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U.S. PREPARATION FOR THE WORLD RADIO CONFERENCES: TOO LITTLE, TOO LATE?

HEARING

BEFORE THE

SUBCOMMITTEE ON NATIONAL SECURITY, EMERGING THREATS AND INTERNATIONAL RELATIONS

OF THE

COMMITTEE ON GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED EIGHTH CONGRESS

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U.S. PREPARATION FOR THE WORLD RADIO CONFERENCES: TOO LITTLE, TOO LATE?

WEDNESDAY, MARCH 17, 2004

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON NATIONAL SECURITY, EMERGING
THREATS AND INTERNATIONAL RELATIONS,
COMMITTEE ON GOVERNMENT REFORM,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:14 a.m., in room 2154, Rayburn House Office Building, Hon. Michael Turner (vice-chairman of the subcommittee) presiding.

Present: Representatives Shays, Platts, Duncan, Ruppersberger, and Watson.

Staff present: Lawrence Halloran, staff director and counsel; R. Nicholas Palarino, senior policy advisor; Thomas Costa, professional staff member; Robert Briggs, clerk; Grace Washbourne, professional staff member, full committee; Jean Gosa, minority assistant clerk; and Andrew Su, minority professional staff member.

Mr. TURNER. Good morning. Our hearing this morning, entitled, "U.S. Preparation for the World Radio Conferences: Too Little, Too late," is called to order.

Last June, a White House memo to all executive branch departments and agencies concluded the existing legal and policy framework for spectrum management has not kept pace with the dramatic changes in technology and spectrum use.

Today we will discuss one element of that dated policy apparatus—the internal preparations and external consultations used by the Department of State and other Federal departments to prepare for World Radio Conferences, the international meetings where critical decisions are made that shape worldwide communication policies and markets.

Spectrum is global. Spectrum is finite. Immutable laws of physics govern the electromagnetic waves that connect the world's governments, businesses, and citizens in new ways every day.

Any nation that cannot articulate clear positions, protect its vital interests, and work to forge multilateral consensus on spectrum issues puts its national security and economic vitality at risk. Unilateralism is not an option. An analog America would not be safe or prosperous in a digital world.

The World Radio Conference in Geneva, Switzerland, last year challenged the United States to formulate timely, technically complex, and politically sensitive positions on a large number of agenda items. Many Federal agencies, including the Department of Defense, NASA, and the FAA depend on exclusive, long-term access

to coveted frequencies to accomplish their missions. They have had substantial equities at risk in the WRC outcome. A vibrant and growing commercial sector was eager to capitalize on rapidly expanding markets for digital telephones, wireless Internet services, substance abuse transmissions, GPS-based products, and more. Competition and conflicts among and between governmental and commercial users seeking to keep or gain access to prime, technically superior spectrum bands had to be resolved before the U.S. could present a unified negotiating position to the world.

As we will hear, the process used to involve public and private stakeholders, resolve inter-agency disputes, vet proposed positions, solicit international support, and counter opposing regional coalitions yielded substantial success in Geneva. Important lessons were learned about the quality and quantity of preparatory consultations, delegation training, and international outreach. But WRC 2003 also confirmed some longstanding institutional weaknesses in U.S. spectrum policy management.

The United States has no over-arching spectrum strategy to guide near- and long-term policy on use of this precious finite resource. Separate responsibility for commercial spectrum allocation decisions at the Federal Communication Commission and Federal spectrum policies at the National Telecommunications and Information Administration make conflicts between public and private users almost inevitable and more difficult to resolve. No head of the U.S. delegation is appointed more than 6 months before the next WRC convenes, long after other nations have been conducting important discussions at that level.

The next World Radio Conference is scheduled to convene in 2007. Today we ask our witnesses: will we be ready? Will the final report of the White House Spectrum Policy Initiative address management weaknesses that can hobble WRC preparations and prospects? Will the procedures, policies, resources, and people we assemble effectively represent the vital interests of the United States at that crucial international forum?

Our two panels of witnesses bring impressive expertise and hard-won experience to this discussion, and we are grateful for their time and talent, and we welcome you.

[The prepared statement of Hon. Christopher Shays follows:]

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Statement of Rep. Christopher Shays
March 17, 2004

Last June, a White House memo to all executive branch departments and agencies concluded the "existing legal and policy framework for spectrum management has not kept pace with the dramatic changes in technology and spectrum use." Today we will discuss one element of that anachronistic policy apparatus: the internal preparations and external consultations used by the Department of State and other federal departments to prepare for World Radio Conferences, the international meetings where critical decisions are made that shape world-wide communication policies and markets.

Spectrum is global. Spectrum is finite. Immutable laws of physics govern the electromagnetic waves that connect the world's governments, businesses and citizens in new ways every day. Any nation that cannot articulate clear positions, protect its vital interests and work to forge multilateral consensus on spectrum issues puts its national security and economic vitality at risk. Unilateralism is not an option. An analog America would not be safe or prosperous in a digital world.

The World Radio Conference (WRC) in Geneva, Switzerland last year challenged the United States to formulate timely, technically complex and politically sensitive positions on a large number of agenda items. Among them: Should worldwide radio bands for public protection and disaster relief

be harmonized? Should frequencies in the five gigahertz (GHz) range be allocated to meet the growing demand for wireless network services?

Finding answers was not easy. Many federal agencies, including the Department of Defense, NASA and the FAA, depend on exclusive, long-term access to coveted frequencies to accomplish their missions. They had substantial equities at risk in the WRC outcome. A vibrant and growing commercial sector was eager to capitalize on rapidly expanding markets for digital telephones, wireless Internet services, satellite transmissions, GPS-based products and more. Competition and conflicts among and between governmental and commercial users seeking to keep or gain access to prime, technically superior spectrum bands had to be resolved before the U.S. could present a unified negotiating position to the world.

As we will hear, the processes used to involve public and private stakeholders, resolve inter-agency disputes, vet proposed positions, solicit international support and counter opposing regional coalitions yielded substantial success in Geneva. Important lessons were learned about the quality and quantity of preparatory consultations, delegation training and international outreach.

But WRC 2003 also confirmed some longstanding institutional weaknesses in U.S. spectrum policy management. The United States has no overarching spectrum strategy to guide near and long-term policy on use of this precious, finite resource. Separate responsibility for commercial spectrum allocation decisions at the Federal Communications Commission and federal spectrum policies at the National Telecommunications and Information Administration make conflicts between public and private users almost inevitable, and more difficult to resolve. No head of the U.S. delegation is appointed more than six month before the next WRC convenes, long after other nations have been conducting important discussions at that level.

The next World Radio Conference is scheduled to convene in 2007. Today we ask our witnesses: Will we be ready? Will the final report of the White House Spectrum Policy Initiative address management weaknesses that can hobble WRC preparations and prospects? Will the procedures, policies, resources and people we assemble effectively represent the vital interests of the United States at that crucial international forum?

Our two panels of witnesses bring impressive expertise and hard-won experience to this discussion, and we are grateful for their time and talent. Welcome.

Mr. TURNER. I'd like to welcome Mr. Ruppersberger, who has an opening statement for us.

Mr. RUPPERSBERGER. Thank you. Mr. Chairman, thank you for calling this hearing on spectrum allocation and the upcoming World Radio Conference. It is important for us as the policymakers to understand what role spectrum plays in our country and the world, and the implications of not having a unified or negotiated voice when we address spectrum allocation in an international forum.

The need for appropriate spectrum allocation is vital to our country. Spectrum is essential for communication, for Homeland Security, and for commerce. Commercial entities rely on their spectrum allocation to determine how best to utilize their spectrum to offer a wide variety of service. Last, law enforcement relies on spectrum to be able to instruct officers that they are on the scene of an accident, and it is vital so that our troops can be commanded and directed appropriately in battle. But what is the larger question and what is at stake is American leadership in future telecommunications directions.

Our current process of preparing for the WRC is a multi-step process that allows all the interested and vested parties some say in what direction we should move as a country. The FCC handles commercial, NTIA handles government, and a smaller working group with the FCC and NTIA and the State Department meets. Not only do they have very commercial interests, but you throw in the needs of all of the different agencies and departments of the Federal Government. With all these competing interests, do we as a country lose out as a whole? I look forward to understanding more about the process and how we can ensure America stays as the telecommunications leader.

Mr. TURNER. Thank you, Mr. Ruppersberger.

Now we recognize our chairman, Chairman Shays.

Mr. SHAYS. Thank you, Mr. Chairman. And thank you, Mr. Turner, for chairing this. I am at a Budget Committee bringing out the budget resolution. I think this is a hugely important issue, and I recognize that the spectrum is global, and that we need to be global players. I really want my country to be working overtime on this issue. And while I believe there needs to be unilateral action in issues of war and peace at times, not necessarily the preferred way but sometimes the only way. On this issue we have to work as closely as we can with others to resolve our differences and make sure that we optimize what we believe is in our Nation's best interest. I just wanted to personally come here to thank all our witnesses and, as well, to explain my absence.

Thank you very much, Mr. Chairman.

Mr. TURNER. Thank you, Mr. Chairman. We appreciate your leadership in this issue.

I'd like to recognize Ms. Watson.

Ms. WATSON. I'll pass at the moment.

Mr. TURNER. Our panelists today in panel one are: Jeffrey N. Shane, the Under Secretary for Transportation Policy, U.S. Department of Transportation; William Readdy, Associate Administrator for Space Flight, National Aeronautic and Space Administration; Michael Gallagher, Acting Assistant Secretary for Communications

and Information, National Telecommunications and Information Administration, U.S. Department of Commerce; Commissioner Kathleen Abernathy, Federal Communications Commission; Ambassador David Gross, U.S. Coordinator, International Coordinations and Information Policy, U.S. Department of State; and Dr. Lin Wells, Acting Assistant Secretary for NII Networks and Information Integration, U.S. Department of Defense.

If you would all stand to take the oath, we do swear in our witnesses in this committee.

[Witnesses sworn.]

Mr. TURNER. Please note for the record that the witnesses have responded in the affirmative.

I ask unanimous consent that all members of the subcommittee be permitted to place any opening statement in the record, and that the record remain open for 3 days for that purpose. Without objection, so ordered.

I further ask unanimous consent that all witnesses be permitted to include their written statements in the record. Without objection, so ordered.

We begin our testimony today with Mr. Shane.

STATEMENTS OF JEFFREY N. SHANE, UNDER SECRETARY FOR TRANSPORTATION POLICY, U.S. DEPARTMENT OF TRANSPORTATION; WILLIAM READDY, ASSOCIATE ADMINISTRATOR FOR SPACE FLIGHT, NATIONAL AERONAUTIC AND SPACE ADMINISTRATION; MICHAEL GALLAGHER, ACTING ASSISTANT SECRETARY FOR COMMUNICATIONS AND INFORMATION, NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE; COMMISSIONER KATHLEEN ABERNATHY, FEDERAL COMMUNICATIONS COMMISSION; AMBASSADOR DAVID GROSS, U.S. COORDINATOR, INTERNATIONAL COMMUNICATIONS AND INFORMATION POLICY, U.S. DEPARTMENT OF STATE; AND LIN WELLS, PRINCIPAL DEPUTY ASSISTANT SECRETARY OF DEFENSE, NETWORKS AND INFORMATION INTEGRATION, U.S. DEPARTMENT OF STATE

Mr. SHANE. Thank you, Mr. Chairman. We at the Department of Transportation are very grateful to Chairman Shays and members of the subcommittee for first holding this very important hearing and bringing its special perspective to the question of spectrum allocation and preparation for the WRC, and particularly we are grateful for your invitation to us, to the Department of Transportation, to be here.

Radio spectrum decisions made at the World Radio Conferences have a significant long-term impact on the safety, efficiency, and effectiveness of our Nation's transportation system and play a vital role in helping us to plan for and meet our critical infrastructure needs. Radio spectrum under DOT's purview essentially serves as an enabler for a wide variety of land, sea, air, and space transport applications. As we work to modernize and improve our national transportation system, we rely on uninterrupted access to clean spectrum to support a broad range of communications, navigation, and surveillance systems. In fact, DOT is the second largest user

and service provider of all radio services in the Federal Government.

For example, the Department facilitates the use of spectrum to support effective communications links between public transportation agencies and first responders. Our intelligent transportation system program uses wireless technologies to reduce accidents, to ease congestion, and alert rescue vehicles. With our partners in Canada, we operate a state-of-the-art vessel traffic system on the St. Lawrence Seaway using automatic identification system technology to provide accurate, real-time information for navigation, communication, and security throughout the St. Lawrence Seaway and the Great Lakes.

GPS, of course, is a core technology—the global positioning system—operated by the Department of Defense, but it is also one that has critical civilian applications, as everyone knows. These applications are already providing tremendous benefits in areas like air and sea navigation, highway safety, positive train control, and even wireless E911 positioning. That's why DOT attaches such importance to spectrum issues, both domestically and internationally. That's also why we have consistently supported our U.S. delegations in their pursuit of American interests at previous World Radio Conferences and why we are currently involved in the preparatory work that has already begun for the 2007 conference.

The Department will play an active role as the U.S. Government works to determine which items should be addressed at the 2007 conference. We will work to identify ways in which aviation can use radio spectrum more efficiently so that current and future needs can be met through our existing band allocations. We also hope to use the 2007 conference as an opportunity to explore ways to stimulate the development of standardized intelligent transportation systems around the world.

Last December the FCC completed licensing rules on the 5.9 gigahertz band here in the United States for use by dedicated short-range communications technologies, the spectrum enabler for ITS systems. ITS applications will provide tremendous safety benefits to our Nation's highways through collision avoidance systems and other technologies, but standardizing equipment and protocols around the world is simply the single most important thing we can do to reduce costs and hasten the delivery of the systems to large numbers of drivers.

Again, Mr. Chairman, thank you very much for inviting the Department of Transportation to be here. We look forward to answering questions at the appropriate time.

Mr. TURNER. Thank you.

[The prepared statement of Mr. Shane follows:]

Statement of
Jeffrey N. Shane
Under Secretary for Policy
U.S. Department of Transportation

before the

House Committee on Government Reform
Subcommittee on National Security, Emerging Threats and International Relations

hearing on

"U.S. Preparation for the World Radio Conferences: Too Little, Too Late?"

Introduction

Good morning, Mr. Chairman and members of the Subcommittee. I would like to thank you and the members of this Subcommittee for holding a hearing on a topic that is of great importance to the U.S. Department of Transportation (DOT). The Department welcomes this opportunity to present its views on the World Radiocommunication Conference (WRC or Conference), and to provide input on the internal U.S. preparatory process and external consultations. Radio spectrum decisions made at the WRC have a significant long-term impact upon the safety, efficiency, and effectiveness of our Nation's transportation systems, and play a vital role in helping us to plan for and meet our critical infrastructure needs.

DOT is first and foremost a public safety agency, with oversight responsibility for all modes of transportation and for the traveling public that relies on them. Many of our transportation systems and services are also global in nature, and they operate according to international standards and protocols supported by United Nations-affiliated bodies. For DOT, these include the International Telecommunication Union (ITU), the International Civil Aviation Organization (ICAO), and the International Maritime Organization (IMO).

While the Department's most basic mission is to enhance safety, we also have a responsibility to do all we can to make our transportation systems as efficient as possible, and we increasingly employ spectrum in those efforts. DOT's Intelligent Transportation System (ITS) program encompasses a number of wireless technologies that help to reduce accidents, ease congestion, and aid first responders. For example, the Department uses spectrum to support public transportation agencies' role in responding to emergencies by providing interoperable communications links to first responders. With our partners in Canada, we also operate a state-of-the-art vessel traffic system on the St. Lawrence Seaway that uses Automatic Identification System (AIS) technology to provide highly accurate, real-time information for navigation, communication, and security purposes. The Coast Guard is in the process of expanding that system for use at ports and in navigable waters nationwide.

As you can see, our Department has substantial radio spectrum equities that we must provide for and protect in both the domestic and international arenas, with successful management of the

airwaves in the U.S. translating into more productive outcomes at the WRC. The domestic and international aspects of spectrum management are of course inextricably linked, and make DOT a major stakeholder in any and all radio frequency proceedings where a transportation system or service can be affected.

Spectrum management and allocation, of course, have become increasingly complicated due to the scarcity of this resource and a strong desire to leverage the economic benefits of this limited asset. As a result, the WRC has evolved into a forum where competing nations work to secure access to as much spectral "real-estate" as possible. While this process can produce substantial efficiencies in the way spectrum is managed on a global basis, our Department must work to ensure that the spectrum resources we use to carry out our statutory responsibilities are not adversely affected. To this end, we have strongly supported our U.S. delegation in its pursuit of American interests at previous World Radio Conferences, sharing in the successes that have been achieved. The Department also intends to play a productive role in the preparatory work that has already begun for the 2007 Conference.

DOT Spectrum Requirements

The Department of Transportation is a strong supporter of using spectrum to create innovative and cost effective technology solutions to address complex problems. Similarly, given surging demand for transportation services and constrained resources, we are always searching for new ways to bring technology to bear in order to more safely and efficiently meet our Nation's transportation needs. This means that we must maximize the value of all current assets, including the Federal spectrum that DOT modal administrations use to ensure the safe, secure and efficient operation of our transportation systems.

Radio spectrum under DOT's purview essentially serves as an enabler for a wide variety of land, sea, air and space transport applications. As we work to modernize and improve the transport system, we rely heavily on uninterrupted access to radio waves that support a broad range of communications, navigation and surveillance (CNS) systems. In fact, our Department is the second largest user and service provider of all radio services in the United States. We have attached a list of these numerous systems and services for your information.

Aviation, which contributes over $700 billion annually to our country's economy and provides jobs for thousands of Americans is by its very nature a global service, and successful outcomes at the WRC play a big role in helping the Department to promote both the safety and economic well being of this industry. We have a strong track record of accomplishment in helping to make the U.S. aviation system the safest in the world, which is why we work so hard to ensure that our aeronautical and air traffic control systems do not become degraded, constrained or curtailed due to radio frequency interference (RFI).

For example, Secretary Mineta recently launched an interagency initiative with a goal of tripling capacity in our air transportation system over the next two decades. In order to accomplish that ambitious goal we will need continued and clear access to spectrum resources. Only then will we be able to help ensure that the U.S. remains an international leader in providing cutting-edge air transport services that benefit all Americans.

DOT Participation in Past World Radiocommunication Conferences

The successful development and implementation of many of our core transportation services can ultimately be tied to the Department's participation in past Conferences, supported of course by our highly skilled WRC ambassadors. One of those core technologies is the Global Positioning System (GPS), which is managed by our Department of Defense but also has important civilian applications. These applications are already providing tremendous benefits in areas like air navigation, highway safety, E911, or even just in getting driving directions.

We have worked closely with our agency counterparts in past Conferences to protect and preserve the spectrum used for GPS and its applications. As you probably know, at the 1997 WRC there was a proposal tabled for the Mobile Satellite Service (MSS) to share the restricted radio spectrum where GPS operates. This threatened to introduce an immediate source of interference to a space-based positioning and timing system that America provides free to the world, and which has become a cornerstone for global air, land, and sea navigation.

The U.S. was ultimately successful in persuading our global partners not to co-locate MSS in the GPS band, but only after a robust series of international technical studies and a global outreach program leading up to the 2000 WRC. This serves as a good example of how U.S. agencies must work closely together to counter spectrum initiatives raised at the WRC that may threaten U.S. national security or public safety.

Our Department was similarly pleased with the outcome of the 2003 Conference. First, the U.S. effort to provide global radio spectrum for GPS modernization was finalized, which included approval for a new civil signal known as GPS L5. The new L5 signal, which will provide another fully capable, high-integrity safety signal for critical transportation services such as aircraft landings in inclement weather, will start being embedded in GPS satellites launched as of 2006. The successes we have enjoyed at past Conferences with GPS and other items are clear evidence of the importance of this event in helping us deliver new services and technologies to the American public.

Looking Ahead: The 2007 WRC

The Department will continue to play an active role as the U.S. Government works to determine which items should be addressed at the 2007 Conference. One key item will be the review of all future radio spectrum needs for air-to-ground safety communications to determine if additional global allocations are required. We will work to identify ways in which aviation can use radio spectrum more efficiently so that current and future needs, including new technologies, can be met through our existing band allocations. We will also be examining the potential for increased sharing of radar bands to ensure that both civilian air traffic control and military needs can be accommodated using the same or similar radio frequencies.

The 2007 Conference will also likely consider the need for increased radio spectrum to support aeronautical telemetry. This is especially important to our aircraft manufacturers and the military, so that they can safely and efficiently test new aircraft. It is also becoming important to the safety of the Nation's airspace, as this telemetry is largely used to control unmanned aerial

vehicles (UAVs) that will increasingly fly in the airspace used primarily by commercial aircraft today.

Finally, we hope to use the 2007 Conference as an opportunity to explore ways to stimulate the development of standardized Intelligent Transportation Systems (ITS) around the world. Last December, the FCC completed licensing rules on the 5.9 Gigahertz band here in the United States for use by Dedicated Short Range Communications (DSRC) technologies, the spectrum enabler for ITS. ITS applications will provide numerous safety benefits on our Nation's roadways through collision avoidance and other technologies, but standardizing equipment and protocols for ITS around the world will go a long way in promoting public safety and giving U.S. manufacturers and opportunity to succeed not only here, but in other countries as well.

Conclusion

DOT looks forward to participating in the development of the U.S. position for these, and other issues, for the 2007 Conference. I would like to thank the Chairman for calling this hearing and giving me an opportunity to testify here today, and look forward to addressing any questions that you may have on the statements we have submitted.

Attachment: List of CNS Systems Used for Transportation

Frequency Range System / Short Description

Aviation

90-110 kHz LORAN-C[1] — en route navigation aid

190-435 & 510-535 kHz Non-directional Beacon -- en route navigation aid

2100-28,000 kHz High Frequency Communications — en route (mostly oceanic and remote) communications

75 MHz Navigation Aid (NAVAID) Marker Beacon —used for approach and landing, part of Instrument Landing Systems (ILS)

108-118 MHz NAVAID (Very High Frequency (VHF) Omni-directional range (VOR), ILS Localizer, Special Category I (SCAT-I) — ILS approach and landing aid; SCAT-1 GPS assisted landings; Local Area Augmentation System (LAAS) future precision approach and landing aid (GPS augmentation)

118-137 MHz VHF Air/Ground Communications Pilot/controller communication; en route and terminal

162-174 MHz Fixed, Mobile Communications — Comm. for maintenance and administrative, controlling runway lights, etc.

225-328.6 & 335.4-400 MHz Ultra-High Frequency (UHF) Air/Ground Communications — Military pilot/controller

328.6 & 335.4-400 MHz NAVAID (ILS Glideslope)—Approach and landing aid

406-406.1 MHz Satellite Emergency Position Indicating Radiobeacon[1] — Emergency beacon for search and rescue

406.1-420 MHz Fixed, Mobile Communications — Communications for maintenance and administrative, controlling runway lights, etc.

932-935 & 941-944 MHz Fixed Communications — Data links (radar information) between control towers and remote equipment

960-1215 MHz NAVAID (TACAN, Distance Measuring Equipment (DME), etc) — TACAN en-route guidance for military aircraft; DME en-route navigation, UAT

1030 & 1090 MHz Radar Beacon, Traffic Alert and Collision Avoidance Systems (TCAS), Mode S — Identification of aircraft in flight, collision avoidance

1176.45 MHz GPS L5 Downlink[1] - Future En-route and non-precision landing aid

1227.6 MHz GPS L2 Downlink[1]

1215-1400 MHz Air Route Surveillance Radar — En-route surveillance

1544-1545 MHz Emergency Mobile Satellite Comm. (Downlink) — en route/Oceanic communications

1545-1559 MHz Aeronautical Mobile Satellite (R) (Downlink) — Safety communication

1559-1610 MHz Satellite Navigation[1]

1575.42 MHz GPS L1 Downlink[1] - en-route and non-precision landing aid

1645.5-1646.5 MHz Emergency Mobile Satellite Communications (Uplink) -

1646.5-1660.5 MHz Aeronautical Mobile Satellite (R) (Uplink) — Safety communication

1710-1850 MHz Fixed Communications (LDRCL) — radar data, air/ground communication

2700-3000 MHz Airport Surveillance Radar, Weather Radar — Airport Surveillance Radar (ASR) terminal radar; NEXRAD weather radar

3700-4200 & 5925-6425 MHz ANICS (Commercial Satellite Link) — Remote communication in Alaska (leased service)

4200-4400 MHz Airborne Radar Altimeter — Altitude measuring equipment

5000-5250 MHz NAVAID Microwave Landing System (MLS) to 5150 MHz — Precision approach and landing aid; Runway Incursion System (future system)

5350-5470 MHz Airborne Radar and Associated Airborne Beacons — airborne weather radar

5600-5640 MHz Terminal Doppler Weather Radar (TDWR) - wind shear, microbursts, storms, etc.

7125-8500 MHz Radio Communications Link - Data links (radar information) between control towers and remote equipment

8750-8850 MHz Airborne Doppler Radar

9000-9200 MHz Military Precision Approach Radar — Transportable landing aid; ASDE-X

9300-9500 MHz Airborne Radars and Associated Airborne Beacons

11.7-12.2 & 14.0-14.5 GHz FAA Satellite (Commercial Satellite Links) — Leased service for communication between major FAA facilities

13.25-13.4 GHz Airborne Doppler Radar

15.7-16.2 GHz Television (Video) Microwave Link — Radar data to remote control towers

15.7-16.2 GHz Airport Surface Detection Equipment (ASDE III) — Surveillance of airport surface area

21.2-23.6 GHz Microwave Link (Multi-Use) — Various communication links

35 and 94 GHz Synthetic Vision (Experimental)

Maritime

90-110 kHz LORAN-C[1] — Vessel navigation

283.5-315 kHz DGPS corrections link; DGPS - used for harbor/harbor entrance and navigation on inland waterways, rail transportation; and navigation integrity

315-325 kHz DGPS; DGPS - used for harbor/harbor entrance and navigation on inland waterways, rail transportation, and navigation integrity

415-535 KHz MF Radiotelegraphy and data

518 kHz NAVTEX broadcast maritime safety information

1605-3800 KHz MF Radiotelephony including distress and safety communications

4-27.5 MHz HF data/radiotelephony - Maritime distress and safety, including Global Maritime Distress & Safety System (GMDSS)

121.5-243 MHz EPIRB/ELT distress alerts and emergency locating

156-165 MHz VHF Radiotelephony - VHF Maritime Communications, including distress, safety, and vessel traffic control

161.975-162.025 MHz Universal shipborne automatic identification systems (AIS)

162-174 MHz Fixed, Mobile Communications — Communications for command and control and public safety

225-328.6 & 335.4-400 MHz UHF Air/Ground Communications — USCG aircraft

406-406.1 MHz Satellite Emergency Position Indicating Radiobeacon1

406.1-420 MHz Fixed, Mobile Communications — Comm. for public safety and maintenance

1176.45 MHz GPS L5 Downlink[1]

1227.6 MHz GPS L2 Downlink[1]

1535-1544 MHz GMDSS maritime satellite communications (Downlink)

1544-1545 MHz Satellite emergency position-indicating radiobeacon (EPIRB) (Downlink) — Distress alerts

1559-1610 MHz Satellite Navigation[1]

1575.42 MHz GPS L1 Downlink[1] — Primary maritime navigation

1602-1615 MHz GLONASS Downlink — Maritime navigation

1626.5-1645.5 MHz GMDSS maritime satellite communications (Uplink)

2900-3100 MHz Shipboard and vessel traffic services radar — maritime navigation and collision avoidance (primarily foul weather)

9300-9500 MHz Shipborne Radars — maritime navigation and collision avoidance

Surficial Transportation

5.8 GHz Dedicated Short Range Communications System

[1] It is the case that with these radionavigation systems, there are multi-modal user communities far beyond transportation. In addition to navigation, Loran-C is used to some extent by the telecommunications community for timing. GPS has numerous additional user communities and applications.

Mr. TURNER. Mr. Readdy.

Mr. READDY. Thank you, Mr. Chairman, members of the subcommittee. It is an honor for me, as NASA's radio frequency spectrum manager, an astronaut, and also associate administrator for Space Flight to be here to talk to you about the World Radio Communications Conference process and explain how critically important spectrum allocation is to all of our NASA missions.

A NASA mission—understand, protect our home planet, to explore the universe and search for life, and inspire the next generation of explorers as only NASA can. Importance of reliable radio communications for NASA's wide array of scientific and operational missions cannot be overstated. We depend on it every day, launching spacecraft, sending and receiving critical information to and from our assets in space, including spirit and opportunity currently exploring the Martian surface, for scientific observatories like Hubble, Chandler and Spitzer, and the constellation of earth-observing meteorological communications spectrum allocations circling the globe as we speak. Also circling the globe every 90 minutes as we speak is international space station, and on board it, its eight permanent expedition crew, Commander Michael Fole and Flight Engineer Alexander Clary. They, too, depend on spectrum for their navigation, telemetry, communications, health monitoring, and ultimately their safety. And when the shuttle returns to flight next spring, those crews will also rely on spectrum for safe and successful execution of their missions.

As a shuttle astronaut, from the unique vantage point of space, once you've seen the earth from a distance you realize there is a single atmosphere and single ocean that surround this magnificent planet of ours. You also realize how perishable they are, and that they are resources we must share and conserve. So, too, it is with spectrum. Like the air we breathe and the water we drink, we take spectrum for granted. Spectrum is vital for existence in this technologically advanced 21st century we live in. Lives depend on reliable communications, and in emergencies lives are also saved by effective, cooperative use of spectrum.

Just last year I was at a NOAA ceremony over at Department of State with Ambassador Gross and Vice Admiral Lautenbacher celebrating the success of the satellite based co-spa SAR-SAT system which had just surpassed 14,000 lives saved. NASA is very proud of its contributions to the beacon and locating technologies used.

As we expand our horizons beyond low earth orbit to explore space and moon and on to Mars, that lifeline will become even more important, more critical. We won't leave home without it.

Some of those architectures are already in place right now, bringing us pictures from the Red Planet. Spirit and opportunity. And since January there have been over 7 billion hits on the NASA Web site from over 100 million different web addresses.

Our only means of communication, control of receiving and transmitting data to aircraft and spacecraft is via radio. Because space and spectrum knows no borders, NASA must work cooperatively with the other U.S. agencies, the private sector, and other nations, and successful allocation of spectrum for our missions is absolutely

dependent on success of negotiations within the global community that is conducted at the World Radio Communications Conferences.

I'm very proud of NASA's excellent track record in succeeding in the negotiations that achieve our necessary allocations for these scientific missions, and I'd like to submit three specifically bulletins that describe the specific successes at World Radio Telecommunications Conference 2003. The success was due in no small part to NASA's reputation for technical excellence in achievement that is respected worldwide. But to be successful we at NASA also must work very closely with the NTIA, with our colleagues from other departments and agencies as part of the Administration, and with our industry partners as members of the U.S. delegation.

We also hold a rather unique role due to our strong partnerships with international space agencies around the world. As you know, the ITU, International Telecommunications Union, is part of the U.N. system operated on the basis of one country/one vote. Scientists have learned to speak the same language, no matter where they are from, and often they speak with one voice. Scientific research and space exploration have universal appeal and shared interest.

Since 1958 when the National Aeronautics and Space Act was signed, NASA has concluded over 3,000 agreements with over 100 countries and international organizations, and in this last decade nearly 900. We've maintained an active participation in World Radio Conferences since 1959.

Preparation is the key to success, and NASA is currently preparing in Geneva right now. The U.S. National Committee Study Group Seven—Space, Science, and Services—with Mr. Dave Struba over there with three working groups, and those meetings will generate the body of technical data that will assist World Radio Conference 2007 conferees to conduct their business. That's the key to success is early preparation.

Having attended and participated in the last two conferences, I believe our successes are also based on achieving those technically sound bases for the decisions that are made, and during those conferences we count on the strong leadership and negotiating skills of the U.S. Ambassador and the unity and teamwork that the U.S. delegation provides. As a Presidential appointee, the Ambassador and head of the U.S. delegation enjoys the confidence of the administration, possesses the political sensitivities and negotiating skills required in that critical role. We were extremely well served by the leadership, technical expertise, and skillful negotiating talents of Ambassador Janice Obuchowski in 2003 and Gail Schoettler in 2000.

Ongoing fruitful cooperation partnership with other U.S. Federal Government agencies, industry, and global communications community is crucial for providing and defending critical radio spectrum for accomplishing NASA's scientific missions and leading the world's civil space program.

The vision for space exploration announced by the President on January 14th only serves to underscore NASA's need to remain actively engaged in spectrum management today in order to preserve spectrum for use in exploration of space now and for decades to come.

Thank you for this opportunity.

Mr. TURNER. Thank you.

[The prepared statement of Mr. Readdy follows:]

National Aeronautics and
Space Administration

Hold for Release Until
Presented by Witness

March 17, 2004

Subcommittee on National Security, Emerging Threats and International Relations

Committee on Government Reform

House of Representatives

Statement by:
William Readdy
Associate Administrator
Office of Space Flight

108th Congress

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Statement of

William Readdy

Associate Administrator for Space Flight

National Aeronautics and Space Administration

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Mr. Chairman and Members of the Subcommittee, thank you for the opportunity to appear before you today to discuss the World Radiocommunication Conference (WRC) process and the critical importance of the successful negotiation for spectrum allocation at these international conferences.

The importance of reliable radiocommunication for NASA and its wide array of scientific missions cannot be overstated. We depend, every day, on sending and receiving critical information to our assets in space, including the International Space Station, our scientific satellites and, when we return to flight, the Space Shuttle. Lives depend on it. From our astronauts and cosmonauts living in space, to life all over our planet through the important research conducted using Earth-observing satellites, lives depend on reliable data relay provided through the radio frequency spectrum.

The only means of communication and control and of receiving data and transmitting data to aircraft and spacecraft is via radio. Because space knows no borders, NASA must work cooperatively with the other nations of the world in its use of the spectrum. Successful allocation of spectrum for our missions is absolutely dependent on the successful negotiations with the international community conducted at the WRC. NASA has an excellent track record of obtaining and protecting the necessary allocations for our scientific missions.

One example of this comes from our cooperation on space communication. Missions to deep space include exploration of the planets and have been responsible for many years for the production of spectacular photographic images of the planets. Such spacecraft, operating in the farthest regions of the solar system, require highly directional transmitting systems and highly sensitive receiving systems to deliver their data back to

Earth. WRC 2003 made provision for new transmitting systems in allocating the frequency band 7145 - 7235 MHz to the space research service (SRS) (Earth-to-space) in the Table of Frequency Allocations. While the band has been available for use for some time, this action by WRC 2003 provides a clearer, more reliable allocation status, reduces burdensome coordination costs, and makes the allocation easier to use for the space science community.

In the remote sensing arena, an urgent requirement was identified by the United Nations Conference on the Environment and Development (Brazil, 1992) for radar systems operating from space platforms to be able to sense the environment in a frequency band that could "see through" the canopy of rain forests around the world, to measure soil moisture, tropical forest biomass, and for documentation of geological history and climate change. Such a frequency band can only be found in the range from 300 to 600 MHz; WRC 2003 allocated the range from 432 – 438 MHz to the Earth exploration-satellite service (EESS) to conduct such observations. The band also will allow measurements of Antarctic ice thickness as well as the characterization of arid regions of the world from space. Complex protections had to be devised to prevent the space science radars that will use this frequency band from causing harmful interference to current users of the band, including U.S. military systems. Pre-coordination and notification of space science radar missions through the international members of the Spectrum Frequency Coordination Group (SFCG) was crucial to enabling the allocation to be made.

While NASA works closely with the National Telecommunications and Information Administration (NTIA) and the Federal Communications Commission (FCC) as a member of the U.S. delegation, we hold a rather unique role due to our strong partnership with space agencies around the world. This set of relationships helps the global scientific community to speak consistently in unison, benefiting NASA and our partners.

The sharing of frequency bands between commercial interests and public use or scientific interests, however, sometimes seems to be in conflict. On the one hand, the commercial entity needs to be assured of access to the appropriate spectrum to enable a viable business plan. On the other hand, public use and scientific operations cannot be evaluated in terms of revenue generation, but are needed to satisfy public use and scientific requirements, such as personal safety and property, weather forecasting, climate prediction, and environmental monitoring.

Close technical cooperation between commercial interests and the space science community took place during the period between WRC 2000 and WRC 2003 to balance the requirements of commerce and science. Possible methods that could be employed to facilitate the sharing of frequency bands between space science radio systems and other space and terrestrial radio systems, were identified.

Preparations for the next WRC begin shortly after the last one ends, even though that is three or four years away. In fact, we have already begun preparations for WRC 2007, which seems like a long lead, but will in actuality be necessary for the amount of work

that will be required. This is due to the detailed coordination that is required to ensure a clear understanding of all positions -- internally at NASA, within the U.S. government and private sector, and with the international community through coordination at the International Telecommunication Union's (ITU) informal regional committees. NASA is particularly focusing on the aeronautics telemetry and aviation safety issues, which are key agenda items for the upcoming WRC.

I serve as NASA's Spectrum Manager. Within the Space Flight Enterprise, the Space Communications team begins to assess the future spectrum requirements of the Agency based on current and planned programs. In turn, we submit our proposals to the U.S. delegation through the appropriate NTIA processes and begin discussions with our Federal government counterparts to seek a consensus. In parallel, the private sector develops proposals through the FCC WRC Advisory Committee and the Federal Government and non-Government proposals are then coordinated before approaching the international community on specific issues. Advocacy of US proposals and positions internationally requires the participation of our spectrum experts to pre-negotiate on issues that are of critical importance to NASA and its constituents.

NASA maintains an active role in the ITU to aid in accomplishing our objectives, as a member of the U.S. delegation. To obtain the spectrum required, NASA must be a major participant in WRC activities by developing, submitting, and defending proposals to the conferences for those frequency bands, operational requirements, and technical parameters needed by NASA missions. This applies to both current missions and those projected into the future. The vision for space exploration announced by the President on January 14, 2004, further underscores the importance of NASA's full participation in all of the ITU associated work.

The space science requirement, and the technical foundations upon which the new allocations achieved at WRC-2003 were based, were established in the technical groups of the ITU since WRC-2000. The space agencies of the world also worked to refine the technical and operational requirements within the SFCG.

As we begin preparing for the WRC 2007 and close the books on our accomplishments at WRC 2003, we look for lessons learned to aid us in the months ahead. The growing importance of regional conferences in Asia, Europe and the Americas promises to be a critical path to favorable conclusions, and NASA looks to be a full participant in these activities. Our successes stem, I believe, from laying the foundation of the technical aspects of each issue very early in the process, and then reaching out proactively to key partners to build support and develop mutually acceptable resolutions. We then rely on the strong negotiating skills of the U.S. Ambassador and the delegation team during the WRC negotiations.

As a Presidential appointee, the Ambassador and head of the U.S. delegation, enjoys the confidence of the Administration. This person, NASA recommends, should have the political expertise and negotiating skills that will prove beneficial in this critical role. NASA is deeply indebted to the expertise and talents of WRC 2003 Ambassador Janice

Obuchowski for her skillful negotiations on our behalf. In addition, NASA was pleased to offer our suggestions for improvements to the WRC process in response to the NTIA Request for Comment.

Ongoing, fruitful cooperation and partnership with other U.S. Federal Government agencies, industry, and the global communications community is crucial for allocating and maintaining the critical radiofrequency spectrum necessary for accomplishing NASA's scientific mission as the Nation's civilian space agency.

Thank you for the opportunity to address the Subcommittee on this important subject. I look forward to answering any questions you may have.

Mr. TURNER. Mr. Gallagher.

Mr. GALLAGHER. Thank you, Mr. Chairman. I'd like to echo Under Secretary Shane's appreciation to this committee and to Chairman Shays for his outstanding leadership on spectrum issues and spectrum policy matters. It is an honor to be here this morning. It is also an honor to be here with my colleagues in the administration who are truly engaged and understand the importance of spectrum and spectrum policy.

World Radio Conferences are month-long negotiations involving over 2,000 delegates from nearly 150 countries. World Radio Conferences bring together politics, economics, and technical developments on an international stage to determine the spectrum available and the regulations that will govern wireless development, scientific investigation, safety, and security. The United States has but one vote in this environment, and yet has enjoyed high level of success working with the world community to bring forth new services while safeguarding critical operations.

This morning I would focus on four key words that are the ingredients for success. The first is leadership. Leadership means providing guidance, vision, and setting priorities and decisively resolving conflicts. Leadership fundamentally depends upon people and how they work together. The President made the World Radio Conference an early priority to senior White House staff. In 2003, in turn, the Secretary of Commerce made it a priority for NTIA. We received direction and guidance from the Secretary and from the National Security Council and the National Economic Councils to ensure that we stayed on task and on time.

Ambassador Obuchowski, Chairman Powell, NTIA leadership, other Federal agencies, and the private sector embrace the need for aggressive, early work.

World Radio Conferences run in 2- to 4-year cycles and senior management needs to be engaged during that period to support the hard work of the career staff who have the thankless task of preparing the extremely important details and analyses that undergird a successful World Radio Conference. Certainly one of the questions to be answered in reviewing the work process is how to ensure continuity of leadership in the future. We recommend establishing a steering group consisting of senior agency leadership who will take on the responsibility for guiding World Radio Conference activities and for identifying and resolving conflicts early to maximize the opportunity for the United States to achieve success with its international neighbors.

The second ingredient would be balance. We are called upon to balance our economic security with our national security, and as the Secretary of Commerce has informed me, given the choice between the two, do both.

Spectrum is an indispensable building block for America's future that fuels economic growth. A constant flow of new technologies, new services, and products characterize the global wireless market. New startups such as Vivato and Etheros join established companies like the Boeing Co., Lockheed Martin, Intel to contribute growth in our high technology economic, and they rely on the U.S. Government's ability to make spectrum available.

In 2003 the United States achieved outstanding successes in more than doubling the amount of spectrum for wi-fi devices at five gigahertz and agreeing on the common rules on a global basis for those devices. These rules are already helping U.S. industry to market new technologies in countries previously closed to such devices and services. The Boeing Co.'s connection service or broad band in the sky using the 14 gigahertz band is another example where the World Radio Conference results lead directly to economic growth and job creation.

World Radio Conferences are also key to our national security and our homeland security, and to scientific investigation of the earth's resource in outer space. Negotiations at the World Radio Conference in 2003 safeguarded spectrum access for the next generation of GPS by overcoming a challenge to GPS modernization by Europe. Furthermore, as we provided spectrum for wi-fi devices at five gigahertz, we ensured that wi-fi devices around the world will protect our critical radar systems, a perfect example of technical expertise and cooperation to bring forth a result that meets balanced priorities.

The third ingredient is execution. Based on past experiences, we began our preparations for this work earlier than ever, organizing immediately after the close of the 2000 World Radio Conference. We facilitated interaction of government and commercial entities to form well-grounded technical and impactful proposals. We advanced the issues and concluded our preparations in enough time to impress our priorities on America's region and to the rest of the world. We also put forth a delegation team of approximately 150 government and private sector experts. Behind the outstanding leadership of Ambassador Obuchowski were career staff such as Jim Vorhees and Alex Royblad who oversaw the NTIA and FCC preparations. The outstanding success of the five gigahertz items served as a microcosm of teamwork. Charles Glass at NTIA teamed effectively with Warren VanWayser of the FCC, Jerry Connor of the Department of Defense, John Zuzek of NASA. Industry tirelessly supported this work with the efforts of Scott Harris, Rob Cubic, Dave Case, and others.

However, execution does not end when the doors close on the Conference. To take advantage of the successes of the conference, the results need to be reflected in U.S. national regulations. While implementation was a recognized problem in the past, NTIA and the FCC quickly established a plan for implementing the results of the World Radio Conference. A number of the items have already moved through FCC rulemakings, and soon we'll consider an omnibus rulemaking covering most of the remaining World Radio Conference 2003 results. We recommend establishment of this arrangement as a permanent part of the World Radio Conference process.

A final ingredient is improvement. Regardless of past successes, we must continue to improve our processes and adapt as the world changes. The United States needs to be prepared to address the evolving challenges presented by World Radio Conferences or risk relinquishing its global leadership role in telecommunications and technology development and deployment. We have been conducting a review of our processes and will report on the outcome of that assessment in the near future. We expect our recommendations to

cover senior level engagement, cooperation and coordination, outreach, delegation preparation, and World Radio Conference implementation.

So, in conclusion, our experience has taught us the benefits of early and thorough preparation and the importance of our staff and senior agency leaders working together to come to resolutions on difficult issues and of reaching out to other countries. In particular, we appreciate the efforts of those on this panel and those that support them and the panel that follows, the Ambassadors who have lead the previous work delegations in recent years. We continue to work to improve our processes and to ensure the continued success of the United States so essential to our economic and national security. We thank you again for the leadership of this committee, and I look forward to answering any questions you may have.

Mr. TURNER. Thank you.

[The prepared statement of Mr. Gallagher follows:]

Testimony of Michael D. Gallagher
Acting Assistant Secretary for Communications and Information
National Telecommunications and Information Administration
U.S. Department of Commerce
Before the
Committee on Government Reform
Subcommittee on National Security, Emerging Threats, and International Relations
House of Representatives

March 17, 2004

Good morning, Chairman Shays and Ranking Member Kucinich and distinguished members of the Subcommittee. I would like to thank you for inviting me here to testify today on the important topic of improving U.S. success at International Telecommunication Union (ITU) World Radiocommunication Conferences (WRCs). I am Michael D. Gallagher, Acting Assistant Secretary for Communications and Information, U.S. Department of Commerce.

Introduction

Why are WRCs important to the United States? In short, WRCs are the way the nations of the world, meeting collectively at the ITU, regulate spectrum usage at the international level. Radio spectrum is an invisible, but indispensable building block for America's future. It is a natural resource that fuels economic growth. It is key to our nation's digital defense and our citizenry's safety. It is a wireless link that can enable anyone, anywhere to access the resources available on the worldwide web. Employment in industries such as mobile radio remains strong. It is an industry, however, where constant renewal and change dominate. A constant flow of new technologies, services and products characterizes this global market. Government policies for spectrum must keep pace in order for U.S. companies to stay in the race with their international competitors. New startups such as Vivato and Atheros contribute growth in the high technology economy and rely on the U.S. government's ability to make spectrum available. In 2003, the United States achieved outstanding successes by more than doubling the available

spectrum and agreeing on common global rules for 5GHz WiFi devices and "Internet in the Sky" services from passenger aircraft using the 14 GHz band. The results of the WRC in these two examples lead directly to the ability of U.S. companies to market products and services worldwide. Having an ITU allocation and rules in place are already helping U.S. industry to market in countries previously closed to such devices and services.

WRCs are increasingly important to many of the critical functions of Federal agencies, particularly in the areas of national security and homeland defense. Many of the Department of Transportation (DOT) activities for maintaining safe transportation networks and the National Aeronautics and Space Administration (NASA) activities rely on spectrum to operate globally. Without spectrum these agencies and many others could not do their jobs. Two examples where national security interests were at stake at the World Radio Conference 2003 (WRC-03) were spectrum allocations for radars and for the Global Positioning System (GPS). The U.S. delegation protected our ability to operate critical radars in a number of frequency bands, including operation in all parts of the world for force protection radars in the 13 GHz band. The U.S. Delegation also overcame a challenge to GPS modernization from Europe's interest in exploiting the commercial benefits of global satellite positioning.

To succeed in these issues requires that all parts of the government pull together. In the cases above, the National Security Council and the National Economic Council played a major role in focusing the debate and moving the United States government to a common position.

The United States government must continue to be prepared to address the challenges presented by WRCs or risk the likelihood of relinquishing its global leadership role in telecommunications technology and use. Improvements within the process can be made, and the

National Telecommunications and Information Administration (NTIA) is committed to continual improvement in our efforts, working alongside the Department of State and the Federal Communications Commission (FCC).

On the President's behalf, NTIA manages the use of the radio frequency by the Federal agencies. In this role, NTIA processes Federal agencies' requests for frequency assignments; coordinates current and future spectrum requirements among the Federal agencies; and along with the FCC and the Department of State, develops and promotes the United States government's position on spectrum management issues within international treaty bodies and other fora. Because of its unique role as policy adviser and spectrum manager, NTIA must bring together the spectrum interests of Federal agencies and advance policies that promote the benefits of technological developments in the United States for all users of telecommunications services. As the manager of the Federal spectrum, NTIA promotes policies to accommodate new technologies that need spectrum, to improve spectrum efficiency, to increase private sector access to scarce spectrum resources, and to plan for future Federal spectrum needs, including those critical to national defense, public safety and law enforcement.

U.S. communications needs are global. The United States must be capable of operating any time and anywhere in the world. Communications are the backbone of our economic and national security. Therefore, it is imperative that the management of spectrum is accomplished internationally so that the United States and all other nations have a level playing field. The international framework must also be forward-looking and flexible to accommodate future technologies that tend to move faster than traditional approaches toward international negotiations.

To reach our goals, the United States must do its best to prepare for, participate in, and implement the results that provide the framework for international operation of telecommunications. The success of the United States meeting its spectrum needs globally and to protect its use of the spectrum domestically depends primarily on the ability of the NTIA, the Department of State, the FCC, other Federal agencies and the private sector to work together.

NTIA and the FCC have to work hand-in-hand on domestic spectrum management policies on a daily basis. Approximately 70 percent of the allocated radio spectrum below 30 GHz is shared, and there are many overlapping spectrum issues affecting the non-shared portion (about 23 percent non-Federal government and 7 percent Federal government exclusive) in this spectrum. FCC Chairman Powell and I have made it a major goal to coordinate our efforts domestically and internationally through preparation for and participation in the ITU and regional spectrum management activities. Our partnership with the State Department through the leadership of Ambassador Gross, the U.S. Coordinator and Deputy Assistant Secretary for International Telecommunications Policies, ensures a well-focused and integrated foreign policy.

Improving U.S. Spectrum Policy and WRC Challenges

As you are aware, President Bush established the "Spectrum Policy Initiative" to promote the development and implementation of a U.S. spectrum policy for the 21st century. He directed the Secretary of Commerce to chair the initiative. The initiative involves an interagency task force to develop recommendations for improving spectrum management policies and procedures for the Federal Government as well as an examination of ways to improve spectrum management for State, local, and private sector spectrum use.

The Administration is committed to promoting the development and implementation of a

U.S. spectrum policy for the 21st century that will foster economic growth, ensure our national and homeland security, maintain U.S. global leadership in communications technology development and services, and satisfy other vital U.S. needs. Successful participation in WRCs is one way for the United States to maintain global leadership in communications technology development and services.

At the international level, the ITU faces the same spectrum management challenges as those faced by the United States every day. The ever-evolving technical, economic and political environment makes WRCs particularly complex domains. There are challenges of threats to security and safety, of static processes and legacy regulations in a dynamic field, and of the finite nature of access to the radio spectrum. The ITU, and in particular WRCs, often have complaints leveled against them regarding the length and complexity of the spectrum allocation process, policies that cause inefficient use of spectrum and the lack of efficiency stimulating incentives, and delay in accommodating new services and technologies in the spectrum. The United States is leading the way by example is working to overcome these tendencies in the ITU and to make the ITU less reactive. The ITU needs to anticipate future spectrum needs rather than waiting for technology to be deployed before beginning the international allocation process. NTIA also wants to eliminate hurdles the ITU at times erects that limit the ability to share spectrum or to accommodate new needs or capabilities.

WRC Process and U.S. Success

By convening WRCs, the ITU develops international radio regulations that have treaty status. WRCs set the stage for future technological development by allocating radio frequency spectrum to radio services, establishing spectrum use coordination methods, establishing

international rules for radio equipment operation, and identifying spectrum for specific uses. NTIA, with the support of the Federal agencies, partners with the State Department and the FCC in preparing for and participating in these conferences.

The United States has historically been very successful in achieving its objectives at the WRCs as a result of good preparation, the leadership of the heads of the United States delegations, and efforts of the United States delegation. In an organization where the United States has one vote among the 189 ITU member states, our achievements have actually been quite extraordinary.

In addition to the "headline" issues like 5 GHz and GPS that were resolved at WRC-03, there are many other important issues that the WRC must address. For WRC-03, the agenda contained 48 identified items. These items touched on almost all radio services and frequency bands. Bringing these disparate issues to resolution requires a large number of experienced government experts. At WRC-03, we were able to reach a successful resolution on all of the issues.

Our WRC-03 experience has taught us the benefits of early outreach to other countries and thorough preparation of senior agency leaders. I believe that WRC-03 has proven that the United States is doing a better job getting ready for WRCs than in previous years. I am also pleased to say that we are doing a better job in getting WRC results incorporated into U.S. regulations in a timely way thanks to the leadership of the Chairman Powell and the FCC.

Recommended Improvements

In 2002, the General Accounting Office (GAO) in *Telecommunications: Better Coordination and Enhanced Accountability Needed to Improve Spectrum Management* (GAO-

02-096) recommended that the State Department, FCC and the NTIA "jointly review the adequacy of the preparation process following the 2003 World Radiocommunication Conference (WRC) and develop recommendations for improvements." In response, NTIA, the FCC, and the State Department have undertaken a review process. Our agencies have had a series of meetings to coordinate our respective review efforts. We plan to continue these meetings and respond appropriately as promised in our responses to the GAO report and to Congress.

In particular, NTIA is conducting a comprehensive examination of the U.S. preparatory approach, including a request for public comments. NTIA's report will contain an analysis of concerns about WRC preparations and make recommendations. The report will be available soon. In learning from past WRCs and by synthesizing best practices, NTIA believes that improvements can be made in several key areas of WRC preparation, including:

1. **Senior Level Engagement**. As demonstrated in preparing for WRC-03, the resolution of difficult issues and the ultimate success at the WRC can be better achieved through greater engagement of agency leadership. Senior participation and policy direction at early points could greatly facilitate issue resolution. Earlier resolution means early preparation and an earlier opportunity to convey U.S. views. Chairman Powell and I have continued to improve our interagency communications, taking a more forward-looking approach to accommodate advances in technology. This engagement will be carried into the WRC preparatory processes for WRC-07.
2. **Cooperation and Coordination of Federal and Non-Federal Preparations**. NTIA believes that while the federal and non-federal preparatory processes are currently working well, we will continue to seek opportunities for early and ongoing dialog.

3. **International Coordination and Communication.** Ambassador Gross, Chairman Powell, and I have actively been pursuing ways to better coordinate to improve our international outreach efforts as we prepare for international fora such as WRCs. In many instances European or Asian-Pacific, Arab or African nations come to the WRC with unified positions. The United States' ability to reach consensus early with other countries in the Americas on important issues helps ensure that U.S. policy views will prevail in the WRC. Consultations with other countries at all levels needs to be a constant activity throughout the WRC cycle in order for the United States to be successful in conveying its views to others. We are already well on the way to meeting this goal for the next WRC in 2007.

4. **Delegation Preparation.** NTIA believes that the United States can take steps to better prepare our delegations as early as possible through creating delegations, selecting spokespersons and issue coordinators, and appointing a highly qualified Ambassador.

5. **Implementation.** As noted earlier, NTIA and the FCC are working hard to ensure that implementation moves quickly. Some of the key issues from WRC-03 have already moved through the FCC's rulemaking process. Early implementation of any WRC results provides certainty to industry, facilitates planning activities and stimulates investment and job creation. Establishing a clear implementation plan and moving quickly to carry it forward fulfills these goals.

In NTIA's Fiscal Year 2005 budget, the Administration is requesting additional funds to improve our international efforts so we can meet the challenges and complexities of the future WRCs and other technical fora on which major decisions will be made.

Conclusion

I believe that the U.S. WRC preparation process has been very effective, but there is always room for improvement. This hearing comes at an opportune time, because NTIA is now completing development of recommendations to improve the WRC preparatory process. NTIA has learned important lessons from our WRC-03 successes. First, we must work together with the FCC, the State Department, key government agencies and industry to develop creative and practical solutions to tough spectrum issues. We must also engage in early consultation with a number of other countries. We must work effectively with our security allies throughout the process. We must ensure effective leadership of the United States delegation. And finally, we must implement WRC results in a timely fashion. We are applying all of these lessons learned as we now prepare for WRC-07.

Mr. Chairman and members of the Committee, the radio spectrum is vital both to our national and economic security. I look forward to working in partnership with Congress to develop the best possible process for preparing for United States participation in WRCs.

Thank you again for inviting me to testify. I welcome any questions you may have for me.

Commissioner ABERNATHY. Good morning, Mr. Chairman and distinguished members of the subcommittee. Thank you for the opportunity and the honor to appear today to testify on the issue of U.S. preparation for the World Radio Conferences.

As was mentioned, the WRC process has become increasingly important and complex over the past several years as unprecedented progress in the development of radio communication services has resulted in an ever-increasing demand for access to the spectrum resources. Because of the one country/one vote system at the WRC, successful participation requires thorough advance preparation by the United States and then active participation at the conference. WRC 2003 was no exception. Forty-eight agenda items were considered, and the primary focus was the deployment, growth, and evolving use of a broad range of spectrum-based services such as wi-fi and the provision of broadband services via satellites and airplanes.

In light of such an extensive agenda, the United States started its preparation process immediately following WRC 2000, and we sent an expert delegation of public and private sector participants to the conference. This advanced preparation, as has been mentioned, was invaluable, and when combined with an ambitious international outreach effort by the U.S. delegation led by Ambassador Janice Obuchowski, the United States returned from WRC 2003 with a long list of accomplishments.

Just to name a few, the U.S. team ensured spectrum remains available for the introduction of new technologies, incumbent radio communications services remained protected from interference, new commercial ventures can be pursued, and we should see increased global competition and jobs creation. I was proud to be able to serve on the delegation at this year's conference, along with Ambassador David Gross, Former Assistant Secretary of Commerce Nancy Victory, and Associate NASA Administrator William Readdy, as well as other esteemed representatives from the Government and the private sector.

I believe that there are several reasons for the successful outcome of WRC 2003. First and foremost was the extensive coordination between FCC, NTIA, including all the executive branch agencies that it acts on behalf of, the Department of State, and then the private sector. This early effort solidified U.S. positions which could then be negotiated internationally. Fortunately, we all shared a common goal: U.S. success at the Conference.

Second, the high quality and expertise of the U.S. delegation members enabled substantive participation at the Conference at all levels. Until you are there, it is hard to appreciate how significantly the other countries look to the United States for our technical expertise.

Third, the international outreach effort of the United States, both before the Conference and at the WRC, allowed the United States to garner much-needed international support.

Finally, I believe that the able leadership of Ambassador Obuchowski was crucial to the success of the United States.

The FCC also made a significant contribution to the overall success of the U.S. delegation. Not only did FCC staff serve as U.S. spokespersons on nearly half of the items addressed by the Con-

ference, but the FCC was an integral part of the government and industry team that developed the successful U.S. strategy and positions. Moreover, following the conclusion of WRC 2003 the FCC, under the leadership of Chairman Michael Powell, and in coordination with our friends at NTIA, acted quickly to implement many of the decisions from the Conference.

Finally, to ensure that the United States is well prepared for the next Conference, the Commission has initiated preparation for WRC 2007 by convening an Industry Advisory Committee which held its first meeting this past January.

Now, the dual challenges of the ever-increasing demand for spectrum and the WRC's one country/one vote system requires the United States to work smarter and continually re-evaluate our preparatory process for the WRC. I know the FCC, the Department of State, NTIA, NASA, DOD, DOT, and pretty much all the agencies that are dependent on spectrum, are committed to improving the effectiveness of the United States at each WRC, frankly, because there's no other option.

At the FCC we've made process improvements that include increasing the transparency of the FCC preparatory process, increasing our coordination with other Government agencies, enhancing public participation in the development of U.S. positions, increasing our outreach to other countries, and implementing the decisions from each WRC quickly.

Last year, the Commission held a public meeting to evaluate the FCC's efforts at WRC 2003. This meeting confirmed that the private sector, and State and local public safety communities embraced the changes that we had made to date, and we're continuing to work toward additional process improvements so the United States can be ever more successful at upcoming WRCs.

I see we've got some guests coming in.

[NOTE.—Group of midle school students entered the hearing room.]

Commissioner ABERNATHY. We're talking about the World Radio Conference. This is a very important Conference. This is where the United States decides if we are going to have spectrum for you guys to watch TV, listen to the radio, use your computers, instant message everyone. So this is all a big cooperative effort that has to go on with all the countries in the world.

Now, more specifically, we need to improve our further international outreach. We're hampered by two things that many of us are hampered with in our daily lives. We're hampered by a lack of time and a lack of money. In an ideal world, the United States would have all of its positions for an upcoming Conference determined and agreed upon months in advance of a Conference, and we would have a budget that would then allow us to meet with as many countries as possible to ensure that we would be successful. But, given the real world, I do believe there are some solutions out there that allow us to work within these constraints.

First, the FCC should continue to foster close working relationships with other regulatory administrations and regional organizations. This means opening our doors to visiting delegations and building relationships with regulators from around the world, and working with my colleague Ambassador Gross to ensure that we

have these relationships in advance of the meetings. As part of this effort, I have agreed to chair the next ITU Global Regulators Symposium.

Second, the FCC should continue its work with the Department of State and the other Government agencies in expanding U.S. participation in the WRC preparatory efforts in the developing countries and build on all of our global relationships through private entities or organizations that have them already developed.

Overall, I've found that each WRC cycle brings additional refinements to the process, and the FCC is committed to working with Congress and its colleagues across the Government and the private sector to ensure that the United States can continue its leadership position. That's why I remain optimistic about our ability to navigate the complex ITU processes and ensure continued success for the United States.

So thank you for your time. I look forward to answering any questions you may have.

Mr. TURNER. Thank you.

[The prepared statement of Commissioner Abernathy follows:]

Testimony of
Federal Communications Commission Commissioner Kathleen Q. Abernathy
Before the
House Government Reform Subcommittee on National Security,
Emerging Threats and International Relations
"U.S. Preparation for the World Radio Conferences: Too Little, Too Late?"
March 17, 2003

Introduction

I would like to thank Chairman Shays, Ranking Member Kucinich and the distinguished members of the Subcommittee for the opportunity to appear today to testify on the very important issue of the United States preparation for the World Radiocommunication Conferences (WRCs or Conferences).

The FCC has worked on reforming its prepatory process for the WRC and its participation on the U.S. delegation to the WRC over the past few years in an effort to improve the effectiveness of the United States at each WRC. The changes we have made have included increasing the transparency of the FCC prepatory process, improving our coordination with other government agencies, promoting public participation in the development of U.S. positions for WRC, increasing outreach to other countries on issues of importance, and swiftly implementing decisions from each WRC.

Last year the Commission held a public meeting to evaluate the FCC's efforts at the 2003 World Radiocommunication Conference (WRC 2003). This meeting confirmed that the private sector, and state and local public safety believe that the changes we have made are successful and today the FCC's prepatory processes are working well. However, we are not resting on our laurels. We are continuing to work towards improving this process so that the United States can be as effective as possible at upcoming WRCs.

Today I would like to spend a few minutes talking to you more specifically about the WRC process and role that the FCC plays in this process. In addition, I would like to discuss our efforts to continue to improve this process.

The WRC Process

Radiocommunications spectrum is a scarce resource we share with all nations of the world. For that reason, under the auspices of the International Telecommunications Union (ITU), an arm of the United Nations, WRCs are held periodically to consider the regulatory framework to manage the international use of the spectrum resource in an equitable and efficient manner.

The WRC process has become increasingly important over the past several years as unprecedented progress in the development of radiocommunications services has resulted in an even larger demand for access to the spectrum resource. For example, today we have many competing uses of the spectrum from mobile telephony to satellite radio to public safety uses, just to name a few. Because of the "one country one vote" system at the WRC, successful participation requires painstaking and thorough preparation on the part of all countries and active participation throughout the Conference.

WRC 2003 was no exception. WRC 2003 considered 48 agenda items concerning the deployment, growth and evolving use of a broad range of spectrum-based services, such as wi-fi and the provision of broadband services via satellite in airplanes. In order to prepare for such an extensive agenda, the United States started its preparation process immediately following WRC 2000, and sent an expert delegation of over 165 public and private sector participants to the Conference.

This extensive preparation was invaluable and when combined with an ambitious international outreach effort by the U.S. delegation, led by Ambassador Janice Obuchowski, the United States returned from WRC 2003 with a long list of accomplishments. These accomplishments will make spectrum available for the introduction of new technologies, protect incumbent radiocommunication services from interference, enable new commercial ventures, create jobs and increase global competition. I was proud to be able to serve on the delegation to last year's Conference, along with Ambassador David Gross, former Assistant Secretary of Commerce Nancy Victory and Associate NASA Administrator William Readdy, as well as other esteemed representatives from the government and the private sector.

The Reasons for U.S. Success at WRC 2003

I believe that there are several reasons for the successful outcome of WRC 2003. First, the extensive coordination among the FCC, the National Telecommunications and Information Administration (NTIA) (including the Executive Branch Agencies it acts on behalf of), the Department of State, and the private sector early in the process solidified U.S. positions which could then be negotiated internationally. Second, the caliber of the members of the U.S. delegation enabled substantive participation in the Conference at all levels. The United States is fortunate to have established experts in the field of radiocommunications and international negotiations, many with experience at past WRCs and similar meetings, who actively participate in the WRC prepatory process and on the U.S. delegation. Third, the international outreach effort of the United States both before the Conference and at the WRC allowed the United States to garner much needed international support in order to accomplish our goals at the Conference. Fourth, the

improved coordination between the FCC, the Department of State and NTIA on issues of importance at the WRC resulted in a unified message to the rest of the world. And finally, I believe that the able leadership of Ambassador Obuchowski was crucial to the success of the United States. Ambassador Obuchowski's significant experience in telecommunications and international relations, combined with her leadership ability and dedication, was an invaluable asset to the country's efforts at the Conference.

I am proud of the FCC's contribution to the overall success of the U.S. delegation at WRC 2003. Not only did FCC staff serve as U.S. spokespersons on nearly half of the items addressed by the Conference, but the FCC was an integral part of the government and industry team that developed the United States strategy and positions that led to success at the Conference. In addition, in order to further advance the interests of the United States following the conclusion of WRC 2003, the FCC, under the leadership of Chairman Michael Powell, and in coordination with NTIA, acted quickly to implement many of the decisions from the Conference. Further, to ensure that the United States is well-prepared for the next Conference, the Commission has initiated preparation for the 2007 World Radiocommunication Conference (WRC 2007) by convening an industry advisory committee, which held its first meeting in January.

The U.S. WRC Prepatory Process and the Role of the FCC

The WRC process is a collaborative effort among the FCC, the Department of State, NTIA on behalf of the Executive Branch agencies including DOD, the Department of Transportation and NASA, and the private sector. Overall success requires that each entity must actively participate and leverage its resources to ensure that the United States is able to achieve its goals.

The Department of State is ultimately responsible for leading the U.S. efforts at WRCs. The FCC's role is to support and advise the Department of State. The FCC also provides the Department of State with policy and technical expertise on issues related to commercial radiocommunications services, as well as amateur, broadcasting, and state/local government services.

The FCC begins its preparations for each WRC shortly after the previous WRC concludes. Specifically, the FCC focuses its prepatory process efforts on three critical areas:

1) advocacy of the public interest consistent with U.S. policies and regulations;
2) coordination with the Executive Branch agencies; and
3) international outreach.

In order to identify the public interest, the FCC establishes a public forum that allows the public to provide its views and recommendation to the agency. The Commission does this in accordance with the requirements of the Federal Advisory Committee Act by establishing an Advisory Committee for the WRC (WAC). The WAC is chaired by private sector representatives and has an open membership structure. Many extremely qualified members of the private sector participate. For example, the WAC for WRC 2003 was chaired by WRC 1995 Ambassador Brian Fontes, and former Assistant Secretary of Commerce Nancy Victory is chairing the WAC preparing for WRC 2007.

In addition to broad industry participation, members of the Executive Branch Agencies also participate in the meetings of the WAC. The WAC provides the FCC with recommendations on almost all agenda items. In addition, to further promote public participation in the WRC preparatory process, the FCC, through a public notice process,

solicits comments from the public on all recommendations received from the advisory committee. The FCC also maintains a public website (www.fcc.gov/ib/wrc-07/) that provides information on all WRC prepatory activities, including meeting times, dates and locations, copies of relevant documents and links to WRC-related websites of regional and international organizations.

The FCC formulates its positions on WRC agenda items only after taking into account the recommendations submitted by the advisory committee, the positions developed by the Executive Branch through the Interdepartment Radio Advisory Committee, FCC precedent, and comments received in response to its public notices. At times, the positions negotiated among the competing commercial interests within the advisory committee do not coincide with that of the federal government spectrum users. In such cases, the FCC works closely with NTIA and affected parties to reconcile any differences and develop unified recommendations on U.S. positions for the WRC. Once finalized, NTIA and the FCC submit draft proposals that are jointly transmitted to the Department of State. The Department of State, with the Ambassador for the WRC, finalizes the U.S. positions for the Conference and makes them available to U.S. delegation members.

Based on the WRC's premise of "one country one vote" and the growing regionalization of the ITU, international outreach has become an area of increasing importance in the FCC's prepatory process for the WRC. Accordingly, the FCC actively participates on the U.S. delegations to regional WRC meetings, takes part in ITU Radiocommunications Sector study groups and Conference Prepatory Meetings, and supports the U.S. Ambassador to the WRC in their international outreach efforts.

The FCC's Role at the Conference

At the Conference, many members of the FCC serve as delegates and many have leadership roles as spokespersons. This past year, Alex Roytblat ably served as a U.S. Vice Chair at the Conference and Chris Murphy served as the Outreach Coordinator for the U.S. delegation's very successful outreach program to other countries. This direct support for the U.S. Ambassador to the Conference enables the FCC to assist with outreach and address any technical issues that may arise. In addition, several FCC employees served as U.S. spokespersons on specific subjects, such as wi-fi, where they possess unique expertise. Further, the FCC supports the U.S. delegation through its active participation and leadership on "the home team" in Washington, D.C. that remains available for advice and consultation throughout the Conference.

Finally, after the Conference, the FCC has an important role in implementing the decisions of the Conference that further the U.S. national interest. The FCC accomplishes this task often in conjunction with NTIA in its role as manager of the government spectrum resource. As an example, within a month after the conclusion of WRC 2003, the FCC and NTIA committed to a detailed and ambitious plan for the domestic implementation of the Final Acts of WRC 2003. The aim was to ensure that commercial, state, local and federal government spectrum users would derive maximum benefits from the WRC 2003 results. To date, the FCC has fully met its commitment under the plan.

What Can Be Done Better

The FCC is continually working with NTIA, the Department of State, private industry, and state and local public safety organizations to improve its preparatory process and its participation in the WRC. Over the past several Conferences, for instance, the FCC has solicited public input following each Conference, on ways to improve the process. This past year the FCC held a public meeting shortly after the Conference to seek ideas from the public on ways to improve the FCC's prepatory process. The consensus from that meeting was that the recent changes by the FCC, as outlined below, have significantly improved the process. The results of the FCC's review are embodied in a recently released FCC report entitled, "Assessment of FCC's Prepatory Process for the 2003 World Radiocommunication Conference."

More specifically, in an effort to improve its processes, the FCC has stepped up its prepatory efforts. Accordingly, in October of last year, the Commission named the Chair and Vice Chair of the WAC for WRC 2007 and shortly thereafter convened the first meeting of the WAC. Today, I am happy to say, the WAC is meeting regularly and we are progressing in formulating positions for WRC 2007.

Although the FCC has made significant improvements in the WRC prepatory process and in its participation at the Conference, I believe that we can improve further. Specifically, we can always improve our international outreach efforts. To this end we are hampered by two things – time and money. In an ideal world, the United States would have all of its positions for an upcoming Conference determined and agreed upon months in advance of a Conference. Unfortunately, this is not always the case, especially

with areas of the spectrum that are subject to competing uses or new technology comes into play. Therefore, the United States is not always in a position to advocate all of its positions early in the process. In addition, even where we are able to formulate our positions early in the process, there is always room for improvement in international outreach to ensure that the United Sates has an opportunity to explain its positions and learn about priorities (sometimes competing) of other countries.

Despite the time and money constraints we can do more. In preparation for the next WRC, the FCC should continue to foster close working relations with other administrations and regional organizations. The FCC should also work with the Department of State and other government agencies in expanding U.S. participation in the WRC prepatory efforts in the developing countries. I am committed to ensuring that this occurs. In addition, we can build on existing public-private partnerships, such as the United States Telecommunications Training Institute, to improve our outreach.

Conclusion

Overall, I believe that each WRC cycle brings additional refinements to the prepatory and WRC process. Starting WRC preparations early and focusing our efforts on areas of critical interest to the United States allows the FCC to leverage its limited resources. In addition, relying on an open and balanced prepatory process ensures the credibility and integrity of the process. In the area of coordination with the Executive Branch agencies, the FCC and other government agencies are continually improving their dialog to resolve any technical issues. This working relationship is important not only for resolving contentious issues prior to the Conference, but to ensure effective working relationships during the Conference itself. I also believe that the increasing amount of

international outreach performed prior to and at the Conference is critical to our success. Finally, I am pleased that the FCC is committed to faster implementation of the decisions of the Conference so that U.S. consumers can recognize the benefits of the WRC process through the availability of new and innovative radiocommunications services.

Mr. TURNER. Ambassador Gross.

Ambassador GROSS. Thank you very much, Mr. Chairman. Welcome to everyone. I don't think I have ever been to a more well-attended hearing than the one we have today, which underscores the importance and the reason for having the hearing today, not just about what we've done in the past but really what it means for the future and looking forward. The issues, as Commissioner Abernathy just talked about, for everyone just joined, has to do with spectrum, has to do with the international aspects of spectrum and making sure you all have enough spectrum for your future, for your cell phones, for TVs, for radios, for a whole host of things, as well as to ensure that your national security, your future is well protected. It is the responsibility of the people at this table, who are all Government officials, senior Government officials, to ensure that happens.

I want to thank you, Mr. Chairman, especially for the interest that you have shown and the other members of the committee have shown, and particularly the staff of the committee have shown. It meant a tremendous amount to the delegation at WRC 2003 and to me in particular that staff members came and spent time with us at the WRC to see firsthand what was going on. That was important to underscore the importance of the activities that the delegation was undertaking, as well as the ongoing work. So I want to thank them in particular for taking time out and for helping us in that process.

Let me just spend a moment, if you would allow me to talk a little bit about my position. I am an ambassador for the United States and my job is to coordinate and lead all international telecommunications activities on behalf of the United States. It is my ongoing responsibility to make sure that the process, whether it is the WRC process or other processes, runs smoothly and that our work is done effectively and efficiently. The reason why that job is in the U.S. State Department and not another agency is because of the decision that was made some time ago that it is extraordinarily important that the work that we do with regard to telecommunications be done in complete harmony with our foreign policy—that is, to make sure that we get the maximum impact and that we are well informed, both from a foreign policy perspective as well as from a technical perspective, in these activities.

I, as many of the people up here on the panel, come originally from the private sector, and so the concept of process improvement is one that is near and dear to our hearts, and so this process of looking back and then looking forward is particularly important. There is no pride of practices, and we constantly attempt and look very carefully trying to do process improvement so we can continue to do a better job for the American people.

One of those aspects is the team approach, and one of the things that I was most proud about as we went through this process after the WRC 2000 was a recommitment to the team. Each of the agencies here at the table, as well as other agencies, came together both personally and organizationally to act as one team to work for the American people's best interest. That process was ongoing, extraordinarily important, and I am very thankful to all the members for that process.

That process included one of the most important pieces, and that was the recommendation to the President of a WRC Ambassador. Because of the nature of the Ambassadorial position only lasts for approximately 6 months, it is incumbent upon the people at this table and our staffs and others to work continuously on the process, as well as the issues that are going on.

As was mentioned earlier, the process for the WRC 2007 began with the very end of WRC 2003. It is a continuing process. That is well understood. What is perhaps not as well understood is that process is continuous throughout our outreach on international telecommunications. We have an ongoing series of bilats independent of the WRC process, but yet each of those bilats is educated by and works in harmony with our upcoming WRC agenda, so we're dealing with China, Russia, India on an ongoing basis about a number of issues, WRC is always a part of that process, even well before the WRC Ambassador is appointed. Similarly, as we have U.N. summits the WRC process is always a part of our thinking. The ITU has many meetings, many conferences, large and small. The WRC process is always a part of that proceeding.

It is also important to remember that the WRC is a treaty-writing, and the ITU—the International Telecommunications Union, of which the WRC is one of the most important meetings, is also a treaty-based organization, and we treat it as such. Ultimately, however, what this is all about is doing the best job for the American people, bringing jobs to the American people, ensuring our national security. It requires all of us to work together. It requires all of us to be nimble, opportunistic, and optimistic.

I am very pleased about the results that Ambassador Obuchowski was able to get for us, as well as the almost 170 members of the delegation representing both the private sector and the public sector. They did an extraordinarily good job, as I note that other WRC's Ambassadors have been able to do. In going back through the record, I believe virtually every one, if not all, have, in fact, brought back and achieved all of their objectives. If the test of the work that we have done is whether or not we were effective in getting that which the American people wanted, our process has always been effective. Our job collectively and individually is to ensure that's true going forward, and you have my assurance that will be the case from the State Department.

Thank you very much.

Mr. TURNER. Thank you, Ambassador.

[The prepared statement of Ambassador Gross follows:]

Testimony of

Ambassador David A. Gross

Deputy Assistant Secretary of State for
International Communications and Information Policy
before the
House Government Reform Subcommittee on National Security,
Emerging Threats and International Relations
March 17, 2004

World Radiocommunication Conferences

Introduction

Mr. Chairman, distinguished members of the Subcommittee, I want to thank you for holding this important hearing and I appreciate the opportunity to testify on this issue. I am Ambassador David Gross, Deputy Assistant Secretary for International Communications and Information Policy (CIP) at the Department of State. The Department of State has the authority and ultimate responsibility for establishing U.S. foreign policy with respect to international telecommunications.

CIP is the focal point within the Department for the International Telecommunication Union's (ITU) World Radiocommunication Conference (WRC) preparations. In fact, CIP is the U.S. government focal point for ITU matters generally. We think it is important to recognize that WRCs are the pinnacle of a global process that allows new services and technologies to go

forward, while providing them a place in an international order that ensures globally harmonized communications that are interoperable and seamless. In this process, the United States must maintain an overarching world-view and approach that advances U.S. foreign, economic and national security goals, recognizing that what CIP does in all meetings-both bilateral and multilateral- impacts WRCs and visa versa. WRCs are truly at the intersection of foreign and economic policy and communications technology. In summation, the importance of the decisions made at WRC cannot be overstated as those decisions significantly impact national security, economic growth and the creation of U.S. jobs.

In our WRC role, we endeavor to make constant improvements to the WRC preparatory process by building on our experiences from past conferences. At the same time, recognizing that each WRC is unique, we believe that it is important to retain flexibility in our approach in order to take advantage of opportunities that arise.

In addition to the Department's general authority over the conduct of U.S. foreign relations, the legal authority for the Department's role in U.S. policy development and preparations for WRCs is derived from 22 U.S.C. 2707(b). This provision states that the "Secretary of State shall be responsible for the formulation, coordination and oversight of foreign policy

related to international telecommunications and information policy," including exercising "primary authority for the conduct of foreign policy with respect to such telecommunication functions, including the determination of United States positions and the conduct of United States participation in negotiations with foreign governments and international bodies." The statute further states that, in exercising this authority, the Secretary shall coordinate with other agencies as appropriate and give "full consideration to the authority vested by law or executive order" in the Federal Communication Commission, Department of Commerce and the Office of the United States Trade Representative (USTR).

WRCs are held under the auspices of the International Telecommunication Union's Radiocommunication Sector (ITU-R) and are convened on a recurring basis. These conferences have a mandate to consider specific radiocommunication matters, including proposals for revisions to the Radio Regulations and associated frequency assignment and allotment plans. To the extent that the Senate has given its advice and consent, the Radio Regulations constitute an international obligation binding on the United States concerning the use of the radio-frequency spectrum by U.S. radiocommunications services. Revisions to the Radio Regulations are proposed at the WRC on the basis of an agenda that is recommended by the

previous WRCs and approved by the ITU Council, the 46-country board that governs the ITU between Plenipotentiary Conferences.

Process

Preparing for WRCs is a continuous process. Immediately following a WRC, the ITU-R convenes the first of two sessions of the Conference Preparatory Meeting (CPM). The U.S. delegation, led by the Department of State, participates in an examination of the agenda items for the next WRC. Delegations attending the CPM identify areas needing further technical study to support the spectrum and technical decisions that will occur at the next WRC. These technical issues are assigned to the various relevant Radiocommunication Study Groups. These Study Groups (and their sub-groups) are made up of technical experts from countries and telecommunications organizations throughout the world. They study and make recommendations on different radiocommunication services, radio system characteristics and the use of the spectrum and satellite orbits. Specifically, studies are completed within these groups to demonstrate how existing services can be protected while providing sharing opportunities for new services. A product of this first CPM is an outline of the technical report that will be forwarded to the next WRC.

This report, created as a result of the work of the Study Groups, provides the basis for the technical decisions of the next WRC. The report is finalized at a second CPM, which is held about six months before the WRC is convened. The Study Groups (7 in all, with 37 sub-groups) and their sub-groups, meet from one to three times each year during the study group cycle, which coincides with the periods between WRCs. Study Group work is based on technical input documents from countries and sector members.

U.S. telecommunications experts, both from government and the private sector, participate extensively in the ITU-R Study Group process. The work of these experts is organized into groups that parallel those of the ITU-R Study Groups. The groups all carry out their work within the framework provided by International Telecommunication Advisory Committee-Radiocommunication Activity (ITAC-R). This advisory committee is chartered by the General Services Administration (GSA) to the Department of State as an advisory committee under the Federal Advisory Committee Act (FACA). The ITAC-R advisory process is the mechanism used by the U.S. Department of State to obtain the information and advice it needs to formulate the materials it provides to the delegations it leads and the papers it submits to international and regional meetings.

The State Department-led ITAC-R is a key component of the U.S. preparatory process for WRCs. During the intervals between WRCs, the various domestic technical groups, who represent all spectrum users, meet to provide technical input to the U.S. government. These papers are channeled through the ITAC-R National Committee, a group open to all technical experts who care to participate, where they are reviewed and commented upon. When differences occur, the Department acts as a mediator to reach resolution. At the same time, these documents undergo a policy review within the Department. All text generated in the United States that is intended for international audiences, including input documents to the Study Group process and proposals to the CPM and WRC, must be approved by the Department of State in consultation with the Federal Communications Commission (FCC) and the Department of Commerce's National Telecommunications and Information Administration (NTIA). Once this process is complete, the Department forwards the documents to the ITU-R.

The ITAC-R is also key to U.S. efforts to work within the Inter-American Telecommunication Commission (CITEL), the regional telecommunication arm of the Organization of American States (OAS). All documents submitted to these meetings must first go through the Advisory

Committee process and be approved by the Department in consultation with NTIA and the FCC.

Under the ITAC-R, the Department of State also hosts a series of National Committee meetings when preparing for WRCs. These meetings provide a forum for all spectrum users, government and private, to come together before the U.S. delegation is formed to discuss and advise the Department on conference issues. Meetings such as these are intended to complement the FCC and NTIA preparatory processes in order to bring all groups together to facilitate debate.

Both NTIA and FCC also have ongoing WRC preparatory processes. The result of their work is two sets of draft proposals. Much of the technical work that is the basis for these proposals is completed within the context of the ITU-R Study Group process. When complete, these proposals are then jointly reviewed, coordinated and modified when necessary by the NTIA and the FCC. They are then forwarded to the Department of State where they are reviewed and, if necessary, revised and then forwarded to the ITU.

As is always the case when there are competing uses for available spectrum and orbit resources, some issues are more difficult to resolve than others. A particularly challenging problem during the preparatory phase of past WRCs was determining when contested issues were ripe for resolution.

To address this, the Department of State coordinated and led a meeting of U.S. government Principals during its preparatory process for WRC 2003. This meeting was initiated to ensure higher level, interagency oversight of the WRC preparatory process at the earliest possible stage. It addressed such issues as possible nominees to recommend to the President to head the U.S. Delegation to WRC, resources that could be committed by the various agencies to the preparatory process and to the WRC itself, and how best to coordinate these resources. The group also discussed issues that were still under debate domestically as well as a time frame within which resolution of those issues could be reached. While this group was never called upon to make final decisions on such issues, I believe that the existence of this group, along with the focus of the principals in the various agencies who were capable of making such decisions, assured that all proposals were completed sufficiently early to effectively advance U.S. interests. Moreover, the fact that U.S. proposals were completed in record time allowed CITEL to be the first regional organization to submit regional proposals to the ITU. This resulted in the Americas being first of all the ITU regional groups to present its proposals at the WRC, and also allowed us to influence the proposals of other regional groups.

From our experience with previous WRCs, we also believe that certain issues needed attention in advance of the announcement of the WRC Head of Delegation. To address these issues, we initiated a second group, the Core Committee. It consisted of representatives from NTIA, FCC, Department of Defense (DOD), and the National Aeronautics and Space Administration (NASA). Its purpose, like that of the Principal's group, was to assist in coordinating the work of conference preparations at an earlier stage. This group met several times before a Head of Delegation was announced. It examined and proposed a Conference structure and developed a list of international Committee Chairs to lead the work of the WRC. Another purpose of this group was to identify and attempt to reconcile differences in positions and proposals on Conference issues at an early date so that these proposals could be discussed and support sought for U.S. proposals at regional, bilateral and international meetings leading up to the WRC. The group also identified areas of divergence with other Regions and countries in the hopes of resolving those differences in negotiations prior to the WRC. Finally, the group also created a draft list of U.S. spokespersons and committee chairs so that these groups could begin meeting and carrying out the necessary preparatory work before the delegation was formed.

The good working relations among the staff from the various agencies participating in this group enabled it to significantly advance the necessary preparatory work before the WRC Ambassador was appointed. Both of these groups were noted in the WRC Delegation Report and the Department plans to continue both with meetings of Principals and meetings of a preliminary Core Committee in its future preparatory work.

Head of WRC Delegation

The head of delegation to the WRC is appointed by the President, who also confers the personal rank of Ambassador. The person selected is given a six-month appointment as an expert consultant to the Department of State's Bureau of Economic and Business Affairs and reports to the head of CIP. The person selected files a financial disclosure form, and must undergo a conflict-of-interest review and clearance by the Department's ethics lawyers, consistent with applicable laws.

The Department also plays a key role in preparing WRC ambassadors for their role as Head of Delegation. Under Department leadership before the appointment of the WRC 2003 Ambassador, a briefing book was prepared that addressed every agenda item. The Department also provides office space and administrative support for the WRC Ambassador, assists in

arranging bilateral and multilateral meetings with other countries and regional groups, and arranges for discussions with senior ITU officials.

Outreach

The Department of State lends support to outreach efforts that are important to certain entities at upcoming WRCs. For example, the Department of State assists groups that export U.S. informational materials into countries hosting regional meetings to educate delegates attending these meetings on various telecommunications equipment and services. These efforts are intended to gain support, through education, from foreign delegates for U.S. proposals.

The Department also leads delegations participating in the Permanent Consultative Committee of CITEL, the group that addresses radiocommunication and broadcasting issues. It is through these meetings that Inter-American Proposals (IAPs) are submitted from the Americas to the WRC on behalf of many of the Western Hemisphere countries.

The Department also assists in organizing small delegations, led by the WRC Ambassador, with experts from the Department, NTIA, FCC, DOD, NASA and the Federal Aviation Administration (FAA), to engage in an aggressive pre-WRC outreach effort. For example, before WRC 03, these small delegations met with over 40 countries and attended regional

meetings that included Europe (in Portugal), the Americas (in Florida), Africa (in Gabon) and Asia (in Japan). While budget and time constraints would have made individual meetings in over 40 countries impossible, we continue to take advantage of regional meetings to hold bilateral meetings with as many countries as possible, a practice that began before WRC 95. These bilateral meetings complement CIP's ongoing bilateral and multilateral work and set the stage specifically for WRC issues. These discussions with international partners are key to the U.S. success at WRCs.

During the preparatory phase the Department also sent cables to embassies throughout the world in order to gain support for U.S. proposals. This was especially useful after regional meetings, such as CITEL, when delegations were undecided on whether to support a U.S. proposal. Embassy officials were asked to discuss U.S. proposals with the government communications experts in various countries and to ask them to join in supporting these proposals. In at least one instance, this resulted in the U.S. proposal being chosen over another country's proposal in representing the regional view. This was of great significance to DOD and the U.S. delegation because our negotiations at the WRC had the weight of the region behind them.

Structure of the Delegation

Once the WRC Ambassador is appointed, a delegation is proposed and the Department goes through the accreditation process. Vice Chairs are appointed from the Department, NTIA and the FCC; heads of committees, that parallel the WRC committee structure, are confirmed; and the delegation begins to meet on a weekly basis until the Conference begins. It is at this time that the Delegation takes on its final shape, position papers are completed along with talking points on all the agenda items, and strategies are charted together with fallback positions, as appropriate.

During WRC 2003, Department of State officers headed six of the eight committees to help manage the work of the Delegation leading up to and during the WRC. It provided an Executive Director and general support for the four-week conference. The Department's efforts in support of the U.S. delegation at the WRCs are Department wide, as demonstrated by the expert support that the U.S. mission provides regarding arrangements for the U.S. Delegation and U.S. activities both before and during the Conference, and by the offices that are set up and staffed by the Department's Office of International Organizations for the delegation as a whole and for the Ambassador personally. These efforts greatly facilitate the work of the Delegates during the conference.

Results

It is important to note that at WRC 03 the U.S. delegation achieved all of its major objectives. In fact, the United States has been remarkably successful at WRCs. The delegations to WRCs make decisions that are critical to the national security interests, economic growth and scientific endeavors of all nations. It is a testament to the process that the U.S. has never lost an important objective through its participation in ITU WRCs. And the process itself is easing a bit. For example, until WRC 2003, there was an alarming increase in agenda items. Each country wanted its specific issues addressed and showed little willingness to compromise. Such an approach resulted in the 48 agenda items that were addressed by the 2003 WRC. There finally appears, however, to be a trend in the opposite direction. I am happy to report that the agenda for WRC 2007 has only 27 items, a marked improvement to what was fast becoming an unmanageable process. Moreover, the next Conference is scheduled to occur in 2007. This is an interval of four years. Even with a four-year interval, however, the work of the Study Groups is well underway and a team of U.S. experts is already extensively engaged in preparing for WRC-07.

We at the Department of State look forward to opportunities to further improve on the WRC process. We look forward to working with the private

sector, NTIA, FCC, NASA, DOD and all other agencies that participate at the WRC.

Mr. TURNER. We want to take this opportunity also to acknowledge that the students who have joined us are from the Kelman Academy from Cherry Hill, NJ. They are eighth graders. We welcome you.

Dr. Wells.

Dr. WELLS. Thank you very much. Let me also echo the other speakers here today to thank the committee for its leadership and its interest in this.

From the standpoint of the Department of Defense, the World Radio Conferences are strategically crucial for our country because spectrum has become the bedrock of the communications flows that are literally today the lifeblood of our modern national security systems. In addition to their importance for the commercial development of new technologies, a dynamic process that DOD supports, the WRCs affect what spectrum is available for military operations. This is not just true here but, of course, around the world.

In an era of asymmetric warfare in which the greatest threats are often the most decentralized and the hardest to pin down, United States and allied forces require this kind of global access to spectrum to go wherever the enemy goes with greater stealth and access to firepower than the enemy can employ.

WRCs then are integral to our strategic approach to network centric warfare and information superiority, and failure to prepare properly for and execute the strategies to ensure the spectrum access will literally have life or death consequences. Because of its extensive responsibilities for defending not only the United States but also coalition partners and allies, DOD has interests and equities concerning multiple spectrum bands. These responsibilities and interests are often not shared or understood by other countries, even those who may themselves be protected by the global umbrella of wireless links maintained by the United States for itself and its allies.

In this complex world, DOD must ensure that it prepares for each World Radio Conference and communicates its obligations within the U.S. Government to the broader U.S. spectrum community, to allies, and ultimately to the WRC, itself.

WRC 2003 underlined the growing importance of spectrum-dependent technologies in the Nation's defense. The conference was convened just weeks after the liberation of Iraq. It was the first global spectrum conference held after the terrorist attacks of September 11 and the resulting War on Terror. The timing served to underscore the high stakes for the U.S. delegation in Geneva working to preserve a businesslike and cooperative environment for multinational diplomacy.

The Department of Defense identified at least 30 items on the agenda for WRC 2003, out of a record-breaking total of 48 agenda items that touched on national security interest and Department equities. Because of this, advanced preparation was vital to a successful outcome. Throughout the preparation phase and during the conference, itself, DOD devoted substantial human capital and financial resources. As a result, we feel we contributed to the successful advancement of national security interests that occurred during the conference.

The U.S. approach to WRCs can function well, provided adequate preparation is followed by experienced and effective management at each conference—a point that I think all my colleagues have made very well. Among the many facets of this process are comprehensive technical preparation, effective and consistent outreach and regional coordination, and selection of dedicated delegation leadership. To a commendable extent, this is, in fact, just what happened for WRC 2003.

The greatest contribution to WRC preparation and success that should be incorporated now is the creation of a national level spectrum priorities. As contemplated in the President's current spectrum initiative, establishing clearly articulated policy will lead to more informed preparations for WRCs at early stages of each preparation phase; therefore, we are committed to furthering the goals of the President's initiative.

In addition, the organization of the U.S. WRC effort could be streamlined in some areas, including the training of participants and more involvement by senior leadership in the preparation phase.

Let me address two points. We need to improve the quality of U.S. document submissions and delegate training. There is a shortfall in the proper use of regulatory procedures and language in some cases in the preparation of U.S. submissions to the ITUR study groups. This carries over into the work process, itself. Joint NTIA, FCC, State Department training could be targeted at improving the quality of the U.S. submissions, increasing the effectiveness of the U.S. preparations for the study groups and the work, themselves, and we are working with our colleagues to bring this into fruition.

The second point is I think that we should establish senior leadership structure during the preparation periods. This was done to some extent in the run up to WRC 2003. The preparation phase, which constitutes much of the interim between the conferences, should be guided by a senior leadership group that is composed of top-level officials representing all of the relevant departments and agencies, meeting frequently to define. In effect, this group could obviate the need to create a permanent Ambassador to the WRC, which, of course, has time constraints in the appointments. So we have suggested a meeting be called among the senior leadership to initiate this process and look forward to going forward.

To summarize, Mr. Chairman, as the largest user of spectrum resources in the United States, DOD has made a profound commitment to shepherd its spectrum resources as effectively as technology will allow. That commitment extends fully to the preparations for the WRC conferences, also.

We look forward to working with this subcommittee, providing any assistance it can and to enhance the U.S. role at future WRCs.

Thank you very much.

Mr. TURNER. Thank you, Dr. Wells.

[The prepared statement of Dr. Wells follows:]

WRITTEN STATEMENT OF

DR. LINTON WELLS, II
PRINCIPAL DEPUTY ASSISTANT SECRETARY OF DEFENSE
FOR NETWORKS AND INFORMATION INTEGRATION

HOUSE COMMITTEE ON GOVERNMENT REFORM
SUBCOMMITTEE ON NATIONAL SECURITY EMERGING THREATS
AND INTERNATIONAL RELATIONS

HEARING ON WRC PREPARATIONS

MARCH 17, 2004

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COMMITTEE

On behalf of the Department of Defense (DoD), I would like to thank this committee for the opportunity to testify regarding the importance of the World Radiocommunication Conferences (WRCs) for national security and homeland defense. I commend this panel for devoting its attention to the subject of how the United States prepares for WRCs and for examining how our government's representation at these conferences could be streamlined and improved.

Because spectrum has become the lifeblood of modern national security systems, the WRCs—which are the international, treaty-level conferences that allocate spectrum resources globally—are strategically crucial for the United States. In addition to their importance for the commercial development of new technologies—a dynamic process with which DoD involved—WRCs directly affect the availability of spectrum that is vital for military operations around the world. In an era of asymmetric warfare, in which the greatest threats are often the most decentralized and hard to track and pin down, U.S. and allied forces require global access to sufficient spectrum to go where the enemy goes, with greater stealth and access to firepower than the enemy can employ. The WRCs, then, must be viewed as integral to our strategic approach to network-centric warfare. Failure properly to prepare for, and execute, strategies to preserve and enhance spectrum access will literally have life-or-death consequences.

Ever since the development of radio technologies at the beginning of the last century, spectrum has grown in importance as a component of military combat and support systems. This importance has, however, grown exponentially in recent years, due

to a confluence of technological development and international events that has, literally, changed the world—and changed the environment in which those who serve our country in uniform must operate. DoD operations across the board are increasingly reliant upon spectrum-based technologies. Wireless technologies link unmanned Predator targeting and reconnaissance systems to pilots located thousands of miles away. Spectrum is the lifeline that ties our soldiers on the battlefield to commanders and extricates them when their lives are hanging in the balance. Spectrum is a key factor in establishing information superiority that allows U.S. forces to bring targeted and effective force to bear upon the nation's enemies, while minimizing damage and casualties among noncombatants. In short, spectrum-dependent technologies are revolutionizing nearly every aspect of what DoD does to protect this country.

Not surprisingly, the importance of each WRC reflects the period of history and consequent circumstances in which it is held. This was certainly true of WRC-2003, which was convened just weeks after the liberation of Iraq and was, in fact, the first global spectrum conference held after the terrorist attacks of 9/11 and the resulting operations in Afghanistan. It is no exaggeration to say that WRC-2003 was held during one of the most active periods in the coalition's war on terrorism. The timing of this conference served to underline the high stakes for the U.S. delegation to Geneva in working to preserve a business-like and cooperative environment for multilateral diplomacy during the conference.

The war on terrorism served to heighten the importance of WRC-2003 for those of us responsible for safeguarding the military's access to spectrum resources. DoD identified at least 30 items on the agenda for WRC-2003—out of a record-breaking total of 48 agenda items—that touched on national security interests and Department equities. Because of the potentially broad impact of WRC-2003 on DoD operations, DoD engaged in considerable advance preparation to ensure a successful outcome of WRC-2003. Throughout the preparation phase, and during the Conference itself, DoD was fully engaged in protecting those equities and interests—and in fact advancing *all* U.S. interests, military and civil—as an integral participant on the U.S. delegation. DoD devoted substantial resources to WRC preparation, in terms of human capital, time, expertise and financial support. This participation—along with the vital participation of other government agencies and, indeed, many of the private sector advisers—made WRC 2003 a success in terms of advancing national security interests. DoD achieved all of its major goals for the Conference, albeit with some compromises.

While WRC-2003 resolved many outstanding spectrum issues, the very nature of evolving technologies, or changing world circumstances, ensures a need for diligence in preparing for future WRCs. Indeed, the very success of WRC-2003 underscores within DoD the need to remain an involved and key player, with other U.S. government departments and agencies, in future WRC preparations and in contributing to efforts to improve that preparation administratively and organizationally. The process of preparing for the next WRC, tentatively set to occur in 2007, is already under way, with DoD participation being integral to that effort.

There are many facets to the U.S. approach to WRC participation, including comprehensive technical preparation of positions, effective and consistent outreach and regional coordination internationally, and the selection and support of a dedicated leadership team to head the delegation. This process is, in fact, what has occurred for WRC-2003 and previous Conferences to a greater extent than is generally realized. The organization of the U.S. WRC effort could be streamlined, however, in several areas: (1) training of participants, (2) earlier identification of delegation members, and (3) more involvement by senior leadership in the preparation phase. I will elaborate on these recommendations further at a later point during my remarks to the committee. As you are aware, the President has created a Spectrum Policy Initiative. DoD is working with other Agencies to develop recommendations for improving spectrum policies and procedures to promote more efficient and beneficial use of spectrum, without harmful interference to critical incumbent users. Although this initiative is not solely directed at improving WRC or international representation, improved spectrum policies and procedures will provide a necessary and solid foundation for the preparation of future WRC conferences.

DoD Preparation and Commitment of Resources

Success at each WRC involves a well-planned preparation phase that emphasizes the building of support for key positions. Ideally, this process begins many years prior to the conference. The U.S. has to be sensitive to the spectrum concerns of other nations, in addition to our own. Military organizations—the North Atlantic Treaty Organization

(NATO) being perhaps the best example—have no direct standing at the International Telecommunication Union (ITU); their influence is exerted through team-building, coordination of positions, and "stove-piping" those views up to the highest levels of defense ministries and departments in each allied nation. DoD has several vehicles available to it to accomplish its military-to-military coordination tasks, which it alone contributes to the overall U.S. preparation phase. These include:

- Engaging NATO member nations through the Frequency Management Subcommittee (FMSC) of NATO's Consultation, Command and Control Board. NATO establishes its positions early in the process, and civilian representatives exert a high degree of influence, often creating a challenge for DoD interests.
- Engaging foreign military spectrum managers via the Joint Frequency Management Offices of the U.S. geographic combat commands—EUCOM and PACOM, in particular. This involves participation in annual regional conferences that also are attended by military counterparts from foreign administrations.
- Engagement through the Combined Communications Electronics Board, which is comprised of representatives from the United States, Australia, Canada, the United Kingdom and New Zealand.
- Bilateral mil-to-mil consultations during the months leading up to each WRC, particularly with key ITU members such as the European nations, Japan and South Korea.

- Interaction through the Partnership for Peace organization and countries invited by NATO. This interaction often provides an educational opportunity for representatives of these countries, many of which are already aligned with U.S. positions.
- Interaction with military representatives of the Gulf Cooperation Council, which is key to our important relations with allies in the Persian Gulf.

Many, if not all, of these interactions were features of DoD's preparation for WRC-2003. The agenda for the conference had been approved at the previous WRC in 2000, so the potentially-large impact of this particular WRC was well known to spectrum experts within DoD. It became clear within DoD that this WRC, and perhaps all future ones, called for a top-level awareness and commitment of Department resources—a commitment that was attained and maintained, throughout the preparation process.

These preparation activities were followed up by strategic outreach efforts at the conference, carried out through the U.S. delegation in Geneva, which contained several representatives from DoD—among them some of the Department's most highly-qualified and experienced spectrum engineers. These individuals worked as members of the teams that concentrated on the agenda items identified as crucial to national security and homeland defense. But more than that, they were team players in the entire U.S. effort, which included agenda items of major interest to commercial spectrum users in the United States. This team-oriented approach reflects the Department's awareness that it benefits directly from the development of spectrum-based technologies—such as

Wireless Local Area Network (WLAN) technologies like the 802.11(b) "Wi-Fi" networking standard—that can be deployed for an array of civilian and military uses. Once in Geneva, the DoD members of the delegation participated fully in the U.S. outreach program, effectively built working relationships with delegates from other nations and furthered the discussion of U.S. proposals at the conference. As an adjunct to U.S. conference participation, DoD representatives in Washington were standing by to provide strategic expertise and political support whenever needed.

Outcomes for DoD on Key WRC-2003 Issues

The preparation process, coupled with effective follow-through on the ground in Geneva, led to positive outcomes for DoD on its major priority items. The following is a discussion of eight key agenda items, their impact on the Department, and their resolution.

Global Positioning System (GPS) coordination issues — Prior to the conference, some countries initiated a persistent effort to impose formal satellite coordination mechanisms on radio-navigation satellite systems. This proposal, opposed by the United States, would have applied retroactively to the U.S. upgrade to the GPS system in some spectrum bands. Following hard negotiations that continued into the latter stages of the conference, the U.S. delegation successfully avoided the retroactive application of formal coordination procedures, which could have put the GPS upgrade at a relative disadvantage to other systems, such as the European Galileo system. In addition, the

U.S. delegation successfully demonstrated that the imposition of satellite power limits in one spectrum band—limits unacceptable to the U.S.—were not necessary to protect other spectrum-based services from interference. Moreover, the U.S. also succeeded in incorporating a viability test for submissions of new positioning systems for coordination going forward. Diligent pre-Conference preparation, coupled with consistent adherence to U.S. interests before and after the Conference, resulted in an outcome that will protect the GPS system upgrade going forward.

Accommodation of WLAN Systems—This agenda item was among the most important commercial agenda items at WRC-2003. It involved the global allocation of 455 megahertz of spectrum to WLAN systems in the 5 gigahertz range of the Allocations Table. The U.S. delegation succeeded in winning this global allocation on terms that will pave the way for commercial development of new systems in the band, while at the same time protecting critical DoD radar systems in the same band. The success of this effort was due, in part, to negotiations that took place several months before the conference among DoD, National Telecommunications and Information Administration ("NTIA") and the Federal Communications Commission ("FCC") to forge a common U.S. position. The need to protect DoD radars, while accommodating commercial development, led to the incorporation of a technology ("Dynamic Frequency Selection") that allows WLAN systems to avoid interference with the radars. This technological solution, worked out in advance within the U.S. preparation process, became part of the mandated worldwide sharing criteria approved in Geneva.

Protection of Navy Radars from Reduced-Size Satellite Receivers — The continued use of radars aboard U.S. and allied naval vessels was threatened by a proposal to allow the deployment of small commercial satellite dishes in the same spectrum band. Despite the fact that this proposal was widely supported outside the United States, the U.S. delegation was able to negotiate a compromise that set strict power limits on the use of the smaller satellite dishes. Although this position represented a compromise from the original U.S. position (which was to disallow the smaller dishes entirely), this result will provide adequate interference protection for DoD radars.

Earth Stations aboard Vessels ("ESVs") — This agenda item, favored by the U.S., proposed allowing the operation of certain types of satellite terminals on board moving ships. The resulting measure included a requirement for ships to contact coastal administrations whenever they operated those satellite terminals within a certain range of a country's coastline. The U.S. did not strongly object to this requirement, however, because military systems will continue to enjoy special rights under the ITU Constitution.

Identification of Spectrum Bands for Disaster Relief — Certain other countries favored designating certain bands internationally for radio systems employed in "disaster relief and public protection" operations. These bands would have included the 380-400 MHz band, which is already used by military systems. Ultimately, there were no binding changes to the ITU's Radio Regulations. The conference approved a non-binding resolution identifying bands for disaster relief, and only on a regional basis.

Protection of Passive Services — The U.S. faced a widely-supported proposal to adopt regulatory language stipulating strict limits on certain "out of band" transmissions. The U.S. delegation was able to prevent the adoption of hard limits, which could have had a negative impact on DoD and commercial systems, including GPS. The conference, however, put the issue on the agenda for the next WRC, meaning that the U.S. will have to revisit it, at least with regard to certain spectrum bands.

Protection of Radio and Navigation Services at 225-400 MHz — DoD was concerned with protecting radio and navigation systems heavily used by NATO from a move to allocate "telecommand spectrum" below 1 GHz. The U.S. delegation succeeded in limiting the allocation to a footnote in the regulations for several countries, which was acceptable to DoD.

High-Frequency (HF) Allocations for Amateur Service — The Conference decided to allocate 100 kilohertz of spectrum to the amateur radio operators immediately, with another allocation for international broadcasters to be considered at the next WRC. The combination of country exceptions and service-specific footnotes added to the Radio Regulations will allow continued use of the High-Frequency band by DoD, leading to an acceptable outcome. Beyond WRC-2003, however, the continuing threat of loss of HF frequencies poses a very serious challenge to DoD war-fighting capabilities.

In addition to these agenda items, DoD was pleased by the action the U.S. delegation took, decisively, during the closing days of the Conference, to head off a move by a

coalition of countries to enact a provision that would have limited the lifespan of existing satellite systems. This proposal would have been disastrous for many of the commercial satellite systems desperately needed by developing countries and developed-world users (including DoD) alike. The conference wisely saw that the measure, if enacted, would have threatened investment in the satellite industry and curtailed any future increase in capacity and reduction of costs for satellite services.

These agenda items and outcomes represent the broad scope of challenges that the Department faced, across the global spectrum allocation chart, in Geneva. Because of DoD's extensive responsibilities to defend not only the United States, but also our coalition partners and allies, DoD has obligations, interests and equities that concern multiple spectrum bands. These responsibilities and interests are often not shared or understood by other countries—even those that may themselves be protected by the global umbrella of wireless links maintained by the United States for itself and its allies. Hand-in-hand with efforts to protect its use of the spectrum, DoD is continuing to explore ways to use this precious resource more efficiently. In a complex world, it is up to DoD to ensure that it prepares for each WRC and communicates its obligations within the U.S. government, to the broader U.S. wireless community, to U.S. allies and ultimately at the WRC itself.

Lessons Gained from Reviewing the Key Outcomes

The outcome of WRC-2003, in my view, offers several important lessons that are relevant to today's hearing, because they point to ongoing priorities for the organization and preparation of future U.S. delegations. These lessons include the following:

1. *There is a continuing need for regional cohesiveness and support.* The "one-country, one-vote" system employed by the ITU, as a United Nations agency, leads to considerable bloc voting at WRCs and, therefore, to a highly-developed system of regional coordination of positions and proposals. The Europeans pioneered the use of regional associations and groups to coordinate and prepare for WRCs, but the practice has been widely emulated—perhaps on a less monolithically cohesive basis—by countries around the world. There are now region groups for Asia (the Asia-Pacific Telecommunity), Africa (the African Telecommunications Union), the Arab world, the former Soviet republics, and for the Americas.

   The latter group is the Inter-American Telecommunication Commission, commonly know by its acronym in Spanish, "CITEL." This organization is the telecommunications arm of the Organization of American States. For WRC-2003, CITEL, including the United States, submitted 42 proposal documents containing 279 specific proposals to the ITU. On many agenda items—of which the protection of radars from smaller satellite dishes is one example—support from CITEL countries was very helpful. Effective use of regional groups has to begin from the ground up,

through extensive coordination during the preparation phase. Future U.S. delegations should take steps to utilize regional cohesion, through CITEL, wherever possible.

2. *There is a need to engage political resources within the government.* At times, WRC delegations will encounter negotiating positions coming from its counterparts that are heavily influenced by political considerations. Where these stances pose a threat to U.S. interests or a barrier to progress in the work of the Conference, U.S. Delegations must have access to reach back to Washington and obtain strategic and real-time political support and advice from the relevant and responsible officials in the government.

   During WRC-2003, the need for this kind of support was evident with regard to the agenda items affecting the GPS system. Political support and backing in the tough negotiations with other administrations were absolutely crucial in achieving an outcome that protected U.S. interests. Similar situations are likely to occur in all future WRCs. Again, solid preparation will ensure that the leadership of each U.S. delegation has clear instructions on how to proceed, and that is has the confidence and backing to implement those instructions.

3. *There is a need to be flexible in the U.S. preparation process.* The United States faces serious constraints in its ability to parcel out, domestically, valuable access to spectrum that increasingly is desired for commercial development, but which remains vital for national security and other uses that represent the public good. Interests

within the United States may appear to diverge or split along an apparent commercial/governmental fault line. In the long run, however, there is no such divergence. Government departments such as DoD benefit from commercial development of services and equipment, which DoD may then employ in some circumstances; concomitantly, technological spin-offs of military systems can spark entirely new industries. The true national interest lies, then, in being flexible and applying technological solutions to apparent conflicts over spectrum interests.

The United States was able to accommodate what at first appeared to be divergent interests between protecting military systems and allocating spectrum for WLANs. Because of our leadership in spectrum technology, the U.S. delegation was able to negotiate the use of a mechanism, dynamic frequency selection, which paved the way for a unified U.S. position. The crucible of pre-conference negotiations in the United States then vastly improved and strengthened the overall U.S. position internationally going into the WRC. In this instance, the U.S. preparation process not only worked to head off a split in the U.S. delegation, it affirmatively improved the U.S. position going forward.

4. *There is a need to fully understand the needs and requirements of all military stakeholders.* Within DoD, there are multiple stakeholders in the outcome of WRCs. Major theater command structures, such as CENTCOM, will have certain priorities for spectrum access, which may differ from those of other commands or offices in the Pentagon. Moreover, the operational requirements of personnel in the

field, which are not static, must be effectively communicated and integrated into the ongoing WRC preparation process. To add another layer of complexity, the equipment and system solutions for these requirements, at all levels, are constantly influenced and even determined by the evolution of new technologies.

Looking to the Future

At this juncture, DoD and other departments and agencies are already devising strategies to meet the goals and challenges posed by the agenda for the next WRC. The U.S. delegation to that conference ought to be successful, provided there is a continued government commitment of time and resources to achieve U.S. goals. Perhaps the greatest contribution to WRC preparation and success will be the creation of a national spectrum policy, as contemplated in the President's current spectrum management policy initiative. Establishing a clearly-articulated policy will lead to more efficient and informed preparation for WRCs, at early stages of each preparation phase. Among the specific areas that could be streamlined or improved before WRC 2007 are several that concern training and organization of the delegation. I will address each of these areas in turn.

- *Improve the Training of Newer U.S. Delegates* — Although DoD personnel and others benefit from some training provided by the Departments of Commerce and State, there is a continuing shortfall in preparing first-time members of U.S. delegations for their roles in multilateral diplomacy at WRCs. This is particularly

true regarding the proper use of regulatory procedures and language in the preparation of U.S. submissions to ITU-R study groups, an issue that carries over into the WRC preparation process. In order for the U.S. to retain its proficiency in promoting and defending its positions in the international arena, there should be increased investment in personnel training and mentoring. A series of seminars in which WRC veterans instruct newer delegation members would be helpful additions to WRC preparation.

In particular, joint NTIA-FCC-State Department training could be targeted at improving the quality of U.S. document submissions, thus increasing the efficiency and effectiveness of U.S. preparations for ITU study groups and the WRCs themselves. Focused training workshops should be held early in the preparation process—and perhaps on an annual basis--- in order to provide opportunity for participation by as many potential delegation members as possible.

- *Designation of U.S. delegation members should take place as early as possible.* In the past, recommendations have called for the naming of the WRC delegation at least six months in advance of an upcoming conference. In truth, however, real opportunities to influence regional positions and engage in meaningful outreach to other countries occur much earlier than six months prior to a WRC. Meaningful progress on WRC agenda issues can occur as early as two or more years before the conference. Frequently, many of the U.S. government and private sector personnel that work on these issues between WRCs do find their way onto the delegation

rosters. To maximize the consistency of preparation, however, it would be ideal to solidify the delegation membership before the final conference preparatory meeting in advance of each WRC.

- *Establish a senior leadership structure.* The preparation phase—which conceivably includes the entire interim period between conferences—should be guided by a senior leadership group comprised of top-level officials representing all of the relevant departments and agencies. This group would meet frequently to identify and define rapidly-evolving issues and direct the development of responses to them. In effect, the senior leadership group could obviate the need to create a permanent ambassador for WRC, which has often been discussed as a solution to the relatively late appointment of an ambassador, which now occurs roughly six months before each Conference. Top-level direction of the complex preparation process—which is vital to national security—does not have to wait until the ambassador is in place. Rather, it can be provided by the senior leadership group, facilitating U.S. leadership at a time when many other administrations are already converging upon positions and making commitments to their regional organizations.

Conclusion

DoD is the largest single user of spectrum resources in the United States. Moreover, the scale and scope of its spectrum-dependent obligations make access to spectrum a matter of life and death. It is a profound commitment of this Department to shepherd its

spectrum resources and make the most efficient, optimal use of them that technology will allow. That commitment extends to the effort to prepare for each WRC as an integral player in the spectrum community. The Department has no doubt that this committee, with the advice and aid of all the relevant departments and agencies—and the private sector—will do whatever is required to preserve and enhance the U.S. role in WRCs well into the future. I look forward to working with the committee and providing any assistance I can to this important task.

Mr. TURNER. I appreciate all of your perspective and testimony and the information that you have given to us. Thanks for being here.

There is no question that each of you, in describing the accomplishments that you have had, can cite specific results that have been important or have been achieved and that benefit both the U.S. national security and also our economy. We hear the words "cooperation" and "teamwork," and that is, of course, important with the way this is structured.

We know from the testimony and from the structure that we have here that we do have a diffusion of authority and interest. We note that the Federal Communications Commission and the Department of Commerce's National Telecommunication Information Administration share domestic spectrum management and policymaking responsibility, NTIA manages all Federal Government use of the spectrum, and also serves as the President's advisor in telecommunications matters. The FCC regulates and manages all commercial and private sector use of the spectrum, as well as State, local, and government use. And in international spectrum negotiation and conferences the Department of State exercises primary authority. So that diffusion of authority and responsibility, knowledge base, experience certainly requires the level of cooperation and teamwork that you need for the success level that you've had.

But, nonetheless, that structure begs the question of what did not go well at WRC 2003 as we look to how we can improve it. What are some of the things that you would cite where we could have accomplished more? Mr. Shane, we'd start with you.

Mr. SHANE. Thank you, Mr. Chairman. From the vantage point of the Department of Transportation, the process actually worked very well. We have, as I explained in my remarks, a lot of equities in spectrum, and we participated pretty thoroughly and quite prominently, I would say, in the preparations for the WRC of 2003. Ambassador Obuchowski was in my office a number of times in anticipation of that. She didn't require any prompting from me. She came on her own motion to chat about the things that we were concerned about. So I felt that it worked well.

There were some issues that came up suddenly that couldn't have been the subject of preparations. Those had to be discussed very much on the fly. I think that is in the nature of the process, and there's just no way you can anticipate everything. In fact, I would fault some of our trading partners for not doing a better job of coordinating with us in advance so that we might have been better prepared for some of the things that we would have possibly supported had we known about them in advance. But I can't fault the internal U.S. Government process for those lost opportunities; I think our trading partners could have done a better job. So I am not here to complain about the preparation for WRC 2003.

Mr. TURNER. Mr. Readdy.

Mr. READDY. Well, I have to say from the NASA perspective we achieved all our aims at WRC 2003. I'd go back to some points made by the other panelist. It comes down to, I think, continuity of the effort, and we are engaged continuously in establishing the technical bases for our positions and helping our colleagues in the other agencies and departments do that. Ambassador does have a

term of only 6 months because of limitations of the appointment process. Perhaps continuity is the place where we could make the most progress.

Mr. TURNER. Mr. Gallagher.

Mr. GALLAGHER. Thank you. From NTIA's perspective, we share and reinforce the statements that Under Secretary Shane and Mr. Readdy have made that the early preparation was critical, and that is by far the biggest focal point of whether we are going to succeed or not in the World Radio Conference. We did it here.

I also would say that it was particularly important, having lived through this, that it was having a timely CPM submission to CITEL was also critical. That is a cleavage point in the process was important, and that was a stressful exercise, but I think it is stressful under any circumstances. I don't think there's anything you can do in particular to make it better than it was.

I would point to resource issues perhaps. There were a number of discussions where it was unclear how gaps were going to be filled from a resource perspective. Again, it underscores the commitment of the team to accomplish the mission that we found them, and the Department of Defense I think is to be credited with stepping in and filling that void in a substantial way.

Those would be the responses to the question for improvement.

Commissioner ABERNATHY. Thank you, Mr. Chairman. The good news is that there were no failures. Were we on the edge sometimes? I mean, was this tough? Yes. And so I think the question is: how do we ensure that there's more stability, more reliability going forward, because, as was mentioned, it's only going to get harder. You're only going to have more countries having disagreements about how to allocate spectrum and you're only going to have more internal, local U.S. disputes about where should the spectrum go. We see it all the time at the FCC. We then go to NTIA because there's disputes between the different departments and between the private sector, and we end up having to pick and choose and try and make best guesses. And so when you're going to a global conference where you may be tying your hands for years to come on some of this spectrum, I think it becomes critical that we have the kind of coordination that we had in this instance. But one thing that was very important is that once Ambassador Obuchowski came onboard she had such expertise that she could jump in immediately. What if we hadn't had someone like that? So I think, looking at making sure the Ambassador gets appointed as soon as possible, continuing to ensure that there is coordination between these groups—because all these groups need to be represented anyway, regardless of how you do it. Every single entity that was at the table from the private to the government all had very real issues. They need to be there. We need to solicit their input. And then, once we finally land on a place for the United States, we need to go around and make sure we've got international allies, many times with countries that lack sophistication when it comes to telecommunications issues. So we are doing education at the same time we are trying to bring them on to our side.

Resources and funding—always critical, always stressful, because none of us have a specific budget just for this. But I think the good news is, because it is so important to every agency, at the end of

the day they do come forward and work together and provide what funding they can.

Ambassador GROSS. Thank you, Mr. Chairman. I would underscore and agree with all that has been said before. Looking ahead, what we learned from WRC 2003, which there were many things we learned, was the extraordinary importance of outreach and coalition building. As a number of people have testified this morning, we have only one vote amongst approximately 189. We cannot go it alone. We have no need and desire to go it alone. Rather, we need to build on a continuing basis coalitions. We do not and we cannot wait until the conference to build such coalitions. And so this is an ongoing process. It is ongoing now for WRC 2007. As Secretary Wells pointed out, this WRC 2003 was held right after the liberation of Iraq, an extraordinarily complex and difficult time in the international community. Yet, the work that had been done over the years of building coalitions, of building trust, of building information flows allowed us to go forward and to build coalitions at the meeting so that all U.S. objectives, both economic and national security related, were able to be achieved.

What we've learned in 2003 underscores that which we knew before, which is: coalition building is always key in these international approaches.

Thank you.

Dr. WELLS. Mr. Chairman, I think most everything important here has been said. I would just reiterate the two points I made earlier about the value of training for members of the delegation—I think we can do better on that—and establishing continuity by the senior leadership coordination that we're working even now to establish for WRC 2007. Thank you.

Mr. TURNER. My next question, I'm really interested in the structure issue again. We talk about cooperation, but the issue of authority is one that I think may not be very well defined here.

The Department of State, as we know, has the statutory responsibility to provide the leadership on the U.S. international spectrum positions. So with the Department of State, how do you go about exercising this responsibility? Do you have authority for setting timelines and schedules for the other agencies? What is your oversight of the other agencies' participation? What if there's disagreement between the agencies? What if you get to the WRC and there's a policy shift that you want to make with the other agencies not being supportive?

Another one that I find interesting, in listening to each of the testimony, almost every one of the agencies talked about their international partners, so you have each agency having international partners that affect their ability to be successful, when in the end it is the State that is going to be the liaison internationally on this matter. And I'd like to couple that with the reaction of the other agencies as to the appropriateness of the State in doing this, where obviously the technical expertise lies elsewhere.

Thank you.

Ambassador GROSS. Thank you very much, Mr. Chairman.

With regard to the timeline, certain of the timelines are established by the International Telecommunications Union, itself. As a number of people have mentioned, there are dates that are estab-

lished for the CPM meetings. One is held immediately after the WRC, one is held 6 months ahead of time. There are timeframes for getting our national submission in. There are similarly timeframes for getting our submissions in for some of the regional activities such as we've mentioned with CITEL and the like.

Similarly, there are timeframes through the study group process where the hard, technical work is done in between the WRCs, and so that drives a lot of the timing, as well.

Our job is to make sure that things are done in a timely fashion. Of course, part of the balance is also to make sure that it is done in an open and transparent way, both within and amongst the various agencies, but also with regard to the public participants, as well. We work very hard. We have a process, a Federal advisory process called the ITAC process that allows for that to happen, and I'm very pleased that, of course, all of the time commitments and needs have been met.

With regard to oversight, we believe very strongly in a team oriented approach, and I cannot be more pleased with the responsiveness and the work that has been done by all of the agencies and also by the private sector as part of that team. Our oversight responsibilities are extraordinarily important, and we work very closely with the staffs, as well as with the appointed officials of each of the agencies, to make sure that all of the needs of the country are met. We meet periodically. I see everyone at this table on a fairly regular basis, if not a very regular basis, and these are issues that we talk about at that time.

Also in the WRC 2003 process we had very few disagreements. There is an advisory process that the FCC is responsible for. There's an advisory process that NTIA heads up. Those processes then result in recommendations to us. But for a few important exceptions, there was harmony in that process. When there was not harmony, it was my job, because it was before the WRC Ambassador was appointed, to bring all the parties together, to make sure that everyone understood what the issues were, and to ensure that positions were reached. That happened with regard to the important 5 gigahertz issue, for example, and that was successfully resolved.

So our ability to enforce and to promote harmony in those issues where it may not be easy to achieve is an extraordinarily important part of my responsibilities. Once the WRC Ambassador is appointed by the President, it becomes his or her responsibility as head of delegation, and I hand those responsibilities off.

It is important to note that my role continues throughout this process. My job is to ensure that the WRC Ambassador has the resources necessary to achieve the goals and the missions, as is, in fact, as result of the work done by other people up here testifying and their agencies to ensure that happens, as well.

Mr. TURNER. Let's go to Mr. Shane with his comment on the process.

Mr. SHANE. Thanks, Mr. Chairman. I'm a little compromised in responding to this question because I am an alumnus of the Department of State. I spent 4 years there conducting aviation negotiations at a time when, as now, the Department of Transportation retained the technical expertise for international aviation.

The truth is that if you look at these agencies which have all this technical expertise, I think you'll find that each one of us is unbelievably parochial. You would not want to vest the leadership for a process like this in any of us. I'm not going to speak for my sister agencies, but I'm going to speak for the Department of Transportation. We support the Department of State in this role. It conducts this role in a whole host of other economic areas where the stakes are very high and national interest is very high. It is terribly important that there be a facilitator, an arbiter of what the Nation requires, sorting out a whole variety of competing claims as we formulate a position for the WRC.

I think the process works well. I must say I am attracted to the suggestions we've heard from Mr. Gallagher and Dr. Wells, for a senior leadership council, a group, a steering committee of some kind. I think that would enhance our preparatory process. But I am in favor of leaving the State Department in charge.

I don't think you can overstate the value we get from the Foreign Service, from the array of embassies around the world that provide intelligence to the process, who are beating the bushes facilitating that essential outreach that makes the preparatory process successful and that ultimately makes our performance at the WRC successful.

Mr. TURNER. Well, before we go on, why don't we just ask blanketly, are there any other parochial members of the team that would like to argue contrary? [Laughter.]

Dr. Wells.

Dr. WELLS. And I will yield to the Department of State for the coordination. But, you know, Mr. Chairman, we have been blessed with a Government of checks and balances and a distributed system of power and it has served us so well in so many areas. It served us here well, as well, but ultimately we understand when the position gets together and we have our national position, we have to turn to one leader, and I think there is no dispute from any of us that State has that role.

It helps, as you mentioned, the bilateral links. It helps us to be able to get our national positions together as early as possible so that we can all go forward with one voice to participate and build the support for this one country/one vote through our bilateral channels, but I think we all understand at the end of the day we come back to support them.

Mr. TURNER. Thank you. While turning to Mr. Ruppersberger for his questions, I also want to recognize that Mr. Duncan of Tennessee has joined us, has been with us. Thank you.

Mr. RUPPERSBERGER. OK. First I want to get back to the WRC. Probably to Ambassador Gross, but really the whole panel, if you'd like—the panel is very talkative, so that's great. You have good opinions.

At the WRC, who is our largest competitor? Did we reach out to them? Do our competitors have a more formalized structure that deals with the WRC, and how do we compare to them? That will be an interesting answer. And what can we learn from them and how they work? Why don't we start with you, Ambassador Gross, and then anyone else who has a comment.

Ambassador GROSS. Certainly. Actually, the questions you raise are very similar to the questions I raised when I first took this job.

Mr. RUPPERSBERGER. Good. That's why I asked them.

Ambassador GROSS. Our largest competitors are, not surprisingly, some of the largest countries and regions that economically compete with us and militarily compete with us. Spectrum, of course, equates into both of those categories very strongly. Having said that, there's also, and somewhat surprisingly, great commonality amongst those interests, and so what we have done is to work very aggressively to find those common areas that meet our needs and the legitimate needs of others.

The economic piece is often the most difficult, and I would say that, for example, Europe often has a very different approach and some very different views, and it takes a lot of creativity and a lot of hard work to make sure that our views are found to be the consensus views.

How others are organized——

Mr. RUPPERSBERGER. Well, what countries would it be, then? Can you answer that specifically?

Ambassador GROSS. Actually, for many of these purposes Europe speaks with a common voice. They work very hard—and this is one of the lessons that we have learned. This came up particularly in WRC 2000, where there was a lot of issues, and before that, having to do with mobile telephones and things of that nature.

Mr. RUPPERSBERGER. How about China?

Ambassador GROSS. China is extraordinarily important and takes this process extraordinarily seriously, because they both have the economic and the military aspects, as well. They recognize that.

But let me just go back to Europe for a moment because China, of course, has the same situation that we naturally come from, which is it is a large, single country. One of the lessons that we have learned and one of the plays that we have taken out of someone else's playbook is the necessity of building coalitions in your back yard. So, for example, just as Europe has tried to work collectively and because they have so many votes by having common positions, we, too, have reached out in a very successful manner to our countries in our region through the CITEL process. I notice that there's a chart here and there's one up on the screens, as well, that shows CITEL. I'm a little concerned because it shows CITEL above the State Department, and I'm not sure that's really quite accurate. But, nevertheless, I think the purpose of that was really to show that we work very closely with the other administrations in CITEL, which include all of the Americas. That came to be a very important piece of the puzzle. So what we try to do is both do it bilaterally but also build these regional coalitions as Europe has.

Mr. RUPPERSBERGER. OK. Are they a more formalized structure than we have?

Ambassador GROSS. They have a more formalized structure, although I need to be careful here. We have a formal structure through CITEL. I think the question is whether or not we feel freer than some European countries to establish our own positions when our national security, our national economic interests demand that we reserve the right to do.

Mr. RUPPERSBERGER. I know my time isn't up, but we have a vote that has just been called.

Mr. TURNER. Mr. Duncan, you also have questions?

Mr. DUNCAN. Yes. I'll try to be very quick, because I know we have some votes going on. I apologize. I've got three subcommittee hearings going on at the same time, so I have been in and out and I haven't heard all of the testimony. You've gone into this some on the last question, but I assume, from the bits and pieces I've heard, that, Ambassador Gross, you are the coordinator for the whole Government? Is that correct?

Ambassador GROSS. On international.

Mr. DUNCAN. Because you've got so many different departments and agencies involved in this.

Ambassador GROSS. Yes.

Mr. DUNCAN. And, just so I can learn a little bit about this, I know I've read Ambassador Bryant's testimony, and he has said somebody should be in charge of this for a couple of years at least instead of the 6-months. Do each of the departments and agencies have people who are working on this full time?

Ambassador GROSS. Let me first address—my job, as a statutory matter, is to lead the U.S. international telecommunications work that is done. That's an ongoing process. It's a 24/7 process. It is independent of the WRC process.

Mr. DUNCAN. Right. So you are involved in many other things other than the WRC.

Ambassador GROSS. Precisely. Then, as we get closer to a WRC, we have traditionally over the past good number of years had appointed—actually, for a long period of time we have appointed someone to lead and head that delegation, in large part, a reflection of the intense time commitment that requires, which is somewhat different than many of the other international telecommunications activities that we do. But we also have many others, IT related, U.N. related, bilaterally related, and otherwise.

Mr. DUNCAN. Let me ask you this. I don't know enough about this conference, and I've got to kind of be quick because we've got these votes, but how many people attend from all the countries to this conference?

Ambassador GROSS. Over 2,000.

Mr. DUNCAN. And how big was the U.S. delegation?

Ambassador GROSS. About 170.

Mr. DUNCAN. And what would you say was the No. 1 or main accomplishment of the U.S. delegation at the 2003 conference?

Ambassador GROSS. Well, I think the main accomplishment is that we had a whole series of accomplishments, and every single one of them——

Mr. DUNCAN. Could you give me an example of one or two of those?

Ambassador GROSS. Certainly. On the economic side, it was getting spectrum for 5 gigahertz for the wireless LANS. Those are wi-fi related, a substantial economic development and one that really is very, very helpful for U.S. industry. I'll leave it to Dr. Wells perhaps on the Defense, but were a number of very important Defense-related successes that we had to help national security and to protect national security from certain threats that had gone oth-

erwise. We had a whole series of these types of issues and balancing issues. We had some very important—on the space side, some very important developments that we were able to accomplish for——

Mr. DUNCAN. Do you think that you speeded up the process of warning about terrorist activities in that conference, or did you get much into that?

Ambassador GROSS. I would say that behind much of the activity was the recognition of the need for national security, whether it is terrorist or other threats; that because the WRC was held right after the Iraq invasion and, of course, after September 11, it was close to all of our hearts and minds. And I will say not only for ours, but also for many other delegations, as well.

Mr. DUNCAN. Can you give me—since you are the lead man here, can you give me some wild, rough guess as to how much it costs the taxpayers or the U.S. Government in preparation and actual attendance for one of these conferences, because we prepare for it for several years.

Ambassador GROSS. There are a couple pieces to that. With regard to the State Department, there are the costs for many of the 30-some people who work for me and in my group, many of whom are devoted full time to the WRC process. In addition, we have out of pocket expenses, something in the order—I think the allocation is something in the order of between $300,000 and $400,000. But, of course, all of the agencies at this table and many other Federal agencies spend a tremendous amount of their resources, and I would leave it to them to determine whether——

Mr. DUNCAN. So you can't give me a wild guess then?

Ambassador GROSS. Wild guess? I could give you probably a helpful guess. I would rather be able to look to my colleagues for more——

Mr. DUNCAN. Since we don't have time, I would appreciate it if you would contact these other agencies and see if you can come up with some sort of a reasonable estimate.

Have you set any preparatory deadlines for developing the U.S. positions for the 2007 conference?

Ambassador GROSS. Yes. There are deadlines established by the International Telecommunications Union. We need to get ours in for about 6 months in advance of the WRC 2007. In addition, we have deadlines for CITEL, which is our regional group that drives a lot of it. But we also have our self-imposed deadlines, and we are working on that now. Part of the tension, I should quickly add, though, is we have to balance very carefully our strong desire to have our firm positions early enough to be effective in our international outreach, but not so early as to lock us into positions that we will want to change as world events and economics and technology changes.

Mr. DUNCAN. So if we don't——

Ambassador GROSS. It's a continuing balancing.

Mr. DUNCAN. If we don't change this Ambassador's position, then we basically have to have all our positions developed before someone is even appointed as Ambassador?

Ambassador GROSS. That's right. And we don't wait for that.

Mr. DUNCAN. OK. Thank you very much.

Mr. RUPPERSBERGER. Real quick?

Mr. TURNER. Real quick, go ahead.

Mr. RUPPERSBERGER. I'll probably throw it out and have to leave you, and I won't be coming back. We talked about coordination, pulling together, and it is difficult when you have a lot of different groups, but you need to have one boss, and by statutory that's the Department of State. Now I want to throw this out because I think that in management you have to put your goals out, your mission. You have to be held accountable for what you do and you have to have a structure and you have to have a plan, so these questions really I would ask and I'm probably not going to be able to listen to the answers. How does the Department of State exercise the responsibility of leadership? Are you responsible for setting timelines and schedules of the U.S. WRC preparatory process at the FCC and NTIA? How does the State Department provide oversight of the WRC preparatory process? And how do you determine the effectiveness and success of the U.S. delegation at WRC?

I think these are relevant. We talked about working together and what our plan is, but this gets into the specifics of management, and that's your role. So if you could answer those. How much time do we have; 5 minutes. We're going to have to leave. Maybe you could get those back to us in writing.

Mr. TURNER. Sorry. We have 5 minutes to get to the vote, but I do want to give you the real quick opportunity, if anyone wants to add anything in closing, comments that they've thought of that they want to add to the record. Obviously, you can do that also in writing, but if there are any closing comments you would like to make at this point—anyone? Yes, Ambassador?

Ambassador GROSS. If I may, let me just underscore one extraordinarily important thing that was touched on but can't be overstated, and that is the extraordinary dedication and work that the staffs do of each of our departments in working together. They are extraordinarily dedicated and extraordinarily good, and you find tremendous continuity. If you look around at other delegations around, nobody does a better job. No other administration, no other country does a better job than the United States year in, year out, in accomplishing these goals.

Thank you.

Mr. TURNER. Ambassador, we appreciate your comments. I would appreciate your patience as we run. We didn't want to have you to be held, because it looks like it might be as much as 45 minutes before we return, so we did want to be able to dismiss this panel. Thank you for participating.

[Recess.]

Mr. TURNER. For the record, let's just note that I introduced all of our panel members and that they responded in the affirmative to the oath. We'll begin with Mr. Bryant.

STATEMENTS OF JOHN BRYANT, FORMER CONGRESSMAN AND U.S. AMBASSADOR TO 1997 WORLD RADIO CONFERENCE; GAIL SCHOETTLER, U.S. AMBASSADOR TO 2000 WORLD RADIO CONFERENCE; AND JANICE OBUCHOWSKI, U.S. AMBASSADOR TO 2003 WORLD RADIO CONFERENCE

Ambassador BRYANT. Thank you, Mr. Chairman. I thank you for inviting me to offer observations on the World Radio Conferences and also thank the committee now as a private citizen for taking time to get into this arcane area. It is very complicated and very time consuming, and you're not going to be asked any questions about it at a town meeting, I assure you, but it is very, very important.

I was the 1997 WRC Ambassador. I had been on the Telecommunications Subcommittee here for 14 years, and I assume I was chosen because of a presumption that I knew something about telecommunications and perhaps had some skills that might lend itself to the job. The fact is, though, that I was, as I learned, the latest in a long line of WRC Ambassadors, very few of whom possessed any significant knowledge about the very complicated technical substance of international spectrum allocation, and I don't think any of them, like me at the time, had any knowledge of the institutional history or the dominant personalities in the World Radio Conference.

As a result, I was suddenly in charge of the delegation that was being formed, I was in charge of the process of forming our agenda for the conference, responsible to see that we succeeded at the conference, yet I knew less about the process probably literally than any other participant in the entire process. The conference was only months away, as I was chosen in about February, as I recall, and I believe we had that conference in the fall, probably in October. It has been a while, but I think I am correct about that.

I rose to the occasion, I believe. Our delegation did a great job. We had terrific people. But I think that the process does not serve our critical national interest unless it has changed a lot since I did it, and from listening to the previous panel it doesn't sound like it has changed fundamentally. I think that our interests were placed at risk by a process that begins too late, that lacks year-round management for long-term objectives, and is under-funded. And I don't want to suggest it totally lacks year-round management. It does not totally lack that. But I do not think that we have year-round management for the outcome of the WRC.

I offer the following four recommendations to support my position.

First of all, the responsibility for the World Radio Conference, as well as the rank of Ambassador, should be given to either a Presidential appointee or a career Foreign Service professional who works year round in the International Telecommunications Union process. I think that our tradition of on-the-job training should be discontinued in favor of the same type of professional management of spectrum allocation that is employed by other countries, including our most important rivals in this process.

Between radio conferences, there are a huge number of conferences, decisions, study groups, and other activities of the International Telecommunications Union. They have a bearing on the

relations between the participating nations, they have a bearing on the relations between the dominant individuals and their long-term policy decisions, and unless the leader of our effort is able to actually participate in the process, it's not going to be managed with an eye to maximizing the effectiveness and the ability of our delegation to fulfill our objectives at the subsequent conference.

Mr. Chairman, I would like to make an analogy that I think is quite apt, and that is this: appointing a delegation head for 6 months is about like a congressional district electing somebody to serve the last 6 months of a 2-year cycle and expecting them to be able to come up here and understand the institutional history, who the people are, and match wits with Henry Hyde and John Dingle. It's about the same thing. That's what we did while I was there in 1997. I think that's still what's going on, based upon what the last panel has said in its testimony.

Second, if the WRC Ambassador is to continue to be a Presidential appointee, that person should be appointed at least 2 years before the next scheduled World Radio Conference and it should be a full-time job. Preparation for this process is critical. I don't think it is possible to describe the complexity of trying to master everything from ship-to-shore radio to the most complicated satellite systems, much of the substance of which has a lot to do not only with our critical economic interests, but with our intelligence operations, our military operations, and a whole variety of other aspects.

Like every diplomatic effort, the mix of international interests, personalities, and, in this case, technical issues, is extremely complicated. I think it is disconcerting to think that the newly appointed head of the U.S. delegation starts off presiding over U.S. stakeholders, all of whom know more than he or she does and all of whom, at the international level, are familiar with each other from having worked with each other for many years, but the U.S. head of delegation does not have those relationships.

Third, I know that everybody who comes here says the same thing, but funding for this operation ought to match its critical importance. At the very least, the WRC Ambassador, if we continue the current system that I'm advocating should change, but if we continued it they ought to have a staff and office—it doesn't need to be very large, because they are well supported by the allied agencies that testified in the first panel, but they need at least that.

Fourth, they need the ability to travel. I was hindered in my efforts by the inability to make some trips that I thought were critical in order to deal face to face with the principal people that we were going to be dealing with at the conference, either to convince them of our position or to try to understand their position so we could craft a compromise. The WRC Ambassador ought to be able to do one-on-one communication in the same way that a Member of Congress needs to do that with other Members of Congress.

Finally, I believe the State Department should continue to have principal responsibility for the WRC process. Ultimately these issues are geopolitical in nature. They are not technical issues. It is easy to obscure the geopolitical nature of this whole process by becoming wound up in the complex technical substance of it. We had the situation while I was the Ambassador, for example, of

Israel and Palestine not wanting to do certain things together. The way in which we dealt with them had some ramifications that were totally different than anything involving the substance of WRC. I had to have instructions about how to deal with that. We had at that time the former Yugoslavia. I think one of the countries was attempting to take the place of the former Yugoslavia, or something like that. The State Department needs to be able to give instructions with ease with regard to how those matters are handled.

Additionally, in that year we had our major rivals trying very hard to intervene and to change some things that were extremely important to us at the very highest level, not the smallest of which was to change the way in which we handled global positioning systems. I had to call upon higher-ups in the State Department to deal with this matter at higher diplomatic levels than the position that I held. That needs to be able to happen with ease if the public interest is to be served. So I think the State Department has done a good job in this area. I do think that this person, though, that heads this delegation ought to be picked earlier, given resources, and supported in the fashion that I have described.

Thank you for letting me testify.

Mr. TURNER. Thank you.

[The prepared statement of Ambassador Bryant follows:]

TESTIMONY OF JOHN W. BRYANT

The Subcommittee on National Security, Emerging Threats
and International Relations, Committee on Government Reform,
U.S. House of Representatives

March 17, 20004

I wish to thank Chairman Shays and the members of the subcommittee for the invitation to offer my observations regarding the U.S. role in World Radio Conferences.

I served as WRC Ambassador in 1997, immediately after completing 14 years service in the House of Representatives as a member of the Subcommittee on Telecommunications of the Committee on Energy and Commerce.

I was chosen for this post in February of 1997 in part, no doubt, due to the presumption that my long tenure on the Telecommunications Subcommittee indicated familiarity with the subject matter of the World Radio Conference.

In fact, I was to be another in a long line of WRC Ambassadors with a background in telecommunications, who, while perhaps possessing enthusiasm and talent for many parts of the assignment, had little knowledge of the technical substance of international spectrum allocation and no knowledge of the institutional history or the dominant personalities in the WRC process.

As a result, in 1997, as in so many previous years, the newly-designated WRC Ambassador, leader of the U.S. delegation to the World Radio Conference, in charge of the process of forming the U.S. agenda for the conference, and responsible to see that the final treaty protects and advances the interests of the United States, knew less about the process than perhaps any other participant. And, with the treaty-writing conference only months away, there was little time to learn.

Like previous WRC Ambassadors, I believe I rose to the occasion and am proud of the accomplishments of the 1997 delegation. But I also strongly believe our critical national interests are placed at risk by a process that

begins late in the WRC treaty-writing cycle, lacks year-around management for long-term objectives, and is underfunded.

I offer the following four recommendations:

1. **The responsibility for the WRC and the rank of ambassador should be given to a presidential appointee or career foreign service professional who works year-around in the International Telecommunications Union process.** Our tradition of on-the-job training in this post should be discontinued in favor of the same type of professional management of spectrum allocation employed by other nations, including our most important rivals.

   There are many conferences, decisions, and allied activities of the ITU which occur between World Radio Conferences which have a direct bearing on the relations between participating nations, their individual representatives, and their long-term policy decisions. Unless the leader of our nation's WRC efforts is able to actively participate in this process, it will not be managed with an eye to maximizing the ability of the U.S. to fulfill its objectives at the subsequent World Radio Conference.

2. **If the WRC Ambassador is to continue to be a political appointee, that person should be appointed to full-time duty no less than two years before the next scheduled WRC.** Preparation for this process is critical, as the substantive work of the WRC is quite complicated. Knowledge of the international participants is also critical. Like every diplomatic effort, the mix of international interests, personalities, and, in this case, technical issues, is extremely complex. Without this knowledge, the WRC Ambassador is at a major disadvantage in planning and executing a successful WRC strategy.

   It is disconcerting to think that, with our current process, the newly appointed head of the U.S. delegation begins his tenure presiding over meetings of U.S. stakeholders in which he knows less than any other participant. He then progresses to international meetings in which almost all other participants, including, most importantly, the heads of the delegations of our most important international rivals, have known each other personally and professionally for many years.

3. **Funding for the WRC process should match its critical importance to our economy and national security.** It must include an office and staff for the WRC Ambassador and an adequate travel budget.

   The staff need not be large, as the technical support provided by the career experts at the State Department, FCC, NTIA, and other agencies is excellent. But functioning with no personal staff, as previous WRC Ambassador's have had to do, is an unacceptable hindrance for such an important task. (Note that delegation of the WRC portfolio to a full-time professional, rather than a part-time temporary appointee, would resolve the staff issue, as a staff would already be in place).

   The WRC Ambassador's primary objective is to convince foreign governments to support the U.S. position on issues of critical importance. This requires the ability to travel extensively in order to be able to inform other nations of the merits of the U.S. position, to fully understand the needs and objectives of the other nations, and to build personal relationships necessary for success in the negotiations. Previous WRC Ambassadors have been too limited in their ability to travel, due to budget constraints.

4. **The State Department should continue to have principal responsibility for the WRC process and delegation.** The complex technical issues considered in the WRC process should not obscure the fact that these issues are ultimately geopolitical in nature: they bear directly on critical national economic and security interests and cannot be considered separately from other critical foreign policy objectives and concerns.

   There will continue to be instances in which government leaders who outrank the WRC Ambassador in the diplomatic process will need to be called upon to reach out to their counterparts in foreign governments to protect or advance a national priority in the WRC process. In 1997, certain governments aggressively advanced numerous proposals which were a threat to the national security of the United States and its allies. One such proposal would have compromised the operation of our global positioning system, for example. These matters were not only addressed in the WRC process, they were also addressed expeditiously at higher diplomatic levels, a process that would have been more difficult if responsibility for the WRC process resided in an agency other than State.

Mr. TURNER. Ambassador Schoettler, I'm going to give you the choice as to whether or not you proceed. You'd have about 7 minutes for all of your comments, or we could wait until after the vote. Would you like to proceed?

Ambassador SCHOETTLER. I'll proceed, yes. I'll do it in less than 7 minutes.

Thank you. I appreciate the chance to be here today, because the World Radio Communication Conference is so important to our national security and our economic competitiveness, so I'm going to, because of the time—and you have my testimony—I'll just summarize the recommendations that our whole delegation made. Grace, I'll leave with you a copy of all of the recommendations.

We had 162 members, about half each from government and industry, and I think the large delegation made our job much easier because we were able to cover a huge number of meetings, unlike any other delegation there. We had people with high technical skills who were able to cover all of the various negotiations every day. And, quite honestly, our success was due to the excellence of our delegation. They were superb.

Second, I had terrific people assigned to me by the Defense Department. NASA, Badri Younes, who is here today, is now at DOD, and the FCC, and they worked closely with me for 6 months managing the entire process. I can't tell you how important that was to the success of our delegation to have their expertise and their ability to manage.

The State Department was outstanding. They provided me and for all of us office space. They enabled me to travel to important meetings around the world prior to the WRC, which was very, very important in setting up our negotiations. So one of my major recommendations is that they have sufficient funding to do that job.

Other recommendations—engage in an extensive and vigorous outreach program with other countries before the WRC, both within our region and elsewhere. The politics of the WRC determine whether we win our positions or not. Commitments are made early. And developing countries, in particular, responded very positively to our reaching out to them, and their votes often ensured our success, again in a one country/one vote environment. I can't over-estimate the value of reaching out to and respecting the needs of other countries when you are the world's powerhouse. In Istanbul in 2000, each one of our delegation members also was assigned to a country who was there, and they maintained coordination with them, pushed our positions, and it was invaluable.

I think the Ambassador should have suitable facilities, preferably a suite, for hosting other delegations, both for negotiations and social events. Again, it is because the delegates to the WRC think it is a huge honor to be invited to the U.S. Ambassador's suite. It is just so important and it was very critical to our success.

I think the State Department should continue to be the lead Government agency for the WRC preparation for all of the reasons that you've heard. I believe it is very important for the WRC Ambassador to be a Presidential appointee and to report to a key White House official. It gives you the chance to convene warring parties and to solve internal problems, but it also provides great stature nationally and internationally.

The WRC Ambassador should be appointed more than 6 months before the next WRC, and I think there is a technical problem there, but that I would urge Congress to overcome because leadership is so important.

I think the delegation should be whatever size is needed to provide Government's unique expertise and to meet the needs of both industry and national security. As you've heard before, I believe a senior executive coordinating committee in Government under the leadership of the White House would be very helpful in overseeing WRC preparation.

I also believe that Government and industry should negotiate directly to resolve differences on key issues; that it isn't a good idea to work only through government intermediaries. That's cumbersome and less effective. And our direct negotiations in 2000 helped our delegation to go to the WRC committed, completely committed to our proposals.

A couple of other things I will just touch on very briefly, and that is establish a media strategy, because the Ambassador needs to be the spokesperson and it avoids rumors.

So I'll just leave a copy of our delegation report, and I am going to let Janice now go, because we've probably got 3 minutes.

Thank you.

[The prepared statement of Ambassador Schoettler follows:]

Testimony of
Dr. Gail Schoettler
U.S. Ambassador
World Radiocommunication Conference 2000
To the Committee on Government Reform
Subcommittee on National Security, Emerging Threats, and International Relations
March 17, 2004

Thank you for inviting me to discuss WRC preparation with you. The World Radiocommunication Conference is a global negotiation that is essential to our national security and economic competitiveness. Therefore, our success in these negotiations is critical and depends on thorough preparation. This international treaty conference is one country, one vote, where our ability to persuade is more important than our global power.

I will summarize the recommendations of my WRC 2000 delegation, which are similar to those made for the past 30 years. If these were implemented, WRC preparations would be much smoother and our chances of winning our positions much greater.

My delegation had 162 members, about half each from government and industry. The large delegation made our job much easier, since we had extraordinary technical expertise and the ability to cover the dozens of negotiating sessions held each day, something no other delegation could do. We also had tremendous foreign language capability in our delegation, which was very useful as we worked with other countries. Our success was due to the excellence of our members.

I was so fortunate to have very knowledgeable people assigned to me by the Defense Department (Col. Rick Reaser), NASA (Badri Younes, now at the DoD) and the FCC (Julie Buchanan). They worked with me for 6 months, organizing countless intricate details, negotiating agreements on tough issues, traveling with me, as needed, around the world to meet with key countries, and providing exceptional expertise. They managed the entire process with great skill and judgment. I couldn't have been successful without them. I strongly recommend this kind of support for future WRC ambassadors and delegations.

The State Department provided office space and support for all of us. They enabled me to travel to important meetings, both regional and bilateral, as we prepared for the WRC. They provided outstanding support at regional meetings and the WRC for all delegates. Our embassies and consulates were invaluable help everywhere. The biggest weakness is the Department's lack of resources for WRC preparations, in general, and for hosting other delegations, in particular, a key factor in building crucial relationships and support for US positions.

Other recommendations we made:

1. Engage in an extensive and vigorous outreach program with other countries before the WRC, both within our region and elsewhere. The politics of the WRC

determine whether we win our positions or not. Commitments are often made early. Developing countries, in particular, responded very positively to our efforts to work with them in advance. Their votes often ensured our success. It is impossible to overestimate the value of reaching out to, and showing respect for, other countries when you are the world's powerhouse. In Istanbul, each delegation member was assigned a country to work with so that coordination and persuasion were managed within established relationships. This was very effective.

2. The ambassador should have suitable facilities, preferably a suite, for hosting other delegations, both for negotiations and social events. This was a very important part of the WRC 2000 success, as other delegations were truly honored to be invited to the U.S. ambassador's suite for both work and hospitality.
3. The State Department should continue to be the lead government agency for WRC preparation, with sufficient resources to do the job well at home and abroad.
4. The WRC ambassador should be a presidential appointee and report to a key White House official. This not only makes it far easier to convene warring parties at home and to solve internal problems, but also provides great stature internationally.
5. The WRC ambassador should be appointed more than 6 months before the next WRC, therefore being exempt from the 6 month rule regarding special ambassadorial appointments. Building a strong team and coordinating US positions more than 6 months out would make negotiations much more effective and efficient. Leadership is critical.
6. The delegation should be whatever size is needed to provide government's unique expertise and to meet the needs of both industry and national security.
7. A senior executive coordinating committee, under the leadership of the White House, should be responsible for overseeing WRC preparation and resolving inter-agency disputes.
8. Government and industry should negotiate directly to resolve their differences on key issues. Working through government intermediaries is cumbersome and less effective. Our direct negotiations in 2000 enabled our delegation to go to the WRC committed to our proposals and working together.
9. Unclassified information should be shared openly within the delegation so everyone understands the common purpose.
10. Congress should be kept informed of WRC issues and progress.
11. Establish a media strategy, with the ambassador as the spokesperson. This avoids misinformation and rumors being spread at home and abroad.

I will leave a copy of our full recommendations report with the committee staff. It was an honor to lead my delegation and it is a privilege to discuss our recommendations with you.

Mr. TURNER. Ambassador Obuchowski, if you are able in about 3 minutes to conclude your comments, we'll adjourn the hearing.

Ambassador OBUCHOWSKI. Perfect.

You've heard of the three Tenors. We have the three Ambassadors. You can see we represent about a decade of experience and both political parties. I'm very happy to see the continuity in commitment to the country among us. In fact, Ambassador Schoettler made some excellent recommendations and passed them along to me, and I hope that our delegation was able to implement them.

I also want to recognize this committee and thank you so much for your interest and for enabling three of your senior staff people represented today to come to Geneva. That communicated to everyone from around the world that this wasn't about one party or one agency; this was a unified national effort. It had a profound impact.

Most of the good points have already been covered. I subscribe to almost everything I've heard. Every WRC takes on the coloring of its time in history. Given that our WRC was convened after September 11th and after the liberation of Iraq, this was certainly a WRC that was strongly influenced by national security considerations. At the same time, we were very proud that we had a very strong private sector. We had many commercial accomplishments, the most visible of which was Wi-Fi which you've already heard about.

In talking about WRCs, this particular conference had 48 agenda items and it reflected the complexity of these and the depth with which spectrum permeates our economy. So there's tremendous strategic importance that agenda reflected. We've had great leadership over the years and great organization, even though we use a very distributed process. But, you can always perfect things, and so I'd like to quickly touch on a couple of recommendations that I have in my testimony, which I will also leave, as well as our final report—a nice, colored copy.

First, I'd like to subscribe to what CSIS said in its report. I commend that to you. They comment about the fact that this Conference represents major geopolitical and economic stakes wrapped in technical language, and so the strategic importance of WRCs should be emphasized.

No. 2, we need a dedicated budget arrived at in consensus with all the agencies and then presented to the Ambassador. At that point you can work based on a much more tighter framed organization than sort of passing the cup. It works. It seems to always work but it is a drain of energy at the end of the day.

We also need a blueprint. A lot of the institutional history that drives us resides in the hands of the Ambassadors and very dedicated staff. So I would suggest that we commit to either paper or CD-ROM the things that inevitably have to happen to knit together the delegation.

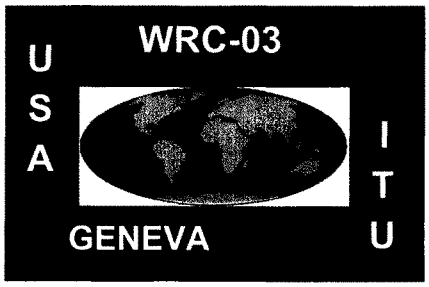
My final recommendation goes to the President's spectrum initiative. I know that this committee has had other hearings and will have hearings about the importance of a national spectrum policy. We have very complicated issues on the table, and in order to drive them in a timely fashion we do need that top-down vision. That will, in turn, enable us to prepare our recommendations more quickly and to drive them up through the various stove pipes of re-

gional preparations around the world. For example, we can then use military bilaterals to drive some of our security recommendations, such as in Europe before there is a unified position. That would be my final recommendation.

I do want to thank you for the honor of testifying. We'll respond to questions when they come in writing so you can get on to your other work.

Thanks.

[The prepared statement of Ambassador Obuchowski follows:]



WRITTEN STATEMENT OF

AMBASSADOR JANICE OBUCHOWSKI
WORLD RADIOCOMMUNICATION CONFERENCE 2003

HOUSE COMMITTEE ON GOVERNMENT REFORM
SUBCOMMITTEE ON NATIONAL SECURITY EMERGING THREATS
AND INTERNATIONAL RELATIONS

MARCH 17, 2004

NOT FOR PUBLICATION
UNTIL RELEASED BY THE
COMMITTEE

I would like to thank Chairman Shays, Ranking Member Kucinich and the distinguished members of the Subcommittee for the opportunity to appear today to testify on U.S. participation in World Radiocommunication Conferences (WRCs). The International Telecommunication Union's Radiocommunication Sector ("ITU-R") held its 2003 World Radiocommunication Conference (WRC 2003) from June 9 to July 4, 2003, in Geneva, Switzerland. I am honored to report to you on our accomplishments at WRC 2003 and to advance suggestions on how the United States can improve its performance at future WRCs.

WRC 2003 occurred at a time of changed geopolitical and economic conditions, particularly in comparison with the Istanbul conference three years earlier. The United States' priorities inevitably were more focused upon preserving global access to spectrum resources required to protect its national security and public safety in the war against terrorism. Safeguarding the ability of U.S. departments and agencies to perform their missions is always a mandate for U.S. Delegations. But at no time had this mandate been more clear.

At the same time, WRC 2003 was—as most recent radiocommunication conferences have been—a chance for the United States to exercise its technological leadership by introducing new commercial services. Perhaps the clearest example of this was the U.S. role in securing a worldwide allocation for wireless LAN (local area network or "WLAN") devices and services in the 5 GHz range. In a world in which technological and market developments overtake all efforts to plan and regulate, Wi-Fi

and other wireless LAN technologies represent the kind of market-driven, grass-roots development of consumer technologies that the U.S. market can incubate so well.

Our delegation, consisting of 167 government and private-sector experts, met the complex challenges it faced at WRC 2003. The delegation represented our nation's interests well, doing so in the best traditions of patriotism, professionalism, determination and friendly outreach that characterize American participation in multilateral diplomacy.

The United States could not be certain, by any means, that all delegations around the globe shared its priorities, interests or, indeed, its vision of a productive WRC 2003, devoid of distractions from extraneous geopolitical issues. And yet, this is exactly the kind of conference WRC 2003 turned out to be.

WRC 2003 may well turn out to be the largest radiocommunication conference ever held. The Conference broke all past precedents in terms of the scope of the agenda. There were 48 separate agenda items, a figure that represented roughly a doubling of the agenda's size from the previous WRC. In keeping with the large number of issues to be resolved, some 138 countries sent a total of 2,300 delegates to the conference. Even as the Conference got under way, the ITU's leadership urged administrations to consider whether WRCs had grown too large and complex, and burdened with too many agenda items. Budgetary problems facing the ITU-R were a constant undercurrent running through the Conference.

As the largest single delegation to WRC 2003, the United States played a key role in producing a business-like conference. It was in the United States' interest to work for such a result, given the unprecedented number of agenda items of interest to it and the scope and scale of participation by other countries, on both national and regional levels. The need to have a tightly focused, productive Conference was recognized also by other administrations, including those of other major economic powers and the developing world, by the leadership of the Conference, and by the ITU leadership.

All significant U.S. objectives were met. The U.S. Delegation's success in meeting its objectives came despite strong resistance from other countries and regional groupings that are U.S. economic rivals or, in some cases, political opponents. As in past WRC conferences, the United States differed on several key issues with the European group. The United States also encountered disagreements and hard negotiations with some members of the Arab and Asian groups—notably, Syria and Iran. In all cases, however, the United States was able to negotiate compromises and agreements that furthered and protected U.S. interests.

Results of WRC 2003

Because of the size of our economy and our role as a technological innovator, the United States has perhaps more at stake than any other nation represented at the periodic WRCs. Its Table of Allocations is more complex; the number of government and private sector stakeholders is more profuse; and the sheer sophistication of spectrum-dependent

activities is higher than any other country in the world. Several key results should be highlighted.

- *Allocation of spectrum in the 5 gigahertz (GHz) range for Mobile Service, to support wireless local area network (WLAN) systems (e.g., Wi-Fi); upgrade of allocations in the same spectrum range (5 GHz) for Radiolocation, Earth Exploration Satellite Service (EESS) and Space Research Service (SRS).*

The United States was able to successfully promote broad-based Wi-Fi deployment in the bands at issue, so long as dynamic frequency selection (DFS) technology was incorporated as part of the regulatory structure for unlicensed use to protect DoD systems in the band.

- *A secondary allocation for Aeronautical Mobile Satellite Service (AMSS) in the 14-14.5 GHz band to support the commercial roll-out of broadband services for airline passengers.*

The United States secured a global allocation for in-flight broadband network services. The United States, which pioneered the Internet and has pushed for broadband access everywhere on Earth, is now pioneering broadband access *above* the Earth, as well. The global AMSS allocation became effective immediately following the Conference, on July 5, 2003, clearing the way for rollout of this commercial service by Boeing and any other companies seeking to enter the market.

- *Agreement on sharing and coordination mechanisms to protect existing services in the 1100-1300 MHz frequency range and to allow the upgrade of the U.S. GPS (Global Positioning System) satellite service in the Radionavigation Satellite Service (RNSS).*

The lightning rod for disagreement at the Conference proved to be the 1164-1215 MHz band. In this band, the Europeans strongly pressed for application of a formal coordination procedure, detailed in Article 9 of the Radio Regulations. Retroactive application of Article 9 coordination would provide an advantageous position for the Galileo system, which the Europeans insisted had been filed at the ITU before the U.S. filing for the GPS upgrade. This would give Galileo precedence under a first-come, first-served approach, requiring that GPS accommodate Galileo in the coordination process. The United States, which believed that Galileo might actually have filed too early under the rules, strongly opposed any retroactive application of Article 9.

Both sides adhered firmly to their positions throughout the first three weeks of the Conference, with the European regional group, CEPT, threatening to bring the issue to a formal vote with the support of the Arab Group. Final resolution of the issue came with a compromise, in which the Europeans agreed to apply Article 9 only prospectively, to RNSS systems filed in the band after January 1, 2005. This effectively grandfathered both Galileo and GPS. This will preserve the ability, under informal coordination mechanisms, for the upgrade of GPS, as planned. The U.S. success on this agenda item can be attributed to firm resolution to defend its interests and principles, as well as to alert and effective support by all concerned branches of the U.S. government.

- *The protection of government Radiolocation systems (i.e., military radars) and satellite data relay systems (i.e., NASA's Tracking and Data Relay Satellite System) from interference in the 13.75-14 GHz band, shared with Fixed Satellite Service (FSS) systems.*

Countries supporting change in this agenda item sought permission for the FSS satellite dishes to be smaller, thus potentially sparking more widespread commercial use in this band. The United States, despite its strong satellite industry, opposed any such reduction in the satellite dish size. Concern that more widespread dish deployment would cause harmful interference to incumbent services with primary status in the band, Radiolocation (i.e., Navy radar) operations and SRS activities (including communications vital to the Space Shuttle and International Space Station programs), motivated the U.S. position. These issues were resolved through a compromise agreement. Although the U.S. Delegation did not succeed, against overwhelming opposition, in its original "no change" proposal, it did succeed in negotiating power limits that will protect U.S. government systems operating in the band.

- *Defeating a proposal that would have set a time limit, originally suggested as being within a range of 20-30 years, for lifetimes of satellite systems—including operating ones and plans to launch new generations of satellites.*

Under a proposal advanced by Arab states, existing commercial systems would have a term of up to 30 years in which to launch and operate their systems, through single or multiple generations, before possibly having to relinquish their rights to an orbital position. The proposal posed a threat to the ability of commercial satellite systems to win and retain investment, imperiling recovery of the U.S. satellite industry. When it appeared that the issue was headed for a floor debate, the U.S. Delegation mobilized, utilizing its active outreach program to communicate the threat's seriousness to the global satellite industry. The United States led the floor debate against the proposal, joined by an overwhelming show of support from many countries, including developing countries.

The result of debate on the floor during the penultimate night of the Conference was acceptable to the United States.

- *Agreement on an agenda for the next World Radiocommunication Conference that focused on specific spectrum requirements and that did not unnecessarily strain ITU resources.*

The Conference also approved a resolution setting a draft agenda for the next WRC, which is slated tentatively for 2007. The U.S. Delegation succeeded in placing all of its priority items on that agenda. Moreover, the final resolution includes fewer than half the number of agenda items that were addressed at WRC 2003. This reverses the trend of recent WRCs, which had seen a progressive doubling in the agenda size. This result is in keeping with the goals of the United States—and of the ITU itself—to reduce the cost and scope of WRCs in the future.

FACTORS IN MEETING U.S. OBJECTIVES

Successful participation in a WRC requires painstaking and thorough preparation. The positive tenor of the preparatory process was set early by the principals involved: Chairman Michael Powell of the Federal Communications Commission (FCC), Ambassador David Gross representing the Department of State, and Assistant Secretary of Commerce Nancy Victory representing the National Telecommunications and Information Administration (NTIA), with notable participation by other government agencies including the Departments of Defense, Transportation and Homeland Security, the National Aeronautics and Space Administration (NASA), and the National Oceanographic and Atmospheric Administration (NOAA). These principals committed

their agencies to fast-track preparation and close cooperation. These objectives were met in the preparatory phase of the WRC 2003 effort.

I shall briefly cover some aspects of our preparatory process and Conference organization that contributed to attaining U.S. objectives.

Disciplined Strategy Development and Delegation Management

WRCs are among the largest multilateral treaty conferences periodically scheduled within the United Nations system. They function as the culmination of multi-year preparatory, "study" cycles, when spectrum allocation and management issues are thoroughly examined. NTIA and the FCC finalized draft Conference proposals based on the priorities and objectives identified in their respective WRC-03 preparatory processes. After reconciling any diverging views or outstanding issues, NTIA and the FCC posted accepted proposals on their respective WRC 2003 websites for information and further consideration by the public. Following a final review process, including input from the public, NTIA and the FCC jointly forwarded these WRC-03 proposals to the Department of State for submission to the ITU.

Once the Head of Delegation came on board, an expert team from the most engaged departments and agencies formed the Delegation leadership. The Delegation, once formed, developed strategy documents for each agenda item. We met on a weekly basis as a group prior to the Conference and daily during the month in Geneva.

Delegation leadership also met daily to refine positions and address organizational issues as they arose.

WRC-03 Delegation Training Day

The U.S. Delegation conducted the first ever Delegation Training Day on May 14, 2003. The Training Day was successful in helping the Delegation to prepare for events in Geneva and to adopt the proper tone and demeanor for multilateral diplomacy. The event should be repeated by future WRC delegations and possibly other State Department-supported conference delegations, as well.

The U.S. Country Outreach Program

Building open lines of communication and goodwill with other administrations is crucial in an organization such as the ITU, which employs the United Nations voting system of "one country, one vote." Like all other countries, the United States has only one vote on any given issue. But unlike many other countries, its commercial and/or government interests are at stake in virtually all of the WRC agenda items. It then becomes imperative for the U.S. Delegation to employ its numerical and intellectual strengths by engaging all of the other delegates, across all agenda items. The positive effects on U.S. efforts were noteworthy. At WRC 2003, the U.S. Delegation carried out an extensive outreach effort throughout the month, with each Delegation member encouraged to build an informal relationship with a counterpart country delegation.

Commitment to Regional Cooperation

As foreseen prior to the opening of the Conference, this WRC featured a maturation of the trend, over recent decades, of countries' working through regional telecommunications organizations. The U.S. preparatory process was carried out in close concert with other member nations of the Inter-American Telecommunication Commission (CITEL), the telecommunications arm of the Organization of American States (OAS). On many of the issues, the United States went into the Conference having developed consolidated proposals with CITEL member nations. Regional cooperation, not only within CITEL, but also with other regional groups such as the African Telecommunications Union (ATU) and the Asia-Pacific Telecommunity (APT) group enabled the U.S. Delegation to counterbalance, as needed, the collective power of the European bloc, which operates through the Conference of European Postal and Telecommunications (CEPT) administrations.

Due to "fast track" conclusion of U.S. positions, the United States was able to bring a thorough set of final U.S. proposals to the concluding CITEL meeting, hosted by the United States. Numerous "Inter-American Proposals" or "IAPs" significantly or totally mirrored U.S. proposals. We strengthened our substantive presence within our region and CITEL, in turn, was a much stronger player at WRC 2003.

The preparatory phase of WRC 2003 involved unprecedented coordination with U.S. partners in CITEL. This coordination and cooperation continued throughout the

Conference. Two members of the informal core group of the Delegation were detailed to work closely with CITEL, which held regular meetings during the WRC.

WRC 2003 was also notable because it saw the growth and maturation of regional groupings beyond the Americas (CITEL), Western Europe (CEPT) and the Asia-Pacific region (APT). The ATU, an arm of the African Union (previously known as the Organization of African Unity), signed a cooperation agreement with CITEL at the Conference. The United States has long recognized the importance of the African countries as key participants in WRCs, and the work of the ITU-R in general. The U.S. Delegation celebrated the CITEL-ATU partnership, which was solidified at the Conference.

The Strength of the U.S. Delegation

One additional reason for success should also be mentioned, however—the more for its likelihood of being taken for granted or overlooked in discussing WRCs. Perhaps the most fundamental reason for the success of the U.S. Delegation was the involvement of many individuals with enormous cumulative experience on their issues of expertise. At their best, WRC delegations bring this cumulative expertise—in which the United States is unsurpassed—as the greatest tool in representing their countries' interests. The U.S. preparatory system, however cumbersome it can be, maximizes the input of all of these parties and harnesses them in the national interest. WRC 2003 exemplifies what this system can produce.

RECOMMENDATIONS FOR FUTURE SUCCESS

Recognizing the hard work and success made possible by the previous WRC delegations, there is room for improvement in the way the United States prepares for and conducts its representation at the Conferences.

First, as a threshold matter, I applaud the input on this issue provided by the Center for Strategic and International Studies, which has dedicated significant resources and intellectual capital in the effort to provide a blueprint for reform in this area. I would urge this committee, and everyone associated with spectrum management and WRC preparation, to continue to take every possible action to raise the level of awareness about the importance of these Conferences. Government and industry alike must realize that despite the heavy deployment of spectrum engineering terms, World Radiocommunication Conferences are venues for multilateral diplomacy involving political and economic stakes of the highest order. In large measure, they are geopolitical and economic negotiations carried out in technical terminology. I commend CSIS for recognizing this and devoting the considerable depth of its pool of talent and expertise to consideration of these issues.

Second, I would like to recommend that WRCs be supported through a dedicated and fully funded budget at the Department of State, prepared after consultation with all of the most involved government agencies in order to determine optimal resource allocations among them. This budget should be managed by the WRC ambassador upon appointment.

In line with this recommendation is another one to craft a "living document" or blueprint for WRC preparation. This blueprint would guide WRC preparations and Delegation activities, bringing the full benefit of institutional history. Much of the administrative knowledge and experience that goes into preparing for a WRC and carrying it through to success lies in the collective institutional memory of the corps of veterans who serve on U.S. Delegations repeatedly. This is a vital national resource, and unless it is committed to paper (or CD-ROM) it will inevitably erode over time. One of the best contributions to future Conferences would be the drafting of a comprehensive blueprint, guidebook and primer covering all facets of this process and providing the benefit of current expertise to those engaged in future WRC preparations and Conferences.

Third, I fully endorse the effort, embodied in the President's spectrum policy initiative, to elevate spectrum management issues to the level of comprehensive, national policy. As our economy and national security increasingly depend on wireless technologies, spectrum has risen to the level of a critical infrastructure resource, and it deserves high-level attention and coordination. I trust that the relevant departments and agencies within the federal government, which have done so much to support the national interest in all previous WRCs, will support the effort to establish a high-level policy direction for spectrum management. This would set a baseline for the WRC preparation process and allow all participants to identify and pursue national goals in concert with one another.

Fourth, it has become abundantly clear that for purposes of ITU participation in general, and WRC negotiations in particular, regional blocs have become the dominant mode of operation for many participants from around the world. Much has been said about the reality and potential of Pan-American cooperation through CITEL, but I would like to reinforce and emphasize the need for the United States to cultivate dialogue and cooperation within that organization wherever possible. It is in the commercial and security interests of the United States to do so. Moreover, we should recognize the growth and expansion of newer regional organizations, such as the ATU, the Arab Group and the Regional Communications Community (RCC). We should continue to develop good working relationships through dialogue with these important groups, in addition to the long established regional groups in Europe and Asia.

Finally, I would like to thank this subcommittee for convening this hearing, and for its ongoing efforts to monitor and guide U.S. activities to prepare for the WRCs and to ensure effective representation of the country at these Conferences. It has been a profound honor and pleasure for me to have worked with so many dedicated Americans over the past months, as Head of Delegation for WRC 2003. It is highly gratifying for me to see that this subcommittee and its very able staff recognize the importance of these Conferences to the future economic growth and national security of the country. I look forward to answering any questions you may have and to working with you in your efforts to optimize U.S. WRC preparations.

Mr. TURNER. We want to thank all of you for your service and the importance of this issue and also for your participation today.

With that, we'll be adjourned.

[Whereupon, at 12:15 p.m., the subcommittee was adjourned, to reconvene at the call of the Chair.]

[Additional information submitted for the hearing record follows:]

Questions for the Record
Jeffrey N. Shane
Under Secretary for Policy
U.S. Department of Transportation
House Committee on Government Reform
Subcommittee on National Security, Emerging Threats and International Relations
Hearing on World Radio Conferences
March 17, 2004

1. Question:
What prompted DOT to have an Under Secretary focus on the issue of spectrum?

Answer:

DOT, through its numerous modal administrations, and especially with the Federal Aviation Administration (FAA), is the second largest user of Federal spectrum and the largest Federal provider of spectrum-based services in the United States. Many of these services enable critical "safety-of-life" functions such as aircraft navigation and communications. Other applications, such as with the Global Positioning System (GPS), have become part of the U.S. critical information infrastructure (CII), as well as the cornerstone of worldwide air traffic control (ATC) modernization efforts. Finally, some DOT programs depend upon private sector spectrum to enhance transportation safety and efficiency, such as Intelligent Transportation System (ITS) applications.

Spectrum is the linchpin for safe transportation, but due to increasing demands the Department has come under increasing pressure to share its spectrum resources with experimental, and sometimes incompatible, radio services from the private sector. The need to protect our ability to perform the Department's spectrum-enabled safety-of-life responsibilities, while helping to promote new technologies and improve spectrum management, requires sustained, high-level involvement in these issues.

2. Question:
How do you believe the United States can achieve balance in the consideration of government and non-government spectrum issues without a well-defined national spectrum strategy? What should be included in a White House international spectrum strategy?

Answer:

The DOT view is that the U.S. cannot achieve balance on Government and non-Government spectrum issues without a well-defined national spectrum strategy. The President's Spectrum Task Force is currently looking hard at these issues and will be issuing a series of recommendations regarding spectrum policy issues. DOT has been an active participant in those discussions, working to ensure that the proper balance is struck between using spectrum to encourage the development of new technologies – an important objective of many DOT stakeholders -- and ensuring continuity in federal

agencies' access to the spectrum resources they need to perform their statutory responsibilities. This national spectrum strategy also will help guide our preparation for future international events like the World Radiocommunication Conferences (WRCs) and meetings of the International Civil Aviation Organization (ICAO) and the International Telecommunication Union (ITU).

3. Question:
In your opinion, what United States preparatory processes work well and what processes need improvement?

Answer:

The State Department, NTIA, and FCC work very well together in promoting the U.S. position, both in pre-WRC preparatory activities and at the WRC itself. There is always, however, room to improve, and the Department is committed to working closely with our colleagues throughout the federal government to begin preparing for WRC 2007 as early as possible in order to be most effective in advocating U.S. interests at that meeting.

4. Question:
Do you feel that your department has appropriate senior level input into critical spectrum debates with NTIA?

Answer:

DOT does provide senior level input into critical spectrum debates within NTIA. Spectrum matters, however, are typically handled through the Interdepartmental Radio Advisory Committee (IRAC), and if agreement cannot be reached within that forum issues are raised to more senior levels. One of the issues we are currently discussing within the Federal Government Spectrum Task Force is how we can further improve this process by ensuring more consistent senior-level participation in spectrum issues to help identify potential problems earlier in the spectrum allocation process.

5. Question:
How often do you encounter your senior level counterparts in the WRC preparatory process?

Answer:

Encounters at the senior levels have in the past typically been initiated through informal meetings to exchange information on specific policy positions rather than through a formally established process. After appointment of the WRC Ambassador, meetings at the senior levels of the Federal agencies become more frequent as U.S. positions are developed. DOT has always worked closely with the U.S. WRC Ambassador to ensure that there is full understanding of the transportation issues being discussed at the WRC among senior U.S. representatives.

For example, after the appointment of Ambassador Obuchowski for WRC-2003, DOT and FAA arranged a meeting between her, Ambassador Stimson (U.S. Ambassador to ICAO), and Dr. Kotaite (President of the ICAO Council) for a review of the U.S. and ICAO positions for the WRC. This professional relationship between Ambassador Obuchowski and ICAO senior leadership proved valuable in the successful pursuit of U.S. objectives in Geneva.

6. Question:
Based on your experience, do you believe NTIA views the federal government users as their principal spectrum customers, or do they view the commercial industry equally as their spectrum constituents as well?

Answer:

The NTIA's responsibilities are to develop consensus U.S. government positions on spectrum policy issues and to represent the interests of federal spectrum users before the FCC. NTIA takes these responsibilities very seriously, and works closely with the Department to ensure that positions taken before the FCC on behalf of federal users are fully informed by transportation needs. As part of the U.S. Department of Commerce, NTIA is also well placed to understand the interests of commercial industry and the impact those interests may have on federal spectrum users, especially as scarce spectrum resources are more often shared between public and private sector entities. DOT works directly with NTIA through the IRAC to ensure critical "safety-of-life" bands are protected from harmful interference.

7. Question:
Do you feel it is appropriate to have the State Department as the critical mediator among final government and industry positions developed by NTIA and the FCC?

Answer:

DOT believes that the State Department is well placed to serve as the mediator between NTIA and FCC when developing the U.S. position for the WRC. Such mediation, however, must be well informed by the needs of other U.S. government agencies, and has to take place within the context of a broadly accepted set of strategies and objectives that have been agreed to among these agencies.

8. Question:
What information does your department receive from the State Department about US trade positions or WRC/International Telecommunications Union activities during the period between WRCs? Would it be helpful if this information were shared on a continuous basis?

Answer:

DOT does not typically receive formal communications about U.S. trade positions during the period between WRCs. The State Department does provide periodic updates of ITU activities within the IRAC forum. Greater information sharing among federal agencies could be particularly helpful in the development of the U.S. Position for the WRC, and we are committed to working with the State Department and our other federal colleagues to accomplish that goal.

9. Question:
What are the strengths and weaknesses of the current arrangement for choosing the U.S. delegation leadership?

Answer:

The U.S. has been fortunate to have very strong and knowledgeable leaders appointed as the U.S. Delegation lead by the President. That said, it can be a challenge for U.S. Ambassadors, appointed just six months prior to the Conference, to participate fully in U.S. preparations for the WRC. Earlier appointment of the Ambassador, or development of a more permanent interagency preparatory process, may result in enhanced training opportunities for Delegation members and encourage earlier, and more effective, international outreach efforts.

10. Question:
Is the United States' negotiating strength improved or hindered by the use of an appointed political representative working with career spectrum managers and ITU experts from other countries?

Answer:

The U.S. negotiating strength is certainly improved by having an appointed political representative to lead the U.S. Delegation. The broad delegation of authority extended to the Ambassador and the Ambassador's links back to high levels in the Administration result in greater flexibility in decision-making authority of the U.S. Delegation during complex, time-sensitive negotiations.

11. Question:
At a NAS forum on spectrum, the FAA representative mentioned support and interest in the creation of a WRC Ambassador Secretariat. Does the Department of Transportation support this idea?

Answer:

The WRC Secretariat concept was presented as one potential example of how the U.S. preparatory process for the WRC could be improved. The FAA also stated that this concept had been presented in other studies, for example those of the Office of Technology Assessment and WRC Ambassador after-action reports, as a possible way forward. But it is only one concept of several that may be worth exploring. DOT

believes that the U.S. WRC preparatory process can be improved and, because DOT is a major stakeholder in U.S. use of the radio spectrum, we would have a key role in any review of the current process.

12. Question:
What established staff positions does the Department of Transportation have dedicated to WRC preparation and participation?

Answer:

Department of Transportation modal administrations, like the FAA, as well as the Secretary's Office of Navigation and Spectrum Policy, have a wide array of technical, regulatory, and policy expertise in radio frequency spectrum management. That expertise is tapped as needed for WRC preparation and participation. However, there are no specific staff positions within DOT with sole responsibility for WRC preparation.

13. Question:
How are financial estimates at DOT to carry out WRC activities developed?

Answer:

Within DOT, each operating administration develops its own budgets based on the approved WRC agenda and on historical funding data from past WRCs. As an example, in the FAA, after initial views on the agenda items are prepared and funding estimates are developed, a plan is drafted to assign work to various FAA offices and support contractors, to prepare test plans, statements of work for studies, and other details. The FAA normally funds these activities through its Facilities and Equipment (F&E) budget, while the Office of Navigation and Spectrum Policy uses its normal operating budget for WRC preparation activities.

14. Question:
It appears that the President's 2005 budget does contain increases for the NTIA for WRC purposes. Did your department earmark funding specifically for WRC preparatory activities?

Answer:

DOT does not currently earmark funding specifically for WRC preparatory activities.

15. Question:
How much financial and staff resources did the Department of Transportation provide to the WRC 2003 Conference?

Answer:
Please see Enclosures 1 and 2, which are attached, providing WRC expense data.

16. Question:
What guarantees do we have that you continue to supply the level of resources needed to participate in international spectrum forums such as the ITU and the WRC?

Answer:

The critical nature of radio frequency spectrum to the overall mission of DOT modal administrations – as briefly outlined in the response to Question 1 above -- will ensure DOT continues its active contributions and participation to the WRC process. For example, support of the WRC activities has been specifically identified as a key objective in the FAA's Flight Plan (2004-2008) as a required element for enhancing global aviation seamless operations.

17. Question:
Do you believe there is a better mechanism for funding U.S. participation in WRCs other than gathering together funds from various federal and private sector sources?

Answer:

We believe that the current funding mechanism for U.S. participation in WRCs works well and should be retained.

18. Question:
What criteria does the State Department require for selection to U.S. delegation?

Answer:

We are not fully apprised of the specifics of the State Department process to select members of the U.S. Delegation. However, one criterion that is used for selection to the U.S. Delegation is whether the individual has the expertise needed to adequately address the WRC agenda items.

19. Question:
Are you all satisfied with the level of financial and staff support provided for WRC 2003 activities by the Department of State?

Answer:

The State Department provides no funding directly to DOT for WRC activities, but did provide staff support to the U.S. delegation that was instrumental in helping us to pursue our objectives during the meeting.

20. Question:
What other training does your department or the State Department provide or require of U.S. delegates?

Answer:

The DOT representatives took advantage of ITU training provided by NTIA as well as WRC training hosted by Ambassador Obuchowski after her appointment. The Department also has a number of employees with past experience attending WRC meetings, which will be called upon to train new members of our staff in preparation for future WRCs.

21. Question:
Are more training programs or mandatory training needed for delegations and the Ambassador?

Answer:

DOT believes that training programs for WRC delegation members have been quite helpful and, to the extent possible and with sufficient funding availability, should be expanded.

22. Question:
How do you represent the United States at the ITU and other spectrum related conferences before we come to a U.S. position? Should the U.S. try to reach agreement on key or non-controversial WRC 2007 issues earlier than the current process allows?

Answer:

DOT representatives participate in numerous international technical meetings prior to the WRC. We do attempt to influence the WRC positions of hosting nations and global organizations as early in the preparatory process as possible, even if the U.S. has not yet adopted its formal position. For example, the FAA is currently participating in Working Group F of the ICAO Aeronautical Communications Panel where the ICAO position for WRC-2007 is being developed. Agreement on a formal U.S. position earlier in the process, however, would help us to be more effective in these international discussions.

23. Question:
In the past, it has been claimed that WRC decisions beneficial to federal departments have not been implemented in a timely manner. What are the experiences of the Departments of Transportation in this regard?

Answer:

Delays in implementation of WRC decisions has typically not proven to be a serious issue for DOT since many WRC spectrum allocation decisions reflect the needs of civil aviation systems that had their genesis and developmental efforts in the U.S. Implementation of WRC decisions, however, is much improved over the last several WRC cycles. These improvements are reflected in the fact that the FCC and NTIA have

developed a joint WRC-03 Implementation Plan, announced by the FCC Chairman and NTIA Administrator at the biannual FCC/NTIA summit in August 2003.

Enclosure 1

DOT Provided Funding for the World Radio Conference (WRC)

The Federal Aviation Administration (FAA) is a lead modal administration on behalf of DOT at the World Radiocommunication Conference (WRC)

Historical Financial Data from WRC 2003

	F&E ***	OPS **	Total
FY 2001	$718,900	$39,100	$758,000
FY 2002	$318,600	$57,000	$375,600
FY 2003	* $783,200	**** $92,400	$875,600
Total for WRC 2003	$1,820,700	$188,500	$2,009,200

Projected Resources Needed for WRC 2004-2005

	F&E	OPS	Total
FY 2004	$685,000	$58,900	$743,900
FY 2005	$1,275,000	$63,800	$1,338,800
Current Total for WRC 2004-2005	Add total	add total	add total

* Includes $10,000 to support the Ambassador's work at the CITEL conference in February 2003 and $10,000 to support the Ambassador's work at the WRC in June 2003.

** Operations

*** Facilities and Equipment

**** Includes Office of the Secretary of Transportation Funding

Enclosure 2

FAA Facilities and Equipment (F&E) Expenditures

Estimated FY 2004 Study Expenditures

- Air Traffic Control Modeling $200,000
- Evaluation of GPS/Galileo Interference to FAA L-Band ATC Radar 160,000
- F/TSAM Operational Upgrades 200,000
- Statistical Analysis of radars vs RNSS 50,000
- Fixed Links in the 5GHz band 75,000

Total $685,000

Estimated Expenditures in FY 2005

- Testing of ARSR-3 radar to determine interference level from planned Galileo signals 275,000
- Statistical Analysis of radars versus GPS L2 frequency interference..... 100,000
- Study to assess spectrum issues associated with implementing GPS L5 (1164-1188 MHz band) on the DME channels..... 100,000
- Analyze the feasibility of implementing a wide area LAN using off-the-shelf equipment and determine such a system's potential for replacing airport fixed links and to support runway incursion applications 700,000
- Assess the feasibility of replacing current FAA fixed links implemented in several different frequency bands with a common radio link in the 5091-5150 MHz band 100,000

Total $1,275,000

National Aeronautics and
Space Administration
Headquarters
Washington, DC 20546-0001

MAY 26 2004

Reply to Attn of: LB:MDC

The Honorable Christopher Shays
Chairman
Subcommittee on National Security, Emerging
Threats and International Relations
Committee on Government Reform
House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

Enclosed are the responses to written questions submitted by you, resulting from the March 17, 2004, hearing at which Mr. William Readdy testified regarding "U.S. Preparation for the World Radio Conferences: Too little, too late?" This material completes the information requested during that hearing.

Cordially,

D. Lee Forsgren

D. Lee Forsgren
Assistant Administrator
for Legislative Affairs

Enclosure

Responses to written questions submitted by Cong. Shays resulting from the March 17, 2004, hearing at which Mr. William Readdy testified.

QUESTION 1:

How do you believe the United States can achieve balance in the consideration of government and non-government spectrum issues without a well-defined national spectrum strategy? What should be included in a White House international spectrum strategy?

ANSWER 1:

A well-defined national spectrum strategy is essential to achieve balance in the consideration of government and non-government spectrum issues. A White House international spectrum strategy should include development and implementation of a U.S. national spectrum policy, taking into account the 'big picture' of all U.S. spectrum needs, both public and private sectors, and evaluation of each proposed spectrum action on this national basis.

QUESTION 2:

In your opinion, what United States preparatory processes work well and what processes need improvement?

ANSWER 2:

Direct consultations between Federal agencies and commercial entities would improve the preparatory process. A lack of transparency in agreements can lead to the inadvertent creation of industrial policy or at least policy development that is not technology neutral.

QUESTION 3:

Do you feel that your department has appropriate senior level input into critical spectrum debates within NTIA?

ANSWER 3:

Yes, NASA has appropriate senior level input into critical spectrum debates.

QUESTION 4:

How often do you encounter your senior level counterparts in the WRC preparatory process?

ANSWER 4:

NASA maintains a spectrum policy and planning directorate within the Office of Space Flight at NASA Headquarters that represents Agency requirements on the working level. Within this directorate is an international spectrum program executive whose role includes the regular review and revision of the NASA Spectrum Long-Range Plan, and regular contact (several times a year) with our international counterparts as needed.

During the preparatory process, NASA senior management meets with their Department of State counterparts, as required. Typically, they meet with senior counterparts from other Federal government agencies at the WRCs.

QUESTION 5:

Based on your experience, do you believe NTIA views the federal government users as their principal spectrum customers, or do they view the commercial industry equally as their spectrum constituents as well?

ANSWER 5:

Although the FCC has jurisdiction over use of commercial spectrum, NTIA is part of the Department of Commerce, whose broader mission supports the commercial sector. Thus, in our experience, NTIA generally views the commercial industry equally as their spectrum constituents to the derogation of the Federal Government interests.

QUESTION 6:

Do you feel it is appropriate to have the State Department as the critical mediator among final government and industry positions developing by NTIA and the FCC?

ANSWER 6:

The State Department, on behalf of the President, is quite properly the leader for U.S. foreign policy and positions taken at international conferences. It is the responsibility of agencies to develop Government positions especially in areas where agency mission performance is at stake. Agencies may choose to delegate that responsibility to NTIA, to speak on behalf of the Government, but ultimate accountability lies with the agencies. Thus, agencies whose interests are at stake, along with the NTIA, are most appropriate mediators with the FCC. The State Department's role is not one of technical mediation, but of assuring compliance of U.S. positions with U.S. foreign policy.

QUESTION 7:

What information does your department receive from the State Department about US trade positions or WRC/International Telecommunications Union activities during the period between WRCs? Would it be helpful if this information were shared on a continuous basis?

ANSWER 7:

NASA continually prepares for WRCs. For many years, NASA has provided personnel for leadership positions within the International Telecommunications Union (ITU), particularly in the ITU's Radio Bureau (ITU-R) Study Group dealing with the science services. Currently, NASA personnel serve as the Chairman of this Study Group (SG 7 – Science Services), along with the Chairman of Working Party 7B (Science Communications). NASA also chairs the U.S. National Study Group 7 and two of its Working Parties (7B and 7C). NASA leads in the ITU-R in developing technical and operational studies of space science systems that form the basis for US proposals to the upcoming WRC. In this role, NASA has access to WRC/ITU activities information.

It is not a normal practice for the State Department to share information on U.S. trade positions. It might be useful for planning purposes if the Department of State, the Department of Commerce, or the Office of the U.S. Trade Representative provided such information.

QUESTION 8:

What are the strengths and weaknesses of the current arrangement for choosing the US delegation leadership?

ANSWER 8:

The existing arrangement for choosing the U.S. delegation leadership has served the Nation well over the past several Conferences. However, in recognizing the rapidly increasing competition for accessing spectrum, particularly by developing countries, it becomes imperative to improve upon the heritage system.

Making the Deputy Head of the U.S. Delegation a senior government official with policy oversight would provide continuity and consistency between conferences and could better aid the Ambassador in setting up the senior delegation support staff.

Additionally, early appointment of the U.S. Ambassador in the WRC preparatory process could be very advantageous. Usually the selected nominee is identified in a reasonable time frame (e.g., three months prior to the meeting of the Conference Preparatory Meeting), but he/she is not available to undertake WRC preparatory work until some few months prior to the WRC. Perhaps the selected nominee could be identified as Head of Delegation at the right time, and later, when appropriate appointed as Ambassador.

QUESTION 9:

Is the United States' negotiating strength improved or hindered by the use of an appointed political representative working with career spectrum managers and ITU experts from other countries?

ANSWER 9:

The United States' negotiating strength is improved by the use of an appointed political representative working with career spectrum managers and ITU experts from other countries. The negotiating skill set and credibility brought to the WRC by a political appointee are often crucial in resolving the outcome of a difficult issue in favor of the US. The additional contribution to the skill mix of the U.S. delegation from someone experienced in political processes gives the U.S. a distinct advantage vis-à-vis other delegations.

QUESTION 10:

How are financial estimates at NASA to carry out WRC activities developed?

ANSWER 10:

NASA maintains a Spectrum Policy and Planning Directorate within the Office of Space Flight at NASA Headquarters in Washington, DC, which publishes NASA's Spectrum Long-Range Plan. Analysis of this plan will highlight any spectrum deficiencies for any NASA missions for the next ten years that must be brought before a WRC. NASA's Director of Spectrum Policy and Planning meets regularly with the Office of Space Flight budget managers to ensure adequate resources are identified within the overall NASA budget submissions to the Administration. Our financial estimates are based on past levels of effort required and current estimates of specific cost elements such as staff time and travel.

QUESTION 11:

It appears that the President's 2005 budget does contain increases for the NTIA for WRC purposes. Did NASA earmark funding specifically for WRC preparatory activities?

ANSWER 11:

As part of its ongoing planning for spectrum management, NASA provided funding for WRC preparations within its 2005 budget submission. The level of effort identified, based on previous experience, will increase slightly each year as the WRC approaches and as the number of technical and regional preparatory meetings increases.

QUESTION 12:

How much financial and staff resources did NASA provide to the WRC 2003 conference?

ANSWER 12:

a. Direct funds (travel, staff, equipment, and publishing)

i. Pre-conference planning -- NASA began preparing for WRC 2003 approximately one month after the end of WRC 2000. Early efforts were directed toward developing the technical sharing studies within the ITU-R study groups to provide the foundation for future proposals to WRC 2003 on issues of importance to NASA. In addition to approximately 4.5 civil servant FTEs, the NASA efforts were supported by an approximately equal number of contract personnel. (The level of support gradually increased closer to the conference.) NASA's contract budget for support of international spectrum management activities is roughly $750K per year (including travel expenses) plus the cost of the civil servant labor. Civil servant travel costs averaged approximately $70K per year during this pre-conference phase. NASA also helped to support the U.S. hosting of the final CITEL (a French acronym which translates to Inter-American Telecommunication Commission) meeting prior to WRC 2003 at a cost of $30K.

ii. At the conference -- NASA had seven civil servants and an equal number of contract support personnel on the US Delegation. Three of these individuals were provided to directly support the State Department and the WRC Ambassador. In addition, NASA hosted a reception for Heads of Delegations and selected invitees. The reception cost approximately $40K. NASA also developed a Space Science Services information booth and staffed it throughout the conference by subject matter experts. The cost of the booth was approximately $30K plus the staffing

costs (average two people throughout the four week length of the conference). In addition, NASA provided two persons to help staff an Interagency GPS Executive Board (IGEB) GPS information booth that was also on display throughout the conference. NASA provided handout information on both GPS and various space science services themes as a part of the booth support activities.

iii. Post-conference implementation -- Post conference implementation involved fractional time from several individuals over approximately a four month time period following the conference.

b. Representational funds spent in the name of the ambassador

i. Government sources --$10K

ii. Non-government sources -- $0K

c. In-kind contributions

i. Dedicated staff -- One senior level civil servant approximately 6 months/0.5MY, one civil servant full time during the conference to provide administrative support for the Ambassador and one full time contract employee made available to directly assist State Department.

Equipment -- Gifts for Ambassador Obuchowski to present to foreign delegation heads (e.g., matted high resolution World maps from space) -- $2K

ii. Lodging -- Travel and lodging for the three individuals provided by NASA to directly support the Ambassador and State Department during both multilateral meetings prior to WRC 2003 and throughout the Conference. These costs amounted to approximately $23K.

QUESTION 13:

What guarantees do we have that NASA will continue to supply the level of resources needed to participate in international spectrum forums such as the ITU and the WRC?

ANSWER 13:

NASA relies on the availability of access to the spectrum to achieve all of its aeronautic and space mission objectives. The Agency will continue to budget for ITU and WRC activities in order to satisfy its spectrum requirements. Additionally, NASA contributes its share of the cost of maintaining NTIA Office of Spectrum Management (OSM), and also pays spectrum use fees to the ITU. The cost of these items is outside NASA's control, and any increase in these costs could jeopardize the ability of the Agency to continue to supply the level of resources.

QUESTION 14:

Do you believe there is a better mechanism for funding U.S. participation in WRCs other than gathering together funds from various federal and private sector sources?

ANSWER 14:

The process of gathering together funds from various Federal and private sector sources for the purpose of providing representational funding during WRCs and Regional (CITEL) meetings seems to work fairly well and should be continued. Designated funding for the Ambassador would be particularly useful.

QUESTION 15:

What criteria does the State Department require for selection to the US delegation?

ANSWER 15:

NASA defers to the State Department to better characterize what criteria it applies. NASA has had no difficulties with the selection and composition of the U.S. delegation.

QUESTION 16:

Are you all satisfied with the level of financial and staff support provided for WRC 2003 activities by the Department of State?

ANSWER 16:

The staff of the Department of State International Office (IO) and the support staff of the US Mission in Geneva gave excellent support to the US Delegation to WRC 03.

QUESTION 17:

What other training does your department or the State Department provide or require of US delegates? Are more training programs or mandatory training needed for delegations and the Ambassador?

ANSWER 17:

The short training session made available during one delegation meeting was satisfactory to initiate newcomers to ITU processes. Additional training is not needed.

QUESTION 18:

How can we improve the current outreach to other countries and regions on spectrum issues?

ANSWER 18:

In light of the growing importance of regional positions prior to WRCs, more effort could be made in organizing coordinated government/industry outreach events with other countries. In particular, there is value in being able to explain U.S. views to both public and private sector interests overseas in an integrated way in addition to exclusively government-to-government or industry-to-industry meetings.

QUESTION 19:

How do you represent the United States at the ITU and other spectrum related conferences before we come to a US position? Should the US try to reach agreement on key or non-controversial WRC 2007 issues earlier than the current process allows?

ANSWER 19:

NASA speaks only on technical and operational issues within the Study Group structure of ITU-R during the development of ITU-R Recommendations that form the bases for potential WRC proposals. We adhere strictly to U.S. positions at a WRC. Earlier agreement within the U.S. would be helpful, facilitated by a National spectrum strategy.

QUESTION 20:

How should WRC outreach activities be integrated with other international activities of the State Department?

ANSWER 20:

NASA defers to the State Department on this internal State Department organizational issue. NASA is prepared to continue support to the Department of State. NASA will continue to provide clear priorities for NASA objectives at each WRC.

QUESTION 21:

In the past, it has been claimed that WRC implementation of positions beneficial to federal departments have not been implemented in a timely manner. What are the experiences of the NASA in this regard?

ANSWER 21:

With the impetus of senior-level NTIA and FCC direction, the schedule for implementation of the Final Acts of WRC 2003 into the US national regulations is on a faster track than previous Conferences. Subsequent to WRC 2003, the Assistant Secretary of NTIA and the Chairman of the FCC formally agreed to a year plan with a specific schedule to implement commitments made at WRC 2003. This shorter schedule affects both agencies and resulted in the publication, on March 29, 2004, by the FCC of the relevant Notice of Proposed Rulemaking (NPRM).

The Honorable Christopher Shays
Chairman
Subcommittee on National Security,
Emerging Threats, and International Relations
Committee on Government Reform
House of Representatives
Washington, DC 20515

Dear Chairman Shays:

Thank you again for providing me with the opportunity to testify before the Subcommittee on National Security, Emerging Threats and International Relations on March 17, 2004, regarding the United States' preparation for World Radio Conferences. The interest of the Committee and your clear leadership on international spectrum policy developments is much appreciated. Enclosed please find the written responses to the Subcommittee's follow-up questions from the hearing.

If I may be of further assistance, please contact me or Jim Wasilewski, the National Telecommunications and Information Administration's Acting Director of Congressional Affairs, at (202) 482-1840.

Sincerely,

Michael D. Gallagher
Acting Assistant Secretary for
Communications and Information

Enclosure

ANSWERS TO QUESTIONS FOR THE RECORD FROM HOUSE COMMITTEE ON GOVERNMENT REFORM, SUBCOMMITTEE ON NATIONAL SECURITY, EMERGING THREATS AND INTERNATIONAL CONCERNING U.S PREPARATIONS FOR WRCs.

Questions for the record were transmitted to NTIA on March 25, 2004 following-up testimony given by Acting Assistant Secretary for Communications and Information Michael D. Gallagher on March 17, 2004 before the Subcommittee on National Security, Emerging Threats and International Relations.

1. In your written testimony you state that NTIA will shortly issue a report on improving the WRC process. Can you tell us what some of your specific recommendations will be and provide the Subcommittee a copy of the report to [be] part of the official hearing record?

The NTIA report on "Improvements to the U.S. WRC Preparatory Process" will be completed in May 2004. NTIA will provide a copy to the Subcommittee as soon as it is available. The report recommendations cover many of the areas related to preparing for and implementing the Conference, such as senior-level engagement, cooperation and coordination of Federal and non-Federal preparations, international consultations and communications, delegation preparation, and WRC implementation.

2. How do you each believe the United States can achieve balance in the consideration of government and non-government spectrum issues without a well-defined national spectrum strategy? What should be included in a White House international spectrum strategy?

The Communications Act provides a dual structure whereby NTIA manages spectrum for federal government users, and the FCC manages the spectrum for all other users. This dual structure, builds in the balance necessary to consider all spectrum interests. While the two principal spectrum management agencies each have their own spectrum constituencies and WRC preparation processes, there is a high degree of coordination and cooperation in defining national objectives and strategies between the government and

civil sectors. Any national or international spectrum strategy should represent the interests of all parties (Federal Government and commercial) having a stake in WRCs.

We have found the right balance on several high-profile issues such as UWB, 3G, and 5 GHz as an Administration and that the results of those efforts gave birth to the spectrum initiative. To that end, President Bush established a "Spectrum Policy Initiative" to promote the development and implementation of a U.S. spectrum policy for the 21st century. President Bush directed the Secretary of Commerce to chair the initiative. The initiative also establishes an interagency task force to provide information from which recommendations will be developed for improving spectrum management policies and procedures for the Federal Government as well as an examination of ways to improve spectrum management for state, local, and private sector spectrum use. The Administration is committed to promoting the development and implementation of a U.S. spectrum policy for the 21st century that will foster economic growth, ensure our national and homeland security, maintain U.S. global leadership in communications technology development and services, and satisfy other vital U.S. needs. Spectrum planning, including a national spectrum strategic plans, is actively being discussed in response to the President's initiative. The development of an improved national spectrum strategy contemplated by the Presidential Spectrum Initiative would include reviewing and improving the WRC process.

3. How does the Executive Branch resolve disputes and provide oversight of the WRC preparatory process and development of the U.S. position? Do you have suggestions on how this oversight can be improved?

The Interdepartment Radio Advisory Committee's (IRAC) Radio Conference Subcommittee (RCS) meets monthly to discuss, develop and approve federal agency views, position and proposals on WRC issues to recommend to NTIA. NTIA reviews those recommendations and formulates federal inputs to the process. In some cases after this review, NTIA modifies the positions and proposals developed within the IRAC in keeping with Administration policies.

All federal agencies are members of the IRAC RCS and recommendations on most government issues are resolved in this subcommittee; and if not, the issues are resolved in the IRAC. NTIA has the responsibility for forming the Executive Branch position. In most, but not all cases, NTIA agrees with the RCS recommendations. In those cases where the agencies cannot reach agreement, the issues are elevated within NTIA and any necessary inter-agency discussions are conducted. NTIA considers the differing

viewpoints and reaches a conclusion. NTIA's willingness to make these difficult decisions often serves as motivation in helping the agencies reach agreements. Federal agencies can also raise their concerns to higher levels in Commerce, State or National Security Council if the issue involves substantial national security concerns.

4. In a report released in 2002, the General Accounting Office recommended that, following the 2003 WRC, the Secretary of State, the Secretary of Commerce and the Chairman of the Federal Communications Commission should jointly review the adequacy of the process used to develop and promote the U.S. position and prepare a joint report containing any needed recommendations for improvement. Would you describe the progress being made on this recommendation?

As the agencies and former WRC ambassadors stated in hearing testimony, the current WRC process has delivered very positive results for the United States. It is also important to note that the process has improved with each WRC. NTIA, on behalf of the Secretary of Commerce, is completing a comprehensive review of the WRC process and will be making recommendations for improvement. NTIA, the State Department, and the FCC began meeting in August of 2003 to discuss improvements that could build on our success at WRC. NTIA has taken the initiative to work with the FCC and Department of State to develop common views on the WRC process. NTIA has already made several improvements in the WRC preparation within the IRAC's RCS process for WRC-2007. The Department of Commerce will continue to collaborate with its WRC partners, the State Department and the FCC, in a joint effort to improve the WRC process. We are mindful, however, of the different responsibilities, as well as the independent status of the FCC.

5. Have you set preparatory deadlines with NTIA for developing your governmental WRC 2007 U.S. position?

General deadlines for completing U.S. proposals and positions for WRC-2007 were established in September 2003. These deadlines primarily relate to developing U.S. views and proposals for submission to the Inter-American Telecommunications Commission of the Organization of American States (CITEL). A second set of deadlines were established to prepare for ITU-R technical groups developing material for the Conference Preparatory Meeting, generally held about 6 months prior to the WRC.

Several related intermediate work schedules will be set as needed to meet those general deadlines.

6. Who has final approval of FCC and NTIA and State Department WRC07 preparatory deadlines and what happens if they are not met?

All three agencies participate in developing the timeline for WRC preparation. NTIA is primarily responsible for scheduling Executive Branch activities within the IRAC's RCS. The FCC handles the WRC public advisory process. A timeline for U.S. delegation activities is developed approximately one year prior to the WRC when the core delegation is formed. In the early stages, timelines are primarily driven by the CITEL meeting schedule. The agencies are aware of the need to complete proposals in time for adequate consideration by CITEL and by other countries. The responsibility for meeting the deadlines for the preparation of U.S. views and proposals falls mainly on the FCC's WRC coordinator and for NTIA, the IRAC RCS chair. Both NTIA and the FCC have consistently met deadlines for the last two conferences on most issues. When an issue(s) has not been resolved until later in the preparation process, the United States can propose additional ITU technical meetings in order to meet international deadlines for the technical study work. This comes at the cost of additional resources.

7. How can the FCC and NTIA better educate the commercial sector on the federal agencies' radiocommunication requirements, and related policies and decisions that affect U.S. conference proposals?

NTIA has continuous contact with the commercial sector by hosting seminars and other joint government industry events on specific issues. From a WRC perspective, NTIA and federal agencies are observers to the FCC's WRC Advisory Committee and its subgroups with the objective of informing the commercial sector of federal requirements. As part of our WRC process recommendations, NTIA intends to focus on improving direct consultations with the commercial sector on certain WRC issues. NTIA will also encourage federal agencies to deal earlier and more directly with commercial interests on contentious WRC issues.

8. If the NTIA, or one of the government departments you represent do not support the State Department's position on WRC agenda items, what is the process for resolving these differences?

A strong principle in WRC preparation is maintaining a separation between telecommunication policy issues where the State Department defers to NTIA and the FCC, and foreign policy considerations where the State Department has the principal responsibility. The State Department participates in both the FCC and NTIA preparatory processes. In some cases, the State Department acts as a mediator when there are differences between NTIA and FCC positions on how to treat a topic at the WRC. Once the U.S. proposal or position has been established, all agencies agree to support the position.

9. To lessen the possibility of irreconcilable positions, should the Department of State make clear its position on issues to the FCC and NTIA when these two agencies are developing their WRC positions?

NTIA and the FCC work together to develop WRC positions rather than receive them from State. WRCs typically do not have a high content of purely foreign policy related issues. The United States has successfully maintained the WRCs as "technical" not political conferences. The Department of State gives its principal guidance for upcoming WRCs in approving the agenda for the upcoming WRC at the preceding WRC. There are on-going consultations among the three agencies regarding WRC priorities and issues of concern. Early guidance from State on ITU resource and ITU procedural issues is helpful but often these can only be addressed in detail after basic U.S. positions are developed.

10. For the 2003 WRC, please provide a detailed accounting of NTIA sources and level of funding in the following categories.

Direct funds (travel, staff, equipment, and publishing)
Pre-conference planning
At the conference
Post-conference implementation
Representational funds spent in the name of the ambassador
Government source
Non-government sources
In-kind contributions
Dedicated staff

Equipment
Lodging

All NTIA funding is from appropriations. For NTIA, the approximate total direct expenditures for WRC-03 were $2,547,000 (note that some implementation activities are continuing into FY2004). Many of the meetings and other activities involving WRC issues also involve other matters, thus only a portion of the staff time for these meetings and activities is allocated to WRC.

Pre-conference planning:

FY2000 (after WRC-2000)
- Person years: 1.2
- Expense[1]: $206,000
- Travel: $10,000
- Equipment: none attributed
- Publishing: none attributed

FY2001
- Person years: 2.5
- Expense: $450,000
- Travel: $50,000
- Equipment: $16,000
- Publishing: none attributed

FY2002
- Person years: 3.5
- Expense: $630,000
- Travel: $70,000
- Equipment: $16,000
- Publishing: none attributed

FY2003
- Person year: 3.5
- Expense: $630,000

[1] All personnel expenses assume an average grade level of GS-14 step 3 at 178,000 per person year including direct personnel overhead. No other overhead is included in the amounts shown.

Travel: $91,000
Equipment: $16,000
Publishing: none attributed

For the WRC 2003 itself
Person years: 0.8
Expense: $124,000
Travel: $94,000
Equipment: none dedicated
Publishing: none attributed

Post-Conference Implementation:
FY2003
Person years: 0.2 person years
Expenses: $36,000
Travel: none
Equipment: none attributed
Publishing: none attributed[2]
FY2004 (estimated)
Person years 0.6 person years
Expenses: $108,000
Travel: None
Equipment: none attributed
Publishing: none attributed

Representational funds spend in the name of the ambassador:[3] None
Government sources: none
Non-government sources: none
In-kind contributions: none
Dedicated staff for WRC: none
Equipment: none
Lodging: none

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[2] The implementation of the WRC results is published in the NTIA Manual as part of the normal Manual updating

[3] NTIA does not have authority to budget or expend representational funds. Such authority has been requested.

11. What established staff positions do you have dedicated to WRC preparation and participation? Are they under one office at NTIA? Is WRC preparation their only job responsibility?

Preparation for WRCs is an OSM-wide team effort drawing on key domestic elements, as well as international components. There is no fully dedicated WRC staff at NTIA. Key staff members, however, devote a considerable part of their time directly to WRC preparation. Additionally, NTIA staff is involved in the ITU technical study work and other international and domestic activities that are closely related to WRC preparation. Most of this staff works in the Office of Spectrum Management International Division. Other offices within the Office of Spectrum Management provide some support for technical studies in the ITU-R. Many of these studies pertain to WRC issues.

12. How are financial estimates to carry out NTIA WRC activities developed?

Because NTIA's WRC preparation is so closely tied to other spectrum planning and international activities, no separate WRC budgeting is done. For the year the WRC is held, additional funds for travel are required and budgeted accordingly.

13. What guarantees do we have that you will continue to supply the level of resources needed to participate in international spectrum forums such as the ITU and the WRC?

WRC preparation is an integral part of NTIA's activities. While resource levels may vary and are subject to budget authorization, fully funding WRC activities will remain a critical NTIA priority. In fact, in the President's FY2005 budget request, we are seeking substantial increase in funding for international activities so that we can improve WRC preparations through increased contact with other countries, specifically in spectrum contexts other than WRC.

14. In the past, the United States has been faced with challenges regarding the implementation of WRC decisions; specifically those items that benefit government users. What were the consequences of this non-action to government users?

In the past there have been cases of delayed implementation in U.S. domestic rules of certain WRC actions affecting a small number of government activities. It is difficult to

assess what impact the delays had. A number of the delayed items involved allocation upgrades, e.g. from secondary to primary status. Therefore, the delays did not prevent implementation of government services, but in some cases may have complicated preparations for subsequent WRCs as a result. Thus, the implementation actions, though delayed, have allowed Federal agencies to use the spectrum allocations in an effective manner. A concerted effort between NTIA and the FCC at senior management levels improved the implementation of the WRC Final Acts. This new commitment at senior levels was followed by robust and detailed action by the FCC and NTIA to implement WRC-03 decisions. These pro-active steps resulted in establishment of a clear and transparent timeline for implementation of WRC-03 decisions including outstanding WRC agenda items from prior conferences. These improved processes and timelines will form the precedent by which NTIA and the FCC implement future WRC decisions.

15. How did the NTIA prioritize actions required to complete implementation?

For WRC-03, it was not necessary to prioritize actions to be taken. At the conclusion of the WRC, the FCC had already begun rulemakings on several of the key items resolved internationally by the WRC. For example, the 5 GHz band allocation changes and earth stations on-board vessels rulemakings were already underway. The remaining WRC-03 results could be taken as a single package. All proposed changes from the Executive Branch on these remaining issues were adopted at the same time with the exception of one item that required some additional time to develop an appropriate Federal Government allocation.

16. To what extent was coordination with the FCC necessary to complete the implementation?

The implementation of WRC results is a joint effort between NTIA and the FCC involving significant coordination. Almost all of the issues involve Federal Government interests as well as commercial interests. Thus, NTIA coordinates on all items. The FCC rulemaking process is the appropriate vehicle to obtain public comments on WRC implementation actions, though nothing would prevent NTIA from conducting a public rulemaking with respect to Federal Government allocations and rules for spectrum sharing with Federal systems. NTIA participates at the staff level in all FCC rulemakings affecting spectrum issues. Rulemaking for WRC-03 issues is currently underway.

17. What do you see as the role of NTIA in the implementation process?

NTIA has the responsibility to review and adopt any necessary changes in its regulations resulting from modification of the Radio Regulations of the International Telecommunication Union. As noted above, NTIA coordinates changes with the FCC and NTIA participates in the FCC's rulemaking. Normally NTIA works primarily on a staff-to-staff basis with FCC staff on issues of mutual interest including WRC implementation. This is done in conjunction with the FCC that has the same responsibility. NTIA provides proposals for modification of some rules (specifically the table of frequency allocations) to the FCC where jurisdiction is shared with the FCC. The rule changes become final upon publication in the Federal Register.

18. Who has statutory responsibility for implementation of the WRC agenda items?

There is no specific statutory obligation to implement WRC agenda items. Agenda items are implemented as a result of U.S. treaty obligations as a member of the International Telecommunications Union.

19. How does the United States track which aspects of the Final Acts have been implemented? Who is responsible for keeping these records?

Both FCC and NTIA maintain records concerning which items from the Final Acts have been implemented. NTIA has not made a formal report with this information in the past but plans to do so for WRC-2003 onward.

20. What actions are the FCC, Commerce and State taking to implement outstanding WRC Final Acts since 1993? Are these actions ad-hoc in nature or are they being formally institutionalized by your agencies for use in future WRCs?

All necessary actions from WRCs prior to 2003 have been completed or are the subject of current FCC rulemakings. These domestic regulatory changes, as well as operational experience with the changes, are part of the baseline for proposals to future Conferences.

21. Should the United States develop a plan and schedule to complete rulemaking for each WRC agenda item? If so, who should develop it? And within what timeframe of WRC completion should the plan be executed?

In August 2003, the NTIA and FCC issued press releases with a jointly agreed plan for implementing WRC-2003 results. This press release can be viewed on the NTIA home page at http://www.ntia.doc.gov/ntiahome/press/2003/ImplementationPlan080703.htm. This plan added certainty for the public and government agencies that all relevant items would be addressed. It has also added timeliness in getting NTIA recommendations complete as well as FCC rulemakings started. As part of the WRC process review, NTIA is recommending that for future WRCs such a joint plan be developed and issued as soon as possible after the completion of the WRC. We are working with the FCC to formalize the improved WRC implementation process.

22. Who do you see as your spectrum constituents as the federal spectrum manager? The role of NTIA as federal spectrum manager and Commerce representative is confusing. You seem to also share the responsibility for industry now residing with the FCC. Can you clarify your WRC representational priorities?

NTIA has a dual role, one being the spectrum manager for federal agencies and the other as the President's principal advisor on telecommunications. The second of these roles also relates to the overall Department of Commerce responsibilities to promote international commerce and United States economic development. The Administration must consider all aspects of U.S. spectrum use. At the same time, NTIA ensures that the government's mission requirements are met. The Secretary of Commerce, Don Evans, has made it clear that we must strive for and achieve both economic security and national security and not one at the expense of the other.

23. How much does your knowledge of industry preferences and objectives influence what NTIA supports as a WRC proposal for negotiations with the FCC?

Industry preferences and objectives are a critical component of our drive to balance economic and national security in making spectrum decision. NTIA is informed of and considers industry interests in making WRC proposals. Ultimately, industry support is required both at the WRC and in domestic implementation. NTIA has found it very helpful to gain a full understanding of industry needs, because often approaches

acceptable to both the Federal agencies and industry emerge from such discussions. It is also often the case that Federal agencies are prime users of commercial systems at issue, particularly those with global reach. NTIA does not represent commercial interests in preparing Executive Branch positions for WRCs. Of course, once a United States position is established, including those for commercial systems, NTIA actively supports that position.

24. How would you describe the distribution of responsibilities among the agencies participating in WRCs?

An important aspect of WRC preparation is staffing the delegation with the appropriate members. NTIA and FCC are responsible for providing suggestions to the Department of State and the ambassador on recommended delegation structure and staffing. NTIA and FCC have served as vice-chairs of the delegation. The principal responsibility of this position is to give final views on positions before and during the WRC. U.S. spokespersons are selected based on experience and abilities from NTIA, FCC, the Department of State or other agencies as appropriate. Other delegation jobs are filled as agencies are willing and able to do. Attached is the structure for WRC-03. NTIA is constrained because it does not have the authority to expend representational funds. Thus, NTIA has not made any direct financial contributions to the work of the delegation.

25. What criteria does the State Department require for selection of NTIA personnel to the U.S. delegation?

The Department of State has not issued formal guidance as to its criteria for selecting NTIA personnel to the U.S. delegation. NTIA participants have subject-area knowledge and involvement in preparatory activities over several years. Delegates must be able to work with delegates from other countries and have worked with other countries during the preparatory phase. Typically, NTIA delegates are U.S. spokespersons for one or more issues that they have been responsible for in the preparations leading up to WRC.

26. Who is responsible for training the delegation and when does this training begin?

Each federal agency and commercial entity is responsible for training their WRC personnel, whether it is on-the-job training or formalized training.

Past experience in WRCs and other ITU meetings is one of the main criteria for being appointed as a WRC delegate. "Hands-on" experience with the ITU culture is the best way to be an effective delegate. This requires that individuals attend meetings where their immediate contribution would not necessarily justify their participation, however, they gain experience by exposure to the process. This applies to WRC delegations as well where less experienced individuals are included for the purpose of gaining the necessary experience in order to participate more effectively in future delegations. This process has worked quite well in maintaining a cadre of experienced WRC delegates at the FCC, NTIA, and the Department of State, as well as other government agencies.

WRC-03 Ambassador Janice Obuchowski's contribution to future U.S. WRC preparations is delegation Training Day. Ambassador Obuchowski's vision was to bring the U.S. delegates up to a common threshold of knowledge and experience using a "team building exercise" as the vehicle. NTIA took Ambassador Obuchowski's Training Day vision and mapped out an entire day of training focused on conference technical issues, rules of procedure, microphone and negotiation strategy and foreign customs and courtesies. NTIA worked closely with State, the FCC, Federal Government Agencies and the private sector to make Ambassador Obuchowski's vision a reality and a model for future WRC delegations.

27. What other training does your department or the State Department provide or require of US delegates?

All WRC delegates have assigned areas for which they are responsible and with which they should be familiar. Delegates need to be familiar, as well, with the workings of the WRC and ITU. NTIA has provided formal training to government employees and government contractors to familiarize new staff to ITU and U.S. procedures for ITU-R study groups, Conference Preparatory Meetings and WRCs. NTIA is in the process of expanding this training to a course with a focus on practical exercises. This will help ensure that there is staff prepared to participate in WRC in coming years. Private sector participation in such a course is also being considered.

28. What are the strengths and weaknesses of the current arrangement for choosing the U.S. delegation leadership?

Appointment of the U.S. Head of Delegation with the personal rank of Ambassador is a strength of the current process. An appointed ambassador carries the necessary prestige

and influence to bring the United States Delegation together and enhance the United States= negotiating strength at the WRC. An ambassador that "hits-the-ground-running" coupled with a well-developed and functioning interagency process has proven to be a successful combination. For instance, the last two U.S. Heads of the Delegation worked informally for several months to familiarize themselves with conference issues and other administrations' delegations prior to being formally appointed. This greatly increased their knowledge and effectiveness, familiarizing them with the issues and their foreign counterparts in advance of their appointment. One of the drawbacks to the current process is that there often is a lengthy period of uncertainty surrounding the selection of the ambassador. This is an outgrowth of the 6-month duration of the appointment as ambassador and the process by which the individual is selected. In order to correct this problem, the head of delegation could be selected and begin their work at the Department of State prior to their appointment as an ambassador. Another option would be to legislatively change the term of the temporary appointment for WRC ambassadors from 6 months to 9 or 12 months.

29. Are six months sufficient to carry out the Ambassador's duties and responsibilities for preparing for and attending the WRC?

There is a consensus among WRC participants that a 6-month appointment is too short. To complete all of the required actions, the ambassador, even one with a solid telecommunications background and international experience, needs more than 6 months. We recommend that the ambassador be brought into the process in an official capacity up to one year prior to the WRC. One of the advantages of an earlier appointment is that the ambassador would be able to meet and work with the other countries' heads of delegation, especially those who are WRC leaders and who have represented their administrations in multiple WRCs. The ambassador could also participate in the conference preparatory meeting, 6 months prior to the conference, to experience the technical debate, the politics and develop relationships with established international principals. The Ambassador's leadership in consultations with other administrations is a key factor in achieving U.S. conference goals and objections. NTIA recommends conducting consultations under the Ambassador's leadership earlier than the current practice, which is less than 6 months prior to the WRC.

30. Is the United States negotiating strength improved or hindered by the use of an appointed political representative working with career spectrum managers and ITU experts from other countries?

The United States has been very successful in achieving its objectives with delegations headed by temporary political appointees. There has been concern that the success for a specific WRC appears to be dependent on the qualities of the individual ambassador. While this may appear to be the case, experience over several WRCs indicates that the process for selecting the ambassador ensures that the ambassador is generally qualified. The political skills and policy "muscle" that an appointed ambassador brings has compensated for any lack of knowledge or WRC experience. We do not believe that a career employee with other responsibilities would likely be able to devote the time necessary to perform the intense activities leading up the WRC. If a career individual were to be appointed only for the particular WRC, there would be many of the same issues as with a political appointee without the benefit of having the political appointee stature. In addition, a political appointee often brings relationships and skills to the delegation that complement and round out the delegation's career talents and experience which is focused on international spectrum matters.

Another criticism that is sometimes made is that the U.S. ambassador may not be able to work with other heads of delegation due to lack of direct ITU experience. While the ambassador plays a critical role, and needs to deal intensively with other heads of delegation on some issues, there are experienced government career delegates that can provide the necessary substantive and technical knowledge.

ATTACHMENT 1

Source: U.S. WRC-03 Delegation Report (annotated)

ANNEX B: U.S. Delegation Leadership, Committee Chairpersons and Spokespersons

Administration	
Head of Delegation	Janice Obuchowski
FCC Vice Chair	Alex Roytblat - FCC
NTIA Vice Chair	Jim Vorhies - NTIA
State Dept. Vice Chair	Frank Williams - State
Delegation Coordinator	Kevin Kirsch - DoD
Executive Director	Anne Jillson - State
Outreach Coordinator	Chris Murphy - FCC
Security Coordinator	Scott Rutherford - DoD
Committee Leaders	
Steering (COM1)	Janice Obuchowski
Credentials (COM2)	Anne Jillson - State
Budget (COM3)	Anne Jillson - State
Regulatory Matters (COM4)	Doug Spalt - State
Allocation Matters (COM5)	Cecily Holiday -State
Editorial (COM6)	Tom Gergely – National Science Foundation
Appendix 30 and 30A (GPT1)	Rockie Patterson - FCC
Report, Studies, Agendas (GPT2)	Frank Williams - State
U.S. Subcommittee Leaders	
Procedural (4A)	Larry Reed - FCC
Non-GSO Issues (4B)	Scott Kotler - FCC
MF & HF Band Broadcast (4C)	Don Messer – International Broadcasting Bureau - State
Radionavigation/Radiolocation (5A)	Darlene Drazenovich - NTIA
Mobile Services (5B)	Marcus Wolf - FCC
Fixed Services & H.A.P.S. (5C)	Edward Jacobs - FCC
5 GHz and Science Issues (5D/E)	Charles Glass - NTIA

Spokespersons

Charlie Breig-FCC	Larry Reed - FCC
Darlene Drazenovich NTIA	Doug Spalt - State
Cecily Holiday- State	Wayne Whyte - NASA
Tom Gergely - NSF	John Zuzek - NASA
Don Messer - IBB	

Team Leaders

AI-1.1 (Team 4A1)	Larry Reed - FCC
AI-1.10 (Team 4C4)	Paul Arnstein – Coast Guard
AI-1.11 (Team 5B2)	John Giusti - FCC
AI-1.12 (Team 5D4)	Brad Kaufman - NASA
AI-1.13 (Team 5C1)	Edward Jacobs - FCC
AI-1.14 (Team 4C5)	Paul Arnstein - Coast Guard
AI-1.15 (Team 5A1)	Muhammad Khan - DoD
AI-1.16 (Team 5B3)	Marcus Wolf - FCC
AI-1.17 (Team 5A2)	Mike Richmond - FAA
AI-1.18 (Team 5C2)	Frederick Moorefield - DoD
AI-1.19 (Team 4B1)	Frederick Moorefield - DoD
AI-1.20 (Team 5B4)	Marcus Wolf - FCC
AI-1.21 (Team GTP2A)	Charlie Breig - FCC
AI-1.22 (Team GTP2B)	Charlie Breig - FCC
AI-1.23 (Team 4C6)	Merri Jo Gamble - Justice
AI-1.24 (Team 5A3)	Jerry Conner - DoD
AI-1.25 (Team 5C3)	Edward Jacobs - FCC
AI-1.26 (Team 4A5)	Edward Jacobs - FCC
AI-1.27 (Team GTP1A)	Rockie Patterson - FCC
AI-1.28 (Team 5A4)	Mike Richmond - FAA
AI-1.29 (Team 4B2)	Chris Hofer - NTIA
AI-1.3 (Team 5B1)	Vernita Harris - NTIA
AI-1.30 (Team 4A6)	Ed Davison - NTIA
AI-1.31(Team 5B5)	Dave Franc and Marcus Wolf – NOAA, FCC
AI-1.32 (Team 5C4)	Edward Jacobs - FCC
AI-1.33 (Team 4A7)	Charlie Breig - FCC
AI-1.34 (Team 4B3)	Charles Rush - FCC
AI-1.35 (Team GTP1B)	Rockie Patterson - FCC
AI-1.36 (Team 4C7)	John Wood – International Broadcasting State
AI-1.37 (Team 4B4)	Scott Kotler - FCC

AI-1.38 (Team 5D5)	Ralph Puckett - DoD
AI-1.39 (Team 5C5)	Scott Kotler - FCC
AI-1.4 (Team 5D1)	Mike Richmond - FAA
AI-1.5 (Team 5D2)	Charles Glass - NTIA
AI-1.6 (Team 5D3)	Charles Glass - NTIA
AI-1.7 (Team 4C2)	John Wood – International Broadcasting State
AI-1.8.1 (Team 4A3)	Robin Haines - NTIA
AI-1.8.2 (Team 4A4)	Robin Haines - NTIA
AI-1.9 (Team 4C3)	Paul Arnstein – Coast Guard
AI-2 (Team GTP2C)	Larry Reed - FCC
AI-3 (Team 4A2)	Larry Reed - FCC
AI-4 (Team GTP2D)	Larry Reed - FCC
AI-5 (Team GTP2E)	Larry Reed - FCC
AI-6 (Team GTP2F)	Larry Reed - FCC
AI-7.1 (Team 4A8)	Larry Reed - FCC
AI-7.2 (Team GTP2G)	Frank Williams - State

April 23, 2004

The Honorable Christopher Shays
Chairman, Committee on Government Reform
U.S. House of Representatives
Congress of the United States
2157 Rayburn House Office Building
Washington, D.C. 20515-6143

Dear Chairman Shays:

Thank you for the opportunity to testify before the Subcommittee on National Security, Emerging Threats, and International Relations regarding preparations for the World Radio Conference. I am pleased to respond to the Subcommittee Members' post-hearing questions in the attachment to this letter.

Please let me know if you or other Members of the Subcommittee have further questions or need additional information.

Sincerely,

Kathleen Q. Abernathy

Answers for the Record
Commissioner Kathleen Q. Abernathy
Federal Communications Commission

1. **In a report released in 2002, GAO recommended that the Secretary of State, Secretary of Commerce and Chairman of the FCC should review processes used to prepare for the WRC and prepare a report with recommendations for improvements. Can you describe the progress that has been made on this recommendation?**

   In response to the GAO recommendation and in light of the accomplishments achieved at WRC 2003, the FCC conducted an internal and a public review of the agency's WRC 2003 preparations. Based on the outcome of those reviews, the FCC produced an assessment report on the efficacy of its prepatory activities for WRC 2003 which was publicly released. The lessons learned through the assessment have already been applied at the initial phases of the FCC's prepatory effort for the next WRC in 2007 and will be employed continually in the FCC's WRC prepatory process. The FCC is also working with the Department of State and the National Telecommunications and Information Administration (NTIA) on formulating a joint response to the relevant congressional committees as recommend by the GAO

   The FCC's assessment report is available publicly at: http://www.fcc.gov/wrc-07/docs/WRC_REPORT_FINAL.pdf.

2. **How do you believe the United States can achieve balance in the consideration of government and non-government spectrum issues without a well-defined national spectrum strategy? What should be included in a White House international spectrum strategy?**

   In order to ensure that issues surrounding government and non-government spectrum requirements are coordinated, the FCC and NTIA hold multiple meetings each year at the principal, as well as the staff, level. In addition, just this past year, on January 31, 2003, NTIA and the FCC executed a Memorandum of Understanding to facilitate spectrum management for both government and non-government spectrum.

   The FCC has also made significant progress on spectrum management reform over the past couple of years. Specifically, the FCC has initiated many proceedings to improve access to and the efficient use of the radiocommunications spectrum, and to improve interference management.

   Taken together, these interagency spectrum planning activities and rulemaking proceedings constitute a national spectrum planning strategy that provides a framework for efficient and innovative use of the spectrum for private and public uses. Admittedly, this is based on voluntary, cooperative efforts between the FCC and NTIA, but in some respects this approach ensures that each constituency – government and private users – are well represented in the public policy debates.

3. **What is the FCC's role in the White House Spectrum Initiative?**

   The FCC, as an independent agency, has observer status in the Administration's spectrum initiative inquiry. The FCC has actively participated in the Initiative through its observer status.

4. **To what extent do the Commissioners actually approve and support the positions that the FCC takes internationally on WRC matters?**

   As an initial matter, FCC Commissioners are regularly briefed on the draft WRC proposals the FCC may recommend to the Department of State. However, FCC Commissioners do not approve the draft proposals from the WRC Advisory Committee since they are merely technical recommendations to the State Department and are not legally binding. To the extent decisions taken at the WRC require FCC adoption, all Commissioners vote on the item.

5. **What are the strengths and weaknesses of the current arrangement for choosing the US delegation leadership?**

   An Ambassadorial level political appointee as head of the U.S. WRC delegation sends a strong signal to the world regarding the importance the United States places on the outcome of the WRC. However, the short-term nature of the appointment does create time pressures on the United States and limits the ability of the Ambassador to make international contacts. To address this issue, principals from the FCC, NTIA and the Department of State meet regularly to address any critical issues and form a core delegation of senior staff members to help prepare for the upcoming Conference in advance of the Ambassador's appointment.

6. **Is the United States' negotiating strength improved or hindered by the use of an appointed political representative working with career spectrum managers and ITU experts from other countries?**

   The prestige associated with an Ambassadorial rank head of delegation combined with a career civil service staff, has allowed the United States to be extremely successful at WRCs. The core delegation of career civil service staff has been able to maintain on-going relations with the spectrum managers and ITU experts from other countries despite the change in the head of delegation.

7. **Do you believe six months are sufficient to carry out the ambassador's duties and responsibilities for preparing and attending the conference?**

   The current appointment process, with a 130 working day limit to the term of the WRC Ambassador, does impose substantial time constraints. It may be helpful to try and bring on the Ambassador a little earlier, in the form of contactor to the Department of State, in order to be able to prepare for the Conference. But I believe it would be a mistake to sacrifice the Ambassador level position to ensure earlier preparation. Regardless of the time frame, the FCC is committed to continuing to actively work with the Ambassador to ensure that she or he is able to carry out their duties successfully.

8. **If the FCC does not support a State Department WRC position, is there any process available by which the Commission can appeal it?**

   While there is no formal appeal process, because of the negotiated nature of the WRC prepatory process, the State Department has historically worked with the FCC and other interests to ensure that a consensus position can be agreed upon. In fact, throughout the WRC prepatory process, the FCC, the Department of State and NTIA meet often to resolve any difficult issues that may arise. In this manner, there is rarely, if ever, a time where the State Department has adopted a U.S. WRC position that has not been fully coordinated with the FCC. Moreover, in formulating U.S. positions for the WRC, the Department of State relies on the technical expertise of the FCC and NTIA. Under that arrangement, WRC positions are aligned with U.S. domestic spectrum policies and priorities.

9. **To lessen the possibility of irreconcilable positions, should the Department of State make clear its position on certain issues to the FCC and NTIA when these two agencies are developing their WRC positions.**

   Clarity by the State Department is critical to the overall success of the coordination process. Fortunately, the consistent coordination between the FCC, NTIA and the Department of State, enables all three agencies to continually discuss and work through any issues that may occur. Another critical piece of this coordination effort, however, is the FCC, through the public comment process and the WRC Industry Advisory Committee (WAC) to fully vet the private sector, and state and local government positions.

10. **For the 2003 WRC, please provide a detailed accounting of FCC sources and level of funding in the following categories:**

    Direct funds (travel, staff, equipment and publishing)
    Pre-Conference Planning
    At the conference
    Post-conference implementation
    Representational funds spent in the name of the ambassador
    Government sources
    Non-government sources
    In-kind contributions
    Dedicated staff
    Equipment
    Lodging

    I have provided in response to this question a detailed accounting in Attachment A to this letter.

11. What established staff positions do you each have dedicated to WRC preparation and participation? Does this staff have other job responsibilities?

The WRC preparation and participation is a highly dynamic process. The preparations for each WRC extend over several years and are punctuated by surges in activity, such as regional or ITU meetings. These activities culminate in the Conference Prepatory Meeting (CPM) and finally the WRC itself. This type of effort requires a flexible staffing approach. To coordinate the FCC's WRC efforts, we have established the permanent position of a WRC Director. The WRC Director works closely with the technical and regulatory experts within the agency that follow the issues relevant to the WRC agenda. Thus, in addition to the WRC Director, staff involvement in WRC activities is correlated to the level of WRC prepatory activities. Under this arrangement, the agency's limited staffing resources are utilized in the most efficient and productive manner.

12. How are financial estimates at the FCC to carry out WRC activities developed?

With respect to WRC travel, the FCC forecasts the costs of travel required for the WRC and its preparations. The FCC estimates the costs associated with attending the international prepatory meetings and the Conference itself, and incorporates these costs into the travel budget for the relevant fiscal year. The Commission also allocates money in its IT budget to ensure adequate information/technology resources including international wireless telephones and laptop computers.

13. Given the financial and other resource commitments industry makes to the WRC, should the FCC and other agencies budget specifically for WRC activities?

The FCC does specifically budget for the significant travel costs associated with each WRC. The agency does this for each fiscal year while taking into account its overall budget and priorities.

14. Does the FCC earmark funding specifically for WRC prepatory activities?

The FCC recognizes the importance of WRCs and therefore specifically budgets travel money to cover the necessary expenses. However, the agency does not earmark the fund for WRC purposes, but instead it is included in the overall budget for the FCC.

15. What guarantees do we have the FCC will continue to supply the level of resources needed to participate in international spectrum forums such as the ITU and the WRC?

The WRCs have the broadest implications for U.S. industry, government and consumers of any ITU Conference. That is why ITU preparation and participation has always been one of the FCC's critical missions. The WRC decisions directly affect the use of radio spectrum on an international, cross-border and domestic basis. The FCC's involvement in the WRC is therefore imperative to its ability to effectively manage and regulate spectrum use in the United States. Previous WRCs, including WRC 2003, demonstrate that there is a direct correlation between the extent of advance preparation before the Conference and the degree of success achieved at each Conference. This preparation

entails active participation in international spectrum forums such as the ITU and CITEL, and regional and bilateral meetings. For these reasons, the FCC intends to maintain its participation in international spectrum forums. This obligation is inherent in Section 1 of the Communications Act which requires the FCC to "make available...to all people of the United States...a rapid, efficient, Nation-wide and world-wide wire and radio communication service...."

16. Do you believe there is a better mechanism for funding U.S. participation in WRC's other than gathering together funds from various federal and private sector sources?

The FCC, other government agencies and the private sector all have equities at stake at the WRC. We therefore allocate accordingly from our overall budget to ensure that we can safeguard these equities with the WRC prepatory process. The FCC believes that the best mechanism for ensuring adequate funding is to allow the respective agencies and the private sector to decide the appropriate levels of resources to use for WRCs from their own budgets. Of course, the success of this approach is dependent upon adequate funding overall for the FCC and other government agencies.

17. What criteria does the State Department require for selection to the US delegation?

While we cannot speak for the State Department, we can explain the role of the FCC. The FCC's role on the U.S. delegation is unique. The FCC is the only government agency responsible for representing the private sector, and state and local government interests consistent with the public interest and U.S. policies, rules and regulations. In order to fulfill this responsibility, the FCC is often reliant on the expertise of private sector representatives on the U.S. delegation and listens closely to their views. It is therefore, the FCC's objective to ensure that the private sector expertise and interests are adequately represented while keeping the delegation size at a manageable level. Considering the high-level of private sector interests in the WRC, the FCC works with the Department of State and NTIA to develop general criteria for participation on the U.S. delegation. These criteria are made available to the interested private sector entities. The FCC's staff participation on the U.S. delegation is limited to essential WRC issue experts.

18. What training does your department or the State Department provide or require of US delegates? Are more training programs or mandatory training needed for delegations and the Ambassador?

The effective advocacy of U.S. interests at WRC requires an in-depth understanding of technical and regulatory spectrum management concepts. These concepts are frequently revised to keep pace with rapid development of radiocommunications services. To maintain the high level of expertise of its WRC delegates, the FCC offers several internal and external training opportunities. For example, through the FCC University Program, FCC staff may take advantage of courses that will enable them to improve their foreign language or negotiation skills. Also, the FCC's U.S. delegates are predominantly the subject matter experts with a good understanding of ITU processes.

19. How is country information collected and shared between the Department of State/NTIA and the FCC and other interested federal departments? Can this process be improved?

Regional support has become an increasingly important driver in the outcome of each WRC. In preparation for WRC 2003, for example, the FCC made personnel and resource commitments to follow the European, Asian-Pacific, African and Caribbean regional preparations. The FCC provided detailed reports on these meetings to the WAC and other federal government agencies. The FCC also provided regulatory updates on the CITEL and ITU meetings. These reports enhanced the U.S. prepatory efforts by considerably improving the understanding of foreign views, positions and proposals and being able to discuss those views with representatives from other countries. It would be beneficial to establish a centralized repository (i.e., database) of information on the foreign views and positions. The FCC will work with the Department of State and NTIA on developing such a database.

20. To what extent have final acts been implemented for the WRC since 1993? If all final acts from these WRCs have not been implemented, what remains and why?

All of decisions from prior WRCs have been addressed and implemented, as appropriate. The FCC has three pending proceedings which, upon their conclusion, will implement the remaining allocation decisions made at WRC 2003.

21. How does the FCC track which aspects of the final acts have been implemented? Does the FCC have any type of database for tracking implementation of the final acts? If not, are there plans to create one? Does the FCC have statutory responsibility for the tracking of the implementation of WRC Final Acts or does the State Department?

Following each WRC, the FCC compiles a list of action items and develops a plan to implement all actions for WRC implementation. With respect to spectrum allocations, the FCC's Office of Engineering and Technology tracks all of the resulting changes and develops detailed methods for implementation in coordination with NTIA.

22. Following the 2003 WRC, the FCC issued, for the first time, a final acts implementation schedule in conjunction with NTIA. Is this procedure going to be institutionalized in the future?

Yes. The FCC and NTIA are currently formalizing an agreed approach for promptly implementing future WRC actions.

23. What is the role of the FCC in the implementation process?

The FCC and NTIA have a joint role for implementing the WRC decision. As such, the FCC must amend the U.S. Table of Frequency Allocations as well as amend its technical rules. To accomplish this result, the FCC carries out public rulemaking proceedings.

24. Should the United States develop a plan and schedule to complete rulemakings for each WRC agenda item? If so, who should develop it? And within what timeframe of WRC completion should the plan be executed?

We firmly support swift implementation of the decisions from each WRC. Further we believe that the plan for implementation should be agreed to by the FCC and NTIA. However, we do not believe it is prudent to adopt arbitrary guidelines for WRC implementation. Many of the decisions taken at WRCs are complex and require significant changes to the United States Table of Frequency Allocations. In other cases it may be necessary to relocate existing users. In such situations, a fact specific schedule may be more appropriate. Therefore, while we support formalizing the process for agreeing to an implementation schedule for WRC decisions following each Conference, we believe that the schedule needs to be tailored to reflect the individual nature of the decisions of each Conference.

25. In the past, we have heard that U.S. government and commercial stakeholders had trouble resolving their differences in developing U.S. negotiating positions on WRC agenda items. How has this problem affected our ability to conduct international negations?

Not surprisingly, there are times when U.S. government interests may be in conflict with those of some of the U.S. stakeholders. This allows for the early identification of potential problem areas. That is why we dedicate substantial resources upfront to ensuring effective communication between the public and private sectors. While we have generally been able to resolve any differences before the Conference, at times in the past, these differences have not always been resolved on a timely basis and this has hurt our international outreach efforts. Through the increased coordination between the government and the private sector, we have begun to lessen this time delay.

Further, while it may be preferable to resolve all differences as quickly as possible, an on-going dialog both domestically and internationally can serve to further inform and refine U.S. positions, which is also beneficial. For example, with regard to making new spectrum available for wireless networking devices in the 5 GHz region of the spectrum, one of the highest profile agenda items at WRC 2003, additional technical analyses showed that spectrum sharing was possible between wireless networks and U.S. Department of Defense radars. As a result, an agreement was reached with industry, federal government spectrum users, the FCC and NTIA several months in advance of the Conference. This enabled the United States to reach a successful result for all U.S. interests at WRC 2003.

26. Has the FCC set prepatory deadlines for developing the FCC's WRC 2007 US position?

Yes. There are many advantages to having established U.S. positions early on in the WRC prepatory process. That is why the FCC developed a draft timeline for the prepatory efforts based on the assumption that the next WRC will take place sometime in mid-2007. With that understanding, the FCC expects that the next CPM will take place in late 2006. Recognizing that it would be highly advantageous to have the U.S.

positions on WRC 2007 finalized prior to the CPM, the FCC intends to work closely with the other federal agencies and the private sector to develop draft Conference proposals on most WRC 2007 Agenda Items by early 2006.

27. How can the FCC and NTIA better educate the commercial sector on the federal agencies' radiocommunication requirements, and related policies and decisions that affect U.S. conference proposals?

This has been an important focus of both agencies over the past several years. First, to increase transparency of and to promote public participation in the WRC prepatory process, the FCC solicits comments from the public on the federal agencies' views on WRC and proposals received from NTIA. In addition, because many members of the U.S. government participate in the FCC's WAC, there is often an open dialogue on issues of joint interest. Further, NTIA and the FCC actively coordinate in this area, and where there is no issue of national security, bring in industry to these discussions.

28. Do you think the FCC has improved its reputation at the ITU for consistency in WRC efforts? By that I mean, the FCC has been known to fight hard internationally for a global allocation, get it, and then come home, change its mind, and have to start over again – to the consternation and upheaval of the affected industries.

Yes. The FCC strives to ensure transparency of its WRC preparations. The FCC's positions for the WRC are formulated only after taking into account recommendations from the WAC and comments received in response to the Public Notices. Through this process, the public, government agencies and even foreign entities are afforded ample opportunity to advocate their views on WRC issues. The FCC's domestic rulemaking process is also transparent and accessible to the public in accordance with the statutory requirements. Given such a high degree of transparency and accessibility in both the WRC and domestic rulemaking process, it is unlikely that any FCC action would take the private sector by surprise or that we will be in the position of having to reverse ourselves following the conclusion of a WRC.

United States Department of State

Washington, D.C. 20520

April 28, 2004

Dear Mr. Chairman:

Following the March 17, 2004 hearing at which Ambassador David A. Gross testified, additional questions were submitted for the record. Please find enclosed the responses to those questions.

If we can be of further assistance to you, please do not hesitate to contact us.

Sincerely,

Paul V. Kelly
Assistant Secretary
Legislative Affairs

Enclosure:
As stated.

The Honorable
Christopher Shays, Chairman,
Subcommittee on National Security, Emerging Threats,
And International Relations,
Committee on Government Reform,
House of Representatives.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#1)
Committee on Government Reform
March 17, 2004

Question:

Did the Department of State have a schedule for establishing the final positions on issues for the 2003 WRC? Was the schedule met in 2003? What is the Department's schedule for the 2007 WRC?

Answer:

The Department uses, and meets, the timelines for the submission of proposals set out in the ITU General Rules. General Rule 40 (Marrakesh, 2002; an equivalent provision, numbered differently, has been agreed at numerous preceding Plenipotentiary Conferences) states that proposals are due eight months following the dispatch by the Secretary-General of invitations to attend the WRC. Invitations are sent a year before the WRC convenes. This schedule was used by the Department for WRC-03. We will apply the same schedule for the next WRC.

Positions are not the same as proposals. Positions are documents for use within the delegation bearing upon our posture on foreign proposals or other issues. These are prepared generally prior to the Conference Preparatory Meeting which precedes the WRC by about six months. They are updated, or new ones are prepared, as issues develop and events warrant.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#2)
Committee on Government Reform
March 17, 2004

Question:

As statutory leadership authority for WRCs, are you responsible for setting timelines and schedules of the US WRC preparatory process at the FCC and NTIA? If so, have you set these schedules for the 2007 WRC?

Answer:

The Department works cooperatively with NTIA and FCC to meet the timelines for the submission of proposals set out in the ITU basic instruments. The particulars are set out in response to Question #1.

We also meet deadlines established by CITEL, the telecommunication arm of the Organization of American States, with respect to proposals destined for a WRC. While they are not laid down in the same sense as the ITU deadline, meeting the CITEL deadline allows our proposals to serve as a basis for the Western Hemispheric view. This is a particularly critical aspect given the fact that the ITU operates on a one-nation-one-vote basis.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#3)
Committee on Government Reform
March 17, 2004

Question:

If the State Department finds it necessary to change a position on a WRC agenda item that has already been agreed to by both FCC and NTIA, what is the process for making and communicating such a change?

Answer:

The process regarding changing positions is to communicate with NTIA and FCC in an effort to reach agreement among all three agencies on a U.S. position for the WRC. In all cases the Department reviews proposals from a U.S. policy standpoint prior to their submission to the ITU so as to ensure that broader foreign policy interests are met.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#4)
Committee on Government Reform
March 17, 2004

Question:

If the FCC and NTIA do not support the State Department's position on WRC agenda items, which is the process for resolving these differences? Is it timely and open?

Answer:

The process is that State, NTIA and FCC will discuss the matter in an effort to reach agreement between the three agencies. The agencies seek to resolve the matter in an open process in a timely fashion.

Should initial agreement not be reached among the three agencies as occasionally happens, the position is held for further discussions. If resolution is not possible, the matter has infrequently been referred to the National Security Council for decision.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#5)
Committee on Government Reform
March 17, 2004

Question:

What is the International Telecommunication Advisory Council's (ITAC-R) role in finalizing/approving U.S. positions for WRCs? Does this Council work or meet with the FCC WRC Committee or the IRAC's WRC Subcommittee? If so, is there a formal process for their contact?

Answer:

ITAC-R is chartered under the Federal Advisory Committee Act to provide advice to the Department. As such, it is not linked to FCC or IRAC. The ITAC and the National Committee comment upon the development of inputs to the ITU-R process throughout the preparatory phase. Study Group contributions and issues are part and parcel of the ITAC process.

In similar fashion, inputs to the Conference Preparatory Meeting, the second session of which precedes the WRC by about six months, are developed through the ITAC-R process. Throughout, of course, many of the same players are involved in the ITAC-R process, the Department of Commerce's IRAC-based WRC preparatory process, and the FCC's Industry Advisory Committee.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#6)
Committee on Government Reform
March 17, 2004

Question:

In Secretary Gallagher's testimony he stated that NTIA worked with the National Economic Council and the National Security Council in preparation for WRC's. Was the State Department involved in these discussions?

Answer:

Yes, there is close coordination within the Executive Branch on WRC proposals and positions, as required. The Department is in contact with the NEC and the NSC on WRC-related issues and developments, as required.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#7)
Committee on Government Reform
March 17, 2004

Question:

How do you each believe the United States can achieve balance in the consideration of government and non-government spectrum issues without a well-defined national spectrum strategy? What should be included in a White House international spectrum strategy?

Answer:

The preparation for WRCs is inseparable from the development of ongoing national spectrum strategies by the Department of State, NTIA and FCC. Such strategies, by the nature of spectrum use, are inherently dynamic. Our process is a bottom-up approach which is driven by emerging needs within the private and government communities. Industry can present spectrum proposals at any time and, to accommodate them, any U.S. strategy needs to be flexible. Balance arises through the well-disciplined and practical processes that we have. These include the Executive Branch process within the Interdepartment Radio Advisory Committee, and the FCC's Industry Advisory Group. As part of the Executive Branch process, execution of the President's Spectrum Policy, including its international

parts, is facilitated by ongoing cooperation between the Department of State and NTIA.

The U.S. may be unique in its ability and capacity to develop a consensus on balance, not an a priori planning process.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#8)
Committee on Government Reform
March 17, 2004

Question:

In October 2003, NTIA in a Federal Register request for comment, asked for input into improving the current WRC federal processes. Did the State Department respond to this inquiry? If so, what input did you give? If not, why not?

Answer:

NTIA is hosting a series of meetings aimed at improving the current WRC federal process. The Department of State participates in those meetings. Within the interagency process the Department of State responded to relevant sections of the report.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#9)
Committee on Government Reform
March 17, 2004

Question:

Is the current funding level and process for WRC adequate? What, if any, additional areas or activities require funding?

Answer:

The funding for the administrative expenses that the Department incurs in preparing for, and attending, WRCs has been adequate. This includes the salary for the U.S. head of delegation, the salaries for Department employees who prepare for and attend WRCs, the travel expenses of the head of delegation and other Department employees, clerical support for the head of delegation, an office for the head of delegation during the WRC, and equipment and staff for a delegation office for the U.S. delegation during the Conference. Other agencies pay for their delegates to attend preparatory meetings as well as the WRC itself. As with any program, each agency must weigh competing interests when deciding what activities to fund. The challenge we face is to get the job done successfully within the resources available.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#11)
Committee on Government Reform
March 17, 2004

Question:

Should the Department of State have a line item in the budget to support WRC activities and the ambassador?

Answer:

For all practical purposes the Department does have a line item for the WRC conference. It has always provided the requested funding once it has received a detailed list of funding requirements. Funding requirements change from year to year depending on the location and more importantly on the person selected to be the head of delegation. If a head of delegation is appointed from outside the Department, significant salary costs will need to be funded. This is not the case when the sitting Ambassador for the Office of International Communications and Information Policy serves as the Head of Delegation. It would probably be fiscally imprudent to set aside the same amount each year because the costs change.

When a Head of Delegation (HOD) is selected from the outside, much of the money received for the conference is obligated well in advance of the HOD joining the Department. Under existing hiring practices, the HOD can

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#10)
Committee on Government Reform
March 17, 2004

Question:

How are financial estimates to carry out WRC activities developed?

Answer:

Multiple factors are considered when developing the budget:

- Location of the actual conference as it relates to availability of administrative and technical resources, security at that location, costs of traveling to and from, and cost of lodging;
- Substantive issues - as they might impact costs (i.e. additional travel, contract support);
- Historical requirements for space, equipment and miscellaneous support costs;
- Salary costs for Head of Delegation;
- Legal requirements controlling funding;
- Representation requirements.

only be employed for 120 days. It is not prudent to wait that long to initiate contracts for space, equipment and support. To obtain preferred space, equipment and support, contracts must frequently be signed a year prior to the beginning of the conference.

Individuals hired from the outside to serve as HOD are typically unaware of the funding limits and security restrictions that the federal government has (i.e. business class restrictions regarding air travel of less than 14 hours, limits on payments for lodging, restrictions on the use of non-government personal, etc.).

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#12)
Committee on Government Reform
March 17, 2004

Question:

How much money and resources are available to the US ambassador and when is this money available? Who determines the budget?

Answer:

The availability of money and resources changes over time. The timing of the conference typically requires money from two separate fiscal years. Again, because of the need to procure space, equipment and technology in a timely manner, and the need to fund a significant amount of pre-conference travel, initial budgets are typically prepared two years in advance of the conference.

The Department of State funds all of the basic conference requirements. These requirements are the same that the Department would fund for an Assistant Secretary, or the Ambassador for the Office of International Communications and Information Policy who may serve as an HOD, or any other HOD equivalent. Sometimes the Department of Defense and NASA have provided additional funding to cover the cost of upgrades

(suites, business class and additional representational expenses) for a HOD who has been selected from outside of the Department.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#13)
Committee on Government Reform
March 17, 2004

Question:

Per Congressman Duncan's request: For the 2003 WRC, please provide a detailed accounting of funding from all sources (government and non-government) in the following categories:

Answer:

I. Personnel Support
A. Administrative Support (Pre Conference and During)

US Mission Geneva	Time/salaries
Administrative Asst. (FSN)	410 hours
Office Management (FSN)	212 hours
Protocol Asst./Receptions (FSN)	110 hours
Kitchen Staff/lunch & receptions (FSN)	184 hours
General Services & Conferences (FSN)	21 hours

Average FSN hourly rate in $50; average overtime rate $65

Bureau of Economic and Business Affairs	
Administrative Officer (GM-14)	120 hours
Special Assistant/Contractor	$82,040
Miscellaneous (GS-12)	60 hours

Office of International Conferences
Admin. Officer (pre-conf & during) FS-03 220 hours

B. Substantive Support (Pre Conference and During)

US Mission Geneva	
Counselor/Econ Affairs FS-0C	5 hours
First Secretary FS-01	50 hours

Bureau of Economic and Business Affairs	
David Gross (SES)	1,000 hours
Frank Williams (GS-15)	5,500 hours
Douglas Spalt (GS-15)	5,500 hours

Cecily Holiday (GS-15)	5,500 hours
Richard Beaird (SES)	2000 hours
James Ennis (GS-15)	500 hours

Office of International Organizations

All Staff	160 hours

C. Additional Support outside State

II. Conference Funding (does not include contract salaries or direct salaries)

Salary for Head of Delegation	$ 57,543
Conference Travel (air fare)	$ 90,401
Lodging (lodging/per diem)	$145,744
Equipment	$ 36,170
Office Space	$ 19,751
Lodging (upgrade to suite - DOD)	$ 3,586
Post Conference Implementation(printing Report, additional travel/lodging)	$ 46,000
Representation (State)	$5,000
Representation (DOD)	$ 10,000

NASA also provided $10,000, which is accounted for in the above numbers.

There were no in-kind contributions

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#14)
Committee on Government Reform
March 17, 2004

Question:

What are the strengths and weaknesses of the current arrangement for choosing the U.S. delegation leadership?

Answer:

The Department of State, NTIA and FCC each appoint a vice chair to serve directly under the WRC Ambassador. Early in the preparatory process, senior staff from the Department, the FCC, and the NTIA compile a list of candidates for consideration for other leadership roles such as U.S. delegation committee heads and spokespersons. This group is selected from government experts at the various agencies who participate in the domestic and international WRC preparatory process. The list of leadership positions is then circulated, commented upon, and sometimes changed by agreement of the three agencies. In other words, the process is one of consensus among the three agencies in choosing the U.S. delegation leadership. This process has the advantage that, by and large, it usually selects the best person for the job, although occasionally, the best person may join the private sector right before a conference begins, which can result in a less experienced person

having to fill the role. The disadvantage of this process is that the three agencies occasionally cannot reach consensus. This is usually due to the difficulty of selecting a spokesperson for a difficult agenda item when there are strong competing spectrum interests. In such instances, either the three agencies agree on two candidates as " co-spokespersons" on that issue or the Department makes the decision on the appropriate person from among the competing candidates.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#15)
Committee on Government Reform
March 17, 2004

Question:

Is the United States' negotiating strength improved or hindered by the use of an appointed political representative working with career spectrum managers and ITU experts from other countries?

Answer:

It is an advantage to have a dedicated, highly motivated head of delegation who has broad political support by virtue of being a political appointee. Such a person can take into account the important political elements involved in the U.S. position, without losing the long-term concerns that should also play a role. It is important to remember in this context that career spectrum managers and ITU experts on the U.S. delegation support the head of delegation. Those who serve as vice chairs and committee chairs are career, senior U.S. staff members who generally have participated extensively in the ITU process. Moreover, many of the spokespersons have the same qualifications. Thus, professional experts, whose job it is to support and advise the head of delegation, are constantly available to the head of delegation to advise on long-term concerns, etc.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#16)
Committee on Government Reform
March 17, 2004

Question:

Do you believe the WRC process would be improved by having a permanent WRC Ambassador? Is so, where should that position be housed? Should it be your position that has that responsibility or would that impede your ability to effectively carry out your many other responsibilities?

Answer:

While there would be advantages and disadvantages to having a permanent WRC Ambassador, appointing a person who has wide-ranging political support six months before the conference commences outweighs the disadvantages. Again, the lack of identifying the WRC Ambassador early in the process does not prevent WRC issues from being discussed at bilateral and multilateral meetings. Moreover, the process of preparing for the WRC is independent of the naming of a WRC Ambassador as illustrated by the fact that a large number of professionals begin working on the technical aspects of WRC preparation starting immediately after the previous WRC ends. The intense, full time work of the Head of a Delegation does not begin until the months immediately prior to the conference. The ability of the

head of CIP to lead the WRC delegation depends upon the workload and responsibilities at the time.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#17)
Committee on Government Reform
March 17, 2004

Question:

How and when does the State Department determine the size and makeup of the delegation? Is the nominated delegation formed early enough in the process to develop and approve final positions in a timely manner? If not, how can this process be improved?

Answer:

The WRC agenda heavily influences the size and make-up of the delegation. It is necessary to have experts on each agenda item. The process for accrediting a delegation begins as soon as the Head of Delegation is announced. This has generally been five months before the WRC begins. Only government employees can negotiate or speak on behalf of the United States. Consequently, delegation leaders must anticipate the number of agenda items, working groups and drafting groups that may be formed during the WRC so that there are sufficient U.S. government employees available to present the U.S. position at the various meetings during the Conference. With regard to the private sector, as a matter of policy and delegation organization, companies are generally allowed to provide two members to the delegation if they are otherwise qualified.

Exceptions are sometimes made if a company is able to demonstrate that it has interests in more agenda items than can be covered by two delegates. Once a proposed delegation has been formed, the Department sends it to the Department's White House Liaison Office for final approval. Forming the delegation five months before the beginning of the WRC allows ample time for the delegation to develop and to approve final proposals and positions, given the extensive preparatory process that has already taken place. Moreover, once the delegation is formed, further outside participation is limited because only members of the delegation are allowed to attend meetings. The Department's efforts to keep the process open as long as possible (prior to actual selection of the delegation) provide opportunities for experts who do not plan to attend the WRC to contribute to the process.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#18)
Committee on Government Reform
March 17, 2004

Question:

Who is responsible for training the delegation and when does training begin?

Answer:

Training comes from a variety of sources. Ambassador Obuchowski introduced a new training initiative for WRC-03: Delegation Training Day. Participation was mandatory and the issues addressed included the ITU Rules of Procedure, microphone etiquette, negotiation strategy, and delegate behavior, custom and courtesies. The Department expects to use this concept to prepare for future conferences. While Training Day was a useful tool, it is not a substitute for actual experience in the international environment. Ideally, training of U.S. delegation members begins during the ITU-R study group cycle and the CITEL meetings that lead up to the WRC. Such an environment is good for allowing senior members of the U.S. delegation to train the more junior members. All government experts who will be attending the WRC in the role of a spokesperson are generally expected to attend as many preparatory meetings as possible to gain the experience necessary to be effective. It is the individual agency's

responsibility to see that this occurs, but, of course, such participation may be limited due to budget constraints.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#19)
Committee on Government Reform
March 17, 2004

Question:

Are more training programs or mandatory training needed for delegations and the Ambassador?

Answer:

Delegation Training Day is a particularly effective tool for giving an overview of what to expect at a conference. It was initiated by the WRC-03 Head of Delegation, Ambassador Obuchowski, and we expect to repeat it for future WRCs. However, as indicated above, there is no substitute for actual participation in the international preparatory process leading up to a WRC. Sending delegates to the second Conference Preparatory Meeting, about six months before the WRC, provides some training in many aspects of conference activities, and because treaty text does not result from this meeting, it is often a good opportunity for training delegates who may not be familiar with the process.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#20)
Committee on Government Reform
March 17, 2004

Question:

In Ambassador Obuchowski's testimony, she indicated that the WRC Ambassador would be better served with an administrative "blue print". This blue print should guide WRC administrative preparations and delegation activities based on collective institutional knowledge gained at past WRC's. Will the State Department prepare this guidebook for the WRC 2007 Ambassador?

Answer:

At the conclusion of each WRC, the delegation leaders prepare a Delegation Report. This comprehensive report contains of valuable information for future WRC ambassadors about how that U.S. delegation was organized and what those participants believe worked well for the delegation at that particular conference. In addition, a former Department employee who served as Executive Director for a WRC authored a Guide for the Executive Director that contains valuable information on the administrative aspects of running a delegation. For WRC 2003, the Department created a briefing book for the WRC 2003 Ambassador. This briefing book contained substantive summaries of each agenda item, biographies on some of the key players at conferences, descriptions of the

various regional organizations and some administrative information. It is expected that the Department will continue to refine this briefing book process and incorporate sections from these other sources in order to expand the administrative section.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#21)
Committee on Government Reform
March 17, 2004

Question:

How do we currently target countries to set bilateral and multilateral meetings regarding spectrum?

Answer:

The Core Committee, which we mentioned in our testimony, compiles a list of countries that should be selected for bilateral. Certain influential countries are always on this list. Other countries are added to the list because of their positions on issues that are important to the United States. These countries are identified by what we learn through our attendance at regional meetings, discussions we have at other ITU meetings, such as Council, the Radio Advisory Group and Study Group meetings and through CIP's ongoing schedule of bilateral meetings. This list is refined throughout the WRC preparatory process. The WRC Ambassador travels to as many of those countries as possible, although budget and time constraints may prevent travel to bilateral meetings with each identified country. As a result, the practice has evolved of holding many of these meetings on the margins of regional or other multilateral meetings. The U.S. attempts to attend many

regional meetings, with special emphasis on those meetings held the year before the WRC commences, so as to meet bilaterally with as many of the identified countries as possible while saving on the time and the expense of individual trips.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#22)
Committee on Government Reform
March 17, 2004

Question:

How is country information collected and shared between the Department of State/NTIA and the FCC and other interested federal departments? Can this process be improved?

Answer:

A government traveler is always expected to send a cable, and write a trip report upon return from official travel. Any information collected on these trips should be included and shared with other agencies. We also rely upon the United States' extensive network of embassies. Economic Officers posted at these embassies are in routine contact with telecommunications experts. They routinely gather information on a multitude of economic issues, including spectrum issues, and are ready to respond to Department inquiries. These cables are shared with other agencies. Additionally, the Core Committee discusses any information gathered regarding other countries' positions. This information is incorporated into a section entitled "Foreign Views" in our position papers on specific issues. Based upon experiences with past WRCs, it may be that for WRC 2007, a single office may be designated to be the repository of all of this type of information.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#23)
Committee on Government Reform
March 17, 2004

Question:

Should the U.S. try to reach agreement on key or non-controversial WRC 2007 issues earlier than the current process allows?

Answer:

Generally speaking, agreement on non-controversial issues is reached earlier than agreement on the more controversial issues. Certainly, wherever possible, agreement on key issues should be reached sufficiently early so as to enable the U.S. delegations to discuss those issues with other countries during bilateral and multilateral meetings leading up to the Conference.

Questions for the Record Submitted to
Ambassador David A. Gross by
Chairman Christopher Shays (#24)
Committee on Government Reform
March 17, 2004

Question:

How should WRC outreach activities be integrated with other international activities of the State Department?

Answer:

The Office of International Communication and Information Policy at the Department considers the WRC when it conducts its bilateral and multilateral meetings. At these and other meetings, WRC issues are integrated into other discussions or, when appropriate, discussed specifically in the context of United States' other foreign, economic and national security goals.

House Government Reform Committee
Subcommittee on National Security, Emerging Threats, International Relations
Hearing Date: March 17, 2004
Member: Christopher Shays
Hearing: "U.S. Preparation for the World Radio Conferences: Too little, Too late?"

1. How do you believe the United States can achieve balance in the consideration of government and non-government spectrum issues without a well-defined national spectrum strategy? What should be included in a White House international spectrum strategy?

The Department of Defense (DoD) recognizes that spectrum is vital for both commercial and governmental uses. Further, it believes that commercial development and governmental development of spectrum-based technologies is a synergistic process, which benefits both US industry and government--and ultimately the public at large. Moreover, DoD has a commitment to using spectrum resources in the most efficient and optimal manner possible. This mirrors the necessity felt by commercial spectrum users to maximize their own spectrum resources in order to obtain the most value in the marketplace. Therefore, there are real incentives for the government and industry to work together in improving everyone's access to spectrum. The best way to achieve that improvement is through technologies that capitalize on ways to "share" spectrum, to dynamically select frequencies that are not currently in use, and other techniques.

In the past, issues have arisen in which government and non-government users have sought access to the same spectrum. More and more, spectrum "saving" technologies will tend to dissolve these issues. One way to balance the interests of industry and government (keeping in mind that both represent different facets of the national interest) is to develop a national policy direction, clearly enunciating national goals and priorities. This national policy, set forth in one or a series of documents by the federal government, should not be intended to pick technological or institutional "winners" and "losers." Nor can it foretell what spectrum-dependent products or services will succeed in the market. Rather, it should identify the core, foundational principles of spectrum management and indicate how commercial and governmental spectrum needs will be balanced, in general. The Department of Defense recognizes that this is a feature of the President's spectrum management policy initiative, and it fully supports the Commander in Chief in this initiative. The national policy will be jointly developed by the Department of Commerce and the Federal Communications Commission to address both government and commercial equities.

The national spectrum policy should address international priorities for the United States. In fact, the policy should be reviewed and updated periodically, and these reviews could coincide with the start of each preparation cycle for the World Radiocommunication Conferences (WRCs). The national policy then would provide the foundation for research and decision-making, feeding into the process of developing US positions for the WRCs.

House Government Reform Committee

Subcommittee on National Security, Emerging Threats
and International Relations

Hearing Date: March 17, 2004

Member: Christopher Shays

Questions for the Record

Hearing: "U.S. Preparation for the World Radio Conferences:
Too Little, Too Late?"

Dr. Linton Wells, II
Principal Deputy Assistant Secretary of Defense
For Networks and Information Integration

2. What is your department's role in the White House Spectrum Initiative Task Force.

The Department of Defense has been highly engaged and has dedicated adequate resources to fully support this Initiative. DoD is working closely with the Department of Commerce and other agencies to address and meet the stated objectives. DoD views this initiative as a proactive response on the part of the Administration to address the growing requirements for additional spectrum that confront Federal Government agencies, as well as the private sector.

As requested by the President, the DoD's principal to the Task Force has been intimately engaged. We have developed and lobbied aggressively for support from the other Federal agencies for revolutionary proposals to address not only growing spectrum needs for the Federal government, but also those of state and local governments, and commercial industry.

The President's initiative successfully balances efforts to accelerate the nation's economic growth with the need to ensure that national security and public safety interests are not compromised. It clearly seeks to protect existing systems from harmful interference. It also highlights DoD's need for certainty and predictability in the way spectrum is allocated and used. This is consistent with the publicly stated objectives of the Department of Defense.

We favor this reexamination of spectrum management policies and processes to keep pace with the evolving demand for spectrum driven by new technologies and evolving wireless market needs and requirements. The dependence of the Department of Defense on spectrum as a force multiplier and enabler has been demonstrated recently in Bosnia, Afghanistan, and Iraq, where we were able to execute successful military operations with smaller, leaner fighting forces, limited casualties and limited collateral damage. Our dependence on spectrum has been growing at a rapid rate as we transform our military into a network-centric force. We need to ensure that frequency spectrum does not become a bottleneck in this transition.

The President's initiative will provide the vehicle to articulate DoD's spectrum requirements, which are at the core of DoD's transformation goals.

3. What is the biggest structural hurdle in DoD preparations for WRCs? Is this recognized as a priority within both OSD and the Services?

The overall preparatory process could benefit greatly from the establishment of a senior leadership group composed of top-level officials representing all of the departments and agencies. This group would provide overall guidance and establish clear priorities for the entire US delegation. DoD is recommending that a meeting be called among the senior leadership in the near future to initiate this process.

Regarding internal DoD processes, DoD is the single largest user of spectrum but has nevertheless been successful in developing a relatively streamlined internal approach to prepare for WRCs and their associated preparatory meetings. Service and Joint positions on issues are introduced, debated, and generally resolved within the International Permanent Working Group (IPWG), which is a subset of the Frequency Panel of the Military Communication-Electronics Board. As a general rule, all DoD positions on international spectrum issues are cleared through the IPWG. Although some inefficiency remains in the preparatory process, the IPWG, with support from the Services and the Joint Staff, is maintaining constant oversight and leadership to reduce duplication of effort. This is an ongoing process and DoD continues to make progress in this regard.

4. In your opinion, what United States preparatory processes work well and what processes need improvement?

The number of separate groups in the United States with an interest in international spectrum management matters is large. With this number of interested parties the process of coordinating a single US position going into the WRC is significant. That being said, the processes that exist today, though sometimes cumbersome, provide the opportunity to achieve consensus in a timely fashion. Although this worked to some extent at WRC03 and preparatory meetings, we need to do better in the future. Early convergence on national priority issues help to shape our international position to benefit US objectives.

Establishment of a senior leadership structure has been proposed by the department as a means to improve US preparation for WRC. A senior leadership group composed of top-level officials representing all of the relevant departments and agencies should guide the preparation phase, which constitutes the interim between Conferences. This group would meet frequently to identify and define the rapidly evolving issues and direct the development of responses to them. In effect, the senior leadership group could obviate the need to create a permanent ambassador for WRC, which has often been discussed as a solution to the relatively late appointment of an ambassador, typically occurring six months prior to a WRC. Top-level direction of the complex and vital preparation process does not have to wait until the ambassador is in place. Rather, the senior leadership group, facilitating US leadership at the time when many other administrations are converging upon positions and making commitments to their regional organizations, can provide the direction and continuity required. The formal process of international outreach can start much earlier and then accelerate when the WRC Ambassador is appointed.

Achieving early consensus in the US, facilitated by senior-level direction, allows for the establishment of a clear outreach program for each conference agenda item, and significantly earlier engagement with administrations and regional groups. Establishment of a senior leadership group provides an opportunity to establish momentum early in the preparatory process and maintain this momentum throughout the process of selecting and preparing delegation leadership for each WRC.

5. Do you feel that your department has appropriate senior-level input into critical spectrum debates within NTIA?

Yes. During the most recent preparation cycle for WRC, for example, the Department of Defense was very active in developing overall US positions. It played a key role in setting the position with regard to wireless LAN (WLAN) systems in the 5-gigahertz (GHz) range. This potential allocation affected a band in which significant DoD assets were already operating. There was a need to find a way to make the spectrum available for commercial development and exploitation for a promising commercial industry--but without jeopardizing national security. Through the cooperative involvement of DoD, NTIA and other parties, this issue was resolved by applying a technological solution, in the form of "dynamic frequency selection" (DFS), which will make the allocation possible without causing harmful interference to DoD systems. In addition, the DoD has been integrally involved, through NTIA, in the process of identifying and allocating spectrum resources for future 3G services and for ultra-wideband technologies. All of these issues were extremely complex, technically, and involved intensive discussions. In the end, however, they resulted in balanced agreements that protected national security and freed spectrum for increased commercial use.

It is vital for DoD and other agencies to have a place at the table in spectrum management decisions. NTIA has been responsive in this regard, and the result has been a net positive for all concerned. The Department will continue to be involved, integrally, in spectrum management circles within NTIA and beyond, including the FCC. This involvement will be continuous and well informed, not episodic. We are confident that NTIA will continue to work with DoD, the largest single user of spectrum, and will represent the national interest competently and thoroughly.

6. How often do you encounter your senior level counterparts in the WRC preparatory process?

Using WRC03 as an example, DoD had several encounters with counterparts from several government agencies, including State Department, NTIA and the FCC. The Department has taken measurable strategic steps to highlight the importance of spectrum to its ability to meet mission requirements. DoD regularly met with senior counterparts to strategize for many spectrum-related issues, and in particular to find a way forward when working level groups failed to reach agreement. For WRC 2003, DoD leadership received regular briefings from the Director for Spectrum Management and made sure to engage these agencies when we identified issues that required more direct senior level involvement. As for meetings between DoD and counterparts from the remaining Federal agencies on WRC issues, they were subject to special meetings called by the State Department. However, continuous communication and coordination took place among Federal agencies at the Director's level and below.

7. Based on your experience, do you believe NTIA views the federal government users as their principal spectrum customers, or do they view the commercial industry equally as their spectrum constituents as well?

NTIA has a multi-faceted role in serving as the top spectrum management office in the Executive Branch. First, it is the spectrum manager for all government agencies and departments that employ wireless frequencies for an array of important functions that serve the public and the national interest. In addition, it serves as the top advisor for overall spectrum management policy to the White House. Administratively, NTIA represents DoD and other government spectrum users in forums such as the International Telecommunication Advisory Committee (ITAC), and more generally, in discussions with the Federal Communications Commission (FCC) and Congress on spectrum allocations, assignments and usage. In this role, NTIA does act as an advocate for government spectrum users, inasmuch as it takes the lead role in educating and informing these other parties concerning the needs and priorities of government users.

Any role of protecting government "constituents" is within the context of NTIA's duty as the overall telecommunication policy advisor to the President. NTIA must have a broader scope than simply as an advocate and regulator of government spectrum usage. NTIA must balance the needs of all potential users—commercial and governmental—in the United States. NTIA has shown that it recognizes this role, and it has been a continual force in asserting the need to find policy and allocation solutions that conform to the national interest, broadly defined.

In fact, there is no natural inconsistency between the interests of government spectrum users and commercial spectrum users. The Department of Defense is NTIA's partner in searching for compromises and technical solutions whenever there is any apparent conflict over allocations or spectrum usage. There has been close cooperation between DoD and NTIA on such issues—cooperation that has been matched, to the best of my knowledge, by similar cooperation between NTIA and other government agencies, including the FCC. NTIA has shown that it has a unique role and ability in bridging perceived differences between government users and commercial interests. This is, at times, a difficult role for NTIA to play, but without it, there is the possibility that standard or even routine disputes over allocations would have to be resolved at the highest levels of government—a situation that would rapidly encumber the top-level policy-makers, whose role should not be in adjudicating disputes, but rather in setting overall policy priorities.

8. Do you feel it is appropriate to have the State Department as the critical mediator among final government and industry positions developed by the NTIA and the FCC?

The World Radiocommunication Conferences are, at their core, diplomatic functions, involving negotiations among sovereign nations. The stakes are high, and decisions can affect national security and the economic health and leadership of the country. Moreover, the Final Acts of each WRC are treaty-level international

agreements. Therefore, it is not only appropriate for the Department of State to play a role in both the preparation phase and the actual conduct of the conference, it is essential.

WRC preparation is, in the US system, a highly collaborative process. No single government agency, no single commercial entity, can speak for all of the interests at stake in each WRC. More importantly, no single agency or department possesses all of the expertise and resources required to put together such a complex multilateral diplomatic effort. Each department brings to the table its expertise and research on all of the agenda items important to that department. Through the preparation process, the product of that research is brought to bear on international coordination efforts with US partners in the Americas and with allies abroad.

It is perhaps not totally accurate to label the Department of State as the "critical mediator" in the internal process of developing US positions. This is a wholly collaborative process involving multiple players inside and outside of government. Under the auspices of the FCC, industry develops recommendations for US positions, while at the same time, NTIA coordinates the development of positions by US government agencies, acting both as users of spectrum and as stewards of the public interest. These are then reconciled with the industry recommendations in a process coordinated by the Department of State.

The chief role of DoS is to then coordinate how these US positions, once consolidated, are presented and coordinated internationally, through outreach efforts and at the WRC conferences themselves. The Department of State carries out this role well, although it is hampered by administrative constraints, which include the lack of a dedicated budget and staffing limitations. These are compensated for by the membership on the US delegation of spectrum experts from other government agencies (government spectrum users such as DoD) and from the private sector, which leads the world in innovating spectrum-based products and services.

9. What information does your department receive from the State Department about US trade positions or WRC/International Telecommunications Union activities during the period between WRCs? Would it be helpful if this information were shared on a continuous basis?

Representatives of DoD are active members of the US working parties and study groups participating in the activities of the International Telecommunications Union (ITU) during the period between World Radiocommunication Conferences. As such, DoD is in coordination with State Department representatives within the associated working parties, study groups, meeting delegations, and in preparation for meetings with regional organizations such as CITEL, APT, CEPT and NATO. DoD representatives are in contact with DoS representatives throughout the ITU study cycle and work directly with State Department representatives involved in diplomatic "Outreach" programs with other administrations. Continued sharing of information and close coordination is essential to US security and economic interests.

10. What are the strengths and weaknesses of the current arrangements for choosing the US delegation leadership?

The leadership for the US delegation to the WRC consists of the Ambassador, senior leaders from several government agencies, including State Department, NTIA, and the FCC, as well as spokespersons for each agenda item. Starting with the latter, the spokespersons are selected based on their experience with, and interest in, the agenda item over the intervening period since the last WRC. Each individual has a well-established reputation and track record prior to the identification of the US delegation and comes with a good deal of expertise, both technical and political, for that particular issue. This grass roots expertise is an area of strength for the US delegation.

Senior leaders are chosen from government, especially State Department, NTIA, and the FCC, based on their continued leadership during the intervening period as well. These three organizations represent the wide cross-section of interested parties in the WRC. Finally, the Ambassador is a political appointee; in past experience the Ambassador only sometimes has had a background in the issues associated with the WRC. In instances when the Ambassador has had no background in spectrum matters, there is only a very short six-month period of time available to prepare the Ambassador. This limits effectiveness. Additionally, six months or less is obviously insufficient time to establish the personal relationships comparable to those of the career administration representatives to the ITU. While the US career spectrum management personnel fill the gap, this circumstance is obvious to our partners and creates a substantial uncertainty leading up to the WRC.

11. Is the United States' negotiating strength improved or hindered by the use of an appointed political representative working with career spectrum managers and ITU experts from other countries?

Regardless of the source of the representative, either politically appointed from industry or found in the career government ranks, the credentials and personality of the individual and the timing of his/her appointment are the real determining factors in improving and maintaining the United States' negotiating power. Many appointed political representatives from industry have had previous and extensive experience in government service in the spectrum business and have proven to be most effective when called to serve as the representative of the government for a specific purpose, such as Ambassador to a WRC. Also, the talented political appointees who presently occupy key senior government positions dealing with spectrum matters enhanced the US standing on spectrum issues on a daily basis.

A qualified, politically appointed representative brings many favorable advantages to the negotiating table. At WRC 2003, the Ambassador of the US Delegation was a prime example of a politically appointed representative who excelled at planning and negotiating. This truly enhanced the United States position on spectrum issues of all types. Her credentials included extensive experience both as a prominent leader in the telecommunications field as well as experience in the Department of

Commerce and the National Telecommunications and Information Administration during the George H. W. Bush administration. For WRC 2000, the then-appointed ambassador was equally adept at organizing and interacting at the international level, having been a state Lieutenant Governor and having experience with covering state and local government spectrum issues at the White House just prior to her appointment.

Appointment of a political representative for a relatively short term may carry the disadvantage of a lack of an early-on opportunity to establish goals and objectives for future WRCs and to develop more effective and established relationships over a longer period of time with career government spectrum managers and foreign administrations. However, this problem can be greatly minimized by a more timely appointment of the ambassador, giving him/her at least a full six months or more to assemble a staff, establish priorities, and plan and execute those programs that will best benefit established US positions. Inadequate time for the proper planning and execution hampers any US representative, whether politically appointed or otherwise.

Overall, there does not seem to be any evidence that talented political appointees, selected under the current process, hinder US negotiating strength. Their experience and skills honed in the private sector as well as with related government service seem to help them quickly assume leadership of a critical US Delegation. On the other hand, a person whose expertise and experience is only limited to either a career in industry or in government, but not both, can be at a serious disadvantage in regard to knowledge and credibility, at home and abroad.

12. What established staff positions does the Department of Defense have dedicated to WRC preparation and participation?

The Department of Defense has two (2) government service positions within the Defense Spectrum Office dedicated to WRC preparation and participation. Additionally, there are seven (7) man-years of support contractor effort dedicated to WRC preparation activities within the Defense Spectrum Office and Office of the Assistant Secretary of Defense (Networks and Information Integration). Each of the military department frequency management offices also has dedicated support to WRC preparation and participation. One dedicated government service position per military frequency management office, for a total of three (3). The contractor support to the frequency management offices averages six (6) to eight (8) dedicated man years per annum.

13. How are financial estimates at DoD to carry out WRC activities developed?

Within DoD, all directors are required to provide their budget requirements according to the usual budget cycle. Budget requirements for WRC typically cover other related ITU activities. The estimates are based on the level of required participation in the regular ITU study and working group activities, and as well as on all technical and regulatory activities associated with the WRC and the Plenipotentiary. The estimates have varied from year to year depending on the level of activity and issues of interest to DoD. Our estimates cover all related activities, from technical analyses and studies, to

soliciting regulatory expertise, travel, outreach and representation funds, and support to US Ambassador to the WRC. Considering that many of the issues are dynamic in nature, DoD always managed to shift priorities and allocate adequate resources to deal with emerging issues.

14. It appears that the President's 2005 budget does contain increases for the NTIA for WRC purposes. Did the Department of Defense earmark funding specifically for WRC preparatory activities?

The Department does not have a single fund for WRC activities. However, all components have taken spectrum in general, and ITU related activities in particular in their budget submittal. Within Office of the Assistant Secretary of Defense (Networks and Information Integration), where we are the DoD lead for Spectrum management, we make sure that WRC related activities and issues are identified at the end of the previous WRC. Then, a work plan is identified along with roles of the various components and projected cost estimates. The estimates are then embedded in the overall spectrum budget requirements, where they get reviewed and prioritized.

15. How much financial and staff resources did the Department of Defense provide to the WRC 2003 Conference?

DOD contributed considerable resources to prepare for, attend, and follow up to the WRC. Several tiers were engaged in this process, from the program offices and operations personnel up to attendance at the Conference by the Assistant Secretary of Defense for Networks and Information Integration. A reasonable estimate of resources expended is approximately $25 million. Breakout estimates are provided below.

Direct funds (travel, staff, equipment, and publishing)
Pre-conference planning
At the conference
Post-conference implementation

(Figures are in $K)

i. Pre-conference planning (3 years):	
Staff (govt and non govt)	
Services (AF, Army, Navy, USMC)	8,000
Defense Spectrum Office (DISA)	10,000
Joint Staff	500
OASD(NII)	2,500
Travel	1,000
Logistical Support/Rep Funds	100
ii. At the conference:	
Staff:	700

Travel	400
Rep Funds	50
iii. Post-conference implementation:	
Staff	1,250
Total ($K)	24,500

In addition to delegate membership, DoD provided two dedicated staff members to provide administrative and organizational support to the US delegation. DoD did not provide office equipment or lodging.

16. What guarantees do we have that DoD will continue to supply the level of resources needed to participate in international spectrum forums such as the ITU and the WRC?

US military forces are increasingly employing spectrum-based technologies as vital, integral components of tactics and strategy. No military in the world does this better than the US military. Information superiority is a pillar of contemporary war fighting, and it underpins the logistical and other support mechanisms, as well. The Department recognizes that, because spectrum asset is a strategic asset, World Radiocommunication Conferences are of paramount importance. In order to maximize our ability to defend the country and its allies, we must contribute and participate as integral and leading members of US WRC delegations. This imperative, in and of itself, will act to guarantee that sufficient DoD resources will be allocated to WRCs and other ITU forums. As the nation's largest single user of spectrum, it has become evident to the Department, at high levels, how important that resource is to national security.

17. Do you believe there is a better mechanism for funding US participation in WRCs, other than gathering together funds from various federal and private-sector sources?

As long as the State Department remains the coordinator of the international aspect of spectrum management, it should be empowered to undertake and complete its mission. In practical terms, the State Department should have a dedicated and fully funded budget with which to carry out the preparation, training, outreach and diplomatic functions of the US WRC delegation. This would provide, at the very least, the core funding required to carry out what is, after all, a vital exercise in multilateral diplomacy.

This does not mean that other agencies, and the private sector, have no role in supporting WRCs. The agencies may well continue to bear the cost of engineering studies that support US positions, and they will undoubtedly continue to donate the services of their personnel on the delegations to WRCs, Conference Preparatory Meetings and other regional and global forums leading to each WRC. The private sector will provide similar support. In addition, companies have a unique contribution to make in furthering the US outreach efforts through their hosting of receptions, dinners and other

events during the WRCs (and preparatory meetings). For all of these companies and agencies, perhaps their greatest contribution is in the area of expertise. The Department of State, however, should defray the core costs of supporting the delegation as they are engaged in multilateral diplomacy. These costs include delegation offices and equipment, travel for the ambassador to key preparatory meetings and bilaterals, some outreach activities (such as press operations and on-site seminars), communications facilities to maintain internal cohesion within the delegation and obtain guidance from proper authorities in Washington, etc.

18. How are members of the US delegation selected at your department? Who approves these selections?

Selection of DoD members of the US delegation is based primarily, but not exclusively, on level of expertise and involvement in preparatory activities leading up to the conference. The Services, Joint Staff, and the various DoD agencies and organizations submit candidates' names to the Office of the Assistant Secretary of Defense for Networks and Information Integration (OASD(NII)), which is the single focal point for approval. Factors such as level of participation leading up to the conference, criticality of skill sets, and senior leader involvement contribute to the decision on the makeup of the DoD membership. Although a large number of delegates are necessary to cover all of the submeetings and working groups at the conference, cost and personnel footprint considerations also contribute to the final decision.

19. What criteria does the State Department require for selection to the US delegation?

All accredited participants shall be US citizens and shall comply with the memorandum from the President's Chief of Staff dated July 25, 2002.

Basic selection criteria for private sector nominated Delegates to WRC 2003 were as follows:

1. Candidates should typically be essential to support negotiations at WRC 2003.
2. The candidate will be on scene and participating throughout the full four weeks of the WRC.
3. The candidate will participate substantively in the preparatory work of the delegation.
4. The candidate has participated substantively over a period of time in the preparations for WRC 2003 preceding the formation of the US Delegation.
5. The candidate fully discloses the party or parties, foreign and domestic, whom he or she represents.
6. The Office of International Conferences can accredit the candidate.
7. The candidate understands the norms of conference behavior.

8. Two candidates per private-sector entity may be selected. However, in very specific cases three may be selected based on a written justification. (Each corporate entity will count as a private-sector entity.) If a candidate becomes a conference officer, he or she may be replaced from the same company.

Basic selection criteria for private sector Senior Advisers to WRC 2003 should include:

1. The candidate is a recognized senior player in private sector telecommunications.
2. The candidate will be on scene at WRC for a week at most.

Basic selection criteria for public sector Delegates to WRC 2003 should include:

1. Other than number 8, all criteria applicable to private sector Delegates apply.
2. The candidate has a suitable security clearance.
3. The candidate either has assigned spokesperson duties on the floor of the WRC or is expected to become a conference officer.
4. The candidate has assumed major organizational responsibilities for the Conference.

Basic selection criteria for public sector Senior Advisers to WRC 2003 should include:

1. The candidate is a recognized senior player in public sector telecommunications.
2. The candidate has a suitable security clearance.
3. The candidate will be on scene at WRC for a week at most.

The above criteria are only for development of a nominated delegation. The nominated delegation is subject to White House approval; consequently, some on the nominated delegation may not be on the accredited delegation.

Both private and public sector support personnel may be present in the host city with neither accreditation nor access to the conference site.

20. Are you all satisfied with the level of financial and staff support provided for the WRC 2003 activities by the Department of State?

The Department of State provides the services of individuals with long and honorable careers in support of US multilateral diplomatic activities. They are veterans of multiple WRCs. The support provided by the State Department may suffer from the lack of a sufficient, dedicated budget for each WRC.

21. What other training does your department or the State Department provide or require of US delegates?

The Department requires prospective delegates to attend the NTIA-sponsored "Radio Frequency Spectrum Management Seminar". Training lasts a week and encompasses the breadth of national and international spectrum management issues, to include the WRC preparation process.

DoD also requires its delegation members to attend State Department sponsored delegation training sessions specifically tailored and offered just prior to WRC attendance.

22. Are more training programs or mandatory training needed for delegations and the Ambassador?

There are two specific areas the Department of Defense has identified as training shortfalls, each addressed in turn.

Improving the Quality of US Document Submissions – There is a training shortfall in the proper use of regulatory procedures and language relating to the preparation of US submissions to the ITU-R study groups, which carries over into the WRC preparation process. Joint NTIA-FCC-State Department training could be targeted at improving the quality of US submissions, increasing the efficiency and effectiveness of US preparations for ITU study groups and the World Radiocommunication Conferences. Focused training workshops should be held early in the preparation process, and perhaps on an annual basis, in order to provide opportunity for participation by as many potential delegation members as possible.

Provide a Better Understanding of the US WRC Preparatory Process – One of the strengths of the US preparatory process is that it continually brings together some of the spectrum community's most senior and experienced experts within and outside of the government, many of whom are repeat veterans of previous WRC delegations. From year to year, however, some of these veterans retire or move on in their careers, with a resulting loss of institutional memory and expertise that may not be entirely recovered. In order for the US to retain its proficiency in promoting and defending its position in the international arena, there should be continued and even increased investment in personnel training and mentoring. Seminars in which WRC veterans instruct newer delegation members would be helpful additions to WRC preparation.

23. How can we improve the current outreach to other countries and regions on spectrum issues?

WRCs are integral to the Department's strategic approach to network-centric warfare, and failure to prepare properly for and execute the strategies to ensure this spectrum access could have dire consequences. Because of its extensive responsibilities for defending not only the homeland, but also coalition partners and allies, the US has global interests and equities concerning multiple spectrum bands. These responsibilities and interests are often not shared or understood by other countries; therefore, the US should engage early with other administrations, demonstrate a high degree of technical and political expertise, meet on a regular basis, and provide some degree of continuity in personnel. Maintaining strong personal and professional relationships with our counterparts around the world is an important aspect of this business.

24. How do you represent the United States at the ITU and other spectrum related conferences before we come to a US position? Should the US try to reach agreement on key or non-controversial WRC 2007 issues earlier that the current process allows?

Without a US position predetermined before a conference, the US delegation members, including those from the Department of Defense, are limited to careful discussion and querying of other administrations on their views. In the early stages of ITU and regional negotiations immediately after a WRC, a large number administrations often meet without a stated known position on many issues and meetings agendas largely revolve around discussions and exchanging of ways to proceed within the ITU. However, over the course of a year or so after a WRC, various administrations have developed their positions and naturally court the support of the US, which may or may not have reached a national position on key or non-controversial issues.

Without a US position determined before a spectrum conference, representatives of US interests discuss national "views" making it clear that it is not a US "position" and that these views are be subject to change. Care is taken to not convey indecisiveness and to avoid a sense of disinterest. US delegates bring the views and positions of other administrations back to the US forums for consideration as US positions are formulated.

Experience at the WRC 2003 has clearly shown that the US should reach early agreement on at least the non-controversial WRC 2007 issues. Also, determination of positions on key issues should be formulated as rapidly as possible, but often conflicting multiple interests mandates further discussion. For example, the Department of Defense, as a major participant in the process, continuously attempts to preserve the robustness and flexibility of national defense systems and must weigh the many potential risks of private sector demands on spectrum, a time consuming process that requires in-depth coordination among the Services, NATO, and between the military departments of other countries. While the current process of discussion with a call for consensus appears adequate, a greater sense of urgency would help speed up the development of positions.

The advantage of reaching agreement at the earliest opportunity would allow the US to assume the lead at ITU and regional conferences as well as in bilateral negotiations, recognizing that it is easier to influence another administration's position than attempting to change an established one. Because many administrations first consider the US positions as they determine their own, the US influence can begin early to reap long-term benefits. Also, an earlier decision on key US positions allows more time for the US to persuade other nations to change their opposing views. Overall, the Department of Defense attempts to assist in US positions being made as rapidly as possible to enhance the US advantage in negotiations well before WRC 2007.

25. How should WRC outreach activities be integrated with other international activities of the State Department?

The Department of State conducts a regular round of bilateral meetings with trading partners and allies on communications and IT-related issues. These meetings are good opportunities for the Department to express the views of the United States on WRC agenda items—provided that US positions have been consolidated early enough in the preparation process.

In addition, the State Department should fully brief, and make available, economic affairs officials in various missions and embassies, to provide full support to the ambassador/Head of Delegation, who may be visiting that country for a pre-WRC outreach meeting. Because some of these meetings are regional in nature, embassy staff can provide valuable background data about the individuals with whom the ambassador will meet. In addition, embassy officials can play an absolutely necessary role in providing facilities for outreach events, local transportation and other logistical activities.

26. In the past, it has been claimed that WRC implementation of positions beneficial to federal departments have not been implemented in a timely manner. What are the experiences of the Department of Defense in this regard?

Failure to implement WRC positions beneficial to federal departments in a timely manner is an issue that increases the uncertainty and complexity of the environment in which the Department of Defense operates, hampers efficient and effective spectrum management and development of future US WRC positions. The sooner the US implementation occurs, the clearer our intent within the international community, and the more effective our outreach efforts are in the international forum. However, the Department of Defense has not experienced operational or financial impacts directly attributable to the delay in implementation of WRC decisions.

Significant effort over the past six months has been made to expedite the implementation of WRC 2003 decisions. DoD has actively participated in the review and preparation of the documentation developed to implement WRC 2003 decisions favorable to federal departments, as well as to the private sector.

Testimony of
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Before the
Committee on Government Reform
Subcommittee on National Security, Emerging Threats, and International Relations
United States House of Representatives

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I would like to thank Chairman Shays, Ranking Member Kucinich, and the distinguished members of the Subcommittee for the opportunity to submit my written testimony on the important issue of improving U.S. preparations for the International Telecommunication Union ("ITU") World Radio Conferences ("WRCs"). I am Brian F. Fontes, currently Vice President, Federal Regulations, for Cingular Wireless. More relevant for the Subcommittee's purposes, I served as U.S. Ambassador for the 1995 WRC ("WRC-95") and, more recently, as the Chairman of the Federal Communications Commission's ("FCC") WRC Advisory Committee ("WAC") for the WRC conference in 2003 ("WRC-03"). The WAC formulates industry positions on various WRC agenda items for the government's consideration and, hopefully, support. Through the years, I have observed WRC preparation efforts – by industry and government – in my current position at Cingular Wireless, during my tenure as Senior Vice President at the Cellular Telecommunications & Internet Association ("CTIA"), and as former senior staff member at the FCC. I am testifying solely in my own right, and not as a representative of Cingular Wireless.

Over the years of International Telecommunications Union (ITU) WRCs, the U.S. government has generally proven to be very successful in identifying and achieving its own WRC objectives (and in defeating or deflecting agenda items deemed not to be in the best interests of our country). U.S. preparatory efforts have continued to improve over the years, as Ambassador Gross, Commissioner Abernathy and others noted in their testimony. Nevertheless, as discussed below, a number of improvements are possible.

Background -- the WRC Process

My observations and recommendations for improvements to the U.S. government's WRC preparations are based on three fundamental realities: (1) the WRCs are highly specialized meetings and negotiations, requiring legal and diplomatic expertise and experience in WRC rules and conventions; (2) at the same time, much of the subject matter of WRCs is highly technical, requiring engineering expertise and understanding of spectrum allocation and utilization issues; and (3) ultimately, individual governments, not industry players, have the final vote on WRC matters, making government-to-government interaction critical to consensus building. With these realities in mind, I cannot overemphasize the importance of an organized, coordinated, and well prepared U.S. WRC process.

Government-Industry Partnership

Preparation for the WRCs is an industry-government partnership. In many respects, the preparation process is, and should be, viewed as an opportunity for industry and government to construct positions that benefit both government and industry interests. Many WRC agenda items are submitted on behalf of particular industries or in relation to particular technologies and, as such, the government necessarily relies on industry expertise – particularly technical experts knowledgeable in spectrum-related technologies. At times, industry and government differ on recommended positions in response to WRC agenda items. Communication between industry and government is critical to resolve, where possible, these differences. An example where this has been successful is the discussion surrounding the 5 GHz band prior to WRC 2003. Industry and government were successful in reaching a compromise that provided for both industry and government interests to be served.

At times, the government may not be able to accommodate industry interests due to the nature of the government's use of spectrum. As noted previously, it is the U.S. government (head of delegation), not industry representatives, that votes on WRC agenda items if consensus cannot be reached. When the government and industry are unable to reach a unified position,

clear dialogue is essential to ensuring that all parties understand the U.S. delegation's position. It is at these times when communications and the ability to identify alternatives are most needed.

In addition, government and industry both need to know and appreciate the WRC's rules and conventions, as opponents of particular agenda items can use those rules (the process) to obstruct other delegations' objectives including those of the U.S. Experienced legal and policy staff are absolutely critical in this regard.

The experience of WRC-95 is particularly illustratative. There, government and industry worked hand-in-hand as the U.S. delegation sought to add a brand new agenda item at the opening of the conference. Specifically, the U.S. government and segments of the satellite industry sought to reallocate spectrum for non-geostationary orbit fixed satellite systems, like Teledesic's. The U.S. delegation's proposal was rejected by the Heads of Delegations opening meeting where the agenda for the WRC is approved. Fortunately, an identical proposal by the delegation from Indonesia was approved for the WRC agenda. Finally, after four tumultuous weeks, the U.S. delegation ultimately succeeded in obtaining significant spectrum for this purpose, although the delegation's efforts to obtain additional MSS feeder link spectrum for Little LEO systems were not as fruitful.

A more recent development (in the past 10 years) that the U.S. government will need to address is the involvement of multinational companies that serve in both the U.S. delegation and other delegations, a circumstance that requires safeguards to ensure that the U.S. government position and strategy remains confidential and within the "four walls" of the delegation. Hash penalties should be established for those individuals and companies that violate the confidences of the delegation. Examples include expulsion from the delegation and the baring of companies to participate in delegation work. I suggest that as part of the preparation process penalties and enforcement be developed and clearly communicated to those participating in both the preparation process and the actual delegation.

Early Preparations Are Critical

I wholeheartedly agree with other witnesses' testimony concerning the importance of early preparation well in advance of a coming WRC. Pre-WRC discussions on a bilateral and multilateral basis have become increasingly important as regional voting blocs have gained momentum at recent WRCs. These discussions, including formal regional conferences (CITEL for the United States) necessarily begin shortly after the conclusion of the preceding WRC. This, in turn, requires countless hours of formal and informal meetings and discussions. Thus, it is critical that the head of the delegation, as well as core members of the delegation itself, be determined early in the preparation process. I experienced the hazards of a late start to a degree, as I was appointed head of delegation just a couple of months before WRC-95 to replace former Congressman Mike Synar, who became gravely ill and later passed away. Because of my previous delegation work, Mike asked that I provide him assistance just prior to his leaving the delegation in late June early July, 1995. Due to the outstanding staff and delegation that already had been established, I was able to "hit the ground running," so to speak, but the need for early planning became all the more apparent.

The FCC's early establishment of WACs for the WRCs contributed to the U.S. government's success. The WAC, if established early in the preparation process, provides the FCC and other government agencies with early recommendations on almost all agenda items. These efforts, in turn, contribute to the U.S. government's ability to begin multilateral and bilateral discussions with a unified position enabling the delegation to utilize regional meetings more effectively. For WRC-03, the WAC was able to identify and resolve comparatively non-controversial issues first, allowing the government to adopt a unified, consensus position early in the process on these issues. This allowed the U.S. Government to present these positions early at the regional meetings, bi-lateral and multi-lateral meetings. Also, by resolving the non-controversial issues early, the advisory committee and the government were able to focus on the controversial issues. This process allowed the controversial issues, such as the 5 GHz band, to be resolved prior to the WRC conference. The U.S. Government's WRC-03 success at 5 GHz demonstrates how the process can work at its best.

Delegation Management -- Practical Considerations

Managing the U.S. delegation entails a number of practical considerations. Because of the amount of expertise needed, and because multiple agenda items are addressed, delegations have inevitably become large. The U.S. delegation at WRC-95 amounted to approximately 110 people – up to 167 at WRC-03 – most of whom remain intensely involved throughout the weeks of negotiation, meetings, and monitoring proceedings during a WRC.

At recent WRCs, "agenda creep" has been a problem as agenda items "studied" or not resolved from the previous WRCs have been "rolled over" into future events – resulting in more issues requiring additional expert delegates. Ambassador Gross's efforts to avoid agenda creep and to extend the period between WRCs from 2 or 3 years to 4 years will likely help to keep the size of future delegations at a more manageable level.

Successful management of the U.S. delegation also requires that resources be expended for many "basics." Managing delegates' involvement and engagement in particular agenda items requires ongoing communication among government delegates and between government and industry delegates. The communications (or "cables") between the delegation and the U.S. delegation's "home team" back in the United States must be carefully drafted and monitored. Moreover, I can't say enough about the importance of adequate facilities at the WRC itself, not only in terms of "square footage" but for purposes of security, computing and communications capability.

Finally, it is important to recognize the growing importance of regional voting blocs at the WRCs, and the need to manage communications and relationships with other delegations and regional organizations, cannot be overemphasized. The ITU's WRC meetings are designed to reach decisions by consensus; however, in an unusual case votes may be required and the vote procedure is one nation, one vote (assuming you meet the criteria to vote, e.g., payment of ITU dues). Thus, the development of regional voting blocks and taking a position contrary to a region can be a daunting task. As the importance of regional blocks has increased over time, it is

vital that U.S. participation in regional meetings, if only as an observer, if we are going to be successful and more clearly understand positions contrary to our own.

Post-Conference Action

It is critically important that the FCC expeditiously act to implement the decision of the WRC. This is essential for credibility when advocating future positions and certainly important to U.S. business and consumer interests. The record on implementing WRC decisions has been mixed. After WRC-95, the process of reallocating and licensing the spectrum took nearly two years. In contrast, after WRC-03 the Commission reallocated spectrum in the 5 GHz band and made it available for use less than one year after the WRC concluded. The FCC faced different challenges on these issues: the 5 GHz reallocation at WRC-03 was the product of much better planning and government and industry consensus. Obviously, if the WRC were to reach agreement on matters contrary to U.S. interests, the U.S delegation at the WRC can note that in the U.S. implementation of the WRC decision will be implemented in a different manner or not implement at all.

The FCC should endeavor to ensure that its allocation decisions are consistent with international allocations whenever possible. The reallocation of 1.9 GHz spectrum after WRC-92 is an example in which the delegation went to considerable effort to promote an allocation that the FCC ultimately modified. Granted, political or technical considerations can make adoption of WRC items difficult or unacceptable, but the U.S. government must keep in mind that harmonized spectrum works to the benefit of industry and consumers by facilitating economies of scale in equipment manufacturing and as mention above, helps to maintain the credibility of future U.S. WRC delegations.

Finally, for the reasons discussed earlier, preparations for the *next* WRC should begin almost immediately after the previous WRC ends. The FCC, NTIA and industry should identify their "teams," the FCC and NTIA should establish their coordination processes, and the WAC organization process should commence, all as early as possible.

Specific Recommendations

In light of these observations, I recommend that the U.S. government, including Congress where necessary, take the following actions to both improve on the U.S. government's success at future WRCs and to preserve the improvements made in recent years:

- *Select the head of the delegation at least one year in advance of the conference.* The rank of Ambassador provides an added cachet in the U.S. government's preparatory efforts. Given the growing importance of regional blocs, providing the delegation head the imprimatur of an Ambassador can be important. I understand that given the nature of the appointment, statutory limitations and the need for Senate approval are obstacles to providing Ambassadorial rank earlier, absent congressional action. At an absolute minimum, however, policymakers should consider the feasibility of naming the head of the delegation at least one year in advance, with the rank of Ambassador afforded as soon as possible thereafter.

- *Government versus private sector personnel as delegation head.* There are numerous individuals, both in and out of government, who could no doubt perform the task admirably. Each, however, brings both disadvantages and advantages. On one hand, a government employee, particularly one who has been involved in previous WRCs, can bring a degree of continuity and institutional memory to WRC preparation, thus mitigating the steep "learning curve" facing a private sector appointee. On the other hand, an appointee with industry experience can provide insight and perspective on industry positions that a government employee might not share. Both will no doubt have their own institutional biases. The recent trend has been toward private sector appointees, albeit ones with substantive government experience and in some cases, subject matter expertise. Policymakers should consider whether the extremely strict conflict of interest rules currently imposed on the head of delegation (Ambassadors), which require an appointee to quit his or her position (rather than take a simple leave of absence) and stock divestiture, may effectively preclude very able private sector

individuals from serving as head of the delegation. There are no easy answers here, but the issues are worth consideration.

- *Ensure that delegations have adequate office, meeting and communications resources.* This recommendation applies both to WRC preparation and the WRC itself.

- *Address the role of multinational corporations in the U.S. delegation.* Multinationals have played and will continue to play a legitimate role in the U.S. delegation, but safeguards should be considered. Again, there are no easy answers here. Mandatory expulsion from a delegation (whether or not a member represents a multinational) for disclosing confidential delegation positions is a good starting point.

- *Participation in regional meetings, bi-laterals and multi-laterals:* Resources must be available to government participants to assure that we are prepared to address WRC agenda items and to build coalitions among nations to advance the U.S. government and industry interests.

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