

Securing America's Trust: Security Printing and Electronics in Federal Credentials



Keynote from ROBERT C. TAPPELLA, *Public Printer of the United States*
Secure Document World 2010 | February 9, 2010 | Queen Elizabeth II
Conference Center, Westminster, London, UK



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Good afternoon. My name is Bob Tapella. I am the Public Printer of the United States of America. I am so pleased to be here in London at the Security Document World 2010 Conference – the largest annual security document, anti-counterfeiting, e-ID, biometric and border control show in the world.

As Public Printer, I serve as the chief executive officer of the U.S. Government Printing Office (GPO), the largest industrial manufacturer in the District of Columbia and one of the largest printing, digital information, and security credentialing factories in the world.

Although we are a Federal Government agency, we operate much like a business with annual revenues of \$1 billion. Like any business we must earn our revenue, control our expenses, and try to end each year with some retained earnings or profit. All of our retained earnings are invested back into GPO, allowing us to upgrade technology and other infrastructure.

The title of Public Printer traces its roots back to the days of Benjamin Franklin, who actually held the title of “Public Printer” for the colonies of Pennsylvania and Delaware before the American Revolution. More than two hundred years later, I have been entrusted with similar responsibilities: to record the words and actions of our Government and to make certain that these documents of our democracy are made widely available to the public and kept in perpetuity.

Each day, every day I remind myself of this incredible opportunity and responsibility. There is a portrait of Ben Franklin hanging over the fireplace in my office, and he looks over my shoulder every day. I’m certain Ben would be fascinated by just how much our industry has evolved and, perhaps more importantly, where we’re going.



Origins of the U.S. Passport

It may surprise you to learn that the history of the U.S. passport begins with Franklin. He was among the Founding Fathers gathered in Paris to sign the treaty granting American independence. After the treaty was signed, Franklin remained in Paris. Impressed with the design of French travel documents, he operated a small printing press and produced the first U.S. passport.

A pass to enter the United States, signed by Dr. Franklin, identified the bearer as a highly trusted individual, who could pass freely between America and other nations. Could Franklin have foreseen the day when an electronic chip would affirm that a traveler was trustworthy?

Knowing Franklin, as a leading author, satirist, political theorist, politician, scientist, inventor, civic activist, statesman, diplomat, and yes, even printer, maybe he could.

As the 25th Public Printer of the United States, and carrying on the rich tradition of Dr. Franklin, this afternoon I’ll give some brief remarks on GPO and the roles we play, and I will focus on security printing and electronics in Federal credentials, including the passport. I’ll then conclude with my thoughts on how private sector vendors can partner with us to bring value to the products and services we provide to our Federal agency customers.

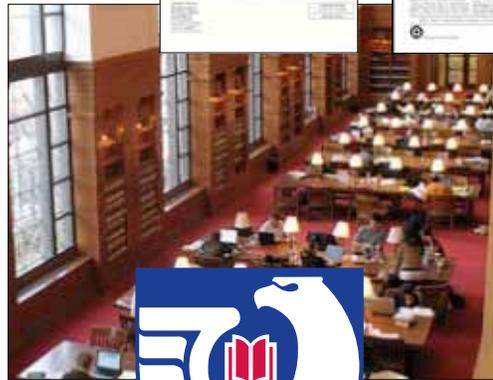


GPO Yesterday and Today

When GPO first opened for business in 1861, printers set type by hand under candlelight; printing presses were driven by steam; and deliveries each morning to the United States Capitol were by horse-drawn cart. Since then, every Public Printer has had to adapt the agency to new technologies and new ways of meeting the needs of Congress, Federal agencies, and the American people.

GPO plays four primary roles today:

- GPO plays an integral role in the legislative and regulatory process by the daily work we do for the United States Congress and the Administration. We process work for Senate and House bills, reports, hearings, documents, laws and other congressional publications. We publish what we call the Official Journals of Government, which include two daily newspapers: the *Congressional Record* and the *Federal Register*. In partnership with the office of the Federal Register, GPO prints and disseminates the official text of Federal laws, Presidential documents, administrative regulations, and notices of proposed rulemaking.
- GPO plays a facilitating role as we work with the American library community to provide free, open, and permanent public access to the documents of our democracy through the Federal Depository Library Program. Since 1813, depository libraries have safeguarded the public's right to know by collecting, organizing, maintaining, preserving, and assisting patrons with information from the Federal Government. As institutions committed to equity of access and dedicated to free and unrestricted public use, the Nation's more than 1,250 depository libraries serve as one of the vital links between "We the People" and our Government.
- GPO plays a supportive role to all of the agencies of the Federal Government as we help them meet their printing and information product needs. This includes Web site design, commemorative publications, training DVD's, and traditional printing, too. We do this much like a print broker would. Last year we sent nearly 145,000 jobs with a value of nearly half a billion dollars to more than 2,000 private sector vendors located in every State, plus Guam, Puerto Rico, and the Mariana Islands.
- GPO plays a critical role in our Nation's security by producing secure Federal credentials including the U.S. passport for the Department of State and "trusted traveler" cards for the Department of Homeland Security Customs and Border Protection.



Security and Intelligent Documents

It's this fourth role—the work we perform in producing security and intelligent documents for the Federal Government—that I want to focus on today. With this work, in essence, we are securing America's trust. The success of our security and intelligent documents programs proves that we can connect security printing with secure electronics to designing, printing, personalizing, and delivering the most trusted credentials in Government.

We are trusted to validate those who cross a border, receive Medicare benefits, or display a law enforcement badge. We are trusted to protect Government property, strengthen national security, and safeguard personal identity. We are trusted because our secure Federal credentials are made by Government employees in secure, Government-owned and Government-controlled facilities, supported by Government-audited secure supply chains.

GPO has been producing the U.S. passport for more than 80 years. More recently, GPO worked together with the Department of State to create an ICAO-compliant passport containing an electronic chip. To date, we have manufactured more than 52 million of these e-passports, and they are now the standard issued by the State Department. This year, we'll produce about 11 million more. Today's passport illustrates how GPO connects precision printing – our traditional strength – with secure electronics.

But that's not all we do. The security capabilities proven in the passport have been re-combined, creating a family of secure Federal credentials – secure booklets, secure cards, and secure badges.

GPO is chartered to do business with all Federal agencies from all three branches of our Government – executive, legislative and judicial. There is an ease of doing business with the GPO for our Federal agency customers. There is no burdensome procurement process. With a requisition for printing, it takes little more than a signature.

The benefits continue with the use of established GPO systems to order, pay for, and change the specifications of a secure credential agreement. Plus, GPO manages all acquisitions, ensures adherence to Government guidelines, and monitors contract performance. GPO also has a longstanding history with Federal Government centers for technology, standardization, and validation, where we collaborate with laboratories, forensic scientists, and other specialists.

So, where does that leave the private sector? Well, GPO partners with vendors that bring value to our products and services. We have nearly 150 years of experience providing products and services to Federal agency customers, including more than 80 years providing secure Federal credentials, and more than 70 years partnering with the private sector.





And so, we are both a provider and a partner. We partner with our fellow Federal agencies and we partner with the private sector. This unique role allows us to innovate and lead in ways the private sector cannot do on its own.

Our customers confirm the result. Our credentials are tough to counterfeit but easy to authenticate. Achieving the greatest fraud resistance and durability takes an on-going dialog between experts in multi-layer security design and experts in the materials of card and booklet construction.

Our experts contribute their knowledge of substrates, chemical security agents, and laminates to create credentials of integrity and durability. They synthesize design and materials to achieve level one, level two, and forensic levels of security. And under the same roof, secure data acquisition and personalization take place.

A variety of technologies may be selected for personalization—such as thermal transfer, laser engraving, and embossing—to imprint personally identifiable information, or PII, on the credential surface. The same PII is encoded in any electronics that we embed. Edge-to-edge graphics can also be applied during this phase.

Base credential cards may be blank, or punched from securely printed sheets. We can print personalized letters and affix credential cards to them. We can add inserts and protective sleeves, and then the entire package is inserted into an envelope for mailing. These steps are created in-line, supporting throughput of millions of secure Federal credentials per year and we have built the platform to be scalable for new opportunities.

Secure Federal Credentials

We have already accumulated a significant record in the production of secure credentials for a variety of Federal agencies:

- For the U.S. Capitol Police, we created a credential for the 2009 Presidential Inaugural. We designed, produced, and personalized the law enforcement credentials that were used by more than 40 different agencies that day. More than 10,000 individual credentials – encrypted and machine readable – were issued, including many with a one-hour turn-around time immediately before the event.
- For the Department of Defense, GPO furnished the security design for the next generation of the CAC—the common access card. We utilized proprietary security design software, not unlike that used in the bank note industry, to produce a credential that has security features embedded in its design, strengthening the visual and physical security of the card.



- For the Department of Health and Human Services, we manage the personalization and delivery of hundreds of thousands of Medicare health insurance cards for Puerto Rico. These are the first plastic cards used in the Medicare system to provide reliable and accurate access to their infrastructure, significantly reducing fraud.

- GPO also produces a credential for the U.S. Coast Guard. It verifies the identity, training, and qualifications of crew members aboard merchant ships.

■ Also, for the Presidential Inauguration, GPO printed a range of materials including invitations, maps, signs, programs, tickets, and other products, some of them with intricate and sophisticated security features, both overt and covert, including some never before used in the United States. In a crowd of more than 1.8 million people, some of these color-coded, encrypted, and bar-coded secure documents enabled visual verification of those closest to the President.



GPO designed and developed “trusted traveler” cards for the Department of Homeland Security, Customs and Border Protection. The cards are issued to pre-approved travelers who cross U.S. borders with Canada and Mexico. We print and personalize the cards, enclose them with custom letters in one of three languages, and then distribute them directly to end users. To date, we’ve delivered nearly 750,000 of these cards to existing subscribers. We produce additional cards for new subscribers each day.

“Trusted traveler” cards were created in response to the Western Hemisphere Travel Initiative. There are three distinct categories of these cards:



- NEXUS cards help expedite travel between the United States and Canada. We produced, personalized, and delivered more than 400,000 cards last year, in a joint venture with the Canadian government.
- SENTRI cards, which stands for the “Secure Electronic Network for Travelers Rapid Inspection,” are for frequent travelers who cross our border with Mexico. GPO made 240,000 SENTRI cards last year.
- FAST cards, which stands for “Free and Secure Trade,” are for approved commercial truck drivers making fully qualified trips between the U.S. and Canada or to the U.S. from Mexico. To date, we’ve manufactured and distributed more than 100,000 FAST credentials.



“Trusted traveler” cards are equipped with a chip and an antenna, to signal the border crossing officer that a pre-approved traveler is approaching the dedicated lane to expedite passage.

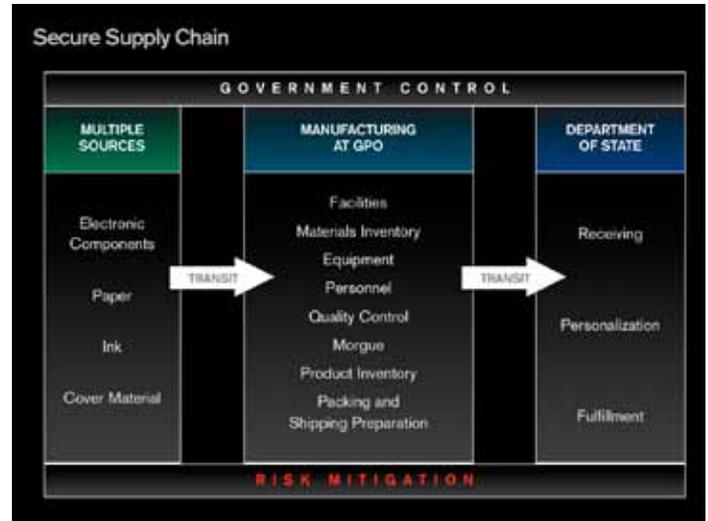
Many of our customers come to GPO for end-to-end services, from design to delivery. The credentials we create for them are one-of-a-kind, completely unique applications.

But not every Government agency needs a completely unique credential. Smaller Government agencies must ensure security without compromise, but are often unable to afford the cost of a completely custom approach. Smaller agencies may issue only two or three credentials at a time, not thousands.

For customers like these, we’ve created a new secure credential product. It consists of a suite of materials that customers can use to make and issue credentials in their own offices using GPO-supplied materials. The suite consists of base sheets, laminates, a CD with templates, and a printed guide with step-by-step instructions.



Customers may select one of three base sheets, each with a patriotic design. These sheets are 110-pound security index, with fine-line designs rendered with solvent-sensitive security inks. Base sheets are fed through the customer’s laser printer to add personal data and the agency seal. Scoring and perforations in the base sheet make it easy to separate the



credentials prior to lamination. The laminate itself incorporates more than a dozen security features. This new system allows our customer to create individual credentials on demand, one at a time if necessary.



To pilot this concept, we worked with the Department of the Treasury, where credentials were issued to enforcement officials who make periodic inspections of banks and other financial institutions. An enthusiastic response led us to create a restricted, turn-key product for use by Government officials. The Inspector General community was quick to endorse this product. Every Federal agency has an Inspector General, whose primary responsibilities are to detect and prevent fraud, waste, abuse, and violations of law.

The law enforcement community likes the control they can maintain over the credentialing process. The entire process takes place inside their own secure facilities, reducing both risk and overall costs. It's so easy to use, even the Public Printer can make one.

Lessons Learned

Now that you know a little bit about the GPO and some of the products and services we provide, I'd like to switch gears and share some of the lessons we've learned from the current passport procurement.

- Mitigate risk in the secure supply chain through the use of multiple sources. We selected two prime vendors to supply our inlayed cover stock material. We have split the inlayed cover purchases roughly 60/40 between the two vendors because of performance and ramp-up issues.
- Reduce single points of failure in the secure supply chain. There are two prime vendors for inlayed cover stock material, there are two chip suppliers, and there are multiple manufacturing and integration sites. GPO even built and established a second secure production facility in a geographically distant location from our main plant in Washington, DC, because we didn't want to be a single point of failure. This second plant at the Stennis Space Center, in Mississippi, regularly produces 30% of the overall U.S. passport volume every year.

- Reduce the possibility of locating supply chain functions in politically unstable regions of the world. The electronics business is a global business. We understand that. But, how far and to where components that eventually become a part of the U.S. passport travel is important to us, and it should be important to those who wish to do business with us.
- Administer a robust and effective Secure Supply Chain Audit Program to protect passport components and raw materials from malicious attack, alteration, theft, and malfeasance. Well-documented audits, both regular and unannounced visits, and third party evaluations of the supply chain all occur. This may be done by GPO, our Inspector General, or other U.S. Government resources such as the Government Accountability Office, the Department of State's Diplomatic Security Service, or the Federal Bureau of Investigation. In fact, later this month, I will be joining GPO's Inspector General as he personally reviews part of the passport supply chain.
- Allow for and even encourage technology upgrades and innovations providing for a better product or raw material with higher quality and performance at a lower price. Examples might include packaging and shipment solutions that are more secure, less costly and easier to inventory, or perhaps the introduction of a micro-electronic chip that operates at higher speeds with increased security protocols at a lower price point. We want to be flexible.
- World-class inventory management systems and processes that ensure adequate levels of critical components are available up and down the supply chain. While we may have a contract with a prime vendor, quite often there are many subcontractors. We want to be certain that every subcontractor is open and transparent about their supply levels all throughout the supply chain, that there are safe levels of components at all critical points throughout manufacturing, and that these components have transparent inventory audits and reports available to us.
- Establish a clear, concise, and well distributed product defect guide throughout the supply chain to establish standards and reduce variability and protests or disputes. We created a guide that has actual defect samples, components, photos, and specifications used to settle disputes and inform key parts of the supply chain. We also established a defect guide with our Federal agency customers to be certain that we are meeting their needs.



So, there you have it: some background on GPO and the roles we play, what security printing and electronics in Federal credentials look like, my thoughts on how private sector vendors can partner with us to bring value to the products and services we provide to our Federal agency customers.

I'd like to conclude by saying that GPO will always seek:

- New approaches to security graphic design
- New materials for printing and construction
- New technology to protect personal information
- New channels for document delivery and fulfillment
- And new allies from the public and private sectors – allies like you!

Thank you very much.



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