



Smart Card  
Alliance

# 2013 ANNUAL e-YEARBOOK

A Vision for the Future  
Reflections on the Past





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# 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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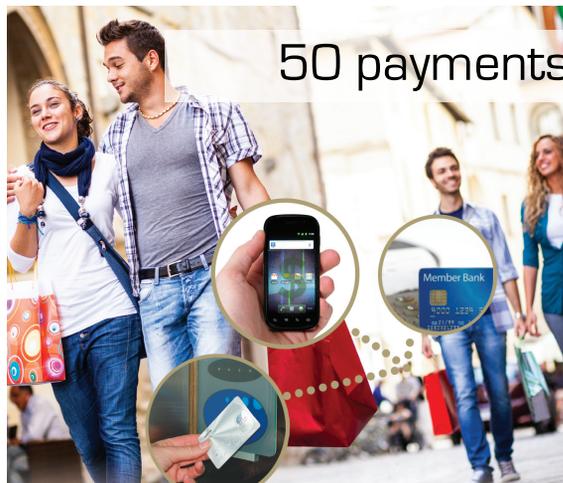
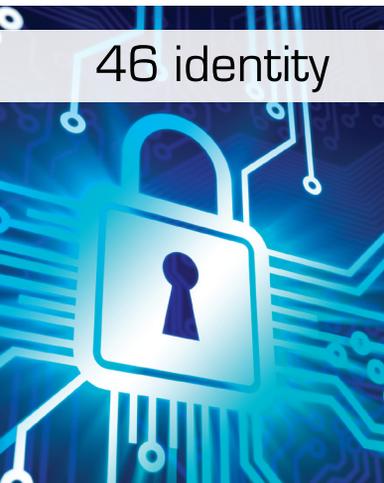
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# A Vision for the Future with Reflections on the Past

## *Fulfilling the Mission through Councils, Conferences and Training*



The founding members of the Smart Card Alliance in 2001 had a vision about forming a community of industry leaders from two sides of the smart card value chain – those who benefit from chip technology in their businesses and those who supply the technology, systems, and services that meet the business requirements.

For twelve years, my objective has been to fulfill that vision and accelerate the widespread application of smart card technology through many different activities. I have witnessed smart card adopters and suppliers collaborating on standards and best practices and sharing experiences and resources to make a fragmented ecosystem become whole and functional, while always applying chip technology advances to meet changes in the business requirements.

The **2013 Smart Card Alliance Yearbook** is our effort to capture the essence of a year's worth of Smart Card Alliance activity to accelerate growth and anticipate changes for the smart card industry. Within the Smart Card Alliance organization, our members have addressed the market requirements and technical applications for smart cards in specific industry verticals by forming six industry councils. Collectively, these councils produced 50 work products including white papers, FAQs, webinars, workshops, and comments to standards bodies. The councils are the fabric that connects everyone together in a common goal to educate and inform the market to accelerate smart card adoption.

Conferences are another way we educate the market and keep members informed. The 2013 calendar year began with the Payments Summit in Salt Lake City. This popular event drew more than 600 banking, transportation, and mobile payments professionals to focus on chip-enabled payments and how merchants, transit agencies and online retailers are preparing for the new consumer payments options ahead. Isis' mobile wallet was on full display in Salt Lake City and Isis provided free mobile UICC upgrades to anyone with NFC-ready phones to ride the UTA light rail system throughout the city. And the Payments Summit was enhanced by a skiing social at nearby Solitude Ski Resort.

In May, we held the NFC Solutions Summit near San Francisco. Enabling NFC mobile solutions involves a complicated ecosystem that has hindered NFC's path towards large scale market adoption in the United States. In 2013 we started to see increasing volumes

of NFC mobile smart phones which sparked renewed interest in NFC payments, device security, and other NFC applications. The Summit included sessions about emerging non-payments applications – such as mobile credentials and data exchange between NFC smart tags and phones – that may unlock the enormous potential of NFC. Partnering with the NFC Forum allowed the Summit to remain connected to the global standards and NFC usage models outside of the U.S.

In October, the Government Conference on identity, security, and healthcare returned to Washington, DC. This year the event expanded to include consumer identity and cloud security through the User-Centric ID Live Conference program. The enhanced agenda addressed the government's NSTIC initiative and the need for digital identity credentials that consumers can acquire and control in cyberspace.

Unfortunately, no one expected that the federal government would shut down for 16 days and keep many of our best government thought leaders at home. With an adjusted agenda and great contributions from our informed industry leaders, attendance remained strong and attendees came away better informed about the increasing role of mobile in government identity and access security, and the pressing need for more security in healthcare markets.

A new event, the 2013 Smart Card Alliance Member Meeting in December in Miami, is in the planning stages as I write this. This is a unique opportunity for members to participate in individual and cross-council educational and working sessions to exchange information and find solutions to common challenges and opportunities. Collectively these conferences keep members connected while attracting new organizations and educating a new generation of potential adopters of smart cards and services.

The third major component to satisfy our mission is through professional development and training. The Leadership, Education and Advancement Program (LEAP) and CSCIP certification training began five years ago. LEAP and CSCIP have 335 active members and 195 individuals with general, government, or financial CSCIP certifications.

It is a privilege to lead this collection of 220 committed organizations along the mission set by the founding members of the Smart Card Alliance in 2001. I often say to colleagues that it is a great time to be in the smart card industry. I hope that this edition of the **2013 Smart Card Alliance Yearbook** provides you with valuable insight into all that our community of industry leaders has accomplished this year and that it gives you some perspective into what lies ahead for you, your organization, and the smart card industry.

**Randy Vanderhoof**  
Executive Director  
Smart Card Alliance

## A Message from Willy Dommen, Smart Card Alliance Chair, 2011-2014



As my first two-year term as the Chairman of the Board comes to a close, I reflect upon the accomplishments of the organization, the changes that have occurred in our market place, and the future of this organization of “over achievers.” First, I would like to establish a frame of reference for all those members who have not been with our organization through the process of re-building the membership over the last 10 years. Under the leadership of our Executive Director Randy Vanderhoof, supported by Cathy Medich, the Smart Card Alliance has grown into a “mature” organization with a solid foundation of a highly motivated and participative membership.

As an organization, we have “grown-up.” And, whether we like it or not, we now need to act like adults. So what does acting like an adult mean from an organizational perspective? First, for the last 10 years, the Alliance has been focused on building the membership and creating a business model that will allow the organization to sustain the business from year-to-year to serve members, similar to a start-up. Over this time period, we experienced continuous double-digit growth both in terms of membership and revenue. Randy also needed additional staff and was supported by hardworking entrepreneurial individuals. However, no matter what business you’re in, growth will slow and eventually go flat.

In anticipation of a possible slowdown in growth of the organization due to market conditions and industry need, the Board directed Randy to initiate several actions for driving future Alliance activities to maintain the value of the organization for our membership. The first obligation was to set the Smart Card Alliance, including the EMV Migration Forum, on a solid financial footing, able to sustain operations and serve the membership even through a challenging economy. This was accomplished, and member investment in the Alliance remains preserved into the future.

Second, we hired a top-tier management consulting firm to develop a three to five year business plan. The consultant organized the work accomplished during the board retreats from the last few years, validated the findings, and added their insight to the business plan. This business plan will now drive activities and investments over the next three years. The Board will review the business plan scenarios annually to verify validity and if required, adjustments will be made.

During my term as Chairman, I am proud that we have taken this carefully measured and thoughtful approach to the Smart Card Alliance, and its affiliated chapters, to protect the viability of the organization for many years to come.

In closing, I want to thank Randy and his dedicated team for all their hard work over the last year. Also, I appreciate all of the individuals who provided valuable input to the business plan – board members, council members, and key people and company executives who have contributed and sustained our organization over the years. We now have a path forward into the future.

**Willy Dommen**  
Senior Manager  
Accenture

## Member List

3M Cogent, Inc  
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Accenture  
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ACT Canada  
Advanced Card Systems, Ltd.  
AMAG Technology, Inc.  
Ambiq Micro Inc.  
American Express  
American Express – SCALA  
AMF Medios Transaccionales S.A. – SCALA  
Apriva  
Arjowiggins Security – SCALA  
Arvest Bank Operations, Inc.  
Athena Smartcard Solutions Inc.  
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Banco de Ahorro y Credito Inmobiliario S.A. – SCALA  
Banco Santa Cruz – SCALA  
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Banred S.A. – SCALA  
Banrisul S.A. – SCALA  
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Benefit Resource, Inc  
BetterBuyDesign  
Blackboard Inc.  
Booz Allen Hamilton  
C-SAM Inc  
Capgemini USA Inc  
Capital One  
CardLogix  
CertiPath LLC  
CH2M HILL  
CHARGE Anywhere LLC – SCALA  
Chase Card Services  
Chicago Transit Authority  
City of Calgary, Calgary Transit  
Clear2Pay  
Codebench, Inc.  
Computer Science Corp (CSC)  
Consult Hyperion  
Core Quality Service, S.A. – SCALA  
CorFire  
CPI Card Group  
Cryptography Research, Inc.  
Cryptomathic Inc  
Cubic Transportation Systems, Inc.  
Cubic Transportation Systems – SCALA  
Czech Technical University in Prague  
Dallas Area Rapid Transit (DART)  
Datacard Group  
Datacard Group – SCALA  
Datawatch Systems, Inc  
Defense Manpower Data Center  
Deloitte & Touche LLP  
Department of Homeland Security  
DeviceFidelity, Inc  
Diebold Security  
Direccion General Del Registro Civil – SCALA  
Discover Financial Services  
Double Diamond Group  
DVN Technology Ltd.  
Edmonton Transit System  
EFT Source, Inc.  
Eid Passport Inc  
Enable S.A. – SCALA  
ENTRUST  
Equinox Payments  
Evertec Latino America S.A. – SCALA  
Exponent, Inc.  
FEITIAN Technologies Co., Ltd  
FIME  
First Data Corp.  
First Data – SCALA  
FIS  
Fiserv  
Fundacton Instituto De Ingenieria – SCALA  
Galitt US  
GEMALTO  
Gemalto – SCALA  
General Services Administration  
Genfare, a Division of SPX Corporation  
Georgetown University - UIS - Facilities & Safety Control Systems  
Giesecke & Devrient  
Giesecke y Devrient de Mexico – SCALA  
Global Enterprise Technologies Corp  
Global Enterprise Technologies Corp (GET Group) – SCALA  
Heartland Payment Systems  
Hewlett-Packard Enterprise Services, LLC  
HID Global  
HID Global – SCALA  
Hillsborough Transit Authority  
iAll-Tech  
ICards Solutions Latinoamerica S.A De C.V. – SCALA  
ICMA  
Identification Technology Partners, Inc.  
Identive Group  
IDmachines LLC  
ImageWare Systems, Inc.  
InComm  
Infineon Technologies  
Ingenico, North America  
Ingersoll Rand Security Technologies  
Init Innovations in Transportation  
INSIDE Secure  
Instituto Federal De Acceso a La Informacion Y Proteccion De Datos – SCALA  
Instituto Nacional De Tecnologia Da Informacao - ITI – SCALA  
Intel  
IntelCav – SCALA  
Intelligent Parking Concepts LLC  
Inter American Development Bank – SCALA  
Interac Association/Acsys Corporation  
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Invoke Technologies  
IQ Devices  
Isis  
IT Security Services – SCALA  
Jack Henry Processing Solutions  
JC Simonetti & Associates, Inc.  
JCB International Credit Card Co., Ltd  
KONA A, Inc., a KONA I co. Ltd. company  
Latin American Security Association – SCALA  
Lenel Systems International  
LGAI Technological Center S.A. (Applus+)  
LifeMed ID Inc.  
Linxens  
LTK Engineering Services  
Magnetic Ticket & Label Corp  
MARTA  
Massachusetts Bay Transportation Authority  
MasterCard Worldwide  
MasterCard Worldwide – SCALA  
Metropolitan Transportation Commission  
MorphoTrust USA  
MTA New York City Transit  
Multos International PTE LTD  
NACHA - The Electronic Payments Association  
Nagra ID Security  
Nagra ID – SCALA  
NASA  
National Institute of Standards and Technology  
Natural Security  
NXP Semiconductors  
NXP Semiconductors – SCALA  
Oahu Transit Services, Inc  
Oberthur Technologies  
Oberthur Technologies – SCALA  
Oficina Nacional De Tecnologias De Informacion (ONTI) – SCALA  
OTI America  
Panama Canal Authority – SCALA  
Paragon Application Systems  
Port Authority of NY/NJ  
Port Authority Transit Corporation  
PPG Industries, Inc.  
Primax  
Prime Factors, Inc.  
Probaris, Inc  
Q-Card Company  
Quadagno & Associates, Inc  
Quantum Secure Inc  
Raak Technologies  
Ready Credit Corporation  
Redeban Multicolor S.A. – SCALA  
Regional Transportation Authority  
Regions Bank  
Registro Publico de Panama – SCALA  
Roehr Consulting  
SafeNet, Inc  
Safran Morpho – SCALA  
SAIC - Science Applications International Corp.  
San Francisco Bay Area Rapid Transit District (BART)  
Scheidt & Bachmann USA  
Scotiabank – SCALA  
Secure Missions Solutions, Inc.

SecureKey Technologies  
 Sertracen – SCALA  
 SETIS Automacao e Sistemas Ltda – SCALA  
 SHAZAM  
 Smartrac N.V.  
 Smartrac Technology Group – SCALA  
 Société De Transport De Montréal  
 Southeastern Pennsylvania Transportation  
 Authority (SEPTA)  
 Stanley Black & Decker  
 STMicroelectronics  
 STMicroelectronics Ltda. – SCALA  
 SunTrust  
 Sunward Telecom Limited  
 Superintendencia De Bancos De Panama –  
 SCALA  
 Tecnica Comercial Vilsa, S.A. DE C.V. – SCALA  
 Telered, S.A. – SCALA

Thales  
 The State Government of Chihuahua Mexico –  
 SCALA  
 The Utah Transit Authority  
 Tiempo  
 Transit Chek  
 TSYS  
 Tyco Software House  
 Tyfone  
 U.S. Department of State  
 Ultra Electronics Card Systems  
 Ultra Electronics Card Systems – SCALA  
 Underwriters Laboratories (UL)  
 Unitec Blue – SCALA  
 United Services Automobile Association  
 U.S. Department of Transportation/Volpe  
 Center  
 U.S. Government Printing Office

Valid USA  
 Vantiv  
 Veracity Payment Solutions  
 VeriFone  
 VeriFone Inc – SCALA  
 Visa  
 Visa – SCALA  
 Vix Technology  
 Washington Metropolitan Area Transit  
 Authority (WMATA)  
 Watchdata Technologies Pte Ltd  
 Watchdata Technologies – SCALA  
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## Leadership Council

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# alliance management



Left to right: Randy Vanderhoof, Debra Marshall, Cathy Medich, Bill Rutledge, Kacie Nolan, Edgar Betts, Jaclyn Sauvé. Not pictured: Nicole Lauzon.

## Randy Vanderhoof

Executive Director

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Randy Vanderhoof is the Executive Director of the Smart Card Alliance. The Smart Card Alliance is a not-for-profit, multi-industry association of over 200 member firms working to accelerate the widespread acceptance of smart card technology in North America and Latin America. In addition to his leadership role with the Smart Card Alliance, in August 2012 he became the Director of the EMV Migration Forum, an independent, cross-industry organization established to support the alignment of global payment networks, regional payment networks, issuers, processors, merchants, and consumers to successfully move from magnetic stripe technology to secure EMV contact and contactless technology in the United States.

Prior to joining the Smart Card Alliance, he was with IBM Global Smart Card Solutions. From 2000 to 2001, he was Vice President Business Development with First Access, Inc. a developer of contactless smart card technology for network access

security and authentication. From 1995 to 2000, he worked at Schlumberger (now Gemalto) as Market Segment Manager, Campus Solutions supporting the development and marketing of smart card-based identification and payment systems.

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.

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## Cathy Medich

Director, Strategic Programs

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Cathy Medich is Director of Strategic Programs for the Smart Card Alliance. In this role, she manages strategic marketing and industry initiatives and directs all industry council activities, including the definition of new projects, the management of project teams, and the development of messaging and marketing programs to promote council positions in the industry. Cathy also manages programs and working committee activities for the newly-formed EMV Migration Forum.

As an independent consultant with over 20 years of experience in marketing and strategic planning for technology businesses, Cathy has completed projects for Hewlett-Packard, Diversinet, NACHA, Zantaz, Securify, ePatterns, RadarGolf, ViVotech and VeriSign. Prior to launching her consulting practice, Cathy was Vice President of Product Marketing for PaymentNet (now part of PayPal), an Internet payment services startup. From 1996 to 1998, she served as Director of Marketing for VeriFone.

Cathy has B.S. and M.S. degrees in Electrical Engineering and Computer Science from M.I.T. and an M.B.A. from the Wharton Graduate School.

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## Debra Marshall

Manager, Communications

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Debra Marshall is Manager of Communications for the Smart Card Alliance, where she oversees communications and operations, which includes creating, developing and maintaining Alliance printed materials, newsletters, brochures, annual publications, website content, membership kits,

and marketing and design collateral. She is also responsible for communications for the EMV Migration Forum.

Debbie spent the bulk of her career working in Communications at Comcast. She began her career working for a newspaper, where she won a national writing award for best feature article at the age of 23. Prior to joining the Smart Card Alliance, Debbie served as consultant for Pershing/Bank of New York Mellon, Siemens, and the Public Relations Society of America.

Debbie is the recipient of more than a dozen national, regional and industry awards for feature and news writing, special events marketing, website content, and new logo launches. She is a cum laude graduate of Seton Hall University, where she received her undergraduate degree in Communications.

---

### Jaclyn Sauv 

Manager, Conference Services  
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Jaclyn Sauv  is currently the Manager of Conference Services for the Smart Card Alliance and EMV Migration Forum, leading the logistic support team responsible for all conference operations. In addition, Jaci supports each conference program committee as a speaker liaison and the Sales and Marketing staff by managing all Exhibitor and Sponsor communications.

Before joining the Smart Card Alliance in 2011, Jaci worked for 14 years in a diverse range of positions, including Partner & Event Marketing Specialist at Westbrook Technologies, Director of Field Sales Administration & Division Event Planner at Scholastic Inc.

Jaci holds a degree in Communications / Media with a concentration in video production from Western Connecticut State University.

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### Edgar Betts

Associate Director, SCALA  
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Edgar Betts came to the Alliance in March 2005 to help develop and complete the Market Development Cooperator Program (MDCP) grant for Latin America issued by the International Trade Administration to the Alliance.

Prior to joining the Smart Card Alliance, Edgar was the Executive Director and Co-Founder of the Smart Card Division for Integra Group Corporation, responsible for the promotion, distribution, and implementation of smart card and RFID solutions for the Central American and Caribbean markets.

In 2007, the Junior Chamber International (JCI) of Panama recognized Edgar with "The Outstanding Young Persons of the World" (TOYP) award under the category of Science & Technology Development. In 2010, "Capital Financiero" also recognized him in their list of the 40 most influential people under 40.

---

### Bill Rutledge

Consultant, Events and Conferences  
[bill@cnxtd.com](mailto:bill@cnxtd.com)

Bill Rutledge is the founder and managing director of Cnxted (pronounced "connected") Event Media Services, and a partner at RiverSide InfoMedia. Bill has handled logistics, database management, and sales and marketing for the Smart Card Alliance events and conferences for several years. He has more than 20 years of experience in the launch and development of over 130 different conferences, trade shows, custom events, and webcasts.

---

### Kacie Nolan

Events Intern

Kacie Nolan is a 2012 graduate of Virginia Tech, where she received bachelor's degree

in Communications with a focus in event coordination. She worked as an intern for nationally known PR firm Fleishman Hillard in their consumer marketing department.

---

### Nicole Lauzon

Membership  
[nlauzon@smartcardalliance.org](mailto:nlauzon@smartcardalliance.org)

Nicole Lauzon is responsible for membership management and database support for both the Smart Card Alliance and EMV Migration Forum. A 2005 graduate of Douglass College at Rutgers University, she joined the Alliance in 2009.

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## Board of Directors

### 2012- 2013 Executive Board

**Chair:** Willy Dommen, Accenture

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**Treasurer:** Paul Legacki, Infineon Technologies

**Assistant Treasurer:** Brian Russell, Giesecke & Devrient

**Secretary:** Greg Garback, Washington Metropolitan Area Transit Authority

**Assistant Secretary:** Debbie Bartoo, Bank of America

**Technology Vice Chair:** Neville Pattinson, Gemalto

### 2012-2013 Directors

Troy Bernard, Discover

Greg Boardman, Ingenico

Kirk Brafford, Deloitte

Bob Gilson, U.S. Department of Defense/  
Defense Manpower Data Center

Simon Hurry, Visa, Inc.

Oliver Manahan, MasterCard Worldwide  
Michael Nash, Xerox

Scott Rau, Chase Card Services

Kelly Urban, First Data Corporation

### 2013-2014 New Directors

Frazier Evans, Booz Allen Hamilton

Brian Stein, CH2M HILL

## Membership Value Statement

Your membership dollars support the council initiatives, networking meetings and industry events, web site development, marketing programs, newsletter, Educational Institute workshops, 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 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.



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“In regards to the events, these have been the best conferences of all the conferences that I have attended. The focus of the event and the presentation and networking opportunities as well as the specific information being made available during the conferences make this a valuable contribution to the industry.”

— **Dana Blegen, CSCIP/P, Master Engineer**  
**Paragon Application Systems**

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## 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 smart card technology form factors 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 industry interoperability
- ✓ Outreach to government and commercial organizations
- ✓ Innovative ways of approaching common business goals
- ✓ Professional development



## 2013 MEMBER SURVEY

### Report on Member Satisfaction and Value of Alliance Activities

Members continue to value Smart Card Alliance activities in 2013 with a strong increase in satisfaction ratings for many Alliance activities and programs. We had 145 members from 78 member organizations (53.8% of all member organizations) respond to our July 2013 survey.

#### Member Satisfaction

To gauge overall satisfaction, we asked 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, declining slightly from 2012's 86.0 rating; however, satisfaction remained good across all member categories. Satisfaction is highest with active members (those who are involved in councils, 55.1% of respondents). Active members had a satisfaction rating of 88.4 vs. an 82.2 rating from non-active members. In addition, Smart Card Alliance members who are members of the EMV Migration Forum also have higher satisfaction – 86.8 rating vs. 84.1.

In addition to the composite satisfaction rating, the survey asked members to rate satisfaction with a variety of Alliance activities and programs. A scale of one to five was used, with five the highest satisfaction. Our overall rating for all activities was 4.03, up from 3.75 last year; activities with ratings over 4 included:

- White papers and reports
- 2013 Payments Summit
- Industry Council participation
- 2012 Government Conference
- Certified Smart Card Industry Professional (CSCIP) program
- Smart Card Alliance public and members-only web sites
- EMV Connection web site
- Council webinars

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“The long standing dedication to the Smart Card Alliance Councils by many of the brightest and most influential members of the industry provides a stable and dynamic forum for open discussion and information exchange. The Access Control Council helps me stay ahead of rapidly evolving technology and changing directives that impact the market and affect my business.”

— **Steve Rogers, President**  
**IQ Devices**

“The Smart Card Alliance provides a unique and extremely valuable platform for information sharing and education on the acceptance, use, and applications of smart card technology. We have been deeply involved and tightly linked to the broad market insights, hot topics of the industry-leading innovation and best practices for implementation.”

— **Tibi Zhang, Director of International Business**  
**Feitian Technologies Co., Ltd.**

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## Value of Alliance Activities

Communications, conferences, councils and council deliverables are highly valued by members. Activities rated as highest value in the 2013 survey were:

- Email announcements about Alliance events and council projects
- Smart Card Alliance websites – public (industry news) and member sites (white papers, reports and resources; member contact information; past conference proceedings); EMV Connection
- Smart Card Talk monthly newsletter
- Conferences: networking opportunities; complimentary and discounted registration; speaking opportunities
- Industry council participation and deliverables

We were pleased to see our new EMV Connection web site continued to provide important value to members. Launched in July 2012, this web site has up-to-date resources on EMV for issuers, merchants, acquirers/processors and consumers. With the start-up of our new affiliated organiza-

tion, the EMV Migration Forum, the site has expanded to include resources from both the Smart Card Alliance Payments Council and the EMV Migration Forum.

## Benefits of Alliance Membership

When asked to tell us the top benefits of Alliance membership, members gave us a wide variety of responses. Networking and staying abreast of industry news, market trends and technology continue to be top benefits for members. Other top benefits mentioned in the 2013 survey were:

- Education
- Collaboration, discussion and thought leadership
- Visibility, market exposure, and brand recognition
- Contributing to and influencing industry growth and direction
- Conferences, speaking opportunities, sponsorships and exhibits
- Council participation and white papers
- LEAP/CSCIP

Benefits in the words of a few members included:

*“I’ve been somewhat immersed in EMV for the past 18 months, and I honestly don’t think we would have been successful in our certification without the resources and contacts we were able to make through both the SCA and EMV Migration Forum. Both organizations make a huge difference in the industry now that the U.S. is finally paying attention.”*

*“The Alliance continues to serve as a vital information resource to my organization, by providing a variety of functions and meetings to obtain the latest information.”*

*“Through the Transportation Council, we stay abreast of the leading technologies, approaches and issues and are able to serve our customers better as a result.”*

## Industry Council Involvement

Over 60% of survey respondents participate in one or more industry councils, with our Payments, Mobile and NFC, and Transportation Council members strongly represented in this year’s survey. Overall

# membership

satisfaction for Council activities increased significantly with all activities rating “very satisfied.”

## Member Engagement

As in past years, a large number of respondents are not active in Alliance activities or familiar with many of our programs. Through the Smart Card Talk monthly newsletter, member bulletins, email announcements, and participation in our events, members can learn about activities and decide how to get involved.

Industry council participation is an excellent way for members to get directly involved in shaping industry messages and influencing industry direction – cited as one of the key benefits that the Alliance delivers for members.

## Important Industry Issues

EMV, mobile, NFC and payments continue to be at the top of the list for the most important industry issues and topics that the Alliance should be working on. Other industry issues noted as most important by members in the survey include:

- Payments security / fraud / innovation
- Healthcare
- Cloud / card-not-present fraud / Internet authentication

Members are encouraged to participate in the councils to tackle industry challenges and help to move the industry forward in critical markets.

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“The CSCIP programs are GREAT!!!”

— **Tony McGee, Manager, Customer CARE**  
**CPI Card Group**

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WORLD LEADER IN THE FIELD OF SECURE TECHNOLOGIES

## #1 EMV provider in the U.S. and expert in Mobile Financial Services end-to-end solutions.

### EMV

Increase security with smart card technologies.



### NFC Now

Issue the ‘top-of-the-wallet’ payment solution.



### Wallet Management

Aggregate, promote and deploy services in a branded wallet.



### Mobile Money

Deliver a full mobile financial services experience.



# member profiles

Each month, we featured a Member Profile in our monthly Smart Card Talk industry newsletter to inform members about the business profiles of their professional colleagues. You can access all the interviews by visiting the Smart Card Alliance website.



## IDmachines

January 2013

IDmachines



Salvatore D'Agostino

IDmachines LLC is a Boston-based consulting practice focused around identity (people and things), credentialing, access control, security and automation. The firm continues an arc of work over the last 30 years that has moved from technology assessment to machine intelligence to its application in industrial automation to a focus on machine vision (video analytics) for security and manufacturing quality control to distributed credential validation and authorization to IDmachines today. Besides

their subject matter expertise and related consulting services, IDmachines has developed an open-source-based toolset to help end-users, system integrators and original device manufactures create, deliver and maintain solutions that incorporate best practices around identity, credentialing and access management (ICAM).

Smart Card Talk spoke with Salvatore D'Agostino, CEO of IDmachines, in January 2013 about the company's profile and offerings.

"As a small and growing business, maintaining focus is our biggest challenge," said D'Agostino. "We have to stick to our particular subject matter expertise and where it can be best leveraged. This is why we have invested in developing toolsets to help deliver our services. The good news is that these tools are really useful and widely applicable; the tricky part is developing them while continuing to meet the needs of our customers and evolving them so that they may be used by others. While smart card technology it is not the only identification, credential and authentication technology we deploy, it provides a very important part of the solutions our clients are looking to provide or use."

"Ongoing education is ... an important part of leveraging opportunities."



February 2013

TSYS



Sarah Hartman

Global processor TSYS supports financial institutions, businesses and governments in more than 80 countries. By offering merchant payment-acceptance solutions as well as services in credit, debit, prepaid, mobile, chip, healthcare and more, the company makes it possible for those in the global marketplace to conduct safe and secure electronic transactions with trust and convenience.

Smart Card Talk spoke with Sarah Hartman of TSYS, Senior Director of Payment Solutions, in February 2013 about the company's technologies and innovation.

"Smart card technology has been a key part of TSYS' payment offerings for more than a decade – primarily from an EMV standpoint," said Hartman. "TSYS started issuing chip cards in the early 2000s, initially supporting the European region, moving on to the Canadian region, and now focusing efforts on the U.S. EMV migration. We currently support issuers who utilize smart card technology in more than ten countries. While most of the current applications are EMV payment related and are being used to lower risk and fraud losses – we're excited about the opportunity to support our clients' future uses of smart card technology, including loyalty programs and programs which use the smart card technology to securely store and access information and locations."

One of the key challenges with new technologies and innovation," said Harman, "is how best to prioritize efforts between "business as usual" activities, which are critically important, and future offerings. Our creation of a global product team and innovation group, combined with strengthening the process we use to prioritize projects, has helped us meet this challenge."

# member profiles



**March 2013**  
**Visa, Inc.**



**Simon Hurry**

Visa is a global payments technology company that connects consumers, businesses, financial institutions and governments in more than 200 countries and territories to fast, secure and reliable electronic payments. They operate one of the world's most advanced processing networks – VisaNet – that is capable of handling more than 24,000 transaction messages a second, with fraud protection for consumers and assured payment for merchants.

Smart Card Talk spoke with Simon Hurry of Visa, Inc., Senior Business Leader, Chip Infrastructure, in March 2013 about the company's innovations and services.

"Visa is not a bank and does not issue cards, extend credit, or set rates and fees for consumers," Hurry explained. "Visa's innovations, however, enable its financial institution customers to offer consumers more choices: pay now with debit, ahead of time with prepaid, or later with credit products. A high priority for Visa, and fundamental to the success of electronic payments, is fighting fraud and protecting cardholders and merchants," he added. "Visa seeks to innovate new solutions that enhance security and reduce the value of stolen data to criminals. That's why in August 2011 Visa was the first payment network to announce a plan to accelerate chip migration in the U.S."

"We see the U.S. move to chip as an important step forward for all stakeholders in building a future-proof infrastructure that helps reduce fraud, supports emerging payment technologies and enhances international acceptance," Hurry added. "As part of Visa's roadmap to accelerate the migration to EMV and support merchant adoption of this technology, we are offering tangible benefits to merchants who update their POS infrastructure to accept contact and contactless chip payments through our Technology Innovation Program (TIP)."



**April 2013**  
**LifeMed ID, Inc.**



**David Batchelor**

LifeMed ID, Inc. is a national leader in providing healthcare systems and infrastructure to support positive patient identity at all points of registration, connectivity and shared data between multiple EMR/EHR/ADT systems to improve healthcare provider patient care, administrative efficiencies and continuity of care. They are also focused on increasing patient satisfaction and safety.

Smart Card Talk spoke with David Batchelor, CEO and founder of LifeMed ID, Inc., in April 2013 about the company's vision and implementation for expansion of smart card applications into the healthcare industry.

"The trend in the marketplace is to simplify the healthcare process, increase identity recognition and administrative efficiencies, and utilize a standardized system to manage patient identity," said Batchelor. "The complexity consumers have is the number of cards in their wallet. For almost every transaction there is a different card – a health ID card, insurance card, pharmacy card, and payment card. The trend is to consolidate all of the health-related cards securely into one single device. We envision a patient will be able to streamline their engagement with the healthcare provider using one smart card and/or their smart phone."

"There is an increased need for a higher level of privacy and security," he added. "With smart cards, the right patient care is given to the right patient and documented on the right patient record. Patient safety is improved with the virtual elimination of 'overlaid' medical records, which is the root cause of erroneous medical procedures and identity mistakes, leading to over 190,000 preventable deaths in the U.S. each year."



**May 2013**  
**XTec Incorporated**



**Kevin Kozlowski,**  
**CSCIP/G**

XTec's focus is authentication – strong, cryptographic authentication. It's essential for securing facilities and data, essential for fighting fraud. Their solutions support rapid, electronic authentication which deters fraudulent credentials. While XTec is known as a premier security provider for the federal government and commercial arenas, overseeing cabinet level smart card systems deployments, contributing to federal smart card publications and providing security and authentication

guidance to numerous federal agencies, their solutions also reach beyond the federal arena. State and local governments, the financial industry, and the health care industry look to XTec to help them achieve interoperability and combat fraud.

Smart Card Talk spoke with XTec's Vice President, Kevin Kozlowski, in May 2013 regarding the importance of educating the market.

"Education on smart cards is our primary challenge as an industry," said Kozlowski. "Within the federal government, most people understand at least the value of smart cards, even if they don't recognize its full range of capabilities. But beyond the federal government is an array of industries and local government entities that need the security that smart cards offer. They just don't know enough about it."

"I would say education efforts should focus on three key facts: First, smart card technology is privacy enhancing; it is intertwined with an existing trust infrastructure. Second, it can be user friendly as well as mobile. Implementation and use are not onerous processes. Third, when implemented as an enterprise solution, smart card technology offers a notable return on investment."

Said Kozlowski, "If more non-federal enterprises knew these facts, I think adoption of smart card technology would be even more widespread."



**July 2013**  
**Unitec Blue**



**Matias Gainza Eurnekian**

Unitec Blue is an Argentine company specializing in nanotechnology and the production and development of products and services tailored to the needs of a variety of customers. The company plans and develops different products such as smart cards (contact and contactless), SIM cards (cards with chip for cell phones), EMV cards (credit and debit payment cards), contactless and RFID tags (e.g., labels, tags for tracking, pay pass, tracking of pharmaceuticals, electronic voting). They

also develop different processes and services which include the original manufacturing of chips on silicon wafers and their packaging and subsequent inclusion in electronic equipment.

In the summer of 2013, Smart Card Talk spoke with Matias Gainza Eurnekian, an executive with Grupo Corporación America, an Argentine investment group active in the airport, airport business, cargo and energy sectors. Among the group's subsidiaries is Unitec Blue.

"Technological change is transforming the way we live, act, and relate to people," said Eurnekian. "That is why our mission is to create products that facilitate and optimize these relationships, establishing the use of the technology as part of daily life. For Unitec Blue, the global smart card market is one of our main focuses, divided into payment cards (with or without contact), SIM cards and EMV cards. The finance sector in Latin America (mainly through credit and debit cards) is heading towards mainstreaming global economic trends and new technological processes," he added. "EMV cards and the ecosystem to support them are entering the market. These developments provide flexibility in the form of payment and value-added services with increased security."

# member profiles



**October 2013**  
**First Data**



*Kelly Urban*

First Data is a payment transaction enabler that connects the consumer experience with the merchant. The company 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 Kelly Urban, director of Advanced Solutions and Innovation, Mobile, in October 2013, about the company's mobile commerce products.

"Smart card technology spans the entire breadth of First Data," said Urban. "We offer payment network-compliant POS devices supporting both contactless and EMV cards. First Data personalizes and authorizes both contactless and contact plastic cards for financial institutions. First Data also has one of the few industry level trusted service managers in the U.S. which supports the only nationally launched secure element based NFC mobile wallet."

Urban, whose particular focus is mobile payments in the U.S., spoke about the increasing number of products and services based on smart card/chip technology in the market. "It's growing at an amazing pace," he said. "We have talked about needing to reach critical mass with both devices and readers. It seems clear that chip presenters and chip acceptors are finally getting to the needed numbers. The number of NFC-enabled mobile devices continues to grow, which is a good indicator. Chip technology is evolving faster than ever...and the capabilities of those chips are getting more robust."



**November 2013**  
**Leidos (formerly part of SAIC)**



*Chris Williams*

In late September 2013, SAIC separated into two new, publicly traded companies; Leidos is a new technology solutions company focused on national security, health, and engineering markets for both public service and commercial customers, with annual revenue of approximately \$6 billion. Chris Williams, who had been with SAIC for the past 10 years, moved over to Leidos to focus on cybersecurity, identity management, smart cards, and policy compliance issues.

Smart Card talk spoke with Chris after the announcement of the new companies, to learn more Leidos, headquartered in Virginia, with a business focused on national security, health, and engineering markets for both public service and commercial customers; the company has an annual revenue of approximately \$6 billion.

"This company separation has actually turned into a huge opportunity for us," said Williams. "With the split, Leidos needed new smart card technology in order to provide the new enterprise the same capabilities that SAIC has had for many years as well as some new ones. We are deploying new enterprise smart card systems and seamlessly migrating from our legacy platforms to a modern one based on PIV-compatible (Personal Identity Verification) technologies."

"Smart card technology is critical to enterprise cybersecurity and is used by employees to secure access to corporate networks and resources across the enterprise," he added. "Leidos leverages smart card technology, including the government's Common Access Card (CAC) and (PIV) badge technologies, to provide our customers with integrated solutions that include state-of-the-art cybersecurity."

# member recognition program

## New in 2013: Center of Excellence Distinction

The Smart Card Alliance created a new member program in 2013 called the Smart Card Alliance Center of Excellence to recognize an elite mix of member companies who reach the highest level of active participation in the Alliance by having made outstanding contributions in the form of providing valuable time, talent and resources across a wide mix of Alliance activities.

This year we are delighted to announce the following 23 member companies who comprise the first class of Center of Excellence recipients:

- ABnote
- American Express
- CPI Card Group
- Capgemini USA Inc.
- Cubic Transportation Systems
- Datacard Group
- Deloitte & Touche LLP
- Discover Financial Services
- First Data
- Gemalto
- Giesecke & Devrient
- HID Global
- HP Enterprise Services
- LTK Engineering Services
- MasterCard
- NXP Semiconductors
- Oberthur Technologies
- SEPTA
- Ultra Electronics Card Systems
- Xerox
- XTec, Incorporated
- VeriFone
- Visa

Member involvement is not measured by how large an organization is, but by the actions of the organization and the commitment of its employees when it comes to engaging in industry activities and helping to fulfill the mission of the Smart Card Alliance.

Inclusion in this exclusive level is directly related to the following criteria members demonstrated in 2012-2013:

- Industry Council recognition for Honor Roll participants or Top Contributor to one or more of our Industry Councils
- Council officer position elected by peers
- Number of employees with LEAP/CSCIP training and certification
- Corporate CSCIP training and certification participation
- Alliance conference and event sponsorship of \$5,000 or greater in the last year
- Supporting membership in multiple chapters (SCALA) or affiliated organizations (EMV Migration Forum)

Congratulations to these companies for their continued involvement in Alliance activities.



# conferences and events



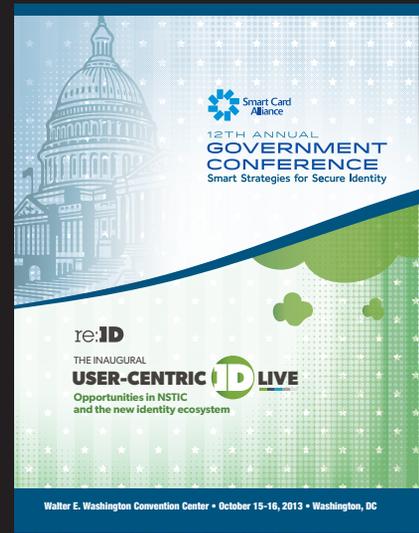
**2013 Payments Summit**  
Grand America Hotel  
Salt Lake City, Utah  
February 5-7, 2013

More than 700 people attended the summit – held this year in a different, larger venue to accommodate the large number of attendees - to learn and collaborate on the most pressing issues in payments – the U.S. move to chip-based EMV card payments in retail and transit, and the adoption of smart mobile payments. Attendees also were updated on pilots for Isis mobile wallets, and their launch throughout transit in Salt Lake City.



**NFC Solutions Summit 2013**  
Hyatt Regency San Francisco Airport  
Burlingame, California  
May 15-16, 2013

Presented by the Smart Card Alliance in partnership with the NFC Forum, the 2013 conference brought together nearly 400 leaders and analysts from financial services, payments processing, retail services, technology providers and applications development. While experts agreed that the major first step to broad NFC adoption was accomplished, lively discussion took place as to what the “killer app” would be to get the technology to take off.



**2013 Government Conference**  
Washington Convention Center  
Washington, D.C.  
Oct. 15-16, 2013

This leading event - with the addition of a new User-Centric ID Live Conference - for ID security provided a comprehensive agenda on efforts toward strong authentication technology in government identity programs. Global trends in secure identification, mobile PIV usage, NSTIC, healthcare and developments in state and local ID programs were the focus of industry speakers at this always anticipated event in the nation's capital.



22 Smart Card Yearbook



# Save the Date for these 2014 Events



## 2014 Payments Summit

February 5-7, 2014

Grand America Hotel, Salt Lake City, Utah



## NFC Solutions Summit 2014

June 3-4, 2014

Renaissance Arboretum Hotel, Austin, Texas



## 2014 Government Conference Co-located with User-Centric ID Live

October 29-30, 2014

Walter E. Washington Convention Center, Washington, D.C.



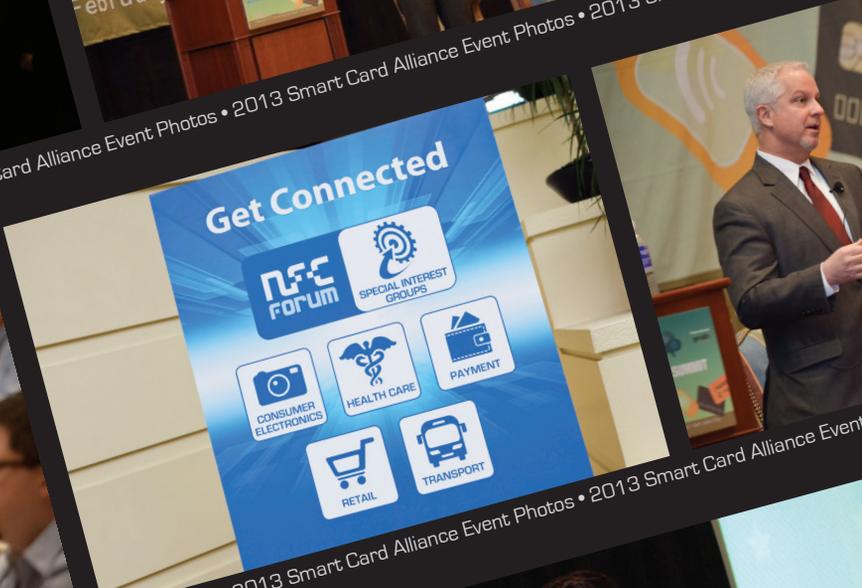
## The Smart Card Alliance 2014 Member Meeting

December 2014

Location TBD



# event photos







## Certified Smart Card Industry Professional (CSCIP)

The Smart Card Alliance offers three CSCIP credentials: CSCIP, CSCIP/Government and CSCIP/Payments. CSCIP is an internationally recognized credential for smart card industry professionals, and the CSCIP program prepares professionals to gain advanced levels of smart card industry knowledge and applications experience, and then move on to complete training and pass a multi-part exam.

In 2013, the Smart Card Alliance announced it reached a milestone - it had awarded certifications to more than 200 executives globally since the program's inception in 2009.

To date, a dozen organizations have completed the CSCIP Corporate Training Program for their entire staffs and, most recently, requests for proposals are includ-

ing requirements that bidders report the number of CSCIPs on the company payroll.

Regardless of the specific credential, all CSCIP certifications require demonstrated proficiency in a broad body of industry knowledge, including:

- Smart card technology fundamentals
- Security
- Application and data management
- Identity and access control usage models
- Mobile and Near Field Communication (NFC) usage models
- Payments usage models

The Alliance's CSCIP Smart Card Technology and Applications Training Course Modules serve as the primary review materials for the CSCIP certification exam, and include more than 300 pages of text, charts,

and graphics. A full day CSCIP training and exam preparation class led by seasoned smart card industry experts further solidifies the technical and broad smart card business applications training experience. The Alliance maintains and updates its training materials to reflect industry changes.

The CSCIP certification has become the benchmark for executives in increasingly competitive markets where proven expertise is critical. Through corporate and individual training programs, and workshops at industry conferences, the Alliance offers professionals training and tools to earn the certification and differentiate themselves from their peers. At the same time, participation in these programs demonstrates employers' commitment to maintaining highly skilled workers.



## About LEAP

The Smart Card Alliance Leadership, Education and Advancement Program (LEAP) is an online, members-only organization for smart card professionals. Its purpose is two-fold:

- To advance education and professional development
- To manage and confer, based on a standardized body-of-knowledge exam, the Certified Smart Card Industry Professional (CSCIP) designation

LEAP provides resources and materials including white papers, FAQs, position papers and archives of webinars, workshops and conference proceedings in the access security, payments, identity, healthcare, mobile and transportation markets, all of which are updated regularly. LEAP membership also offers plenty of opportunities for individuals to further their careers and showcase their professionalism within the industry.

LEAP is especially valuable for new entrants to the market or professionals working for small organizations without access to full Smart Card Alliance membership benefits.

## 2013 CSCIP Recipients

Paul Baker, Gemalto  
Juan Bautista, Giesecke & Devrient de Mexico  
VamsiKrishna (Vamsi) BondadaVenkata, Deloitte & Touche LLP  
Jamie Chang, Deloitte & Touche LLP  
David Chawira, Gemalto  
Lishoy Francis, Orange (France Telecom R&D)  
Steve Grande, Datacard Group  
Kay Kyriacou, Gemalto  
Dariusz Lewicki, CryptoTech, Ltd.  
Randy Luhman, Identive Group  
Juan Marinas, First Data  
Andy Matko, Ultra Electronics Card Systems Inc  
Maxmillian D Michieli, CPI Card Group  
Christian O'Keefe, Deloitte & Touche LLP  
Chris Pellegrino, Ultra Electronics Card Systems Inc  
Ramoncito Reyes  
Steve Rogers, IQ Devices  
Steve Schow, CPI Card Group  
Megan Shamas, Montner & Associates, Inc  
Ron Sutton, Deloitte & Touche LLP  
Brenda Sutton, Deloitte & Touche LLP  
John Ward, Deloitte & Touche LLP  
Jeff Wold, Datacard Group  
Mark Wright, Datacard Group

## 2013 CSCIP/G Recipients

Jonathan Brooks, Global Enterprise Technologies Corp  
Heather Brooks, Xtec, Incorporated  
David M. Helbock, Jr., Xtec, Incorporated  
Jonathan McGill, Xtec, Incorporated  
Chadrick Sine, SAIC  
Maria L. Smith, DMS International

## 2013 CSCIP/P Recipients

Brett Chemaly, Discover Financial Services, LLC  
Dave Kaminsky, Mercator Advisory Group  
Emmett McDonnell, Glenshesk Solutions Inc  
Ross Murdoch, Gemalto  
Keith Paulsen, Cirque Corporation  
George Peabody, Glenbrook Partners LLC  
Peter (Qingwu) Song, Ingenico Canada Ltd  
Sridher Swaminathan, First Data  
Robert Thompson, CIBC  
Irene C. Villaverde-Aquino, Credit Union Central of Canada

## 2013 CSCIP/G and CSCIP/P

Brian Keltner, Wells Fargo Bank N.A.

## 2013 CSCIP and CSCIP/P

Eric de Katow  
Tim 't Hart, Kyushu University

## 2013 CSCIP and CSCIP/G

Tony McGee, CPI Card Group

## 2013 Smart Card Alliance Professional Certification Trainers

### Brett Chemaly, Discover Financial Services

Brett recently joined Discover Financial Services as Manager – Global Chip Products, where he currently focuses on debit related matters affecting the U.S. Payments Industry. Prior to joining Discover, he was employed within MasterCard's Emerging Payments team based in Toronto, Canada where he was responsible for managing and consulting on MasterCard's chip programs on both sides of the border. Prior to his tenure in Canada, Brett spent eight years with the MasterCard Chip Centre of Excellence based in London and Belgium where he consulted extensively across Europe and the Middle East to both issuing and acquiring institutions.

### Bryan K. Ichikawa, Deloitte

Bryan Ichikawa is a Senior Manager for Deloitte's Enterprise Risk Services group based out of Arlington, Virginia. A globally recognized expert in biometrics, smart card, security, credentialing and identity and access management, Bryan is a trusted advisor to the U.S. federal government as well as other national government clients around the world, regularly assisting clients in the identification, design, integration and deployment of these technologies to deliver complete and comprehensive identity management solutions. Bryan holds two patents for data security and user privacy in communications systems and is a contributing author for "Smart Cards—Seizing Strategic Business Opportunities."

### Gilles Lisimaque, ID Technology Partners

Gilles Lisimaque is a Partner with ID Technology Partners, a leading consulting firm in Washington, DC, supporting high assurance identification solutions. Gilles, who has more than 25 years of experience developing smart card solutions, has worked with aspects of smart cards including chip design, manufacturing, packaging, operating system design, application development, international standards, reader interfaces, and host applications. He holds multiple patents on smart card security and smart card operating system design and has held high-level seats with numerous smart card and security forums, associations and standards bodies including AFNOR, ANSI, ISO and ISTPA (International Security, Trust and Privacy).

### Gerald Smith, ID Technology Partners

Gerald Smith is a Senior Consultant with ID Technology Partners, a leading consulting firm in Washington, DC, supporting high assurance identification solutions. He has more than 30 years of experience deploying card solutions. Gerald has worked with all aspects of smart cards including chip manufacturing, packaging, operating system design, virtual machines, application development, reader interfaces, and host applications. He is a National Merit Award recipient from the U.S. INCITS standards organization as well as an ISO project editor on smart card standards.

### Rich Uhrig, Identity and Access Solutions, XTec, Inc.

Rick Uhrig is a Senior Manager with XTec, Inc., a leading provider of trusted products and services for authentication and security solutions. Rick has more than 25 years of experience designing, developing and evaluating information security solutions, including 15 years with smart card solutions.

For a full list of CSCIP recipients go to: <http://www.smartcardalliance.org/pages/activities-leap-cscip-registry>

# 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. To read the complete letters, visit the Smart Card Alliance website.



## Industry Thoughts on Last Year

It is time for my annual look into what the future might bring to the payments and mobile markets. I LOLd myself (that's Laugh out Loud for those who don't have teenagers) when I looked back on my letter from

last year and saw which of my predictions did come true, which ones didn't, and what did happen that wasn't on my radar screen. The most surprising thing in 2012 that I never saw coming has to be the broad cross-industry support of the new EMV Migration Forum, the organization started by the Smart Card Alliance in August 2012 as a separate, EMV migration-focused organization, that went from concept to launch in less than 90 days. The other chuckle I got was my preoccupation last January with whether Apple's decision to include NFC in the next Apple iPhone 5 was going to be the savior or the demise of NFC in America. It turned out to do neither.



## Cool and Steady Sets the Pace

This year has already kicked off with a busy agenda of activities. Earlier this month the Smart Card Alliance held its 2013 Payments Summit in Salt Lake City. This year we registered 620 people and 48 exhibitors and sponsors

(up from 520 and 35 in 2012, respectively). The Summit was solid proof that the entire EMV payments, mobile payments, and transit payments ecosystems are moving forward. It is from this successful springboard that we are now hard at work on the NFC Solutions Summit, as well as planning webinars and getting resources ready for publication. As details and logistics fill my mind, I also make sure to keep an eye on the larger picture, which is this. The Smart Card Alliance is recognized as the single industry voice for smart card technology, leading the discussion on the impact and value of smart cards in the U.S. and Latin America. The staff and I take this role very seriously, and it is my hope that we continue to provide valuable information to our members and friends.



## The Whole Nine Yards

Often, people use nautical metaphors to describe things that represent their point of view. I have heard quite a few in reference to the United States "embarking" on its EMV migration. Another nautical quip that might

be used to answer a question about how long will it take for the U.S. to complete the transition from magnetic stripe to EMV chip

technology would be to describe the "considerable headwinds" that are affecting the transition in the payments markets. To further this analogy, these headwinds are coming mainly from the regulatory environment that exists only in the U.S. in meeting the Durbin Amendment rules. However, one of the best phrases that I have come across to describe how best to "keep the ship moving" and deal with the "headwinds" is this: "It is the set of the sails, not the direction of the wind that determines which way we will go."



## The Future Is Now

My prediction that 2013 would be the "Year of NFC" is based on simple common sense, which is only a good thing if the forces shaping the mobile markets today are indeed common.

I'm going to dive right in and say that NFC will be the thing mobile analysts and industry experts will be talking about in 2013, and what they'll say about the "missed opportunity" will likely refer to NFC payments, at least in its purest form of widespread proximity mobile wallet-enabled transactions. What I am excited about is the idea that, in 2013, I may be able to own a laptop that has NFC baked inside that will let me easily pay online rather than needing to fill out those tiresome online check-out forms.



## The Value of Networking

One concept I came to appreciate listening to the presentations at the NFC Solutions Summit was the power of the networking effect.

This effect happens when a small but critical mass of devices is reached which enables an increase in value in a different but related device. For example, when a few hundred mobile phones with NFC are in a market, it creates demand for perhaps a few thousand inexpensive NFC tags, which enables a few dozen merchants with a few hundred stores to join a marketing promotion that is NFC-enabled which causes a few thousand mobile offers to be redeemed, which influences a few hundred more consumers to try NFC. This cycle continues to grow and expand geographically and include new uses and applications.



## Reaching Higher

We're in the process of shaping the strategic direction for the Smart Card Alliance for the next three to five years. We spent a few months in advance of our annual board

of directors strategic planning retreat working with global management consulting firm Oliver Wyman to independently assess strengths and weaknesses of the Alliance and the opportunities and threats to further smart card adoption in North America and Latin America. Several strategic opportunities were discussed, including expanding our role for smart card technology and applications training, EMV, healthcare, mobile/NFC, M2M, international expansion, and organizational operational efficiencies. The research and resulting information presented by the consultants showed that we are a nimble group whose greatest assets – our members and their collective knowledge – can be leveraged even greater within the industry.

## JULY 2013

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

### Cyberspace and Identity

Another area of interest are the developments in the market that are shaping the future of Internet identities and cyberspace.

More and more, I read comments from Internet security gurus from PayPal, Microsoft, PING Identity, and Amazon declaring that Internet security – that is, getting by with individuals having dozens of Internet identities based on user names and passwords – is broken. What is unclear is how to move forward with stronger digital identities that can be shared across multiple relying parties, so that, for example, my identity credential recognized by my online bank account could be used to access my favorite Internet shopping site. The Identity Ecosystem Steering Group (IDESG), funded and led by NSTIC Program Office at NIST, is attempting to accomplish for the electronic commerce market what the Smart Card Alliance has accomplished for the smart card access control market, namely establish a cross-industry stakeholder body to collaborate on best practices and technology standards for trusted identities over the Internet.

## AUG 2013

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3			
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

### Facing a Challenge

The recent ruling by a U.S. district court judge that said the Federal Reserve Board overstepped its authority in how it capped debit-card fees and defined debit routing choices has left many stakeholders unsure

about their next move. As a result, nearly two years of planning by U.S. financial institutions, major payments brands, payments processors and merchants for a purposeful conversion from fraud-prone magnetic stripe payments systems to more secure and globally accepted EMV chip cards may have to adjust to new regulations. Now is the time for leaders of the world's largest and most economically diverse financial industry to turn this surprising legal setback to their established business practices into an impetus to forge something better for all stakeholders in the payments system.



### The Value of NFC

NFC was in the news again recently more for what didn't happen than did. Once again Apple has decided to forgo including NFC technology in its popular phone. For some mobile industry analysts, this is another opportunity to declare that NFC is dead and that if NFC was everything that industry proponents claim it is, then surely Apple would be jumping on it. I believe that having NFC available in the hands of millions of mostly young, tech savvy, upper-income consumers would be an adrenaline shot for mobile payments scheme operators, merchants and non-payments application developers and would accelerate the consumer demand for NFC use cases like the Isis mobile wallet and mobile identity management. Over time, the need for Apple products to talk to non-Apple products will grow stronger and NFC will be the link that bridges the two worlds together.



### Functioning amidst Dysfunction

As this issue of Smart Card Talk went to press, the United States federal government was shut down due to a few hard line politicians who have calculated that by not funding the government, their actions will somehow make America a better place for everyone. As we prepare for this month's 2013 Government Conference and inaugural User Centric ID Live Conference, the topic of my executive director letter is about government in the context of smart card adoption and leadership on security and identity credentialing. My thoughts may not inspire much confidence in the institution unless you look beyond the politicians and focus on the part of government I know and have the deepest respect for.



### Trust and Security

Since most digital transactions today happen without any face-to-face contact, such as when someone (the digital user) pays their bills online, there is a virtual wall separating the user initiating the transaction and the bank or travel services provider (the relying party) offering the service. The service provider needs a method to see through this virtual wall and authenticate the user on the other side. User authentication is the means of identifying who the user really is and being able to determine that the user has established any trust with the provider. The biggest challenge I see is trust, and this is where smart card technology can help. In the NFC mobile payment world, the technology that adds trust to the device is the "secure element." The secure element can be a removable chip in the form of a SIM card (called a UICC) or a microSD card, or the secure chip can be embedded inside the phone.

# web site highlights

## Smart Card Alliance Web Site Highlights

- Total site visits, average per month: 19,494
- Number of page views per visit: 2.08
- New visits: 71.7%
- Links to Alliance and LEAP members-only resources
- Multi-media educational resources: videos, webinar recordings, slide shows
- Access to over 110 Smart Card Alliance publications

## Most Popular Web Resources

- Smart Card Alliance white papers and publications
- EMV Migration Forum information
- Smart Card Alliance members
- Smart card technology primer and application information
- Smart Card Alliance events

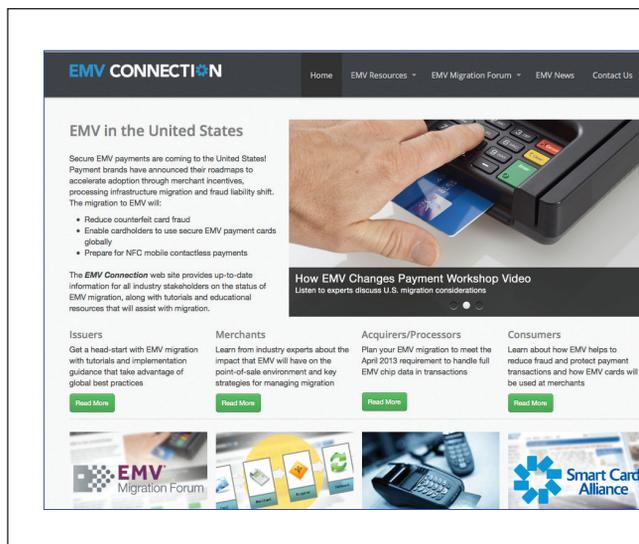
## Top Accessed Publications and White Papers

- [Card Payments Roadmap in the U.S.: How Will EMV Impact the Future Payments Infrastructure?](#)
- [Smart Card Technology in U.S. Healthcare: Frequently Asked Questions](#)
- [EMV and NFC: Complementary Technologies that Deliver Secure Payments and Value-Added Functionality](#)
- [EMV: Frequently Asked Questions](#)
- [Proximity Mobile Payments: Leveraging NFC and the Contactless Financial Payments Infrastructure](#)
- [Anatomy of a Mobile Device Webinar Presentation](#)
- [Near Field Communication \(NFC\) and Transit: Applications, Technology and Implementation Considerations](#)



## New in 2013: Videos, Publications, Workshops, Webinars and Newsletter

- [New NFC Video Series](#): five industry expert videos providing perspectives on NFC in the United States
- [2013 Payments Summit Plenary Videos](#): nine videos of plenary keynote presentations and roundtables
- [Smart Card Alliance Publications](#): five new publications on payments, EMV, mobile identity, NSTIC and physical access control systems, plus comment submissions to the Senate and U.S. Coast Guard
- [Educational Institute Workshops](#): New workshop video on how EMV changes payment (LEAP members only)
- [Webinars](#): Four Mobile and NFC Security Fundamentals Webinar recordings
- [Smart Card Talk Newsletter](#): Revamped and streamlined monthly Smart Card Alliance newsletter



## EMV Connection Web Site

- Over 22,800 visits from over 13,500 unique visitors
- EMV educational resources for issuers, merchants, acquirers/processors and consumers
- EMV industry news
- [How EMV Changes Payment](#) video workshop
- New publications from the Smart Card Alliance and EMV Migration Forum: [The EMV Ecosystem: An Interactive Experience for the Payments Community](#); [Glossary of Standardized Terminology](#); [EMV Testing and Certification White Paper: Current U.S. Payment Brand Requirements for the Acquiring Community](#)
- EMV Migration Forum information and members-only web site

**Educational videos and webinar recordings**

**Streamlined Smart Card Talk monthly newsletter**

**Over 23,700 downloads of publications and presentations**

**Number of page views per visit – 2.08**

**Over 175,000 visits from over 126,000 unique visitors**



**Keep Connected Join Our Community**

Facebook Twitter LinkedIn LinkedIn LinkedIn LinkedIn

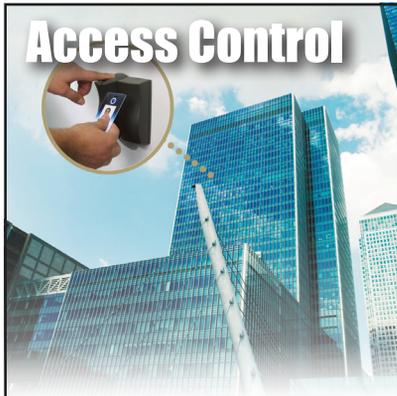
LEAP Government Smart I.D Smart Payments Healthcare Identity Mgt.

**Active Social Media Programs**

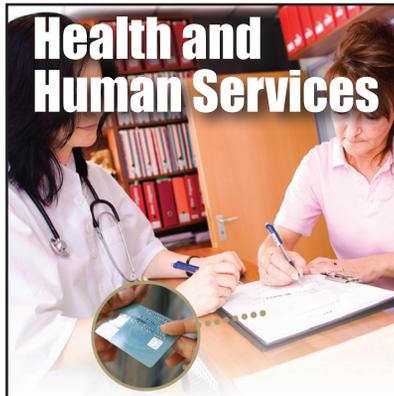
- LinkedIn Groups: [Government Smart ID](#) – 1,760 members; [Smart.Payments](#) – 1,151 members; [Healthcare Identity Management](#) – 146 members; [Smart.Transit](#) – 62 members; [LEAP](#) – 488 members
- [Twitter](#): 420+ tweets, 2,555 followers
- [Facebook](#): 255 “likes”

# industry councils

Through six 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 results of the councils' work help 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 Access Control Council's 2013 activities had a strong focus on providing guidance on smart card implementation in government credentialing initiatives. The Council expanded activities to collaborate with other councils on the use of mobile devices for identity and access control applications. The Council is made up of more than 158 individuals from 50 leading organizations.



The Health and Human Services Council expanded its charter in 2013 to promote the adoption of smart card technology for both health and human services organizations and within the national health IT infrastructure. Council activities focused on policy guidance and collaboration with other industry organizations. More than 60 individuals from over 30 leading organizations participated in the Council.



The Identity Council's 2013 activities focused on the National Strategy for Trusted Identities in Cyberspace (NSTIC) and mobile identity. The Council delivered two white papers, participated in two workshops, and led Alliance activities on NSTIC. More than 110 individuals from over 45 leading organizations participated in the council.



The Mobile and NFC Council activities in 2013 included strong educational programs and collaboration with other industry organizations. The Council produced a series of four webinars, participated in two workshops, and collaborated with other councils on the use of mobile devices for identity applications. The council is made up of more than 170 individuals from 70 leading organizations.



The Payments Council expanded activities in 2013 to look at new payments innovations, while continuing its strong program on EMV education. The Council completed an interactive resource on the EMV ecosystem, led one EMV workshop and published a new white paper. The council is made up of more than 200 individuals from over 60 leading organizations.



The Transportation Council was active in 2013 working on projects to smooth acceptance of open contactless payment cards for transit fare payment. The Council launched three projects covering the impact of EMV migration on transit and open payments acceptance opportunities and challenges. More than 170 individuals from over 60 leading organizations participated in the council.

## A Look at Our Councils in 2013

*A Remarkable Year Thanks to Dedicated Members*



One might think that smart card industry professionals never sleep! As a member-based organization, the Alliance councils depend on members volunteering their time to participate in Alliance education and advocacy efforts and to contribute their expertise in developing resources that can be used by the entire industry. All of our council members have “day jobs” working in the industry and yet they still find the time to collaborate on projects that help move the industry forward as a whole. Over 570 individuals from more than 120 member organizations participated in councils in 2013, with strong participation from all membership categories.

How much did we do this past year? Our six councils met regularly and were highly productive. The councils delivered six new white papers, submitted commentary to both government and industry groups on eight different topics, produced five webinars and four workshops, and led Alliance efforts in reaching out to each of the vertical industry segments. This is a remarkable set of accomplishments from our volunteers!

While we’re currently organized within vertical market segments, we’re seeing increased collaboration among our councils on topics that cross the markets. For example, strong authentication for online transactions applies to every sector – from logging on to a web site to paying for eCommerce transactions to accessing sensitive healthcare information. Our councils are collaborating to provide guidance for the National Strategy for Trusted Identities in Cyberspace (NSTIC) and are active participants in the Identity Ecosystem Steering Group (IDESG). Mobile is another common theme with smart phones and tablets transforming all markets. In 2013 Councils took a close look at mobile identity and the government’s PIV credential, providing cross-council guidance on technical, process and policy considerations, and developed educational resources on how mobile is changing the U.S. payments landscape for both consumers and merchants.

The Alliance isn’t alone in its efforts to try to guide markets to more secure and efficient authentication approaches and transactions. The councils maintained strong engagement with other industry organizations, with a significant number of projects accomplished through collaboration with other industry groups. Councils worked with GlobalPlatform, HIMSS, International Biometrics and Identification Association, NFC Forum, Security Industry Association, and the Workgroup for Electronic Data Interchange to deliver industry comments, white papers, webinars and workshops in 2013.

2014 is going to get off to a fast start, stimulated by the cross-council break-out sessions at our first Member Meeting in December. Mobile, EMV, FIPS 201-2, open payments in transit, and strong authentication will continue to be priority topics, while we will also be expanding into the health and human services industry vertical. What you can expect is that Alliance councils will focus on activities that keep smart card technology front and center as the choice for implementations that need strong privacy and security features and enhanced applications.

I encourage all members to get involved in our Councils. Members find that Council participation not only helps the industry, but is also a great way to stay up-to-date on industry developments, showcase their company expertise and build their own reputations in the industry.

Thanks to all of the Council officers, steering committees and members for your contributions and support in 2013!

**Cathy Medich**

Director, Strategic Programs  
Smart Card Alliance

# access control council



## Access Control Council Mission

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

### Officers

- Chair: Lars Suneborn, Oberthur Technologies
- Vice Chair: Lolie Kull, HP Enterprise Services
- Secretary: Sal D'Agostino, IDmachines

### Steering Committee

- Dave Adams, HID Global
- Salvatore D'Agostino, IDmachines
- Tony Damalas, Damalas LLC
- Michel Escalant, Gemalto
- Frazier Evans, Booz Allen Hamilton
- Walter Hamilton, Identification Technology Partners
- Dave Helbock, XTec, Inc.
- Andy Kuchel, Quantum Secure Inc.
- Lolie Kull, HP Enterprise Services
- Roger Roehr, Roehr Consulting
- Steve Rogers, IQ Devices
- Jason Rosen, NASA
- Adam Shane, AMAG Technology
- Mike Sulak, Department of State
- Lars Suneborn, Oberthur Technologies
- Joe Tassone, Identive Group
- Mike Zercher, NXP Semiconductors

### Top Three Contributors

- Salvatore D'Agostino, IDmachines
- Steve Rogers, IQ Devices
- Adam Shane, AMAG Technology

### Honor Roll

- Tim Baldridge, Defense Manpower Data Center
- Salvatore D'Agostino, IDmachines
- Tony Damalas, Stanley Security Solutions
- John Esser, Oberthur Technologies
- Frazier Evans, Booz Allen Hamilton
- Marty Frary, Independent
- Christophe Goyet, Oberthur Technologies
- Walter Hamilton, Identification Technology Partners
- Mike Kelley, Secure Missions Solutions
- Kevin Kozlowski, XTec, Incorporated
- Lolie Kull, HP Enterprise Services
- LaChelle LeVan, Independent
- Stafford Mahfouz, Tyco Software House
- Roger Roehr, Roehr Consulting
- Steve Rogers, IQ Devices
- Adam Shane, AMAG Technology
- Mike Sulak, U.S. Department of State
- Lars Suneborn, Oberthur Technologies
- Joe Tassone, Identive
- Rob Zivney, Identification Technology Partners

### 2013 Activities

- *PACS Primer for PIV* brief, providing a high-level overview of physical access control systems (PACS) for the GSA Evaluation Program Technical Working Group (EPTWG) (in collaboration with the Security Industry Association (SIA)).
- Submission of comments to GSA on the draft FIPS 201 Evaluation Program documents (in collaboration with SIA).
- *Mobile Devices and Identity and Access Control Applications*, ISC West 2013 workshop (in collaboration with the Identity and Mobile & NFC Councils).
- [Supporting the PIV Application in Mobile Devices with the UICC](#) white paper, providing guidance to U.S. Government policy makers and technologists on the key technical, business and policy considerations for supporting the Personal Identity Verification (PIV) application and credentials on mobile devices using the UICC (in collaboration with the Identity and Mobile & NFC Councils).
- Submission of [comments](#) to the Coast Guard on the TWIC Reader Notice of Proposed Rule Making (in collaboration with the International Biometrics & Identification Association (IBIA)).
- Submission of comments to NIST on draft special publication, SP 800-73-4.
- Submission of comments to GSA on "Enabling Strong Authentication with Personal Identification Verification Cards: Public Key Infrastructure (PKI) in Enterprise Physical Access Control Systems (E-PACS) Recommended Procurement Language for RFPs, VERSION Release Candidate 2."
- Submission of comments to GSA on proposed deprecated Approved Product List (APL) categories.
- *Federated Identity, Strong Authentication, NSTIC and the Identity Ecosystem*, Smart Card Alliance 12<sup>th</sup> Annual Government Conference workshop (in collaboration with the Identity Council).
- Completion of Council Steering Committee and officer elections.
- Relationships with IBIA and SIA.

### Access Control Council Members

3M Cogent, Inc. • ABnote • Accenture LLP • Advanced Card Systems Ltd. • AMAG Technology, Inc. • Athena Smartcard Solutions Inc. • Booz Allen Hamilton • CertiPath LLC • CH2M HILL • Codebench, Inc. • CSC • Cubic Transportation Systems, Inc. • Datacard Group • Datawatch Systems, Inc. • Defense Manpower Data Center • Deloitte & Touche LLP • Eid Passport Inc. • ENTRUST • Exponent, Inc. • Gemalto • General Services Administration • Giesecke & Devrient • HID Global • HP Enterprise Services • Identification Technology Partners • Identive • IDmachines • Ingersoll Rand Security Technologies • IQ Devices • Lenel Systems International • Morpho • NagraID Security • NASA • NXP Semiconductors • Oberthur Technologies • Probaris, Inc. • Quantum Secure Inc. • Roehr Consulting • SafeNet, Inc. • SAIC • Secure Mission Solutions, Inc. • Stanley Black & Decker • ST Microelectronics • Tyco Software House • Ultra Electronics Card Systems • U.S. Department of Homeland Security • U.S. Department of State • U.S. Department of Transportation/Volpe Center • Washington Metropolitan Area Transit Authority (WMATA) • XTec, Inc.

# Year in Review: Access Control Council Chair

## *Council Demonstrates Value through Letters, Comments and White Papers*

As usual, 2013 was a busy year for the Access Control Council and our members.

As HSPD-12 became a reality and PIV credentials are now issued to nearly all federal employees, the focus of both government and industry is now on ensuring successful implementation, usage and lifecycle management of the PIV credentials.

To reflect the maturing market, GSA updated the Approved Product List (APL), and the associated Evaluation Program (EP) was significantly updated during the first part of 2013. GSA invited industry groups to provide input to a suite of nine documents. To minimize duplication of effort and coordinate industry responses, the Smart Card Alliance Access Control Council invited the Security Industry Association (SIA) to participate in our meetings and led a coordinated cross-industry effort to provide input and suggestions to the GSA Evaluation Program Technical Working Group (EPTWG).

Comments provided include deprecation and establishment of new product categories, as well as harmonization of commonly used industry terminology. The significance and volume of documents led to a very hectic period with two meetings per week and an extension of the initial response deadline. Today, many of those suggestions are included in the updated APL EP.

The “Supporting PIV Application in Mobile Devices with the UICC” white paper was a cross-council project with the Identity and Mobile and NFC Councils. This white paper provides guidance to government policy makers on the main technical and policy considerations for implementing PIV on mobile devices with the UICC as the secure environment.

The U.S. Coast Guard (USCG) issued a Notice of Proposed Rulemaking (NPRM) regarding the Transportation Worker Identification Credential (TWIC) reader requirements. The TWIC program received some negative press largely based on incomplete performance and cost data collected from some of the early TWIC pilot test sites. As a result, the USCG NPRM included language that would eliminate requirements for electronic validation of TWIC in most ports, effectively reducing the TWIC to a “flash pass.”

Walter Hamilton led the Council project to provide a response and highlight the economic risks associated with a disruption to port operations due to an adversary gaining access to sensitive container and petroleum terminals. At the time of this writing, the final ruling is not completed, but unofficial information indicates that the number of ports that qualify for full electronic validation of TWIC has been greatly increased compared to the original

NPRM. Obviously, the benefits of e-Authentication of the TWIC were made clear.

NIST requested public comments for the update of SP800-73-4 and the Council submitted comments on topics ranging from cryptographic keys, signing certificates, multiple UUID identifiers, secure messaging and card activation using biometric on-card comparison – a wide range of topics, indeed!

In addition, the Council sent a short letter to the GSA EPTWG seeking clarification on language contained in “*Enabling Strong Authentication with Personal Identification Verification Cards: Public Key Infrastructure (PKI) in Enterprise Physical Access Control Systems (E-PACS) Recommended Procurement Language for RFPs*,” where some ambiguities and errors existed.

The Council sent a second letter to GSA regarding deprecation of APL categories such as the CHUID reader that, if the category remained, or such reader would be allowed, would be a cost effective reader for use for access to areas located where no CAK or PKI validation is required.

Current activities focus on determining what access control points trigger APL compliance and streamlining the process for post-installation certification and long-term sustainability. One component of the suggested approach is to create a simple compliance test procedure that may be completed locally by trained staff, or a local contractor. This is a similar approach to those used to test fire alarm systems to maintain compliance with strict life and safety regulations. This approach may save considerable time, effort and expense, if adopted.

For 2014, the Council is anticipating additional cross-council and cross-industry activities for industry education. To provide technical direction, NIST will be updating current and creating new special publications. These will include new technologies and guidance for Federal use of PIV credentials in both logical and physical access control systems. The Council will provide input to NIST and GSA and will develop educational documents to cover the next phase of smart credentials for Federal users, system integrators and technology providers.

**Lars Suneborn**  
Sr. Manager, Technical Marketing  
Federal ID, Oberthur Technologies



# PACS Primer for PIV

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**P**ACS stands for physical access control system. Typically, the term refers to an electronic system that controls a secure area. To request access, a credential (most often a card) is presented to a reader. A PACS can be a single standalone device, or it can include multiple doors, buildings, campuses, cities, or countries. A variety of physical and network components can be used to build an effective and efficient PACS. Functionality, not system topology, is what determines whether something is a PACS.

The *PACS Primer for PIV* introduces, defines, and explains the terms and concepts required to understand how a PACS is constructed and organized, what it does, and how it operates. The primer assumes that the reader is familiar with U.S. Federal Public Key Infrastructure (PKI) and logical access control system (LACS) applications.

## Purpose of a PACS

The primer begins by expanding on the purpose of a PACS – to manage controlled ingress or egress through secure boundaries while monitoring actions and deviations from an approved process. The discussion describes how secure boundaries are established and includes the requirements that the PACS support high levels of throughput and integration with intrusion detection, video surveillance and fire alarm systems, to improve its effectiveness as a security countermeasure and provide life safety functions.

## PACS Functions

The primary PACS function is to enable authorized personnel to pass through portals (e.g., doors, turnstiles, gates) quickly. The primer describes the ancillary functions required to support physical access control and explains both why a PACS must be resilient

enough to continue to function even when network connectivity or communications are lost and how this requirement can be met.

## Typical PACS System Components

PACS resilience is typically achieved by distributing access control functionality, which requires the presence of a remote controller. The primer itemizes additional critical system components, including the PACS host/server, and the components that comprise access control points, which include a reader, a locking device, and a door position monitor. Component descriptions include the functions of each component within the system, the underlying mechanisms used, and any integration requirements.

## Typical PACS Topology

As the primer points out, there is no single ideal PACS system configuration. Examples are provided of how reader, controller, and server functionality can be supported by a variety of devices and system designs. The factors that influence appropriate configuration are summarized and key considerations are suggested for system design and implementation.

## Implications of Using PKI

Integral to the PACS process is the requirement to authenticate credentials and authorize entrance to a specific location. Authentication identifies a credential and determines its validity. Authorization determines whether the credential and credential holder are permitted to access that location. A PACS typically tests whether a cardholder is authorized to enter a specific portal first, before initiating the authentication process.

PKI can be used in a PACS to authenticate credentials “at the door,” establishing both that the certificates on a credential are valid and that the credential is not a clone or forgery. The primer describes the validation process, itemizing both the data to be checked and the timing requirements. It identifies the issues raised by using PKI, including both general access issues (such as potential effects on throughput rate) and issues specific to the validation process. In addition to recommending methods for analyzing and evaluating the impact of using PKI, the primer provides examples of PACS implementations that address challenges particular to the use of PKI.

## About the Primer

The Smart Card Alliance Access Control Council collaborated with the Security Industry Association (SIA) in developing the *PACS Primer for PIV*. The document was developed to provide a high level overview of physical access control systems for the GSA Evaluation Program Technical Working Group (EPTWG) and the authors of FIPS 201 Evaluation Program documents.



# Comments on TWIC Reader Requirements Rulemaking

In June, the Smart Card Alliance Access Control Council submitted comments in response to the U.S. Coast Guard's "Transportation Worker Identification Credential (TWIC) Reader Requirements Notice of Proposed Rulemaking (NPRM)."

## Background

Congress passed the Maritime Transportation Security Act of 2002 (MTSA) to implement security procedures that would limit unescorted access to secure areas of maritime facilities and vessels. Access was intended to be granted only to those workers who were properly vetted and cleared by the U.S. Government and whose identity and status could be verified electronically through the presentation to a reader of a biometric transportation security card. The intent was to prevent potential terrorists or other adversaries from freely accessing secure areas of maritime facilities and vessels.

Over 2.4 million maritime workers have been issued a Transportation Worker Identification Credential (TWIC), which is a tamper-resistant biometrically enabled smart card. Used in conjunction with an electronic reader, the credential can establish that it is a valid card issued by TSA and not a forgery; that it has not expired; that it has not been revoked by TSA for cause; and that the person presenting the card is the person to whom the card was issued.

The rulemaking proposed by the Coast Guard limits the use of TWIC smart cards and readers for cost and reliability reasons and relies instead on visual inspection of TWIC cards as the primary security protocol for 95 percent of the maritime user population.

## Issues Raised

The Smart Card Alliance comments identified a number of potential issues, including the following:

- Whether the NPRM satisfies Congressional intent to enhance security at U.S. ports and maritime facilities.
- Congress recognized that U.S. ports are particularly vulnerable to breaches in security and found that "biometric identification procedures for individuals having access to secure areas in port facilities are important tools."
- Whether visual inspection provides adequate security.
- The proposed rulemaking limits the mandatory TWIC reader requirement to only 532 of 3,270 facilities, 38 of 13,825 vessels, and 5 percent of the issued TWIC cardholders. For the remaining 2,738 facilities, 13,727 vessels, and 95 percent of the TWIC holders, authorization decisions would rely on visual inspection by security staff.
- Whether it is satisfactory to keep records and logs of reader transactions only, as opposed to all transactions.
- Whether reader and reader implementation costs were calculated appropriately.
- In its economic analysis, the Coast Guard excluded the personnel cost savings that maritime operators will realize

by not requiring security personnel to perform visual inspection procedures at every entry point. In addition, reader implementation cost estimates were extrapolated from pilot cost data, which do not represent current costs, and average TWIC reader acquisition costs were overstated.

- How delays associated with reader transaction failures and downloading cancelled card lists (CCLs) were calculated.
- Both current changes to card design and user experience improve throughput rates significantly.

## Recommendations

The Smart Card Alliance Access Control Council made the following recommendations:

- Expand the scope of the proposed regulation to make the use of TWIC card readers mandatory for a majority of the facilities and vessels currently identified in Risk Group B (which accounts for 85 percent of the nation's container cargo).
- Require transaction logs when visual inspection is used and when any non-automated exception situation is encountered (such as escorted visitors or recurring unescorted access).
- Conduct a new reader cost analysis using current TWIC reader product information.
- Require maritime operators to download the latest version of a CCL every 12 hours, regardless of MARSEC (maritime security) level.
- Correct the statement in the NPRM that TWIC readers cannot identify valid cards that were obtained by fraudulent means (such as through unreported theft or the use of fraudulent IDs). TWIC readers identify cards that were obtained through unreported theft of the TWIC card by performing biometric verification of the cardholder.
- Require the use of readers at large, general-cargo container terminals in both Risk Groups A (currently excludes most such terminals) and Risk Group B or reclassify the terminals into Risk Group A.
- Require vessels at sea to update the CCL under certain circumstances for security.

## Summary

The use of TWIC cards in conjunction with TWIC readers can prevent potential terrorists or other adversaries from obtaining unescorted access to secure areas of maritime facilities and vessels. Visual inspection does not achieve the security objectives intended by Congress in the MTSA, and reliance on visual inspection would make it relatively easy to breach the perimeter of a facility or vessel by presenting a fake, stolen, or borrowed TWIC card. The Smart Card Alliance strongly recommended that the Coast Guard expand the scope of the proposed regulation.

# mobile and nfc council



## Mobile and NFC Council Mission

Raise awareness and accelerate the adoption of payments, loyalty, marketing, promotion/coupons/offers, peer-to-peer, identity, access control, transit and other applications using Near Field Communication (NFC).

### Officers

- Chair: Sadiq Mohammed, MasterCard Worldwide
- Vice chair: Chandra Srivastava, Visa Inc.
- Secretary: Deborah Baxley, Capgemini

### Steering Committee

- Deborah Baxley, Capgemini
- Maarten Bron, UL Transaction Security
- Stu Cox, Giesecke & Devrient
- David deKozan, Cubic Transportation Systems, Inc.
- Amol Deshmukh, Gemalto
- Jeff Fonseca, NXP Semiconductors
- Neil Hickey, Accenture
- Peter Ho, Wells Fargo
- Holger Kunkat, C-SAM
- Sadiq Mohammed, MasterCard Worldwide
- Howard Hall, Consult Hyperion
- Ivan Plajh, Smartrac N.V.
- Scott Rau, Chase
- JC Raynon, VeriFone
- Tony Sabetti, Isis
- Gerald Schoenecker, Ingenico
- Chandra Srivastava, Visa, Inc.
- Sridher Swaminathan, First Data Corporation
- Joe Tassone, Identive

### Top Three Contributors

- Bart van Hoek, UL Transaction Security
- Tom Zalewski, CorFire
- Rob Zivney, Identification Technology Partners

### Honor Roll

- Brent Bowen, Valid USA
- Peter Cattaneo, Intercede Ltd
- Salvatore D'Agostino, IDmachines
- David deKozan, Cubic Transportation Systems, Inc.
- Chris Edwards, Intercede Ltd
- Frazier Evans, Booz Allen Hamilton
- Chris Gardner, SecureKey Technologies
- Philip Hoyer, HID Global
- Josh Kessler, MasterCard
- Gurpreet Manes, SafeNet Inc.
- James McLaughlin, Gemalto
- Doug Morgan, Independent
- Akif Qazi, Discover Financial Services
- Sanjiv Rawat, Giesecke & Devrient
- Steve Rogers, IQ Devices
- Tony Sabetti, Isis
- Chandra Srivastava, Visa Inc.
- Brian Stein, CH2M Hill
- Lars Suneborn, Oberthur Technologies
- Sridher Swaminathan, First Data Corporation
- Joe Tassone, Identive
- Bart van Hoek, UL Transaction Security
- Tom Zalewski, CorFire
- Mike Zercher, NXP Semiconductors
- Rob Zivney, Identification Technology Partners

### 2013 Activities

- *Mobile Devices and Identity and Access Control Applications*, ISC West 2013 workshop (in collaboration with the Access Control and Identity Councils).
- *NFC Base Camp: The Fundamentals of NFC Mobile Technology and Business Applications*, 2013 NFC Solutions Summit workshop
- *Mobile/NFC Security Webinar Series* – four webinars produced in partnership with GlobalPlatform and NFC Forum
- *Supporting the PIV Application in Mobile Devices with the UICC* white paper, providing guidance to U.S. Government policy makers and technologists on the key technical, business and policy considerations for supporting the Personal Identity Verification (PIV) application and credentials on mobile devices using the UICC (in collaboration with the Access Control and Identity Councils).
- Submission of comments to Mobey Forum on industry glossary, in collaboration with the NFC Forum
- Completion of Council Steering Committee and officer elections.
- Relationships with GlobalPlatform, Mobey Forum and NFC Forum.

### Mobile and NFC Council Members

3M Cogent, Inc. • ABnote • Accenture LLP • Advanced Card Systems Ltd. • American Express • Bank of America • BetterBuyDesign • Booz Allen Hamilton • Capgemini USA Inc. • Capital One • CH2M HILL • Chase Card Services • Clear2Pay • Consult Hyperion • CorFire • CPI Card Group • C-SAM, Inc. • Cubic Transportation Systems, Inc. • Czech Technical University in Prague • Datacard Group • Datawatch Systems, Inc. • DeviceFidelity, Inc. • Discover Financial Services • ENTRUST • Exponent, Inc. • FIME • First Data Corporation • FIS • Fiserv • Gemalto • Giesecke & Devrient • GlobalPlatform • Heartland Payment Systems • HID Global • HP Enterprise Services • Identification Technology Partners, Inc. • Identive • Infineon Technologies • Ingenico, North America • Ingersoll Rand Security Technologies • INSIDE Secure • Interac Association/Acsys Corporation • Intercede Ltd. • IQ Devices • JVL Ventures, LLC dba Isis • Lenel Systems International • MasterCard Worldwide • Morpho • MTA New York City Transit • Natural Security • NFC Forum\* • NXP Semiconductors • Oberthur Technologies • OTI America • Probaris, Inc. • Quadagno & Associates, Inc. • Quantum Secure Inc. • SafeNet, Inc. • SecureKey Technologies • Smartrac N.V. • STMicroelectronics • Thales • TSYS • Underwriter Laboratories (UL) • Unwire US, Inc. • U.S. Department of Homeland Security • Valid USA • VeriFone • Visa Inc. • Wells Fargo

# 2013 Year in Review: Mobile and NFC Council

## *Council Fills a Need in an Active First Year*

After completing its first successful year, the Mobile and NFC Council is seeing tremendous participation and response from over 70 Smart Card Alliance organizations. The Council is pursuing its goal of raising awareness of NFC and mobile technologies, needs, use cases and hurdles, and delivering projects that will benefit widespread adoption. The Council is focusing on mobile payments as well as on loyalty, marketing, offers, identity and access control applications, which will enhance the consumer mobile experience and help in industry adoption.

The [Mobile and NFC Security Webinar](#) series developed in 2013 in collaboration with GlobalPlatform and the NFC Forum was made available on the Alliance website and continues to get great response. The Council was very active in planning and ensuring success of the 6<sup>th</sup> Annual Payments Summit in Salt Lake City and NFC Solutions Summit at San Francisco. At the latter event, the workshop called *NFC Base Camp: The Fundamentals of NFC Mobile Technology and Business Applications*, was very well attended and received. The Council also collaborated with the Access Control and Identity councils to host a workshop on Mobile Devices and Identity / Access Control Applications.

This year the Council launched the 'Secure Credentials for Mobile Payments' project with the objective to do a deep dive into specific use case examples to explain the security, risks, implementations and management of secure credentials. Three use cases were targeted: closed loop QR code, NFC secure element, and NFC with credentials in the cloud. These were presented during the NFC Solutions Summit in May 2013.

The NFC payment market in the U.S. is still in its early stages, with positive market trends for growth. Some other thoughts and observations include:

- Significant numbers of NFC compatible handsets have been released and certified in 2013.
- While NFC POS enablement at retail is still lagging, it may get a boost from the EMV upgrade in the U.S. with dual technology payment terminals.
- Consumer adoption may require multi-party effort for provisioning and acceptance.
- Isis continues to play key role in the NFC rollout in the U.S. with their announcement of post pilot rollout.
- There is a growing interest in alternate mobile payment technologies like QR code and cloud-based payment (such as Square, Level Up, Paydiant, MCX).
- Mobile acceptance at retail is another area that is gaining good traction and has the Council's attention.

The Mobile and NFC Council is getting ready for another year of exciting activities. We are enhancing collaboration with the Payments, Identity and Transportation Councils for joint workshops and projects. We are planning to track alternate mobile payments strategies, along with value-added services that will enable consumer adoption. Mobile commerce is experiencing tremendous growth and innovation and we are excited to be part of it. We solicit your participation and ideas for projects to make this Council a success. Thank you for all your support!

**Chandra Srivastava**  
Mobile and NFC Council Vice Chair  
Business Leader, Mobile and POS innovations  
Visa Inc.



# Mobile and NFC Security Fundamentals

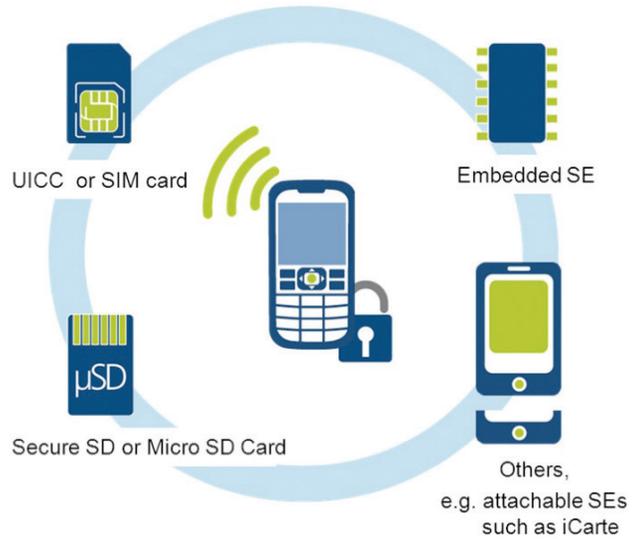
The Smart Card Alliance Mobile and NFC Council, in partnership with [GlobalPlatform](#) and the [NFC Forum](#), hosted a series of four public webinars on mobile and NFC security fundamentals. The webinar series provides an educational resource for mobile application developers and the mobile community on the choices for security implementations for NFC applications. The webinar is the result of a Council project launched in late 2012 to look at security considerations for mobile and NFC application implementations.

The first webinar, held on March 5 in partnership with GlobalPlatform, described the “anatomy of a mobile device.” Kevin Gillick, GlobalPlatform, introduced the organization and their activities and mission. Philip Hoyer, HID Global, provided the foundation for the webinar series by describing the mobile device architecture and the use of secure elements and Trusted Execution Environment for security implementations. Gil Bernabeu, GlobalPlatform, described what the mobile device security interfaces are and how mobile applications and data are securely provisioned.

The Council focused specifically on secure elements in the second webinar on March 28. Sree Swaminathan, First Data, described how secure elements work in a mobile phone and what standards are used for NFC and secure element implementations. Sanjiv Rawat, Giesecke & Devreint, defined the different types of secure elements and compared how they are used and provisioned. Greg Coogan, Morpho, outlined how secure elements are used in payment and access applications.

The third webinar, held in partnership with the NFC Forum, reviewed NFC Forum tags and security considerations. Tony Rosati, NFC Forum Security Work Group Chair and BlackBerry, described the four NFC Forum tag types, the architecture supporting the tag types, and security approaches used with tags in different applications. Joe Tassone, Identive, discussed NFC tag uses and the value chain supplying tags. Mike Zercher, NXP Semiconductors,

## Types of Secure Elements



outlined how a developer could implement security functionality with NFC Forum tag applications. Rob Zivney, Identification Technology Partners, concluded with a discussion of NFC Forum tag market directions.

The fourth webinar, held on May 9 in partnership with the NFC Forum, wrapped up the series with a discussion of different NFC use cases and the implications of security in those use cases. The webinar presenters – Tony Sabetti, Isis; Christian Ali, SecureKey Technologies; Jonathan Main, NFC Forum Technical Committee and MasterCard; and Steve Rogers, IQ Devices – covered use cases for payment, logical access, advertising, retail, healthcare, and physical access.

The [Mobile and NFC Security Fundamentals Webinar Series](#) recordings and presentations are available as a public educational resource on the Smart Card Alliance web site.

## NFC Tag Security Landscape

Vulnerability	Attack	Mitigation	Note
Data modification (e.g., smart poster)	Replace tag with another (i.e., phishing attack)	NFC Forum Signature RTD - Data integrity	Adds no cost to the tag
Eavesdropping (e.g., medical history)	Listen from a distance	Encrypt the tag contents or password protected URL	Adds no cost to the tag - Tag could have an encryption engine (cost)
Data corruption/replacement (e.g., any tag)	Destroy the tag (i.e., denial of service)	Physical protection	Tag replacement can be detected using web analytics
Man in the middle (e.g., ticketing)	Intercept and modify data without parties knowing	Secure challenge-response and/or encryption engine	Tag must have a crypto engine (e.g., ticketing)



## A true open payments system that's easy to integrate.

Our open payments solution reduces operating costs, enhances data collection and decision-making, and makes it easier for riders to get around. The underlying technology is non-proprietary, taking advantage of open standards, open architecture and COTS hardware and software. We incorporate strong risk management protocols and real time account balances, protecting agencies' revenues, while extending the security, speed and convenience of contactless retail transactions to transit.



We're proud to be delivering the New Payments Technology (NPT) system to the Southeastern Pennsylvania Transportation Authority (SEPTA). Scan the QR Code below to find out more about this project.

[www.xerox.com/transportation](http://www.xerox.com/transportation)



# health and human services council



## Health and Human Services Council Mission

Promote the adoption of smart cards for healthcare and human services applications 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.

### Officers

- Chair: Michael Magrath, Gemalto
- Vice Chair: David Batchelor, LifeMed ID, Inc.
- Secretary: Hugh Gilenson, ABnote

### Steering Committee

- David Batchelor, LifeMed ID, Inc.
- Anna Fernezian, CSC
- Margaret Free, Giesecke & Devrient
- Hugh Gilenson, ABnote
- Michael Magrath, Gemalto
- Jim Zalnasky, Oberthur Technologies

### Top Three Contributors

- David Batchelor, LifeMed ID, Inc.
- Hugh Gilenson, ABnote
- Mitch Hanson, OTI America

### Honor Roll

- David Batchelor, LifeMed ID, Inc.
- Mitch Hanson, OTI America
- Hugh Gilenson, ABnote
- Anna Fernezian, CSC
- Michael Magrath, Gemalto
- Gupreet Manes, SafeNet, Inc.

### 2013 Activities

- Submission of comments to the Office of the National Coordinator for Health IT, Health IT Policy Committee, on Stage 3 Meaningful Use of electronic health records.
- Submission of comments to the U.S. Senate on “Reboot: Re-Examining the Strategies Needed to Successfully Adopt Health IT” white paper.
- Smart healthcare card web briefing for Workgroup for Electronic Data Interchange (WEDI).
- Participation in WEDI white paper project on smart card technology and biometrics.
- Change of Council name and expansion of Council charter to promote the adoption of smart card technology in U.S. health and human services organizations and within the national health IT infrastructure.
- Development of preconference symposium for the 2014 HIMSS Conference, “Privacy and Security: Challenges and Opportunities in Healthcare Identity”
- Completion of Council Steering Committee and officer elections.
- Relationships with HIMSS, Secure ID Coalition and WEDI.

### Health and Human Services Council Members

ABnote • Accenture LLP • Advanced Card Systems Ltd. • Bell Identification B.V. • Booz Allen Hamilton • Clear2Pay • CSC • Datacard Group • Defense Manpower Data Center • Deloitte & Touche LLP • Diebold Security • Eid Passport Inc. • ENTRUST • Fiserv • Gemalto • Giesecke & Devrient • HP Enterprise Services • Ingenico, North America • Lenel Systems International • LifeMed ID, Inc. • MasterCard Worldwide • NXP Semiconductors • Oberthur Technologies • OTI America • PPG Industries, Inc. • SafeNet, Inc. • SAIC • SecureKey Technologies • STMicroelectronics • Thales • Tycos Software House • Valid USA • VeriFone • Xerox • XTec, Inc.

# Year in Review: Health and Human Services Council Chair

## *Critical Issues Tackled in a Critical Industry*

In August 2013, the Healthcare Council changed its name to the Health and Human Services Council, which more accurately reflected the Smart Card Alliance's outreach to federal, state and local government human services agencies. The mission of the Council brings together human services organizations, payers, providers, and technologists to promote the adoption of smart cards in U.S. health and human service organizations and within the national health IT infrastructure.

Widely adopted around the world, over 100 million smart cards have been issued to patients and health and human services 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 networks and patient portals containing sensitive and private health information.

Public and private organizations have streamlined operations and reduced costs by issuing a single, secure, multi-purpose credential that can be used for identity and payment, provides a secure carrier for portable medical records, benefits and insurance coverage, provides secure access to emergency medical information, and enables compliance with government initiatives and mandates.

At a time when the U.S. is migrating from paper-based medical records to electronic records, the industry continues to turn to smart card technology to address ever-increasing problems including: fraud, waste and abuse; operational inefficiencies; and patient and provider identity authentication.

The Health and Human Services Council was involved in a number of critical initiatives in 2013 that resulted in positive outcomes for the healthcare industry.

- In February, the Smart Card Alliance submitted comments responding to the Health Information Technology Policy Committee (HITPC) Request for Comments regarding the Stage 3 definition of meaningful use of electronic health records (EHRs). The Alliance's comments advocated that EHR vendors should accept two-factor (or higher) authentication for provider users to remotely access protected health information (PHI) in Stage 3.
- In April, a white paper titled "*REBOOT: Re-examining the Strategies Needed to Successfully Adopt Health IT*," was released by several U.S. Senators outlining concerns with current federal health information technology policy. The Senators requested input from the public and the Council submitted comments pertaining to data security and patient safety.
- "The Medicare Common Access Card Act" – bi-partisan legislation introduced in the U.S. House of Representative (H.R.3024) in August – continues to gain support on both

sides of the aisle. 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 National Strategy for Trusted Identities in Cyberspace (NSTIC) continues move from a written document to planning the vision of an "Identity Ecosystem." The Identity Ecosystem Steering Group (IDESG) celebrated its one year anniversary. The IDESG's Healthcare Committee is progressing in developing use cases and our Council's representatives are advocating higher assurance digital credentials for patients and healthcare providers to protect privacy and security.
- In September, the Health Information Management Systems Society (HIMSS) selected the Smart Card Alliance to hold a full-day, pre-conference symposium at HIMSS' Annual Conference & Exposition in February 2014. The symposium entitled *Privacy and Security: Challenges and Opportunities in Healthcare Identity* will bring together healthcare practitioners and healthcare association leaders to present examples of how organizations are successfully meeting the challenges of healthcare identity management.

In 2014, the Healthcare Council will leverage 2013'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.
- Educate public and private health plans on the benefits of smart card technology.
- Develop the educational materials for human services agencies explaining how smart card technology can help reduce costs and increase efficiencies.
- Actively participate within the Identity Ecosystem Steering Group to promote the need for NIST Level of Assurance 4 authentication in healthcare.
- Provide educational resources to support the Medicare Common Access Card legislation.

We look forward to another successful year for the Health and Human Services Council.

**Michael P. Magrath, CSCIP**  
Director, Business Development  
Gemalto



# Comments on *Reboot: Re-Examining the Strategies Needed to Successfully Adopt Health IT*

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In April 2013, Senators John Thune (R-S.D.), Lamar Alexander (R-Tenn.), Pat Roberts (R-Kan.), Richard Burr (R-N.C.), Tom Coburn (R-Okla.), and Mike Enzi (R-Wyo.) released a white paper titled [REBOOT: Re-examining the Strategies Needed to Successfully Adopt Health IT](#). The white paper outlines concerns with current federal health information technology (health IT) policy, including increased health care costs, lack of momentum toward interoperability, potential waste and abuse, patient privacy, and long-term sustainability. The industry was asked to provide comments on the white paper. The Smart Card Alliance Health and Human Services Council submitted [comments](#) on Section IV, “Long-Term Questions on Data Security and Patient Safety Remain,” on May 16, 2013.

## Issues for EHRs

The white paper states:

Being proactive in anticipating and planning for patient safety concerns is a critical part of the long-term success of EHRs [electronic health records]. Providers unsure about protecting the security of patient data will be more likely to opt out of EHR programs. Additionally, patients will be less likely to engage with their EHR if they feel their information is not secure or care is negatively affected. If unaddressed, these issues could seriously undermine the program.

Identity management and authentication are the major security issues raised by the use of EHRs. To architect a safe, secure, and interoperable health IT infrastructure, it is critically important to address provider authentication and patient authentication concurrently, to identify patients and healthcare providers properly and securely, match healthcare records, and identify those who have authorized access to such records.

## Provider Authentication

Protecting an individual’s medical information and privacy is the foundation of an EHR system. If an EHR is compromised by unauthorized access, the damage to the individual’s privacy is irreversible.

At the urging of the federal government, NIST has developed identity authentication standards that define four levels of assurance (LoA). As the consequences of an authentication error or credential misuse become more serious, the level of assurance required increases from LoA 1 to LoA 4. The use of an LoA 4 credential significantly reduces the risk of inappropriate exposure. A so-called *two-factor* authentication policy falls within NIST’s LoA 3 and LoA 4. Such a policy would allow the Office of the National Coordinator for Health IT (ONC) and the Health IT Policy Committee (HIT-

PC) to develop an EHR system that both protects patient privacy and establishes the critical infrastructure that can prevent billions of dollars of fraud, waste, and abuse in public healthcare systems and private health plans.

In May 2009, the Federal CIO Council published “Personal Identity Verification Interoperability for Non-Federal Issuers.” This guidance drove the definition of the PIV Interoperable smart card (PIV-I). Using PIV-I, providers could carry a single credential for use in multiple facilities. A multi-application credential, PIV-I can be used for physical access and for two-factor or three-factor authentication. The PIV-I credential exceeds every authentication requirement being discussed or already mandated for providers.

## Patient Authentication

Patient authentication is one of the most effective methods for preventing medical identity theft. Currently, few providers require strong evidence of patient identity at the point of service. The identity problem is exacerbated when patient information is out of date or incorrect. Patient identity issues result in duplicate testing, incorrect medical procedures, medications given to the wrong patients, and even death, while contributing to the high cost of health care. The estimated expense per hospital to correct duplicate and overlay records ranges from \$500,000 to \$2.5 million every few years.

Smart health ID cards in the possession of a patient can enable two-factor or three-factor authentication. The patient information on a smart card can be encrypted using robust, extremely secure standard cryptography methods. Authenticating each patient’s identity on an ongoing basis eliminates duplicate and overlay records. Proper identity at the point of registration also ensures that the provider has the right patient for the right visit, providing patient safety and satisfaction, reducing administrative costs, and unifying patient identity data while creating an audit trail across entire healthcare systems and disparate groups.

## Summary

To solve the healthcare identity management problem, the Council recommended that the healthcare industry rely on existing federal initiatives and standards and move to smart card-based identity management and authentication. For healthcare providers, this can be accomplished in the form of PIV and PIV-I cards, smart card-based electronic identity credentials already used in several other government identity programs. Patient identity management with smart health ID cards can significantly improve quality of care, administrative efficiency, revenue collection, and legislative compliance.

# Comments on the Meaningful Use of Electronic Health Records

The [Health IT Policy Committee](#) makes recommendations to the National Coordinator for Health IT on a policy framework for the development and adoption of a nationwide health information infrastructure, including standards for the exchange of patient medical information. The Smart Card Alliance [Health & Human Services Council](#) submitted comments on January 14, 2013, in response to the HITPC request for comments on the Stage 3 definition of meaningful use of EHRs. The Alliance limited comments to Section III of the definition, “Privacy and Security.”

## Background

In September 2012, the Health IT Policy Committee (HITPC) recommended that EHRs be protected by two-factor or higher authentication so that providers could access protected health information remotely in Stage 3. In addition, it was recommended that entities identify other access environments that could require multiple factor identity authentication and continue to identity-proof providers in compliance with HIPAA. The HITPC requested input on several issues related to multi-factor authentication.

## HITPC Issues and Alliance Responses

The first issue addressed was how to reconcile HITPC’s recommendations with the approach to identification taken by the National Strategy for Trusted Identities in Cyberspace (NSTIC). The Alliance recommended that because the digital identity marketplace is so new, the Department of Health and Human Services (HHS) should look beyond the NSTIC approach since the identity ecosystem may take several years to emerge. In the meantime, HHS should leverage the standards defined by NIST Special Publication 800-63-1, *Electronic Authentication Guideline*.

The Alliance also noted that providers can benefit from adopting a single credential for both physical and logical access. Healthcare organizations currently spend a lot of money managing credentials. (A hospital may issue a flash pass to all employees, a card for physical access into certain areas, and a one-time-password for remote access or DEA compliance. Physicians affiliated with more than one hospital must manage multiple credentials.) Use of PIV Interoperable (PIV-I) credentials, developed to allow non-federal organizations to issue identity cards that Federal government relying parties can trust and that are interoperable with Federal government PIV systems, would enable providers to carry a single credential that can be used in multiple facilities.

Finally, Meaningful Use Stage 3 should require Level of Assurance 3 or Level of Assurance 4 for remote access and clearly explain both the differences and the advantages of Level of Assurance 4 solutions for reducing fraud, protecting patient privacy, and securing access to the EHRs.

A report prepared for HHS in 2009 emphasizes the need for strong patient authentication to combat medical identity theft and fraud. The second issue addressed was how the Office of the National Coordinator for Health Information Technology Medical Identity Theft (ONC) would test the HITPC’s recommendation for patient identity certification criteria. The Alliance suggested using existing Federal standards, defined by numerous NIST documents (including FIPS-201, the technical guidance that supports Homeland Security Presidential Directive 12, or HSPD-12), which calls for a common identification standard for Federal employees and contractors.

The Alliance also provided comments on a third issue: whether ONC should permit certification of an EHR as a standalone or certify an EHR along with a third-party authentication service provider. HHS may want to consider contracting with external labs that are experienced in testing identity and authentication technologies under the FIPS 201 Evaluation Program.

Finally, comments were invited on what security risk issues (or HIPAA Security Rule provisions) should be subject to meaningful use attestation in Stage 3. Rigorous identity proofing of providers and patients is imperative to neutralize the risk of identity theft, including medical identity theft. When digital credentials are issued, the production, personalization, and issuance of these credentials should be performed in a central location, both for security and to remove the threat that an insider will issue fraudulent credentials. State motor vehicle departments are migrating to central issuance of driver licenses due to insider fraud, and HHS should follow this model.



# identity council



## Identity Council Mission

Promote best policies and practices concerning person and machine identity, including strong authentication and the appropriate authorization across different use cases.

### Officers

- Chair: Bryan Ichikawa, Deloitte & Touche LLP
- Vice chair: Neville Pattinson, Gemalto
- Secretary: Salvatore D'Agostino, IDmachines

### Steering Committee

- Salvatore D'Agostino, IDmachines
- Francine Dubois, NagraID Security
- Frazier Evans, Booz Allen Hamilton
- Chris Gardner, SecureKey Technologies
- Bryan Ichikawa, Deloitte & Touche LLP
- Neville Pattinson, Gemalto
- Steve Rogers, IQ Devices
- Chris Williams, SAIC

### Top Three Contributors

- Salvatore D'Agostino, IDmachines
- Frazier Evans, Booz Allen Hamilton
- Neville Pattinson, Gemalto

### Honor Roll

- Stefan Barbu, NXP Semiconductors
- Peter Cattaneo, Intercede Ltd.
- Salvatore D'Agostino, IDmachines
- Frazier Evans, Booz Allen Hamilton
- Chris Gardner, SecureKey Technologies
- Bryan Ichikawa, Deloitte
- Harold Kocken, Deloitte
- James McLaughlin, Gemalto
- Neville Pattinson, Gemalto
- Brian Stein, CH2M Hill
- Lars Suneborn, Oberthur Technologies
- Abel Sussman, Booz Allen Hamilton
- Mike Zercher, NXP Semiconductors

### 2013 Activities

- Leadership of the Smart Card Alliance activities in the National Strategy for Trusted Identities in Cyberspace (NSTIC) initiative.
- *Mobile Devices and Identity and Access Control Applications*, ISC West 2013 workshop (in collaboration with the Access Control and Mobile & NFC Councils).
- [\*Supporting the PIV Application in Mobile Devices with the UICC\*](#) white paper, providing guidance to U.S. Government policy makers and technologists on the key technical, business and policy considerations for supporting the Personal Identity Verification (PIV) application and credentials on mobile devices using the UICC (in collaboration with the Access Control and Mobile & NFC Councils).
- [\*Smart Card Technology and NSTIC\*](#) white paper, describing the benefits of combining smart card technology and strong credentials within NSTIC.
- *Federated Identity, Strong Authentication, NSTIC and the Identity Ecosystem*, Smart Card Alliance 12<sup>th</sup> Annual Government Conference (in collaboration with the Access Control Council).
- Completion of Council Steering Committee and officer elections.
- Relationships with Secure ID Coalition.

### Identity Council Members

3M Cogent Inc. • ABnote • Accenture LLP • Advanced Card Systems Ltd. • Athena Smartcard Solutions Inc. • Booz Allen Hamilton • CertiPath LLC • CH2M HILL • Consult Hyperion • CPI Card Group • Cryptography Research, Inc. • CSC • Datacard Group • Defense Manpower Data Center • Deloitte & Touche LLP • Eid Passport Inc. • ENTRUST • Exponent, Inc. • Fiserv • Gemalto • General Services Administration • Giesecke & Devient • HID Global • HP Enterprise Services • Identification Technology Partners • Identive • IDmachines • Infineon Technologies • Ingenico, North America • IQ Devices • Lenel Systems International • Multos International • NagraID Security • NIST – National Institute of Standards and Technology • NXP Semiconductors • Oberthur Technologies • Probaris, Inc. • Quantum Secure Inc. • SafeNet, Inc. • SAIC • SecureKey Technologies • Stanley Black & Decker • Tyco Software House • Ultra Electronics Card Systems • U.S. Department of Homeland Security • XTec, Inc.

# Year in Review: Identity Council Chair

## *Trusted Identity Emerges as a Critical Initiative*

This year has experienced an evolution in the world of identity. Practitioners within our industry, as well as the general public, now recognize that secure online transactions rely on identities, and that stronger identity policies, processes, and technologies are needed to better protect online transactions. There is a growing awareness that all identities are not created equal and that there are different levels of authentication associated with identity assurance.

The public and private sectors are interested in the development of stronger authentication capabilities as the number of incidents rise. News reports about security breaches occur frequently, and some have disastrous results. So the need for strong authentication capabilities has become all the more urgent. However, building strong credentials that can be trusted means crossing a multitude of boundaries. Increasingly, the private sector and government agencies have a need to collaborate and share information. In our personal lives we perform significant online transactions. Our transactions include monetary value, and can contain sensitive private and personal information.

Our identities and transactions are intersecting at a crossroads that is aligned to a level of authentication. A low level of authentication means that the risk level is low; little or nothing is lost if the transaction is compromised. A simple query for public information exposes little risk and is an example of a transaction associated with a low level of authentication. A high level of authentication reflects a high level of harm and risk that could result if a transaction is compromised. Access to a bank account by an unauthorized individual could be financially disastrous and therefore should require a higher level of authentication.

The need for secure data sharing is growing. Utilizing email as the primary sharing conduit is no longer effective or acceptable by those parties that rely on secure and timely access to information. Public private partnerships are also growing and this information sharing need coupled with higher levels of authentication are driving the need for federation. Identity assurance now becomes a cross-domain issue, and we are moving towards establishing standards for different levels of assurance so that a credential issued by one identity provider can be appropriately trusted in another.

This year, we have seen the National Strategy for Trusted Identities in Cyberspace (NSTIC) make significant progress, announcing new pilot awards that, in addition to the five pilots previously funded, will advance the concept of trusted online identities. These new pilots extend some concepts around identity, embracing mobility, exploring wearable credentials, addressing trust frameworks, focusing on identity attributes, enhancing privacy, and establishing trustmarks that enable individuals and organizations to easily recognize and trust online credentials.

The healthcare and mobility markets are witnessing tremendous growth with their role within the identity ecosystem. The healthcare industry is urgently embracing the requirement for strong identities with which to conduct business. The mobile industry is headed towards an era where handsets will play a critical role in the identity ecosystem, representing a device from which transactions requiring higher levels of identity assurance may originate.

Another sector where trusted identities and the establishment of operating frameworks were increasingly important this year was Critical Infrastructure. With the issuance of the Executive Order and Presidential Policy Directive 21 on critical Infrastructure on February 12, 2013, The National Institute of Standards and Technology (NIST) was tasked to lead a public-private collaboration to develop the Cybersecurity Framework. The Cybersecurity Framework is designed to provide a prioritized, flexible, repeatable, performance-based, and cost-effective approach, including information security measures and controls, to help owners and operators of critical infrastructure identify, assess, and manage cyber risk. This type of risk-based approach will likely lead to opportunities for the identity community to be informed by the Cybersecurity Framework, as well as to support it via trusted-identity standards.

The Smart Card Alliance Identity Council has completed several deliverables this year, addressing some of the key subject areas mentioned above. These accomplishments include:

- Mobile PIV on UICC White Paper
- Smart Card Technology and NSTIC Brief
- Member Letter on NSTIC

As 2013 comes to an end and we look forward to the next year, the Identity Council will maintain its focus on the topics that continue to evolve in both private and public sectors. There is no doubt that the notion of identity assurance will grow in both concept and practice, and the Identity Council will continue its focus on promoting leading policies and practices concerning person and machine identity, including strong authentication and the appropriate authorization across different use cases.



**Bryan K. Ichikawa**  
Senior Manager,  
Deloitte & Touche LLP

# Supporting the PIV Application in Mobile Devices with the UICC

The increasing use of mobile devices (such as smart phones and tablets) enables workers to stay connected longer and work more efficiently. Because these devices are designed for the mass market, they often implement minimal security, if any. The mobile security requirements for a corporate employee as opposed to a government employee differ, especially for organizations that allow employees to bring their own devices (BYOD). Very specific security practices and features are required to protect sensitive and confidential information within an e-mail client or enable secure access to remote services.

This white paper was developed to guide U.S. Government decision-makers who are considering supporting the Personal Identity Verification (PIV) application and credentials on mobile devices.

## Implementation Strategy

The U.S. Government requires lengthy certification of cryptographic modules (i.e., FIPS 140-2) used in identity credentials. Given the fluid nature of the handsets and operating systems in the mobile device market, this requirement represents a challenge. This white paper describes a strategy for using the so-called “secure element” in a mobile device to secure the PIV credentials. The secure element stores data and applications that require protection and provides a secure execution environment for those applications. A mobile device’s secure element is typically hardware based and can be implemented as a universal integrated circuit card (UICC), an embedded smart chip, or a smart microSD card. This white paper focuses on using the UICC.

Most modern mobile devices contain a UICC, which is a stable, removable, and standardized form factor with a standardized interface (communications protocol) that is less vulnerable to market volatility in handsets and operating systems. The UICC is already subject to security certifications driven by the telecommunications industry. Using the UICC to contain the PIV application and credential provides the Government with a stable, certified form factor

that has a managed lifecycle and provides for a logical extension for storing the PIV framework’s “derived credentials” on a mobile device.

Although this document focuses specifically on the U.S. Government market and on the PIV credentials, the techniques and technologies discussed are applicable to any smart card-enabled identity credential and token and to any UICC-enabled smart phone or mobile device.

## Use Cases

The white paper discusses three major categories of use cases:

- The mobile device acts as a computing device (handles e-mail, encrypts and decrypts files, accesses virtual private networks, signs documents).
- The mobile device emulates a contactless smart card (enables physical and logical access, including Web authentication).
- The mobile device acts as a smart card, with card reader, PIN pad, and display.

## Implementation Issues

Supporting the PIV application and credentials in the UICC means interacting with different industry players and integrating with mobile handsets, operating systems, and application architecture. The white paper describes the mobile platform architecture and components, the provisioning infrastructure, and the PIV management system required.

One benefit of this approach is that provisioning, activation, and lifecycle management of the PIV applet and credentials can be done over the air. The white paper suggests a provisioning and management model for the applet and credentials.

Finally, the white paper lists the U.S. Government policies that are affected and the issues that must be addressed. The paper concludes by delineating the efforts required from involved industry stakeholders: mobile network operators, UICC manufacturers, handset application providers,

middleware providers, and government agencies.

## Conclusions

Incorporating the PIV credential in the UICC is cost effective and beneficial. Well-deployed mechanisms can already control the content of the UICC over the air. These mechanisms can ensure secure activation of credential functionality on the UICC and credential provisioning from the U.S. Government’s issuing authority. The UICC-based credential can then be made available to local mobile applications through mobile PIV middleware for a range of use cases.

This approach effectively balances the need for flexibility by handset makers with the need for security to protect government and commercial online identities. This architecture provides an approach that is both interoperable with the current PIV infrastructure and scalable, leveraging the investment that has already been made.

## About the White Paper

This white paper was developed by the Smart Card Alliance Identity Council, Mobile and NFC Council and Access Control Council to provide guidance to U.S. Government policy makers and technologists on the key technical, business, and policy considerations for supporting the PIV application and credentials on mobile devices using the UICC.

Council members involved in the development of this white paper included Bell Identification B.V.; Booz Allen Hamilton; CH2M HILL; Deloitte & Touche LLP; Gemalto; General Services Administration (GSA); HID Global Corporation; Identification Technology Partners; IDmachines; Intercede Ltd; IQ Devices; NXP Semiconductors; Oberthur Technologies; SAIC; SafeNet, Inc.; SecureKey Technologies; XTec, Inc.

# Smart Card Technology and the National Strategy for Trusted Identities in Cyberspace

As use of the Internet has increased, so has cyber crime. According to the Federal Bureau of Investigation, currently the leading and most persistent financial crime is identity theft. Approximately 12 million Americans have been affected by identity theft of some kind in the past 2 years.

In May 2009, the White House created the National Strategy for Trusted Identities in Cyberspace (NSTIC) in response to an action item in the *Cyberspace Policy Review* calling for an online environment in which individuals and organizations can execute transactions with confidence. The NSTIC initiative proposes a marketplace that allows people to choose among multiple private and public identity providers who can issue trusted credentials.

## NSTIC Approach

The NSTIC approach envisions an *identity ecosystem* combining trusted online identities and a supporting infrastructure. Individuals and organizations trust each other because they agree to follow specific standards to obtain and authenticate both their digital identities and the digital identities of all devices involved in a transaction. The identity ecosystem is designed to secure a complete range of transactions, from anonymous to fully authenticated and from low value to high. The ecosystem calls for various *levels of assurance*, as defined by Office of Management and Budget Memorandum 04-04 (M-04-04).

An entity known as an *identity provider* (IDP) establishes, maintains, and secures each individual's digital identity. IDPs issue credentials that provide evidence of the person's identity for a transaction. Credentials can also link to a person's authority, roles, rights, privileges, and other attributes.

NSTIC envisions an environment that allows a user to choose a credential service provider from multiple candidates. Accomplishing the NSTIC goals requires the establishment of trust relationships between government agencies and third-party credential providers. The Trust Framework Solutions Initiative establishes the trust required to externalize authentication and leverage approved credential service providers in accordance with NSTIC.

## Smart Card Technology and the NSTIC Initiative

This white paper reviews the NSTIC initiative and discusses how smart card technology can provide the advanced credentialing capabilities needed to enable high assurance in the NSTIC identity ecosystem.

A securely issued smart card or smart card technology-based device can carry a credential and provide many benefits for safeguarding information. The technology supports a number of the initiative's requirements:

- Management of a participant's multiple online identities
- Participant control of presentation



- Preservation of anonymity
- Robust security
- Interoperability among participants

While the details of the NSTIC identity ecosystem are still being defined, the paper describes how smart card technology can provide a secure, flexible solution and high assurance levels.

Smart card technology-based credentials are already used worldwide for multiple applications, including ePassports, the Department of Defense Common Access Card, and the Federal PIV card. Use cases are provided for applications in the banking, identity, and healthcare sectors.

## NSTIC Implementation

The Smart Card Alliance is promoting the adoption of the NSTIC framework. The Alliance strongly agrees with the use of federal, state, and local government initiatives to accelerate the development of an identity ecosystem. At the same time, the Alliance advocates for leveraging existing procedures, standards, and technology. Technologies such as those described in *FIPS 201*, *Personal Identity Verification (PIV) of Federal Employees and Contractors* and in the *Federal Identity, Credentialing and Access Management Roadmap* are vital to achieving interoperable, high assurance identity verification.

## About the White Paper

This white paper was developed by the Smart Card Alliance Identity Council to describe the benefits of combining smart card technology and strong credentials within the National Strategy for Trusted Identities in Cyberspace (NSTIC).

Council members involved in the development of this white paper included: Booz Allen Hamilton; CH2M HILL; Deloitte & Touche LLP; Gemalto; General Services Administration (GSA); HP Enterprise Services; IDmachines; IQ Devices; NXP Semiconductors; Oberthur Technologies; SecureKey Technologies.

# 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.

### Officers

- Co-chairs: Jack Jania, Gemalto, and Oliver Manahan, MasterCard
- Vice chair: Troy Bernard, Discover Financial Services
- Secretary: Deborah Baxley, Capgemini

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- Oliver Manahan, MasterCard Worldwide
- Nick Pisarev, G&D
- JC Raynon, VeriFone Systems
- John Smith, First Data Corporation

### Top Three Contributors

- Nancy Baunis, Connexem Consulting
- Deborah Baxley, Capgemini
- Mike English, Heartland Payment Systems

### Honor Roll

- Christa Addy, SHAZAM
- Philip Andreae, Oberthur Technologies
- Nancy Baunis, Connexem Consulting
- Deborah Baxley, Capgemini
- Troy Bernard, Discover Financial Services
- Louis Bianchin, Valid USA
- Deana Cook, Chase Card Services
- Fred Csaky, FIS
- Terry Dooley, SHAZAM
- Mike English, Heartland Payment Systems
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- Peter Ho, Wells Fargo
- Simon Hurry, Visa Inc.
- Jack Jania, Gemalto
- Brintha Koether, NXP Semiconductors
- Oliver Manahan, MasterCard
- Andra Munteanu, Discover Financial Services
- Nick Pisarev, Giesecke & Devrient
- Peter Quadagno, Quadagno & Associates
- Bill Robertson, Apriva
- Dori Skelding, Visa Inc.
- John Smith, First Data Corporation
- Garfield Smith, Oberthur Technologies
- Brian Stein, CH2M Hill
- Astrid Wang-Reboud, Gemalto

### 2013 Activities

- [The EMV Ecosystem: An Interactive Experience for the Payments Community](#) interactive presentation, providing an educational resource that identifies every stakeholder involved in the EMV ecosystem, their roles, and their links to other participants.
- [How EMV Changes Payment](#) workshop, 2013 Payments Summit
- *The Changing U.S. Payments Landscape: Impact on Payment Transactions at Physical Stores* white paper, describing payments innovations that affect the physical POS and examining the impact of the pending migration to EMV on these new payment solutions.
- Completion of Council Steering Committee and officer elections.
- Relationships with EMV Migration Forum.

### Payments Council Members

ABnote • Accenture LLP • American Express • Apriva • Bell Identification B.V. • Blackboard Inc. • Booz Allen Hamilton • Capgemini USA Inc. • Capital One • CH2M HILL • Chase Card Services • Clear2Pay • CorFire • CPI Card Group • CSC • Cubic Transportation Systems, Inc. • Datacard Group • DeviceFidelity, Inc. • Discover Financial Services • Double Diamond Group • Exponent, Inc. • First Data Corporation • FIS • Fiserv • Gemalto • Giesecke & Devrient • Heartland Payment Systems • HP Enterprise Services • Identive • InComm • Infineon Technologies • Ingenico, North America • INSIDE Secure • Interac Association/Acsys Corporation • JCB International Credit Card Co., Ltd. • Lenel Systems International • LTK Engineering Service • MasterCard Worldwide • Morpho • MTA New York City Transit • Multos International • NACHA- The Electronic Payment Association • NagraID Security • NXP Semiconductors • Oberthur Technologies • OTI America • Quadagno & Associates, Inc. • Ready Credit Corporation • SHAZAM • STMicroelectronics • Thales • TSYS • Underwriter Laboratories (UL) • United Services Automobile Association • Unwire US, Inc. • Valid USA • Vantiv • VeriFone • Visa Inc. • Washington Metropolitan Area Transit Authority (WMATA) • Wells Fargo • Xerox

# Year in Review: Payments Council Co-Chairs

## *Council Efforts Help Bring Real Change to U.S. Payments Infrastructure*

The past year has been an exciting one for the U.S. payments industry, with the growth and interest in mobile payments and open transit payments and – perhaps most exciting – the arrival of EMV chip payments. For the latter, we look back at this year and all of our years working together with a sense of accomplishment, as the Payments Council has taken the lead on educating the U.S. market on EMV chip card technology and the benefits it can provide to the United States.

Though facilitating the adoption of chip-enabled payments and payment applications in the U.S. has always been the Payments Council goal, we can pinpoint the start of the Council's major push towards EMV education in 2009 when U.S. travelers started having increasing problems using their mag stripe cards overseas. At the time, the Council urged card issuers to provide chip cards to their frequent travelers in order to prevent acceptance challenges overseas and to keep their cards top of wallet. Then, through webinars, white papers, FAQs and sessions at Alliance conferences, the Council has educated the industry on how chip card-based technologies and processes can help mitigate card-based fraud losses and promote global payments interoperability.

This past year was no exception, as the U.S. began its migration to EMV chip cards. Because U.S. migration requires new activities and collaboration of many participants throughout the payments industry, the Council produced an interactive PowerPoint tool that identifies every stakeholder involved in the full EMV ecosystem, their roles, and their links to other participants. We also thoroughly examined the changing payments landscape including mobile payments and EMV as it relates to in-store transactions with the white paper, "The Changing U.S. Payments Landscape: Impact on Payment Transactions at Physical Stores." This year's Payments Summit was the largest and most successful event to date, and has become one of the most anticipated events of the year.

This year also brought a lot of attention to the EMV Migration Forum, of which several of our Payments Council members, including both of us, are active participants. The Forum is dedicated to helping address the issues that require broad cooperation and coordination for U.S. payments stakeholders migrating to EMV.

In 2014, as the U.S. makes greater steps forward into our new payments infrastructure, the Payments Council will continue to be the industry leading educator and resource. We look forward to working together and alongside our fellow Councils and the EMV Migration Forum to provide educational materials to help ensure a successful move towards more secure, convenient and innovative payments technologies.

It is a great privilege to serve as Co-Chairs of the Payments Council, and we thank all of our Council participants for their valuable contributions throughout this year and every year.



**Jack Jania**  
Senior Vice President  
of Strategic Partnerships  
Gemalto



**Oliver Manahan**  
Vice President, Emerging Payments  
MasterCard Worldwide

# The EMV Ecosystem: An Interactive Experience for the Payments Community

U.S. migration to secure chip-based EMV payments requires new activities and collaboration of many participants throughout the payments industry. Who are the players and what parts do they play? The Smart Card Alliance Payments Council answered these questions in a PowerPoint tool published in February 2013. The interactive PowerPoint presentation identifies every stakeholder involved in the EMV ecosystem, their roles, and their links to other participants.

The tool is an easy-to-use PowerPoint slideshow. Viewers play the show and select one of the buttons on the first page. When they get to the full ecosystem graphic, all ecosystem participants required to issue and accept EMV cards and devices are shown. Viewers simply click on any participant and the presentation goes to the page that describes that participant—their role, examples of their activities, and their relationship to other participants.

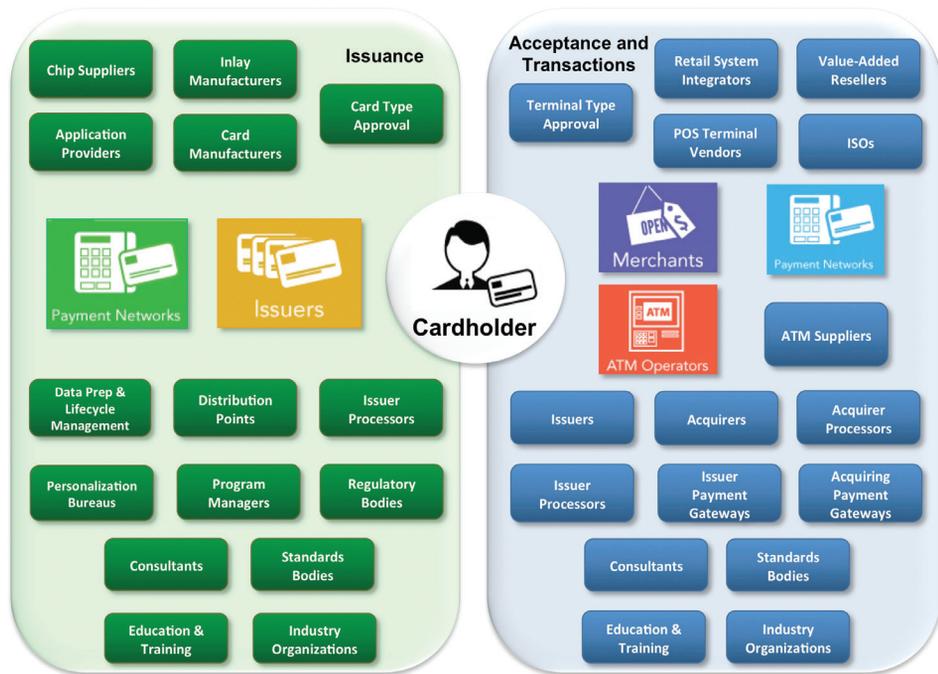
The tool looks at 37 participants or participant roles in both the EMV issuance process – providing an EMV chip card to a cardholder – and the EMV acceptance process – accepting a payment transaction at the EMV-enabled merchant point-of-sale (POS).

## Example: The Issuer as a Participant in the EMV Ecosystem

In the EMV issuance process, the issuer in the EMV ecosystem provides payment devices (cards) to customers, manages payment transactions, educates and trains cardholders, and can also play the role of issuer processor. Example EMV issuers are: Bank of America, Chase, Silicon Valley Bank, State Employees Credit Union, Travelex, UNFCU and Wells Fargo. Issuers interact with other payments industry participants with key links to cardholders, payment networks, card manufacturers, standards bodies and industry organizations.

Issuers also participate in the EMV acceptance process either directly or through issuer processors. During acceptance, a self-processing issuer must be sure that its processing software supports authorization request responses for EMV originated transactions.

## EMV Ecosystem Participants



## Example: The Merchant as a Participant in the EMV Ecosystem

In the EMV acceptance process, merchants accept EMV cards using payment applications at the point-of-sale and support an array of contact and contactless card types and form factors. Merchants add value at the point-of-purchase through customer engagement programs (e.g., loyalty, offers) and provide cardholder education and training. Merchants have key links with POS terminal vendors, retail systems integrators, acquirers, acquirer processors, ISOs, value-added solution providers and payment networks.

## About the Resource

The Payments Council developed this interactive PowerPoint presentation as an educational resource for the payments industry. The EMV ecosystem project included broad cross-industry Payments Council member participation. Members involved in the development of this tool included: Accenture; Acumen Building Services; American Express, Apriva; Bank of America; Connexem Consulting; Datacard Group; Discover Financial Services; FIS; Fiserv; Gemalto; Giesecke & Devrient; Heartland Payment Systems; Infineon Technologies; Interac Association; JPMorgan Chase; Dale Laszig; MasterCard Worldwide; Morpho; NACHA; NagraID Security; NXP Semiconductors; Oberthur Technologies; Quadagno & Associates; SHAZAM Network; TSYS; Valid USA; VeriFone; Visa Inc.; Wells Fargo.

# The Changing U.S. Payments Landscape: Impact on Payment Transactions at Physical Stores

Significant changes to the U.S. payments landscape are affecting how merchants accept payment at physical stores, as well as how consumers interact with merchants to pay for products.

Different payment approaches are removing the requirement for a payment card at the point-of-sale, leveraging cloud-based services or mobile devices. Mobile devices not only support payments but also enable new services that add value for both consumers and merchants. In addition, the U.S. is beginning to migrate to the use of secure EMV contact and contactless technology.

As the payments community moves forward with infrastructure changes and POS system upgrades, understanding key technology trends is critical for implementation of next-generation approaches to payment in the U.S. This white paper describes payments innovations that affect the physical POS and examines the impact of the pending migration to EMV on these new payment solutions. As innovators continue to deliver new solutions, they will need to consider how those solutions function in a chip card-based market.

## Payments Innovations

A number of innovations for physical POS transactions have been introduced in the U.S.

- Near Field Communication (NFC) technology enables devices in close proximity to communicate. NFC-enabled devices are very suitable for highly secure transactions and can conduct contactless payment transactions at contactless-enabled POS terminals.
- Mobile payment card readers (also known as dongles) are payment acceptance devices that allow a smart phone or tablet to accept a payment card. The technology is enabled through a small device (card reader) inserted into the headphone jack of a handset or tablet.
- Tablet POS systems incorporate the features of traditional merchant POS devices into a tablet solution. A merchant's tablet becomes a multichannel POS system that supports all standard payment services and includes additional value-added services, such as employee tracking, inventory management, sales analytics, loyalty, and rewards.
- Geolocation purchasing uses the GPS, WiFi, or Bluetooth functionality resident on both a consumer's phone and a merchant's tablet POS system to identify when the consumer is near or inside the merchant's store.
- 2-D barcodes are presented on a receipt or payment terminal screen or on the consumer's mobile device and linked to stored account information for payment.
- ACH payments use the Automated Clearinghouse system to implement customer payments to merchants.
- Remote ordering allows consumers to use a mobile application, mobile Web site, or traditional Web site to place

and pay for orders, for pick-up at the merchant physical store. The technology is most commonly used by quick service restaurants.

The white paper describes these innovations and their use, advantages, and disadvantages in detail, including their effects on the traditional payments landscape. The discussion of effects on the payments landscape covers topics such as the potential of the innovation to result in increased merchant adoption rates and increased competition among acquirers. Example solution providers are identified for each innovation and their programs summarized.

## Key Questions and Considerations

While new technology typically leads to progress, it also raises questions about how its implementation affects consumer privacy and security, the payment process and merchant plans for other POS investments.

Merchants who are contemplating whether to adopt any of the current innovations in the U.S. payments industry must consider issues in addition to the usefulness of the innovation. Advances in data storage and improved information processing capabilities have resulted in more and more data being shared and stored during everyday transactions, raising questions about how these new innovations affect consumer privacy and data security.

Merchants must also be aware of how an innovation may impact or be impacted by EMV migration. The impact of EMV on planned implementation must also be considered to ensure that any new infrastructure investment is able to support both EMV and the new technology.

The white paper examines each innovation for consequences in terms of consumer privacy and security. The two key EMV migration questions (whether the merchant acceptance device is EMV-compliant and whether the consumer is presenting payment credentials that use EMV technology) are introduced and the potential effect of EMV migration on each innovation is described. The discussion concludes by listing critical factors that merchants should consider for each innovation solution.

## Conclusions

The white paper concludes that it is still too early to tell how the landscape of the U.S. payments industry might be impacted by the wave of new innovation that is reaching the market. In the end, those that can integrate added value, flexibility and speed to all parties along the payment value chain, without impacting security or privacy, may ultimately have the best chance of success.

# 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.

### Officers

- Chair - Craig Roberts, Utah Transit Authority
- Vice chair, transit - Gerald Kane, Southeastern Pennsylvania Transportation Authority (SEPTA)
- Vice chair, transit - Mike Nash, Xerox
- Vice chair, parking - Steven Grant, LTK Engineering Services

### Steering Committee

- Linh Huynh, INSIDE Secure
- Kathy Imperatore, PATCO
- Mark Lulic, MasterCard Worldwide
- Celine Mantoux, Giesecke & Devrient
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- Kenneth Mealey, American Express
- Pradap Mistry, Cubic Transportation Systems
- Eric Reese, Chicago Transit Authority
- Eric Schindewolf, Visa Inc.
- John Vasilj, Accenture

### Top Three Contributors

- Amy Linden, MTA New York City Transit
- Jerry Kane, Southeastern Pennsylvania Transportation Authority (SEPTA)
- Mike Nash, Xerox

### Honor Roll

- Nancy Baunis, Connexem Consulting
- Lanny Byers, Consult Hyperion
- Michael DeVitto, MTA New York City Transit
- Steven Grant, LTK Engineering Services
- Kathleen Imperatore, Port Authority Transit Corporation (PATCO)
- Jerry Kane, Southeastern Pennsylvania Transportation Authority (SEPTA)
- Norman Kort, Cubic Transportation Systems, Inc.
- Rob Lieghton, MasterCard
- Amy Linden, MTA New York City Transit
- Celine Mantoux, Giesecke & Devrient
- Josh Martiesian, LTK Engineering Services
- Jane Matsumoto, Accenture
- Mike Nash, Xerox
- Peter Quadagno, Quadagno & Associates
- Craig Roberts, Utah Transit Authority
- Brian Stein, CH2M Hill
- John Vasilj, Accenture

### 2013 Activities

- *U.S. Migration to EMV and the Challenges for U.S. Public Transit Agencies* white paper, identifying the specific areas of U.S. EMV migration impact on transit and providing an informed starting point for discussions among industry stakeholders.
- *Open Fare Payments for Small Transportation Agencies: Payments as a Service Acquisition Guide* project in process, developing materials to support open payment fare collection as a service for small transit agencies.
- *Transit Industry and Payment Brands* project in process, discussing topics to enhance the cross-industry dialog and focusing on the acceptance of contactless open loop payment cards by the transit industry.
- Completion of Council Steering Committee and officer elections.

### Transportation Council Members

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# Year in Review: Transportation Council Vice Chair

## *EMV Makes its Move into Transit*

The Transportation Council was actively engaged in a variety of key issues and pressing challenges over the past year. Foremost on the Council agenda was the advent of EMV, which presents both significant compliance hurdles for the transit industry as well as opportunities to achieve benefits under open payments. Accordingly, members began work on a new white paper entitled “U.S. Migration to EMV and the Challenges to Public Transit Agencies”. The paper’s purpose is twofold: first, it presents the transit industry’s unique place in the payment ecosystem as an evolving merchant; that is, an industry operating mostly closed loop fare systems but now moving toward an open payment platform. Briefly, the paper delves into EMV compliance challenges confronting transit, including an uncertain business case due to legacy conversion costs; shifting liability costs from issuers; and potential fraud increase in e-commerce.

Secondly, the paper explores potential EMV benefits such as deferred authorization by providing offline authentication/authorization; working with scores of issuers and the need for contactless media; and engaging the payment industry to identify the best strategies to meet EMV requirements and mitigate risk. The draft completion of the paper in September provided an opportunity for Council members to present some of the content to members of the EMV Migration Forum at the Dallas meeting in September 2013.

Closely aligned to the EMV paper is a second Council initiative that seeks to create a cross industry dialogue between the transit industry and payment brands on topics of mutual interest. A sampling of these issues include synchronization of the Application Transaction Counter; sharing of the primary account number on multiple bank cards; substitution of pseudo account numbers by issuers; and risk models for prepaid contactless cards.

A third project advanced in 2013 addressed the need to provide information and guidance on open payment fare systems to small and medium-sized transit agencies. Recognizing that most agencies in the U.S. may not have adequate technical or financial resources to undertake an open payments project, this initiative presents a practical guidebook for users to im-

plement open fare payments as a service acquisition. Beginning with development of the operational concept and identification of equipment and technology, through to installation, testing and system operation, the guide will fill a much-needed information gap in the transit industry.

Finally, the Council actively pursued innovations emerging in transit, tolling and parking payment systems which may provide opportunities for convergence. Account-based, mobile and “open” payment strategies provide opportunities for payment with common media, linked accounts or a “Universal Transportation Account.” In several regions in the U.S. transportation agencies have initiated integrated corridor management programs to manage transportation demand and reduce congestion. In a federally funded demonstration in Los Angeles, information is exchanged between customers’ tolling and transit payment accounts, and travelers are given pricing and rewards incentives to use transit or car pools and travel at less congested times. The Transportation Council will have an opportunity to suggest opportunities for convergence as part of a study sponsored by the National Academy of Sciences, “Preliminary Strategic Analysis of Open Standards Fare Payment Systems for Public Transportation.”

In closing, I wish to thank the many active Council members for their time and patience in developing projects and contributing content. Looking forward, the Council will continue to seek out projects that address timely and pressing issues facing the transportation industry, resulting not only in benefits to the Council members but to our partner Councils and Smart Card Alliance overall.

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



# U.S. Migration to EMV and the Challenges for U.S. Public Transit Agencies

The payments industry in the United States is now beginning to migrate to EMV, a set of specifications managed by EMVCo to ensure global interoperability between payment chip cards and terminals and to mitigate card fraud.

For U.S. transit agencies, the challenge represented by EMV migration is complicated by the fact that several transit agencies are currently planning or piloting payment systems that accept contactless open payment cards at the turnstile or fare box. This approach allows travelers to use bank-issued cards at the transit point-of-entry; transit agencies would no longer have to issue their own transit-specific payment media. Some of the largest agencies are awarding contracts or developing systems based on this approach. One agency has already implemented open payments.

U.S. migration to EMV therefore presents challenges and opportunities for both current and future transit fare payment systems. This white paper identifies the specific areas where EMV migration will impact transit, suggests strategies to mitigate negative impact, and identifies areas of opportunity for EMV migration to enhance the use of bank cards for transit fare payment.

## Challenges for Current Systems

The major challenge for current transit fare systems is the difficulty of making a good business case for migrating to EMV. Vending

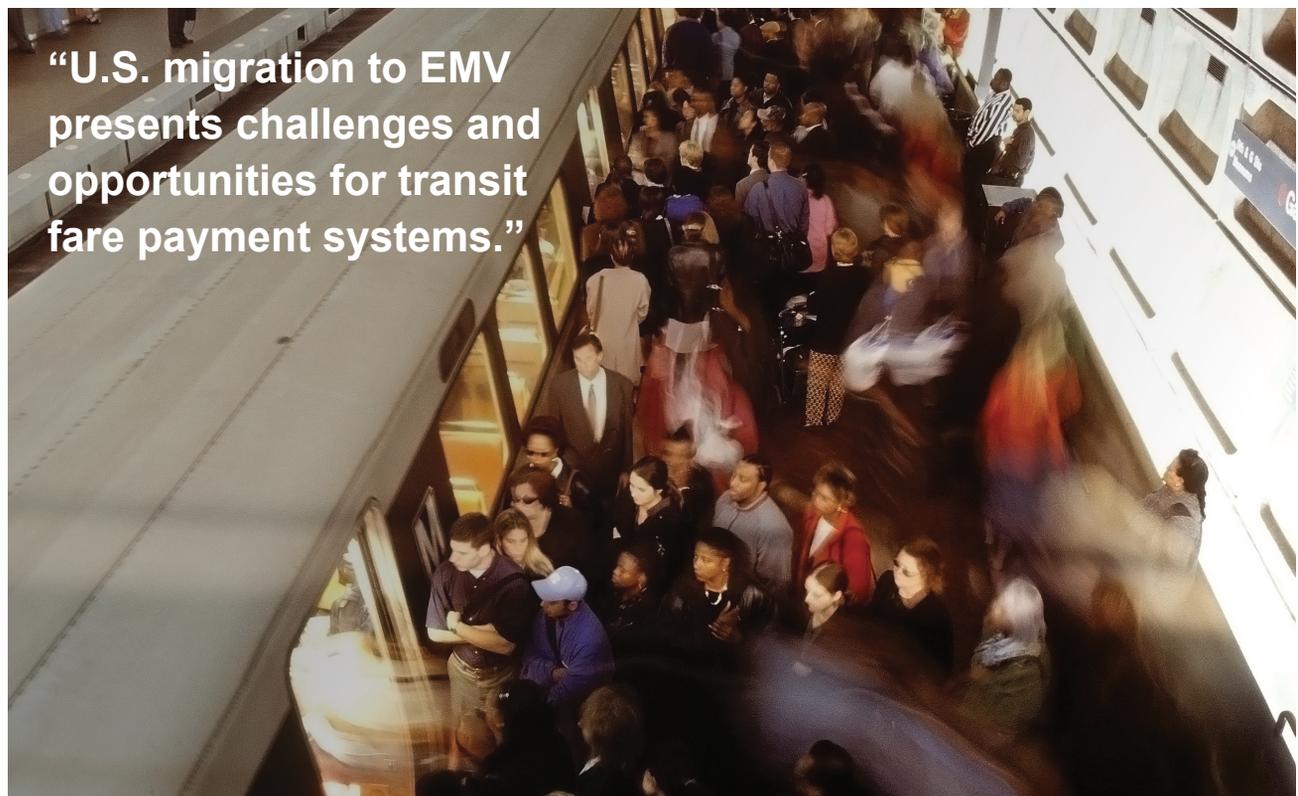
machine conversion or replacement is expensive, and transit agencies experience low levels of counterfeit fraud-related chargebacks. Little data is available on how much of current issuers' liability will be shifted to transit, making it hard to identify the potential financial effects of the planned liability shift. And transit agencies that are planning to replace current fare collection systems during the next five years will not find it cost effective to migrate to EMV on old systems that are about to be replaced.

Investment to provide EMV acceptance capability will be difficult to justify outside of regularly scheduled planned upgrades or replacements, if then.

## Challenges for Open Payment Systems

Transit agencies moving to open payment systems are planning to deploy contactless-only acceptance devices at entry points. EMV cards issued without a contactless interface or that require cardholder verification will not be accepted, and the cardholder will not be able to use these devices for transit payment. The acceptance of open payment cards will be impossible unless EMV cards have a contactless interface and purchases at entry points do not require cardholder verification.

Another issue for open payment discussed in the white paper is the authorization transaction counter (ATC) that is included in EMV



.....

contactless cards and that permits offline authorization. The ATC controls how many transactions can be completed offline. The ATC is incremented not only for a pay-as-you-go tap, but also for free transfer and exit taps and check balance/expiration date taps. If the number of offline taps exceeds the issuer's predefined limit, the next online authorization may be declined, or worse, the card may be invalidated. Mitigating the risk of inappropriate refusal and synchronizing the counter represent another challenge.

Transaction authorization is an additional issue for open payment systems. Online authorization of open payment card transactions results in transaction speeds greater than what is acceptable at gated points of entry for transit. Using a contactless open payment card for pay-as-you-go fares can mean an entry decision is required before an authorization response is received. The transit merchant risks nonpayment on that particular transaction and, when the authorization response is to decline the card, the merchant risks nonpayment on any additional transactions (deferred authorization risk) until the merchant can hotlist the card. Managing deferred authorization risk is essential to the use of open payment cards. The white paper describes how EMV cards could help with this challenge if offline authorization is supported.

One final issue discussed is the growth in card-not-present (CNP) fraud that is expected to follow deployment of EMV cards in the U.S., as fraud shifts from physical POS transactions to eCommerce transactions. Agencies moving toward open payment systems are designing robust backend systems to encourage riders to establish accounts. Increased CNP fraud is a major concern as transit grows the account-based volume.

### General Transit Challenges

EMV migration raises several general challenges for transit:

- EMV transaction processing adds more steps at the terminal, increasing the time needed for a transaction and affecting both transaction performance and the customer experience.
- Card readers will probably need to support both EMV and other card types, including closed-loop cards. Reader software will have to prioritize the type of card it is trying to read.
- EMV requires changes to the hardware and software throughout a transit merchant's processing network, including changes not only to acceptance devices but also to host systems/processors.

### About the White Paper

This white paper was developed by the Smart Card Alliance Transportation Council to identify the challenges for U.S. public transit agencies in supporting U.S. migration to EMV-based payment transactions. Preliminary conclusions from the white paper were presented to the EMV Migration Forum during the Forum's September meeting.



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# emv migration forum



## Overview

The Smart Card Alliance formally announced the creation of the EMV Migration Forum (the Forum) on July 31, 2012, to address issues that require broad cooperation and coordination across many constituents in the payments space in order to successfully introduce [secure EMV contact and contactless technology](#) in the United States. It has been widely agreed that cross-industry cooperation is essential to ultimately benefit both the payment ecosystem and consumers, and to that end, a broad cross-section of leading payments brands, issuers, payments processors, and industry suppliers were behind establishing the Forum.

Immediate reaction to the formation of a neutral, cross-industry environment for payments ecosystem stakeholders to address topics that require some level of industry cooperation and/or coordination to migrate successfully to EMV technology in the United States was extraordinary, and remains overwhelmingly positive and supportive.

In less than 18 months, membership in the Forum includes more than 140 global payments brands, financial institutions, merchants, processors, acquirers, regional

debit networks, industry associations and industry suppliers. While part of the Smart Card Alliance corporate organization, the EMV Migration Forum has a separate membership and includes organizations with no previous involvement with or usage of smart cards or chip technology other than how this technology integrates into the EMV payments infrastructure

Member companies have consistently reported that the Forum provides them with a supportive and congenial venue in which all payments stakeholders can seamlessly and successfully transition from magnetic stripe technology to secure EMV contact and contactless technology in the United States.

In 2013, Forum members gathered in person nine times throughout the United States, at one-day Working Committee meetings and two-day member conferences

With its goal to align actions and timelines for everyone in order to achieve an efficient, coordinated, and timely migration to EMV, the Forum is successful due to its members and their collaborative work mindset.

## Officers

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# Year in Review: EMV Migration Forum

## *Strong Support from all Industry Stakeholders*

Launched in August, 2012, the EMV Migration Forum – a cross-industry organization that is separate but affiliated with the Smart Card Alliance – focused on the alignment of all payments stakeholders to ensure a timely and efficient move from magnetic stripe technology to EMV contact and contactless payments technology in the United States. The EMV Migration Forum has already accomplished a great deal in its first full year, with U.S. EMV migration now in full swing.

The Forum now has over 140 member organizations, with representatives from all industry stakeholder groups – payment brands, issuers, acquirer processors, merchants, debit networks, and industry suppliers. And our members are very active – attending member meetings, participating in Working Committee and Special Interest Group activities and discussions, and engaging in interactive and energetic discussion about EMV implementation in the U.S. Over 400 individuals from more than 100 member organizations are also involved in our six Working Committees, which are chaired by industry leaders and meet via regular conference calls and at the member meetings.

By the end of 2013, Forum members will have met a total of nine times in person, from two-day all-member conferences to one-day in-person Working Committee meetings, from Salt Lake City to New Orleans and cities in between. The full member meetings average over 200 attendees, with sessions focused on updates from stakeholder groups, education and specific project activities. Each participating organization sends its top payments experts and managers to share information and collaborate on creative solutions to the challenges ahead for the U.S. migration to EMV.

I look back at 2013 with a mixture of surprise and determination: surprise at the immediate positive response of financial institutions, merchants, and processors to join our organization and support the mission; and determination to achieve our goals and objectives by the October, 2015, target liability shift date.

Central to all of our activities is our mission: address issues that require broad cooperation and coordination across many constituents in the payments space to ensure the successful adoption of EMV-enabled cards, devices, and terminals across the U.S. market and to ensure that migration in the U.S. market is efficient, timely and effective.

Forum activities in 2013 focused on discussing and providing clarity on the approach for implementing EMV debit in the U.S. market and on providing educational resources for both Forum members and the general payments industry. Some of our key accomplishments were:

- Gaining agreement among Forum merchant, issuer, merchant acquirer, and issuer processor members on [recommended principles for implementing EMV debit in the U.S.](#), with Debit Working Committee members collaborating to define technical directions.
- Agreeing on and publishing a [glossary of standardized terminology](#) to assist industry stakeholder communications.
- Publishing the [EMV Testing and Certification White Paper: Current U.S. Payment Brand Requirements for the Acquiring Community](#), which describes the payment brands' current processes for testing and certification.
- Completing a survey of EMV stakeholders to understand key concerns and perspectives and help to shape Forum activities.
- Establishing two new Working Committees (ATM and Card-Not-Present Fraud) and managing the six active Working Committees, each with its own set of project and educational activities and priorities set by the membership.

While there are uncertainties about how debit will be implemented in the U.S., we expect 2014 to be equally active for the Forum. Because the United States is diverse, has a larger scale than other countries and is expected to embrace multiple strategies (e.g., both chip and signature and chip and PIN implementations) for implementing EMV based on issuer and merchant preferences, education on EMV implementation choices is critical. The EMV Migration Forum will devote more time in 2014 to providing the critical education that payments stakeholders require – at meetings, through Working Committee projects and through development of educational resources published to the industry.

The Forum's mission is to coordinate the timeliest, most efficient, and cost-effective way to move the complex, diverse U.S. payments market to EMV. By establishing a professional, collaborative environment for engaged discussion and debate among all industry stakeholders, the organization is harnessing the collective expertise of the U.S. payments industry to guide our migration to more secure EMV technology. Thank you to everyone who played a role in the Forum this year; we appreciate your support and look forward to achieving more milestones.



**Randy Vanderhoof**  
Director  
EMV Migration Forum

# EMV Migration Forum Working Committees

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The EMV Migration Forum has six working committees and two special interest groups focused on different topics relevant to EMV Migration. The working committee topics and activities are chosen by EMV Migration Forum members based on critical issues discussed in the Forum meetings. Forum members can join any working committee and lead or participate in committee projects. Projects are defined by the committee members to focus on the critical issues or challenges that impact the U.S. payments industry migration to EMV. Working committees meet at EMV Migration Forum in-person meetings and in regular teleconferences.

- **ATM Working Committee**, led by David Tente, ATMIA, and Ron Schnittman, Bank of America

The ATM Working Committee goal is to explore the challenges of EMV migration for the U.S. ATM industry, work to identify possible solutions to challenges, and facilitate the sharing of best practices with the various industry constituents, with the goal result being more positive EMV migration experience for consumers. The Working Committee will serve to provide input, solutions, and expertise that are specific to the needs of the ATM channel to other EMV Migration Forum working committees.

- **Card-Not-Present (CNP) Fraud Working Committee**, led by Sheryl York, Litle & Co., and Salman Syed, MasterCard

The Card-Not-Present Fraud Working Committee goal is to create a comprehensive best practices strategy to mitigate card-not-present fraud in the new EMV chip card environment, using a balanced approach considering all key stakeholders – issuers, consumers, merchants, acquirers, networks and third parties. Currently, the Working Committee projects include reviewing and assembling lessons learned from other country migrations, benchmarking potential tools used to address fraud, monitoring fraud levels and collaborating with other organizations to understand fraud costs, and providing best practices for online fraud management.

- **Communication and Education Working Committee**, led by Diane Jackson, CPI Card Group, Mansour Karimzadeh, SCIL, and Cindy Knowles, FIS

The Communication and Education Working Committee goal is to deliver a communications plan for key payments industry stakeholder that promotes an efficient, timely and effective migration to EMV-enabled cards, devices and terminals in the United States. Committee projects include leading the Forum's efforts on developing clear, consistent messaging around EMV migration.

- **Debit and EMV Working Committee**, led by Emily Santos, SunTrust, and Oliver Manahan, MasterCard

The Debit and EMV Working Committee goal is to coordinate across the payments industry to solve debit challenges with EMV migration in the United States. The Committee is working on understanding stakeholder requirements for debit and network routing and identifying potential solutions that comply with the Durbin Amendment and support merchant routing. The Committee includes a broad cross-section of the payments industry including issuers, merchants, acquirers, processors, global payment brands, regional debit networks, industry suppliers and industry associations.

- **Testing and Certification Working Committee**, led by Randy Burnette, VeriFone, and Cindy Kohler, Visa

The Testing and Certification Working Committee goal is to discuss the challenges with EMV certification and define approaches for achieving certification to meet the payment brand milestones for fraud liability shift. Areas for focus include: education on the testing and certification that is required for different industry stakeholders; evaluation of current processes to define approaches for streamlining testing and certification.

- **U.S. Coordination Working Committee**, led by Jan McGrath, MasterCard and Dan Jovanovic, City National Bank

The U.S. Coordination Working Committee goal is to identify the specific areas that need coordination for the U.S. market and to deploy projects for stakeholders to collaborate on critical issues. The Committee is exploring ways to obtain early input on best practices for EMV-related operations and consumer and merchant messaging.

## Special Interest Groups

The EMV Migration Forum has two special interest groups (SIGs), one for merchants and one for issuers. The Issuer SIG is led by Jesse Lee, Wells Fargo, and Mansour Karimzadeh, SCIL, and the Merchant SIG is led by Kristy Cook, Target, and Laura Ermer, McDonald's

SIGs meet at EMV Migration Forum in-person meetings and gather members into "birds-of-a-feather" sessions to discuss topics relevant to SIG participants.

More than 400 EMV Migration Forum members participate in the working Committees, with each committee including participants from all stakeholder categories. Members have had a busy year, producing white papers, surveys, internal discussion documents, process flows, and publications for the industry.

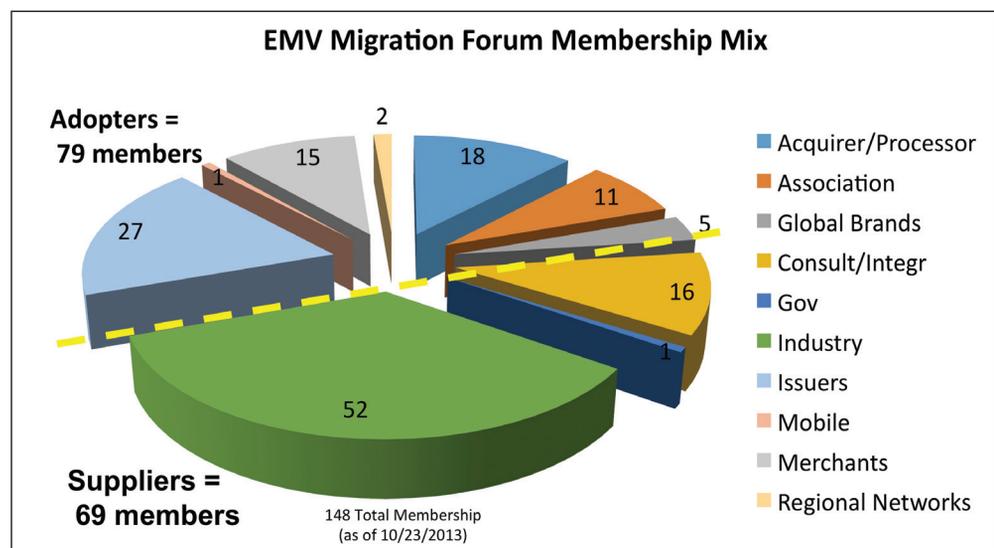
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# latin america chapter



## SCALA Mission

Stimulate the understanding, adoption, use and widespread application of smart cards in the Americas.

## SCALA Overview

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

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

The smart card market is growing, due to many market factors including the migration to EMV, open payments fare collection in transit and government and commercial identity programs.

## SCALA Committees

### Financial Payments Council

The Financial Payments Council promotes the understanding of the benefits of using smart cards for payments in the financial sector. The council played a key role in the development of the *“Card Payments Roadmap in Latin America & the Caribbean: How Does EMV Impact the Payments Infrastructure?”* white paper, the technical document that was the basis for the SCALA-PaymentMedia conference, EMVTour.

In 2013 in a continued strategic alliance with Payment Media, SCALA developed the EMVTour, conference events held throughout the Latin America & the Caribbean region. These events provide information regarding EMV smart card technology to the professionals that are directly involved in the migration process. The Financial Payments Council has been participating actively as part of the EMVTour organization committee in order to create an agenda personalized to the needs of each market and the level of migration of EMV in each country where this event is held.

#### Council Officers

Chairman: Marcelo de Oliveira, Visa Inc.  
Financial Industry Representative: Jorge Krug, Banco do Rio Grande do Sul

#### Steering Committee

Henry Torry, American Express  
Kim Hangoc, MasterCard Worldwide  
Pablo Juan, Giesecke & Devrient

#### Top Contributors

Antonio Muñoz, Safran Morpho; Carmen Gonzalez, Visa Inc.; Dimas Gomez, Gemalto; Nidia Ceballos, First Data

### ID and Government Council

In 2013, the SCALA ID and Government Council continued its strategic efforts to expand the use of smart card technology in Latin America & the Caribbean region. This year the council developed a *Govern-*

*ment Information Exchange* in Mexico, focused on the exchange of information and impartial industry best practices with different government agencies, industry leaders, and member organizations in the region on the use of smart cards to help to improve government services.

Through this Council, SCALA provides a program that helps guide governments and related institutions on the application of smart card technology in identity credential projects. 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 to different project such as: E-Passports, E-Visas, Driver's Licenses, Social Security Systems, Access Control, National ID, Fare Collection & Transportation, Healthcare.

#### Council Officers

Chairman: Luis de la Cruz, Magicard-Ultra Electronics

#### Steering Committee

Claudio Perez Tabacow, HID Global  
Rolando Colchado, Giesecke & Devrient  
Luis Cuevas, Oberthur Technologies

#### Top Contributors

Mia Harbitz, Inter-American Development Bank; José Lisac, Sertracen; Ally McDonald, ICards Solutions; Hans Schut, Smart-rac N.V.

# SCALA Takes to the Road to Educate and Inform

*Multi-country EMV Tour Brings EMV to Masses, Promotes Identity and Smart Card Apps*



Reflecting on our accomplishments for 2013, we have seen our organization grow both in size and influence, stepping up to the plate when needed to lead the industry toward a common goal. In years past, SCALA's role had been overshadowed by industry players and individuals not willing to conform to our leadership, work culture, impartial nature, and vision. I am glad to announce that those

days are now in our past and all of the key industry organizations in Latin America and the Caribbean are at one with our unified industry voice.

This year prominent organizations such as American Express, CHARGE Anywhere, Ultra Electronics Card Systems, Unitec Blue, and Watchdata Technologies have joined SCALA at the Leadership Council level, helping us to solidify our industry leadership, as we now have all the international payment networks and serious card manufacturers/suppliers in Latin America as members. SCALA now has over 50 member organizations including all representing industries – chip manufacturers, card suppliers, integrators, end users, financial institutions, government agencies, and global international organizations.

In 2013, SCALA held events and activities designed to assist key market segments that needed our help, such as the financial industry in Latin America, which had been struggling to obtain impartial industry information for their EMV migration. Utilizing the white paper *“Card Payments Roadmap in Latin America & the Caribbean: How Does EMV Impact the Payments Infrastructure,”* SCALA and its partner, PaymentMedia, created, and took on the road, an **EMV Tour**, which has helped to educate and promote EMV migration in the region.

The **“EMV Tour – ConoSur”** held in March in Buenos Aires, Argentina, focused on South American markets in the beginning stages of migration towards EMV smart card technology. The event was then taken to the Caribbean, a region struggling to kick start its migration process because of lack of information. The **“EMV-**

**Tour – CAC,”** which was held in June in Punta Cana, Dominican Republic, received a record level of corporate sponsorship and included participants from Central American nations.

For our ID, security, and government members, SCALA conducted its highly anticipated **“Government Information Exchange,”** an activity meant to help the smart card industry outreach to government agencies by providing an open forum to share impartial information and address some of their initiatives, concerns, and necessities. This year's **Exchange** in May, in Mexico City, was conducted with the Commercial Services of the U.S. Embassy of Mexico. The event was highly attended by both Federal and State Agencies from Mexico, which then asked us to conduct a second edition of the exchange in June of 2014. Some of the key speakers included Ultra Electronics, Inter-American Development Bank, HID Global, Giesecke & Devrient, Smartrac, and Oberthur Technologies.

Accordingly, the SCALA chapter organization has expanded its deliverables and resources to the Latin American and Caribbean markets, adapting and translating key documents and white papers for the region including: **EMV & NFC: Complementary Technologies, Mobile Devices and ID Applications,** and **The EMV Roadmap for Latin America & Caribbean.** These resources and white papers have become valuable for our members and potential members. In this regard, the SCALA Advisory Board of Directors voted to grant only members access to white papers, industry reports, conference proceedings, market studies, and other relevant resources to only member organizations.

One of the more exciting moments occurred recently at the **Cartes – Secure Connexions** just last month, from November 19-21 in Paris, France. Cartes chose the SCALA chapter to lead the track *“Brazil – Building Trust in Mobile Life.”* This was the first time a Latin American country has been chosen to be honored in the industry's biggest event, and it was indeed both a generous compliment for SCALA and validation that we are viewed as the single industry voice of smart card technology in the region.

Lastly, in 2013 we finally completed a much-needed member resource, **The SCALA Member Handbook**, a comprehensive guide explaining all of the benefits and opportunities for members, as well as general organization procedures. The handbook has already become a valuable resource for existing and new members.

We are looking forward to supporting you for another great year.

**Edgar Betts**  
Associate Director, SCALA

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www.c-sam.com

Capgemini USA Inc  
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www.capgemini.com

Capital One  
15000 Capital One Drive  
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www.capitalone.com

CardLogix  
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Irvine, CA 92618  
www.cardlogix.com

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www.chase.com

Chicago Transit Authority  
567 West Lake Street  
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www.transitchicago.com

City of Calgary, Calgary Transit  
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www.calgarytransit.com

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Scottsdale, AZ 85251  
www.clear2pay.com

Codebench, Inc.  
6820 Lyons Technology Circle, Suite 140  
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Computer Science Corp (CSC)  
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Irving, TX 75063  
www.csc.com/cards

Consult Hyperion  
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Core Quality Service, S.A.  
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[www.cpicardgroup.com](http://www.cpicardgroup.com)

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San Francisco, CA 94105  
[www.cryptography.com/dpa](http://www.cryptography.com/dpa)

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Richardson, TX 75081  
[www.devicefidelity.com](http://www.devicefidelity.com)

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Canton, OH 44707  
[www.dieboldsecurity.com](http://www.dieboldsecurity.com)

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[www.iall-tech.com](http://www.iall-tech.com)

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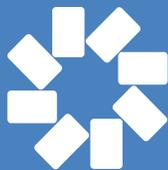
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