Smart Card Alliance

2011 e-Yearbook

A Smart Card Alliance Publication • Volume 1 • Issue 1

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Making Good on Our Commitment

Showing the world the benefits of smart card technology

Raising awareness of the value of smart card technology and accelerating its adoption across North America and Latin America have been at the core of everything that the Smart Card Alliance strives for. The list of meaningful achievements in this regard can fill volumes. This first-ever issue of the **2011 Smart Card Alliance E-Yearbook** hopefully captures the essence of a year's worth of smart card industry leadership and advancement.

Our organization stays at the forefront of innovative thinking by leveraging the expertise of nearly 200 industry members across a broad spectrum of markets and technologies. Our work focuses on demonstrating "why and how" variations of secure, microprocessor-based chip technology are applied in different industries. The technology we collectively call "smart cards" shows up in a range of form factors including cards, USB tokens, mobile phones, stickers and add-on devices, and embedded security hardware.

Nothing illustrates leadership in collective innovative thinking more than the North American financial industry's decision to accelerate both contact and contactless **EMV payments**, enabling our market to leapfrog other global markets' advancement of **NFC mobile payments**. Industry collaboration led by the **Payments Council** resulted in several acclaimed white papers, live webinars, interactive workshops, and broad representation at our Payments Summit and Annual Conference. U.S. bank card issuers, processors, merchants, and suppliers, like our Canadian neighbors before them, became convinced that the industry was ready to cooperate to reduce fraud, improve the experience of international travelers, and accelerate the use of mobile devices for payments. At the same time **six major metropolitan areas** are implementing or planning to implement open bank card fare payment and two major competing mobile payments schemes, Google and Isis, are helping shape the next generation of consumer payments using mobile devices. Now that we have answered the question of "why," we eagerly look to 2012 to address "how" EMV and NFC will be adopted by industry stakeholders.

Only something so fundamentally market-changing as EMV and NFC could overshadow the 2011 advances in the **government identity management and access security industries**. The lexicon most identified with government-led identity credentialing and access management – HSPD-12, TWIC, and CAC card – has been replaced by **NSTIC** (National Strategy for Trusted Identities in Cyberspace), **PIV** (Personal Identity Verification) and **PIV-I** (Personal Identity Verification - Interoperable). These initiatives move far beyond the federal government market into the global commercial Internet, e-commerce, and access control markets. Much as **HSPD-12** in 2004 set the direction for the next seven years of government identity management and security investment being centered on smart cards, **OMB M-11-11**, issued on February 3, 2011, set in motion government use of PIV credentials to access facilities and networks. It is likely that the 2011 establishment of the NSTIC National Program Office and the definition of a commercial digital identity ecosystem will set the direction for using smart card-based badges, USB tokens, and mobile phones for the remainder of the decade. Promising developments in using smart cards with **electronic health records** could also transform the healthcare industry, just as EMV and NFC are transforming payments.

I am truly proud of the work that the Smart Card Alliance has done on behalf of our industry. We still have much more to offer, but our efforts are impacting government and private sectors, organizations and individuals in a positive way. The Smart Card Alliance helps guide and shape our industry's cooperative focus, and this first-ever edition of the **2011 Smart Card Alliance E- Yearbook** provides a terrific glimpse into our progress.

Randy Vanderhoof
Executive Director
Smart Card Alliance

yearbook contents

The Smart Card Alliance E-Yearbook is produced by the Smart Card Alliance, a not-for-profit, multi-industry association working to stimulate the understanding, adoption, use and widespread application of smart card technology.

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A Message from Neville Pattinson, Smart Card Alliance Chair, 2009-2011

Greetings! It has been another productive year for the Alliance, and I have enjoyed working with all of you. In all of my years in the smart card industry, I have never seen the industry jump forward as much as it has in the past few years, and especially in this past year. Our work together with the Smart Card Alliance has been integral in these changes.

One of the strongest examples of the Alliance propelling the industry forward is our work with EMV chip technology. The Payments Council's tireless efforts to produce web content, white papers, webinars, and conference presentations around EMV security benefits, as well the hassles of magnetic stripe when traveling, have truly moved the marketplace. In May 2010, the United National Federal Credit Union (UNFCU) announced the first U.S. chip cards for its frequently traveling customers. Soon, other banks followed suit, including Citi, JP Morgan Chase, PSCU Financial Services, Silicon Valley Bank, the State Employees Credit Union, Travelex, U.S. Bank and Wells Fargo. Then, in August 2011, Visa announced plans to accelerate the migration to EMV chip technology and the adoption of mobile payments through acceptance requirements, liability shifts, and the Technology Innovation Program (TIP). With this, the United States is well on its way to shifting payment technology to EMV, and I believe the educational work of the Smart Card Alliance has been instrumental in making this happen.

Another industry where Alliance education has caused a shift is transit. At a time when many transit agencies are updating or replacing their payment systems, the Alliance Transportation Council has been providing many transit resources on the opportunities, benefits and challenges of all of their options. This timely education has led to many agencies choosing to move forward with a very innovative and advanced payment choice – open payments, the acceptance of contactless bank cards for fare payment. Today, six major transit agencies have moved or are moving towards these new open payment systems.

In my years working with the Identity Council, I have been pleased to participate in educating the industry on expanding the use of Personal Identity Verification (PIV) credentials beyond the federal government. The success of these efforts was evident at our recent Government Conference in Washington, DC, where many presenters spoke at length about the use of PIV-Interoperable (PIV-I) credentials for federal contractors, state and local governments, and emergency response officials.

There are a few areas to highlight where Alliance education and participation are just beginning to bear fruit. One of these is the National Strategy for Trusted Identities in Cyberspace (NSTIC), which is just getting started, but is an effort where I see the Alliance playing a key role in the years to come. Another is mobile payments. The Alliance has been talking about and educating on how to securely implement Near Field Communications payment technology for many years; now it seems we are closer than ever to being a reality.

Finally, I would like to thank all of the Alliance members for volunteering their time, and all of their hard work and dedication to council projects and Alliance events. Thank you to Randy Vanderhoof and Cathy Medich for leading us to all of our success this year. I am looking forward to another great year!

Neville Pattinson
Vice President, Government Affairs
Gemalto

A Message from Willy Dommen, Smart Card Alliance Chair, 2011-2013

I first would like to acknowledge and thank the membership for the generous contributions of time invested into council projects. The value of the Smart Card Alliance can be truly measured in terms of the hours spent by the membership to produce high quality content to inform and educate the market about smart cards. The Alliance activities are measurably driving identity management in government, payment in transportation, EMV education beyond financial services, and the merits of smart card technology for healthcare.

The key trend that is going to increasingly drive the activities of every Smart Card Alliance council in the future is the migration of smart card applications to a mobile platform. We have now reached the point in time where "it is not about the card anymore." All of the Smart Card Alliance work over the past two decades may serve as the foundation for managing card-related mobile applications on a phone. There was a time in the mid 90's where the vision was to hold banking, identity, transportation payment and health care data on a single smart card; and even anonymous P2P transactions could take place. However, the complexities of the business and legal issues slowed development. Fast forward to 2012, the capabilities of the mobile phone are now allowing the original smart card vision to materialize. Many business and legal issues have been resolved. However, the resolution of business and legal challenges will continue to be an on-going process and the Alliance councils are helping to accelerate progress.

Several industry trends will impact our council activities over the next year and in the future.

Federal government identity management programs are continuing to evolve. As we are learning, a common identity credential for all federal employees and contractors presents complex challenges that are being addressed as they arise. The concepts and methodologies applied to the federal identity management programs are not only forming the basis for identity management programs for both state and local governments, but are also serving as benchmarks for private industry. The work of the Smart Card Alliance councils will continue to shape the outcome of these programs.

The transportation industry is continuing to drive the convergence of using multiple forms of payment for a ride. Cities such as Chicago and Philadelphia are entering into contracts that total in the hundreds of millions of dollars for new fare payment systems. And, cities such as New York, Washington, DC, and Dallas have started the process for procuring new fare payment systems. As demonstrated by recently awarded contracts, these new fare payment systems allow non-traditional business arrangements for financing projects.

The healthcare industry's mandate to convert from paper-based health records to electronic health records will be the key issue driving the Alliance healthcare activities. The council's activities have been focused on educating various interest groups on the advantages of a solution that includes smart card technology. The key challenge will be to harmonize the interests of all the stakeholders involved in healthcare management and services delivery.

Today, the Smart Card Alliance is a very healthy organization and my objectives as Chairman are to work with the Executive Director and the Board to establish the long-term strategy for securing the future of this organization. I believe that we need to continue to draw on the ideas of the membership to maintain the organization's viability into the future.

Willy Dommen
Senior Manager
Accenture

Member List

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Accenture LLP
ACI Worldwide, Inc
ACS, A Xerox Company
ACT Canada
ActivIdentity
Acumen Building Enterprise, Inc
AMAG Technology, Inc
American Express
Angelo Buscemi
Apriva
Ashok Joshi
ASSENDA S.A.S.b - SCALA
Athena Smartcard Solutions Inc
Atsec Information Security
Autoridad Nacional Para La Innovacion Gubernamental (AIG) - SCALA
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Banco Amazonas S.A. - SCALA
Banco Bolivariano - SCALA
Banco Comercial De Manabi S.A. - SCALA
Banco Del Austro - SCALA
Banco Del Pacifico - SCALA
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Collis America, Inc
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Core Quality Services, S.A. - SCALA
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Nagra ID Security
NASA
National Institute of Standards and Technology
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Oberthur Technologies -SCALA
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Regional Transportation Authority
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SAIC - Science Applications International Corporation
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Leadership Council

Alliance Management

Executive Director

Randy Vanderhoof

Randy Vanderhoof is the Executive Director of the Smart Card Alliance. He came to the Alliance in January, 2002 and became the Executive Director in August, 2002. During his tenure as the chief executive, he has directed the transformation of the organization from primarily a networking organization into a diverse, education oriented, international, multi-industry organization that gathers industry stakeholders together to help stimulate the rapid adoption of all forms of smart cards (cards and other form factors) for electronic payments and digital security applications. In December 2008, Randy was named by Security Magazine to the list of the Top 25 Most Influential People in the Security Industry.

Randy is a graduate of Saint Joseph's University in Philadelphia, PA with a BS in Management Marketing. He received his MBA from Rider University in Lawrenceville, NJ.

Board of Directors

2010 – 2011 Executive Board
Chair – Neville Pattinson, Gemalto
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Treasurer – Willy Dommen, Booz Allen Hamilton
Secretary – Garfield Smith, Oberthur Technologies
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Linda Brown, Infineon Technologies
Matt Calman, Bank of America
Clair Fiet, Utah Transit Authority
(Observing Government Board Seat – Transit)
Roland Fournier, L-1 Identity Solutions
Greg Garback, Consultant
Bob Gilson, U.S. Department of Defense/DMDC
(Observing Government Board Seat)
Dale Grogan, LifeMed Card, Inc
Simon Hurry, Visa, Inc.
Oliver Manahan, MasterCard Worldwide
Dom Morea, First Data
Keith Ward, Northrop Grumman

Membership Value Statement

Your membership dollars support the council and task force initiatives, networking meetings and industry events, web site development, marketing programs, newsletter, Educational Institute, industry advocacy and media outreach efforts that all contribute to the growth of the smart card industry in North and Latin America.

Our strategy for the coming year is to continue to engage the many diverse aspects of our industry and to strive to bring together the providers of the technology and the users of the technology in a friendly, open community.

The Alliance has extended its reach globally by engaging international smart card organizations to join the Smart Card Alliance to bring their experience and innovation to the organization and enable the Alliance to keep a global perspective on how the smart card industry is evolving elsewhere in Europe, Asia, and Latin America.

The Alliance is a founding member of ISCAN, an international network of smart card associations with representatives from smart card industry organizations from Europe, Canada, India, Asia, South Africa, and China. ISCAN facilitates the sharing of information and market trends involving the smart card industry around the world.

The Alliance delivers value to its membership. Below are some quotes from member organizations about their experience of being members of the Smart Card Alliance.

Comments on Membership Value

"Being a part of the Smart Card Alliance is one of the best career decisions I've ever made. The Alliance has provided a platform combining networking, collaboration, learning, and moving the industry toward a more positive future. In addition, active involvement in industry councils is an ideal way to build up your reputation!"
— Deborah Baxley, Principal | Banking, Capgemini Financial Services Global Business Unit

"Gemalto has seen firsthand how the wealth of information generated by the Smart Card Alliance (SCA) Payments Council transforms into benefits to issuers, payment processors and merchants, speeding the return on investment to its smartcard programs. As a member of the board of directors, Gemalto is highly committed to the standards and ideals of the SCA, which has established itself as the single industry voice for smart card technology through such a positive contribution."
— Philippe Benitez, VP Marketing for Secure Transactions, Gemalto North America

"As a transit agency that is travelling the long and winding road in exploring the use of emerging payments technologies, we have found in the Transportation Council an invaluable resource and trusted chaperone. Put simply, we could not have progressed to the point we are today without the Council's leadership and work in assembling subject matter experts and industry leaders from across the broad spectrum of the payments ecosystem to engage in thought-provoking discussions that serve to inform and educate."
— Michael DeVitto, Vice President, AFC Program Management and Sales Operations, MTA New York City Transit

Membership Benefits

As a not-for-profit, membership organization, the Smart Card Alliance mission is to accelerate the widespread adoption, usage, and application of smart card technology in North and Latin America by bringing together users and technology providers in an open forum to address opportunities and challenges for our industry. This balance makes the Smart Card Alliance a unique place where users, issuers and suppliers meet to exchange ideas, discuss common issues and work together to develop and expand the use of all types of integrated circuit "chip" cards and alternative form factor smart cards in the Americas. Members come from all industry sectors, including financial, retail, transit, corporate, government, healthcare and mobile, along with the technology and solution providers that service these sectors.

- Alliance meetings and conferences
- Company visibility
- Information, research and education
- Support for standards and interoperability
- Outreach to government and commercial organizations
- Innovative ways of approaching common business goals
- Professional development

When security matters, MULTOS is the safest choice.

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Member Survey Profile

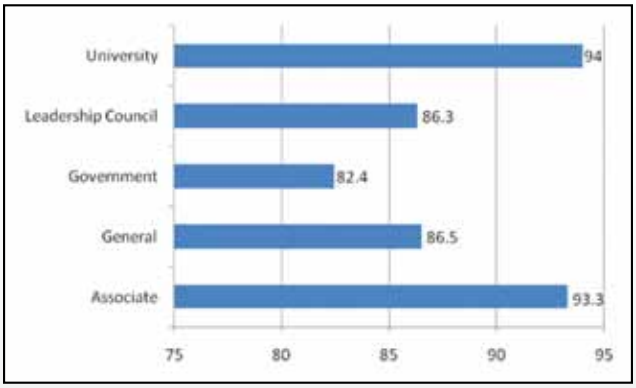
What Are Smart Card Alliance Members Saying?

The Smart Card Alliance conducts an annual member survey to get input on our activities so that we can ensure that our programs focus on member-driven priorities and provide significant value to the membership overall. We had 139 members from 87 member organizations (52% of member organizations) responded to the June 2011 survey.

1. Are members satisfied with the Alliance programs and activities?

Overall, members are satisfied with Alliance programs and activities. We ask members to give us a numeric score between 0-99 to indicate satisfaction, with 90-99 indicating high satisfaction, with Alliance delivering excellent performance, 80-89 indicating satisfaction, with membership value clearly present, 70-79 indicating low satisfaction, with improvement needed, and 0-69 indicating dissatisfaction.

This year our average satisfaction rating was 85.7, improving slightly over 2010's 85.2 rating, with satisfaction good across all member categories. The figure below shows the satisfaction rating by member category. An important result is that active members (those who are involved in councils, 54% of respondents) rate their satisfaction significantly higher than non-active members – 89.3 rating from active members vs. 81.5 rating from non-active members.



2. What do members value most about the Alliance activities?

Communications, conferences, councils and council deliverables are highly valued by members. Activities rated as highest value in our 2011 survey were:

- Email announcements about upcoming events and council projects
- Smart Card Alliance website – public site: Industry News; Smart Card Products & Services Directory
- Smart Card Alliance website – members-only site: white papers, reports, and resources; past conference proceedings; member contact information
- Industry council participation and deliverables
- Conferences: networking opportunities; complimentary and discounted registration; speaking opportunities
- Smart Card Talk monthly newsletter
- Media coverage of Alliance and member activities.

3. What did members say about the top benefits of Alliance membership?

Members were asked to tell us what they thought the top benefits of Alliance membership were – generating a wide variety of responses. The top benefits identified were:

- Keeping up-to-date and abreast of news, new technologies, industry developments
- Networking
- Participation in the smart card industry forum / industry influence
- Council and white paper participation
- Conferences and speaking opportunities
- EMV advocacy / advancement / education
- Recognition as an industry leader / visibility / brand recognition

Benefits in the words of a few members included:

> *"Staying abreast of new activities and technologies in a complex and fast-moving marketplace consisting of government, vendor and commercial entities all working together to solve tough problems"*

> *"Learning about what is happening in the industry. Being able to educate myself through listening to industry leaders. Having people to network with in the industry."*

> *"Getting an opportunity to sort out between technological hype/sizzle and the realities of business model/implementation – face-to-face discussions at SCA meetings are very valuable."*

> *"The opportunity to participate in industry-shaping deliverables such as white papers and publications, and to participate and speak at events."*

4. Where did members feel the Alliance needed improvement?

Members did feel that some activities had less value. Key areas were:

- Smart Card Alliance social media
- Smart Card Talk newsletter
- Alliance presence at other industry events
- Industry outreach to media

As we moved into the fall, we've launched several initiatives to address these areas, improving our visibility in social media, revamping our monthly newsletter, and adding Alliance staff for events, communications and operations.

In addition, we found that many of the survey respondents had no experience with or were unaware of Alliance programs and activities. We'll be more active in the coming year in reaching out to members to communicate what the Alliance is doing and achieving and to encourage members to get involved in our industry councils.

5. What did members identify as the most important industry issues and topics that the Alliance should be working on in 2011/2012?

Every year members are asked what they think are the most important industry issues, to help align our industry councils and outreach efforts. Most of the issues mentioned in this year's survey are already top priorities for our councils. Top issues mentioned this year were:

- Payments: EMV, NFC, mobile payments, security of mobile/ roadmap for secure mobile payments
- Identity and access: healthcare, NSTIC, FIPS 201-2, commercial identity verification, mobile identity / authentication
- Transit: NFC, open payment for transit, transit and parking

Our industry councils cover many of the topics identified in the survey and we encourage all members to participate in the council activities.

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member profiles

Each month, we featured a Member Profile in our Smart Card Talk Industry Newsletter to inform members about their industry, main business profile and offerings. You can access all the interviews here.

Identive Group (formerly HIRSCH Electronics) • *February 2011*

HIRSCH, a business unit of Identive Group, Inc. (Nasdaq:INVE) (Frankfurt:INV), manufactures integrated security and identity systems for worldwide markets. Identive Group, Inc. is a leading provider of products, services and solutions for the security, identification and RFID industries.

HIRSCH's award-winning solutions bring together access control, video surveillance, intrusion detection, digital certificates, smart cards and biometrics to successfully secure facilities, digital assets and electronic transactions. The company brings significant expertise to mission critical facilities of national security consequence. In February, Smart Card Talk spoke with Lars Suneborn, a veteran in the security industry who currently is guiding the company's government customers with implementation of FIPS 201 compliant products and related system enhancements. Lars is also the chair of the Smart Card Alliance Physical Access Council.

"Today, security agencies from several nations are increasingly deploying nationwide PKI-enabled enterprise PACS that are integrated with agency identity and credential management systems," said Lars. "To assist and guide our Federal agency clients, the HIRSCH Government Program Group combines a deep understanding of Federal government operational as well as technical requirements for physical access control systems. HIRSCH has become recognized as a go-to company for high-security and HSPD-12 PACS solutions."

"Security management functions which merge physical and logical access and require rapid authentication are evolving," he remarked. "To satisfy this new paradigm, next generation security management systems must be able to strengthen the binding between the pillars of identity, credential validation and the card user. Currently, smart cards are the only portable technology platform that is able to combine the related technologies in a practical manner."

Read the complete interview here.

Infineon Technologies • *March 2011*

Infineon Technologies provides semiconductor solutions that address energy efficiency, mobility, and security. The company's chips are found in all types of automobiles, industrial electronics, home appliances, gaming consoles, and PC peripherals.

Within its chip card business, Infineon is a broad line supplier of hardware-based security, providing SIM chips, secure microcontrollers for payment, government ID, and platform security, and RFID chips for applications ranging from limited use ticketing to tracking library books. Smart Card Talk spoke with Joerg Borchert in March 2011 about the company and market trends.

"Infineon chips help support the business of others, both internal to the smart card industry and outside of it," said Borchert. "In response to demand from the smart card industry for a more flexible supply chain, Infineon developed a new flash technology name SOLID FLASH, and to further harden secure chips from attacks. the company introduced INTEGRITY GUARD, which employs full-chip encryption and other advanced technology to meet the security challenges of this decade."

"The trend to mobile payment and NFC is exciting," Borchert noted. "We've also seen the necessity for open systems in payment and transportation." Borchert indicated that security is one of the key factors driving smart card technology in government and commercial markets in the U.S.

"Who is that person trying to access the device or network? Cross that border? Make that payment? How do I know they are authorized? Properly designed and implemented, smart card technology can reduce the risk. Security innovation and fast adoption are key to protection of assets in a highly networked society."

Read the complete interview here.

Hewlett-Packard Enterprise Services • *April 2011*

HP is the world's largest technology company, bringing together a portfolio that spans printing, personal computing, software, services and IT infrastructure at the convergence of the cloud and connectivity, creating seamless, secure, context-aware experiences for a connected world. Lines of business include applications services, business process outsourcing, IT outsourcing and industry solutions. In April, Smart Talk spoke with Lolie Kull, who supports the Global Identity Practice, Public Sector, and is a founding member of the Smart Card Alliance Physical Access Council.

"Smart card technology has been a key driver for our federal government identity, credentialing and access management business," said Kull, adding that ID management is critical in healthcare and cybersecurity. "As the need for establishing trusted identities increases, the need for identity management and technology such as smart card technology will continue to be a major business driver for HP. You simply cannot achieve secure access to the Internet or any application or resource that you need without being able to have a strong trusted identity and secure authentication.

"With smart card technology, and HP's expert identity management support," Kull continued, "we (government, businesses and citizens) can begin the road to true trusted identities in cyberspace that will enhance privacy and provide security for information and transactions." Kull explained that its solutions can support the healthcare industry by reducing fraud for Medicare and Medicaid, help protect the privacy of patients, and reduce the administrative workload for healthcare professionals.

"HP has many state, local and private sector customers and potential customers that would benefit from taking advantage of our expertise and the lessons we have learned from our global identity, credentialing and access management implementations," Kull observed.

Read the complete interview here.

Northrop Grumman • *May 2011*

Northrop Grumman designs some of the world's most sophisticated war-fighting tools, from stealth fighters and airborne surveillance systems to nuclear powered aircraft carriers and submarines. The company secures sensitive systems and networks that are critical to national defense. Northrop Grumman currently has several projects underway to ensure corporate-wide compliance with the enhanced security requirements mandated by Homeland Security Presidential Directive 12, more commonly referred to as HSPD-12, and guided by Federal Information Processing Standard (FIPS) 201. In May, Smart Card Talk spoke with Keith Ward, director of enterprise security and identity management for Northrop Grumman. A 25+ year veteran, he is recognized as an information technology executive and has business management experience in leading, managing and developing complex mission critical enterprise programs and solutions.

"We've identified the critical need for a common framework for federated collaboration including identity management and assurance, data protection, digital rights management and secure collaboration," said Ward. "For us to do business in today's world, we must balance the need to protect intellectual property (IP) while demonstrating willingness and ability to meet contractual requirements from government customers for auditable, identity-based, secure flows of information."

Ward said the key factor driving smart card technology is the National Strategy for Trusted Identities in Cyberspace (NSTIC), which identifies a set of guiding principles for accelerating the use of trusted digital identity credentials. "Deploying a smart card system that reflects these principles can help secure transactions on the Internet, improve the public's awareness and control of personal information, and stimulate the growth of online commerce," he said. "It is prudent to first create one or more proofs of concepts (POCs) in controlled settings to expose and close critical gaps before expanding to more ambitious smart card pilots that include real transactions with real people."

Read the complete interview here.

member profiles

Lockheed Martin • *July 2011*

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The firm's units are broken into four broad business areas: Information Systems & Global Solutions (IS&GS), Aeronautics, Electronic Systems, and Space Systems. In July Smart Card Talk spoke with John Mears, director of Biometric Solutions at Lockheed Martin.

"Lockheed Martin is the largest provider of IT services, systems integration, and training to the U.S. government," said Mears. "This includes a diverse portfolio of proven, large-scale biometrics and identity management programs such as the FBI's Next Generation Identification (NGI) program; the TSA Transportation Workers Identification Credential (TWIC); and RapI.D.™, a portable DNA analysis device that is being collaboratively developed by Lockheed Martin and ZyGEM Corp. Ltd's Microlab unit." Mears spoke about how smart card technology plays a key role in several identity management initiatives that Lockheed Martin supports.

"The corporation serves as the lead contractor on the Transportation Security Administration (TSA) Transportation Worker Identification Credential (TWIC) program, which provides biometrically encoded credentials to vetted maritime workers who require routine, unescorted access to secure areas at our nation's ports." In addition, said Mears, the company also employs smart card technology for its HSPD-12 compliant employee badging program called Assured Identity. This program provides employees with a credential to be used for authentication in physical access control for all Lockheed Martin facilities, as well as logical access control for computer and VPN access.

Named by Business Week as one of the "Best Places to Launch a Career," the corporation was also recognized by Frost & Sullivan as the 2011 North American Biometric Operations & Integrations Company of the Year.

Read the complete interview here.

Ingenico • *September 2011*

Headquartered in Paris, Ingenico is the number one provider of payment solutions in the world, with 3,000 employees and over 15 million terminals deployed in more than 125 countries.

The 30-year old global company is the partner of choice for financial institutions, banks, major retailers and single shop outlets worldwide, providing retail and single outlet operators with a "One Stop Shop" offer of secure transaction solutions.

Smart Card Talk spoke with Thierry Denis, President of Ingenico, North America, in September. An engineer by trade, Denis relocated from Sydney, Australia to Atlanta, Georgia, to assume his new executive role with the company he's worked with for more than 20 years.

"Overall, in regards to smart card technology, Ingenico is, what I would consider, an enabler of smart card chip-based payments," said Denis. "We were the first POS manufacturer in the world to offer chip-based technology on its terminals," Thierry recalled, "and this technology is now used globally by consumers with EMV integrated circuit payment cards.

The migration and adoption of smart card-chip based technology is a very complex and lengthy process which requires commitment and cooperation of all players in the payments ecosystem including card issuers, processors, POS hardware manufacturers, regulators, merchants, and consumers," Denis added.

"As a major player in the payments ecosystem, we are constantly involved in the migrations and implementation of smart card chip-based technology payments across the world. Recently, we have begun to deploy chip-based-technology-enabled terminals throughout Canada. Today, we're working with several major merchants on piloting smart chip card enabled terminals in the U.S."

Read the complete interview here.

HID Global • *October 2011*

HID Global is a supplier for millions of secure identity customers around the world. Over the years they've become recognized for quality, innovative designs and industry leadership serving OEMs, system integrators, and application developers in a variety of markets.

Markets include physical access control, logical access control including strong authentication and credential management, card printing and personalization, highly secure government ID, and identification technologies used in animal ID and industry and logistics applications. In October, Smart Card Talk spoke with David Nichols, the company's Director of Market Strategy for Secure Identity.

"From our standpoint," said Nichols, "smart card technology provides versatile interoperability that customers seek while supporting multiple applications such as physical access, biometric authentication, cashless vending and PC log in. As the demand for smart card technology continues to grow to meet customer needs, it also is core to HID Global's business."

Nichols said industry research, integrator forums and the company's direct experience in the market illustrate some major trends the company is poised to deliver on, including the move to mobility as Near Field Communications (NFC) and other technologies fuel the migration of access control technologies and other applications to mobile platforms; the convergence of physical and logical access including multiple authentication methods on a single smart card; and evolution of the smart card itself to meet the need for greater privacy protections and the ability to validate and secure identities using multiple layers of card security.

"There are some compelling trends driving interest for smart card technology," said Nichols, adding that standards implementation is a critical factor that will drive adoption of the card technology.

Read the complete interview here.

First Data • *November 2011*

First Data Corporation, a global leader in electronic commerce and payment processing, makes payment transactions secure, fast and easy for merchants, financial institutions and their customers. First Data leverages its vast product portfolio and expertise to drive customer revenue and profitability. Whether the choice of payment is by debit or credit card, gift card, check or mobile phone, online or at the checkout counter, First Data takes every opportunity to go beyond the transaction.

Smart Card Talk spoke with Dom Morea, SVP and Division Manager for Advanced Solutions and Innovation at First Data Corporation, in November.

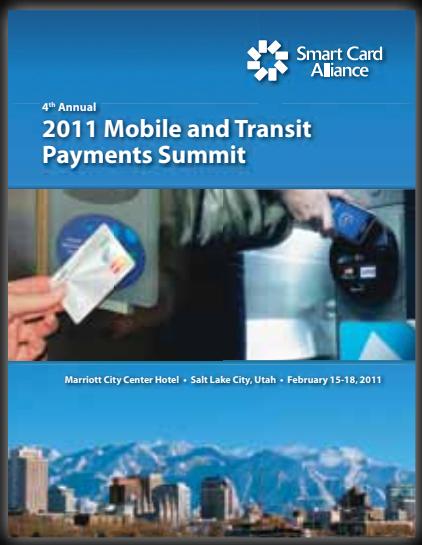
"For many years, First Data has worked on chip card initiatives all over the world," said Morea. "Our main initiatives include supporting contactless and EMV migrations and startups across the globe, and driving mobile payments with our full-service trusted service manager solution working with all the players in the ecosystem." Morea added that "2011 was really the year mobile payments began. and we will continue to see it accelerate with consumer adoption on the rise and merchants and financial institutions embracing this technology."

Morea talked about how mobile commerce creates opportunities for new commerce solutions that combine payments with other services like loyalty, offers and advertising. "The new contactless and mobile initiatives are creating a whole new set of partners in the ecosystem including mobile network operators, handset manufacturers, and other technology companies," Morea remarked.

"This next revolution in payments will have a profound impact on everyone in the payments system. For First Data, the emergence of mobile commerce positions us to deliver a suite of services to enable new mobile commerce solutions for merchants, service providers and issuers."

Read the complete interview here.

conferences and events



2011 Smart Card Alliance Mobile and Transit Payments Summit

Marriott City Center Hotel
Salt Lake City, Utah
February 15 – 18, 2011

Utah's capital was filled with industry stakeholders ready to discuss current U.S. and international trends in mobile payments and transit payments at the Payments Summit. Speakers and attendees included mobile operators, transit operators, mobile device manufacturers, mobile services providers, chip and card manufacturers, terminal manufacturers, payment brands, issuing banks, payments processors, and systems integrators.

2011 Smart Card Alliance Annual Conference – "The Roadmap for EMV Payments and Secure ID"

Hyatt Regency McCormick Place,
Chicago, Illinois
May 3 – 5, 2011

An interactive pre-conference workshop on implementing EMV in North America unofficially ushered in The Smart Card Alliance 2011 Annual Conference held at the Hyatt Regency McCormick Place in Chicago. Hundreds of professionals in the payments and security markets attended workshops, networked, met vendors, and shared best practices on the forces driving EMV adoption and secure ID programs globally.

10th Annual Smart Card Alliance Government Conference

Ronald Reagan International
Trade Center
Washington, D.C.
November 2 – 4, 2011

More than 600 Alliance members, government colleagues and industry friends gathered for the annual fall government identity and security conference, meeting up with colleagues and making new connections. The collaboration with government identity and security and policy leaders made the 10th Annual Conference one of the most successful conferences in Smart Card Alliance's history.

2012 Payments Summit

February 8 – 10, 2012
Hilton Salt Lake City Center
Salt Lake City, UT

The 2012 Payments Summit brings industry stakeholders and end users from the banking, retail, mobile, and transportation ecosystems together to explore in depth the impact that EMV contact and contactless payments and NFC mobile payments will have on next generation payments adoption in these industries.

NFC Solutions Summit 2012

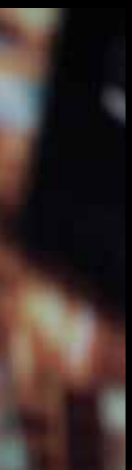
May 22 – 24, 2012
Hyatt Regency San Francisco Airport, Burlingame, CA

The NFC Solutions Summit will cover the state of this promising technology, including developments in new NFC devices and add-ons, the status of the growing NFC ecosystem, NFC-enabled payments and other popular applications in North American and international markets

11th Annual Smart Cards Government Conference

November 28 – 30, 2012
The Walter E. Washington Convention Center
Washington, DC

The Government Conference features comprehensive coverage of strong authentication technology in government identity programs, including federal Personal Identity Verification (PIV) and PIV-I credentials, developments in National Strategy for Trusted Identities in Cyberspace (NSTIC), trusted ID on mobile devices, and evolving global standards.



event photos

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2011 Smart Card Alliance Event Photos

Certified Smart Card Industry Professional (CSCIP)

The Smart Card Alliance offers two CSCIP credentials: CSCIP and CSCIP/Government. These credentials are the smart card industry's only standardized certification program that recognizes professionals who have advanced levels of smart card industry knowledge and experience, and have passed a multi-part exam developed by leading smart card industry experts with the support of international industry associations. CSCIP is a strong credential for individuals to have to set themselves apart as industry experts and compete on a global scale.

The designation defines professionals who demonstrate proficiency in a broad body of industry knowledge, as opposed to expertise in specialized smart card disciplines.

The CSCIP/Government certification contains the same fundamentals as the CSCIP certification, but includes in-depth content about the U.S. government's implementation of the Federal identity management infrastructure and smart card-based employee and contractor identity credentials that resulted from Homeland Security Presidential Directive 12 (HSPD-12). The CSCIP/G certification requires demonstrated proficiency in smart card technology fundamentals, security and application/data management, and identity usage models, and adds FIPS 201, PIV card and Federal identity management initiatives.

About LEAP

The Smart Card Alliance created the Leadership, Education and Advancement Program (LEAP) to:

- Advance education and professional development for individuals working in the smart card industry
- Manage and confer, based on a standardized body-of-knowledge exam, the Certified Smart Card Industry Professional (CSCIP) designation.

LEAP is designed for individuals interested in continuously improving their professional proficiency in the smart card industry, and membership is open to all full-time professionals working within the industry; an organization does not have to be a current member of the Smart Card Alliance for someone to be a LEAP member.

Smart Card Alliance Professional Certification Trainers

Gilles Lisimaque, Partner, ID Technology Partners

Gilles Lisimaque is a Partner with ID Technology Partners, a leading consulting firm in Washington D.C. supporting high assurance identification solutions. Gilles has over 25 years of experience developing Smart Card solutions. He received the 2008 OSCA Individual Leadership award from the Smart Card Alliance.

Gerald Smith, Senior Consultant, ID Technology Partners

Gerald Smith is a Senior Consultant with ID Technology Partners, a leading consulting firm in Washington D.C. supporting high assurance identification solutions. Gerald has over 30 years of experience with all aspects of smart cards including chip manufacturing, packaging, operating system design, and deploying card solutions.

Rick Uhrig, Senior Manager, Identity and Access Solutions, XTec, Inc.

Rick Uhrig is a Senior Manager with XTec, Inc., a leading provider of products and services for authentication and security solutions you can trust. Rick has over 25 years experience designing, developing and evaluating information security solutions, including 12+ years with smart card solutions.

2011 CSCIP Recipients

Terri Anomnachi, WMATA
Deborah Baxley, Capgemini USA Inc.
Philippe Benitez, Gemalto
Guy Berg, Datacard Group
Edgar Betts, Smart Card Alliance
Louis Bianchin, Watchdata
Adam Bisi, Gemalto
Dana Blegen, Paragon Application Systems
James Bonura, Gemalto
Tracey Breckenridge, Gemalto
Jim Burgess, Bank of America
Michael Chiviendacz, Entrust
Pete Comps, LTK Engineering Services
Jose Correa, Gemalto
Kerry Cousins, Gemalto
Salvatore D'Agostino, IDmachines
Douglas Deckert, CH2M HILL
Chun Dong, WMATA
Scott Etherington, Gemalto
John Fessler, Exponent Inc.
Keith Flemons, WMATA
Ronald Fournier, L1 Identity Solutions
Dawn Gallagher Murphy, A La Card Marketing & Consulting Services Ltd.
Orlando Garcia, Core Quality Service
Christopher Glendenning, Gemalto
Joel Goldman, Gemalto
Dharmen Gor, Ramsiaa, Inc.
Bill Gostowski, Gemalto
Julie Green, LTK Engineering Services
Dale Grogan, LifeMed Card, Inc.
Akiko Haga, The Royal Bank of Scotland Group
Gerhard Hancke, ISG Smart Card Centre
Prakash Hariramani, Visa
Paul Harper, ActivIdentity
Roald Harter, Identive Group
Linh Huyuh, INSIDE Secure
Bryan Ichikawa, Unisys
Steve Jia, EWA-Canada
Brian Kean, First Data
Jim Kelley, Gemalto
Brian Keltner, Wells Fargo Bank N.A.
Bob Knowles, WMATA
Shirley Kusumawati Lay, Gemalto
Jon Langley, Gemalto
Nathalie Launay, Thales Security Solutions & Services
LaChelle LeVan, Probaris, Inc.
James Lock III, J.P. Morgan Chase
Diana S. Loughner, IDenticard
Karrie MacDonald, Gemalto
Ashish Malpani, Gemalto
Guillaume Mandret, Oberthur Technology
Joshua Martiesian, LTK Engineering Services
John McKeon, IBM
Mohit Mehotra, Birlasoft, Inc.
Sarah Ming Hsi, MARTA
Barry Mosteller, Oberthur Technologies
Stefan Negritoiu, Microsoft
Mike Neumann, Gemalto
Tze Yang Ng, Gemalto
Donncha O'Hegarty, The Home Depot
Gilliaume Oosthuizen, Thales
Denis Ouellet, Gemalto
Ken Pantin, The Bank of New York Mellon
Jennifer Passmore, Canadian Tire Bank
Neville Pattinson, Gemalto
Joe Pilozzi, STMicroelectronics
Michael Poitner, Giesecke & Devrient
Myles Roberts, FAA
Giles Roethlisberger, Gemalto
Mike Russo, CH2M Hill
Erica Savka, Visa
George Sellers, Gemalto
Mridul Sharma, Gemalto
Michael H. Smith, Montner & Associates, Inc.
Jeff Stroud, Gemalto
Raghavan Sundaravaradan, Gemalto
Yo Tabayashi, Sony Corporation
William Tran, Gemalto
Scott Verberg, HP
Irene C. Villaverde-Aquino, Credit Union Central of Canada
James Wain, SEPTA
John Whitworth, First Data

CSCIP/G Recipients

Brendon Allen, Ingersoll Rand
Todd Arnold, XTec Inc.
Jeffrey Barry, CertiPath LLC
Nabeel Bitar, Ingersoll Rand
Neil Bolin, CertiPath LLC
Martin Bouchard, Entrust
Tim Bramble, Entrust
Gary Brown, Entrust
Angelo Buscemi, Management Consultant
Muhammad Umar Saleem Butt, Entrust
David Barry Colston, XTec Inc.
Philippe Cote, Entrust
Gordon Coulson, Entrust
Tony Damalas, Diebold Security
Joshua Davis, Ingersoll Rand
Justin Davis, Wells Fargo Bank N.A.
Debs Debs-Faouzi, Entrust
Mari Devitte, XTec Inc.
Justin Dew, XTec Inc.
Raena Dhuy, XTec Inc.
Suzette V. Diaz, XTec Inc.
William Dorner, Ingersoll Rand
Todd Eberwine, Ingersoll Rand
Paul H Evans, Paul Evans & Associates
Leslie Farhood, XTec Inc.
Jim Feeley, Entrust
Patrick Finnegan, Hirsch Identive
Robert A Fontana, Codebench, Inc
Michael Fox, Ingersoll Rand
Andy Geremia, Ingersoll Rand
Nabil Ghadiali, XTec Inc.
Chris Ghantous, Entrust
Irving Gilson, US Department of Defense
Edward Hanson, XTec Inc.
Paul Harper, ActivIdentity
Stephen Higgs, ICF Jacob & Sundstrom
Stephen Howard, Certipath
Nhan Huynh, Protiviti Government Solutions
Harry Jackson, XTec Inc.
Christopher Jensen, General Dynamics IT
Andy Jones, XTec Inc.
Eggert Jonsson, Siemens Government Services
Won Jun, ID Technology Partners
Michael Kelley, Secure Mission Solutions
Luke Koops, Entrust
Kevin Kozlowski, XTec Inc.
Lolie Kull, HP
Philip Lee, Homeland Security Consultants
David Loegering, Datacard Group
Michael Mallinson, Entrust
Taylor Marcum, INSIDE Secure
Desmond McCarthy, XTec Inc.
Ahmed Mohammad, Oberthur Technologies
Jonathan D Mooney, Ingersoll Rand
Douglas Morford, Booz Allen Hamilton
Tom Murphy, XTec Inc.
Stefan Negritoiu, Secure Mission Solutions
John Pearson, XTec Inc.
Dwayne Pfeiffer, Northrop Grumman
Rick Pratt, XTec Inc.
Roger Roehr, Roehr Consulting
Walid Saab, Entrust
John Santisteban, HID Global
John Schiefer, XTec Inc.
Sean Schutte, XTec Inc.
Andrew Sheedy, ActivIdentity
James Sheire, NXP Semiconductors
Brian Sherman, Ingersoll Rand
David Simonetti, ICF Jacob & Sundstrom
Lars Suneborn, Hirsch Identive
Samir Tamer, Ingersoll Rand
Krishne Thomas, XTec Inc.
Rick Uhrig, XTec Inc.
Mark Vita, XTec Inc.
Rocco Vitali, Ingersoll Rand
Peter Wilson, Ingersoll Rand
Ernest Wolfe, XTec Inc.
Christopher Wood, Entrust

CSCIP and CSCIP/G Certified

Tim Baldridge, NASA
Anna Fernezian, Computer Science Corporation
Diana Loughner, IDenticard Systems
Brad McGoran, Exponent, Inc.
Ketan Mehta, Booz, Allen & Hamilton
Robert Merkert, Identive Group
Michael Zercher, NXP Semiconductors

executive director letters

One of the highlights of the monthly Smart Card Talk Newsletter is the letter from Executive Director Randy Vanderhoof. Check out his thoughts during a very busy year for the Alliance and the industry.

January 2011

I see the mobile phone rapidly becoming the center of attention in 2011. The dazzling rate of change that occurs in the mobile applications markets and the rapid growth of smart phones will result in new payments applications, along with new cross marketing opportunities among retail merchants, transit operators and payments providers.

Read the full letter here.

February 2011

The 2011 Mobile & Transit Payments Summit in Salt Lake City was a re-energized stimulus. The summit saw a record-breaking number of attendees, including first-time visitors to a Smart Card Alliance event. Add in major announcements involving the arrival of NFC mobile devices and new commercial rollouts for banks, mobile operators and alternate payment providers, and you'll understand the palpable buzz in the air.

Read the full letter here.

March 2011

Billions of dollars are at stake regarding the Federal Reserve's announcements about debit interchange fee limits. What makes sense: take the money out of the hands of issuers and merchants and invest it for them in new payments security technology. Consumers will benefit, there will be less identity theft, and overall the investment will significantly reduce the estimated $3.6 billion lost annually in fraud.

Read the full letter here.

April 2011

The NSTIC (National Strategy for Trusted Identities in Cyberspace) plan calls for the development of open, standards-based, interoperable, voluntary digital identity credentials that can be shared across multiple parties. NSTIC is a bold example of how government can provide leadership and direction without dictating to private industry how to do it.

Read the full letter here.

May 2011

Set against a backdrop of "speculative tension" over EMV and cybersecurity, the 2011 Annual Conference: Roadmap to EMV Payments and Secure ID attendance saw a record of 459 attendees, a 55% increase over 2010. While the payments sessions outnumbered the identity and security sessions about two to one, both tracks had the audiences engaged from the start.

Read the full letter here.

June 2011

What made Google's announcement in May about its Google Wallet pilot planned for the fall in New York and San Francisco such a bold statement is that they have aligned, under one marketing banner, a payment brand (MasterCard), a bank (Citi), and a [trust] broker (First Data), plus the lone mobile operator (Sprint) not currently in the other competing mobile operator-led joint venture, Isis.

Read the full letter here.

July 2011

Rarely has there ever been a time in history when someone could sit in a room of less than 30 people and watch an entire multi-billion dollar industry ecosystem unfold and reveal its inner secrets and uncertainties in an open forum. But that is exactly what happened this month at the Federal Reserve Bank in Boston, at perhaps the final meeting of the Mobile Payments Industry Workgroup (MPIW).

Read the full letter here.

August 2011

Earthquakes and hurricanes were merely the warm-up acts to another shattering event this summer: Visa's announcement that they were planning to accelerate the migration for the U.S. to EMV contact AND contactless chip technology. With this announcement by Visa and expected announcements for their own EMV migration to follow by MasterCard, Discover, and American Express, a new era starts in the U.S. payments industry.

Read the full letter here.

September 2011

The continued growth and expansion of the smart card markets in North America and Latin America demand that the Smart Card Alliance also expand and meet the needs of an organization that grew by 60 new members in the last 12 months. Our commitment to our members and followers to keep the Smart Card Alliance moving the market forward included adding two full-time staff members to the organization.

Read the full letter here.

October 2011

As we approach our 10th Annual Smart Card Alliance Government Conference, I'm reminded of the achievements that have been made that had its origins in the wake of the attack on America on September 11, 2001. The great awakening by our government leaders to make changes in the interest of national security resulted in presidential directives, legislation, and new government policies.

Read the full letter here.

November 2011

More than 600 Alliance members, government colleagues and industry friends gathered for our annual fall government identity and security conference. Conference calls and emails can't compare to the face to face networking and social aspects of a Smart Card Alliance event. Keep this thought in mind as you receive information about the Payments Summit in February 2012 and the NFC Solutions Summit in May 2012.

Read the full letter here.

December 2011

Our new e-yearbook wraps up another exciting year for the smart card industry and an extremely productive year for the Smart Card Alliance. On behalf of our entire staff and our nearly 200 member organizations – I wish everyone the most joyous of holiday seasons and a healthy and prosperous new year ahead.

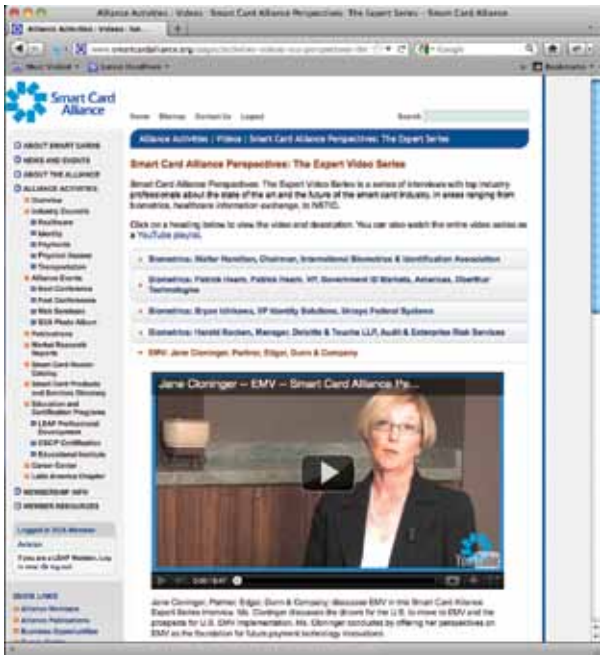
Smart Card Alliance web site **highlights:**

- Smart card industry news
- Industry reports and white papers
- Expert Series video interviews
- Topical slide shows
- Smart card products and services directory
- Webinar recordings and event proceedings
- Comprehensive smart card application resources
- LEAP and CSCIP educational resources

Number of page views per visit – 4.86

Top Accessed Web Resources	Jan.-Sept. 2011
Reports and white papers	321,273
Smart card products and services directory	
- Visits	34,170
- Page views	251,793
Industry news	246,676
Press releases (Alliance)	224,889
Smart card reader catalog	10,993
Resource pages	
- Contactless payments	6,793
- Government ID	4,439
- NFC	5,279
- EMV	7,139
- Healthcare ID	4,038
Videos: YouTube views (cumulative, all videos)	4,987
Slide shows	
- Chip-Enabled Mobile Marketing	1,022
- NSTIC/Cybersecurity	1,076
- EMV	1,769
- Medical Identity Theft	295

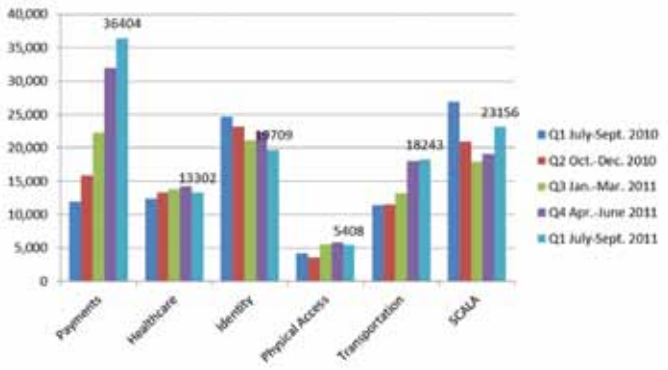
Over 34,000 smart card products and services directory visits



New in 2011: Multimedia resources: slide shows; videos/ podcasts; expert series videos

- Smart Card Alliance Perspectives: Expert Series Videos – with YouTube channel accessible from the web site: 29 videos on biometrics, EMV, healthcare information exchange, NFC/mobile payments, NSTIC, PIV-I, and transit and open bank card payments
- Smart Card Alliance news – video and podcasts with Randy Vanderhoof: BankInfoSecurity podcasts on EMV/NFC and Durbin; contactless (RFID) payments security; photos/ video from Annual Conference
- YouTube videos: Contactless (RFID) Payment Security
- Topical slide shows: EMV; NSTIC and smart cards; medical identity theft; chip-enabled mobile marketing; PIV-I

Publication Access/Downloads – Council and SCALA Reports



web site highlights

Expanding social media programs

Average monthly site visits – 80,000

Over 35,000 white paper downloads per month

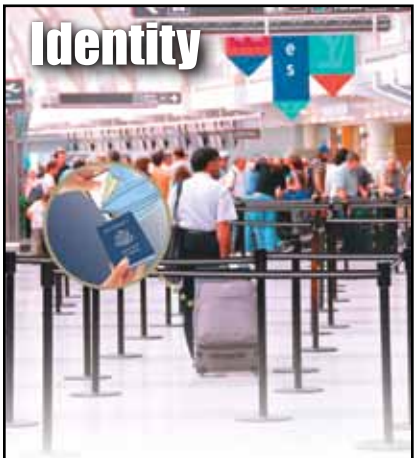
Active social media programs

- LinkedIn Groups: Government Smart.ID – 1,109 members; Smart.Payments – 711 members; Healthcare Identity Management – 85 members; Smart.Transit – 35 members; LEAP – 294 members
- Twitter: 300+ tweets, 1,419 followers
- Facebook page: 145 members

industry councils

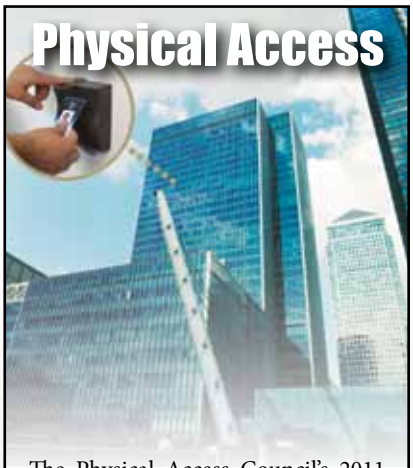
Through five industry councils, the Smart Card Alliance proactively addresses topics of key concern in the different smart card vertical markets. Alliance members lead Council activities and contribute to a wide variety of projects, including white papers, webinars, workshops, web resources, position papers and industry commentary. The councils' work helps to drive smart card implementations in the U.S. and provide authoritative educational material for both the U.S. and international smart card markets.

The Healthcare Council focused on policy guidance and educational resources on smart card technology in healthcare identity applications, completing two white papers, one industry comments submission, and one webinar in 2011. More than 60 individuals from 30 leading organizations participated in the council.

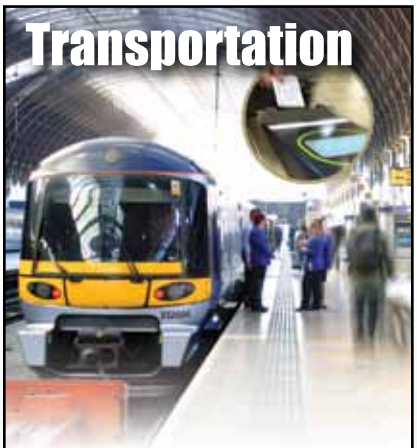


The Identity Council led the Smart Card Alliance efforts on the National Strategy for Trusted Identities in Cyberspace (NSTIC) and cybersecurity and collaborated with other councils on identity management and strong authentication. More than 105 individuals from over 40 leading organizations participated in the council.

The Payments Council focused on both EMV and NFC in 2011, publishing two white papers and two FAQs, holding an EMV webinar and full-day workshop, and providing up-to-date web resources. The council is made up of more than 180 individuals from over 55 leading organizations.



The Physical Access Council's 2011 activities expanded to provide guidance to state and local governments and enterprises on leveraging FIPS 201 and the PIV card standards for identity credentialing. The council is made up of more than 160 individuals from over 50 leading organizations.



The Transportation Council focused on providing guidance on using open contactless bank card payments for fare collection, delivering two white papers, two full-day workshops, and a new industry-wide discussion group. The council is made up of more than 150 individuals from over 60 leading organizations.

A Look at our 2011 Councils

The engines powering Smart Card Alliance industry contributions

We started the industry councils in 2004 to focus on specific issues and opportunities in the different vertical markets for smart cards in the U.S. The councils have been phenomenally effective. Member-led and member-driven, the industry councils have made significant contributions to the smart card industry – publishing education and outreach material for different markets, responding to issues in the media, developing industry positions on key government initiatives, and establishing relationships with other industry groups.

2011 was another great year of Council activities and participation. In the past year, our councils completed 37 projects, including 14 white papers and FAQs, four industry comments submissions, seven webinars and workshops, eight physical meetings or events, and four projects developing tools and resources for the industry. Projects have focused on the hottest topics in the smart card industry – EMV migration, Near Field Communication (NFC), the National Strategy for Trusted Identities in Cyberspace (NSTIC), FIPS 201, Commercial Identity Verification (CIV) credentials, healthcare identity management, and open payments in transit.

The council results could only be accomplished through the tremendous commitment of the many individuals who contribute to council projects. In 2011, over 480 individuals from more than 115 organizations participated in at least one council. Our annual Council Honor Roll, started in 2010, showcases the top council contributors – giving them the recognition that they deserve for committing time and energy to the industry, in addition to the "day jobs" that they have with their companies!

We expect the councils to produce an equally strong set of deliverables in 2012, as the U.S. smart card market and our membership continue to grow. The councils will be continuing efforts on EMV, NSTIC, FIPS 201, smart cards in healthcare, and transit payments, and expanding efforts on mobile/NFC, logical access and cybersecurity to address new and emerging markets.

The councils are the engines powering the Smart Card Alliance industry contributions. The Alliance thanks all council members for their contributions and for their enthusiastic participation. The work and results have led to strong positions for smart cards in many industry sectors and to the Alliance being the "go to" organization for cross-industry collaboration and resources on smart card technology and applications.

Cathy Medich
Director, Strategic Programs
Smart Card Alliance

healthcare council

Healthcare Council Mission

Promote the adoption of smart cards in U.S. healthcare organizations and within the national health IT infrastructure and educate the healthcare market on why smart card technology is the appropriate solution for healthcare identity management applications.

Council Officers

Chair: Michael Magrath, Gemalto
Vice chair: Dale Grogan, LifeMed ID, Inc.
Secretary: Anna Fernezian, CSC

Steering Committee

- Anna Fernezian, CSC
- Dale Grogan, LifeMed ID, Inc.
- Michael Magrath, Gemalto
- Gurpreet Manes, Oberthur Technologies
- Bob Merkert, Identive Group
- Matthew Neuman, Giesecke & Devrient

Top Contributors

- Anna Fernezian, CSC
- Dale Grogan, LifeMed Card, Inc.
- John Rego, OTI America

2011 Honor Roll

- David Batchelor, LifeMed Card, Inc.
- Rachelle Blake, LifeMed Card, Inc.
- Gary Christoph, Northrop Grumman Corporation
- Paul Contino, Independent / Mount Sinai Medical Center
- Salvatore D'Agostino, IDmachines LLC
- Anna Fernezian, CSC
- Dale Grogan, LifeMed Card, Inc.
- Michael Magrath, Gemalto
- Ola Martins, Oberthur Technologies
- Bob Merkert, Identive Group
- Matthew Neuman, Giesecke & Devrient
- Rick Pratt, XTec, Inc.
- John Rego, OTI America

2011 Activities

- Comments submission to the Department of Health and Human Services (HHS) Office of the National Coordinator for Health Information Technology (ONC) request for comments HIT Policy Committee: Meaningful Use Workgroup Request for Comments Regarding Meaningful Use Stage 2."
- Getting to Meaningful Use and Beyond: How Smart Card Technology Can Support Meaningful Use of Electronic Health Records white paper, outlining the ways in which smart card-based systems can better position healthcare organizations and providers for meaningful use of electronic health records, while addressing many of the security and privacy challenges that come with electronic health records and health data exchange.
- Smart Health ID Cards: Addressing Challenges with Patient Identity Management and Authentication webinar, reviewing the key challenges with patient identity management and authentication today and discussing how patient ID cards and smart card technology can address the critical issues.
- Supporting press release for the Smart Medicare Common Access Card Act of 2011.
- Complementary Smart Card Guidance for the WEDI Health Identification Card Implementation Guide white paper, developed to serve as a supplement to the WEDI Health Identification Card Implementation Guide.
- Relationships with the AMA, HIMSS, WEDI and the Secure ID Coalition.

Council Members

ABnote Group • Accenture • Bell Identification B.V. • Booz Allen Hamilton • CardLogix • Castles Technology, Co., Ltd. • CSC •Datacard Group • Defense Manpower Data Center (DMDC) • Deloitte •Diebold • Fiserv • Gemalto • Giesecke & Devrient • Honeywell • HP Enterprise Services • Identive Group • Lenel Systems International • LifeMed ID, Inc. • MasterCard Worldwide • Northrop Grumman Corporation • Oberthur Technologies • OTI America • PPG Industries, Inc. • SAIC • ST Microelectronics • Thales e-Security • VeriFone • Watchdata Technologies • XTec, Inc.

Year in Review: Healthcare Council Chair

2011: The year Congress noticed smart cards

Widely adopted around the world, over 100 million smart cards have been issued to patients and healthcare professionals. Smart cards provide identity assurance regardless of whether the card holder is authenticating identity at the point of care or using the technology for strong authentication into web portals containing sensitive and private health information.

2011 will go down as the year that smart cards have finally garnered the attention of the U.S. Congress for the U.S. healthcare system – a system with over $100 billion in annual fraud, waste and abuse, increasing identity theft, and countless inefficiencies. At a time when the U.S. is migrating from paper-based medical records to electronic records being viewed, exchanged and edited on the Internet, the industry is beginning to take a hard look at smart cards and how this mature, standards-based technology can address increasing problems.

- "The Medicare Common Access Card Act" was introduced in September. The legislation calls for pilots in five geographic locations featuring smart cards "to combat a reported $60 billion lost to waste, fraud and abuse within the Medicare system." The upgraded Medicare card could eliminate a large portion of fraud and improper payments by enabling the Centers for Medicare and Medicaid Services (CMS) to authenticate and verify providers and recipients of equipment.

- The Healthcare Council hosted a well-attended webinar in September to educate healthcare organizations on the benefits of upgrading health IDs to smart cards Presenters were from the American Medical Association (AMA), Medical Group Management Association, and Wyckoff Heights Medical Center.

- The Workgroup for Electronic Data Interchange (WEDI) published its latest version of the Health Identification Card Implementation Guide, referencing smart cards as machine-readable technology.

- The AMA determined that smart cards were the most suitable technology to support its Health Security Card (HSC) grant project. The HSC will contain essential information for health care providers and local, tribal, and state health departments to identify individuals, meet their immediate health needs, and improve access to critical data, thereby minimizing morbidity and mortality. The Federal Emergency Management Agency (FEMA) announced plans to support the AMA's Health Security Card grant by coordinating an exercise in the spring of 2012 to authenticate first responders using their First Responder Authentication Credentials (FRAC) to gain entry inside the situation perimeter, and to identify and triage patients carrying a smart health ID.

The Department of Health and Human Services (HHS) Health IT Standards Committee recommended single-factor, username and password authentication for consumers accessing their own personal health records. Although the National Strategy for Trusted Identities in Cyberspace (NSTIC) will be voluntary, consumer access to online health information is a use case cited throughout the Strategy. Thus a disconnect: the White House promotes strong authentication while HHS most likely recommends single factor. The Standards Committee deemed two-factor authentication to access electronic health records (EHRs) as "out of scope." This was hugely disappointing; EHRs will likely be key targets for hackers.

In 2012, the Healthcare Council will leverage 2011's progress to:

- Further educate the market on the need to have our nation's health information systems secure and accessed by healthcare professionals via strong authentication.
- Actively participate with the NSTIC Program Office to promote the need for Level 4 authentication in healthcare.
- Promote and educate public and private health plans on the benefits of smart card technology.
- Support the Medicare Common Access Card legislation.

Michael P. Magrath, CSCIP
Director, Business Development
Gemalto

Getting to Meaningful Use and Beyond

How Smart Card Technology Can Support Meaningful Use of Electronic Health Records

Healthcare is at a pivotal point in its evolution – one that has been faced by many other industries which have made the painful transition from a paper to a digital infrastructure. The speed at which healthcare is moving toward electronic medical records has been accelerated by government legislation and incentives, but this pace may also be its downfall. Healthcare data is a sensitive and highly personal collection of information that requires extraordinary protection. At the same time, in order to derive value from electronic health records, this information needs to be readily available to healthcare providers, healthcare facilities, and even patients and their families to positively impact care quality, accuracy and cost. This seeming dichotomy of purpose makes the effective use of electronic medical records very challenging.

However, the challenge is not simply the implementation of electronic health records (EHRs), but meaningful use of them, which entails a host of additional requirements for new and existing technologies in the healthcare, security and information technology industries. The U.S. government's Health Information Technology for Economic and Clinical Health (HITECH) Act (part of the American Recovery and Reinvestment Act of 2009, or ARRA) has specific meaningful use criteria requiring all healthcare entities to use certifiable technology that has the ability to transform healthcare information into a standardized, electronic, accessible, readable and usable format. The criteria also require healthcare data to be kept confidential, private and secure, accurate, shareable with patients as well as providers, mobile and exchangeable, and readily available. Smart card technology and smart card-based systems can aid in meeting these requirements.

Smart card technology and smart card-based systems meet a number of criteria for meaningful use:

- Smart cards augment the security of electronic medical records (EMRs) and EHRs by providing strong authentication which corresponds to at least Level 3 Assurance of the White House Office of Management and Budget (OMB) M-04-04 Memorandum.
- Smart cards can carry public key certificates which provide the highest level of trust identity management for data interchange across networks.
- Federal standards are in place for identity verification and data access and security which use smart cards (the Federal Information Processing Standard (FIPS) 201 Personal Identity Verification (PIV) of Federal Employees and Contractors).
- Smart card software is commercially available that can improve the quality, safety and efficiency of healthcare delivery while improving care coordination and data access.
- Smart card technology can help institutions manage a qualified EHR by integrating information from other external sources.
- Smart card technology honors the goals of certification criteria by: promoting interoperability, promoting technical innovations which embrace adopted standards, keeping implementation costs low, considering best practices, and providing a modular solution.

As the industry moves forward in the pursuit of meaningful use in EHR implementation, standard best practices will include sharing data from various media across multiple networks. For information to be useful, it must be accurate, secure, and related to a single individual. Access to sensitive medical information must only be granted to known (authenticated) individuals or institutions that can supply valid identity credentials and that are authorized to access the information. Information must be able to be updated and must be synchronized across all networks in real-time. Individuals or entities that access, document and modify medical information (e.g., by adding to a medical record) must provide credentials to demonstrate that the resulting data can be trusted and is accurate. Finally, confidence in the technology, by the healthcare industry, providers and facilities, and consumers, is a requirement for success. Smart card technology can be used to address all of these requirements, with a long history of global success that can help build confidence in the new healthcare systems.

Smart card technology can augment existing EMR/EHR systems to provide the critical functionality necessary to achieve meaningful use, as well as to address important security and privacy gaps that could compromise the future use and utility of emerging regional and national health information networks.

About the White Paper

The white paper, Getting to Meaningful Use and Beyond: How Smart Card Technology Can Support Meaningful Use of Electronic Health Records, was developed to discuss the ways in which smart card technology and smart card-based systems can better position healthcare organizations for meaningful use of electronic health records, while addressing many of the security and privacy challenges that come with electronic health records and health data exchange.

Smart Card Alliance Healthcare Council members involved in the development of this white paper included: Computer Sciences Corp. (CSC); Gemalto; Giesecke & Devrient; IBM; Identive Group; IDmachines; LifeMed ID, Inc.; MasterCard Worldwide; Mount Sinai Medical Center; Northrop Grumman Corporation; Oberthur Technologies; OTI America; XTec, Inc.

Complementary Smart Card Guidance for the WEDI Health Identification Card Implementation Guide

Version 1.1 of the Workgroup for Electronic Data Interchange's (WEDI) Health Identification Card Implementation Guide includes Integrated Circuit Cards (ICC), commonly known as smart cards, as an appropriate card type. The Smart Card Alliance supports the WEDI Health Identification Card Implementation Guide and its intent to enable automated and interoperable identification using standardized machine-readable health identification cards in an effort to bring uniformity of information, appearance, and technology to the over 100 million cards now issued by healthcare providers, health plans, government programs, and others.

Smart card technology is used globally for secure identity, access and payment applications. Within the U.S., smart card technology is currently used for a wide variety of applications: government and enterprise identity cards, the U.S. ePassport, contactless credit and debit cards, transit fare payment cards and GSM mobile phones. In addition, Visa's announcement to accelerate U.S. migration to EMV smart credit and debit cards is a major step in moving the U.S. payment system from insecure magnetic stripe technology to secure smart card technology to reduce fraud and to bring the U.S. in line with the payments infrastructure in the rest of the world.

Over the past few years, smart card use in the U.S. healthcare sector has grown significantly. Although the purpose of a health ID card is use by a consumer to convey identity information to healthcare providers or others, only cards based on smart card technology can provide accurate identity verification and authentication while increasing patient privacy and security. Additionally, smart cards bring operational efficiencies to the healthcare system that reduce costs, reduce fraud, increase patient satisfaction and improve patient care. As EHRs and personal health records (PHRs) move to the mainstream, smart health ID cards can also be used as a two-factor authentication mechanism into a provider or insurer web portal. Smart health ID cards protect patient privacy and security when accessing online records and support the National Strategy for Trusted Identities in Cyberspace (NSTIC), which identifies consumer access to online electronic health records as warranting two-factor authentication.

Smart health ID cards also facilitate compliance with the Health Insurance Portability and Accountability Act (HIPAA) requirements and, when used by healthcare providers, with the Drug Enforcement Administration's (DEA) two-factor authentication requirement for ePrescribing controlled substances and the forthcoming requirement from the Department of Health and Human Services (HHS) to use two-factor authentication to access and exchange EHRs.

A WEDI-compliant smart health ID card can incorporate a smart card chip and deliver benefits to healthcare providers and payers. Smart cards can be used in all environments. With a smart health ID card, patient information can be stored in the smart card chip and accessed from authorized readers; a patient photo can also be included on the health ID card. Issuers also have the option to remove printed personal and confidential information from the card and store it securely in the smart card, protecting patient privacy.

As a standards-based technology, smart card solutions for patient identity management are deployed around the world and are available from numerous vendors. While other, non-smart card ID technologies exist in the market, only smart cards offer strong authentication, non-repudiation (digital signatures), and secure, rewriteable data storage. As such, smart card technology is uniquely positioned to support the delivery of multiple benefits simultaneously, including the delivery of value-added services, process automation, and fraud/cost reductions.

Smart card technology provides a strong foundation for health ID cards, enabling improvement in healthcare processes and in patient identity verification, while securing patient information and protecting patient privacy.

About the White Paper

The white paper, Complementary Smart Card Guidance for the WEDI Health Identification Card Implementation Guide, was developed to serve as a supplement to the WEDI Health Identification Card Implementation Guide, provide WEDI-compliant smart card designs and discuss the features and benefits of smart ID cards for healthcare providers and payers.

Smart Card Alliance Healthcare Council members involved in the development of this white paper included: Computer Sciences Corp. (CSC); Datacard Group; Gemalto; Identive Group; LifeMed ID, Inc.; Oberthur Technologies; OTI America; Watchdata Technologies USA; XTec, Inc.

identity council

Identity Council Mission

Promote the need for technologies and usage solutions regarding human identity information to address the challenges of securing identity information and reducing identity fraud, and to help organizations realize the benefits that secure identity information delivers.

Council Officers

Chair: Harold Kocken, Deloitte Audit and Enterprise Risk Services

Vice chair: Neville Pattinson, Gemalto

Secretary: Salvatore D'Agostino, IDmachines

Steering Committee

- Salvatore D'Agostino, IDmachines
- Roland Fournier, L-1 Identity Solutions
- Harold Kocken, Deloitte Audit and Enterprise Risk Services
- LaChelle LeVan, Probaris
- Bob Merkert, Identive Group
- Neville Pattinson, Gemalto
- Steve Rogers, Intellisoft, Inc.
- James Sheire, NXP Semiconductors
- Chris Williams, SAIC

Council Members

ABnote Group • Accenture • Athena Smartcard • Booz Allen Hamilton • CardLogix • Castles Technology, Co., Ltd. • Cogent Systems • CPI Card Group • CSC • Cryptography Research, Inc. • Datacard Group • Defense Manpower Data Center (DMDC) • Deloitte • Diebold Security • Exponent • Fiserv • Gemalto • General Services Administration • Giesecke & Devrient • HID Global Corporation • HP Enterprise Services • IDenticard • Identification Technology Partners • Identive Group • IDmachines • Infineon Technologies • Infogard • Intellisoft, Inc. • L-1 Identity Solutions • LaserCard Corporation • Lenel Systems International • MAGICARD - Ultra Electronics • Multos International • NagraID Security • NXP Semiconductors • Oberthur Technologies • Probaris, Inc. • SAIC • Tyco Software House • Unisys • U.S. Department of Defense • Visa Inc. • XTec, Incorporated

Top Contributors

- Salvatore D'Agostino, IDmachines LLC
- LaChelle LeVan, Probaris, Inc.
- Steve Rogers, Intellisoft

2011 Honor Roll

- Dave Adams, HID Global
- Ben Black, Deloitte & Touche LLP
- Salvatore D'Agostino, IDmachines LLC
- Mark Dale, HP
- Tony Damalas, Diebold Security
- Robert Donelson, Organization Change Future Workplace, LLC
- Roland Fournier, L-1 Identity Solutions
- Marty Frary, Independent
- Marlon Guarino, Defense Manpower Data Center
- Walter Hamilton, Identification Technology Partners
- Daryl Hendricks, General Services Administration
- Harold Kocken, Deloitte & Touche LLP
- Lolie Kull, HP
- LaChelle LeVan, Probaris, Inc.
- Gilles Lisimaque, Identification Technology Partners
- Diana Loughner, IDenticard
- Michael Magrath, Gemalto
- Stafford Mahfouz, Tyco Software House
- Don Malloy, NagraID Security
- John McKeon, IBM
- Bob Merkert, Identive Group
- Fiona Pattinson, Atsec Information Security
- Neville Pattinson, Gemalto
- Rod Pieper, HP
- Rick Pratt, XTec, Inc.
- Kenny Reed, Datawatch Systems Inc.
- Roger Roehr, Roehr Consulting
- Steve Rogers, Intellisoft
- Dan Schleifer, IDmachines
- Adam Shane, AMAG Technology
- James Sheire, NXP Semiconductors
- Mike Sulak, U.S. Department of State
- Lars Suneborn, Hirsch Identive
- Rick Uhrig, XTec, Inc.
- Chris Williams, SAIC
- Rob Zivney, Identive Group

2011 Activities

- Comments submission to the National Institute of Standards and Technology (NIST) on the Notice of Inquiry (NOI), "Models for a Governance Structure for the National Strategy for Trusted Identities in Cyberspace (NSTIC)." Comments focused on key principles for governance, establishment of a balanced Steering Group to manage the NSTIC efforts, and management of the Steering Group to allow all potential stakeholders to participate without any one member being allowed to dominate proceedings.

- NSTIC FAQ, providing an overview of NSTIC and a discussion of the role of smart card technology in meeting NSTIC objectives.

- Collaboration with the Physical Access Council to submit comments to NIST on FIPS 201-2, develop the white paper, Personal Identity Verification Interoperability (PIV-I) for Non-Federal Issuers: Trusted Identities for Citizens across States, Counties, Cities and Businesses, and produce the webinar PIV-I for Non-Federal Issuers.

Year in Review: Identity Council Chair

Protecting our nation from cyber threats

Our cyber world has grown and spread rapidly. It enables us to do our jobs faster and more efficiently. However, the ubiquitous manner in which cyberspace is integrated with our culture and daily lives generates some of the most serious and critical challenges currently faced by our society. The rapidly evolving world of cyberspace has brought great technological innovation and improvement to almost every aspect of modern society. The President has declared that the cyber threat is one of the most serious economic and national security challenges that we face as a nation. Recent data breaches have highlighted the importance of building a secure digital infrastructure. With this intensified focus on cybersecurity, the government has put forth many efforts to protect our Nation from cyber threats.

The Identity Council has observed several significant cyber security trends in 2011:

1. Federal initiatives (e.g., the National Strategy for Trusted Identities in Cyberspace (NSTIC), the Office of Management and Budget Memorandum M-11-11, the Federal CIO Council memo accepting third party credentials) – impacting federal government agencies, its partners and customers, and solutions offerings
2. Technology innovation and offerings changing paradigms – from mobile devices to cloud computing and the possibilities they bring us
3. A shift from creating identities to managing identities across domains – addressing trust around identities created by different entities and developing standards and frameworks that can be leveraged for common purposes, supported by continued focus on interoperability
4. Fiscal restraint – doing more with less and ensuring that initiatives yield greater efficiency and effectiveness

Within the Smart Card Alliance and its Councils, we witness the continued importance of identity management across domains. In healthcare there is the discussion and implementation of electronic healthcare records (EHR). In the payments industry we observe the use of mobile devices for payment. Understanding and managing the user community is at the heart of the matter. In 2011, we therefore have seen multiple initiatives where the Identity Council has worked with other councils on initiatives that have a common denominator: managing identities.

The objective of the Identity Council for 2012 and beyond is to remain a trusted source with valuable knowledge in the area of identity management and to provide feedback and guidance on the different initiatives around us (e.g., NSTIC, Open ID, Kantara, Federal Identity, Credential, and Access Management (FICAM)). The Council also aims to ensure these initiatives work toward common objectives that benefit government and industry, and ultimately the citizens of the United States.

For 2012, we will continue to focus on NSTIC, FICAM and other federal activities that influence us all. The Identity Council, however, also plans to actively follow non-federal identity management related initiatives. This includes activities by state and local government and activities in the payment and healthcare industry.

As technology progresses so does the ability to better serve our personal and business needs while changing the way we think and operate. It is my aim to keep the Identity Council forward-looking while being involved in critical initiatives and providing assistance to make a difference in the world of identity management.

Harold Kocken, LL.M., CIPP/G, PMP
Manager
Deloitte & Touche LLP – Audit & Enterprise Risk Services

Smart Card Alliance Comments on NSTIC Governance

The Smart Card Alliance Identity Council submitted comments to NIST on July 21, 2011, in response to the NIST Notice of Inquiry (NOI), "Models for a Governance Structure for the National Strategy for Trusted Identities in Cyberspace (NSTIC)." This article extracts the comments on general principles and the structure and composition of the NSTIC Steering Group.

General Principles for the NSTIC Governance Model

General principles that should guide the NSTIC governance model are as follows:

- Governance should be driven by the private sector, not government. Government is a key stakeholder in the identity ecosystem and should participate as a stakeholder, rather than as the administrator.
- Funding is needed both during organization formation and in steady state. The government should consider providing seed funding during the formation phase. The steering group will need to define the business and funding models for maintaining the organization in steady state as one of its initial tasks.
- Organization members should work in peer relationships, with all members having an equal vote regardless of the size of the organization.
- Steering group processes should be deliberate, transparent and open to all members and to the public.
- Development of the organization should be in phases, with the Smart Grid initiative a useful model of how to accomplish the phased development.
- All stakeholders must be able to have a voice in the steering group, and the organization must make a conscious effort to include smaller organizations, consumers, privacy groups and end users.
- The steering group must be tasked to develop a sustainable funding model for the organization, with no special category of members or funding level required for representation on the steering group.
- The organization must be sensitive to international requirements and implement a structure that engages with the international community.
- Government involvement should be as a stakeholder and be structured to minimize the legal impact to the organization (e.g., involvement should be such so that FACA can be avoided).
- The organization focus should be to build on existing infrastructure and standards, developing action plans to address weaknesses.

Structure of the Steering Group and Stakeholder Representation

Many organizations and associations today exist with a management board, organization officials and a substructure of working groups or committees that undertake the detailed operation of the organization and service to its membership. These organizations are generally governed by a set of executed bylaws, have membership criteria (such as common interests), and have a dues/funding structure. They also have auditable accounts and a democratic process for electing the organization's officers.

NSTIC can fit this organizational model with careful attention to the steering group composition and the regulation of its operation.

In the opinion of the Smart Card Alliance, it is important for the NSTIC steering group to be composed of two elements:

1. The administrative function, composed of resources dedicated to the sustainable operation, logistics and management of the entire NSTIC collective, providing direct support to the management function. The administration resources should be independent of any outside influence and not have a stake in the material content or output of NSTIC.
2. The management function, which would define the bylaws and abide by them; set the mission and scope of the organization; set strategic objectives; and define a sub-structure of committees and working groups. This function would also be the decision maker for all organization output and would be the referee for policy questions and conflict.

The NSTIC management function should be open to all potential stakeholders, both voting and non-voting, without any one member being allowed to dominate proceedings. For consideration, we suggest the management function be composed of organizations representing multiple members wherever possible.

By creating the steering group composition as outlined above, multi-member organizations (usually of like-minded/specialist members) can engage their memberships in providing skilled resources and quality input to the sub-structure of NSTIC, such as volunteers to work in committees on policy and technology.

A number of industry organizations represent members of the identity ecosystem. At a high level, these organizations could represent: identity providers; attribute providers; consumer, privacy and civil liberty organizations; communication and information technology infrastructure providers; software and application providers; certification and education organizations; academic and research and development organizations; relying parties (representing major industry sectors); standards development organizations; the United States Federal Government; state, local, tribal and other governments

NSTIC: Frequently Asked Questions

1. What is the NSTIC?

The National Strategy for Trusted Identities in Cyberspace (NSTIC) is a White House initiative that broadly defines an Identity Ecosystem that would re-establish trust and better protect online identities.

According to the Howard A. Schmidt on the White House blog, "Through the strategy we seek to enable a future where individuals can voluntarily choose to obtain a secure, interoperable, and privacy-enhancing credential (e.g., a smart identity card, a digital certificate on their cell phone, etc.) from a variety of service providers – both public and private – to authenticate themselves online for different types of transactions (e.g., online banking, accessing electronic health records, sending email, etc.)."

2. What was the impetus for the NSTIC?

U.S. citizens are increasingly using the Internet for sensitive transactions, like banking, mortgage applications, buying and trading stocks, and reviewing healthcare information. Given this, there are very real problems of identity management, privacy and security in cyberspace. NSTIC aims to give individuals and organizations the ability to complete online transactions with confidence and trust, and without the threat of cybercrime.

3. What are the goals for the NSTIC?

According to the White House, the goals for the NSTIC are: (1) design the Identity Ecosystem; (2) build the Identity Ecosystem infrastructure; (3) strengthen privacy protections for end users and increase awareness of risks; (4) manage the Identity Ecosystem.

4. Who is defining the NSTIC Identity Ecosystem?

NIST is currently leading the effort to facilitate private sector involvement in defining and establishing the Identity Ecosystem. The Identity Ecosystem will be created and run primarily by the private sector. According to the NSTIC web site: "The role of the federal government is to facilitate and help jump start the private sector's efforts by convening workshops and bringing together the many different stakeholders important for establishing the Identity Ecosystem. The government will also protect individuals by ensuring that the Identity Ecosystem meets these four guiding principles: (1) privacy-enhancing and voluntary, (2) secure and resilient, (3) interoperable, and (4) cost-effective and easy to use. Lastly, the government can help drive the market by accepting Identity Ecosystem credentials for its online services."

5. What is the Smart Card Alliance view of the NSTIC?

The Smart Card Alliance endorses NSTIC. In a comment on the NSTIC, the Alliance said:

"The NSTIC Framework is well conceived and written. It is intentionally broad in scope, providing a wide range of trusted identity constructs and identity protection technologies. The Framework is very pragmatic and practical in its approach, because it limits its role to being an enabler, facilitator and accelerator of the Identity Ecosystem development. There is a clear recognition that many different public and private stakeholders will be involved in working out the specifics of the framework and ultimately, using it."

6. Does the NSTIC specify using smart card technology within the Identity Ecosystem?

The NSTIC Framework identifies smart card technology as one example of an identity medium – a card, USB token or other device storing identity credentials used to validate online identities and transactions – and one that is suitable for high-value transactions and identities.

7. How would smart card technology contribute to the Identity Ecosystem?

For high assurance online identity transactions (for example, for a mortgage application or health record access), using smart card technology for an identity credential will protect identities in cyberspace in a secure, privacy-sensitive way.

8. How easy or hard would it be to implement smart card technology as part of the Identity Ecosystem?

The U.S. federal government has extensive experience using smart card technology in identity applications. As a result, there is already an established set of best practices, standards and technology solutions for smart card-based identity management and authentication. This foundation for protecting identities in cyberspace can easily be adapted to fulfill NSTIC's goals.

For a guide to how smart card technology protects online identities and transactions, see the Smart Card Alliance slideshow, Smart Card Technology and the National Cybersecurity Strategy.

About the FAQ

The NSTIC FAQ was developed by the Smart Card Alliance Identity Council to answer questions about the NSTIC and the role of smart card technology in NSTIC.

payments council

Payments Council Mission

Facilitate the adoption of chip-enabled payments and payment applications in the U.S. through education programs for consumers, merchants, issuers, acquirers/processors, government regulators, mobile telecommunications providers and payments service providers.

Council Officers

Co-chairs: Simon Hurry, Visa and Oliver Manahan, MasterCard
Vice chair: Troy Bernard, Discover Financial Services
Secretary: Deborah Baxley, Capgemini

Steering Committee

- Deborah Baxley, Capgemini
- Troy Bernard, Discover Financial Services
- Jo Ann Davaris, American Express
- Michael English, Heartland Payment Systems
- Simon Hurry, Visa, Inc.
- Jack Jania, Gemalto
- Mohammad Khan, ViVOtech
- Paul Legacki, Infineon Technologies
- Michelle Lehouck, CPI Card Group
- Dan Loomis, VeriFone
- Oliver Manahan, MasterCard Worldwide
- Nick Pisarev, G&D
- Dori Skelding, Chase Card Services
- Garfield Smith, Oberthur Technologies
- Charles Walton, INSIDE Secure

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Top Contributors

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- Guy Berg, Datacard Group
- James F. Lock, JPMorgan Chase
- Jeffrey Stroud, Gemalto

2011 Honor Roll

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- Ron Pinkus, Giesecke & Devrient
- JC Raynon, ViVOtech
- Gregory Riche, IBM
- Dori Skelding, Chase Card Services
- Garfield Smith, Oberthur Technologies
- Chandra Srivastava, Independent
- Brian Stein, Accenture LLP
- Jeffrey Stroud, Gemalto
- Charles Walton, INSIDE Secure
- Tom Zalewski, ViVOtech

2011 Activities

- Card Payments Roadmap in the U.S.: How Will EMV Impact the Future Payments Infrastructure? white paper, providing educational resources for stakeholders across the payments value chain about the critical aspects of deploying an EMV solution in the U.S.
- EMV Roadmap Implementation Options for the U.S. workshop at the Smart Card Alliance Annual Conference, delivering in-depth training to conference attendees.
- EMV FAQ and NFC FAQ, answering common questions about EMV and NFC.
- EMV for Merchants and Merchant Acquirers webinar, providing a primer on EMV for U.S. merchants and acquirers.
- The Mobile Payments and NFC Landscape: A U.S. Perspective white paper, providing an overview of the current state of the market for mobile payments and NFC-enabled payment applications in the U.S.
- Contactless Payments Security Q&A, Contactless Payments Resources, EMV Resources, NFC Resources updates, providing up-to-date information on key industry topics.
- Smart.Payments LinkedIn Group, encouraging industry-wide discussion of chip-enabled payments.

Year in Review: Payments Council Co-Chairs

EMV chip cards take hold in the U.S.

I doubt we'd be going out on too much of a limb if we state that 2011 will go down in history as the year that EMV chip cards took hold in the United States. EMV technology has been widely used in the rest of the world for almost twenty years, with over a billion cards in issue. To date the U.S. has issued fewer than a million EMV cards, but it's a start – especially when compared to almost zero EMV compliant cards until now. Moreover, several credit unions and at least four major banks have announced EMV programs, some of which include the more sophisticated dual-interface cards that are capable of both contact and contactless payments.

None of this would have happened without the support and dedication of the Smart Card Alliance Payments Council which focuses on facilitating the adoption of chip-enabled payments and mobile payment applications in the U.S. The group has brought together payments industry stakeholders, including payments industry leaders, merchants and suppliers, and dedicated much of this year to informing and educating the market about EMV and options for deployment in the U.S.

This year's projects included an EMV web seminar and a full EMV conference workshop in Chicago, as well as a white paper on EMV that was one of the most widely downloaded white papers in Alliance history. In addition, the Council never lost focus on the contactless and mobile technology poised to take off in a major way with the introduction of mobile wallets and NFC-enabled smart phones. The Alliance delivered an excellent white paper on the mobile payments landscape that explores a wide variety of topics including the mobile business relationships needed for success, over-the-air downloads of mobile applications and the related requirements for mobile security, and the concept of secure elements.

All this was made possible through the efforts of the men and women in the Payments Council, who selflessly give their time, and the commitment of the companies they work for. We greatly appreciate your participation and look forward to another year of continued growth in chip and contactless technologies.

Simon Hurry
Senior Business Leader, Global Chip Implementations
Visa Inc.

Oliver Manahan
Vice President, Emerging Payments
MasterCard Worldwide

Card Payments Roadmap in the United States: How Will EMV Impact the Future Payments Infrastructure?

To reduce counterfeit, lost and stolen card fraud, and to protect cardholder data, nearly every country in the world is widely deploying EMV. Due to historic low fraud rate and high implementation cost, the U.S. is a late-comer to EMV, but increases in fraud losses and the declining cost of adoption are now driving the U.S. toward broad deployment of EMV.

Planning a roadmap to EMV requires choice of card interface (contact, contactless or dual), card authentication method, cardholder verification method, transaction authorization approach. The U.S. may evolve to a hybrid combination of options to best support venue, transaction type, and compatibility with the rest of the world.

Issuers and merchants may choose to implement only the options they need. EMV will impact the card interface and the host and transaction authorization processing. Issuers may choose to issue contact, contactless or dual interface cards. Issuer host systems must process full chip data, or as an option, take advantage of an on-behalf-of service from a payment brand, that requires minimal host system changes. Issuers also need to select whether cards are always authorized online or whether offline authorization is also supported. These choices must also be reflected in the cardholder verification methods that are supported.

Acquirers/processors will need to modify their systems to receive all possible types of chip data from POS devices and place the data into appropriate Field 55 tags. They will also be required to certify they are transmitting the appropriate fields to the payment networks.

Many new POS terminals in the market today are built with a smart card chip reader and other hardware components to support EMV. These chip-ready POS terminals that are already in use will simply require a software or firmware upgrade to be fully EMV capable. Additionally, contactless readers currently deployed may require software or firmware upgrade to support EMV contactless. The POS software requires an EMV kernel that is certified with a lab to demonstrate compliance with baseline EMV requirements, and certified with the various payment brands, each of which has different requirements. Standalone POS terminals can be supported by ISOs and acquirer EMV messaging, but integrated POS systems are customized by larger retailers and will need software modifications to support the EMV messaging changes. In some cases, retailers are installing hardware that is EMV-capable but not enabled. Ideally these terminals can be upgraded remotely.

ATMs offer a compelling case for EMV since they are targets for fraudulent cash withdrawals. Although U.S. ATMs are not EMV ready today, all major ATM vendors offer EMV-capable ATMs, and in some cases, existing ATMs can be upgraded rather than replaced. ATM owners need to review their equipment's hardware, software, certification, and upgrade capabilities. The ATM will need a contact and contactless reader that is EMV certified for EMVCo levels 1 and 2, plus brand-specific certifications. Online PIN is the only cardholder verification method supported by ATMs, and approved PIN pads are already in place from the mandated Triple DES upgrade. The software needs to contain a certified EMV kernel and support contactless.

Although the enormous size of the U.S. payment industry makes widespread change costly and difficult, the true cost of fraud is increasing and threatens to damage the industry's reputation. This damage could accelerate as criminals move to the U.S. as the weakest link. The cost of EMV implementation in the U.S. has likely declined from original estimates due to maturation of the technology. Ad hoc comparison to representative costs from Canada support this premise. The roadmap outlined in this white paper demonstrates that various options are available to migrate to EMV. Due to the maturity and wide availability of EMV technology and products, migration will be less complicated than it would have been a decade ago.

About the White Paper

The white paper, Card Payments Roadmap in the U.S.: How Will EMV Impact the Future Payments Infrastructure?, was developed to educate stakeholders across the payments value chain about the critical aspects of deploying an EMV solution in their business environments in the U.S. The white paper describes the current state of the payments infrastructure in the U.S., discusses the impact of the global deployment of EMV on possible roadmaps, and provides a primer on EMV card authentication, cardholder verification and transaction authorization methods. For each stakeholder (issuers, merchants, acquirers/processors and ATM owners), the white paper outlines actions that need to be taken to issue EMV cards, and to accept and process EMV transactions.

Smart Card Alliance Payments Council members involved in the development of this white paper included: Accenture LLP; American Express; Apriva; Booz Allen Hamilton; Capgemini; Capital One; CPI Card Group; Datacard Group; Discover Financial Services; epay Worldwide, Inc.; First Data Corporation; Fiserv; Gemalto; Giesecke & Devrient; Heartland Payment Systems; HID Global; IBM; JPMorgan Chase; LTK Engineering Services; MasterCard Worldwide; NagraID Security; Oberthur Technologies; Smartcard Marketing Solutions; Thales e-Security; Visa Inc.; ViVOtech; Watchdata.

The Mobile Payments and NFC Landscape: A U.S. Perspective

Mobile commerce is growing dramatically and affects every component of the retail industry. Financial apps – including mobile banking, POS, m-commerce, and payment apps – provide consumers, merchants, and small businesses with the ability to run their financial lives entirely from a smartphone. Solutions for accepting payments using a mobile phone have been introduced over the past several years but have not gained the traction or attention that they are receiving today. Accepting payments using a mobile phone is becoming more common. Solutions improve employee productivity and effectiveness and customer service, and extend the ability to accept payment cards to many new small merchants. Increasingly, consumers research, recommend, compare, and buy online or in combination with brick-and-mortar retailing.

Mobile payments are defined as payments in which a mobile device is functionally involved in executing or confirming a payment. Mobile payments are classified by location, transaction size, technology used, and funding source. Certain payments are more appropriate for certain venues or payment types (for example, the use of mobile bar codes in a coffee shop).

Adoption is always an issue with a new payment type. The main stakeholders – mobile operators, merchants, bank issuers, and, most importantly, consumers – must benefit sufficiently to overcome any barriers to adoption. Benefits can include reliability at the POS, strong security, ease of use, wallet functionality, high rates of acceptance, device deployment/availability, low transaction costs, and the availability of additional value-add applications.

Currently, two key players are driving the U.S. market for mobile payments: the Isis consortium and Google Wallet partners. Standards and hardware availability are paving the way for NFC mobile payments as well. The NFC standards, specified by ISO/IEC, ETSI, ECMA International, and NFC Forum, ensure global consistency and an interoperable infrastructure. More than 20 handset manufacturers are reportedly producing NFC-enabled handsets, and 10 handset models are already available. The key manufacturers of microSDs, SIMs, SEs, and other specialized hardware are offering the accessories and services needed to support NFC.

The first step is to provision a secure payment application onto the NFC-enabled mobile phone and personalize it, whether by OTA, through the Internet, or by centralized or instant issuance. These activities require access to the SE security keys. The provisioning service, typically envisioned as being provided by a TSM, would also perform life-cycle management to enable reprovisioning to new or replacement handsets or carriers.

Mobile payments are as secure (or more secure) than payments made using plastic payment cards. Standard security technologies, such as encryption, SSL, or VPNs, and GlobalPlatform's secure channel protocol protect the personalization and life-cycle

management processes. Payments are protected with tamper-resistance and cryptography in the same manner as chip-enabled payment cards, and wallets can be protected with PINs.

Many mobile payment approaches are being discussed, evaluated and tested, including integrated NFC, non-integrated contactless, bar codes, cloud-based solutions, and text messaging. As approaches evolve, some are likely to become obsolete, while others may be combined. A comparison shows that bridge technologies, text-messaging, and bar codes solve certain device availability problems, but at the expense of reliability, security, and wallet and value-add functionality. NFC approaches emerge as the top choice, despite the challenges of acceptance and device availability, because they are reliable, secure, and easy to use.

About the White Paper

The white paper, The Mobile Payments and NFC Landscape: A U.S. Perspective, was developed to provide an overview of the current state of the market for mobile payments and NFC-enabled payment applications in the U.S. and to evaluate the advantages and disadvantages of different mobile payment approaches.

Smart Card Alliance Payments Council members involved in the development of this white paper included: Accenture; American Express; Apriva; Bank of America; Capgemini; Capital One; Connexem Consulting; CPI Card Group; Datacard Group; DeviceFidelity; Discover Financial Services; First Data Corporation; Gemalto; Giesecke & Devrient; Heartland Payment Systems; Infineon Technologies; INSIDE Secure; JPMorgan Chase; Mike Kutsch; Dale Laszig; LTK Engineering Services; MasterCard Worldwide; NACHA; NagraID Security; NBS Technologies; NXP Semiconductors; Oberthur Technologies; Quadagno & Associates; Chandra Srivastava; Thales e-Security; WatchData Technologies USA; VeriFone; Visa Inc.; ViVOtech.

EMV: Facts at a Glance

1. What is EMV?

EMV is an open-standard set of specifications for smart card payments and acceptance devices. The EMV specifications were developed to define a set of requirements to ensure interoperability between chip-based payment cards and terminals. EMV chip cards contain embedded microprocessors that provide strong transaction security features and other application capabilities not possible with traditional magnetic stripe cards. Today, EMVCo manages, maintains and enhances the specifications. EMVCo is owned by American Express, MasterCard, JCB, and Visa, and includes other organizations from the payments industry participating as technical and business associates.

2. Where has EMV been adopted?

Eighty countries globally are in various stages of EMV chip migration, including Canada and countries in Europe, Latin America and Asia. According to EMVCo, approximately 1.2 billion EMV cards have been issued globally and 18.7 million POS terminals accept EMV cards as of Q1 2011. This represents 40.1% of the total payment cards in circulation and 71% of the POS terminals installed globally.

In August 2011, Visa announced plans to accelerate chip migration and adoption of mobile payments in the United States, through retailer incentives, processing infrastructure acceptance requirements and counterfeit card liability shift. A number of major U.S. issuers are already issuing or have announced plans to issue EMV cards.

3. What are the benefits of EMV?

The biggest benefit of EMV is the reduction in card fraud resulting from counterfeit, lost and stolen cards. EMV also provides interoperability with the global payments infrastructure – consumers with EMV chip payment cards can use their card on any EMV-compatible payment terminal. EMV technology supports enhanced cardholder verification methods and, unlike magnetic stripe cards, EMV payment cards can also be used to secure online payment transactions.

4. Will EMV be implemented in the United States? Are there any U.S. banks issuing EMV cards?

U.S. banks have already started issuing payment cards with EMV technology to their customers, and Visa has announced EMV incentives, mandates and liability shift for the U.S.

Issuer announcements as of August 2011 include the following:

- The United Nations Federal Union (UNFCU) was the first U.S. financial institution to issue EMV payment cards. According to UNFCU, the offering has rapidly become very popular with the international travelers who make up much of the credit union's members.
- JPMorgan Chase has also started to issue EMV payment cards to specific portfolios where card members are international travelers.
- Wells Fargo has announced that they would begin offering EMV cards targeted to U.S. customers who travel internationally in summer 2011.
- The State Employees Credit Union announced that they are converting their entire debit card portfolio to EMV.
- Silicon Valley Bank announced that they are offering an EMV credit card for businesses.
- U.S. Bank has announced that they are offering a dual EMV chip and contactless payment card to their travel reward cardholders.
- Travelex issues a prepaid foreign currency EMV card for U.S. consumers traveling internationally; the card is available in airports at Travelex locations.

5. How does EMV address payments fraud?

First, the EMV card includes a secure microprocessor chip that can store information securely and perform cryptographic processing during a payment transaction. EMV cards carry security credentials that are encoded by the card issuer at personalization. These credentials, or keys, are stored securely in the EMV card's chip and are impervious to access by unauthorized parties. These credentials therefore help to prevent card skimming and card cloning, one of the common ways magnetic stripe cards are compromised and used for fraudulent activity.

Second, in an EMV transaction, the card is authenticated as being genuine, the cardholder is verified, and the transaction includes dynamic data and is authorized online or offline, according to issuer-determined risk parameters. Each of these transaction security features helps to prevent fraudulent transactions.

Third, even if fraudsters are able to steal account data from chip transactions, this data cannot be used to create a fraudulent transaction in an EMV or magnetic stripe environment, since every EMV transaction carries dynamic data.

And lastly, EMV can also address card-not-present (CNP) fraud, with cardholders using their EMV cards and individual readers to authenticate Internet transactions.

6. Where I can learn more about EMV?

The Smart Card Alliance provides an EMV Resources web page that provides Alliance resources, industry resources, and recent articles and news on the topic. EMVCo also provides many resources on its website.

About the FAQ

EMV Facts at a Glance was developed by the Payments Council to answer questions about EMV, about the impact that EMV has on reducing payment card fraud and about U.S. plans for EMV.

Contactless Payments Security Questions & Answers

1. How is contactless payment different than RFID?

Both contactless payment devices and radio frequency identification (RFID) tags use radio frequency (RF) technology. However, RFID tags are typically cheap, read-only, low memory devices that can be read over greater distances and that have no or minimal security. Contactless payment cards and devices contain secure microprocessors and memory, have the ability to perform cryptographic processing, have multiple functions, and are required to operate within much smaller distances than RFID tags.

In addition, contactless payments devices and the payments processing networks and systems have specifications and security standards above and beyond those used in basic RFID applications to ensure the integrity and security of the cardholder data and payment transaction.

2. Are contactless payment transactions secure?

Yes. Contactless payment, as implemented by American Express, Discover, MasterCard, STAR and Visa, protects customers' personal information and is a secure way to conduct payment transactions. The financial payments networks used to process contactless payments are the same networks that process millions of magnetic stripe transactions securely today. The primary difference is that the contactless payment device (card, fob or other form factor) uses RF technology to send payment account information to the merchant's point-of-sale (POS) terminal, instead of requiring the payment card's magnetic stripe to be swiped. Contactless payment devices are designed to operate at very short ranges – less than 2-4 inches – so that the consumer needs to make a deliberate effort to initiate the payment transaction.

As contactless payment devices are designed to exchange information with a payment terminal using RF technology, the financial payments industry has designed multiple layers of security throughout the traditional credit and debit payment systems to protect all parties involved in the payment transaction. Most of these protective measures are independent of the technology used to transfer the consumer payment account information from the payment card or device to the merchant POS terminal and are used for both magnetic stripe and contactless transactions. For example, online authorization, risk management and real-time fraud detection systems are used to detect potential fraudulent activity for any credit or debit card payment transaction. Plus, the liability policies which protect consumers from fraudulent transactions on traditional consumer credit and debit accounts also apply to American Express, Discover, MasterCard, STAR and Visa contactless transactions.

3. How are contactless payment transactions made secure?

For contactless payments, the financial industry uses added security technology both on the contactless device as well as in the processing network and system to prevent fraud. While implementations differ among issuers, examples of security measures that are being used include the following:

- *Industry standard encryption.* At the card level, each contactless card can have its own unique built-in secret "key" that uses standard encryption technology to generate a unique card verification value, cryptogram or authentication code that exclusively identifies each transaction. No two cards share the same key, and the key is never transmitted.
- *Authentication.* The issuers verify that the contactless payment transaction has a valid card verification value, authentication code or cryptogram before authorizing the transaction. Therefore, at the system level, issuers have the ability to automatically detect and reject any attempt to use the same transaction information more than once.
- *Confidentiality.* The processing of contactless payments does not require the use of the actual cardholder name in the transaction. In fact, best practices being used within the industry do not include the cardholder name in the contactless chip.
- *Control.* Cardholders control both the transaction and the card throughout the transaction. Cardholders do not have to hand over either a card or their account information to a clerk during a contactless transaction.

About this Q&A Document

The Contactless Payments Security Q&A was developed by the Smart Card Alliance to answer questions about contactless payment security. The questions and answers below apply only to contactless payment using contactless smart card technology, as implemented by American Express, Discover, MasterCard, STAR and Visa.

physical access council

Physical Access Council Mission

Accelerate the widespread acceptance, usage, and application of smart card technology for physical access control..

Council Officers

Chair: Lars Suneborn, Hirsch Identive
Vice chair: David Nichols, HID Global
Secretary: Salvatore D'Agostino, IDmachines

Steering Committee

- Salvatore D'Agostino, IDmachines
- Tony Ferguson, Bioscrypt / L-1 Enterprise Access Division
- Walter Hamilton, Identification Technology Partners
- Kevin Kozlowski, XTec, Inc.
- Lolie Kull, HP Enterprise Services
- Bob Merkert, Identive Group
- David Nichols, HID Global
- Steve Rogers, Intellisoft, Inc.
- Jason Rosen, NASA
- Adam Shane, AMAG Technology
- Mike Sulak, Department of State
- Lars Suneborn, Hirsch Identive

Council Members

ABnote Group • Accenture • AMAG Technology • ASSA ABLOY ITG • Athena Smartcard Solutions • Bioscrypt / L-1 Enterprise Access Division • Booz Allen Hamilton • CardLogix • Castles Technology, Co., Ltd. • Codebench, Inc. • Cogent Systems • CSC • Cubic Transportation Systems • Datacard Group • Datawatch Systems • Defense Manpower Data Center (DMDC) • Deloitte • Diebold Security • E & M Technologies Inc. • Exponent • Gemalto • General Services Administration • Giesecke & Devrient • HID Global Corporation • Honeywell • HP Enterprise Services • IDenticard • Identification Technology Partners • Identive Group • IDmachines • Indala • Infogard • Intellisoft, Inc. • L-1 Identity Solutions • Lenel Systems International • Lockheed Martin • MAGICARD - Ultra Electronics • Morpho • NagraID Security • NASA • NBS Technologies • Northrop Grumman Corporation • NXP Semiconductors • Oberthur Technologies • Probaris • Roehr Consulting • SAIC • Shane-Gelling Company • Tyco Software House • Unisys • U.S. Department of Defense • U.S. Department of State • U.S. Department of Transportation • Washington Metropolitan Area Transit Authority (WMATA) • XTec, Incorporated

Top Contributors

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- Tony Damalas, Diebold Security
- Steve Rogers, Intellisoft

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- Ben Black, Deloitte & Touche LLP
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- Mark Dale, HP
- Tony Damalas, Diebold Security
- Robert Donelson, Organization Change Future Workplace, LLC
- Tony Ferguson, Bioscrypt / L-1 Identity Solutions
- Marty Frary, Independent
- Bob Gilson, Defense Manpower Data Center
- Marlon Guarino, Defense Manpower Data Center
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- Daryl Hendricks, General Services Administration
- Won Jun, Identification Technology Partners
- Russ Kent, HP
- Harold Kocken, Deloitte & Touche LLP
- Lolie Kull, HP
- LaChelle LeVan, Probaris, Inc.
- Gilles Lisimaque, Identification Technology Partners
- Diana Loughner, IDenticard
- Michael Magrath, Gemalto
- Stafford Mahfouz, Tyco Software House
- Don Malloy, NagraID Security
- Bob Merkert, Identive Group
- LJ Neve, Booz Allen Hamilton
- David Nichols, HID Global
- Neville Pattinson, Gemalto
- Rick Pratt, XTec, Inc.
- Kenny Reed, Datawatch Systems Inc.
- Roger Roehr, Roehr Consulting
- Steve Rogers, Intellisoft
- Jason Rosen, NASA
- Dan Schleifer, IDmachines LLC
- Adam Shane, AMAG Technology
- Mike Sulak, U.S. Department of State
- Lars Suneborn, Hirsch Identive
- Rick Uhrig, XTec, Inc.
- Bob Wilberger, Independent
- Rob Zivney, Identive Group

2011 Activities

- Personal Identity Verification Interoperability (PIV-I) for Non-Federal Issuers: Trusted Identities for Citizens across States, Counties, Cities and Businesses white paper, describing the benefits of FIPS 201, PIV standards and PIV-I framework for state and local governments to enable interoperability and trust across different government issuers for a wide variety of identity credentialing programs.
- PIV-I for Non-Federal Issuers webinar, held in collaboration with the National Association of State Chief Information Officers (NASCIO).
- Smart Cards and Biometrics white paper, updating the 2002 white paper on biometrics and showcasing eight case study examples of identity verification systems that combine smart cards and biometrics.
- Collaboration with the Identity Council to submit comments to NIST on FIPS 201-2.
- The Commercial Identity Verification (CIV) Credential – Leveraging FIPS 201 and the PIV Specifications white paper, providing guidance for how commercial enterprises can leverage FIPS 201 and the PIV card standards with the white paper. This white paper defines the CIV credential, which leverages the PIV-I specifications, technology and data model without the requirement for cross-certification.
- Comments submission on draft guidance on federated physical access control systems.
- Relationships with NASCIO, the Security Industry Association (SIA) and the International Biometrics & Identification Association (IBIA).

Year in Review: Physical Access Council Chair

PIV-C becomes CIV through industry consensus

As the end of 2011 draws near, a look at this year's activities shows that this has indeed been a busy year for the Physical Access Council (PAC).

2011 started with a continuation of the success and acceptance of the white paper project done in collaboration with NASCIO, "Personal Identity Verification Interoperability (PIV-I) for Non-Federal Issuers: Trusted Identities for Citizens across States, Counties, Cities and Businesses." This effort suggested a practical, cost-effective approach for non-federal issuers to create a consolidated and standards-based identity infrastructure for government-to-government, government-to-business and government-to-citizen transactions.

Our next project, the "Smart Cards and Biometrics" white paper, illustrated how smart card and biometric technologies complement each other and offer a wide range of benefits including enhanced privacy, enhanced security and ease-of-use. The white paper included use cases from around the globe, with projects using a variety of biometric modalities, such as fingerprint and iris. The Singapore immigration clearance system and Amsterdam Schiphol airport access control are just two examples of the interesting use cases in this document.

Another major milestone this year was NIST's release of the initial draft of FIPS 201-2 for comment. Three PAC members presented the 35 most pressing and wide-ranging comments during a two-day FIPS 201-2 workshop hosted by NIST at their Gaithersburg, MD, facilities.

Perhaps the most engaging and entertaining project was naming the credential previously referred to as PIV-compatible, or PIV-C. The name chosen by the PAC, out of more than 50 creative suggestions, was the Commercial Identity Verification (CIV) credential.

Once the CIV credential was named, the natural follow-up question surfaced: Now we have a name, but what is a CIV?

This question triggered our next white paper: "The Commercial Identity Verification (CIV) Credential: Leveraging FIPS 201 and the PIV Specifications." Released in time for the annual Smart Cards 10th Annual Government Conference, the paper has gained recognition and traction among issuers and organizations that have requirements for a secure, identity credential that is resistant to duplication, counterfeiting and alterations and that can be rapidly authenticated, but have no employees who need access to Federal resources.

The CIV credential approach allows commercial issuers to leverage the standards-based PIV technology already developed and deployed, while issuing identity credentials according to their own corporate policies.

New technologies have emerged due to new regulatory requirements and standards. The Federal Identity, Credential, and Access Management (FICAM) segment architecture impacts both physical access control systems (PACS) and the way suppliers and system integrators conduct business.

In the Federal government market, PACS are rapidly becoming more and more IT-centric. Authoritative databases contain much of the information previously created and stored in local PACS servers. Data is shared and transmitted using networks shared with other entities, with the same credential used for physical and network access. FICAM Part B brings the integration of many traditional PACS functions in scope, including physical intrusion detection, guard tour functions, system activity auditing, and archiving and long term storage of history log files. These systems perform functions that may become critical tools to implement and enforce site-specific security policies.

Both FIPS 201-2 and FICAM Part B are expected to be published in the next few months. These important documents will warrant new projects that show how physical and logical security subsystems can be integrated into one comprehensive security and access management system as intended and outlined in these documents.

With all of the activity in both the government and commercial markets to improve both physical and logical access security, we anticipate an equally busy and productive 2012 with some exciting expansions in the charter of the PAC!

Lars R. Suneborn
Director, Government Program
Hirsch Identive

PIV-I for Non-Federal Issuers

Solid identity management and strong credentialing practices are critical to government organizations and enterprises that must verify the identities of a wide variety of individuals – employees, business partners, emergency response officials, and citizens. As a result governments around the world are putting in place the legal framework to leverage strong identity credentials for eGovernment, eHealth and eCommerce and use of these credentials is growing.

Driven by the issuance of Homeland Security Presidential Directive 12 (HSPD-12) in 2004, the U.S. Federal Government has invested significant effort and resources in implementing robust, interoperable credentialing processes and technologies. The resulting standard, *Federal Information Processing Standard (FIPS) 201, Personal Identity Verification (PIV) of Federal Employees and Contractors*, provides a framework of the policies, processes, and technology required to establish a strong, comprehensive program. And in fact, since 2005, the Federal Government has successfully used this framework to issue over 5 million PIV cards to Federal employees and contractors. In addition, Federal agencies have developed an infrastructure for using these interoperable credentials for physical and logical access.

State and local governments and other organizations can leverage the Federal program. Two publications – *Personal Identity Verification Interoperability (PIV-I) for Non-Federal Issuers* and *PIV-I Frequently Asked Questions* – provide states, local jurisdictions, and commercial organizations with applicable standards and guidance. The definition of PIV interoperability builds on the Federal PIV standard and the supporting framework of policies, processes, and technologies.

A PIV card is an identity card that meets the PIV technical specifications to work with PIV infrastructure elements such as card readers, and is issued by the federal government in a manner that allows relying parties to trust the card. The PIV-I card is an identity card that meets the PIV technical specifications to work with PIV infrastructure elements such as card readers, and is issued by a non-federal issuer (NFI) in a manner that allows federal government relying parties to trust the card. The PIV and PIV-I technology and infrastructure are based on standards at many levels – from the physical token (the smart card) to the identity credential components to the public key infrastructure (PKI) – that enable interoperable trust.

Identity Credentials: The Move toward PIV-I

Many state and local organizations point to the PIV standard as a way to achieve a more holistic approach to issuing identity credentials and improving their own business processes. Early state adoption of PIV-I credentials and infrastructure in the Commonwealth of Virginia, the State of Colorado, and the State of Illinois has established baselines for achieving interoperability with Federal credentials, services, and systems. These PIV-I credentials are being used in regional and national interoperability exercises sponsored by the Federal Emergency Management Agency (FEMA) and for piloting operations in other areas, such as accessing Federal systems. In the July 2010 white paper, *Moving towards Credentialing Interoperability: Case Studies at the State, Local and Regional Level*, seven states highlighted ongoing and planned activities for deploying PIV-I credentials within their jurisdictions.

Adoption of PIV-I credentials and its trust framework brings many business benefits to organizations, including:

- Providing interoperability and trust across multiple jurisdictions
- Reducing redundant credentialing efforts and expenditures, allows one ID to be issued (rather than multiple IDs) and increases policy effectiveness
- Enabling a standardized identity proofing process and standardized issuance procedures
- Providing strong proof of cardholder identity
- Protecting data from accidental or deliberate loss, alteration, or destruction
- Providing the ability to authenticate identity and attributes electronically
- Protecting against identity theft and reduces opportunities for fraud
- Improving ROI for identity credentialing programs

The maturity of the Federal standards, the availability of compliant commercial off-the-shelf (COTS) products, and the ability to use a single, interoperable, and secure PIV credential across multiple application areas can enable states, local jurisdictions, and enterprises to improve their security postures, infrastructures, and services for employees, contractors, businesses, and consumers. Using the PIV-I standards helps to provide a foundation for a cost-effective identity credentialing approach.

About the White Paper

The Physical Access Council and Identity Council developed the white paper, Personal Identity Verification Interoperability (PIV-I) for Non-Federal Issuers: Trusted Identities for Citizens across States, Counties, Cities and Businesses, to describe the benefits of FIPS 201, PIV standards and PIV-I framework for state and local governments to enable interoperability and trust across different government issuers for a wide variety of identity credentialing programs.

Physical Access Council and Identity Council members involved in the development and review of this white paper included: Accenture LLP; AMAG Technology; CardLogix; CertiPath; Datacard Group; Datawatch; Deloitte; Diebold Security; Gemalto; General Services Administration (GSA); Hewlett-Packard; HID Global; IDenticard; Identification Technology Partners; Identive Group; IDmachines; Intellisoft, Inc.; L-1 Identity Solutions; NagraID Security; NASA; Northrop Grumman Corporation; Organization Change Future Workplace, LLC (OCFW); Probaris, Inc.; Roehr Consulting; Software House / Tyco; Technica; U.S. Dept. of Defense/Defense Manpower Data Center (DMDC); U.S. Dept. of State; XTec, Inc.

The Commercial Identity Verification (CIV) Credential: Leveraging FIPS 201 and the PIV Specifications

Homeland Security Presidential Directive 12 (HSPD-12) mandates a standard for a secure and reliable form of identification to be used by all Federal employees and contractors. Signed by President George W. Bush in August 2004, HSPD-12 initiated the development of a set of technical standards and issuance policies (FIPS 201) that create the Federal infrastructure required to deploy and support an identity credential that can be used and trusted across all Federal agencies.

This credential, the Personal Identity Verification (PIV) card, is now deployed and used by Federal agencies to assign controlled resource access privileges to Federal employees and to authorize the cardholder to access both physical and logical resources. The success of this program is largely due to the development of goals, issuance policies, and technical specifications that all agencies agree to follow. A cross-certification policy establishes trust between agencies, so that employees from one agency can use their PIV credentials to access controlled resources while visiting other agencies. Products and systems that conform to the defined technical interoperability standards are offered by a variety of suppliers. New standards-compliant products are introduced frequently. Today, well over 5 million PIV cards have been issued by the Federal government to employees and contractors.

One of the main advantages of these credentials is that they adhere to a set of standards that is accepted by suppliers, issuers, and users. The Federal government can now choose from a wide range of conforming access control products, which can be purchased from a variety of suppliers, and be assured that their choice will work with every employee's or contractor's credential.

PIV-interoperable (PIV-I) cards are being issued by Federal contractors to those employees who need access to Federal buildings and networks. The PIV-I credentials are technically interoperable with the PIV infrastructure. PIV-I issuers comply with the identity-proofing, registration, and issuance policies described in FIPS 201 and are cross-certified with the Federal PKI Bridge.

Private enterprises can also take advantage of this technology. This white paper defines the Commercial Identity Verification (CIV) credential, which leverages the PIV-I specifications, technology and data model without the requirement for cross-certification. Any enterprise can create, issue, and use CIV credentials according to requirements established within that enterprise's unique corporate environment.

What Is the CIV Credential?

The CIV credential is technically compatible with the PIV-I credential specifications. However, a CIV credential issuer need not comply with the strict policy framework associated with issuance and use of the PIV and PIV-I credentials. This freedom allows corporate enterprises to deploy the standardized technologies in a manner that is suitable for their own corporate environments. Figure 1 shows a comparison of PIV, PIV-I and CIV credentials.

Figure 1. Comparison of PIV, PIV-I and CIV Credentials

	PIV	PIV-I	CIV
Policy			
Identity vetting Breeder documents Background checks	Follows FIPS 201	Requires two breeder documents defined by FIPS 201 Other policies are defined by the issuer with the intent to be cross-certified by the Federal Bridge	Follows the corporation's policies
Process			
Enrollment Issuance Activation	Follows FIPS 201	Follows FIPS 201	Follows the corporation's policies
Technical Interoperability			
Card data model	Follows SP 800-73	Follows SP 800-73	Follows SP 800-73
Credential number	FASC-N	UUID	UUID

A corporate enterprise can implement a CIV credentialing program and use the supporting technology and standards in the way that best fits the enterprise's requirements.

About this White Paper

The white paper, The Commercial Identity Verification (CIV) Credential – Leveraging FIPS 201 and the PIV Specifications: Is the CIV Credential Right for You?, was developed by the Physical Access Council to provide guidance on how enterprises can take advantage of FIPS 201 and the PIV credential specifications to implement a standards-based commercial identity credentialing program. The white paper defines the Commercial Identity Verification (CIV) credential, discusses corporate benefits of adopting the CIV credential, and outlines planning and implementation considerations and best practices.

Physical Access Council members involved in the development of this white paper included: ActivIdentity; AMAG Technology; Bioscrypt/L-1 Identity Solutions; Booz Allen Hamilton; Codebench, Inc.; Datacard Group; Datawatch Systems Inc.; Diebold; E & M Technologies; HID Global; HP Enterprise Services; IDenticard; Identification Technology Partners; Identive Group; IDmachines; Intellisoft; NagraID Security; NXP Semiconductors; Roehr Consulting; SAIC; Tyco Software House; Unisys; U.S. Department of State; XTec, Inc.

transportation council

Transportation Council Mission

Promote the adoption of interoperable contactless smart card payment systems for transit and other transportation services and accelerate the deployment of standards-based smart card payment programs within the transportation industry.

Council Officers

Chair: Craig Roberts, Utah Transit Authority (UTA)
Vice Chair - Transit: Gerald Kane, Southeastern Pennsylvania Transportation Authority (SEPTA)
Vice Chair - Parking: Peter Burrows, Parkeon
Vice Chair - Tolling: Mike Nash, ACS, A Xerox Company

Steering Committee

- Dave Blue, Cubic
- Michael DeVitto, MTA NYC Transit
- Mike Dinning, U.S. Dept. of Transportation/Volpe Center
- Margaret Free, Giesecke & Devrient
- Greg Garback, WMATA
- Linh Huynh, INSIDE Secure
- Paul Korczak, Korczak & Associates
- Mike Meringer, VeriFone
- Bob Merkert, Identive Group
- Eric Reese, Chicago Transit Authority
- Martin Schroeder, APTA
- Brian Stein, Accenture
- Faye Surrette, MasterCard Worldwide
- Sandy Thaw, Visa Inc.

2011 Activities

- Open Bank Card Payments for Transit workshop at the Smart Card Alliance Mobile and Transit Payments Summit and the APTA Fare Collection Workshop, delivering in-depth training to workshop attendees.
- A Guide to Prepaid Cards for Transit Agencies white paper, providing guidance on what transit agencies should look for when evaluating the feasibility and benefits of using prepaid cards as one element of an open fare collection system.
- Transit and Contactless Open Payments: An Emerging Approach for Fare Collection white paper, discussing the opportunities, benefits and challenges of transit agencies accepting contactless open bank cards for fare payment.
- Transit Open Payments Resources web page, providing up-to-date information on key industry topics.
- Smart.Transit LinkedIn Group, facilitating open discussion of transit industry trends and challenges.

Top Contributors

- Greg Garback, Washington Metropolitan Area Transit Authority (WMATA)
- Jerry Kane, Southeastern Pennsylvania Transportation Authority (SEPTA)
- Michael Nash, ACS, A Xerox Company

2011 Honor Roll

- Matt Baratz, Port Authority of NY/NJ
- David Blue, Cubic Transportation Systems, Inc.
- Peter Burrows, Parkeon
- Douglas Deckert, Booz Allen Hamilton
- Mike Dinning, U.S. Department of Transportation/Volpe Center
- Willy Dommen, Booz Allen Hamilton
- Stephanie El Rhomri, FIME
- Larry Filler, LF Consulting
- Steve Frazzini, MTA New York City Transit
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- Greg Garback, Washington Metropolitan Area Transit Authority (WMATA)
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- Ashok Joshi, Keville Enterprises, Inc.
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- Joshua Martiesian, LTK
- Kenneth Mealey, American Express
- Mike Meringer, VeriFone
- Michael Nash, ACS, A Xerox Company
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- Tomas Oliva, Scheidt & Bachmann
- Matt Radcliffe, NXP Semiconductors
- Eric Reese, Chicago Transit Authority
- Craig Roberts, Utah Transit Authority (UTA)
- Joe Simonetti, JC Simonetti & Associates
- Brian Stein, Accenture LLP
- Faye Surrette, MasterCard Worldwide
- Sandy Thaw, Visa, Inc.
- Tim Weisenberger, U.S. Department of Transportation/Volpe Center
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Year in Review: Transportation Council Vice Chair

Moving toward open payments

At the close of 2011 the Transportation Council may look back with a sense of accomplishment for its work on several activities and publications. First and foremost, the Council published a major white paper: Transit and Contactless Open Payments: An Emerging Approach for Fare Collection. The paper resulted from an outstanding collaboration among transportation and payment industry experts that exemplifies the Council's spirit and enthusiasm. As with all service industries, transit seeks to improve customer service and create operating efficiencies by harnessing new technologies and embracing new business models. As a source document, the paper strikes a middle ground between conceptual and technical levels to provide a clear understanding of the transit industry's direction toward the acceptance of payment media that meets bank industry and contactless requirements.

In March Council members presented a technical workshop on open payments at the 2011 American Public Transportation Association Fare Collection Conference. The session provided a comprehensive view of open bank card contactless payments and how they pertain to transit. Industry expert speakers discussed alternative architectures for open transit fare payment and provided practical planning and implementation guidance for developing the business case and procurement strategy for open bank card payments. The event marked an important milestone between Alliance members and APTA in their efforts to provide information and technical skill to their respective members.

At the close of 2011, the Council is completing a second white paper entitled: Near Field Communication and Transit. NFC represents a breakthrough technology in the mobile arena with far-reaching benefits in both the transit and payment industries. The Council believes this developing technology responds to growing consumer demands for information and for making purchases. The paper describes the role currently played by mobile phones and devices as riders and non-riders seek access to real-time information. As a standards-based wireless communication proximity technology, NFC differs sharply from conventional forms of mobile communications and commerce. NFC-enabled devices are compatible with the smart card acceptance infrastructure, which means that NFC phones can be used with the existing contactless payment infrastructure.

Looking ahead to 2012 the Council's attention will focus on the progress of several noteworthy projects that have gained traction. Transit operators in Chicago (CTA) and Philadelphia (SEPTA) both awarded contracts for the design, installation and operation of new fare payment systems that will allow the use of conventional credit and debit cards. These agencies join Salt Lake City's operator (UTA) as early adopters of the open payments movement. Other cities in the process of moving to open payments include New York City and Washington, DC.

The Council will also be collaborating with the Payments Council to understand U.S. plans for migration to the EMV payments infrastructure and the impact that this will have on transit, and with the Identity and Physical Access Councils to look at the use of identity credentials in transit applications.

The Transportation Council has been quite successful in bringing together all of the key industry participants and in working together to understand how to solve transportation industry problems with standards-based smart card technology. We're looking forward to continuing to foster this collaboration as we move to new payments standards and mobile technologies.

Gerald J. Kane
Senior Project Planner, New Payment Technologies
SEPTA

Transit and Contactless Open Payments: An Emerging Approach for Fare Collection

Two of the undeniable forces behind the evolution of transit fare payments have been passenger needs for rapid fare payment transaction speeds and payment choices. A third legitimate element, more recently, merits inclusion: payment security. Throughout the 1990s and into the new century virtually all of the major transit agencies in North America invested heavily in automatic fare collection (AFC) technologies, allowing the development of robust transaction-based systems. These card-based, closed loop systems appealed to core transit customers as agencies refined and then promoted stored value and stored pass product implementations. Despite this success, however, the industry was still challenged in at least two key areas: first, the means to attract rider markets either unfamiliar with or not needing these specialized fare instruments; and second, the burden of owning, operating, and maintaining proprietary card-based systems.

Transit rider preferences, however, represent a subset of the broader consumer marketplace. According to the 2010 Federal Reserve Payment Study, credit, debit and prepaid payments made up over 65 percent of all non-cash payments in 2009, with a value of $3.52 trillion. Further, the number of non-cash payments in the United States increased at a compounded annual rate of 5.2 percent since 2006. These findings and trends, as the study points out, result from a combination of technological and financial innovations that influenced the payment instrument choices of consumers and businesses. The banking and payment industries understand consumer desires for faster transactions, the convenience of not carrying cash, improved theft and loss prevention, and ease of record keeping. Recognizing opportunities to expand card use in low-value transactions, the payment industry re-defined payment requirements, including elimination of the need for signatures and receipts, contactless technology adoption, and expansion of prepaid bank products.

The two industries, transit and financial payments, are moving toward the mutually compatible goal of market expansion through customer convenience, transaction speed and data security. The contactless payment card transaction process and fee structure operates within a unique multi-party system in direct contrast to the transit agency model of proprietary card payments. The understanding of the two approaches is key to recognizing the tradeoffs and merits of open payments by transit agencies. The white paper outlines the mechanics of the bank card payment process, including payment aggregation and advanced processing techniques to address transit needs dealing with authentication, authorization and approval in real-time or near-real-time. Transit integrators are implementing risk management solutions tailored to the transit environment, and the industry is working with the card-issuing community to ensure processing rules are in place suitable to transit as a merchant category. Two new technologies, NFC and EMV, are also being introduced in the market. NFC, a short distance wireless communications technology, may completely alter the payment landscape by allowing purchases from mobile phone users, and enabling location-based advertising and communication. EMV is an open standard specification for smart card payments and acceptance devices designed to improve security of bank card transactions. Eighty countries are in various stages of EMV chip migration.

Through the publication of this paper and others like it, it is hoped the transit community gains a new understanding about the architecture of open payments and its benefits. Like many industries, transit agencies struggle with multiple standards and the challenges of interoperability. By adopting bank industry standards for payment, however, the goal of interoperability is achieved. Increasingly, as shown by the pilot projects conducted in the New York-New Jersey region, the open payment operation of the Utah Transit Authority, and several ongoing procurements among large North American transit operators, the industry will develop further insights into the opportunities and benefits of open payments and account-based fare payment approaches.

About the White Paper

The white paper, Transit and Contactless Open Payments: An Emerging Approach for Fare Collection, was developed to inform the transit industry of the opportunities, benefits and challenges of accepting contactless open bank cards for fare payment and to inform the bank card industry of unique requirements for transit fare collection.

Smart Card Alliance Transportation Council members involved in the development of this white paper included: Accenture; ACS, a Xerox company; American Express; Booz Allen Hamilton; Bell ID; CH2M; Chicago Transit Authority; Collis; Connexem Consulting; Cubic Transportation Systems; Dallas Area Rapid Transit (DART); Discover Financial Services; epay North America; Gemalto; Giesecke & Devrient; HID Global; Identive Group; IDmachines; Infineon Technologies; INSIDE Secure; JC Simonetti & Associates; JPMorgan Chase; Keville Enterprises; LF Consulting; LTK Engineering Services; MasterCard Worldwide; MTA NYC Transit; NJ TRANSIT; NXP Semiconductors; Oberthur Technologies; OTI America; Parkeon; Payment Strategy, LLC; Quadagno & Associates; Scheidt & Bachmann; Southeastern Pennsylvania Transportation Authority (SEPTA); Thales; U.S. Department of Transportation (DOT)/Volpe Center; Utah Transit Authority (UTA); VeriFone; Visa Inc.; Washington Metropolitan Area Transit Authority (WMATA)

A Guide to Prepaid Cards for Transit Agencies

For the past several years, transit agencies have been moving away from cash-based fare collection systems to contactless smart card-based systems. In most cases, the cards issued have been closed loop payment cards; that is, cards that can only be used to pay transit fares. Recently, in an effort to both reduce the costs associated with administering these systems and make the systems more convenient for customers, transit agencies are considering accepting contactless bank cards at points of entry, eliminating the need for customers to buy a transit-specific card.

As banks continue the process of converting credit and debit cards to include contactless features, a large number of transit riders will be able to use these new cards on transit systems. However, transit agencies have a long-standing mandate to serve all constituencies in their service areas. Any movement to adopt financial industry products, such as bank cards, would therefore require that all riders be able to obtain such a card conveniently. Because some segments of a transit agency's ridership may not qualify for a credit or debit card or may be uninterested in establishing a relationship with a bank, transit agencies should consider promoting the use of prepaid cards that can operate like a bank card but be available to anyone.

Non-reloadable "instant" prepaid cards provide this service. Because there is no requirement for consumers to apply for these cards, they cannot be declined. Non-reloadable "instant" prepaid cards can be limited to use at a single merchant, but they can also carry payment network branding enabling customers to use them at a wide variety of merchants. Another option is to use reloadable prepaid cards that are issued by financial institutions and carry a payment network brand. Such cards are easier to obtain than a credit or debit card, since there are no credit approval requirements. The customer only needs to provide simple identification information to meet regulatory requirements. These cards can be reloaded as often as the customer likes and are frequently associated with payroll deposit programs.

By working with the prepaid industry, transit agencies can provide bank card products to supplement payment media, allow all riders to enjoy bank card privileges, and reduce the agency's costs associated with the distribution and maintenance of closed loop transit cards, albeit by transferring some of these costs to the riders purchasing the prepaid cards. This approach has already proved to be feasible for serving riders that carry traditional credit and debit payment cards. Adding prepaid cards to the system would allow all riders to participate.

One significant difference between network-branded prepaid cards and traditional bank cards is that they typically involve a third party, commonly referred to as a program manager. The program manager is responsible for marketing and distributing cards and supporting the program. Discussions in the industry have focused on cooperative relationships between transit agencies program managers that focus on retail-based prepaid cards.

Transit payment represents an important opportunity for prepaid card providers as an effective means for growing a stable customer base. Because transit agencies can benefit from cost savings, there is a reasonable basis for cooperation. Furthermore, retail-based prepaid cards are very similar to the closed loop smart cards that agencies provide today.

There are even more types of prepaid cards than the retail-based products mentioned above. An agency should consider each product type, since each type can provide convenient access to a unique segment of the market. Understanding the similarities and differences can help an agency develop a strategy for open payment card distribution that ensures that every rider has or can easily get a fare payment card at no cost to the agency.

About the White Paper

The white paper, A Guide to Prepaid Cards for Transit Agencies, was developed for transit agencies to provide an overview of the prepaid card industry and the products available, including network-branded prepaid cards. The paper provides guidance on what transit agencies should look for when evaluating the feasibility and benefits of using prepaid cards as one element of an open loop fare collection system.

Smart Card Alliance Transportation Council members involved in the development of this white paper included: ACS, a Xerox company; American Express; Booz Allen Hamilton; Chicago Transit Authority; Connexem Consulting, LLC; Cubic Transportation Systems; Discover Financial Services; epay North America; First Data Corporation; Fiserv; Giesecke & Devrient; JC Simonetti & Associates; JPMorgan Chase; LF Consulting; LTK Engineering Services; MasterCard Worldwide; MTA New York City Transit; Payment Strategy, LLC; Ready Credit Corporation; Scheidt & Bachmann; SEPTA; Thales; Utah Transit Authority; VeriFone; Visa Inc.

latin america chapter

Smart Card Alliance
Latin America & The Caribbean

SCALA Overview

The main mission of the Smart Card Alliance Latin America (SCALA) chapter is in line with the overall goal of the Alliance: to stimulate the understanding, adoption, use and widespread application of smart cards.

Bilingual education programs, market research, advocacy, industry relations and open forums keep Latin American chapter organization members connected to industry leaders and innovative thought. SCALA brings together smart card suppliers, partners and customers to address the challenges facing smart card deployment in the region.

The Latin American smart card market is growing, due to many market factors including the migration of mobile telecommunications operators to GSM, the financial sector migration to EMV, the move to smart transit fare cards and new government and commercial secure identification initiatives.

SCALA Members

ASSENDA S.A.S.
Autoridad Nacional Para La Innovacion Gubernamental (AIG)
Banco Amazonas S.A.
Banco Bolivariano
Banco Comercial De Manabi S.A.
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Banco Del Pacifico
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Making the extraordinary look ordinary

One of the reasons we stay linked to the smart card industry through the Alliance is to work to accomplish one of the hardest tasks in the world – "to make the extraordinary from the ordinary, and then make the extraordinary look ordinary." This is an extraordinary industry that makes technological accomplishments seem ordinary to the masses. The Alliance provides a united voice to all member organizations, and education for all. SCALA adds value through the participation of member organizations involved in the value chain, who contribute their knowledge to improve our industry by increasing market awareness and reducing the risk of smart card implementation through education.

It's been quite a busy year. SCALA was highly active in identity projects, explaining security features, describing applications that benefit customers, working with governments to provide service access to marginalized citizens, and integrating all sectors to improve society. We were also at several industry events that have shown how smart card technology has gathered strength in the different vertical markets.

In 2011, the migration of EMV smart cards in Latin America & Caribbean markets passed 50 percent, meaning that there are more EMV smart cards issued than non-chip cards. Our industry has been directly involved in the greatest modernization of financial payments in recent history. This extraordinary result has only been trumped in impressiveness by the ordinary appearance of multi-application financial payment cards that are also used for transit, loyalty, ID, and security in Latin America and the Caribbean.

The implementation of EMV in Latin America is at the heart of re-establishing the financial sector's credibility and customer/citizen confidence in the market, by reducing fraud through implementing smart cards in Latin America and the Caribbean – something that just a few years ago was considered highly unlikely. Institutions are now offering other applications on the same cards – such as offline processing, loyalty programs, and transit payments – expanding their benefits for customers.

In addition, many transportation systems now use contactless smart cards for transit payments, providing extraordinary improvements in the payment process speed, efficiency, and flow of individuals in the public transit systems..

Far from the brick-like, clunky and unwieldy portable phones of a decade ago, most Latin American and Caribbean countries now have more registered mobile phone accounts than citizens. The introduction of SIM cards significantly reduced the cost of mobile devices, network connections, international interoperability (GSM), and mobile communications access. Our industry has helped to democratize communication, allowing mobile operators to turn a mobile device into something that is ordinary. Moreover, if anyone goes to a mobile operator or technology store to buy a mobile device, it is almost impossible to find a non-GSM (SIM card) mobile phone.

Furthermore, our industry is also behind another extraordinary revolution – mobile payments. Interoperability, the authentication process, and service access will be done through the mobile phone's smart card.

I am eager to be part of the extraordinary changes in 2012, in what will no doubt seem like an ordinary year.

Edgar Betts
Associate Director
Smart Card Alliance Latin America

A Message from Fernando Mendez, Smart Card Alliance Latin America Chair

Reflecting on our accomplishments in 2011, we can say that it has been a very rewarding year for SCALA, a year where we have kept our main programs in line with our objective of developing and multiplying a thorough understanding of the uses and applications of smart cards in Latin America and the Caribbean.

Through bilingual educational programs, extensive market research, advocacy, industry relations and open forums, SCALA kept its members up-to-date with the most innovative ideas and trends from around the world. As a result, smart cards are steadily earning acceptance in the region, helping to shape its ever-changing economy and extending its benefits to more people.

During 2011, we have also expanded our boundaries, growing significantly the migration to EMV through collaboration between the financial sector, mobile telecommunications operators, and governments in programs that take smart cards to mass transit, personal identification, and several other initiatives that reaffirm our commitment to bringing together vendors, partners and customers in order to address the challenges facing smart card deployment in the region.

In order to introduce these initiatives in the region, SCALA has organized workshops and been a key participant in industry events, providing vital information regarding new uses for smart cards, as well as financial administration with new and efficient innovations, which culminated in wins such as the creation of a sub-committee in Panama.

Now that 2011 is almost behind us, we are compelled to look forward. As our region grows, so does the need to provide tools to maintain the momentum and fuel progress. At SCALA, we will continue to create and implement new initiatives in order to make that a reality, by providing innovative ideas and useful information to face the world's economic challenges and generating opportunities and growth that will benefit the industry and our communities. We are looking forward to another great year.

Fernando Mendez
Head of Emerging Products
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SCALA Committees

Financial Payments Council

The Financial Payments Council promotes the understanding of the benefits of using smart cards in the financial sector.

This council played a key role in the development of the "Card Payments Roadmap in Latin America: How Does EMV Impact the Payments Infrastructure?" white paper. This technical document provides important information for the Latin America and the Caribbean region for adapting and implementing EMV technology, and was an important deliverable in SCALA's overall efforts to provide educational material on EMV migration considerations.

Topics included in this roadmap are:

- The impact of global and regional EMV deployments on possible roadmap options for Latin America and the Caribbean.
- A primer on EMV security specifications for card authentication methods, cardholder verification methods and transaction authorization approaches and implementation options for each.
- The relationship between EMV, contactless payments and Near Field Communication (NFC).
- An overview of changes required in the issuing, acquiring/processing, merchant and ATM payments infrastructure to support the different EMV roadmap options.

Government Information Exchange Committee

The Government Information Exchange Committee focuses on the exchange of information among different government institutions in the region on the use of smart cards to help to improve government services.

Through this committee, SCALA provides a program that helps and guides governments and related institutions on the application of smart card technology in projects such as identity credentials. The program is designed so that leading companies in the industry share their experiences with the countries' authorities in order to find solutions to the problems faced.

This program can provide support for different projects such as:

- Personal e-Identification
- E-Passports
- E-Visas
- E-Driver's Licenses
- Transportation Systems
- Social Security Systems
- Access Control

SCALA Events

Government Information Exchange
San Jose, Costa Rica
June 29, 2011

The Government Information Exchange – Costa Rica program aimed to help government institutions adopt and implement smart card or similar technologies for applications such as ID security, passports, access control, and computer infrastructure services.

During this event, experts shared their knowledge on different topics, such as: secure IDs and passports, e-government, driver's licenses, transportation, health and social security, as well as mobile phones and payment methods.

Smart Card Fundamentals Seminar
Panamá City, Panamá
October 25-26, 2011

The Smart Card Fundamentals Seminar – Panama City, Panama, was held to expand the educational content of smart card technical knowledge in Latin America, related to the Certified Smart Card Industry Professional (CSCIP) certification. CSCIP is a recognized certification by the smart card industry that helps to identify industry experts from other professionals. SCALA, as the region's industry association, and Comité de Tarjetas Inteligentes de Panamá (COTIPA) conducted a two-day course on smart card fundamentals for the public and private sectors in preparation for the Smart Card Alliance CSCIP certification.

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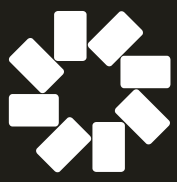

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