDCP-LP	CORPUS CHRISTI	TX	WORD OF GOD FELLOWSHIP, INC.		
KCCZ-LP	CORPUS CHRISTI	TX	GERALD BENAVIDES		
KCCG-LP	CORPUS CHRISTI	TX	KM COMMUNICATIONS, INC.		
KYDF-LP	CORPUS CHRISTI	TX	UNA VEZ MAS CORPUS CHRISTI LICENSE, LLC		
KCBO-LP	CORPUS CHRISTI	TX	CHANNEL 7 OF CORPUS CHRISTI, INC		
K25FW	CORSICANA	TX	VENTANA TELEVISION, INC.		
KIVY-LP	CROCKETT	TX	LEON HUNT		
KTWC-LP	CROCKETT	TX	INTERNATIONAL BROADCASTING NETWORK		
KSEX-LP	DALLAS	TX	D.T.V. LLC		
KJJM-LP	DALLAS & MESQUITE	TX	MAKO COMMUNICATIONS, LLC		
K38IO	DE LEON	TX	FOSTER CHARITABLE FOUNDATION, INC		
KNAV-LP	DE SOTO	TX	TUCK PROPERTIES, INC		
K31GL	DE SOTO	TX	MAKO COMMUNICATIONS, LLC		
KHPK-LP	DE SOTO	TX	MAKO COMMUNICATIONS, LLC		
K55HV	DEL RIO	TX	JOSE VILLAREAL DBA VILLAREAL BROADCASTING		
KEAP-LP	EAGLE PASS	TX	CTV BROADCASTING, LLC		
K40FW	EL PASO	TX	BGM LICENSE LLC		
K07TS	FALFURRIAS	TX	NEW COVENANT CHURCH		
K45DX	FLORESVILLE	TX	TELEFUTURA PARTNERSHIP OF FLORESVILLE		
KVFW-LP	FORT WORTH	TX	GERALD BENAVIDES		
K30DN	FREEMPORT	TX	MAKO COMMUNICATIONS, LLC		
K61HP	GAINESVILLE	TX	IGLESIA JESUCHRISTO ES MI REFUGIO, INC.		
KVAT-LP	GARFIELD	TX	MAKO COMMUNICATIONS, LLC		
KTIZ-LP	HARLINGEN	TX	ENTRAVISION HOLDINGS, LLC		
K17GZ	HARPER	TX	FOSTER CHARITABLE FOUNDATION, INC.		
KCVH-LP	HOUSTON	TX	BROADCASTING SYSTEMS, INC.		
KBPX-LP	HOUSTON	TX	PAXSON COMMUNICATIONS LPTV, INC.		
KVQT-LP	HOUSTON	TX	C. DOWEN JOHNSON		
KHLM-LP	HOUSTON	TX	LOTUS MERGER SUB LLC		
KHTX-LP	HUNTSVILLE	TX	INTERNATIONAL BROADCASTING NETWORK		
KHXL-LP	HUNTSVILLE	TX	INTERNATIONAL BROADCASTING NETWORK		
KVHP-LP	JASPER	TX	BLUE BONNET COMMUNICATIONS, INC.		

KGSW-LP	KEENE	TX	SOUTHWESTERN ADVENTIST UNIVERSITY		
KVHC-LP	KERRVILLE	TX	MARY R SILVER		
KWTC-LP	KERRVILLE	TX	INTERNATIONAL BROADCASTING NETWORK		
KADT-LP	KILLEEN	TX	WORD OF GOD FELLOWSHIP, INC		
K38EB	KINGSVILLE-ALICE	TX	KVOA COMMUNICATIONS, INC		
KQVE-LP	LA VERNIA	TX	WORD OF GOD FELLOWSHIP, INC		
KLMV-LP	LAREDO	TX	J. B. SALAZAR		
KNEX-LP	LAREDO	TX	BMP 100.5 FM, LP		
KCTL-LP	LIVINGSTON	TX	INTERNATIONAL BROADCASTING NETWORK		
KLPN-LP	LONGVIEW	TX	WARWICK COMMUNICATIONS, INC		
KLGV-LP	LONGVIEW	TX	INTERNATIONAL BROADCASTING NETWORK		
KDHU-LP	LOUISE	TX	WORD OF GOD FELLOWSHIP, INC		
KBZO-LP	LUBBOCK	TX	ENTRAVISION HOLDINGS, LLC		
KMYL-LP	LUBBOCK	TX	RAMAR COMMUNICATIONS II, LTD		
K48GB	LUBBOCK	TX	RAMAR COMMUNICATIONS II, LTD		
K24GP	LUBBOCK	TX	MAKO COMMUNICATIONS, LLC		
K67HQ	LUBBOCK	TX	JENNIFER CREMEENS		
KDFL-LP	LUBBOCK	TX	UNA VEZ MAS LUBBOCK LICENSE, LLC		
KFXL-LP	LUFKIN	TX	WARWICK COMMUNICATIONS, INC.		
KETK-LP	LUFKIN	TX	KM COMMUNICATIONS, INC.		
KLUF-LP	LUFKIN	TX	INTERNATIONAL BROADCASTING NETWORK		
KHTM-LP	LUFKIN	TX	INTERNATIONAL BROADCASTING NETWORK		
K34HW	MASON	TX	FOSTER CHARITABLE FOUNDATION, INC.		
KSTI-LP	MCALLEN	TX	FAITH PLEASES GOD CHURCH CORPORATION		
KJST-LP	MCALLEN	TX	CTV BROADCASTING, LLC		
KSFE-LP	MCALLEN	TX	ENTRAVISION HOLDINGS, LLC		
KNDF-LP	MCALLEN	TX	UNA VEZ MAS MCALLEN LICENSE, LLC		
K40FJ	MIDLAND	TX	THREE ANGELS BROADCASTING NETWORK, INC.		
KDFH-LP	MIDLAND	TX	UNA VEZ MAS MIDLAND LICENSE, LLC		
K34HH	MIDLAND	TX	PRISM BROADCASTING NETWORK, INC		
K21GU	MIDLAND	TX	PRISM BROADCASTING NETWORK, INC.		
K69IT	MIDLAND	TX	LAWRENCE HOWARD MINTZ		
KPDN-LP	MONAHANS	TX	PRIME TIME CHRISTIAN BROADCASTING, INC		
KMPL-LP	MOUNT PLEASANT	TX	F. V. P. NETWORK, INC		
KAXW-LP	MULLIN	TX	UNA VEZ MAS MULLIN LICENSE, LLC		
KNCD-LP	NACOGDOCHES	TX	INTERNATIONAL BROADCASTING NETWORK		
KNTA-LP	NEW BRAUNFELS	TX	ARACELIS ORTIZ CORPORATION		
KTLD-LP	ODESSA	TX	ADELANTE TELEVISION LIMITED PARTNERSHIP		
KTLÉ-LP	ODESSA	TX	ADELANTE TELEVISION LIMITED PARTNERSHIP		
K46HN	ODESSA	TX	PRISM BROADCASTING NETWORK, INC.		
K24DS	PALESTINE	TX	ETERNAL TRUTH NETWORK, INC		
K27GR	PARIS	TX	FIRST BAPTIST CHURCH OF PARIS, TEXAS		
KPTD-LP	PARIS	TX	WORD OF GOD FELLOWSHIP, INC		
KRYM-LP	RAYMONDVILLE	TX	ARACELIS ORTIZ CORPORATION		
KRGT-LP	RIO GRANDE CITY	TX	CTV BROADCASTING, LLC		
KZFW-LP	ROYSE CITY	TX	IGLESIA JESUCHRISTO ES MI REFUGIO, INC.		
KTXE-LP	SAN ANGELO	TX	BLUESTONE LICENSE HOLDINGS INC.		
KEUS-LP	SAN ANGELO	TX	ENTRAVISION HOLDINGS, LLC		
K45HW	SAN ANGELO	TX	HOWARD MINTZ		
K43IQ	SAN ANGELO	TX	WINDSONG COMMUNICATIONS, INC.		
KPKS-LP	SAN ANGELO	TX	PRIME TIME CHRISTIAN BROADCASTING, INC		
K51JF	SAN ANTONIO	TX	MINTZ BROADCASTING		
KOBS-LP	SAN ANTONIO	TX	CLARK ORTIZ		
KSAA-LP	SAN ANTONIO	TX	MAKO COMMUNICATIONS, LLC		
KMHZ-LP	SAN ANTONIO	TX	LOUIS MARTINEZ FAMILY GROUP, LLC		
KISA-LP	SAN ANTONIO	TX	MAKO COMMUNICATIONS, LLC		
KBNB-LP	SAN ANTONIO	TX	B COMMUNICATIONS JOINT VENTURE		
KADY-LP	SHERMAN	TX	UNA VEZ MAS SHERMAN LICENSE, LLC		
K30EA	TEXARKANA	TX	TRINITY BROADCASTING NETWORK		

K41EQ	TEXARKANA	TX	THREE ANGELS BROADCASTING NETWORK, INC.		
K36HF	TUSCOLA	TX	MARCIA T TURNER tr/as TURNER ENTERPRISES		
K1PN-LP	TYLER	TX	WARWICK COMMUNICATIONS, INC.		
K20DL	TYLER	TX	PROGRESSIVE CABLE COMMUNICATIONS		
K26GA	TYLER/JACKSONVILLE	TX	THREE ANGELS BROADCASTING NETWORK, INC.		
K49HH	UVALDE	TX	J. B. SALAZAR		
K42GJ	UVALDE	TX	J. B. SALAZAR		
K47J	UVALDE	TX	J. B. SALAZAR		
K17GL	UVALDE	TX	J. B. SALAZAR		
K45HM	UVALDE	TX	J. B. SALAZAR		
KNHB-LP	UVALDE	TX	CTV BROADCASTING, LLC		
KVTX-LP	VICTORIA	TX	SAGA BROADCASTING, LLC		
KUNU-LP	VICTORIA	TX	SAGA BROADCASTING, LLC		
KXTS-LP	VICTORIA	TX	SAGA BROADCASTING, LLC		
KVCV-LP	VICTORIA	TX	WINDSONG COMMUNICATIONS, INC.		
K39HB	VICTORIA	TX	HOWARD MINTZ		
K38IG	VICTORIA	TX	MOSELY ENTERPRISES, L L C.		
KMOL-LP	VICTORIA	TX	SAGA BROADCASTING, LLC		
K49IE	VICTORIA	TX	TELECOM WIRELESS, LLC		
K5VH-LP	VICTORIA	TX	KM COMMUNICATIONS, INC		
K45IN	VICTORIA	TX	HISPANIC CHRISTIAN COMMUNITY NETWORK, INC.		
KCPV-LP	VICTORIA	TX	CLUB COMMUNICATIONS		
K66GD	VIDOR	TX	ROGER MILLS		
KWKO-LP	WACO	TX	BORGER BROADCASTING, INC.		
KTXU-LP	WEST LAKE HILLS	TX	GERALD BENAVIDES		
KJBO-LP	WICHITA FALLS	TX	MISSION BROADCASTING, INC.		
K48HU	WICHITA FALLS	TX	FAMILY BROADCASTING GROUP, INC.		
K26DL	WICHITA FALLS	TX	NATIONAL MINORITY T V , INC		
KUWF-LP	WICHITA FALLS	TX	EQUITY MEDIA HOLDINGS CORPORATION		
K40HZ	WICHITA FALLS	TX	MOSELY ENTERPRISES, L L C.		
KTWV-LP	WICHITA FALLS	TX	EQUITY MEDIA HOLDINGS CORPORATION		
K52JO	WICHITA FALLS	TX	HISPANIC CHRISTIAN COMMUNITY NETWORK, INC		
K53CF	AURORA, ETC	UT	KUTV HOLDINGS, INC		
KUWB-LP	BLOOMINGTON	UT	CLEAR CHANNEL BROADCASTING LICENSES, INC		
K31FG	DELTA, ETC.	UT	KUTV HOLDINGS, INC.		
KMBU-LP	ENTERPRISE	UT	CCR-ST. GEORGE IV, LLC		
K58FT	HUNTSVILLE	UT	ALPHA & OMEGA COMMUNICATIONS, LLC		
K12ND	KANAB	UT	KANAB LIONS		
K10OX	LOGAN	UT	AIRWAVES, INC.		
KUTA-LP	LOGAN	UT	AIRWAVES, INC		
K43AE	MYTON, ETC	UT	KUTV HOLDINGS, INC.		
K26EM	ORANGEVILLE	UT	EMERY COUNTY		
K57JB	PARK CITY	UT	AIRWAVES, INC.		
K43JV	PROVO	UT	THREE ANGELS BROADCASTING NETWORK, INC		
K47HA	ROOSEVELT	UT	DUCHESNE COUNTY		
KUTG-LP	SAINT GEORGE	UT	LAMAR VEASEY		
K59GS	SALT LAKE CITY	UT	ALPHA & OMEGA COMMUNICATIONS, LLC		
KUCL-LP	SALT LAKE CITY	UT	CHRISTIAN LIFE BROADCASTING		
K18FJ	SALT LAKE CITY	UT	NATIONAL MINORITY T V., INC		
KUBX-LP	SALT LAKE CITY	UT	LOGAN 12, INC		
K45GX	SALT LAKE CITY	UT	PRICE BROADCASTING, INC.		
KBTU-LP	SALT LAKE CITY	UT	BUSTOS MEDIA OF UTAH LICENSE, LLC		
KVBT-LP	SANTA CLARA, ETC	UT	CCR-ST. GEORGE IV, LLC		
K49GD	SPANISH FORK	UT	ALPHA & OMEGA COMMUNICATIONS, LLC		
KKRP-LP	ST. GEORGE	UT	FOX TELEVISION STATIONS, INC		
WVAW-LP	CHARLOTTESVILLE	VA	GRAY TELEVISION LICENSEE, INC.		
W14CY	CHARLOTTESVILLE	VA	CORE GROUP INTERNATIONAL, INC		
W25CS	CHESAPEAKE	VA	KM BROADCASTING, INC		
W33AD	CONCORD	VA	PAUL H. PASSINK		

WFMA-LP	FARMVILLE	VA	TIGER EYE BROADCASTING CORPORATION		
W51DO	HAMPTON	VA	THE UNION MISSION		
WTTD-LP	HAMPTON	VA	WAVY BROADCASTING, LLC		
WGBS-LP	HAMPTON, ETC.	VA	JOAN AND KENNETH WRIGHT		
WKPH-LP	HONAKER	VA	HOLSTON VALLEY BROADCASTING CORPORATION		
WERI-LP	KEYSVILLE	VA	TIGER EYE BROADCASTING CORPORATION		
WSVL-LP	KEYSVILLE, ETC.	VA	TIGER EYE BROADCASTING CORPORATION		
WAZC-LP	LURAY	VA	JLA MEDIA AND PUBLICATIONS, LLC		
WDWA-LP	LURAY	VA	WORD OF GOD FELLOWSHIP, INC.		
WDRG-LP	LYNCHBURG	VA	PAUL H. PASSINK		
W43BO	MARION, ETC.	VA	AURORA LICENSE HOLDINGS, INC		
WYAT-LP	MARTINSVILLE	VA	MARTINSVILLE MEDIA, INC.		
WJHJ-LP	NEWPORT NEWS, ETC	VA	JBS, INC		
W30BV	NORFOLK	VA	B.N VISWANATH		
WXOB-LP	RICHMOND	VA	KM BROADCASTING, INC.		
W39CO	RICHMOND	VA	NATIONAL MINORITY T.V., INC		
WRID-LP	RICHMOND	VA	WORD OF GOD FELLOWSHIP, INC.		
WKYV-LP	RICHMOND	VA	ONDA CAPITAL, INC.		
W44CL	ROANOKE	VA	VENTANA TELEVISION, INC		
WBTD-LP	SUFFOLK	VA	WAVY BROADCASTING, LLC		
WJDW-LP	TAZEWELL	VA	JOHN COLSON DASH		
WVBN-LP	VIRGINIA BEACH	VA	JBS, INC.		
WBIV-LP	CHARLOTTE AMALIE	VI	VIRGIN ISLANDS TELECOMMUNICATIONS VENTURES, LLC		
WMNS-LP	CHARLOTTE AMALIE	VI	V.I. CHRISTIAN MINISTRIES, INC		
W29CB	ST. THOMAS	VI	THREE ANGELS B/CING NETWORK, INC		
W21CQ	BENNINGTON	VT	D.T.V. LLC		
W51CB	BURLINGTON	VT	DEEPAK VISWANATH		
W18AE	KILLINGTON	VT	KILLINGTON, LTD		
W61CE	RUTLAND	VT	NEWMONT BROADCASTING CORPORATION		
W52CD	ST. ALBANS	VT	NEWMONT BROADCASTING CORPORATION		
W27CP	WHITE RIVER JUNCT	VT	HEARST-ARGYLE PROPERTIES, INC.		
W21CN	WINDSOR	VT	THREE ANGELS BROADCASTING NETWORK, INC		
K54AO	BREMERTON	WA	KIRO-TV, INC.		
K53AZ	CENTRALIA, ETC.	WA	KIRO-TV, INC		
K64ES	CHELAN	WA	TRIBUNE TELEVISION NORTHWEST, INC		
K49EV	CLARKSTON	WA	UPPER COLUMBIA MEDIA ASSOCIATION		
K09MP	CURLEW & MALO	WA	FRANSON PEAK TELEVISION ASSN., INC		
K13NV	CURLEW & MALO	WA	FRANSON PEAK TELEVISION ASSN., INC.		
K11NB	CURLEW & MALO	WA	FRANSON PEAK TELEVISION ASSN., INC		
K10DC	DANVILLE	WA	DANVILLE TELEVISION ASSN.		
K08CR	DANVILLE	WA	DANVILLE TELEVISION ASSN.		
K12CP	DANVILLE	WA	DANVILLE TELEVISION ASSN.		
K39DM	ELLENSBURG	WA	CHRISTIAN BROADCASTING OF YAKIMA		
K25FP	ELLENSBURG	WA	THREE ANGELS BROADCASTING NETWORK, INC		
K54DX	ELLENSBURG-KITTITA	WA	TRIBUNE TELEVISION NORTHWEST, INC.		
K58BW	EVERETT	WA	KIRO-TV, INC.		
K23FU	KENNEWICK & PASCO	WA	RON BEVINS		
K29FF	KENNEWICK, ETC	WA	RON BEVINS		
K10GH	LAURIER	WA	LAURIER TV CLUB		
K12GM	LAURIER	WA	LAURIER TV CLUB		
K08GG	LAURIER	WA	LAURIER TV CLUB		
K34HK	LONGVIEW	WA	MEREDITH CORPORATION		
K39DL	MOSES LAKE	WA	THREE ANGELS BROADCASTING NETWORK, INC.		
K26GV	OMAK	WA	THREE ANGELS BROADCASTING NETWORK, INC		
K04OI	PASCO-KENNEWICK	WA	RON BEVINS		
K67GJ	POINT PULLEY, ETC.	WA	KIRO-TV, INC.		
K30FL	PORT ANGELES	WA	KIRO-TV, INC.		
K40EE	PULLMAN	WA	SPOKANE TELEVISION, INC.		
KPMT-LP	PULLMAN	WA	DUANE J. POLICH AND ELAINE F. CLEMENSON-POLICH		

K54GS	PUYALLUP	WA	KIRO-TV, INC		
K54DU	RICHLAND	WA	THREE ANGELS BROADCASTING NETWORK, INC.		
KRLB-LP	RICHLAND, ETC.	WA	RADIANT LIGHT BROADCASTING		
K13CQ	ROCK ISLAND, ETC	WA	APPLE VALLEY TV ASSOCIATION, INC		
K11CS	ROCK ISLAND, ETC	WA	APPLE VALLEY TV ASSOCIATION, INC		
KUSE-LP	SEATTLE	WA	EBC SEATTLE, INC.		
K68DL	SEATTLE	WA	THREE ANGELS BROADCASTING NETWORK, INC.		
KHBA-LP	SPOKANE	WA	HE'S ALIVE BROADCASTING ASSOCIATION		
K43GZ	SPOKANE	WA	VENTANA TELEVISION, INC.		
K11FJ	SQUILCHUCK STATE	WA	APPLE VALLEY TV ASSOCIATION, INC		
K09FF	SQUILCHUCK STATE	WA	APPLE VALLEY TV ASSOCIATION, INC.		
K13EZ	SQUILCHUCK STATE	WA	APPLE VALLEY TV ASSOCIATION, INC.		
K67CD	STEMILT, ETC	WA	APPLE VALLEY TV ASSOCIATION, INC		
K65AU	STEMILT, ETC.	WA	APPLE VALLEY TV ASSOCIATION, INC		
K05JO	SUNNYSIDE & PROSS	WA	THREE ANGELS BROADCASTING NETWORK, INC.		
K13WP	SUNNYSIDE, ETC.	WA	RON BEVINS		
K08LU	SUNNYSIDE-GRANDVI	WA	RON BEVINS		
K14HN	VANCOUVER/CAMAS	WA	MEREDITH CORPORATION		
K21EK	WALLA WALLA	WA	BLUE MOUNTAIN BROADCASTING ASSOCIATION		
KWVVO-LP	WALLA WALLA	WA	RADIANT LIGHT BROADCASTING		
K32FN	WENATCHEE	WA	SPOKANE TELEVISION, INC.		
K24EX	WENATCHEE	WA	SPOKANE TELEVISION, INC.		
KWCC-LP	WENATCHEE, ETC.	WA	APPLE VALLEY TV ASSOCIATION, INC		
K39FU	YAKIMA	WA	RON BEVINS		
KCYU-LP	YAKIMA	WA	MOUNTAIN LICENSES, L P		
K49GF	YAKIMA, ETC	WA	RON BEVINS		
K43GY	YAKIMA, ETC.	WA	RON BEVINS		
K58DL	YAKIMA-TOPPENISH	WA	THREE ANGELS BROADCASTING NETWORK, INC.		
WAST-LP	ASHLAND	WI	TRUE NORTH T.V. 25 LLC		
W56AB	DARLINGTON	WI	CITY OF DARLINGTON, WISCONSIN		
K060A	EAU CLAIRE	WI	MARCIA T TURNER D/B/A TURNER ENTERPRISES		
W45CF	ELK MOUND	WI	WHITE EAGLE PARTNERSHIP		
W30BU	GREEN BAY	WI	THREE ANGELS BROADCASTING NETWORK, INC.		
W44BF	LA CROSSE	WI	TV-45, INC		
W67CH	LA CROSSE	WI	KTTC TELEVISION, INC.		
WBWT-LP	MILWAUKEE	WI	BUSTOS MEDIA OF WISCONSIN LICENSE, LLC		
WYTU-LP	MILWAUKEE	WI	CHANNEL 41 AND 63 LIMITED PARTNERSHIP		
W31BA	MINOCQUA	WI	THREE ANGELS BROADCASTING NETWORK, INC		
W02CF	MINOCQUA	WI	THREE ANGELS BROADCASTING NETWORK, INC.		
WIBU-LP	TOMAH	WI	MAGNUM RADIO, INC.		
WTAS-LP	WAUKESHA	WI	WAUKESHA TOWER ASSOCIATES		
W27AU	WAUSAU	WI	NORTHLAND TELEVISION, LLC		
W60CI	WHITING	WI	MS COMMUNICATIONS, LLC		
W24BV	WHITING	WI	MS COMMUNICATIONS, LLC		
W40BC	WHITING	WI	MS COMMUNICATIONS, LLC		
W62DA	WHITING	WI	MS COMMUNICATIONS, LLC		
W31CI	WHITING	WI	MS COMMUNICATIONS, LLC		
W16AY	WHITING	WI	MS COMMUNICATIONS, LLC		
W18CS	WHITING	WI	MS COMMUNICATIONS, LLC		
W068U	WHITING	WI	MS COMMUNICATIONS, LLC		
WCJR-LP	BECKLEY	WV	FAMILY TELEVISION, INC.		
WOCW-LP	CHARLESTON	WV	MOUNTAIN TV, L L C		
W16CE	CHARLESTON	WV	GRAY TELEVISION LICENSEE, INC		
W31CA	CHARLESTON	WV	NATIONAL MINORITY T V., INC		
W22CY	CLARKSBURG	WV	WITHERS BROADCASTING COMPANY OF WEST VIRGINIA		
W21CJ	CLARKSBURG	WV	CORNERSTONE TELEVISION, INC.		
W62DF	CLARKSBURG	WV	GREENBRIER VALLEY TV, LLC		
W31CQ	ELKINS	WV	WITHERS BROADCASTING COMPANY OF WEST VIRGINIA		
WVCW-LP	HUNTINGTON	WV	MOUNTAIN TV, L L C		

W36CR	HUNTINGTON	WV	NATIONAL MINORITY T.V., INC.		
W14CU	HUNTINGTON	WV	VENTANA TELEVISION, INC.		
WVWV-LP	WHEELING, ETC	WV	ABACUS TELEVISION		
K12FY	BIG LARAMIE, ETC	WY	LARAMIE PLAINS ANTENNA TV ASSOCIATION, INC		
K03CR	BIG LARAMIE, ETC.	WY	LARAMIE PLAINS ANTENNA TV ASSOCIATION, INC		
K26ES	CASPER	WY	WYOMEDIA CORP.		
K31HT	CASPER	WY	JAMES R MCDONALD, JR		
K23HQ	CASPER	WY	TELECOM WIRELESS, LLC		
K36GT	CASPER	WY	MARCIA T. TURNER tr/as TURNER ENTERPRISES		
K33GI	CASPER	WY	INSPIRATION TELEVISION, INC.		
K47HQ	CASPER	WY	MANNA MEDIA CORPORATION		
K49AY	CHEYENNE	WY	ECHONET CORPORATION		
KKRR-LP	CHEYENNE	WY	ROBERT R. RULE		
KMAH-LP	CHEYENNE	WY	ROBERT R. RULE		
KKTU-LP	CHEYENNE	WY	DENVER BROADCASTING, INC.		
KGSC-LP	CHEYENNE	WY	THE SPIRIT OF THE LORD MINISTRIES		
KCHY-LP	CHEYENNE	WY	BOZEMAN TRAIL COMMUNICATIONS COMPANY		
K15AD	CODY	WY	ROB-ART, INC.		
K34HZ	CODY	WY	JAMES R. MCDONALD, JR.		
K50DR	EVANSTON	WY	WYOMING COMMUNICATIONS CORPORATION		
K54EH	EVANSTON	WY	CENTRAL WYOMING COLLEGE		
K58GQ	GLENDO	WY	CENTRAL WYOMING COLLEGE		
K50JC	GREYBULL	WY	CENTRAL WYOMING COLLEGE		
K59DY	JACKSON, ETC.	WY	NPG OF IDAHO, INC.		
K02GE	LA BARGE	WY	CENTRAL WYOMING COLLEGE		
K42GZ	LA BARGE, ETC	WY	CENTRAL WYOMING COLLEGE		
K08FD	LABARGE & BIG PINE	WY	CENTRAL WYOMING COLLEGE		
K57AF	LARAMIE	WY	LARAMIE PLAINS ANTENNA TV ASSOCIATION, INC		
K59AM	LARAMIE	WY	LARAMIE PLAINS ANTENNA TV ASSOCIATION, INC		
KPAH-LP	LARAMIE	WY	ROBERT R. RULE		
K14LK	LARAMIE	WY	BOZEMAN TRAIL COMMUNICATIONS COMPANY		
K10FQ	LARAMIE & BOLSER	WY	LARAMIE PLAINS ANTENNA TV ASSOCIATION, INC		
K31FW	MOUNTAIN VIEW	WY	CLEAR CHANNEL BROADCASTING LICENSES, INC.		
KKBT-LP	PINEDALE	WY	RULE COMMUNICATIONS		
K45HO	PINEDALE	WY	RULE COMMUNICATIONS		
K28HL	RIVERTON	WY	RIVERTON FREMONT TV CLUB, INC		
K12MJ	RIVERTON, ETC.	WY	RIVERTON FREMONT TV CLUB, INC		
K58EW	ROCK SPRINGS	WY	LOFLIN CHILDREN'S TRUST - ONE		
K48FE	ROCK SPRINGS	WY	LOFLIN CHILDREN'S TRUST - ONE		
K20FA	ROCK SPRINGS	WY	LOFLIN CHILDREN'S TRUST - TWO		
K56FV	ROCK SPRINGS	WY	LOFLIN CHILDREN'S TRUST - ONE		
K64EP	ROCK SPRINGS	WY	LOFLIN CHILDREN'S TRUST - ONE		
K18ER	ROCK SPRINGS	WY	LOFLIN CHILDREN'S TRUST - TWO		
K30EQ	ROCK SPRINGS	WY	LOFLIN CHILDREN'S TRUST - TWO		
KJCV-LP	SHERIDAN	WY	WESTERN FAMILY TELEVISION, INC		
K09XK	SHERIDAN	WY	KTVQ COMMUNICATIONS, INC.		
K40AQ	SHOSHONI, ETC	WY	RIVERTON FREMONT TV CLUB, INC.		
K42ER	SHOSHONI, ETC	WY	RIVERTON FREMONT TV CLUB, INC.		
K32EL	SHOSHONI, ETC	WY	RIVERTON FREMONT TV CLUB, INC.		
K38EK	SHOSHONI, ETC	WY	RIVERTON FREMONT TV CLUB, INC.		
K25ID	TETON VILLAGE	WY	CENTRAL WYOMING COLLEGE		

Home | Sign Up | News | FAQ | Info | Login

**TV  
CONVERTER BOX  
COUPON PROGRAM**

1.888.712.8827 | www.ntia.gov

**Welcome,  
Guest**

Login  
Sign Up  
Retailer Agreement  
CECB List  
Helpful Links  
FAR

**Coupon Eligible Converter Boxes (CECB)**

The NTIA will maintain a list of approved CECBs to distribute to consumers and participating retailers.

The following is the list of approved CECBs.

- AMTC AT-2016
- AccessHD DTA1010U
- AccessHD DTA1010D
- AccessHD DTA1020D
- AccessHD DTA1020U
- Apex DT1002
- Apex DT1001
- Artec T3A
- CASTI CAX-01
- COSHIP N9900T
- DigitalSTREAM D2A1D20
- DigitalSTREAM D2A1D10
- Goodmind DTA900
- Insignia NS-DXA1
- Lasonic LTA-260
- Lasonic LTR-260
- Magnavox TB100MW9
- Magnavox TB-100MG9\*
- MaxMedia MMDTVB03
- MicroGEM MG2000
- Mustek MAT-K50
- Philco TB150HH9\*
- Philco TB100HH9\*
- RCA DTA 800A

NTIA TV Converter Box Coupon Program

analog signals through to the TV set.

[Contact Us](#) | [Privacy Policy](#) | [Login](#)



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Telecommunications and**  
**Information Administration**  
Washington, D.C. 20230

MAR 13 2008

The Honorable John D. Dingell  
Chairman  
Committee on Energy and Commerce  
House of Representatives  
Washington, DC 20515

Attention: Philip Murphy

Dear Chairman Dingell:

I appreciate the opportunity to have testified before the Subcommittee on Telecommunications and the Internet concerning the "Status of the DTV Transition: 370 Days and Counting" on February 13, 2008. I am pleased to provide the enclosed answers to the questions posed by Representative Mary Bono Mack.

If you have any further questions, please do not hesitate to contact me or James Wasilewski, NTIA's Director for Congressional Affairs, at (202) 482-1551.

Sincerely,

A handwritten signature in black ink that reads "MABaker" with a long horizontal stroke extending to the right.

Meredith Attwell Baker  
Acting Assistant Secretary for Communications  
and Information

Enclosure

**Hearing on the Status of the DTV Transition – 307 Days and Counting  
Subcommittee on Telecommunications and the Internet  
February 13, 2008**

**Questions for the Record from Rep. Mary Bono Mack**

**Question 1: As you may know, I have low-power television stations in my district. I would like to know how many converter boxes have “pass-through” technology and are there more boxes with “pass-through” on the way or in development? And, are there any plans to make consumers aware of this issue?**

**Answer:** As of March 11, 2008, NTIA had certified the following six coupon-eligible converter boxes which contain an analog signal pass-through feature:

- ECHOSTAR TR-40
- DIGITAL STREAM DX8700
- DIGITAL STREAM DSP7700T
- Magnavox TB-100MG9
- Philco TB100HH9
- Philco TB150HH9

NTIA highlights the coupon eligible converter boxes that have an analog signal pass-through feature in the listings on its website and in consumer mailings. In February 2008, NTIA sent a letter to all manufacturers who have expressed interest in producing a coupon-eligible converter box encouraging them to include the analog signal pass-through feature in their product. NTIA understands from manufacturers that a number of converter boxes that include the analog pass-through feature are under development.

Highlighting the coupon-eligible converter boxes that include the analog pass-through feature is just one aspect of our efforts to inform consumers. To help consumers determine whether they are watching a low-power or translator station, NTIA has placed a listing of all stations licensed by the Federal Communications on its website, searchable by state. The NTIA website is [www.ntia.doc.gov/dtvcoupon/LPTVmap.html](http://www.ntia.doc.gov/dtvcoupon/LPTVmap.html). In addition, NTIA has placed questions about low-power/translator stations on the Coupon Program home page, [www.dtv2009.gov](http://www.dtv2009.gov), to assist viewers in understanding their options on how to receive low-power facilities.

NTIA is also reaching out to translator and low-power station operators. NTIA currently operates a grant program so translators and low-power stations can convert the incoming digital signal of a full-power television station to analog for transmission on the low-power station's analog channel. NTIA has mailed helpful information to these station operators so that they can inform their viewers of the options they have regarding the digital transition.

**Question 2: Switching gears for a second, it is my understanding that 11 out of the 12 government agencies that encumber the Advanced Wireless Services spectrum have been coordinating with the licensees during the transition. It has also come to my attention that there has been some difficulty with licensees coordinating with the Department of Defense. As the agency with oversight over the transition, what is the National Telecommunications and Information Administration doing to help this situation?**

All twelve federal agencies relocating to make way for Advanced Wireless Services (AWS) are coordinating with commercial licensees during the transition. To date, the Department of Defense (DOD) has met its target deadlines for vacating the band.

The Department of Defense (DOD) has dedicated a web-based portal for reviewing the many coordination requests from the AWS licensees seeking to enter markets prior to DOD's scheduled move. Where companies seek to deploy earlier than the dates to which DOD committed, many radio interference interactions come into play. In general, where its operations are limited, DOD has expedited resolution of predicted interference conflicts that would prevent early entrance. One year into the transition, DOD has responded to over 110 requests. Depending on the extent of its operations, DOD may need to perform complex analysis and interact directly with AWS companies. NTIA reviews these analytical methods, and where possible, facilitates communication of the results to AWS companies.

Some major markets present critical national defense and preparedness issues. DOD maintains extensive defense system development and preparedness training or operations there. These markets present challenges for AWS licensees seeking to enter earlier than scheduled.

NTIA fully understands the desires of AWS licensees to enter key markets as quickly as possible. NTIA is overseeing developments. Where AWS licensees identify new or particular issues, NTIA will facilitate negotiations with DOD. In addition, NTIA conducts monthly meetings with federal agencies. There, NTIA identifies and addresses any potential relocation issues that might delay a successful transition.

Please be assured that NTIA will continue to work closely with both sides to ensure that AWS licensees can access the valuable spectrum resource as quickly as possible, while at the same time safeguarding the defense operations critical to the regions involved and the nation as a whole.



The Honorable John D. Dingell  
Chairman, Committee on Energy and Commerce  
United States House of Representatives  
Washington, DC 20515-6115

March 13, 2008

Dear Chairman Dingell:

Thank you for the opportunity you gave me to testify before the Committee on February 13, 2008. The Community Broadcasters Association ("CBA") and I very much appreciated being able to express our views on the very important digital television conversion process.

This will respond to your supplemental questions, posed in your letter of March 7, 2008:

1. It has been reported that Chairman Martin has circulated a proposal at the Federal Communications Commission (FCC) that would enable Class A low-power stations to transition to full-power status in relatively short order. Could such a move, on what could be a very large scale, be accomplished without causing harmful interference to existing full-power broadcasters?

Since virtually all full power television stations have been assigned digital channels and operating parameters, I do not see how the conversion of Class A stations to full-power status could have any adverse impact on such stations. The Community Broadcasters Protection Act of 1999 has always required Class A stations to yield their spectrum priority when a full power station faces technical problems that impede its transition to digital operation (47 USC Sec. 336(f)(1)(D)), and Class A applicants were required to certify that they complied with all FCC interference rules when they first applied for Class A status (47 USC Sec. 336(f)(7)). CBA would expect that when converting from analog to digital operation, a Class A station could be required to demonstrate that no pre-existing full power station would receive prohibited interference. The further change from Class A to full power status would thus not result in any new interference, as the existing interference rules for Class A stations are no less strict than those applicable among full power stations.

I also suggest that a transition to full power status would not likely be on a "very large scale," as the operating requirements for full power status are significant. Some Class A stations might not be able to comply, and some others might prefer to forego full power status rather than assume new burdensome requirements.

There would be many benefits from permitting those Class A stations that can qualify and wish to transition to full power status to do so. Class A stations all carry local programming and are the only broadcast service required by law to do so (47 USC Sec. 336(f)(1)(E)(2)(A)). They



also represent diversity of ownership, as the industry is not concentrated; and these stations offer an excellent opportunity for entry by minority and female owners. FCC Chairman Martin's proposal to open the door to full power status for qualifying Class A status would advance diversity and localism in both programming and ownership.

2. I want to be sure that low-power stations are properly educating their viewers about the digital television (DTV) transition. Will your members commit to running accurate public service announcements to inform viewers in markets served by both full-power and low-power broadcasters about how to prepare for the DTV transition?

The CBA has no intent or desire to mislead the public. CBA hopes that the full power broadcasting and electronics industries will take the same approach. We feel that public announcements that "all analog television will end in 2009" were and still are misleading. While we appreciate the fact that government agencies have been making an effort to correct that misstatement, we continue to find the statement being promulgated in some governmental material and in a substantial amount of educational material disseminated by private industry, including in-store displays by retailers. We have asked the private broadcasters, manufacturers, and retailers to improve the accuracy of the information they disseminate, with very limited success. After recent meetings with these industries, CBA is pessimistic and doubts that their messages will fully inform the public.

We feel strongly that the public is entitled to know that most of the digital converter boxes approved by NTIA and all the boxes currently available in retail stores will prevent viewers from watching analog Class A, Low Power TV, and TV Translator stations, unless signals splitters and wiring arrangements are used that we believe are beyond the competence of the vast majority of viewers. We intend to so inform the public and to encourage the public not to purchase such boxes if they wish to view our stations. We are encouraging viewers of our stations to purchase new television sets or other equipment that tunes both analog and digital signals. Please note, however, that the CBA has no control over the content of any announcements or messages produced or broadcast by any particular station.

3. I have some concerns about a video clip and information about the DTV transition as it relates to low-power broadcasters that I saw posted at [www.KeepUsOn.com](http://www.KeepUsOn.com). In that video and on that Web site, you allege that there is a scam going on with respect to the converter box coupon program. Are you alleging that Congress is perpetrating a scam with respect to the converter box coupon program? Are you alleging that the FCC or the National Telecommunications Information Administration (NTIA) is perpetrating a scam with respect to the converter box coupon program? Who would you say is perpetrating a scam with respect to the converter box coupon program?

We believe that NTIA acted contrary to law and opened the door to violations of the All Channel Receiver Act (47 USC Sec. 303(s)) when it adopted regulations that did not require analog tuners to be included in digital converter boxes and gave its stamp of approval to boxes without analog tuners. To that extent, we believe that taxpayer dollars were and are being misspent in the coupon program, and the public has been misled by not being adequately warned



of the pitfalls of using boxes that block analog signals. However, we do not wish the discussion over the merits of the converter box problem to be diverted to concern over particular words. We have accordingly, as you requested, removed all use of the word “scam” from the [keepuson.com](http://keepuson.com) website.

4. In the video clip and information posted at [www.KeepUsOn.com](http://www.KeepUsOn.com), you tell viewers that they should only purchase converter boxes that include both an Advanced Television Systems Committee (ATSC) tuner and a National Television Standards Committee (NTSC) tuner. Why doesn't your video or Web site mention that consumers can obtain a converter box that includes the analog pass-through feature? Has any manufacturer produced a converter box that includes both an ATSC and NTSC tuner? Would a converter box that includes both an ATSC and NTSC tuner be eligible for NTIA's TV converter box program?

We believe that analog pass-through does not comply with the All Channel Receiver Act; and beyond that, analog pass-through is likely to be confusing to viewers because of the need to use two remote control devices and to re-tune an analog TV set to Channel 3 or 4 when returning to a digital station after viewing an analog station. While some viewers may choose to purchase converter boxes with analog pass-through, we do not think that we should actively encourage such purchases. We believe that consumers will be better off if they purchase a device with both analog and digital tuners, including a new TV receiver if need be, and that the disadvantages of pass-through are such that purchase of a better device should be recommended even if the coupon subsidy becomes unavailable because of NTIA's refusal to require all-channel receiving capability.

We have found at least one stand-alone converter box that has both analog and digital tuners for a price of approximately \$250. However, we have also found complete LCD television receivers with dual analog and digital tuners in the \$200-250 retail price range, as well as new conventional glass picture tube television sets with dual tuners for less than \$95 retail. It is also possible to purchase a DVD recorder with dual tuners for about \$135, and the output of that device feeds any analog TV receiver without any further equipment or wiring. Even though these devices are not eligible for a coupon subsidy, we believe that consumers will have more flexibility and ease of use if they buy dual-tuner devices than if they purchase any of the subsidized converter boxes now on retail shelves. The additional cost is well worthwhile and very reasonable, considering that the consumer will end up with a new TV set or video recorder instead of just a tuner.

Ultimately, each consumer must decide for him or herself whether the \$40 subsidy is worth the penalty of losing access to some 7,212 favored analog Class A, LPTV, and TV Translator stations and ending up with a device that is confusing and difficult to use, or whether buying a new TV set or recorder that can receive all television stations, as Congress intended when it passed the All Channel Receiver Act, is the better approach. We also believe that Congress should correct the disservice to the public that results from forcing them to buy an inferior device to use their coupons and that viewers should be permitted to use their coupons to purchase any device with digital tuning capability.



Respectfully yours,

Ronald J. Bruno  
President, Community Broadcasters Association

cc: The Honorable Joe Barton, Ranking Member  
Committee on Energy and Commerce

The Honorable Edward J. Markey, Chairman Subcommittee on Telecommunications and  
the Internet

The Honorable Cliff Stearns, Ranking Member Subcommittee on Telecommunications  
and the Internet



FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON

OFFICE OF  
THE CHAIRMAN

The Honorable John D. Dingell  
Chairman  
Committee on Energy and Commerce  
U.S. House of Representatives  
2125 Rayburn House Office Building  
Washington, DC 20515

Dear Chairman Dingell:

Please find enclosed my responses to the Questions for the Record from the February 13, 2008 Subcommittee on Telecommunications and the Internet hearing.

Please contact me if I can be of any further assistance.

Sincerely,

A handwritten signature in black ink that reads "Kevin J. Martin".

Kevin J. Martin  
Chairman

Enclosure

cc: The Honorable Joe Barton, Ranking Member  
Committee on Energy and Commerce

The Honorable Edward J. Markey, Chairman  
Subcommittee on Telecommunications and the Internet

The Honorable Cliff Stearns, Ranking Member  
Subcommittee on Telecommunications and the Internet

The Honorable Fred Upton, Member  
Subcommittee on Telecommunications and the Internet

U.S. HOUSE OF REPRESENTATIVES  
COMMITTEE ON ENERGY AND COMMERCE  
SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET  
STATUS OF THE DTV TRANSITION: 370 AND COUNTING  
QUESTIONS FOR THE RECORD  
FOR  
FEDERAL COMMUNICATIONS COMMISSION  
CHAIRMAN KEVIN J. MARTIN

FEBRUARY 13, 2008

PLEASE RETURN TO THE SUBCOMMITTEE ON TELECOMMUNICATIONS AND  
THE INTERNET BY MARCH 21, 2008

**Questions for the Record from The Honorable Joe Barton  
to Chairman Kevin Martin**

- 1. Chairman Martin, in 1996, the Federal Communications Commission (FCC) selected the Advanced Television Systems Committee (ATSC) standards for digital television. What patents are essential for manufacturers to make and sell ATSC televisions in the United States? How do manufacturers gain access to those patents? Has access to those patents been an issue in the ability of manufacturers to produce digital televisions and digital-to-analog converter boxes?**

**Response:** The Commission does not maintain a list of the patents on the numerous technologies used in the ATSC standard, nor is there a single private compendium that lists those patents or the holders of rights to those patents. Rather, manufacturers may identify the ATSC patents and those holding the patent rights by conducting patent searches as they would with any other technology. The Commission staff, however, has obtained information from the Advanced Television Systems Committee, the Consumer Electronics Association, FCC decisions, *ex parte* presentations by parties opposing royalty payments and the Internet (as indicated below) to respond to the specific questions as outlined below.

**Question a): What patents are essential for manufacturers to make and sell ATSC televisions in the United States?**

**Response:** We believe that there are at least 17 entities licensing patents that are essential to the manufacture of ATSC receivers. One entity, MPEG LA, manages a portfolio of 32 ATSC patents for seven patent holders. Information on the MPEG LA patent portfolio, patents, and patent holders is available at <http://www.mpegla.com>. LG Electronics, Inc., which participates in the MPEG LA portfolio, also has patents for the 8-VSB system which it licenses separately. The Commission does not have information regarding the specific patent numbers or terms of license for LG's 8-VSB patents. Dolby Laboratories Inc. holds the patent for the AC-3 digital audio technology used in the ATSC standard. Information on the Dolby patent is available at <http://www.freepatentsonline.com/7283965.html>. In addition, Tri-Vision Electronics Inc. holds the rights to the patent for the ATSC v-chip parental control program blocking technology. Information on the Tri-Vision and the v-chip technology is available at <http://www.tri-vision.ca>. The U.S. patent numbers for the above technologies are provided in materials that are attached separately. There also may be additional patents for technologies used in the ATSC standard that are not included in the above sources. Copies of the information available on the websites discussed above also are attached (*See Appendix A*).

**Question b): How do manufacturers gain access to those patents?**

**Response:** Manufacturers independently conduct patent searches and then contact the holders of the patents they identify to arrange for the rights to manufacture devices that use the protected technologies. It is the ATSC's policy that participants in the ATSC standards process offer patent licenses on a "reasonable and non-discriminatory" (RAND) basis. In addition, the Commission premised its decision to adopt the ATSC's DTV system as the U.S. standard on reasonable and non-discriminatory licensing of patents. Nevertheless, individual negotiation with each patent holder or portfolio manager is necessary. There also may be parties not participating in the ATSC process who assert ownership of essential patent rights. Further, some of such non-participants may elect to assert their patent rights at a later time.

**Question c): Has access to those patents been an issue in the ability of manufacturers to produce digital televisions and digital-to-analog converter boxes?**

**Response:** The ATSC requires that participants with essential patent claims to technologies used in the standard make their technologies available on a "reasonable and non-discriminatory" (RAND) basis. The ATSC also requires participants holding patent rights to sign a patent statement affirming this commitment. More information is available in the ATSC Patent Policy available on the ATSC website ([http://www.atsc.org/policy\\_documents/B-4%20Patent%20Policy%2012-13-07.doc](http://www.atsc.org/policy_documents/B-4%20Patent%20Policy%2012-13-07.doc).) At least 17 ATSC participants assert ownership of essential patents which may amount to thousands of claims in hundreds of patents. The ATSC patent statements as signed by original patent holders are available at <http://www.atsc.org/patentstatements.html>. A copy of the ATSC patent policy and the ATSC patent statements submitted by patent holders from that website is attached (*See Appendix B*).

It is also important to note that only participants in the ATSC standards development process are covered by the ATSC patent policy. The identities and actions of other entities that may hold essential claims are not known at this time. Many of the original ATSC patent holders have sold or assigned their patent rights to other entities (see, for example, the list of patent holders participating in the MPEG LA portfolio, several of which are not included in those signing the original ATSC statements) (*See Appendix A*), but the requirement to adhere to the RAND commitment in the ATSC patent statements continues to apply to subsequent rights holders. In its 1996 decision adopting the ATSC standard as the U.S. DTV standard, the Commission stated that the standard is premised on the reasonable and non-discriminatory licensing of relevant patents. The Commission also concluded that greater regulatory involvement was not necessary at that time. The Commission indicated, however, that it remained committed to this

principle and would take appropriate action if a future problem is brought to its attention. See, *Fourth Report and Order* in MM Docket No. 87-268, 11 FCC Rcd 17771 (1996).

No party has filed a formal complaint with the Commission regarding access to patents to produce digital televisions or digital-to-analog converter boxes. The Commission is aware of some issues regarding access to patent rights. Several parties have made presentations to the Commission concerning the acquisition of one of the ATSC patents (U.S. patent No. 5,243,627) by Rembrandt Technologies, and the amount of the license fees that the company is requesting from TV networks and transmission equipment manufacturers. More recently, the "Coalition United to Terminate Financial Abuse of the Television Transition" has made informal presentations to the Commission asserting that high rates for ATSC patent royalties are increasing the price of DTV receivers. In addition, the Consumer Electronics Association has requested that the Commission clarify its rules with respect to DTV V-chip functionality based in part on concern that patent royalties demanded by Tri-Vision, a Canadian entity, would adversely affect the price of DTV receivers (see, *Petition for Clarification and/or Reconsideration of the Commission's Report and Order* in MB Docket No. 03-15).

**Questions for the Record from The Honorable Cliff Stearns  
to Chairman Kevin Martin**

- 1. Chairman Martin, one of the issues that came up at the hearing was the impact of the transition on low-power broadcasters. Before Congress or the FCC can determine what action, if any, needs to be taken, it is important we get the relevant information. Please work with the broadcasters to create an electronically searchable chart listing all Class A, low-power, and translator stations. For each, please indicate the following information, which will enable targeted consumer education and help manufacturers and retailers meet demand for converter boxes with an analog pass-through feature? If any of the information is not available to the FCC, please explain why, and possible other sources of the information.**
- a. The call letters of the station;**
  - b. Whether the station is a Class A, a low power-station, or a translator station;**
  - c. The designated market area that the station falls within;**
  - d. What network affiliation, if any, the station has;**
  - e. Whether and when the station has indicated it plans to transition to digital;**
  - f. Whether the station serves communities that are not located within the coverage area of any other full-power television stations;**
  - g. How many people watch the station; and**
  - h. The ZIP codes that fall within the station's authorized service area.**

**Response:** Commission staff has compiled a list of all licensed Class A, Low Power, and TV Translator stations in the United States and territories. This list of stations is currently is available on the Commission's webpage at <http://www.dtv.gov/consumercorner.html#faq22>. The database file includes the call letters (or number), station type, the community of license and state, licensee name, channel, digital application type and status, affiliation (where available), Designated Market Area ("DMA"), DMA rank, whether the station is licensed to a community that is only served by low power stations, and the zip codes that fall within a 20-mile radius of the stations' geographical coordinates. However, there are approximately 20 stations where no zip code data is available within the 20-mile radius of the station coordinates.

The Commission does not maintain data on the viewership of low power stations. Commission staff has asked the low power broadcasters for the information, but it is our understanding that the industry does not maintain such data. Nielsen Media Research collects viewership data for a limited number (approximately 500) of Class A and low power television stations. These data are subject to a licensing agreement that does not authorize the Commission to release the data to parties outside the Commission. Commission staff is working with Nielsen to determine whether Nielsen viewership data can be publicly disclosed.

Staff is also exploring the implementation of a web-based search tool that would allow the public to easily determine the low power stations in their area.

**Questions for the Record from The Honorable Fred Upton  
to Chairman Kevin Martin**

- 1. Chairman Martin, my understanding is that some full-power broadcasters are still waiting on FCC decisions so they can finish preparing for the digital transition. Please provide a list of all the items the FCC and its bureaus and offices must still issue so broadcasters can complete constructing their digital facilities, such as waiver requests, approvals or modifications of construction permits, final licenses, maximization petitions, and reconsiderations of the 7<sup>th</sup> Report and Order. Please also provide a list of all pending and planned non-DTV-related decisions you anticipate the Commission might address between now and February 17, 2009, that will involve the Media Bureau and or the Office of Engineering and Technology.**

**Response:** Full power broadcasters are not waiting for rulemaking decisions at this time to construct facilities. The Commission issued its Final DTV Table of Allotments and DTV channel assignments last August. In response, we received some Petitions for Reconsideration. On March 6, 2008, the Commission released an *Order* which resolved the outstanding Petitions for Reconsideration concerning the Final DTV Table of Allotments. Thus, the DTV channel assignments for full-power television stations have been finalized, and no waiver requests are pending with the Commission at this time.

The Video Division of the Commission's Media Bureau has been processing and acting on applications for construction permits and modifications as the applications are received. In general, applications for construction permits are acted on within three to five business days of the date on which the application is received. Some of the applicants, however, are required to obtain FAA approval, zoning approval or international coordination before a decision may be issued by the Commission.

As the Commission provided in the *Third DTV Periodic Review Report and Order* last December, broadcasters may file requests to maximize their DTV facilities in August 2008. The *Third Periodic* also permits a broadcaster that is filing an application to construct its post-transition digital facility on a different channel to request an expansion of up to 5 miles if the expansion is necessary to serve the station's current analog viewers. Approximately 50 DTV applications for post transition DTV operation have taken advantage of the up to 5 mile contour flexibility.

The Commission's Office of Engineering and Technology (OET) and the Media Bureau are working with the International Bureau concerning negotiations with Canada and Mexico for agreements on digital television channels in the border areas. The Media Bureau provides policy assistance and OET provides

engineering analysis and database support to this effort.

Before broadcasters in the border areas with Mexico and Canada can transition their facilities to digital, the United States must receive approval from the Mexican and Canadian governments for facilities that may interfere with Mexican and Canadian broadcast stations. The United States (in negotiations led by the State Department, with Commission participation), has been discussing mechanisms for implementing the DTV transition for the past few years with both Canada and Mexico. As a result, Mexico and Canada have agreed to develop a DTV plan and associated agreements to facilitate changes to the DTV plan going forward. The Commission's goal is to reach agreement on a DTV plan with both Canada and Mexico within the next few months. Once an agreement is concluded on the DTV plans for the Mexico and Canada border areas, U.S. broadcast stations in these areas will be entitled to operate in accordance with the plan and Commission rules.

The lists of non-DTV related matters that the Commission may address involving the Media Bureau or OET are attached (*See Appendix C*).

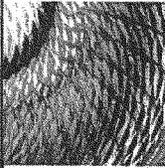
## **APPENDIX A**

**Appendix A**  
**ATSC Patents**

ATSC

MPEG LA

INTRO
PATENT LIST
ESSENTIALITY
LICENSES
AGREEMENT
FAQ



-  MPEG-2
-  ATSC
-  AVCHD.964
-  VC-1
-  MPEG-4 VISUAL
-  MPEG-2 SYSTEMS
-  DVB-T
-  1394
-  MPEG-4 SYSTEMS
-  PROGRAMS IN DEVELOPMENT
-  HOME

### INTRODUCTION

MPEG LA's ATSC Patent Portfolio License provides fair, reasonable, nondiscriminatory access to patents that are essential to use of the digital television standard developed by the Advanced Television Systems Committee (ATSC) and used in digital televisions sold in the United States, South Korea, Mexico, Canada and other countries. The License is offered as a convenience enabling users to acquire worldwide patent rights from multiple patent owners in a single transaction as an alternative to negotiating individual licenses.

MPEG LA's ATSC Patent Portfolio License currently includes patents owned by Koninklijke Philips Electronics N.V., LG Electronics Inc., Matsushita Electric Industrial Co., Ltd. (Panasonic), Mitsubishi Electric Corporation, Samsung Electronics Co., Ltd., Scientific-Atlanta, Inc. and Zenith Electronics LLC.\*

MPEG LA's goal is to provide worldwide access to as much ATSC essential intellectual property as possible; new essential patents and new Licensors may be added to the Patent Portfolio License at no additional royalty during the current license term.

\* Coverage for use of the MPEG-2 Video and Systems standard used in ATSC products is not included in the License. Information regarding a license to patents that are essential to the MPEG-2 Video and Systems standard may be obtained at <http://www.mpegla.com/m2>.

IMAGES COURTESY OF  
PS&D GALLERIES / LINDA TAGLIARINIA

© 2004 MPEG LA, LLC

**ATSC**

INTRO | PATENT LIST | ESSENTIALITY | **LICENSORS** | LICENSEES | AGREEMENT | FAQ

**MPEG LA**

### LICENSORS

Following is a list of patent owners with patents included in the ATSC Patent Portfolio License. Any party that believes it has patents which are essential to the ATSC Standard, and wishes to participate in the ATSC Patent Portfolio License upon successful evaluation, is invited to submit them for evaluation and inclusion. Click here to obtain terms and procedures governing the patent submission process.

**Koninklijke Philips Electronics N.V.**  
**LG Electronics Inc.**  
**Matsushita Electric Industrial Co., Ltd.**  
**Mitsubishi Electric Corporation**  
**Samsung Electronics Co., Ltd.**  
**Scientific-Atlanta, Inc.**  
**Zenith Electronics LLC**

MPEG-2  
ATSC  
AVC/H.264  
VC-1  
MPEG-4 VISUAL  
MPEG-2 SYSTEMS  
DVB-T  
1394  
MPEG-4 SYSTEMS  
PROGRAMS IN DEVELOPMENT  
HOME

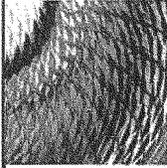
IMAGES COURTESY OF  
PSMO-GALLERIES / LIRD TAGLIAPETRA

© 2004 MPEG LA, LLC

# ATSC



INTRO
PATENT LIST
ESSENTIALITY
LICENSING OPS
LICENSEES
AGREEMENT
FAQ



- [MPEG-2](#)
- [ATSC](#)
- [AVC/H.264](#)
- [VC-1](#)
- [MPEG-4 VISUAL](#)
- [MPEG-2 SYSTEMS](#)
- [DVB-T](#)
- [1394](#)
- [MPEG-4 SYSTEMS](#)
- [PROGRAMS IN DEVELOPMENT](#)
- [HOME](#)

## LICENSE AGREEMENT



*You may click on the image above to submit your request for a copy of the Portfolio License and it will be sent to you promptly*

*This briefing provides an outline of the License. It is for information purposes only. The actual license agreement provides the only definitive and reliable statement of license terms.*

Click [here](#) to download the PowerPoint Presentation.

(If you don't have PowerPoint, you can download the viewer [here](#).)

### Licensing Coverage

The ATSC Patent Portfolio License grants rights under patents listed in Attachment 1 to the License that are essential for implementing the ATSC Standard (see Sections 1.3, 1.4, 1.5, 1.8, 1.15).

The sublicense granted by the License for ATSC Receiver Products (Section 2.1) is royalty-bearing, worldwide, nonexclusive and nontransferable. New Licensors and essential patents may be added following a determination of their essentiality (the Attachment 1 patent list is updated on a regular basis to include them) at no additional cost during the current term, and coverage is for the entire term. Under agreement with MPEG LA, Licensors are required to include all essential ATSC patents that they or their affiliates have the right to license or sublicense (4th Whereas clause).

### Product Categories and Royalties

Under the ATSC Patent Portfolio License, the party that offers ATSC Receiver Products (Section 1.6) for "Sale" (Section 1.16) to the End User (Section 1.11) is responsible for royalties on those Products either manufactured or sold in a country with one or more Portfolio patents. The royalty is \$5.00 for each ATSC Receiver Product (Sections 1.6 and 3.11) from January 1, 1998 (Section 3.3.2).

**License Term**

Coverage is from December 24, 1996 (Section 0.1). The initial license term is through December 31, 2016 (Section 6.1). Following that, Licensees have the right of renewal for successive five-year periods for the life of any ATSC Patent Portfolio Patent, subject to reasonable amendment of royalty terms and rates (not to increase by more than 10% for a specific licensed product and license grant on each 5-year renewal) to suit prevailing market conditions, changes in technological environment and available commercial products at the time of renewal.

**Other important provisions**

A Licensor may instruct MPEG LA to remove its patents from coverage as to a particular Licensee if that Licensee brings a lawsuit or other proceeding for infringement of an ATSC Related Patent (Section 1.7) or an ATSC Essential Patent (Section 1.3) against the Licensor and has refused to grant the Licensor a license on fair and reasonable terms and conditions under such patents on which the lawsuit is based (one example of which is the Licensor's per patent share of royalties payable under the License). The reason for this provision (Section 6.3) is that the License is to protect companies from being sued for using ATSC but should not be used to protect a Licensee benefiting from a Licensor's ATSC essential patents so that it can sue others; it encourages negotiation and innovation in support of the ATSC standard.

Any Licensee is free to add ATSC essential patents to the Portfolio that it and its affiliates may own on the same terms and conditions as all other Licensors (Section 7.4). If a Licensee chooses not to do so, however, it must agree to license such patents on fair and reasonable terms (one example of which is the Licensors' per patent share of royalties payable under the License). The purpose of this provision (Section 7.3) is to assure, for the benefit of all Licensees, that a Licensee does not take advantage of the ATSC Patent Portfolio License, on the one hand, yet refuse to license its own ATSC essential patents on fair and reasonable terms.

A most favorable royalty rates provision (Section 7.7) is included to assure Licensees that no Licensee will be granted an ATSC Patent Portfolio License with more favorable royalty rates than those provided for in the License.

Licensees are responsible for making accurate royalty reports and payments which are subject to withholding of any taxes of Licensors required by applicable law and to audit by MPEG LA (Article 3).

The ATSC Patent Portfolio License is provided for the convenience of Licensees in acquiring patent rights necessary for compliance with the ATSC Standard from multiple Licensors in a single transaction as an alternative to negotiating individual license agreements with each of them. No representation is or can be made that all ATSC Standard patents are included or that other patents may not be infringed or necessary (Article 4).

Licensee information is treated as confidential (Article 5).

IMAGES COURTESY OF

REGIO GALLERIE LINO TAGLIAPIETRA

© 2004 MPEG LA, LLC

**Koninklijke Philips Electronics N.V.**

US 5,684,541

**LG Electronics, Inc.**

US Re. 36,919

US 6,175,718

US 7,051,359

US 7,051,361

US 7,080,401

US 7,100,189

KR 348,249

**Matsushita Electric Industrial Co., Ltd.**

US Re. 38,483

US Re. 38,513  
MX 244,296

US Re. 39,111

US 5,999,569

KR 161,051

**Mitsubishi Electric Corporation**

US 5,488,418

US 5,734,430

US 5,793,432

**Samsung Electronics Co., Ltd.**

US 6,016,172

US 6,104,436  
CN 98103912.X

US 6,184,938

US 6,480,239

US 6,937,292

KR 100,718

KR 134,327

KR 138,289

KR 156,496

KR 194,033

KR 195,177

KR 246,792

KR 329,417

KR 369,579

**Scientific-Atlanta, Inc.**

US 5,600,378

US 6,215,530

Zenith Electronics LLC<sup>†</sup>

US Re. 36,992  
BE 556,306  
CA 2,095,435  
DE 69121902.8  
FR 556,306  
GB 556,306  
JP 3,098,028  
KR 119,736  
NL 556,306  
SE 556,306

US 5,406,587

US 5,416,524

US 5,534,938

US 5,598,220

US 5,602,595

AR 1,566

BR 9607071-4

CA 2,207,003

CN 96191365.7

CO 25,850

HK 1,003,406

JP 3,219,773

KR 313,653

MX 202,505

VE 559-96

US 5,619,269

US 5,629,958

BR 9508262-0

CA 2,194,354

CN 95193982.3

JP 3,386,136

KR 274,288

MX 196,500

---

<sup>†</sup> Name change from Zenith Electronics Corporation, effective January 1, 2008.

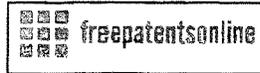
**January 1, 2008**                      **ATSC Attachment 1**  
*[Revised as of January 8, 2008]*  
*[Further Revised as of February 5, 2008]*

**Page 4 of 4**

US 5,677,911  
CA 2,180,245  
CN 94194755.6  
JP 3,258,022  
KR 264,624  
MX 201,976  
TW 255,088

US 5,802,107  
CA 2,266,477  
CN 97197911.1  
HK 1,021,101  
KR 540,316  
MX 210,311  
RU 2,196,390  
SG 61,249  
VN 2,486

US 5,987,070

[Login](#) or [Create Free Account](#)

Search

[Go to Advanced Search](#)[Home](#) | [Search Patents](#) | [Data Services](#) | [Help](#)

Title:

**Delivery and transmission of dolby digital AC-3 over television broadcast**

Document Type and Number:

United States Patent 7283965

Link to this page:

<http://www.freepatentsonline.com/7283965.html>

Abstract:

Methods and apparatus for broadcasting high quality audio "studio direct" with the same digital information employed in the studio by the video producer with AC-3 digital audio signals for broadcast to integrated receiver decoders (IRD). The methods and apparatus permit proper handling of AC-3 data by switching signals to encoders in response to detection of the encoded signals representing compression of the data. Control over individual data bits such as copyright bits is maintained by determining the bit status, comparing it to a preferred status, changing the status if it does not comply with the preferred status, and reevaluating cyclical redundancy check value in each data packet to avoid disruption in the data transmission. In addition, the system includes an uplink device which automatically checks, logs and reports errors in Dolby Digital AC-3 signals by a monitor which employs a processor, a digital audio card and an SMPTE timecode reader. As an option, an ethernet interface may be provided to permit AC-3 transmission to expedite storage and transmission of the audio data by media such as compact disks. The monitor employs a state machine that finds AC-3 packets, locks into the packets and detects discontinuities or loss of signal. The monitor then computes and checks the cyclical redundancy check value of the AC-3 packet found. In addition, the system enables the device to play AC-3 signals such as Dolby Digital out in sync with video signals, regardless of the storage media for the files. A sound card having an input for receiving house reference AES clock pulses enables the AES clock of the playback signal to be locked to the frequency of a production house master as a time code reader or an editor's contact closure match video and audio signals playback.

Ads by Google

**Digital Dvr Hdtv Tv**

High Definition Cable with Dolby Digital Surround Sound.  
Get it now!  
www.RCN.com

**Buy Digital Converter**

Convert Digital Signal to Analog TV With A Digital Box-  
Order Yours Now!  
www.SolidSignal.com/DigitalConvert

**Dolby Decoder**

Find Dolby Decoder. Explore 5,000+ Home Video Choices.  
Shoptilla.com/DvdVcrCombos

**Dolby Digital Cable**

Great deals on everything Dolby Digital Cable themed.  
shopping.yahoo.com

**Affordable Pro Audio Gear**

110% Low Price Guarantee Free Shipping On Qualified  
Orders!  
www.carnaghipro.com

**DIRECTV Official Offer**

Save up to \$305, Free HD or DVR, From \$29.99/mo, Free  
Movie Channels  
www.directstartv.com/DIRECTV

**Dolby Digital**

10+ Dolby Decoders at Great Prices Shop, Compare and  
Save at Pronto.  
Decoder.Pronto.com

**Digital Audio**

Top 5 Websites For Digital Audio  
www.4-all-info.com

**Toslink Optical Cables**

Digital Audio Cables up to 50ft Mini Toslink, Adapters,  
Splitters  
www.AV.Cable.net

Inventors: Michener, James A. (Grass Valley, CA, US)  
Application Number: 09/345659  
Filing Date: 06/30/1999  
Publication Date:

<http://www.freepatentsonline.com/7283965.html>

3/10/2008

View Patent Images: 10/16/2007  
 Images are available in PDF form when logged in. To view PDFs, [Login](#) or [Create Account](#)

Referenced by: [View patents that cite this patent](#)

Export Citation: [Click for automatic bibliography generation](#)

Assignee: The DirecTV Group, Inc. (El Segundo, CA, US)

Primary Class: 704/500

Other Classes: 704/500

International Classes: **G10L19/00**

Field of Search: 348/461, 348/423.1, 348/464, 348/462, 704/500-504, 455/6.3, 455/63.1-63.4, 348/2, 348/423

US Patent References:

<a href="#">5091936</a>	February, 1992	Katznelson et al.	380/237	System for communicating television signals or a plurality of digital audio signals in a standard television line allocation
<a href="#">5712850</a>	January, 1998	Elia et al.	370/326	System for digital broadcasting by satellite
<a href="#">5812976</a>	September, 1998	Ryan	704/201	System and method for interfacing a transport decoder to a bitrate-constrained audio recorder
<a href="#">5835493</a>	November, 1998	Magee et al.	370/395.62	MPEG transport stream remultiplexer
<a href="#">5845249</a>	December, 1998	Malladi et al.	704/270	Microarchitecture of audio core for an MPEG-2 and AC-3 decoder
<a href="#">5915066</a>	June, 1999	Katayama	386/70	Output control system for switchable audio channels
<a href="#">5917836</a>	June, 1999	Ichikawa et al.	371/37.4	Data decoding apparatus and method and data reproduction apparatus
<a href="#">5956674</a>	September, 1999	Smyth et al.	704/229	Multi-channel predictive subband audio coder using psychoacoustic adaptive bit allocation in frequency, time and over the multiple channels
<a href="#">5974380</a>	October, 1999	Smyth et al.	704/229	Multi-channel audio decoder
<a href="#">6002687</a>	December, 1999	Magee et al.	370/394	MPEG transport stream remultiplexer

<u>6009389</u>	December, 1999	Dokic et al.	704/228	Dual processor audio decoder and methods with sustained data pipelining during error conditions
<u>6029126</u>	February, 2000	Malvar	704/204	Scalable audio coder and decoder
<u>6041295</u>	March, 2000	Hinderks	704/206	Comparing CODEC input/output to adjust psycho-acoustic parameters
<u>6061387</u>	May, 2000	Yi	375/142	Method and system for turbo-coded satellite digital audio broadcasting
<u>6108584</u>	August, 2000	Edwards	700/94	Multichannel digital audio decoding method and apparatus
<u>6208802</u>	March, 2001	Mori et al.	386/96	Optical disk, reproduction apparatus, and reproduction method
<u>6226616</u>	May, 2001	You et al.	704/500	Sound quality of established low bit-rate audio coding systems without loss of decoder compatibility
<u>6226758</u>	May, 2001	Gaalaas et al.	713/600	Sample rate conversion of non-audio AES data channels
<u>6253291</u>	June, 2001	Rao et al.	711/147	Methods for processing audio information in a multiple processor audio decoder
<u>6266329</u>	July, 2001	Lazaris-Brunner et al.	370/316	Regional programming in a direct broadcast satellite
<u>6278717</u>	August, 2001	Arsenault et al.	370/477	Dynamic mapping of broadcast resources
<u>6311161</u>	October, 2001	Anderson et al.	704/500	System and method for merging multiple audio streams
<u>6317885</u>	November, 2001	Fries	725/109	Interactive entertainment and information system using television set-top box
<u>6332119</u>	December, 2001	Hinderks	704/206	Adjustable CODEC with adjustable parameters
<u>6341375</u>	January, 2002	Watkins	725/100	Video on demand DVD system
<u>6357029</u>	March, 2002	Sinha et al.	714/752	Joint multiple program error concealment for digital audio broadcasting and other applications
<u>6360368</u>	March, 2002	Chawla	725/94	Method and apparatus for reducing overhead associated with content playback on a multiple channel digital media

				server having analog output
				Priority-based bandwidth
				allocation and bandwidth-on-
				demand in a low-earth-orbit
				satellite data communication
				network
<u>6366761</u>	April, 2002	Montpetit	455/12.1	
<u>6498922</u>	December, 2002	Lazaris-Brunner et al.	455/12.1	Regional programming in a direct broadcast satellite
<u>6542518</u>	April, 2003	Miyazawa	370/468	Transport stream generating device and method, and program transmission device
<u>6549241</u>	April, 2003	Hiroi	348/460	Methods and apparatus for processing multimedia broadcasts
<u>6560496</u>	May, 2003	Michener	700/94	Method for altering AC-3 data streams using minimum computation
<u>6584153</u>	June, 2003	Gordon et al.	375/240.13	Data structure and methods for providing an interactive program guide
<u>6584278</u>	June, 2003	Ando et al.	386/98	Information storage medium and information recording/playback system

## Other References:

Johnston, "MPEG-Audio Draft, Description as of Dec. 10,1990", pp. 336-337, 1991 IEEE.

Angelici et al., "New Architecture for an AES-EBU Digital Audio Receiver", pp. 694-698, IEEE.

Li et al, "An AC-3/MPEG multi-standard audio decoder IC", May 8, 1997, Custom Integrated Circuits Conference, 1997, Proceedings of the IEEE 1997; pp. 245-248.

Bergher et al., "Dolby AC-3 and MPEG-2 Audio Decoder IC with 6 Channel Output", Consumer Electronics, IEEE Transactions on vol. 43, Issue 3, Aug. 1997 pp. 567-574 □□.

Tsai et al., "An MPEG audio decoder chip" Consumer Electronics, IEEE Transactions on □□□□vol. 41, Issue 1, Feb. 1995 pp. 89-96 □□.

Biere, D.; A flexible and modular approach for transmission of digital TV and for interactive service Broadcasting Convention, 1995. IBC 95., International □□ Sep. 14-18, 1995 pp. 195-201 □□.

Lau, W.; Chuw, A.; "A common transform engine for MPEG and AC3 audio decoder" □□Consumer Electronics, IEEE Transactions on □□□□vol. 43, Issue 3, Aug. 1997 pp. 559-566 □□.

## Primary Examiner:

Opsasnick, Michael N.

## Attorney, Agent or Firm:

Grunebach, Georgann S.

## Claims:

What is claimed is:

1. The method for automatically measuring, monitoring, and switching signals for audio satellite broadcasts of program content in AC-3 standard format to be transmitted as AES-3 signal bit streams, said audio satellite broadcasts containing meta data, variable dependent upon said program content comprises: determining a predetermined count at which each packet in the AES-3 bit stream is to arrive, disabling a response to receipt of the packet to avoid outputting the data in the packet if it is received before said predetermined count has lapsed from receiving the start of a packet, in an AES-3 signal bit stream generated by an original source of said program content for delivery to program content receivers by a direct broadcast satellite system, said direct broadcast satellite system having an uplink system, said uplink system operable to multiplex, modulate, encode and add conditional access information to said AES-3 bit stream; detecting if disruption occurs while packet is being received, by said uplink system; accepting the packet of AC-3 information for enabling output after a predetermined time period plus the predetermined count from which the last packet started, if a disruption has been detected, and determining whether said last packet comes within 10 milliseconds after an AC-3 packet was predicted to have arrived, and accepting said last packet as a trigger to provide a valid output in response to said detection.
2. The invention as defined in claim 1 wherein said count is a time count.
3. The invention as defined in claim 1 wherein said count is a word count.
4. The invention as defined in claim 1 and further comprising wherein if another packet comes within a time period greater than 10 milliseconds but less than the predetermined number of milliseconds between packets, and preventing output by refusing to accept the packet, received in said interval between N and X for enabling output.
5. A method for controlling the status of channel status bits in multiple data streams, said multiple data streams of satellite broadcast communications operable to provide video, uncompressed stereo digital data in a first language and uncompressed stereo digital data in a least a second language wherein said video, uncompressed stereo digital data in a first language and uncompressed stereo digital data in at least a second language is program content comprises: establishing agreement between the channel status bit buried in an AC-3 packet and the channel status bit buried within the MPEG-2 PES header structure, and regenerating the channel status bits of the AES-3 stream continuing in the IRD for output of AC-3 to feed an external AC-3 decoder so that the channel status bits comply with the bits in the AC-3 data stream which also agrees with the serial data stream between the IRD and the decoder.
6. The invention as defined in claim 5 wherein said channel status bit is a copyright status bit.
7. The invention as defined in claim 5 wherein said establishing agreement comprises parsing the AC-3 bit stream, determining the channel bit status, setting the channel bit status in MPEG-2 PES header, and generating MPEG-2 PES header in an encoder.
8. The invention as defined in claim 7 wherein said establishing agreement

comprises setting the AC-3 audio stream channel status bit to be on, and recalculating the CRC bit in response to changing the channel status bit in the AC-3 audio stream.

9. The invention as defined in claim 8 wherein said setting comprises an operator manually setting said channel status bit.

10. The invention as defined in claim 8 which said setting comprises automatically setting said channel status bit.

11. The invention as defined in claim 8 wherein said establishing agreement comprises setting the AC-3 audio stream channel bit to be off, and recalculating the CRC bit in response to changing the copyright bit status in the AC-3 audio stream.

12. The invention as defined in claim 11 wherein said setting comprises an operator manually setting said copyright bit.

13. The invention as defined in claim 11 which said setting comprises automatically setting said copyright bit.

14. An uplink processor transmitting AC-3 audio streams together with video transmissions as encoded signal bit streams, the uplink processor incorporated within a direct satellite broadcast system, comprising: An extractor that separates a plurality of AES-3 channels from a signal generated by a source of program content, said audio channels each including at least one audio signal having one of a plurality of encoded formats, said encoded formats for the plurality of AES-3 channels together defining one of a plurality of possible playback formats; A plurality of audio encoders corresponding to possible encoded formats; A switch logic input automatically sensing the playback format from the AES-3 channels and redirecting audio signals in accordance with the sensed playback format to the corresponding encoders to process said encoded formats, said corresponding encoders operable to output data in the form of digital transport packets; and A multiplexer, wherein said multiplexer combines said output data with conditional access data, and program data into the encoded signal bit stream, which is uplinked to a satellite in the direct satellite broadcast system.

15. The invention as defined in claim 14, wherein the playback format of the signal varies.

16. The invention as defined in claim 14, wherein the signal includes first and second AES channels, in a first playback mode said first AES channel includes a first uncompressed stereo audio signal for a first piece of content and said second AES channel includes a second uncompressed stereo audio signal for a second piece of content, and in a second playback mode said first AES channel includes a first compressed stereo audio signal for the first piece of content and a second compressed stereo audio signal for the second piece of content and said second AES channel includes a first compressed multichannel audio signal for the first piece of content.

17. The invention as defined in claim 14, wherein said switch logic input senses

the encoded format of one audio signal in one said audio channel to sense the playback format.

18. The invention as defined in claim 17, wherein said switch logic input senses whether the one audio signal is compressed or uncompressed.

19. A method for combining AC-3 audio and video transmissions as encoded signal bit streams in a direct satellite broadcast system with an uplink processor having an encoder for encoding a plurality of selectable audio signal formats, said method comprising: separating a plurality of AES-3 channels from a signal generated by a source of program content, said audio channels each including at least one audio signal having one of a plurality of encoded formats, said encoded formats for the plurality of AES-3 channels together defining one of a plurality of possible playback formats; sensing the playback format from the AES-3 channels; redirecting each sensed audio signal in accordance with the sensed playback format to an encoder corresponding to the signal's encoded format; outputting data from each corresponding encoder in the form of digital transport packets; multiplexing the transport packets with conditional access data and program data into the encoded signal bit stream; and uplinking the encoded signal bit stream to a satellite in the direct satellite broadcast system.

20. The invention as defined in claim 19, wherein the signal includes first and second AES channels, in a first playback mode said first AES channel includes a first uncompressed stereo audio signal for a first piece of content and said second AES channel includes a second uncompressed stereo audio signal for a second piece of content, and in a second playback mode said first AES channel includes a first compressed stereo audio signal for the first piece of content and a second compressed stereo audio signal for the second piece of content and said second AES channel includes a first compressed multichannel audio signal for the first piece of content.

21. The invention as defined in claim 20, wherein the step of sensing the playback format comprises sensing the encoded format of the first AES channel.

22. The invention as defined in claim 21, wherein the step of sensing the playback format comprises sensing whether the one audio signal in the first AES channel is compressed or uncompressed.

23. The invention as defined in claim 20, wherein the playback format of the signal varies between said first and second playback modes.

Description:

## TECHNICAL FIELD

The present invention relates to apparatus and methods for transmitting video and motion picture broadcasts with AC-3 audio compression systems accepted by the Advance Television Systems Committee (ATSC) for the new American terrestrial broadcast digital television standard with direct from the studio multi-channel audio capability.

## BACKGROUND ART

In 1994, AC-3 marketed as Dolby Digital® was accepted by the ATSC as the audio compression system for the new American terrestrial broadcast digital television standard. At that time, DIRECTV® was already delivering digital transmission to the United States via satellite. For audio compression, DIRECTV® was broadcasting using "MPEG level 1" audio compression providing stereo audio. Dolby Digital® AC-3 won the ATSC selection committee by providing for slightly better compression as well as means of handling a wide array of programming modes up to "5.1 channel". 5.1 channels of surround sound provides for five distinct full fidelity channels, representing: right front, center front, left front, right rear and left rear channels, plus one limited bandwidth "Low Frequency Enhancement" channel. This selection of channels matches what has been available for presentation at movie theaters. The technical details for Dolby Digital® AC-3 is well described as part of the ATSC standard in the ATSC document A/52. This document, as well as the entire ATSC specifications, is available on the World Wide Web at [www.atsc.org](http://www.atsc.org).

A satellite broadcaster provides multiple channels of recently released movies available for viewing on a Pay-Per-View (PPV) basis. This service competes with the VHS tape rentals market and companies. A competitive edge may be provided by the combination of convenience and quality.

Dolby Digital® with 5.1 channels surround sound has come available on DVD releases. Tape marketers would have a quality advantage for the home theater segment of this market unless technology could be developed to permit broadcasters to transmit such audio features. In the fall of 1997, DIRECTV® undertook the project to broadcast full 5.1 channels of audio into the homes of their customers. On Jul. 1, 1998 DIRECTV® began regular commercial broadcast of Dolby Digital 5.1 channel surround sound, begin the first broadcaster to provide such a service.

The prior practice for handling audio within a broadcast environment is as follows: Audio starts at the source as either analog audio, or digital audio in a generally uncompressed format. The audio is mixed to a final "release" version and then possibly lightly compressed for delivery to the broadcast facility. At that broadcast facility, the audio would again be brought down to an uncompressed format and at the last step in the broadcast chain be fed to a real time audio compression. This compression step would do the final "heavy" lossy audio compression for transmissions to the integrated receiver decoders (IRD) used by the end customers.

In this project DIRECTV® was first to bring Dolby Digital® that was encoded at the movie studio by broadcasting that audio "studio direct" to the customer. This required the development of specific applications in the art to meet this objective. These developments are not obvious from the existing AC-3 technology itself, and many obstacles had to be overcome to develop "studio direct" broadcasting of this multiple channel audio standard. Specifically, Dolby Digital® contains what is called as "meta data", that being ancillary data that is used to control the decoder process. This "meta data" routinely changes on a scene by scene basis,

depending on plot of the movie. Examples of "meta data" present in a Dolby Digital® data stream are discussed below.

An LFE is a bit which enables the low frequency enhancement channel. Much of the time this is turned off, providing extra bandwidth availability for the main audio channels. It is enabled where the director wishes to "shake the house". A Dialogue Normalization is a value that defines the dynamic range of the audio with respect to the normal dialog level. Mix Level is an information quantity regarding how to mix a 5.1 channel presentation down to a stereo mix. A Surround Sound Mix Level is a control for the down mix (that reduces the number of channels finally output) levels of the surround sound channels for reproduction as stereo or Dolby Pro-Logic outputs. A Compression gain meta tag controls the decoder dynamic range when the end customer selects a mode of operation that provides a narrow dynamic range.

To do a proper job of encoding Dolby Digital® AC-3, all the above meta data must be supplied correctly by someone knowledgeable of the content. The person most qualified to do provide this information is the sound engineer responsible for mixing the movie at the studio. The ability to deliver to the end customer exactly the same compressed data as created by the sound engineer is a very desirable feature, but not readily available for AC-3 multiple channel audio with the previous broadcast technology.

## DISCLOSURE OF INVENTION

The present invention overcomes the above-mentioned disadvantages by providing "studio direct" broadcasting with the audio quality identical to the DVD release, since it would indeed be the same bits that were on a DVD. As a result, the broadcast will air exactly the same bits that were released to the theaters.

Nevertheless, the meta tag disadvantages of "studio direct" for AC-3 is not readily resolved with the technology from previously known developments for broadcasting stereo and Dolby-ProLogic outputs. A problem that has no remedy is that the signal is fragile. Any single bit error causes an error that lasts for 32 milliseconds. However, the invention-provides means for automatic measuring and monitoring an AC-3 signal for quality assurance.

## BRIEF DESCRIPTION OF DRAWINGS

The present invention will be better understood by reference to the following detailed description of a preferred embodiment when read in conjunction with the accompanying drawing in which like reference characters refer to like parts throughout the views and in which,

FIG. 1 is a block diagram of a system for preparing and transmitting studio original audiovisual programming with AC-3 standard multiple channel audio

output to be ultimately received by the user at an individual receiver decoder device (IRD);

FIG. 2 is a diagrammatic view of the Merge portion of the system shown in FIG. 1;

FIG. 3 is a diagrammatic view of the portion of the broadcaster's use segment of the system of FIG. 1;

FIG. 4 is a diagrammatic view of an Uplink system portion shown in FIG. 3;

FIG. 5 is a flow diagram of portion of the Encoder switching circuit shown in FIG. 4;

FIG. 6 is a diagrammatic view of an apparatus for checking logging and reporting errors in an AC-3 signal adapted for use in the encoder shown in FIG. 4; and

FIG. 7 is a state diagram of a processor control algorithm used in the apparatus of FIG. 6.

## **BEST MODE FOR CARRYING OUT THE INVENTION**

The present invention overcomes the above mentioned disadvantages by a process to accomplish "studio direct" broadcast of video and television programming recorded with AC-3. The job of the movie studio audio engineer is first described briefly to put the invention in proper context. As inputs, the engineer takes what may be hundreds of tracks of audio and creatively mixes them to generate a plurality of outputs. The inputs can include: none to dozens of audio tracks that were recorded live and in sync with the live film action; none to dozens of audio tracks that were recorded from the musical score; none to dozens of audio tracks of sound effects tracks; or none to dozens of audio tracks from folio sound artists and other "sweetening sounds".

Each of these tracks is mixed down, on a scene by scene basis, to form many products. The first product is a multi-track master. This master contains a mix of all the live action sounds, folio sounds, music and special effects. This master generally contains separate dialog tracks, often times in several different languages. This master generally contains the mix down to multi-channel (typically 6 channel) theatrical release with additional dialog channels. From this master the audio engineer generates a stereo mix down of the audio for normal broadcast release. The audio engineer also tapes the multiple track master with a single language dialog making the final theatrical release. One of the theatrical release formats is Dolby Digital® AC-3, where the audio engineer, through a computer terminal, supplies all the meta data to the Dolby Digital® encoder. Another release format previously known is stereo/Dolby Prologic.

The preferred embodiment of the present invention may be implemented by

ordering the studio to provide specific contents on two tapes as follows. One tape contains video and uncompressed stereo English digital data and uncompressed stereo second language audio digital data. This tape is identical to the tape that is normally delivered to broadcasters such as DIRECTV®. The second tape contains video, uncompressed stereo English and compressed Dolby Digital® AC-3. Since these tapes are made on Digital Betacam® machines, the audio is recorded digitally. Data can be supplied and delivered from the machine in AES (Audio Engineering Society) standard AES-3. Each AES-3 signal can carry an uncompressed stereo audio. AES-3 can also carry compressed Dolby Digital AC-3 data. The definition of how AC-3 is placed in an AES-3 is in the Appendix B of the ATSC document A/52 as well as documents IEC958 and IEC1937. This interface is well documented and incorporated herein by reference.

The two tape delivery means used in the preferred embodiment was driven by the proliferation of Sony Digital BetaCam® machines within DIRECTV®, but it is not, however, the only method. Dolby Digital® AC-3 is essentially data and can therefore be delivered by the same means as any data. Going through the process of making yet another tape is time consuming by the studio, in that for a two-hour movie, it takes two hours to make a copy of the AC-3 data to videotape. Traditional data delivery means are not constrained by the notion of "real time" and can accomplish the job much faster. Other applicable means for the present invention include but are not limited to the following examples. A CD-ROM may be loaded to contain the AC-3 data. This costs little, for example, about one dollar U.S., and can be done unless than 15 minutes. A digital computer archive tape may be prepared, such as 8 mm or DLT format. This would increase cost about five times but take less than 10 minutes to generate. A computer network, such as the Internet, could deliver Dolby Digital® AC-3, using TCP/IP protocols and file exchange protocols such as File Transfer Protocol (FTP). Depending on the line speed, this could be accomplished in seconds and does not require any media or transportation costs.

At the start of studio use of AC-3, broadcast devices previously available were not capable of playing Dolby Digital® data in sync with video. A prototype of such a device was developed within DIRECTV® and is described below.

The two tapes specifically requested from the studio arrive by common carrier at DIRECTV® and are processed as follows to make an "air tape". The "air tape" is a tape that is played to broadcast on air and is made in the preferred embodiment as described below.

In the above description, all tape machines are Sony Digital Betacam® machines. The two tapes ordered are sync rolled. The stereo English and stereo second language audio tracks are placed into Tekniche® model 6047T compressor. This box does a lossy audio compression of audio and puts out a proprietary data stream of Tekniche, Inc. that occupies one full AES-3 digital audio stream. The pre-encoded AC-3 is then dubbed to the second AES-3 digital audio track on the Betacam® recorders. Signals are delayed in the dubbing process to assure synchronization between audio and video.

Although the above description explains the method currently in use, DIRECTV® is developing prototype equipment that would functionally replace the Sony

Digital BetaCam® with a box that would play the raw "AC3" file as data in sync with video. As shown at 23 in FIG. 2, examples of inputs such as CD-Rom, digital archive tape or an internet site may transfer AC-3 data to a converter 23 for compression and creation of the house master tape to be prepared for cloning and broadcast.

Video input 25 represents at least one of a plurality of components that can be added to the house master tape 27. Inputs include a countdown clock, interstitials such as edited forms of trailers, rating labels, FBI warnings, "stereo" labels and the like to produce an enhanced house master 29. DIRECTV® produces a "count down clock" that is edited at the beginning of each tape. This segment is placed ahead of the content, such as a movie from studio, making a tape ready for air play. The "air play" tape then goes through a quality assurance step at DIRECTV® to verify that the tape was made correctly. A technician monitors the tape. With the large multitude of audio tracks, it is difficult for an operator to monitor all audio tracks. To aid the quality control function of the tape, DIRECTV® developed a box that automatically checks the AC-3 stream, logs errors and alarms. This device is also useful for quality assurance during the air play of the movie. This device was deemed beneficial and necessary since AC-3 is a fragile bitstream. This development of apparatus and method is described below.

Referring now to FIG. 2, a simplified block diagram illustrates the system employed at DIRECTV® to prepare for the studio direct "air" tape to actually be played on air. All blocks may function similarly to previously known broadcast mechanisms represented generally by studio output 14, cloning device 16 and the user 18, with the exception of the "Uplink System" that will be detailed below. The cloning 16 is used by the broadcaster for creating a clone tape that runs simultaneously in sync with another "air" tape for simultaneous back-up to preserve broadcast service. The user 18 routes and uplinks the data for broadcast transmission to the integrated receiver decoders (IRD's) 20. Each IRD 20 outputs consumer standard AES-3 signal to a player decoder 21 in a well known manner.

The user 18 of the preferred embodiment uses a Sony Digital BetaCam® that outputs digital video and audio out a SMPTE 259 serial digital interface known as Serial Digital Interface (SDI). The serial signal goes through a router 22 (FIG. 3), for example, a large central facility router 23 through which DIRECTV® sources feed this router, and this router 22 feeds all destinations. The router 22 preferably provides all on air switching, for example, switching between reels of a movie. The router 22 also permits an operator at a station 24 to observe any signal that is within the facility. The Digital BetaCam® AES-3 and timecode outputs can be fed to an automatic AC-3 monitor 26, either in preparation or during on-air use, as described in this disclosure to log and report errors in the AC-3 signal.

The program's SDI signal 28 is routed to an Uplink System 30. The Uplink System performs the following operations: video compression using MPEG-2 in real time; decodes the English and second language stereo audio tracks; MPEG layer 1 encodes the English and second language stereo audio tracks; processes the AC-3 data; multiplexes each channel that includes these described tracks with other channels adding in conditional access and program guide information; scrambling; insertion of forward error correction (FEC) information, and

modulating the signal to an IF 32 (FIG. 3.). The IF signal is then up converted as shown at 34 to the uplink carrier frequency, amplified and fed to a dish antenna so the signal can be transmitted up to a satellite.

The "Uplink System" 30 shown in FIG. 4 contains an "encoder" 35 . The encoder portion 34 of the "Uplink System" is detailed in FIG. 4. Specifically left out of this diagram is the multiplexer, scrambling, the FEC and the modulator, since they are not modified from known attributes that contribute to practice of the present invention. A data interface unit (DIU) 42 , a video MPEG-2 encoder 40 , an MPEG level 1 stereo encoder 44 for English, an MPEG level 1 stereo encoder 46 for an alternate language, and a Dolby Digital processor 48 are within the encoder 35 of the preferred embodiment. The encoder 35 outputs data in the format of DSS® transport packets. These packets are then scrambled, multiplexed together in the multiplexer, being combined with other channels as well as conditional access information and program guide in the uplink system 30 .

The SDI signal 28 from the central facility router 24 feeds an AES-3 SDI extraction device, such as a Tekniche 6026E. This device separates the AES-3 data from the SMPTE 259 serial data stream. The SDI containing video is passed on to the MPEG-2 video encoder 40 . The first AES-3 channel extracted is fed two places: to the input of a decompressor 52 , preferably a Tekniche 6048T decompressor that readily recognizes the small data packages as AC-3 data or compressed, uncompressed PCM signal, and to the input of switch logic 50 . The second AES-3 channel is fed two places: to the input of the switch logic 50 and to the input of a Dolby Digital processor 48 .

The function of the "switch logic" 50 is to detect the presence of the compressed Tekniche signal on the first AES (#1) signal, each having two tracks of audio (i.e., L and R stereo PAIR). If the compressed signal is present, then the switch logic takes the decoded audio from the Tekniche 6048T and routes them to the two MPEG Level 1 stereo encoders 44 and 46 . If the compressed Tekniche signal is not present on the AES #1 signal, then the source is assumed to be not Dolby Digital® compatible. Consequently, the switch routes AES #1 directly to the MPEG Level 1 Stereo Encoder for English 44 , and AES #2 to the MPEG Level 1 Stereo Encode for second language 46 . The function of the preferred embodiment of the "switch logic" is described in greater detail with respect to FIG. 5.

As shown in FIG. 4, the AES #2 signal is routed to the Dolby Digital® Processor 48 . This DDP 48 takes AES signal as input and can identify if compressed data such as Dolby Digital® signal is present. If present, the processor 48 checks for discontinuities and modifies the signal, time stamps the signal and places the data into DIRECTV® transport packets, for example by arranging CRC values as described below, as specified by DIRECTV® specification DTV95MDB02, "DSS® Transport Protocol Specification for the IRD ", a proprietary and confidential document to DIRECTV, Inc., although other standards for transport such as MPEG 2 transport standard or ISO/IEC 13818-1 may be employed. Several unique and novel functions performed in this block are described below.

While this system of equipment and technologies were employed to provide "studio direct" Dolby Digital® signal, other components and systems may be employed without departing from the present invention. Where the exact same

data that was generated by the audio production engineer at the studio for theatrical release may be delivered to the home through direct broadcast satellite.

For describing parts of the encoder modifications according to the present invention, a review of ATSC A/52, IEC 959 and IEC 1937 standards is described. Processed signals, such as Dolby Digital signal when sent in serial digital format is sent as packets of data on an AES-3 transport. The AES-3 is a serial transport mechanism that when operated at the industry standard audio sampling rate of 48 Khz can provide for the conveyance of 96,000 32 bit words per second. This provides for two samples, preferably a left and right sample, for each audio sample period of a frequency of 48 KHz. Of these 32 bits, many of them are overhead, conveying framing information, and ancillary information about what is carried as payload. When a Dolby Digital® processor signal is placed in an AES-3, each 32 bit word contains only a 16 bit word of AC-3 data. The data rides in place of the 16 most significant Pulse Code Modulation (PCM) values of audio. All industry-recording devices support recording of at least the minimum of 16 most significant bits of PCM data. As a result, data positions in that location can be recorded by machines traditionally designed for digital audio.

There are three ways in which Dolby Digital® AC-3 data can be arranged in an AES-3 stream: 1) occupying both left and right sample positions, called "32 bit mode" by Dolby Labs; 2) occupying only left sample positions, called "16 bit left" by Dolby Labs, and 3) occupying only the right sample position, called "16 bit right" by Dolby Labs.

In the preferred embodiment, the "32 bit mode" version of AC-3 at 48 Khz sampling is employed. This configuration is compatible with all consumer electronic equipment and is the most common arrangement of AC-3 data within an AES-3. The detailed discussions throughout this application will refer only to this mode. However, the present invention may be employed with the other two modes of mapping of AC-3 data into an AES-3 signal as well as with all the other possible sampling frequencies.

AC-3 data packets are spaced 32 ms, regardless of the mode. In the AES-3 packet can be viewed as a sequence of 16 bit words with an IEC958 header preceding the actual AC-3 data. An AC-3 packet example with an IEC958 header made up of four 16 bit words includes the words Pa, Pb, Pc, Pd, wherein:

- o Pa=0xF872 (Ox=hexidecimal),
- o Pb=0x4E1F (Ox=hexidecimal),
- o Pc="Burst value information" containing a stream identification number assigned typically (if only one type of data is present) of the type of data that follows, and
- o Pd="length code" equal to the number of bits of data that follow.  
In addition, two 16 bit WORDS SYNC and CRC1 precede the data words, wherein:
- o SYNC="AC-3 sync frame"—first byte of AC-3 data, always equal to 0xB77 (Ox=hexidecimal), and
- o CRC1=First Cyclical Redundancy Check (CRC) value in the AC-3 packet.

- Each following series of data words precedes a second cyclical redundancy check (CRC2) wherein:
- o CRC2=Second CRC value in the AC-3 packet after the data, is always a word the last word of the packet.

Between AC-3 packets, the value of data is not defined, however, the inter packet data is generally set to zero. For 48 KHz, "32 bit mode" AC-3, the IEC958 header and the AC-3 sync frame repeats every 3,072 words. (96,000 words per second \*0.032 seconds between packets=3,072 words between packet starts).

AC-3 is particularly unfriendly in video environments. The AC-3 packet rate is ( 1/32 ms) or 31 . 25 Hz while the video frame rate is either 29.97 Hz for NTSC, or 25 Hz for PAL. Consequently there is no easy relationship between AC-3 frames and video frames.

AC-3 packets within an AES stream can be pictorially represented on a time line as spaced boxes, the start of the first box and the start of the second box being 32 ms from each other. Given this as a data stream, switches from one data stream to another, for example, from the original tape to the simultaneously played clone, or to the next tape in a series as occurs at the central facility router, may interrupt reception. At a minimum, switches must occur at reel changes, as well as at the start and at the end of a movie. The Dolby Digital Processor in the encoder must properly handle switches of incoming data stream to minimize the effect through the rest of the chain.

There are two parameters of the AC-3 signal that can alter what happens at the switch time: 1) the relative phase of the two AC-3 packets, and 2) the time at which the switch occurs.

For the unique case when the two AC-3 packet streams are identically in sync, where AES "A" is the "from stream", and AES "B" is the "to stream" that is being switched to are perfectly synchronized, if the switch occurs during the "extra time" between packets, switching can occur without error. If, however, the switch occurs in the middle of the packet, a problem is that the start data for the packet will be from stream "A" and the ending data will be from stream "B". The arrangement of CRC's at both the start and the end of the packet enables a standard decoder that check the CRC will pick up that there was an error in the packet and mute the receiver for that packet.

Detection of switching is more complex when there is a significant phase different between the AC-3 packets. With two out of phase streams, four possible switch-points will be considered.

Of the four switch points, where SW1=mid packet of stream A to mid packet of stream B, SW2=mid packet of stream A to no packet of stream B, SW3=no packet of stream A to no packet of stream B and SW4=no packet of stream A to mid packet of stream B, the worst case occurs if a switch occurring from AES "A" to AES "B" at SW3. This switch case is the worst case given the relatively long chain of operations that follow. There are buffers in both the multiplexers in the encoder, and buffers in the demultiplexer in the home receiver each expecting

data that is on average a constant data rate. With a switch at SW3, almost immediately following the packet from stream "A", another perfectly valid packet from stream "B" appears. If the encoder were to process both packets, then during the 32 ms surrounding the switch there will be a near doubling of the overall data rate. This may cause major problems. The encoder buffer now has been over filled with data. To the extent there is overhead in the output fixed bit rate in the multiplexer, the encoder multiplexer would then utilize every available transport packet until it catches up with load. In the receiver, for a time period following the switch the receiver sees it is receiving buffer fill with the excess data. The rate at which the data is being removed is not changed. This can create a data overflow. Something must happen. At a point considerably after the switch, audio and video will be out of synchronization, or a buffer will overflow causing a noticeable error. The net effect is much like a train wreck, where the average number of cars that occupy a stretch of track at a given instance is exceeded. The exact results are difficult to predict, but is assured to be undesirable. The problem is made much worse if a series of switches happen in a relatively short period of time.

The solution implemented is a series of simple criteria for processing. Step one is to detect that a switch has occurred in the incoming AC-3 stream. A switch on the input can be created many places either in the router, or further upstream, such as in editing or even in the movie studio. Such a break or switch of the AC-3 may be called a "disruption". Normally, if nothing has been disturbed, the AC-3 packet sequence will repeat at exactly a 32 ms rate. The sequence of Pa, Pb, Pc, Pd, and AC-3 Sync Word repeats exactly every 3072 data words. Pa, Pb and the AC-3 sync word are fixed values and provide a clear indication of a start of a packet.

The first rule is: Never accept a packet before it is time. If an AC-3 packet begins before 3072 data words from the start of the last packet, it should be ignored and not transmitted.

The second rule is: If a disruption is detected, do not accept another AC-3 packet until at least "X" milliseconds after when an AC-3 packet was supposed to have started, or at least (32+"X") milliseconds from the last AC-3 packet start, wherein "X" is the amount of time that a given data rate would, given a specified, for example, 4 K byte, receiver buffer size, will cause a data buffer under run in the receiver. For example, at 384 kbps, which is 48,000 bytes per second (384,000/8 bits per byte), and given a 2 K byte nominal buffer, "X" would be 42 ms (2,000/48000). This length of time without data, should force a well designed receiver to detect that a disruption has occurred and with the resumption of data, again look to the present time stamp (PTS) values of the audio and video to re-establish lip sync.

If the first rule is followed, buffers will not overflow and a "train wreck is avoided". If the second rule is followed lip sync can be maintained. The worst side effect is that audio will dip to silence for a short period of time at a switch. Not a perfect solution, but a very workable solution given switches can be scheduled. Switches between reels, as well as the start and stop of the movies are generally selected at a point of relative silence. If this is the case, a disruption can occur completely undetectable by the listener.

A modification to the second rule that is less restrictive is as follows: If another packet comes within "N" milliseconds, after when an AC-3 packet was supposed to have arrived, then accept it. If it is greater than "N" milliseconds but less than "X" milliseconds, then do not accept it. This more complex rule permits minor slips in audio video synchronization. A couple millisecond slippage of lip sync is not very noticeable so it is not required to force a buffer to underflow in the receiver. This is a good "trick", however, it fails if the frequencies of disruptions are high.

The logic in the Dolby Digital® processor to first find and to determine if a "disruption" has occurred is described below at page 18. The proper handling of switching and disruptions can provide for delivery of a product to the home receiver that appears to be flawless. This algorithm is all that is required and enables AC-3 encoding to be accomplished at a location other than at the encoder. Again, "studio direct" AC-3 is accomplished.

The transmission of Dolby Digital signal is infested with copyright bits. A copyright bit is a flag embedded in the bit stream that relays to receiving device whether it is permitted to record the data. The ultimate purpose is to limit unauthorized copying of digital material and to protect the creator's property rights. It is customary to have a single means for flagging this information. In the preferred embodiment, there are a total of three locations that contains this information: 1) buried within the AC-3 packet; 2) within the MPEG-2 PES header structure; and 3) within the channel status bits of the AES-3 stream.

Items 1 and 2 in the list above are transmitted by DIRECTV®. Item 3 is a signal that must be regenerated by the IRD when it outputs AC-3 to feed to an external AC-3 decoder. DIRECTV® set the requirement that there exists agreement between item 1 and item 2 to assure an unambiguous recreation of item 3 within the IRD. To be able to do "studio direct", the Dolby Digital Processor (DDP) within the encoder must be able to monitor and control the copyright bits passing by in real time.

There may be three logical modes of operation:

**INPUT:** Where the encoder takes the AC-3 data that is presented to it, parse through the AC-3 packets and determine the state of the copyright bit and then based on that bit, set the copyright bit in the MPEG-2 PES header to match. The encoder generates the MPEG-2 PES header.

**Always ON:** Where the encoder is instructed either by an operation or an automation system to force copyright protection to this AC-3 audio stream on. Under this case, if the incoming AC-3 data is marketed with the copyright bit set to off, then that bit must be altered. The MPEG-2 PES header is generated with the copyright bit on. The problem here is that changing a bit in the AC-3 stream causes an error in the CRC codes. The CRC values must be recomputed and altered. This is a messy and at times compute intensive operation.

**Always OFF:** Where the encoder is instructed either by an operator or an automation system to force copyright protection to this AC-3 audio stream off.

Under this case, if the incoming AC-3 data is marked with the copyright bit set on, then that bit must be altered. The MPEG-2 PES header is generated with the copyright bit off. The problem here is that changing a bit in the AC-3 stream causes an error in the CRC codes. The CRC values must be recomputed and altered. This is a messy and at times compute intensive operation.

The resolution of problems and the description of methods by which copyright bits can be altered within AC-3 stream is the subject of another disclosure of DIRECTV® by James Michener, entitled: Method for Altering AC-3 Data Streams Using Minimum Computation, and incorporated herein by reference. To provide for "studio direct" AC-3 and properly control the copyright permissions that can be imposed by contract by the studios, this feature is preferred. Not having this feature or an equivalent such as large computation capacity at this IRD, could cause a broadcaster to reject a PPV movie contract being unable to protect the copyrights wishes of the creator.

There are two possible playback tape formats within DIRECTV®. 1) Uncompressed stereo audio on each of the two AES-3 tracks of the Sony Digital BetaCam®, and 2) AES #1 of a Sony Digital BetaCam® comprised of two stereo audio signals, English and second language utilizing lightly compressed audio. AES#2 contains Dolby Digital AC-3. The first is the traditional format for regular programs where AC-3 is not available. The second is a "new" format of AC-3 compatible programming.

The Uplink system 30 has been developed to determine which of the two formats are being delivered and route the appropriate signals accordingly. Within the Uplink System 30 shown in FIG. 4 is a box 50 labeled Switch Logic. That is shown in greater detail in FIG. 5.

The compression system used in the preferred embodiment was designed by Tekniche and is proprietary to Tekniche, although other compression systems may be employed. An attribute that makes the Tekniche compression excellent for this application is the relatively short time for each frame of audio data. The frame size of the data is approximately 8 samples of audio. This is sufficiently short of a period of time whereas there will be no significant alteration of the lip sync between video and audio. The Tekniche decoder already contains a circuit that can recognize their compressed audio frame. This signal was sufficient to act as a control of a switch that selects either: 1) If the signal on AES #1 is uncompressed, then the original BetaCam® audio (AES #1 and AES #2) is fed to the encoder, and 2) if the signal on AES #1 is compressed signal, then the decompressed outputs from the Tekniche's own decoder is selected and fed to the encoder. This feature was built as a custom version of a Tekniche decoder under direction of DIRECTV®.

In the "Uplink System" diagram, AES #2 is always fed to the Dolby Processor. The Dolby Processor can easily identify the presence of Dolby Digital® AC-3 signal on its input by constantly looking for the IEC958 headers (Pa and Pb) as well as the AC-3 sync frame word in the AC-3 packet. This complex sequence of samples would not normally occur in audio and the chance that it would again repeat exactly 32 milliseconds later is astronomical. This process preferably performed as described below. The ability to have an automatic switch that

operates based on the presence of a compressed English and second language permits a broadcaster to selectively transmit AC-3 broadcasts with stereo second language broadcasts without changing configurations.

As described earlier, the Dolby Digital® signal is fragile. A single bit error can destroy a full 32-millisecond slice of audio. Videotape machines were designed with recording uncompressed audio not data as their primary function. If there are imperfections in the tape, most tape machines, rather than using more complex self correcting codes, usually employ error concealment. One popular method is to repeat the last good data sample. Regardless of the error concealment method used, these previously known techniques are ineffective with highly compressed Dolby Digital® signals.

Nevertheless, known machines, such as Sony Digital BetaCam® machines, are fairly robust with regard to audio data recording. Assuming the tape and the tape machine are in good conditions, the machines have the capability to play audio data flawlessly for long periods of time. The problem is that at some point errors will happen. The common causes of errors are excessive tape wear, dirt collecting on the playback heads, or head track alignment or excessive head wear. Since the Dolby Digital® is the most fragile signal on the tape machines that have no concealment or correction circuitry will permit errors to occur most noticeably with that data.

The Dolby Digital® signal is capable of being monitored by an electronic device. It is far more reliable to use electronic verification than human. If an error occurs, it sounds like a short 32-millisecond dip to silence. In a quiet scene, unless the volume is extremely high, it is difficult to detect quiet from silence. The present invention provides a device to automatically monitor the data in real time, and a preferred hardware configuration is described below.

A PC is configured by coupling to a PC BUS for communication with an Digital Audio Sound Card, and a SMPTE Timecode Reader. An Ethernet Interface is optional if reporting back to a control error tracking mechanism is desired. The Digital Audio Sound Card is essentially an audio multimedia card, for example, a Creative Labs, Inc. Sound Blaster Live, that provides digital audio input and output capabilities. Of course, there are dozens of vendors that makes cards with these capabilities. For example, Digital Audio Labs, Inc. Digital Only Card; AdB International Corp., and Multi!Wav Digital Pro24®. Though while each of these cards has their own quirks, they are all suited for the application, although the AdB is preferred where in sync editing control is desired as discussed below.

The SMPTE Timecode Reader is less abundant in the market. The card used in the preferred embodiment is the Adrienne Electronics Corporation PC-VLTC/RDR card as available at <http://www.adrielec.com/>. Similar products are made by Horita as <http://www.horita.com/timecode.htm>. Tape machines keep time information for each frame of video through the use of the SMPTE timecode. This time code is placed on the magnetic tape and is available in two standard output interfaces. Those interfaces are either Linear Time Code (LTC) or Vertical Interval Time Code (VITC). In LTC, time code is modulated on an audio carrier and provided as an audio signal. In VITC, the time code information is encoded and placed on specific lines of the composite video signal during the vertical

blanking period before the start of each picture.

These cards operate within an industry standard "IBM PC compatible" computer. These cards also come with hardware device drivers that operate under the Microsoft Windows® operating system. The sound cards support the Microsoft multimedia API standard and have a common interface. The SMPTE timecode readers come with their own drivers and interface software with no well established interface. An Ethernet card may, optionally, be used to transfer data and alarm information to a server and automation system.

The software written for AC-3 error detection in the present invention uses these drivers and interfaces. The sound card reads data into a buffer and sends a message to the Windows® operating system. The error detection software responds to (handles) the message and starts processing the data. The software consists of a state machine that checks the timing validity and AC-3 data, which first finds the AC-3 packets and once "locked", it detects any discontinuities or loss of signal; and the software computes and checks the CRC value of the AC-3 packet found by the state machine. The method to compute the CRC value is disclosed in the ATSC document A/52.

The state machine 60 for checking the timing validity of AC-3 data is shown in FIG. 7 as a classic state diagram. Every circle represents a state and the lines show conditions whereby the state of the machine can change. Data comes in from the AES stream and for each new piece of data a decision is made if the state is to change. There is a data counter that increments with each new data word received. The counter is held a zero when unlocked. In the diagram the "Cnt" is a shorthand notation for this data counter.

The state machine is initially in the unlocked state. As each data word is received it checks to see if it is equal to "Pa" or 0xF872 (0x=hexidecimal). If it is not, it remains in the unlocked state. If it is, the data control Cnt increments and the state advances to "Pa FOUND". The next data word comes in, and if it is found equal to "Pb" or 0x4E1F (0x=hexidecimal), the data counter Cnt increments and the state machine advances to "Pb Found". Otherwise, the state machine returns to the "Unlocked state". In the "Pb found" state, it stays there until the 5th data sample. If that sample is not 0xB77 (0x=hexidecimal), representing the first word of an AC-3 packet, or an "AC-3 sync frame word", the state machine goes to unlock. If the fifth data sample is 0xB77 (0x=hexidecimal), the state advances to the "Locked and getting data" state. Note, that the value of the incoming data at the time when Cnt=3 is captured and remembered. This value is the packet length in bits, so the "PktLen" is determined by dividing that value by 16 (Note: 16 bits to a word). The state machine stays in the locked mode, gathering data of AC-3 and computing CRC values on the data, until the end of the packet. At the precise time, when Cnt=3072, if the data is "Pa" again, indicating another properly spaced packet, the state machine goes back to Pa found. If not, the state machine goes unlocked.

Any transition into the unlocked state from the "Wait and start of next Pkt" state represents a disruption of data has occurred and that there is a timing error on the incoming AC-3 stream. Data received during the "Locked Getting Data" state is fed into a CRC checking program as described in the ATSC document A/52. Any

transmission into "Locked Getting Data" for the first time since being in the "Unlocked" state indicates the acquisition of signal of an AC-3 stream. If the state machine stays in the "Unlocked" state for greater than some threshold time, that represents a complete loss of signal. Any of these occurrences represents a significant event, or a change to the incoming AC-3 data stream.

The error condition where the state machine stays in an unlocked state for more than a specified period of time can be caused by one of two reasons. One is a failure of the AC-3 playback track. The second is that the tape machine is no longer rolling. The software can differentiate between these two conditions by the observation of the SMPTE. If after 40 milliseconds the timecode does not advance, it can be assumed that the tape machine is no longer playing.

If a significant event in the incoming stream occurs, it will be detected. The software then goes to the VITC/LTC time code reader and reads the SMPTE time code generated by the tape machine and logs that timecode. Similarly, the software reads the real time clock within the PC and obtains the date and the time of day and logs that as well. If the error conditions are severe enough, alarms related to the conditions occurring can be triggered provoking an immediate operator response or activating automation intervention, for example, automating system intervention central control so that if an error, or too many errors occur, the operator switches to back-up tape machines.

The software receives the AC-3 data from the buffer handed to it by the Microsoft multimedia API and must complete the processing of the data before an error is detected. A significant time lapse may have occurred. To provide a more accurate time estimate of when the error occurs, the average latency time is subtracted off all reported values to obtain the time when error occurred for reporting purposes. This value is roughly equal to one half the record time of the multimedia-input buffer. For example, in a 16 K byte buffer, the time works out to 41 milliseconds or about one frame of video.

If the function being performed is a quality assurance check of a newly generated air tape, the log provides a complete list of the known. Some of the errors are caused through the editing, for example, as at such points as the switch between the trailers and the actual start of the movie. The quality assurance operator is in general the same individual who made the master tape. That operator knows at what timecode these disruptions occurred. If errors occur at time codes that should be contiguous, the tape is known to have errors. The quality assurance operator has the option to wind the tape to the frame of the tape at that timecode and monitor the exact flaw and make a determination of the severity of the problem. The log of errors from a quality check of a tape can then be placed in a database and used as a list of all known and expected errors. When a tape is then played to air, this database is used to filter "known" errors that occur at "air-time". New errors give a clear unequivocal indication that the tape is worn or that the tape machine is in need of preventative maintenance.

The states machine of the type described may be applicable to or similar to techniques present in other Dolby Digital® products. However, the present invention provides the use of this state machine in combination with a real time clock and SMPTE timecode readers to provide automatic means of checking the

playback quality of Dolby Digital® both on air and in the tape prep areas of a broadcast facility. No manufacturer has previously provided this feature in any form of equipment despite great utility. Such a device provides an electronic means of quality assurance, to assure that "Studio Direct" Dolby Digital® is done without loss of information. Being electronic, it can be done without human labor at a lower cost.

As described earlier, DIRECTV® currently receives AC-3 data as a separate videotape where one AES-3 track contains the AC-3 data. The generation of this tape is costly and time consuming. The exchange medium for the AC-3 data to the DVD mastering house is a data file. The data file is a binary file that contains AC-3 packets in order, one following the next with no extra space between them and without any IEC958 headers. This file format is from Dolby Labs® and has become the defacto standard. Lip sync is implied in that the first frame of the movie matches with the start of data in the audio file.

No previously known device can play an AC-3 data file and generate an AES-3 signal suitable for building a videotape that contains this track. In addition, no previously known device can start playback of an AC-3 data file at the command of an editor. Although a Sonic Foundry released a version of their software Sound Forge that provides the capability to play an AC-3 data file, the product does not support editor control. Sonic Foundry only partially answered the question providing no means to sync the audio playback with the video. The solution according to the present invention is quite simple. A PC can be built identical to the unit described above for monitoring AC-3 signals. The major difference being that of all the audio cards listed, only the AdB card can operate for this application. The AdB card provides a separate input for a house reference AES clock. This ability permits the AES clock of the playback signal to be locked in frequency to a video production house's master generator, assuring that the frequency of video and audio samples are identical. This assures that lip sync will not drift over time. For this operation, the timecode reader card is optional. The software can, if desired, monitor the time code coming from a tape machine that is playing video and at a pre-determined timecode value begin the playback AC-3 data. An alternative means to start the playback is to start under editor control. The simplest means to accomplish this is by a contact closure performed by the editor and using that to trigger the start of playback. The easiest means of getting a contact closure into a PC is through the game pad, or joystick interface that is widely available on all audio multimedia cards. The Microsoft Windows® API supports this joy-stick interface. The program then simply monitors a specific "fire button" on the joystick to initiate the start of AC-3 playback.

Dolby Labs defined format AC-3 for computer disc may be converted to AES-3 format. The processor looks into the start of the packet and determines the size of the packet. With the size of the packet known the processor generates an IEC958 header. The IEC958 header and the AC-3 packet is then placed in a buffer that is 3072 words long. The extra bits are filled with zeros.

By playing the data out the AES-3 interface card as if it were PCM audio, the conversion is completed.

The present invention includes the system of components that provide the

functionality that permits the playback of AC-3 as a data file in sync with video for the generation of a video tape. This reduces the cost of receiving the Dolby Digital® track from the studios and provides a large number of delivery means available, including CDRom, FTP protocol over TCP/IP networks such as the Internet. Such delivery means are faster than the generation of a videotape. In addition, delivery of a data file is better than via tape for movies that are longer than a single reel of tape since in these situations there will occur a disruption of the AC-3 stream at the video tape reel change.

These features of this device are even more useful as related to playback from a video server. Current video servers attempt to mimic a videotape machine, recording both video and uncompressed audio. It would be highly advantageous for these servers to only store the AC-3 data as a data file, as compared to it's "AES-3 equal". The size of the file is at least a nearly a third the size, it reduces the transfer time as well as problems with discontinuities.

Since previously known tape machines providing recording of only two AES-3 streams, adding Dolby Digital® from a single machine if a dual language capability is required creates some compromise decisions to be made.

The obvious solution is to use the first AES-3 track to carry stereo English language. The second AES-3 track could then contain a second language monaural on one channel, for example, for left channel, and AC-3 could be placed in "16 bit mode" on the other, for example, right channel. Such a process raises two difficulties. First, the second language customers now only have monaural service. Second, AC-3 is recorded in a mode that is not supported by consumer electronic monitors. This format for AC-3 in an AES-3 signal is unusual.

The preferred embodiment of the present invention uses a light level of compression and places two channels of stereo audio into the first AES-3 track. The preferred system also places AC-3 in the common "32 bit" mode on the second AES-3 track. This provides the capability of maintaining stereo broadcast services for both the primary English and second language broadcasts. Until these, to date it appears that no other broadcasters have followed the path of DIRECTV® and have expressed concern over the downgrading of the second language.

While embodiments of the invention have been illustrated and described, it is not intended that these embodiments illustrate and describe all possible forms of the invention. Rather, the words used in the specification are words of description rather than limitation, and it is understood that various changes may be made without departing from the spirit and scope of the invention.

**Get \$40 Discount Coupon**  
Switch from Analog to Digital TV. Govt. is giving out free coupons.  
[www.InstantGrantSearch.com/analogtv](http://www.InstantGrantSearch.com/analogtv)

**Hd Digital Video Recorder**  
Sign up for RCN Cable Service and receive great deals on High Def TV!  
[www.RCN.com](http://www.RCN.com)

**Digital-to-Analog Box**   
Order Your Converter Today & Avoid The Rush. \$49.99 & Up-Buy Today!  
[www.SolidSignal.com](http://www.SolidSignal.com)

Ads by Google

< [Previous Patent \(Method and apparatus...\)](#) | [Next Patent \(Scalable audio, commu...\)](#) >

Copyright 2004-2007 FreePatentsOnline.com. All rights reserved. [Contact us](#), [Privacy Policy](#) & [Terms of Use](#).



**via email and airmail**

May 11, 2005

Mr. Mark Richer  
President  
Advanced Television Systems Committee  
1750 K Street NW  
Suite 1200  
Washington DC 20006

Dear Mr. Richer,

Tri-Vision Electronics Inc. 'Tri-Vision' has the exclusive rights to US Patent No. 5,828,402 ('402) and Canadian Patent No. 2,179,474 ('474) owned by Timothy Callings, who has participated on behalf of Tri-Vision in ATSC committee meetings.

The A65 standard requires transmission of the RRT, which includes the informational scheme for the ratings systems in use. Processing of an A65 compliant signal will necessarily perform the steps set forth in the claims of our '402 and '474' patents.

In accordance with the ATSC Patent Policy, Tri-Vision hereby reiterates its commitment to make available licenses upon request under reasonable and non-discriminatory terms and conditions to all applicants for the purpose of implementing the Specification Document.

Tri-Vision has a history of licensing its patents to major electronics manufacturers under reasonable terms and conditions on a non-discriminatory, non-exclusive basis.

Yours truly,

  
Najmul H. Siddiqui  
C.E.O, Tri-Vision Electronics Inc.  
41 Pullman Court, Scarborough,  
Ontario, Canada. M1X-1E4

## **APPENDIX B**

**Appendix B  
ATSC Patent Policy  
And Patent Statements**

Doc. B/04  
31 Jan 02  
6 Dec 04  
13 Mar 06  
13 Dec 07

Formerly Doc. E/21  
2 July 1986  
1 Dec 1986

**ADVANCED TELEVISION SYSTEMS COMMITTEE, Inc.**

**Patent Policy**

1. **Inclusion of Patents in Specification Documents.** There is no objection in principle to drafting a Specification Document in terms that include the use of an Essential Claim, if it is considered that technical reasons justify this approach. It shall be the policy of the Advanced Television Systems Committee, Inc. (ATSC) that Essential Claims included in ATSC Specification Documents be available to implementers on reasonable and non-discriminatory terms. Prior to a vote on a Specification Document subject to a disclosed Essential Claim and no later than the time frames specified in Section 5, the ATSC shall receive from the person or entity that holds the Essential Claim written confirmation (using the attached form) that:
  - a. A license to the Essential Claim will be made available upon request without compensation to all applicants for the purpose of implementing the Specification Document, which license may be conditioned upon license reciprocity with respect to the same Specification Document; or
  - b. A license to the Essential Claim will be made available upon request under reasonable and nondiscriminatory terms and conditions to all applicants for the purpose of implementing the Specification Document, which conditions may include license reciprocity with respect to the same Specification Document; or
  - c. A license to the Essential Claim will not be provided under reasonable and nondiscriminatory terms and conditions to applicants for the purpose of implementing the Specification Document.

This written confirmation shall be submitted to the President of the ATSC for review and retained in the ATSC's files. After issuance of the ATSC Standard or Recommended Practice, the ATSC shall make the written confirmations available to Members, Observers and third parties upon request.

If a Participant submits a statement under Section 1(c), the technology group considering the Specification Document to which such Essential Claim pertains shall consider whether alternatives to including such Essential Claim are feasible. If there are no feasible alternatives, and the technology group considers that a Specification Document incorporating an Essential Claim identified by a statement under Section 1(c) is in the interests of the Membership, application shall be made to the ATSC

5. **Timeframe for Patent Disclosures.** The patent disclosure obligation is an ongoing obligation that begins with participation by a Participant's Representative in the development of a Specification Document and extends through the life of the Specification Document. A Participant shall make a Disclosure Statement as soon as practically possible during the development of the Specification Document and, at the latest, within forty-five (45) business days after the Participant's Representative obtains actual knowledge of a Potential Claim relating to a Specification Document and in advance of any vote on the Specification Document. For a Participant's discovery of a Potential Claim subsequent to the adoption of the Specification Document, the Participant shall make a Disclosure Statement as soon as practically possible and, at the latest, within forty-five (45) business days after the Participant's Representative obtains actual knowledge of the Potential Claim. ATSC shall provide notice of the patent disclosure obligations to Members in technology group and membership letter ballots.
6. **Failure to Disclose Patents.** Any Participant that (a) does not disclose its refusal to license a Potential Claim pursuant to Section 1(c), or (b) fails to submit a Disclosure Statement concerning a Potential Claim in conformance with Sections 3, 4 and 5, shall be deemed to agree to license any resulting Essential Claim to other Members and Observers and any requesting third party under reasonable and nondiscriminatory terms and conditions and shall not be entitled to make an election under Section 1(c). Any Participant's knowing failure to disclose a Potential Claim, whether by violation or manipulation of the provisions of this Policy, shall be deemed incompatible with such Participant's obligations toward ATSC and shall constitute a "failure to disclose" with consequences as defined in this paragraph. ATSC may in such a case terminate any such Participant's ability to participate in ATSC processes.
7. **No Patent Search Required.** Section 3 does not require a Representative or Participant to perform or conduct patent searches. Knowledge of Potential Claims of a Participant shall not be automatically imputed to any Representative.
8. **No Responsibility for Identifying Patents.** The ATSC shall not be responsible for identifying Essential Claims or for conducting inquiries into the legal validity or scope of Potential Claims.
9. **Non-Member Participants.** Each technology group and specialist group shall use reasonable and consistent efforts, within the discretion of its chair, to ensure that any non-Member who participates in any ATSC activity agrees to be bound by this Patent Policy. In particular, chairs of groups may require non-Member Participants to (a) execute declarations of their intention to comply with this Patent Policy, (b) to require the companies they represent to execute such declarations, or (c) to take other steps to demonstrate their knowledge of and agreement to be bound by this Patent Policy. In addition, chairs of groups shall use reasonable efforts to state at the commencement of meetings that this Patent Policy applies to all Members, Observers and non-Member Participants alike, and all email reflectors shall contain a

- g. **“Representative”** means a person employed by a Participant who is authorized by such Participant to represent such Participant in connection with the work of the ATSC, a technology group, as defined in the ATSC Bylaws, or a specialist group, as defined in the ATSC Bylaws.
- h. **“Specification Document”** means an ATSC Standard, an ATSC Recommended Practice, a Proposed Standard, a Proposed Recommended Practice, a Candidate Standard, or a Working Draft, as defined in the ATSC Bylaws.

**Licensing Declaration**

If the Discloser is the holder of a patent and/or pending patent application that is the subject of an Essential Claim, *i.e.*, the use of which it believes would be required to implement the Identified ATSC Specification Document, the Discloser hereby declares, in accordance with the Statement on ATSC Patent Policy (see ATSC website), that (check one box only).

a. The Discloser agrees to make a license to the Essential Claim available without compensation upon request to all applicants for the purpose of implementing the Specification Document, which license may be conditioned upon license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.

*Mark here \_\_\_ if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.*

b. The Discloser agrees to make a license to the Essential Claim available upon request under reasonable and nondiscriminatory terms and conditions to all applicants for the purpose of implementing the Specification Document, which conditions may include license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.

*Mark here \_\_\_ if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.*

c. The Discloser will not make a license to the Essential Claim under reasonable and nondiscriminatory terms and conditions to applicants for the purpose of implementing the Specification Document.

**Without Compensation:** The phrase "without compensation" does not mean that the Discloser is waiving all of its rights with respect to each patent or patent application that is the subject matter of the Essential Claim. Rather, "without compensation" refers to the issue of monetary compensation; *i.e.*, that the Discloser will not seek any monetary compensation as part of the licensing arrangement (whether such compensation is called a royalty, a one-time licensing fee, etc.). However, while the Discloser in this situation is committing to not charging any monetary amount, the Discloser is still entitled to require that the implementer of the ATSC Specification Document sign a license agreement that contains other reasonable terms and conditions such as those relating to governing law, field of use, reciprocity, warranties, etc.

**Reciprocity:** As used herein, the word "reciprocity" means that the Discloser shall only be required to license any prospective licensee under the stated terms (without compensation or under reasonable and nondiscriminatory terms and conditions) if such prospective licensee will commit to license its patent(s) or patent application(s) forming the subject matter of an Essential Claim under similar (without compensation or under reasonable and nondiscriminatory) terms and conditions.

**Essential Claim**

an identification of specific section(s) or text of the Specification Document that are relevant to the Essential Claim; and

an identification of each patent or patent application claim covering the Specification Document.

This information is informal in nature and does not constitute a legal opinion, but should be based on "good faith and belief" of the Discloser. Information provided in this section does not represent a formal "notice" that implementation of any resulting ATSC Standard or Recommended Practice would infringe any patent or patent application for the Essential Claim.

Completed By:

Name of Participant

Name of Representative

Title of Representative

Signature

Place, Date



- [ATSC Home](#)
- [Press Releases](#)
- [News and Info](#)
- [Photo Gallery](#)
- [The Standard](#)
- [Seminars](#)
- [Sponsorships](#)
- [FAQ](#)
- [Contact Us](#)
- [ATSC Forum](#)

**Corporate Resources**

[Next Level](#)

[Thomson](#)

[Sony](#)

**Mail or Fax?**  
[Membership Form](#)

## patent statements

### A/52 Digital Audio Compression (AC-3) Standard, Rev. B

- [Dolby \(6 Sep 1994\)](#)
- [Dolby \(30 Jun 2003\)](#)

### A/53 ATSC Digital Television Standard, Rev. C – w/ Amendment 1

- |                                     |                         |                                |
|-------------------------------------|-------------------------|--------------------------------|
| <a href="#">AT&amp;T</a>            | <a href="#">Philips</a> | <a href="#">ATI</a>            |
| <a href="#">Dolby</a>               | <a href="#">RCA</a>     | <a href="#">LG Electronics</a> |
| <a href="#">General Instruments</a> | <a href="#">Sarnoff</a> | <a href="#">Zenith</a>         |
| <a href="#">Lucent</a>              | <a href="#">Zenith</a>  | <a href="#">Sony</a>           |
| <a href="#">MIT</a>                 |                         |                                |

### A/65 Program and System Information Protocol for Terrestrial Broadcast and Cable, Rev. B

- [Next Level](#)
- [Thomson \(27 Oct 1997\)](#)
- [Thomson \(14 Nov 1997\)](#)
- [Trivision](#)
- [LG](#)

### A/98 System Renewability Message Transport

- [Sony](#)
- A/100 DASE A/100 DASE**
- [Bitstream](#)
- [Kodak](#)
- [Matsushita](#)
- [Netscape](#)
- [Open TV](#)
- [Sharp](#)
- [Sun](#)
- [Kodak](#)

### A/101 Advanced Common Application Platform (ACAP)

- [Kodak](#)

### A/110 Synchronization Standard for Distributed Transmission

- [CRC](#)

- [CRC](#)





Dolby Laboratories Inc  
Dolby Laboratories Licensing Corporation  
*Signal Processing and Noise Reduction Systems*

100 Potrero Avenue  
San Francisco, California 94103-4813  
Telephone 415-558-0200  
Facsimile 415-863-1373  
Telex 34409

September 6, 1994

The Advanced Television Systems Committee  
1750 K Street, NW, Suite 800  
Washington, DC 20006  
U. S. A.

Patent Statement

Dolby Laboratories Licensing Corporation (Dolby) holds a number of patents on the audio system fully described in ATSC document T3/251.

Dolby will offer licenses under those patents under reasonable terms that are demonstrably free from any unfair discrimination to any qualified applicant.

Dolby has been licensing audio technology to the applicable industry for over twenty (20) years and is known as an independent, fair and reasonable licensor.

Dolby Laboratories Licensing Corporation:

A handwritten signature in cursive script, appearing to read 'Ed A. Schumner'.

Ed A. Schumner  
Vice President



**Dolby Laboratories Inc**  
**Dolby Laboratories Licensing Corporation**  
*Signal Processing and Noise Reduction Systems*

100 Potrero Avenue  
San Francisco, California 94103-4813  
Telephone 415-558-0200  
Facsimile 415-863-1373  
Telex 34409

June 30, 2003

Mark S. Richer  
President,  
Advanced Television Systems Committee, Inc.  
1750 K Street, N.W., Suite 800  
Washington, DC 20006  
U.S.A

Patent Statement

Dolby Laboratories Licensing Corporation (Dolby) holds a number of patents on the audio system that Dolby has proposed to the T3-S6 group for the robust channel audio coder.

Dolby will offer licenses under those patents under reasonable terms that are demonstrably free from any unfair discrimination to any qualified applicant.

Dolby Laboratories Licensing Corporation:

A handwritten signature in black ink, appearing to read 'Steve Vernon'.

Steve Vernon  
Vice President,  
Licensing Technology



James E. Lamar  
President

January 12, 1995

AT&T IPM Corp.  
2333 Ponce de Leon Blvd.  
Coral Gables, Florida 33134

Mr. Robert Hopkins  
Executive Director  
Advanced Television Systems Committee  
1760 K Street NW  
Suite 800  
Washington DC 20006

Dear Mr. Hopkins:

Responding to your letter of August 16 to Mr. Robert Rast of General Instrument Corporation as the representative for the Grand Alliance, we will license our patents which relate to the ATSC Standard for HDTV, to the extent that the claims of such patents are directed toward and are essential to the implementation of the Standard. Such licenses will be granted under reasonable terms and conditions on a non-discriminatory, non-exclusive basis. Such reasonable terms and conditions would include a reasonable royalty and a grant of licenses to us.

If you, or any member of your organization, have any questions concerning the licensing of our patents related to this standard, please contact Mr. David S. Nelson at 908-580-5392.

Very truly yours,

A handwritten signature in cursive script that reads "James E. Lamar".

A very faint, illegible signature or stamp, possibly a carbon copy or a very light ink mark.



Copy to:  
R. L. Cerbone  
G. D. Green  
M. R. Greene  
D. S. Nelson



February 24, 1995

General Instrument Corporation  
181 West Madison Street  
Chicago, Illinois 60602  
Tel 312 541 5040 Fax 312 541 5049

Thomas A. Dumit  
Vice President and  
General Counsel

**VIA FACSIMILE**

Mr. Robert Hopkins  
Executive Director  
Advanced Television Systems Committee  
1760 K Street NW  
Suite 800  
Washington, D.C. 20006

Dear Mr. Hopkins:

Responding to your letter of August 16, 1994 to Mr. Robert Rast, General Instrument makes the following statement:

GI will license its patents which relate to the ATSC Standard for HDTV now under consideration and shortly to be voted upon by the ATSC membership, to the extent that such patents are required to comply with such HDTV Standard. Such licenses will be granted under reasonable terms and conditions on a non-discriminatory, non-exclusive basis to companies willing to similarly license their patents, if any, which are required to comply with such HDTV Standard.

GI is a leading broadband communications company, actively involved in licensing its technology.

Very truly yours,

Thomas A. Dumit

TAD:lmh

CC: Mr. Richard S. Friedland, General Instrument Corporation  
Susan M. Meyer, Esq., General Instrument Corporation  
Mr. Robert Rast, General Instrument Corporation

**Lucent Technologies**  
Bell Labs Innovations



**Roger E. Stricker Ph.D.**  
*Intellectual Property Vice President*

Lucent Technologies Inc.  
Intellectual Property  
Second Floor  
Suite 2000  
P.O. Box 1995  
150 Allen Road  
Liberty Corner, NJ 07938-1995

Telephone 908 903 6271  
Facsimile 908 903 6317  
E Mail [rstricker@lucent.com](mailto:rstricker@lucent.com)

November 17, 1999

ATSC  
Intellectual Property Director  
1750 K Street NW  
Suite 1200  
Washington, DC 20006  
USA

RE: Patent Licensing by Lucent Technologies, Inc.

Dear Sir/Madam:

A number of Standards Groups have introduced a requirement that attendees at meetings be queried with respect to Intellectual Property Rights relevant to proposals under study. If your organization is in this category or is one that develops or recommends standards or may do so in the future please be advised of the following:

This is to affirm that Lucent Technologies Inc., in accordance with long-established practice, will offer patent licenses for submissions made by it which are adopted or recommended as a standard by your organization as follows:

If part(s) of a submission by Lucent is (are) included in a standard and Lucent has patents and/or pending application(s) that are essential to implementation of such included part(s) in said standard, Lucent is prepared to grant - on the basis of reciprocity (grantback) - a license on such included part(s) on reasonable, non-discriminatory terms and conditions.

Please disseminate the above to all units in your organization through the appropriate channels.

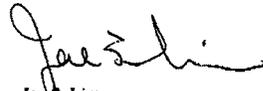
Very truly yours,

## Patent Statement

The Massachusetts Institute of Technology (MIT)'s Advanced Television and Signal Processing Group directed by Professor Jae S. Lim has issued and pending patents that cover the Grand Alliance HDTV System.

MIT will offer licenses under those patents with reasonable terms that are demonstrably free from any unfair discrimination to any qualified applicant.

MIT has been licensing its technology for many years and is known as an independent, fair, and reasonable licensor.



Jae S. Lim  
Professor of Electrical Engineering  
Director of Advanced Telecommunications  
Research Program



**PHILIPS**

**Philips Electronics**

---

VIA FEDERAL EXPRESS  
OUR FILE: 5502-0062

Intellectual Property Department

February 23, 1995

Mr. Bob Hopkins  
Advanced Television Systems Committee  
1750 K Street, NW  
Suite 800  
Washington, DC 20006

**STATEMENT OF PHILIPS' LICENSING POLICY IN CONNECTION WITH  
THE GRAND ALLIANCE HDTV SYSTEM PROPOSAL**

A license, under intellectual property owned by Philips Electronics North America Corporation and which is specific to the Grand Alliance HDTV System proposal, will be made available to applicants under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

As confirmed by you in our phone discussion yesterday, it is our understanding that the ATSC would not consider alternative consideration for license rights (for example present and future cross-license arrangements) to be "unfair discrimination" as defined by the ATSC.

Note: Philips has considerable experience licensing intellectual property and is widely regarded as a respectable company in that context.

A handwritten signature in black ink, appearing to read "Michael E. Marion".

Michael E. Marion  
Group Patent Counsel

MEM:es  
CC: Carlo Basile  
W:\mn\cj23mnd0.smc

Bruce M. Allan  
Vice President  
Technology and Business Development  
  
Telephone: (202) 872-0671  
Facsimile: (202) 872-0674

**RCA**



February 27, 1995

Mr. Robert Hopkins  
Advanced Television Systems Committee  
1750 K Street, Suite 800  
Washington, D.C. 20006

Dear Mr. Hopkins:

This is in response to your letter of February 7, 1995, requesting a patent licensing policy statement with respect to any patent rights which Thomson Consumer Electronics, Inc. might hold in the proposed Grand Alliance HDTV system.

With respect to any such patent rights, Thomson Consumer Electronics, Inc. agrees to grant non-exclusive licenses to applicants under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

Sincerely,

Bruce Allan

**Thomson Consumer Electronics, Inc.**

Suite 601, 1200 19th Street, N.W., Washington, D.C. 20036

February 13, 1995

The Advanced Television Systems Committee  
1750 K Street NW, Suite 800  
Washington, DC 20006

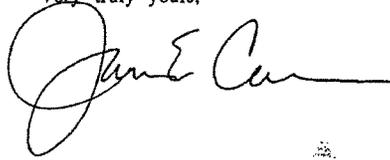
James E. Carnes  
President and  
Chief Executive  
Officer

Patent Statement

David Sarnoff Research Center does not at present hold any patents or pending patent applications which would be required for compliance with the proposed standard describing the Digital HDTV Grand Alliance System.

If, however, Sarnoff should hold such a patent in the future, Sarnoff agrees to make available to all applicants a license under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

Very truly yours,





ZENITH ELECTRONICS CORPORATION □ 1000 MILWAUKEE AVENUE □ GLENVIEW, ILLINOIS 60025-2493

WAYNE C. LUPLOW  
VICE PRESIDENT  
CONSUMER PRODUCTS  
ENGINEERING AND HDTV  
(708) 391-7873  
FAX: (708) 391-7345

February 28, 1995

Mr. Robert Hopkins  
Executive Committee  
Advanced Television Systems Committee  
1750 K Street, N. W.  
Suite 800  
Washington, D. C. 20006

Gentlemen:

Zenith Electronics Corporation is a member of the "Grand Alliance" of companies co-operating in the development of standards for definition television for the United States.

In connection with that Grand Alliance development effort, Zenith has made inventions which it believes are required for compliance with the ATSC standard, as the standard is currently being developed by members of the Grand Alliance.

This is to confirm that in connection with the current high definition television standards selection proceedings before the ATSC, Zenith will make available to qualified applicants a license to practice such inventions in the field of HDTV under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

Zenith has engaged in licensing of its patent properties on a non-discriminatory basis for many years.

Very truly yours,

  
Wayne C. Luplow  
Vice President

WCL:fs



ATI TECHNOLOGIES INC

1 Commerce Valley Dr. East  
Markham, Ontario  
Canada L3Y 7X6

Telephone: (905) 882-2600  
Facsimile: (905) 882-2620  
www.ati.com

July 17, 2003

Advanced Television Systems Committee .  
1750 K Street, N.W.  
Suite 1200  
Washington, D.C. 20006

**Committee Members:**

ATI Technologies, Inc. ("ATI") has made certain inventions that it believes are required (i.e. essential) for compliance with ATSC Document T3-596, "Working Draft Annex D of A/53B" dated March 5, 2003 and the adopted standard that will issue based on such Document (the "ATSC Standard").

ATI has granted the exclusive rights to license such inventions to Zenith Electronics Corporation for compliance with the ATSC Standard and understands that, pursuant to the ATSC Patent Policy, to the extent any such inventions are approved as a part of an ATSC Standard, Zenith will, in accordance with a patent statement filed with the ATSC, make available to applicants a license to practice such inventions for the purpose of complying with the Standard under reasonable terms and conditions that are demonstrably free of any unfair discrimination. Should any of such licensing rights revert back to ATI, ATI will make available to applicants for such purpose a license to practice such inventions under reasonable terms and conditions that are demonstrably free of any unfair discrimination, provided that reciprocal licenses on reasonable terms and conditions for patents owned or controlled by such applicant and covering inventions essential to the Standard are available to ATI from such applicant.

Yours truly,

A handwritten signature in black ink, appearing to read 'B. Robb'. The signature is stylized and somewhat cursive.

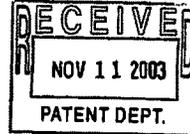
Bryan Robb  
Vice President and General Counsel  
ATI Technologies Inc.



Site 4-1, Bongscheon 7-dong, Kwansak-gu, Seoul 151-818, Korea  
Phone : 82-2-2102-0114 Fax : 82-2-2102-0200

November 6, 2003

Advanced Television Systems Committee  
1750 K Street, NW  
Suite 1200  
Washington, DC 20006



Gentlemen,

LG Electronics Inc. has made certain inventions which it believes are required (i.e. essential) for compliance with ATSC Document T3-596, "Working Draft Annex D of A/53B" dated March 5, 2003.

LG Electronics has granted the exclusive rights to license such inventions to Zenith Electronics Corporation and understands that, pursuant to the ATSC Patent Policy, to the extent any such inventions are approved as a part of an ATSC Standard, Zenith will, on behalf of LG Electronics, in accordance with a patent statement filed with the ATSC, make available to applicants a license to practice such inventions under reasonable terms and conditions that are demonstrably free of any unfair discrimination. Should any of such licensing rights revert back to LG Electronics, LG Electronics will make available to applicants a license to practice such inventions under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

LG Electronics has engaged in licensing its patent properties on such a basis for many years.

Very Truly yours,

Jong Seok Park, Vice President,  
Director of Digital TV Research Laboratory  
LG Electronics Inc.



Richard Lewis  
Senior V.P. Research and  
Technology  
Phone: (847) 941-8048  
E-mail: [richard.lewis@zenith.com](mailto:richard.lewis@zenith.com)

July 28, 2003

Advanced Television Systems Committee  
1750 K Street, N.W.  
Suite 1200  
Washington, D.C. 20006

Gentlemen:

Zenith Electronics Corporation has made, and has been granted the exclusive rights by LG Electronics, Inc. and ATI Technologies Inc., to license certain inventions which are believed required (i.e. essential) for compliance with ATSC Document T3-596, "Working Draft Annex D of A/53B" dated March 5, 2003 and the adopted ATSC standard to issue based on such document (the "ATSC Standard").

This is to confirm that pursuant to the ATSC Patent Policy, to the extent any such inventions are approved as a part of the ATSC Standard, Zenith will make available to applicants a license to practice such inventions for compliance with the ATSC Standard under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

Zenith has engaged in licensing its patent properties on such a basis for many years and, in this instance, is pleased to be able to extend its licensing policy to certain valuable contributions of LG Electronics, Inc. and ATI Technologies Inc.

Very truly yours,

  
Richard Lewis

---

ZENITH ELECTRONICS CORPORATION

2000 HILLBROOK DRIVE LINCOLNSHIRE, IL 60069

zenith

**ATSC****Disclosure Statement and Licensing Declaration***This declaration does not represent an implied license grant***Please return to:**

**Mr. Mark Richer**  
**President, ATSC**  
**1750 K Street NW**  
**Suite 1200**  
**Washington, DC 20006**  
**202-872-9160 – Office**  
**202-872-9161 – Fax**

<b><u>Discloser:</u></b>	
<b><u>Name of Participant</u></b>	Sony Electronics Inc.
<b><u>Contact Information for Participant's Representative:</u></b>	
<b><u>Name of Representative</u></b>	Frederick J. Zustak
<b><u>Address</u></b>	16450 West Bernardo Drive, MZ 7190 San Diego, CA 92127
<b><u>Tel.</u></b>	(858) 942-7117
<b><u>Fax</u></b>	Fred.zustak@am.sony.com
<b><u>E-mail</u></b>	
<b><u>URL (optional)</u></b>	
<b><u>Identification of ATSC Specification Document relevant to the Disclosure Statement:</u></b>	
<b><u>Number</u></b>	TSG/S6-434 r7 - Proposed Amendment to ATSC Digital Television Standard Doc. A/53-4-2006
<b><u>Title</u></b>	Part 4 – MPEG-2 Video System Characteristics, User data

**Licensing Declaration**  
If the Discloser is the holder of a patent and/or pending patent application that is the subject of an Essential Claim, i.e., the use of which it believes would be required to implement the identified ATSC Specification Document, the Discloser hereby declares, in accordance with the Statement on ATSC Patent Policy (see ATSC website), that (check one box only).

- a. The Discloser agrees to make a license to the Essential Claim available without compensation upon request to all applicants for the purpose of implementing the Specification Document, which license may be conditioned upon license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.  
Mark here if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.
- X b. The Discloser agrees to make a license to the Essential Claim available upon request under reasonable and nondiscriminatory terms and conditions to all applicants for the purpose of implementing the Specification Document, which conditions may include license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.  
Mark here if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.
- c. The Discloser will not make a license to the Essential Claim under reasonable and nondiscriminatory terms and conditions to applicants for the purpose of implementing the Specification Document.

Without Compensation: The phrase "without compensation" does not mean that the Discloser is waiving all of its rights with respect to each patent or patent application that is the subject matter of the Essential Claim. Rather, "without compensation" refers to the issue of monetary compensation, i.e., that the Discloser will not seek any monetary compensation as part of the licensing arrangement (whether such compensation is called a royalty, a one-time licensing fee, etc.). However, while the Discloser in this situation is committing to not charging any monetary amount, the Discloser is still entitled to require that the implementer of the ATSC Specification Document sign a license agreement that contains other reasonable terms and conditions such as those relating to governing law, field of use, reciprocity, warranties, etc.

Reciprocity: As used herein, the word "reciprocity" means that the Discloser shall only be required to license any prospective licensee under the stated terms (without compensation or under reasonable and nondiscriminatory terms and conditions) if such prospective licensee will commit to license its patent(s) or patent application(s) forming the subject matter of an Essential Claim under similar (without compensation or under reasonable and nondiscriminatory) terms and conditions.

<b>Disclosure of Patents</b>			
<p><b>In accordance with Sections 3 and 4 of the ATSC Patent Policy, please identify each patent or patent application forming the subject matter of any Potential Claim of which any Representative of the Discloser who is active in an ATSC technology group or specialist group has actual personal knowledge. The Discloser, in good faith, believes that the Potential Claim may be relevant to the implementation of the Specification Document identified by this Disclosure Statement.</b></p>			
<b>No.</b>	<b>Patent / Application No. and Country</b>	<b>Patent / Application Holder</b>	<b>Status (granted/ pending)</b>
1	60/873,697	User Private User Data / Mark Eyer	Pending
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			

Disclosure of Information

In accordance with Sections 3 and 4 of the ATSC Patent Policy, if the Discloser has made a licensing declaration under paragraph (c) above, please provide the following information.

- an identification of each patent or patent application that is the subject matter of the Essential Claim;
- an identification of specific section(s) or text of the Specification Document that are relevant to the Essential Claim; and
- an identification of each patent or patent application claim covering the Specification Document.

This information is informal in nature and does not constitute a legal opinion, but should be based on "good faith and belief" of the Discloser. Information provided in this section does not represent a formal "notice" that implementation of any resulting ATSC Standard or Recommended Practice would infringe any patent or patent application for the Essential Claim.

<u>Completed By:</u>	Frederick J. Zustak
<u>Name of Participant</u>	Sony Electronics Inc.
<u>Name of Representative</u>	Frederick J. Zustak
<u>Title of Representative</u>	Director of Operations, Intellectual Property
<u>Signature</u>	Frederick J. Zustak
<u>Place, Date</u>	San Diego, CA 3/16/07

**THOMSON** MULTIMEDIA

46 quai A, La Balbe

92040 Boulogne  
Cedex FRANCE

Tel 33 (0)1 41 86 50 00

Direct tel. : (33.1) 41.86.5296  
Direct fax : (33.1) 41.86.5638

Licensing and Intellectual Property  
Béatrix de Russé  
Vice President Licensing  
and Intellectual Property

**Attention Mr Craig Tanner**  
Executive Director  
Advanced Television Systems Committee  
1750 K Street, N.W.  
Suite 800  
Washington, D.C. 20006  
U.S.A.

Boulogne, October 27, 1997

O/Ref : CU7L092J

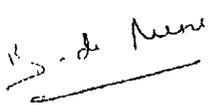
Dear Mr Tanner,

As you know, THOMSON multimedia, both itself and on behalf of its majority owned or controlled subsidiaries (hereafter, collectively, "THOMSON") has considerable experience in the licensing of Intellectual Property. Within the frame of ATSC, we have been working to help standardize a Program Guide for Digital Television. Relating to the foregoing, we are pleased to supply you with the following Intellectual Property Statement.

In the event ATSC establishes a Standard ("Standard") for a Program Guide for Digital Television, THOMSON's general policy is that we are willing to grant or have granted non-exclusive, non-transferable licenses, without the right to sublicense, on commercially fair and reasonable terms and conditions, to the extent we are free to grant such licenses and to the extent our technology is necessary in the use of the Standard, for the making, use or sale of finished multimedia and/or consumer electronic products for end-use and on the basis of reciprocity (that is, that the third party is willing to provide us with an equivalent license).

We trust that this declaration is of assistance to you.

Yours faithfully,

  
B. de Russé

**THOMSON** MULTI MEDIA

46 quai A. Le Gallo

92648 Boulogne  
Cedex FRANCE

Tél 33 (0)1 41 86 50 00

CONFIRMATION COPY

Direct tel. : (33.1) 41.86.5285  
Direct fax : (33.1) 41.86.5638Licensing and Intellectual Property  
Béatrix de Russé  
Vice President Licensing  
and Intellectual Property**Attention Mr. Craig K. Tanner**  
Advanced Television Systems Committee  
1760 K Street, N.W.  
Suite 800  
Washington, D.C. 20006  
U.S.A.

Boulogne, November 14, 1997

O/Ref : CU7L095J

Dear Mr. Tanner :

Thank you for your letter of November 6, 1997, responding to our declaration on the licensing of technology. You raise two points.

Concerning your first point, you have correctly read our declaration as excluding our licensing of those wishing to produce so-called intermediate products, such as integrated circuits or other components. For your information, this limitation is based, among other things, on a concern that, if such producer of intermediate products were fully licensed, we might not also be able to license, and obtain royalties from, the intermediate producer's customer, that is, the manufacturer of the end-product. The basis for this concern is a legal doctrine known as "exhaustion of rights", which essentially prohibits double licensing for the same technology.

However, please be assured that past practice, followed both by THOMSON and by various other companies in the same field, has shown that such a limitation should not, as a practical matter, cause a concern. As long as such producer of the intermediate product sells to a producer of the end-product who itself is directly licensed by us, our policy is that we will not attack, for infringement, the producer of the intermediate product.

Concerning the separate issue of reciprocity, our intent is that we reserve the right to withhold licenses from entities from whom THOMSON is unable to secure an equivalent license related to that entity's intellectual property necessary for use in the ATSC Standard.

Very truly yours,



Béatrix de Russé



**via email and airmail**

May 11, 2005

Mr. Mark Richer  
President  
Advanced Television Systems Committee  
1750 K Street NW  
Suite 1200  
Washington DC 20006

Dear Mr. Richer,

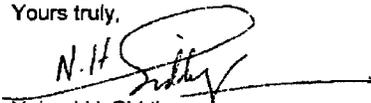
Tri-Vision Electronics Inc. 'Tri-Vision' has the exclusive rights to US Patent No. 5,828,402 ('402) and Canadian Patent No. 2,179,474 ('474) owned by Timothy Callings, who has participated on behalf of Tri-Vision in ATSC committee meetings.

The A65 standard requires transmission of the RRT, which includes the informational scheme for the ratings systems in use. Processing of an A65 compliant signal will necessarily perform the steps set forth in the claims of our '402 and '474' patents.

In accordance with the ATSC Patent Policy, Tri-Vision hereby reiterates its commitment to make available licenses upon request under reasonable and non-discriminatory terms and conditions to all applicants for the purpose of implementing the Specification Document.

Tri-Vision has a history of licensing its patents to major electronics manufacturers under reasonable terms and conditions on a non-discriminatory, non-exclusive basis.

Yours truly,

  
Najmul H. Siddiqui  
C.E.O, Tri-Vision Electronics Inc.  
41 Pullman Court, Scarborough,  
Ontario, Canada. M1X-1E4



**LG Electronics Inc.**

San 4-1, Bongcheon7dong, Kwanak-gu, Seoul 151-818, Korea  
Phone: 82-2-2102-0114 Fax: 82-2-2102-0200

December 23, 2005

Mr. Mark Richer  
President, Advanced Television Systems Committee  
1750 K Street, NW  
Suite 1200  
Washington, DC

Patent Disclosure Statement

Dear Mr. Richer:

This Patent Disclosure Statement is being submitted by LG Electronics Inc. pursuant to ATSC patent policy Document B/04.

LG Electronics Inc. believes it holds one or more Essential Claims regarding the ETT table\_id\_extension related to proposed potential revisions to ATSC Standard A/65B presented by Zenith/LGE to TSG/S8. The Essential Claims are contained in U. S. patent application serial number 11/062,429 (publication number 20050166229), which is a continuation application of U.S. patent number 6,918,133. The Essential Claims relate to insertion of a unique id in a table\_id\_extension of each ETT section header.

LG Electronics Inc. will make available licenses under the foregoing Essential Claims, to the extent they issue as such in a granted U.S. patent, upon request under reasonable and nondiscriminatory terms and conditions to all applicants for the purpose of implementing the Specification Document containing the proposal.

We believe this statement is in full compliance with the ATSC patent policy. Please let us know if any additional information is required.

Sincerely,

A handwritten signature in black ink, appearing to read 'Choon Lee'.

Choon Lee, Vice President,  
Director of Digital TV Research Laboratory  
LG Electronics Inc.

**ATSC****Disclosure Statement and Licensing Declaration***This declaration does not represent an implied license grant***Please return to:**

**Mr. Mark Richer**  
**President, ATSC**  
**1750 K Street NW**  
**Suite 1200**  
**Washington, DC 20006**  
**202-872-9160 - Office**  
**202-872-9161 - Fax**

<b>Discloser:</b>	
<b>Name of Participant</b>	<b>Sony Electronics Inc.</b>
<b>Contact Information for Participant's Representative:</b>	
<b>Name of Representative</b>	<b>Frederick J. Zustak</b>
<b>Address</b>	<b>16450 West Bernardo Drive, MZ 7190</b>
	<b>San Diego, CA 92127</b>
<b>Tel:</b>	<b>(858) 942-7117</b>
<b>Fax</b>	<b>Fred.zustak@am.sony.com</b>
<b>E-mail</b>	
<b>URL (optional)</b>	
<b>Identification of ATSC Specification Document relevant to the Disclosure Statement:</b>	
<b>Number</b>	<b>S13-325 R0</b>
<b>Title</b>	<b>System Renewability Messages</b>

**Licensing Declaration**

If the Discloser is the holder of a patent and/or pending patent application that is the subject of an Essential Claim, *i.e.*, the use of which it believes would be required to implement the identified ATSC Specification Document, the Discloser hereby declares, in accordance with the Statement on ATSC Patent Policy (see ATSC website), that (check one box only).

- a. The Discloser agrees to make a license to the Essential Claim available without compensation upon request to all applicants for the purpose of implementing the Specification Document, which license may be conditioned upon license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.  
*Mark here \_\_\_ if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.*
- b. The Discloser agrees to make a license to the Essential Claim available upon request under reasonable and nondiscriminatory terms and conditions to all applicants for the purpose of implementing the Specification Document, which conditions may include license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.  
*Mark here \_\_\_ if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.*
- c. The Discloser will not make a license to the Essential Claim under reasonable and nondiscriminatory terms and conditions to applicants for the purpose of implementing the Specification Document.

**Without Compensation:** The phrase "without compensation" does not mean that the Discloser is waiving all of its rights with respect to each patent or patent application that is the subject matter of the Essential Claim. Rather, "without compensation" refers to the issue of monetary compensation; *i.e.*, that the Discloser will not seek any monetary compensation as part of the licensing arrangement (whether such compensation is called a royalty, a one-time licensing fee, etc.). However, while the Discloser in this situation is committing to not charging any monetary amount, the Discloser is still entitled to require that the implementer of the ATSC Specification Document sign a license agreement that contains other reasonable terms and conditions such as those relating to governing law, field of use, reciprocity, warranties, etc.

**Reciprocity:** As used herein, the word "reciprocity" means that the Discloser shall only be required to license any prospective licensee under the stated terms (without compensation or under reasonable and nondiscriminatory terms and conditions) if such prospective licensee will commit to license its patent(s) or patent application(s) forming the subject matter of an Essential Claim under similar (without compensation or under reasonable and nondiscriminatory) terms and conditions.

<b>Disclosure of Patents</b>			
<p><b>In accordance with Sections 3 and 4 of the ATSC Patent Policy, please identify each patent or patent application forming the subject matter of any Potential Claim of which any Representative of the Discloser who is active in an ATSC technology group or specialist group has actual personal knowledge. The Discloser, in good faith, believes that the Potential Claim may be relevant to the implementation of the Specification Document identified by this Disclosure Statement.</b></p>			
No.	Patent / Application No. and Country	Patent / Application Holder	Status [granted/ pending]
1	11/229,225	Mark Eyer, System Renewability Transport	Pending
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			

**Disclosure of Information**

In accordance with Sections 3 and 4 of the ATSC Patent Policy, if the Discloser has made a licensing declaration under paragraph (c) above, please provide the following information.

- an identification of each patent or patent application that is the subject matter of the Essential Claim;
- an identification of specific section(s) or text of the Specification Document that are relevant to the Essential Claim; and
- an identification of each patent or patent application claim covering the Specification Document.

This information is informal in nature and does not constitute a legal opinion, but should be based on "good faith and belief" of the Discloser. Information provided in this section does not represent a formal "notice" that implementation of any resulting ATSC Standard or Recommended Practice would infringe any patent or patent application for the Essential Claim.

Completed By:	Carrie Merzbacher
Name of Participant	Sony Electronics Inc.
Name of Representative	Frederick J. Zustak
Title of Representative	Director of Operations, Intellectual Property
Signature	<i>Frederick J. Zustak</i>
Place, Date	San Diego, CA 5/17/06



BITSTREAM

BITSTREAM INC.  
215 FIRST STREET  
CAMBRIDGE, MA  
02142-1270 USA  
617-497-6222  
FAX 617 866-0784  
WWW.BITSTREAM.COM



August 14, 2000

Mr. Mark Richer  
Executive Director  
ATSC  
1750 K Street NW  
Suite 1200  
Washington, DC 20006

Dear Mr. Richer:

Bitstream owns certain patents related to its recent submission to ATSC for a font standard.

Fonts can be created efficiently in compliance with this font standard without infringing any of these patents.

Software for efficiently rendering character images from this font standard can also be readily created without infringing any of these patents.

Bitstream will nonetheless offer licenses under these patents under reasonable terms demonstrably free from any unfair discrimination.

Sincerely,



John Collins  
Vice President, CTO



August 10, 2001

Advanced Television Systems Committee  
 Attention: Mark Richer, ATSC Executive Director  
 1750 K Street NW  
 Suite 1200  
 Washington, DC 20006

Patent Statement

Dear Mr. Richer:

Eastman Kodak Company owns a number of patents that in time may be considered applicable to the eventual, final ATSC Digital Television Applications Software Environment (DASE).

The patents identified as being of potential interest include

<u>US Patent #</u>	<u>Patent Name</u>
5,206,951	'Integration of data between typed objects by mutual, direct invocation between object managers corresponding to object types'
5,226,161	'Integration of data between typed data structures by mutual direct invocation between data managers corresponding to data types'
5,261,080	'Matchmaker for assisting and executing the providing and conversion of data between objects in a data processing system storing data in typed objects having different data formats'
5,303,379	'Link mechanism for linking data between objects and for performing operations on the linked data in an object based system'
5,421,012	'Multitasking computer system for integrating the operation of different application programs which manipulate data objects of different types'
5,421,015	'Multitasking system having an application integration mechanism for linking differently typed data objects'
5,634,124	'Data integration by object management'

If these patents ultimately are found to be applicable to DASE, then Eastman Kodak Company will offer licenses under these patents under reasonable terms and conditions that are demonstrably free from any unfair discrimination to any qualified applicant.

Very truly yours,

  
 Arthur J. Cosgrove, Director Motion Imaging Standards  
 Entertainment Imaging  
 Eastman Kodak Company  
 2400 Mt. Read Boulevard  
 Rochester, New York 14650-3091



Intellectual Property Center  
**Matsushita Electric Industrial Co., Ltd.**  
KADOMA OSAKA 571-8501 JAPAN  
TEL OSAKA (06) 6908-5839, FAX (06) 6908-1795

March 15, 2000

Intellectual Property Director  
Advanced Television Systems Committee  
1750 K Street NW  
Suite 1200  
Washington, DC 20006  
USA

Statement of License Granting

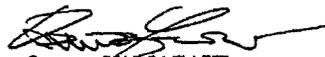
Dear Sir/Madam:

Matsushita Electric Industrial Co., Ltd., both itself and on behalf of its majority owned or controlled subsidiaries (hereafter, collectively "MEI") is pleased that the standardization in relation to ATSC/T3/S17 "DTV Applications Software Environment" (known as DASE) is studying as its UI specification the "HAVi (Home Audio Video Interoperability) Level-2 User Interface" proposal which has been made by eight (8) companies including MEI.

MEI hereby declares that it is prepared to license its freely licensable patents, if any, both granted and pending, which are essential to implementation of the proposed "HAVi Level-2 User Interface".

MEI also declares that it is aware of the rules described in the ATSC Patent Policy, and in particular that it is willing to grant a patent license to applicants under reasonable terms and conditions that are demonstrably free of any unfair discrimination, provided that a similar grant under any licensee's patents within the scope of the license granted to licensee is made available upon request to MEI.

Yours sincerely,



Osamu YAMAZAKI  
Director  
Intellectual Property Center





NETSCAPE

February 27, 1999

Craig Tanner  
Executive Director  
Advanced Television Systems Committee  
1750 K Street NW  
Suite 1200  
Washington, DC 20006

Dear Mr. Tanner,

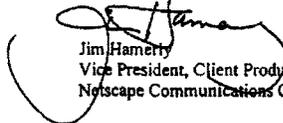
It has recently come to light that Netscape Communications Corporation's JavaScript™ in Java® technology (also known as "Rhino") could be of use in the emerging software specification for advanced television receivers in the United States. The standard is being developed through the T3/S17 Digital-TV Applications Software Environment specialist group (DASE).

This letter confirms that Netscape will make the JavaScript in Java technology and related patents held by Netscape available under reasonable terms and conditions that are demonstrably free of any unfair discrimination to applicants who wish to implement a compliant version of the DASE specification.

Please note that JavaScript is a Sun Microsystems trademark, licensed to Netscape, for use with the scripting language invented and developed by Netscape. The JavaScript trademark is used only under license from Sun.

Netscape has engaged in a licensing a variety of Internet technologies and related intellectual property for a wide range of uses on fair, reasonable, and nondiscriminatory terms for a number of years.

Very truly yours,



Jim Hamery  
Vice President, Client Products  
Netscape Communications Corporation

Netscape  
Communications  
Corporation

10875 Rancho Bernardo Road  
Suite 110  
San Diego, CA 92127-2115

Telephone: 619.673.5050  
Facsimile: 619.673.5054



June 6, 2002

VIA FACSIMILE (202.829.3131)

And US MAIL

Mr. Mark Richer

President

Advanced Television Systems Committee

1750 K Street NW

Washington, D.C. 20006

Re: ATSC Patent Policy Statement

Dear Mr. Richer:

Please accept the following statement from OpenTV, Inc. in connection with OpenTV's participation in the development of the ATSC DASE Specification ("DASE").

If any OpenTV patents are determined to be essential to the implementation of DASE, OpenTV agrees, to the extent required under the ATSC patent policy and applicable law, to provide licenses to such patents for use in equipment fully implementing and complying with DASE on reasonable terms and conditions that are demonstrably free of any unfair discrimination.

Very Truly Yours,

A handwritten signature in black ink, appearing to read "Vincent Dureau".

Vincent Dureau  
Chief Technology Officer  
OpenTV, Inc.

**Sharp Corporation**

22-22, Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan

June 1, 2000

Intellectual Property Director  
Advanced Television Systems Committee  
1750 K Street NW  
Suite 1200  
Washington DC, 20006  
U.S.A.

Dear Sir/Madam:

Sharp Corporation may own intellectual property specific to Level-2 User Interface of HAVi(Home Audio Video Interoperability) Specification, which may have been used in the draft ATSC T3/S17 "DTV Application Software Environment" (known as DASE) proposed draft standard.

Sharp Corporation will license its intellectual property to applicants under reasonable terms and conditions that are demonstrably free of any unfair discrimination, to companies that offer similar opportunities on comparable terms and conditions to others including Sharp Corporation.

Yours very truly,



Haruyasu Sasaki  
Group General Manager  
Intellectual Property Group  
Sharp Corporation

JavaSoft  
931 San Antonio Road  
Palo Alto, CA 94303



August 4, 1998

Craig Tanner  
Executive Director  
Advanced Television Systems Committee  
1750 K Street NW  
Suite 1200  
Washington, DC 20006

Dear Mr. Tanner,

Sun Microsystems is currently working with the ATSC and the T3/S17 Digital-TV Application Software Environment specialist group (DASE) in the development of a software specification for advanced television receivers in the United States.

This letter confirms that, should DASE recommend a specification the implementation of which would require the use of patents held by Sun Microsystems (Sun), Sun will make available to applicants who wish to implement a compliant version of the DASE specification a license to such patents under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

Sun has engaged in licensing of Java(tm) related intellectual property, for a wide variety of uses, on fair, reasonable, and nondiscriminatory terms for a number of years.

Very truly yours,

Mark Tolliver  
President  
Consumer & Embedded

## ATSC

### Disclosure Statement and Licensing Declaration

*This declaration does not represent an implied license grant*

Please return to:

President  
ATSC

1750 K Street NW  
Suite 1200  
Washington, DC 20006  
202-872-9160 – Office  
202-872-9161 – Fax

<b>Discloser:</b>	
Name of Participant	Eastman Kodak Company
<b>Contact Information for Participant's Representative:</b>	
Name of Representative	Mark P. Henry
Address	343 State Street
	Rochester, Ny 14650-0526
Tel.	585 724-9447
Fax	
E-mail	mark.henry@kodak.com
URL (optional)	
<b>Identification of ATSC Specification Document relevant to the Disclosure Statement:</b>	
Number	A/100
Title	DTV Application Software Environment - Level 1 (DASE-1)

**Licensing Declaration**

If the Discloser is the holder of a patent and/or pending patent application that is the subject of an Essential Claim, i.e., the use of which it believes would be required to implement the identified ATSC Specification Document, the Discloser hereby declares, in accordance with the Statement on ATSC Patent Policy (see ATSC website), that (check one box only).

- a. The Discloser agrees to make a license to the Essential Claim available without compensation upon request to all applicants for the purpose of implementing the Specification Document, which license may be conditioned upon license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.  
*Mark here \_\_\_ if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.*
- b. The Discloser agrees to make a license to the Essential Claim available upon request under reasonable and nondiscriminatory terms and conditions to all applicants for the purpose of implementing the Specification Document, which conditions may include license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.  
*Mark here \_\_\_ if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.*
- c. The Discloser will not make a license to the Essential Claim under reasonable and nondiscriminatory terms and conditions to applicants for the purpose of implementing the Specification Document.

**Without Compensation:** The phrase "without compensation" does not mean that the Discloser is waiving all of its rights with respect to each patent or patent application that is the subject matter of the Essential Claim. Rather, "without compensation" refers to the issue of monetary compensation; i.e., that the Discloser will not seek any monetary compensation as part of the licensing arrangement (whether such compensation is called a royalty, a one-time licensing fee, etc.). However, while the Discloser in this situation is committing to not charging any monetary amount, the Discloser is still entitled to require that the implementer of the ATSC Specification Document sign a license agreement that contains other reasonable terms and conditions such as those relating to governing law, field of use, reciprocity, warranties, etc.

**Reciprocity:** As used herein, the word "reciprocity" means that the Discloser shall only be required to license any prospective licensee under the stated terms (without compensation or under reasonable and nondiscriminatory terms and conditions) if such prospective licensee will commit to license its patent(s) or patent application(s) forming the subject matter of an Essential Claim under similar (without compensation or under reasonable and nondiscriminatory) terms and conditions.

<b>Disclosure of Patents</b>			
<b>In accordance with Sections 3 and 4 of the ATSC Patent Policy, please identify each patent or patent application forming the subject matter of any Potential Claim of which any Representative of the Discloser who is active in an ATSC technology group or specialist group has actual personal knowledge. The Discloser, in good faith, believes that the Potential Claim may be relevant to the implementation of the Specification Document identified by this Disclosure Statement.</b>			
<b>No.</b>	<b>Patent / Application No. and Country</b>	<b>Patent / Application Holder</b>	<b>Status [granted/pending]</b>
1	US 5,206,951	"Integration of data between typed objects by mutual, direct invocation between object managers	Granted
2	US 5,226,161	"Integration of data between typed data structures by mutual direct invocation between data managers corresponding	Granted
3	US 5,261,080	"Matchmaker for assisting and executing the providing and conversion of data between objects in a data processing system storing data in typed objects	Granted
4	US 5,303,379	"Link mechanism for linking data between objects and for performing operations on the linked data in an	Granted
5	US 5,421,012	"Multitasking computer system for integrating the operation of different application programs which manipulate	Granted
6	US 5,421,015	"Multitasking system having an application integration mechanism for linking differently typed data objects"	Granted
7	US 5,634,124	"Data integration by object management"	Granted
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			

**Disclosure of Information**

In accordance with Sections 3 and 4 of the ATSC Patent Policy, if the Discloser has made a licensing declaration under paragraph (c) above, please provide the following information.

- an identification of each patent or patent application that is the subject matter of the Essential Claim;
- an identification of specific section(s) or text of the Specification Document that are relevant to the Essential Claim; and
- an identification of each patent or patent application claim covering the Specification Document.

This information is informal in nature and does not constitute a legal opinion, but should be based on "good faith and belief" of the Discloser. Information provided in this section does not represent a formal "notice" that implementation of any resulting ATSC Standard or Recommended Practice would infringe any patent or patent application for the Essential Claim.

<b>Completed By:</b>	Mark P. Henry
<b>Name of Participant</b>	Eastman Kodak Company
<b>Name of Representative</b>	Mark P. Henry
<b>Title of Representative</b>	Director Entertainment Standards
<b>Signature</b>	
<b>Place, Date</b>	Rochester, NY April, 17 2006

**ATSC****Disclosure Statement and Licensing Declaration***This declaration does not represent an implied license grant***Please return to:**

**President**  
**ATSC**

1750 K Street NW  
 Suite 1200  
 Washington, DC 20006  
 202-872-9160 – Office  
 202-872-9161 – Fax

<b>Discloser:</b>	
<b>Name of Participant</b>	Eastman Kodak Company
<b>Contact Information for Participant's Representative:</b>	
<b>Name of Representative</b>	Mark P. Henry
<b>Address</b>	343 State Street Rochester, Ny 14650-0526
<b>Tel.</b>	585 724-9447
<b>Fax</b>	
<b>E-mail</b>	mark.henry@kodak.com
<b>URL (optional)</b>	
<b>Identification of ATSC Specification Document relevant to the Disclosure Statement:</b>	
<b>Number</b>	A/101
<b>Title</b>	Advanced Common Application Platform (ACAP)

**Licensing Declaration**

If the Discloser is the holder of a patent and/or pending patent application that is the subject of an Essential Claim, *i.e.*, the use of which it believes would be required to implement the identified ATSC Specification Document, the Discloser hereby declares, in accordance with the Statement on ATSC Patent Policy (see ATSC website), that (check one box only).

- a. The Discloser agrees to make a license to the Essential Claim available without compensation upon request to all applicants for the purpose of implementing the Specification Document, which license may be conditioned upon license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.  
*Mark here \_\_\_ if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.*
- b. The Discloser agrees to make a license to the Essential Claim available upon request under reasonable and nondiscriminatory terms and conditions to all applicants for the purpose of implementing the Specification Document, which conditions may include license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.  
*Mark here \_\_\_ if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.*
- c. The Discloser will not make a license to the Essential Claim under reasonable and nondiscriminatory terms and conditions to applicants for the purpose of implementing the Specification Document.

**Without Compensation:** The phrase "without compensation" does not mean that the Discloser is waiving all of its rights with respect to each patent or patent application that is the subject matter of the Essential Claim. Rather, "without compensation" refers to the issue of monetary compensation; *i.e.*, that the Discloser will not seek any monetary compensation as part of the licensing arrangement (whether such compensation is called a royalty, a one-time licensing fee, etc.). However, while the Discloser in this situation is committing to not charging any monetary amount, the Discloser is still entitled to require that the implementer of the ATSC Specification Document sign a license agreement that contains other reasonable terms and conditions such as those relating to governing law, field of use, reciprocity, warranties, *etc.*

**Reciprocity:** As used herein, the word "reciprocity" means that the Discloser shall only be required to license any prospective licensee under the stated terms (without compensation or under reasonable and nondiscriminatory terms and conditions) if such prospective licensee will commit to license its patent(s) or patent application(s) forming the subject matter of an Essential Claim under similar (without compensation or under reasonable and nondiscriminatory) terms and conditions.

<b>Disclosure of Patents</b>			
<b>In accordance with Sections 3 and 4 of the ATSC Patent Policy, please identify each patent or patent application forming the subject matter of any Potential Claim of which any Representative of the Discloser who is active in an ATSC technology group or specialist group has actual personal knowledge. The Discloser, in good faith, believes that the Potential Claim may be relevant to the implementation of the Specification Document identified by this Disclosure Statement.</b>			
<b>No.</b>	<b>Patent / Application No. and Country</b>	<b>Patent / Application Holder</b>	<b>Status [granted/pending]</b>
1	US 5,206,951	"Integration of data between typed objects by mutual, direct invocation between object managers	Granted
2	US 5,226,161	"Integration of data between typed data structures by mutual direct invocation between data managers corresponding	Granted
3	US 5,261,080	"Matchmaker for assisting and executing the providing and conversion of data between objects in a data processing system storing data in typed objects	Granted
4	US 5,303,379	"Link mechanism for linking data between objects and for performing operations on the linked data in an	Granted
5	US 5,421,012	"Multitasking computer system for integrating the operation of different application programs which manipulate	Granted
6	US 5,421,015	"Multitasking system having an application integration mechanism for linking differently typed data objects"	Granted
7	US 5,634,124	"Data integration by object management"	Granted
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			

**Disclosure of Information**

In accordance with Sections 3 and 4 of the ATSC Patent Policy, if the Discloser has made a licensing declaration under paragraph (c) above, please provide the following information.

- an identification of each patent or patent application that is the subject matter of the Essential Claim;
- an identification of specific section(s) or text of the Specification Document that are relevant to the Essential Claim; and
- an identification of each patent or patent application claim covering the Specification Document.

This information is informal in nature and does not constitute a legal opinion, but should be based on "good faith and belief" of the Discloser. Information provided in this section does not represent a formal "notice" that implementation of any resulting ATSC Standard or Recommended Practice would infringe any patent or patent application for the Essential Claim.

Completed By:	Mark P. Henry
Name of Participant	Eastman Kodak Company
Name of Representative	Mark P. Henry
Title of Representative	Director Entertainment Standards
Signature	
Place, Date	Rochester, NY April, 17 2006



Communications Research Centre Canada / Centre de recherches sur les communications Canada

As Agency of the Government of Canada / En tant qu'organisme du gouvernement du Canada

3701 Carling Avenue  
Ottawa Ontario K2H 8S2  
Canada

May 18, 2005

Mr. Mark Richer  
President  
Advanced Television Systems Committee  
1750 K Street, NW  
Suite 1200  
Washington DC 20006

Dear Mr. Richer,

I am writing to provide you with a Patent Disclosure related to contributions made by the Communications Research Centre Canada to the ATSC TSG/S9 study group.

The Communications Research Centre Canada (CRC) is the owner of United States Patent Application No. 10/765,138 and Canadian Patent Application No. 2,456,366, which pertain to the use of Kasami sequences as RF Watermarks for transmitter identification, as well as for other applications including data transmission and radio location finding, as specified in ATSC Standard A/110: Synchronization Standard for Distributed Transmission. A license to the relevant claims contained in these patent applications will be made available upon request, under reasonable and nondiscriminatory terms and conditions, to all applicants for the purpose of implementing the standard.

Please let us know if this disclosure is not in full compliance with your patent policy. We would be happy to provide any additional information that you may require.

CRC is the leading Canadian federal laboratory for research and development in advanced telecommunications. CRC currently holds more than 320 license agreements with various Canadian and foreign companies and remains dedicated to commercializing the Intellectual Property that is generated in its world-class laboratories.

Sincerely,

*Jeet Hohti*  
Jeet Hohti

Manager  
Technology Transfer Office  
Communications Research Centre Canada  
Tel: (613) 990-2089 Fax: (613) 990-7671  
E-mail: jeet.hohti@crc.ca



Canada

227 Central Avenue  
Metuchen, NJ 08840-1242  
(732) 494-6400 Phone  
(732) 494-6401 Fax

**Merrill Weiss Group LLC**

*Consultants in Electronic Media Technology/Management*

December 17, 2002

Mr. Mark Richer, President  
Advanced Television Systems Committee, Inc.  
1750 K Street, NW  
12<sup>th</sup> Floor  
Washington, DC 20036

Dear Mr. Richer:

In conformance with the ATSC Patent Policy, as embodied in ATSC Document B/04, this is to advise you that I personally and/or the Merrill Weiss Group LLC have patent interests in the technology contained in the Transmitter Synchronization Standard for Distributed Transmission document currently approved by Technology Group T3 at the level of Candidate Standard (CS/110).

As provided in paragraph 2.b. of Document B/04, this letter is to indicate our willingness to license our technology "to applicants under reasonable terms and conditions that are demonstrably free of any unfair discrimination." The terms and conditions of our licenses will be similar to the terms and conditions of others who license technology in the same field as ours. The terms and conditions will also be demonstrably free of any unfair discrimination because they will be offered to all parties who can demonstrate the financial resources to meet their obligations through normal credit approval processes.

Sincerely yours,



S. Merrill Weiss  
Senior Partner

SONY

February 14, 2006

Mr. Mark Richer  
President, Advanced Television Systems Committee  
1750 K Street, NW  
Suite 1200  
Washington, D.C.

Re: Patent Disclosure Statement

Dear Mr. Richer,

Attached hereto is a Patent Statement and Licensing Declaration submitted by Sony Electronics, Incorporated pursuant to ATSC policy document B-04.

Sony Electronics, Incorporated believes it holds one or more Essential Claims relating to closed-caption carriage technologies described in a recently submitted document entitled "Technology Group Report: Caption Carriage in E-VSB and New Codescs", Doc. TSG-676. In particular, the Essential Claims relate to carrying closed-caption and caption-related information in a program element separate from video. These Essential Claims are in a recently filed utility application claiming priority to a provisional patent application, serial number 60/652,996. The non-provisional serial number has not yet been received by Sony Electronics, Inc.

Sony Electronics, Incorporated will make available licenses under the foregoing Essential Claims, to the extent they issue as such in a granted U.S. patent, upon request to all applicants on a worldwide, non-discriminatory basis and on fair and reasonable terms and conditions solely to use the patented material for the purpose of implementing the Standard Document containing the proposal.

We believe this statement is in full compliance with the ATSC patent policy. Please let us know if any additional information is required.

Sincerely,



Frederick J. Zustak, Esq.  
Director of Operations, Intellectual Property Dept.  
Sony Corporation of America



Memorandum

**DATE:** 2 September 2005  
**TO:** Mark Richer, ATSC President  
**CC:** Patrick Harshman, President Harmonic CSD  
**FROM:** J. Patrick Waddell, Harmonic's ATSC Representative  
**SUBJECT:** Required Patent Disclosure per ATSC B/04

---

It is my duty to disclose that Harmonic believes it holds an Essential Claim, as defined in ATSC Document B/04, on a portion of the SMPTE VC-1 Bitstream Specification.

As required by B/04, we identify our claim and state that it will be made available under reasonable and non-discriminatory terms as defined in Section 1 of B/04. We have not determined if we will comply with either 1a or 1b terms.

The Patent in question is United States Patent Number US 6,463,102 B1, issued to Elliot Linzer, and assigned to Harmonic. We believe it applies to Table 14 and to Section 7.1.1.31 of SMPTE 421M, "VC-1 Compressed Video Bitstream Format and Decoding Process."

Our Patent covers "border processing" where the edges of the picture may be quantized at a different level than the center of the picture. Section 7.1.1.31 defines the semantics of that very process within the VC-1 Specification.

**ATSC****Disclosure Statement and Licensing Declaration***This declaration does not represent an implied license grant***Please return to:**

**Mr. Mark Richer**  
**President, ATSC**  
**1750 K Street NW**  
**Suite 1200**  
**Washington, DC 20006**  
**202-872-9160 - Office**  
**202-872-9161 - Fax**

<b>Discloser:</b>	
<b>Name of Participant</b>	<b>Samsung Electronics America Inc.</b>
<b>Contact Information for Participant's Representative:</b>	
<b>Name of Representative</b>	<b>John Godfrey</b>
<b>Address</b>	<b>1200 New Hampshire Avenue, NW, Suite 550</b>
	<b>Washington DC 20036</b>
<b>Tel.</b>	<b>202-887-5667</b>
<b>Fax</b>	
<b>E-mail</b>	<b>John.godfrey@samsung.com</b>
<b>URL (optional)</b>	
<b>Identification of ATSC Specification Document relevant to the Disclosure Statement:</b>	
<b>Number</b>	<b>S4-064</b>
<b>Title</b>	<b>A-VSB Physical and Link Layers with Single Frequency Network</b>

**Licensing Declaration.**  
 If the Discloser is the holder of a patent and/or pending patent application that is the subject of an Essential Claim, *i.e.*, the use of which it believes would be required to implement the identified ATSC Specification Document, the Discloser hereby declares, in accordance with the Statement on ATSC Patent Policy (see ATSC website), that (check one box only).

- a. The Discloser agrees to make a license to the Essential Claim available without compensation upon request to all applicants for the purpose of implementing the Specification Document, which license may be conditioned upon license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.  
*Mark here \_\_\_ if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.*
- X b. The Discloser agrees to make a license to the Essential Claim available upon request under reasonable and nondiscriminatory terms and conditions to all applicants for the purpose of implementing the Specification Document, which conditions may include license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.  
*Mark here \_\_\_ if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.*
- c. The Discloser will not make a license to the Essential Claim under reasonable and nondiscriminatory terms and conditions to applicants for the purpose of implementing the Specification Document.

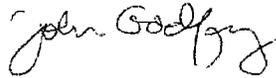
**Without Compensation:** The phrase "without compensation" does not mean that the Discloser is waiving all of its rights with respect to each patent or patent application that is the subject matter of the Essential Claim. Rather, "without compensation" refers to the issue of monetary compensation; *i.e.*, that the Discloser will not seek any monetary compensation as part of the licensing arrangement (whether such compensation is called a royalty, a one-time licensing fee, etc.). However, while the Discloser in this situation is committing to not charging any monetary amount, the Discloser is still entitled to require that the implementer of the ATSC Specification Document sign a license agreement that contains other reasonable terms and conditions such as those relating to governing law, field of use, reciprocity, warranties, *etc.*

**Reciprocity:** As used herein, the word "reciprocity" means that the Discloser shall only be required to license any prospective licensee under the stated terms (without compensation or under reasonable and nondiscriminatory terms and conditions) if such prospective licensee will commit to license its patent(s) or patent application(s) forming the subject matter of an Essential Claim under similar (without compensation or under reasonable and nondiscriminatory) terms and conditions.

Disclosure of Patents			
<p>In accordance with Sections 3 and 4 of the ATSC Patent Policy, please identify each patent or patent application forming the subject matter of any Potential Claim of which any Representative of the Discloser who is active in an ATSC technology group or specialist group has actual personal knowledge. The Discloser, in good faith, believes that the Potential Claim may be relevant to the implementation of the Specification Document identified by this Disclosure Statement.</p>			
No.	Patent / Application No. and Country	Patent / Application Holder	Status [granted/pending]
1	60/979529 US	Samsung Electronics Co., LTD.	Pending

Disclosure of Information
<p>If claims method of deterministically resetting Trellis code for backward compatibility with current DTV system and Turbo coding process.</p>
<p></p>

Completed By:	John Godfrey
Name of Participant	Samsung Electronics America, Inc.
Name of Representative	John Godfrey
Title of Representative	Vice President/Gov't & Public Affairs

<b>Signature</b>	
<b>Place, Date</b>	Washington DC USA, Dec 27, 2007



**Disclosure Statement and Licensing Declaration**

*This declaration does not represent an implied license grant*

Please return to:

President  
ATSC  
1750 K Street NW  
Suite 1700  
Washington, DC 20006  
Tel: 877-8141 Office  
800-877-8141 Fax

<b>Discloser:</b>	
Name of Participant:	FIRE
<b>Contact Information for Participant's Representative:</b>	
Name of Representative:	Rayco Wang
Address:	151 Oakridge Way, Potomac, Maryland, 20854-100, K/Fla
Tel:	301-456-1133
Fax:	301-456-1449
E-mail:	rwang@fire.org
Web (optional):	www.fire.org
<b>Form Number of ATSC Specification Document (insert in the Disclosure Statement):</b>	
Number:	Doc. C9744 (22 February 2005)
Title:	ATSC Candidate Standard: Programming Metadata Communication Protocol Standard, Revision A

**1. Existing Disclosure**  
 If the Discloser is the holder of a patent and/or pending patent application that is the subject of an Essential Claim, i.e., the use of which it believes would be required to implement the identified ATSC Specification Document, the Discloser hereby declares in accordance with the Statement on ATSC Patent Policy (see ATSC website), that (check one box only):

- a. The Discloser agrees to make a license to the Essential Claim available without compensation upon request to all applicants for the purpose of implementing the Specification Document, which license may be conditional upon license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.  
*Mark here if the Discloser's willingness to license is conditional on reciprocity for the above ATSC Standard.*
- b. The Discloser agrees to make a license to the Essential Claim available upon request under reasonable and nondiscriminatory terms and conditions to all applicants for the purpose of implementing the Specification Document, which conditions may include license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.  
*Mark here if the Discloser's willingness to license is conditional on reciprocity for the above ATSC Standard.*
- c. The Discloser will not make a license to the Essential Claim available reasonable and nondiscriminatory terms and conditions to applicants for the purpose of implementing the Specification Document.

**Without Compensation:** The phrase "without compensation" does not mean that the Discloser is waiving all of its rights with respect to each patent or patent application that is the subject matter of the Essential Claim. Rather, "without compensation" refers to the issue of monetary compensation, but that the Discloser will not seek any monetary compensation as part of the licensing arrangement whether such compensation is called a royalty, a one-time licensing fee, etc. However, while the Discloser in this situation is committed to not charging any monetary amount, the Discloser is still entitled to require that the implementer of the ATSC Specification Document sign a license agreement that contains other reasonable terms and conditions such as those relating to copyright law, patent law, reciprocity, warranties, etc.

**Reciprocity:** As used herein, the word "reciprocity" means that the Discloser shall only be required to license any prospective licensee under the stated terms (without compensation or under reasonable and nondiscriminatory terms and conditions) if such prospective licensee will commit to license its patent(s) or patent application(s) forming the subject matter of an Essential Claim under similar (without compensation or under reasonable and nondiscriminatory) terms and conditions.

**Disclosure of Patents**

In accordance with Sections 3 and 4 of the ATSC Patent Policy, please identify each patent or patent application forming the subject matter of any Potential Claim of which any Representative of the Discloser who is active in an ATSC authoring group or specialist group has actual personal knowledge. The Discloser, in good faith, believes that the Potential Claim may be relevant to the implementation of the Specification Document identified by this Disclosure Submission.

No.	Patent / Application No. and Country	Patent / Application Title	Status (granted, pending, expired)
1	PGT/PT/US/2008/0000000	PTN	Pending
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

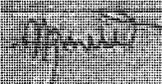
**Disclosure of Information**

In accordance with Sections 3 and 4 of the AISC Patent Policy, if the Discloser has made a  
 Specified Determination under paragraph (c) above, please provide the following information:

- an identification of each patent or patent application known to the subject matter of the  
 Essential Claim;
- an identification of specific section(s) or text of the Specification Document that are  
 relevant to the Essential Claim; and
- an identification of each patent or patent application claim covering the Specification  
 Determination.

This information is informal in nature and does not constitute a legal opinion. It should be  
 based on "good faith and belief" of the Discloser. Information provided to this section does  
 not constitute a legal "waiver" that precludes future of any resulting AISC Standard for  
 Recommended Practice would infringe any patent or patent application for the Essential  
 Claim.

We believe the Essential Claim may be relevant to the Access system and any Association  
 of IBCF or ACAF Data Networking (ADND) or CN7CA.

Completed By:	Erico Hogg
Name of Participant:	ETRI
Name of Representative:	Erico Hogg
Title of Representative:	Director of Intellectual Property Research Group
Signature:	
Date:	STRANEX, 2006/02

**ATSC****Disclosure Statement and Licensing Declaration***This declaration does not represent an implied license grant***Please return to:****President  
ATSC**

1750 K Street NW  
 Suite 1200  
 Washington, DC 20006  
 202-872-9160 – Office  
 202-872-9161 – Fax

<b>Discloser:</b>	<b>Merrill Weiss Group LLC</b>
<b>Name of Participant</b>	<b>Merrill Weiss Group LLC</b>
<b>Contact Information for Participant's Representative:</b>	
<b>Name of Representative</b>	<b>S. Merrill Weiss</b>
<b>Address</b>	<b>227 Central Avenue</b>
	<b>Metuchen, NJ 08840-1242</b>
<b>Tel.</b>	<b>732 494 6400 x102</b>
<b>Fax</b>	<b>732 494 6401</b>
<b>E-mail</b>	<b>merrill@mwgrp.com</b>
<b>URL (optional)</b>	<b>www.mwgrp.com</b>
<b>Identification of ATSC Specification Document relevant to the Disclosure Statement:</b>	
<b>Number</b>	<b>Currently unassigned</b>
<b>Title</b>	<b>S4-1 activity on Mobile/Handheld Physical Layer</b>

Licensing Declaration	
<p>If the Discloser is the holder of a patent and/or pending patent application that is the subject of an Essential Claim, <i>i.e.</i>, the use of which it believes would be required to implement the identified ATSC Specification Document, the Discloser hereby declares, in accordance with the Statement on ATSC Patent Policy (see ATSC website), that (check one box only).</p>	
<input type="checkbox"/>	<p>a. The Discloser agrees to make a license to the Essential Claim available without compensation upon request to all applicants for the purpose of implementing the Specification Document, which license may be conditioned upon license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.</p> <p><i>Mark here ___ if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.</i></p>
<input checked="" type="checkbox"/>	<p>b. The Discloser agrees to make a license to the Essential Claim available upon request under reasonable and nondiscriminatory terms and conditions to all applicants for the purpose of implementing the Specification Document, which conditions may include license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.</p> <p><i>Mark here ___ if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.</i></p>
<input type="checkbox"/>	<p>c. The Discloser will not make a license to the Essential Claim under reasonable and nondiscriminatory terms and conditions to applicants for the purpose of implementing the Specification Document.</p>
<p><b>Without Compensation:</b> The phrase "without compensation" does not mean that the Discloser is waiving all of its rights with respect to each patent or patent application that is the subject matter of the Essential Claim. Rather, "without compensation" refers to the issue of monetary compensation; <i>i.e.</i>, that the Discloser will not seek any monetary compensation as part of the licensing arrangement (whether such compensation is called a royalty, a one-time licensing fee, etc.). However, while the Discloser in this situation is committing to not charging any monetary amount, the Discloser is still entitled to require that the implementer of the ATSC Specification Document sign a license agreement that contains other reasonable terms and conditions such as those relating to governing law, field of use, reciprocity, warranties, etc.</p>	
<p><b>Reciprocity:</b> As used herein, the word "reciprocity" means that the Discloser shall only be required to license any prospective licensee under the stated terms (without compensation or under reasonable and nondiscriminatory terms and conditions) if such prospective licensee will commit to license its patent(s) or patent application(s) forming the subject matter of an Essential Claim under similar (without compensation or under reasonable and nondiscriminatory) terms and conditions.</p>	

**Disclosure of Patents**  
 In accordance with Sections 3 and 4 of the ATSC Patent Policy, please identify each patent or patent application forming the subject matter of any Potential Claim of which any Representative of the Discloser who is active in an ATSC technology group or specialist group has actual personal knowledge. The Discloser, in good faith, believes that the Potential Claim may be relevant to the implementation of the Specification Document identified by this Disclosure Statement.

No.	Patent / Application No. and Country	Patent / Application Holder	Status [granted/ pending]
1	US 7,110,048	S. Merrill Weiss	Granted
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			

**Disclosure of Information**

In accordance with Sections 3 and 4 of the ATSC Patent Policy, if the Discloser has made a licensing declaration under paragraph (c) above, please provide the following information.  
 - an identification of each patent or patent application that is the subject matter of the

**Essential Claim;**

an identification of specific section(s) or text of the Specification Document that are relevant to the Essential Claim; and

an identification of each patent or patent application claim covering the Specification Document.

This information is informal in nature and does not constitute a legal opinion, but should be based on "good faith and belief" of the Discloser. Information provided in this section does not represent a formal "notice" that implementation of any resulting ATSC Standard or Recommended Practice would infringe any patent or patent application for the Essential Claim.

Completed By:	S. Merrill Weiss
Name of Participant	Merrill Weiss Group LLC
Name of Representative	S. Merrill Weiss
Title of Representative	President
Signature	<i>S. Merrill Weiss</i>
Place, Date	Metuchen, NJ, December 14, 2007

# SONY

Sony Corporation of America, Intellectual Property Department  
16530 Via Esposo, RM 7100  
San Diego, CA 92127  
Sender's Direct Telephone (858) 942-2897, Fax (858) 942-7126

---

March 7, 2008

Mr. Mark Richer  
President, Advanced Television Systems Committee  
1750 K Street, NW  
Suite 1200  
Washington, D.C.

Re: Patent Disclosure Statement

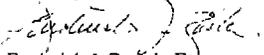
Dear Mr. Richer,

Sony Electronics, Incorporated believes it holds one or more Essential Claims relating to the A72 and A73 standard. These Essential Claims to be identified at a later date.

Sony Electronics, Incorporated will make available licenses under the foregoing Essential Claims, to the extent they issue as such in a granted U.S. patent, upon request to all applicants on a worldwide, non-discriminatory basis and on fair and reasonable terms and conditions solely to use the patented material for the purpose of implementing the Standard Document containing the proposal.

We believe this statement is in full compliance with the ATSC patent policy. Please let us know if any additional information is required.

Sincerely,



Frederick J. Zusk, Esq.  
Director of Operations, Intellectual Property Dept.  
Sony Corporation of America

Advanced Television Systems Committee, Inc.  
1750 K Street, N.W.  
Washington, DC 20006

### PATENT STATEMENT AND LICENSING DECLARATION

Note: This form complies with the American National Standards Institute Procedures for the Development and Coordination of American National Standards. This declaration does not imply a license grant.

<b>Name of Patent Holder Organization</b>	Sony Electronics, Inc.
<small>(If the submitter is notifying SCTE that another organization holds a relevant patent, the holding organization is identified above and the notifying organization below.)</small>	
Organization Name	Sony Electronics, Inc
Organization Address	16450 West Bernardo Drive, MZ 7190, San Diego, CA, USA, 92127-1804
Contact Name / Title	Frederick John Zustak, Esq / Director of Operations, Intellectual Property Department
Telephone / Facsimile	858-942-7117 / 858-942-7120
Email	fred.zustak@am.sony.com
<b>Designation and Title of SCTE Standard</b> <small>(list sections of the standard to which patent claims relate)</small>	ATSC -- A72 & A73
<b>Registration Number(s) - please fill in the form on page 2</b>	

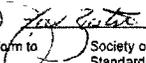
**Licensing declaration:**

Please check one of the following statements:

1. The Patent Holder will grant a license to an unrestricted number of applicants on a worldwide, non-discriminatory basis and on fair and reasonable terms and conditions solely to use the patented material necessary in order to manufacture, use, and/or sell implementations of the named SCTE standard.  
Note: Negotiations of such licenses are left to the parties concerned and are performed outside of the national and international standards organizations.
2. The patent holder is unwilling to grant licenses in accordance with the provisions of 1 above
- If box 1-is checked, please also check here if the Patent Holder is willing to license without compensation
- If box 1 is checked, please also check here if the Patent Holder's willingness to license is conditioned on reciprocity. Reciprocity means that, with respect to prospective licensees that have one or more patents or patent claims that also are necessary for the implementation of the same standard, the Patent Holder shall only be required to license such prospective licensees if such prospective licensees will commit to license their essential patent(s) or patent claim(s) for implementation of the same standard under reasonable and non-discriminatory terms and conditions

**Authorized person signing this declaration:**

Name (printed) Frederick John Zustak Title Director of Operations Organization Intellectual Property Dept

Name (signed)  Date March 11, 2008 Place San Diego, CA

Please send this form to Society of Cable Telecommunications Engineers (SCTE)  
Standards Department 140 Philips Road, Exton, PA 19341

Questions may be sent to [standards@scte.org](mailto:standards@scte.org) or via fax to (610) 363-7133.

**PATENT STATEMENT AND LICENSING DECLARATION**

Patent Registration Information

<b>Patent Number, Country</b>	<b>Patent Title, Inventor</b>	<b>Status (Granted or Pending)</b>
TBD – See Correspondence of 3/7/08		

## **APPENDIX C**

<b>Bureau Office</b>	<b>Docket Number</b>	<b>Media Bureau Non-DTV Items on Circulation</b>
MB		New AM, Mesquite, Nevada and Johnstown, Colorado
MB		New AM, Truckee, CA and Jacksonville, OR
MB		KDWD, Emmetsburg, et. al, IA and Brandon, SD
MB		Revision of the Licensing Procedures for FM Translator Stations MO&O and NPRM.
MB		2002 Biennial Regulatory Review – Review of the Commission’s Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, MO&O (Arso Radio Corp)
MB		Crawford Application for Review re Vinton, LA, et al.
MB		Little Dixie Radio, Inc., et al., KESC(FM), et al., Wilburton and McAlester, OK.
MB	95-31	Reexamination of the Comparative Standards for NCE
MB		KXLA(TV), Rancho Palos Verdes Broadcasters, Inc.
MB	01-7	Distribution of Interactive Television Services Over Cable Report
MB	02-212	FM Allocation, Vinton, Louisiana, Crystal Beach, Lumberton
MB		KDIS-FM (formerly KYFX(FM)), Little Rock, AR
MB		Gateway Christian School, Inc. & East KY U, MIDDLESBORO, KY FIN 87091
MB	01-65	Emmetsburg, Sanborn and Sibley, Iowa, and Brandon, South Dakota, MO&O in MM Docket No. 01-65.
MB	99-322	Amendment to FM Table of Allotments, Chillicothe and Ashville, Ohio
MB		Pamplin Broadcasting-Oregon, Inc. JACKSONVILLE, OR FIN 122581
MB		In the Matter of Network Affiliates Stations Alliance (NASA) Petition for Inquiry into Network Practices and Motion for Declaratory Ruling.
MB	00-30	Texas.Net Complaint
MB		St. George, Utah and Winchester, Nevada BNP-20000128ACK
MB		BIXBY, OK New AM (Auc 32) FIN 122557 Sharon Berlin Ingles
MB		ALBEMARLE/INDIAN TRAIL, NC FID 52553
MB	03-130	Definition of Radio Markets for Areas Not Located in an Arbitron Survey Area
MB		BERLIN, NH, Shaw Communications, W251BD, FIN 141693
MB		Mutually Exclusive Applications for CP for new NCE TV Station on Channel 43, Sacramento, CA
MB		GARDEN CITY, MO; Application for Review; FIN 87565
MB	05-192	Applications for Consent to the Assignment and/or Transfer of Control of Licenses, Adelpia Communications Corp., Assignors, to Time Warner Cable Inc., Assignees
MB		The Proper Treatment of FCC Regulatory Fees Under 47 U.C.C. Section 542(g)
MB		R B Schools and Health Radio, Inc., Applications for New Noncommercial Educational FM Stations.
MB		Marcus Cable Associates, LLC d/b/a Charter Communications, Petition for Determination of Effective Competition
MB	01-33	FM Allocation, Caro and Cass City, Michigan; Application for Review

MB		Sponsorship Identification Rules and Embedded Advertising
MB	02-70	Applications for Consent to the Transfer of Control of Licenses from Comcast Corporation and AT&T Corp., Transferors, to AT&T Comcast Corporation, Transferee
MB		New FM Broadcast Stations, Pocatello, Idaho and Twin Falls, Idaho, FIN 87656
MB		Mixed Groups (commercial and non-commercial)
MB		Revision of FM Translator Licensing
MB		Puerto Rico Radio Market
MB		ITV AOL Termination Proceeding
MB		WABZ(FM), Indian Trail, NC
MB		Garden City, MO Application for Review (KFME-FM)
MB		Paxson Communications, KPXI(TV), Minden, LA, Assignment of License
MB		Edward Schober, New FM Translator, Manahawkin, NJ
MB	01-120	Lincoln & Sherman, IL
MB		Eagle Broadcasting & Saga Communications, Assignment of Licenses, Ithaca, NY
MB	04-219	Evergreen, AL & Shalimar, FL
MB		KIEV(AM) Royce International Broadcasting, Culver City, CA
MB		Royce B/C New AM, Folsom, CA

<b>Bureau Office</b>	<b>Docket Number</b>	<b>OET Non-DTV Items on Circulation</b>
OET	06-94	Measurement standards for Digital Television signals pursuant to the Satellite Home Viewer Extension and Reauthorization Act of 2004
OET	03-254	Geostationary/Geostationary Satellite Orbit Fixed-Satellite Service and Fixed, BAS and CATV Relay Services in the 7, 10, and 13 GHz Frequency Bands
OET	00-258	Amendment of Pt. 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including 3rd Generation Wireless Systems



**National Cable & Telecommunications Association**  
 25 Massachusetts Avenue, NW – Suite 100  
 Washington, DC 20001  
 (202) 222-2300  
 www.ncta.com

**Kyle McSparrow**  
 President and CEO  
 (202) 222-2500  
 (202) 222-2514 Fax

**The Honorable John D. Dingell**

1. It has been reported that Chairman Martin has circulated a proposal at the Federal Communications Commission that would enable Class A low-power stations to transition to full-power status in relatively short order. Are you concerned about the effect such a proposal might have on cable system capacity?

Answer:

Granting must carry status to Class A low-power (LPTV) stations by giving them “full- power” status could have a significant impact on cable system capacity. The inevitable result of granting any class of LPTV stations must carry rights is the displacement of popular cable program networks that have earned placement on cable through the quality of their programming. In addition, such action would stunt the development of new cable networks that provide additional diversity to cable subscribers.

Under current law, low-power stations already qualify for carriage in those limited circumstances in which Congress determined that such carriage would serve the public interest. When Congress enacted the must carry provisions of the Communications Act in 1992, it provided for carriage of qualified LPTV stations. Key requirements for carriage include: that they meet the public interest obligations and requirements imposed on full-power broadcast stations; the FCC determines that their programming would address local news and informational needs not adequately served by full-power stations; the stations are located in smaller markets; and there is no full-power station licensed to any community within the county or political subdivision served by the cable system.

In a number of communities throughout the country, cable operators, either pursuant to must carry rules or through marketplace arrangements, are carrying low-power television stations and they will continue to do so as long as the low-power television stations are providing the kind of programming that subscribers want.

But numbers alone show why Congress refused to grant must carry rights to low-power television stations except in certain limited and specific circumstances. Today there are about 1,750 full-power stations vs. nearly 2,800 LPTV stations and of those 567 are designated Class A LPTV stations. Requiring operators to make room for hundreds of new must carry stations would put an intolerable strain on cable capacity. This is particularly the case since cable operators have committed to carry *both* the analog and digital signal of full-power broadcasters for three years beginning February 2009 to help smooth the DTV transition.

Unfortunately, with less than one year before the February 2009 switchover, the Commission's latest proposal ignores these commitments, and ultimately, injects new uncertainty and potential litigation at a critical time in the digital television transition. Obligating cable operators to carry hundreds of new Class A signals – which Congress determined were not entitled to must carry – imposes an unacceptable, unconstitutional new burden.

Requiring carriage of low-power stations would impermissibly infringe the First Amendment rights of cable operators and program networks. The Supreme Court acknowledged, in narrowly upholding the currently existing must carry requirements, that such requirements adversely affect the First Amendment speech of cable operators and program networks. But the bare majority that upheld the rules found that the burden was not substantial because cable operators were already carrying most full-power broadcast stations, even in the absence of must carry. This is not the case with respect to low-power stations. A low-power must carry requirement would force cable operators to carry a large number of stations that they would not otherwise choose to carry, and it would, as noted above, displace a large number of cable program networks on cable systems. The imposition of such burdens on speech rights would not survive First Amendment scrutiny.

With regard to the problem identified that certain NTIA approved digital to analog converter boxes will not pass through analog signals, the solution is not to impose a low power must carry obligation on cable. The solution is an information campaign by LPTV stations to inform their viewers that they should: (1) request an NTIA voucher for a converter box, and (2) make sure that they buy one of the models that pass through the analog signals. All industries and government agencies involved in the transition effort can help get the word out. However, since this is uniquely a problem for over-the-air viewers of LPTV broadcasters, imposing new, unconstitutional must carry obligations on cable will not solve the problem for those viewers.

**EchoStar Technologies L.L.C.**  
**Response to Written Question from the Hearing,**  
**“Status of the DTV Transition: 370 Days and Counting”**  
**U.S. House Committee on Energy and Commerce**  
**Submitted March 21, 2008**

**Question from the Honorable John D. Dingell:**

It has been reported that Chairman Martin has circulated a proposal at the Federal Communications Commission that would enable Class A low-power stations to transition to full-power status in relatively short order. Are you concerned about the effect such a proposal might have on satellite-system capacity?

**Answer:**

While EchoStar is not in a position to comment on any potential actions by the Federal Communications Commission (“FCC”) regarding changes to the status of Class A low-power stations, we generally believe that requiring Direct Broadcast Satellite (“DBS”) providers to carry all low-power TV stations (the effect of such a status change) likely would have a material impact on consumers and our ability to compete.

A requirement to carry all low-power stations would increase DISH Network’s (“DISH”)<sup>1</sup> broadcast carriage obligations by many times and likely would result in major disruptions in our current service. According to FCC files as of the date of this submission, there are approximately 3,129 low-power Class A television stations,<sup>2</sup> about double the number of full-power stations. In the 174 markets where DISH Network currently provides local broadcast channels to subscribers (“Locals”) using spot-beam frequencies, this means that DISH’s broadcast carriage obligation could increase by an average of fifteen (15) local broadcast stations in each of the Locals markets. Assuming that DISH maintained its current mix of high- and standard-definition signals, and assuming further that each low power station were carried in standard definition (i.e., using as much data as a full-power standard-definition carried on DISH today), a low-power TV carriage obligation would require DISH to devote spot beam capacity to the low-power stations, rather than to serving as many Locals markets as possible. The likely result: eliminating most Locals markets.

Below are a few illustrative examples of how DISH probably would have to reallocate spot beam capacity if forced to carry all low-power Class A television stations:

---

<sup>1</sup> DISH Network is the sister company of EchoStar Technologies Corporation, as stated in Mark Jackson’s oral testimony.

<sup>2</sup> This figure includes construction permits and modified construction permits, but excludes translator stations.

<b>15 More Low-Power Stations Carried</b>	<b>In-Beam Markets Likely Dropped</b>
Atlanta	Augusta, GA TriCities, TN Macon, GA Charlotte, NC
Washington, D.C.	Greensboro, NC Baltimore, MD Roanoke, VA
Jacksonville, FL	Gainesville, FL Tallahassee, FL Albany, GA
Omaha, NE	Des Moines, IA Kansas City, KS Topeka, KS
Philadelphia and New York City	Boston, MA Albany, NY Burlington, VT Syracuse, NY Harrisburg, PA
San Francisco, CA	Sacramento, CA Chico, CA Reno, NV

Under the scenario above, DISH would be unable to provide competitive service to the majority of Locals markets it serves today, undermining our ability to compete against terrestrial video providers and, for rural residents who only can receive DBS, eliminating altogether the local broadcast signals available on pay-TV.

Moreover, the assumptions above do not take into account the bandwidth implications as TV stations go digital and DBS carriers increase the number of such stations carried in high definition. If this were taken into account, the effect of a low-power must carry obligation would be even more draconian.

DISH Network has worked closely with policy-makers to achieve rational, achievable DBS broadcast carriage obligations that balance broadcasters' and DBS subscribers' needs. With respect to the issue raised by Chairman Dingell, DISH Network and EchoStar Technologies Corp. believe that consumers can continue to watch low-power broadcasters transmitting in analog after February 19, 2009. Such consumers may acquire digital-to-analog converter boxes that pass through analog signals. EchoStar's TR-40 converter box performs that function. Encouraging consumers to pursue this option is a far better choice than harming DBS subscribers through unnecessarily burdensome carriage obligations.

David L. Reed  
President and CEO



March 21, 2008

The Honorable John D. Dingell  
Chairman  
U.S. House of Representatives  
Committee on Energy and Commerce  
2125 Rayburn House Office Building  
Washington, DC 20515-6115

Dear Chairman Dingell:

In your letter dated March 7, 2008, you requested that I address the following question:

"It has been reported that Chairman Martin has circulated a proposal at the Federal Communications Commission that would enable Class A low-power stations to transition to full-power status in relatively short order. Could such a move, on what could be a very large scale, be accomplished without causing harmful interference to existing full-power broadcasters?"

On behalf of the 8,300 members of the National Association of Broadcasters (NAB), I would like to thank you for the opportunity to address this important issue. Although it is not possible to give a complete analysis of the impact of granting full power status to Class A low power stations without knowing the precise details of the Federal Communications Commission ("FCC" or "Commission") proposal, NAB believes that such a change would be contrary to the public interest and could reduce full-power broadcasters' ability to serve the public.

**Interference.** There are approximately 581 licensed Class A stations in markets throughout the country. Like all low power television ("LPTV") stations, Class A stations were "squeezed" in between existing full power stations. These stations cannot operate on a full power basis without causing harmful interference to the signals of nearby full power stations and disrupting the public's ability to see those signals. Even if Class A power levels were not increased under the FCC's proposal, simply designating these stations as "full power" would create problems. As a regulatory matter, the interference protection zone for full power stations is larger than

1771 N Street NW  
Washington DC 20036 2800  
Phone 202 429 5449  
Fax 202 429 5410  
[www.nab.org](http://www.nab.org)

Advocacy Education Innovation

that used for Class A stations. If Class A stations gain full power status, current full power stations that are not considered to be causing interference to Class A stations today, by definition would suddenly be considered to cause interference. The unintended result of this change could force current full power stations to reduce power to avoid interference, which would, in turn, reduce service to the public.

**DTV Service Limitations.** Changing the status of Class A stations could also limit the ability of current full power stations to provide better digital television service to the public. For several years, full power stations have sought to increase their power levels in order to provide improved service to their communities. Because of the digital television transition, the FCC has imposed a “freeze” on any application by a station to “maximize” power. Awarding Class A stations full power status would prevent many of the full power stations from increasing power and improving service, because they would now have to “protect” the expanded service areas of the new “full power” Class A stations. Such a result would not serve the public interest. Full power stations have invested billions of dollars converting to digital television. They have been the leaders in driving this new technology. It would be most unfortunate to prevent full power stations from providing better service to the public.

**Effects on Other Low Power Stations.** Awarding Class A stations full power status would not only increase their service areas, it would give them priority over other LPTV stations and television translators. As a result, granting Class A stations full power status may prevent many LPTV and TV translator stations from shifting to digital or effectively “squeeze” these stations out of the market, reducing options available to viewers. In addition, the proposed change could amount to a government grant of economic value to stations that are valued at more than other low power stations and less than full service stations. This change could artificially impact the economic value of all television stations without regard to actual station economics.

**Counterproductive Effects on Class As.** Finally, in order to avoid interference from these new Class A full power stations, the Commission may be forced to relocate them to areas where there is less congestion. In other words, in order to be given true full power status and avoid interference to surrounding stations, the FCC would have to move a Class A station’s community of license from a metropolitan to a more rural area. This policy is counterproductive. The stated purpose of Class A service was to provide an opportunity for viewer access to more diverse viewpoints within local communities. It would be ironic if, in the name of giving these stations full power status, they have to be moved from the communities to which they were originally licensed in order to avoid interference to surrounding stations.

**Better Alternatives.** If the goal of the proposed transition of Class A stations to full power status is to ensure that these stations remain available to viewers following the full power transition to all-digital broadcasting, there are other ways to ensure such

access. NAB shares the concerns of those who want to preserve viewer access to Class A, LPTV, and TV Translator stations. NAB has taken several steps toward addressing the issue of viewer access to these stations, and continues to work toward solutions.

- NAB has established an LPTV Task Force, which is meeting regularly.
- The LPTV Task Force is working to determine the scope of the impact on television viewers.
- NAB staff members have participated in meetings with FCC staff and other concerned parties about the effect of the transition on viewer access to low power stations.
- NAB sent letters to numerous consumer electronics manufacturers urging them to create boxes with the analog pass-through feature.
- NAB is working to educate viewers about low power solutions both over-the-air and on the Internet.
  - NAB is developing action spots geared towards viewers of both LPTV and TV Translator stations.
  - NAB has developed a Web site, [LPTVAnswers.com](http://LPTVAnswers.com), to help educate the public about access to low power stations. Among other things, the site provides a link to a map of low power stations, identifies converter boxes with the analog pass-through feature, and explains how to watch low power stations even without a "pass-through" box. Information on the Web site is available in English and Spanish.
- The NAB LPTV Task Force is considering several other initiatives to help educate viewers and ensure continued access to low power signals after the full power transition.

As outlined above, there are a number of harms to the viewing public that would likely result from the proposed change to the status of Class A stations. At the same time, aggressive steps are being taken to ensure that viewers continue to have access to Class A and other low power stations following the full power transition to all-digital broadcasting.

Thank you for considering the NAB's views on this important issue.

Best wishes.

Sincerely,

A handwritten signature in black ink that reads "David K. Rehr". The signature is written in a cursive style with a large, prominent 'D' and 'R'.

David K. Rehr