




SECURE
TECHNOLOGY
ALLIANCE



2018

ANNUAL REVIEW



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DISCOVER
GLOBAL NETWORK

1 68% of Discover Cardmembers have not returned to a merchant in the last month if their Discover Card was rejected
C+R Research Study of 2,000 Discover Cardholders commissioned by DFS Services LLC and completed in December, 2016.

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EXECUTIVE DIRECTOR'S LETTER: A MESSAGE FROM RANDY VANDERHOOF

Meeting Security Demands for a Changing Market

Thank you for taking time to read the Secure Technology Alliance 2018 Annual Review. This publication highlights a year's worth of member-driven achievements from Alliance organization members. We are proud to showcase the efforts of these industry leaders who give back to the digital security industry by providing their insights and experience that drive the further adoption of smart cards and other security technologies in payments, mobile, transportation, government, healthcare, access control, and new markets that are part of the Internet of Things.

MARKETS MATURE AND NEW MARKETS EMERGE

In the years since the Secure Technology Alliance expanded its mission by adopting a broader vision of digital security beyond smart cards, the size and breadth of the market have expanded significantly. Included in this publication are:

- Details about how the payments industry has nearly completed its conversion to chip cards and seen counterfeit fraud reduced by more than 70% in some cases
- Analysis of how the mobile wallets infrastructure has matured around ubiquitous global brands like Apple, Google, Android, and Samsung
- Updates on embedded smart phone security, tokenization and biometrics, that have provided consumers with increased choice and convenience, and better security
- Discussion of how the federal government has recommitted itself to protecting the federal enterprise with strong security credentials and two-factor authentication based on new policy guidelines for the use of government-issued PIV ID cards

INTERNET OF THINGS SECURITY BENEFITS FROM PAST EXPERIENCE

A big challenge this year was establishing security principles for the IoT industry. The Alliance IoT Security Council was active in responding to known threats like the botnet attacks on connected security cameras and devices being installed with default passwords. The council also promoted the need for protecting billions of newly Internet-connected devices and sensors with embedded security chips and cryptography. Alliance member organizations who defined the security requirements for payment cards, mobile phones, and secure ID credentials are working with IoT suppliers and integrators to build hardware-based security into IoT devices from the start rather than try to fix weak security later.

U.S. PAYMENTS FORUM FOCUSES ON NEW IMPLEMENTATION CHALLENGES

The Alliance's affiliated organization, the U.S. Payments Forum, resolves issues impacting the adoption of advanced payments technologies. Forum members were effective in ushering in EMV and are now focusing on new challenges involving card-not-present fraud, new cardholder authentication solutions, and preparations for increased mobile and EMV contactless cards acceptance. Understanding the impact and changes in the payments delivery and processing ecosystem have on financial card issuers, merchants, and their processors proved to be very important when EMV was introduced. Now, it's proving to be equally important for stakeholders grappling with online fraud and mobile payments acceptance.

ALLIANCE PROVIDES EDUCATION AND TRAINING FOR A NEW GENERATION

The Alliance uses collaborative industry councils, training and certification programs, conferences, workshops and webinars to prepare a new generation of industry leaders. It does this by providing input to other standards bodies and industry groups, distributing its security resources to the outside world via multiple web sites and media relations, and promoting its leaders to speak at industry conferences throughout the world.

With continued active member engagement, the Secure Technology Alliance will continue its support for smart card technology while it prepares the U.S. markets for the new digital security technologies for the future.

Thank you for your support, and I wish you continued success in the new year.



Randy Vanderhoof
Executive Director,
Secure Technology
Alliance



SECURE
TECHNOLOGY
ALLIANCE

The Secure Technology Alliance Annual Review is produced by the Secure Technology Alliance, a not-for-profit, multi-industry association working to stimulate the understanding, adoption and widespread application of secure solutions, including smart cards, embedded chip technology, and related hardware and software.

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32 – PAYMENTS COUNCIL



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SECURE
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ALLIANCE

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A MESSAGE FROM BOARD CHAIR OLIVER MANAHAN, 2017-2019

The Alliance: Providing Objective, Accurate Market Information

I think we can all agree that one of the most difficult challenges facing anyone in an organization is understanding what has the potential to become important in our industry, versus what is just hype.

This has never been more true than in the past year, and adding to the complexity are the dependencies among the various technologies and solutions being discussed in the market: biometrics, blockchain, contactless/NFC, mobile, smart speakers/assistants, among others.

The one thing that has always been unique to the Secure Technology Alliance is our objective to provide accurate, unbiased information to the market. This manifests itself in many ways, whether through Alliance conferences during the year, white papers, or educational webinars, to name just a few activities and deliverables.

The Alliance also spans a multitude of industries, and has councils for each that members can participate in to help shape what comes next: Access Control, Identity, Internet of Things Security, Mobile, Payments and Transportation.

I have had the privilege of chairing or co-chairing the Payments Council for several years. We take great pride in the materials we produce, and always have an engaged and diverse stakeholder group leading projects and providing contributions. We typically take a longer-term view with projects we undertake, looking for products and markets that may take hold in three to five years. When I look back at the materials produced over the past, it's gratifying to see we were tackling the right issues, and in most cases, drawing the right conclusions. I know the same is true for the other industry councils, where great effort goes into the selection, planning and execution of the projects that are undertaken.

As this is my first year as the Chair of the Alliance, I have an even greater understanding of, and respect for the team that Randy leads to pull this all together. I would urge you to continue your efforts in helping make the Alliance the preeminent place where factual and unbiased information is gathered and disseminated. If you're thinking about joining a council but believe the time requirements are too great, I can state without hesitation that I have gained more than I could possibly give.

Thank you for all your efforts, and let's make 2019 an even greater success!



Oliver Manahan
Director of Business
Development
Infineon Technologies

BOARD OF DIRECTORS

2017-2018 EXECUTIVE COMMITTEE

Chair: Oliver Manahan, Infineon Technologies

Treasurer: Morgan Richard, XTec, Inc.

Secretary: Thomas Lockwood, NextgenID, Inc.

Assistant Secretary: Kelly Urban, First Data

Technology Vice Chair: Allen Friedman, Ingenico

2017-2018 DIRECTORS

Reena Abraham, Gemalto

Tim Baldrige, U.S. Department of Defense/
Defense Manpower Data Center

Allen Friedman, Ingenico

Melanie Gluck, Mastercard

Wes Haworth, Verifone

Simon Hurry, Visa Inc.

Thomas Lockwood, NextgenID, Inc.

Oliver Manahan, Infineon Technologies

Eric Megret-Dorne, G+D Mobile Security

Morgan Richard, XTec, Inc.

Elinor Smith, Discover Financial Services

Garfield Smith, IDEMIA

Kelly Urban, First Data

Frederick Wedley/Brin Owen, Jacobs

ALLIANCE MANAGEMENT

RANDY VANDERHOOF

Executive Director

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Randy Vanderhoof is the Executive Director of the Secure Technology Alliance, formerly known as the Smart Card Alliance. In addition to his leadership role with the Secure Technology Alliance, Randy is also the Director of the U.S. Payments Forum (formerly known as the EMV Migration Forum). A frequent speaker at high-level industry events, Randy has led the Alliance since 2001. Prior to that, he spent most of his professional career in management positions with a number of global organizations involving smart card identity and payments technology.

EDGAR BETTS

Associate Director, Digital Innovation Alliance (formerly SCALA)

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Edgar Betts is responsible for the Digital Innovation Alliance (formerly SCALA), an affiliated chapter of the Secure Technology Alliance. He oversaw the spin-off into its own independent industry organization. The Digital Innovation Alliance maintains a collaborative relationship with the Alliance in the U.S.

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Bryan Ichikawa serves as a consultant to the Secure Technology Alliance, and is responsible for marketing and sales for the organization's events and conferences.

KRISTIN KREBS

Coordinator, Conference Services

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Kristin Krebs is responsible for supporting event and conference logistics for the Secure Technology Alliance and U.S. Payments Forum.

NICOLE LAUZON

Membership

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Nicole Lauzon is responsible for membership management and database support for both the Secure Technology Alliance and U.S. Payments Forum.

DEBRA MARSHALL

Director, Communications

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Debra Marshall is Communications Director for the Secure Technology Alliance and the U.S. Payments Forum. Her responsibilities include producing monthly and quarterly newsletters for the two organizations, coordinating all written announcements, updates and news alerts.

CATHY MEDICH

Director, Strategic Programs

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Cathy Medich is Director of Strategic Programs the Secure Technology Alliance, and Associate Director for the U.S. Payments Forum. She manages marketing and industry initiatives, directs industry council and working committee activities, and manages strategic projects. Working with member teams, Cathy leads the development of educational resources covering priority topics for the industry.

DEVON ROHRER

Project Coordinator, Industry Councils

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Devon Rohrer serves as the Project Coordinator for both the Secure Technology Alliance and the U.S. Payments Forum. She joined the organization at the beginning of this year and works closely with the Alliance's six Councils and the Forum's seven Working Committees. Prior to her work with the Alliance and the Forum she supported EMVCo and GlobalPlatform.

JACLYN SAUVÉ

Director, Conference Services

jsauve@securetechalliance.org

Jaclyn Sauvé is the Director of Conference Services for the Secure Technology Alliance and U.S. Payments Forum, leading the logistic support team responsible for all conference operations. Jaci also supports each conference program committee as a speaker liaison and the sales and marketing staff, managing exhibitor and sponsor communications.

LARS SUNEBOEN

Director, Training Programs

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Lars Suneborn is responsible for directing all of the Alliance training programs for members and industry professionals. He works to promote the industry credentials to organizations, leads training classes, and arranges corporate training courses.

SHELBEY VOTAPEK

Consultant, Communications

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Shelbey Votapek manages all electronic communications for the Alliance and U.S. Payments Forum. Shelbey oversees the maintenance of the web sites and assists on various projects for both the Alliance and Forum, including newsletter database management and distribution, member awards and recognition, and Annual Review advertising.



MEMBERSHIP BENEFITS

The Secure Technology Alliance is the right place to be for organizations who are:

- Entering the digital security industry
- Developing or implementing a secure solution to protect identities and data
- Following security trends in the U.S. market

Membership in the Secure Technology Alliance and participation in Alliance activities enable organizations, and their respective individual employees, in all industries to be at the forefront of digital security.

Membership is made up of digital security technology adopter and provider organizations of all sizes focused on the payments, mobile, healthcare, identity and access, transportation, Internet of Things (IoT) and other emerging markets in the U.S. These members and organizations receive:

- ✓ Complimentary registration at Alliance events and conferences
- ✓ Professional development opportunities for individuals and workforces through training and certification programs
- ✓ Up-to-date, valuable market intelligence and the ability to collaborate to solve industry issues through council participation
- ✓ Ability to shape the agenda at Alliance events
- ✓ Ability to influence best practices and standards within the digital security industry through outreach
- ✓ Supplemental educational knowledge by contributing to white papers, FAQs and position statements

"Participation in the Alliance can yield great opportunities. The Alliance provides a rare mix of public, private sector, and not-for-profit organizations and individuals partnered to make a difference. Through this forum, market stakeholders discuss key issues of relevance and value, gain industry and cross vertical insights, and create connections and synergy. Council activities empower members with the ability to make deep connections across our industry and community, shape key activities, increase influence, and enhance personal capabilities. The Alliance and its members have an earned reputation as trusted resources and channels of opportunities."

Tom Lockwood, NextgenID





IMPLEMENTER MEMBERS

take away the knowledge to build business strategies needed to implement secure solutions and protect their valuable intellectual property, data and other assets.

TECHNOLOGY PROVIDERS

take away insights to help differentiate and commercialize their products and services in the fast-changing connected environment.

EXCLUSIVE BENEFITS

Two overarching benefits available only to members are the opportunities to gain the insights required to build successful business strategies to implement secure solutions and commercialize products and services; and networking opportunities to establish valuable business contacts and learn from peers and industry thought leaders.

Even more, only members can:

- Participate in the influential industry and technology councils
- Influence content at Alliance events
- Access and leverage media opportunities
- Participate in Alliance government outreach

The Alliance provides opportunities for the market to come together on key issues of relevance and value and to gain industry and cross vertical insights, connections, and synergy. Through Alliance activities, public, private sector, and not-for-profit organizations and individuals regularly partner to make a difference.





Each year the Secure Technology Alliance conducts a member survey to understand member value and satisfaction with our programs and deliverables. In 2019, we plan to introduce a shorter survey that will still allow us to understand satisfaction levels and areas in which we can provide more opportunities.

SURVEY SAYS....

- Members continue to value and be satisfied with Alliance events, communications, publications and council activities

COUNCILS PROVIDE SATISFACTION

- Active members and council members typically had higher than average satisfaction
- 78.4% of respondents participated in one or more councils
- Survey respondents were weighted toward Mobile, Payments and Transportation Councils

TRAINING AND CERTIFICATION RATINGS INCREASE

- Both value of and satisfaction with the Alliance professional development and training programs received higher results this year than last

"The white papers and webinars from the Secure Technology Alliance provide valuable insight about upcoming industry changes. This information can be very helpful when trying to prioritize initiatives during the annual planning cycle."

Jamie Topolski, Fiserv

MEMBERS VALUE THESE THE MOST

- Collaborating in councils on industry issues
- Influencing best practices
- Networking



WEBSITE REDESIGN WAS WELL-RECEIVED

Members agreed that the site:

- Has a modern look and feel
- Shows that the Alliance is leading the industry with perspectives and education
- Highlights the expanded mission of the Alliance
- Provides an easy experience when looking for information



 **78.4%** of respondents participated in one or more councils.

WHAT'S IMPORTANT TO YOU

We use the Annual Survey to get input on the most important topics for Alliance activities in the coming year. The survey asks an open-ended question to learn what members feel are the most important industry issues. Responses included:

- Contactless payments
- CNP/3DS
- Cybersecurity
- Government: education/implementation of government standards/guidelines; FICAM; state ID issues; Real ID
- Healthcare: healthcare fraud; Medicare card
- Identity: identity as a horizontal; digital identities; non-enterprise identity in the cloud
- IoT
- Payments: payment technology advances; biometrics; open banking APIs; real-time payments
- Technologies: non-PKI technology approaches; AI; crypto technology; blockchain
- Transportation: security of connected and autonomous vehicles; U.S. transit open payments

PARTICIPATE AND ENGAGE IN THE ALLIANCE

Each year, we also get feedback from the survey that there are a significant number of members who are unaware of Alliance programs or who would like to get more involved.

- Make sure you're getting our monthly member bulletins and Daily Industry News. Contact Debra Marshall, dmarshall@securetechalliance.org to receive the communications
- Create a login to the [Alliance members-only site](#) for exclusive content
- Follow us on Twitter or join one of our LinkedIn Groups
- Join one of our [industry councils](#)
- Attend one of our conferences, webinars, workshops or training programs for education and networking opportunities

We value all members' opinions on how the Alliance is meeting your needs and what you would like to see us do differently. We'd love to hear more from you!

"Quadagno & Associates, Inc. has been a member of the Alliance since it was formed in 2001. Since then, the Alliance has evolved, never losing sight of its role to bring government and industry together for the secure processing of identification and payment transactions alike. Its work continues to benefit a variety of government functions that are served by a variety of industries. And in the end, it all benefits humanity. We're pleased to be a part of it all."

Peter Quadagno, Quadagno & Associates



 We thank everyone who responded to the 2018 member survey!

MEMBERSHIP LIST



- 9 POINT 8, Inc.
- ABCorp NA Inc
- ACI Worldwide
- ACT Canada
- Advanced Card Systems, Ltd.
- Allegion
- American Express
- Argotechno
- Benefit Resource, Inc
- Burden Consulting, Ltd.
- Cardtek USA
- CertiPath Inc.
- Chenega Management, LLC
- Chicago Transit Authority
- China UnionPay USA
- Conduent
- CPI Card Group
- Cubic Transportation Systems, Inc.
- Dallas Area Rapid Transit (DART)
- Datawatch Systems, Inc
- Defense Manpower Data Center
- Department of Homeland Security
- Digital Innovation Alliance
- Discover Financial Services
- E4 Security Consulting, LLC
- Elavon, Inc.
- Entrust Datacard
- Exponent, Inc.
- FEITIAN Technologies Co., Ltd
- FIME
- First Data Corp.
- FIS
- Fiserv
- G+D Mobile Security
- Gallagher Group Limited
- Gemalto
- General Services Administration
- Genfare
- Global Enterprise Technologies Corp
- HID Global
- Hillsborough Transit Authority
- ICMA
- IDEMIA
- Identification Technology Partners, Inc.
- Identiv
- Infineon Technologies
- Ingenico, North America
- Integrated Security Technologies, Inc.
- Interac Association/Acxsys Corporation
- Invoke Technologies
- IQ Devices
- Jack Henry Processing Solutions
- Jacobs
- JCB International Credit Card Co., Ltd
- Johnson Controls
- KONA I co. Ltd.
- Leidos, Inc.
- Lenel
- Linxens Holding SAS
- Massachusetts Bay Transportation Authority
- MasterCard Worldwide
- Metropolitan Transportation Authority
- Metropolitan Transportation Center
- Monitor Dynamics
- Multos International PTE LTD
- National Institute of Standards and Technology
- NextgenID, Inc
- NXP Semiconductors
- Nxt-ID, Inc
- Parsons Corporation
- Payments Network Malaysia Sdn Bhd (PayNet)
- Port Authority of NY/NJ
- Port Authority Transit Corporation
- Q-Card Company
- Quadagno & Associates, Inc
- Rambus
- RF IDEas
- San Francisco Bay Area Rapid Transit District (BART)
- San Mateo County Transit District
- scDataCom LLC
- Scheidt & Bachmann USA
- Secure Element Solutions, LLC
- SecureKey Technologies
- Servired, Sociedad Espanola de Medios de Pago, S.A.
- SHAZAM
- Signet Technologies, Inc.
- Southeastern Pennsylvania Transportation Authority (SEPTA)
- Stanley Black & Decker
- STMicroelectronics
- Systems Engineering, Inc.
- Thales
- The Utah Transit Authority
- TransLink
- Tri County Metropolitan Transportation District of Oregon
- Tyco Software House
- U.S. Department of State
- Underwriters Laboratories (UL)
- US Department of Transportation/Volpe Center
- US Government Printing Office
- Valid
- Veridt, Inc.
- VeriFone
- Visa
- Vix Technology
- Wells Fargo
- Xtec, Inc.

As of September 30, 2018

LEADERSHIP COUNCIL



Learn how to upgrade your membership online:
www.securetechalliance.org/membership-information

MEMBER RECOGNITION PROGRAM



ALLIANCE RECOGNIZES OUTSTANDING MEMBER COMPANIES

The Secure Technology Alliance Center of Excellence (COE) was created to recognize an elite mix of member companies who, each year, 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.

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 Secure Technology Alliance.

In 2018, 13 member companies received the COE designation. We are proud of the 10 returning recipients, and thrilled to welcome three companies to this prestigious list.

Inclusion in this exclusive level is directly related to the following criteria members demonstrated in 2017-2018:

- Honor Roll or Top Contributor in one or more of our Industry Councils
- Council officer position elected by peers
- Number of employees with LEAP/CSCIP/CSEIP 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 affiliated organizations Digital Innovation Alliance (formerly SCALA), or the U.S. Payments Forum

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

"Membership in the Secure Technology Alliance has allowed me to connect and collaborate with industry experts across several vertical markets on important projects seeking to enhance privacy protections and secure organizations' critical assets. The Alliance's mission to drive awareness that security be designed into every device, product and service throughout its lifecycle, and the fact that members actively support this by teaming up to develop solutions that government, industry and society can benefit from make the Alliance a very valuable resource to its members and the public."

John Neal, NXP



CONGRATULATIONS TO THE 2018 RECIPIENTS

This year we are delighted to announce the following 13 member companies who comprise the 2018 class of Center of Excellence organizations:

- American Express
- CPI Card Group (New in 2018!)
- Discover Financial Services
- Entrust Datacard
- First Data (New in 2018!)
- G+D Mobile Security
- Gemalto
- IDEMIA
- Infineon Technologies
- Ingenico, North America (New in 2018!)
- NXP Semiconductors
- Underwriters Laboratories (UL)
- Visa

THESE ELITE MEMBER COMPANIES HAVE
REACHED THE HIGHEST LEVEL OF ACTIVE
PARTICIPATION IN THE ALLIANCE IN 2018.



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fiserv.

TRAINING AND CERTIFICATION PROGRAMS

The Secure Technology Alliance is strongly committed to offering industry education programs, training opportunities and resources so individuals and organizations can get in-depth education on secure technologies, applications and implementation best practices. The Alliance currently provides a large number of educational resources covering important industry issues or implementation considerations, summarizing best practices and informing stakeholders on latest developments in secure technologies.

Training and exam certification have taken place at the National Center for Advanced Payments and Identity Security and onsite at Secure Technology Alliance conferences. In 2018, several “on the road” training sessions were also held across the U.S., particularly for the Corporate Training Program.



The Alliance maintains and updates its training materials to reflect industry changes



The [Leadership, Education, and Advancement Program \(LEAP\)](#) is an online, members-only organization for industry 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 members with resources and materials including white papers, FAQs, position papers and archives of webinar, workshop and conference proceedings in the access control, payments, identity, healthcare, mobile and transportation markets.



The Secure Technology Alliance offers three CSCIP credentials: CSCIP, CSCIP/Government and CSCIP/Payments. CSCIP is an internationally recognized credential for smart card industry professionals; the program prepares professionals to gain advanced levels of knowledge in smart card technology and applications.

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



CSCIP/Government certifications require the same level of industry knowledge as the CSCIP certification, with some exceptions. This Government certification excludes payments topics, and includes the following content:

- FIPS 201
- PIV card
- Federal identity management initiatives



CSCIP/Payments certifications require the same level of industry knowledge as the CSCIP certification, along with knowledge of the following principles:

- In-depth content on EMV and EMV migration
- Mobile and NFC payments
- Smart card use in card- and account-based transit payment systems

CORPORATE TRAINING PROGRAM

The CSCIP professional development and smart card training program and exam are available as a corporate training program, at a reduced cost. This program is for organizations who have ten or more professionals interested in a comprehensive training course and exam held at their corporate location.

"It's easy to get caught up in your niche area of expertise when working in the smart card industry. CSCIP/P certification has helped me to zoom out and comprehend industry standards across various markets. This is important as boundaries between verticals blur with technologies and functionalities merging and new ones emerging."

Shereena Sherafudeen, IDEMIA, CSCIP/P



The [Certified System Engineer ICAM PACS \(CSEIP\) training and certification program](#) remains a well-received, popular program since it was established three years ago. This GSA-approved program provides the training and certification required for E-PACS engineers who are employed by commercial organizations that are looking to bid on GSA procurement agreements for access control systems.

The training includes learning objectives that provide system engineers with the knowledge to properly implement E-PACS, and demonstrate the engineer's abilities to set up, test and configure access control features within the security system.

CSEIP RECERTIFICATION

Recertification, valid for two years, extends the value of the CSEIP certification by demonstrating that the certificant is current with new requirements or changes in the technology of E-PACS systems.

CSEIP AND CSCIP CERTIFICANTS

2018 CSEIP CERTIFICANTS

- Rich Anderson, PSG Global
- Kenneth Becker, Integrated Access System
- Chad Black, Blackhawk Security LLC
- Kenneth Butler, Williams Electric
- Paul Cabrera, S.E.G. Inc.
- Jeremiah Cerra, Lenel
- Fred Conover, Structure Works Inc
- Phil Donatone, Williams Electric
- Jeffrey Drill, Communications Resource, Inc.
- Sean Eaton, Johnson Controls
- Eric Eddy, Johnson Controls
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- Kristofer Fannon, Black Box Network Services
- Martin Fletes, Digital Technologies Inc.
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- Thomas Horgan, AMAG Technology, Inc.
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- Raine Lactaoen, Integrated Security Technologies, Inc.
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- Omar Lopez, LS3 Inc.
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- Reigional D Smith, Johnson Controls, Inc.
- Daniel Stafford, General Services Administration
- William Stewart, Convergent
- Brandon Sutphin, Johnson Controls
- Jasen Vonheeder, MEI Systems Integrators
- Kara Yosten, General Services Administration

2018 CSEIP RECERTIFIED CERTIFICANTS

- Wayne Budd, Johnson Controls
- Malcolm Ceasar, The Integration Company
- Jeff Deweese, Johnson Controls
- Colin Doniger, Diversified
- Patrick Finnegan, Identiv
- Deon Ford, Prism International, LLC
- Carlos Gaskin, Boeing
- Matt Geer, eVigilant
- Benjamin Globus, Securityhunter
- Jason Goodloe, Xtec, Inc.
- Mala Grover, Digitronics, Inc
- Baher Guirguis, SigNet Technologies
- Paul Hagen, Secure Mission Solutions
- James Hansen, Hansen Technical Services, LLC
- David Harjo, Bureau of ATF
- Corey Hewitt, Signet Technologies, Inc.
- Martin Hoffman, Johnson Controls
- Jim Kemp, COLSA Solutions
- Douglas Kim, Business Integra
- Jorge A. Lozano, Condortech Services, Inc.
- Matthew Martino, Business Integra
- Nnamdi Martyn, Department of Homeland Security
- Joe McCollum, Identiv
- David Miller, Business Integra
- Jeffrey Ogborn, Aventura Technologies
- Dwayne M Pfeiffer, Northrop Grumman IT
- Mike Plaugher, Johnson Controls
- Daniel Reilly, Business Integra
- Miguel Andres Rojas Handal, Condortech Services, Inc.
- Job Rushdan, Diamond Security Inc
- Jaime Santiago, Bureau of ATF
- Anthony Shields, Business Integra
- Donald Thomas, BruckEdwards
- JC Viricochea, Johnson Controls

2018 CSCIP CERTIFICANTS

- Crisanto Cafirma, American Express International
- Benedict Pang, American Express International

2018 CSCIP/G CERTIFICANTS

- Don Fuller, Department of Treasury
- Graham Gearhart, XTec, Inc.
- Brian Havekost, SigNet Technologies
- Christopher Mathews, XTec, Inc.
- Brian O'Rourke, XTec, Inc.

2018 CSCIP/P CERTIFICANTS

- Wade Cliatt, TSYS
- Scott Corbridge, Community Transit
- Chris Fullerton, TSYS
- Gerry Glindro, IDEMIA
- Subhashini Golamari, ICPS Mauritius
- Durwood Graddy, TSYS
- Sheila Harper, TSYS
- Robert Jensen, Community Transit
- Michael Johnson, LTK Engineering Services
- Kristen Lothspeich, TSYS
- Kin Mak, IDEMIA
- Mike Monnie, TSYS
- Juan Morro, TSYS
- Ken Murphy, TSYS
- Heather Murray, TSYS
- Oscar Ortega, IDEMIA
- Brittney Packard, TSYS
- William Powell, TSYS
- Artur Russ, IDEMIA
- Jim Sanchez, IDEMIA
- Karin Searcy, TSYS
- Shereena Sherafudeen, IDEMIA
- Santhi Sista, Amazon
- Alan Whitemore, American Express



As of September 30, 2018

For a list of all CSCIP recipients go to: www.securetechalliance.org/activities-leap-cscip-registry

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SECURING FEDERAL IDENTITY 2019

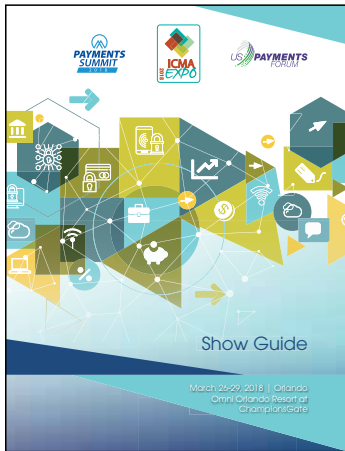
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2018 CONFERENCES AND EVENTS



SECURE TECHNOLOGY ALLIANCE PAYMENTS SUMMIT

Omni Orlando Resort at ChampionsGate • Orlando, FL • March 26-29, 2018

For a dozen years, this key payment event has offered informative sessions, effective networking meetings, and productive industry council and working committee discussions looking at payments from the vantage point of what they were yesterday, what they are today, and what they may be tomorrow. The 2018 event was held for the first time with the U.S. Payments Forum All-Member Meeting and continued the partnership with the International Card Manufacturers Association (ICMA) EXPO. An enthusiastic audience of more than 800 industry professionals participated in an exciting few days. Keynotes from three of the biggest names in payments, Discover, Google and Visa, shaped conversations around:

- Digital payments integration
- U.S. EMV chip migration
- Developments in contactless EMV and NFC payments

The broad perspective from all sectors in payments created one of the most comprehensive and valuable gatherings of professionals sharing both knowledge and challenges.



SECURING FEDERAL IDENTITY 2018

The Hamilton Hotel-Almas • Washington, DC • June 5-6, 2018

This premier event for government-led cybersecurity policy and digital identity technology returned to a two-day format, as there are exciting developments and innovations in federal identity credentialing and access security. If there were an “A” list of government agencies, they were at this conference. Speakers from DHS, FICAM, NIST, OMB and the Executive Office of the President presented their perspectives on securing federal identity. Government policy and technology updates included:

- Progress in aligning security standards with changing requirements for mobile authentication
- The development of Federal Identity Policy document OMB M-18-XX
- Derived mobile credentials
- Electronic authentication for PACS that is fast, reliable, secure and interoperable across agencies

More than half of the attendees were federal executives seeking information on identity management, roadmaps, cloud and mobility progress, and policy initiatives. The event did not disappoint.



SECURING DIGITAL IDENTITY SYMPOSIUM 2018

National Center for Advanced Payments and Identity Security • Crystal City, VA • December 4, 2018

Today's rapidly growing online environment emphasizes the increasing need for secure identification and strong authentication for consumers, businesses and public services. This new, day-long symposium in early December featured presentations from guest speakers, panel discussions, and group discussions in an open setting that was conducive for discussing and debating thought-provoking ideas. Featured speakers and panel discussions focused on:

- Identity proofing – the cornerstone of strong online identities
- How identity attributes are used to create authentication factors
- Using authenticators to manage risk
- The next identity frontiers of mobility and IoT

The symposium's discussions were a fitting way to end a year in which a rapidly growing online environment has created an even more urgent need for secure identification across all digitally transforming markets including payments, healthcare, IT security, in-ap mobile services, and access to government services.

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ePay
RESOURCES

fiserv.

GD G+D
Mobile Security



gemalto
security to be free

Genetec



IDEMIA
augmented identity

IDENTIV

infineon

JE
GENETIC

NXP

perspecta

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The Lab Authority

SAMSUNG
pay

SCHEIDT & BACHMANN

tru shield

VISA



2018 EVENT PHOTOS

The conferences and events produced by the Secure Technology Alliance are specifically tailored to cover every vertical market. These meetings also allow our collective industry knowledge and technology expertise to extend beyond the edges of the organization. Our conferences are always infused with fresh new insights from industry leaders. Industry councils also meet in person at these events, allowing for valuable one-on-one interaction and group collaboration.



Secure Technology Alliance

The most exciting change in 2018 was a complete redesign of the Alliance web site to finish the transition from the Smart Card Alliance to the Secure Technology Alliance. The updated site, www.securetechalliance.org, provides members with new features, targeted content, enhanced search and smarter navigation. The clean, fresh design received high marks in the Annual Member Survey, specifically for the:

- Restructured homepage to reflect the Alliance's mission
- Simpler, more direct navigation to information and resources
- A new Knowledge Center and detailed Education and Training section
- Mobile-friendly design that dynamically adjusts to smart phones and tablets
- Graphics and ads on all internal pages to promote Alliance conferences, events and programs



U.S. Payments Forum

In 2018, visitors came to the site overwhelmingly for information on EMV, mobile and contactless, and card-not-present (CNP) fraud information. From white papers to FAQs to transit use cases, the site experienced steady traffic and downloads throughout the year.



ONE OF THE MOST VALUABLE ADDITIONS TO THE SITE WAS THE USE OF GRAPHICS ON ALL INSIDE PAGES TO HIGHLIGHT ALLIANCE EVENTS, WEBINARS AND PUBLICATIONS.



SECURE
TECHNOLOGY
ALLIANCE

ONLINE PRESENCE

The Secure Technology Alliance and the U.S. Payments Forum have two main web sites that serve as hubs for the organizations, featuring industry news, white papers and publications, event information and proceedings, educational resources, links to webinars, press releases and newsletters.



There's More to Surf

The Alliance and Forum also maintain three ancillary sites that focus on specific areas of interest:

EMV-Connection.com - The Secure Technology Alliance and U.S. Payments Forum maintain the EMV Connection web site to assist all industry stakeholders with EMV migration

GoChipCard.com - Developed by the U.S. Payments Forum and the Payments Security Task Force, the site assists consumers, merchants and issuers with the migration to chip technology

IoTSecurityConnection.com - The Secure Technology Alliance developed this website to provide information and resources on the Internet of Things (IoT)



The Top Ten List: Page Views

Secure Technology Alliance

1. Alliance Members
2. Activities: CSEIP Program
3. Activities: LEAP-CSCIP
4. Alliance Overview
5. Publications: Benefits of Smart cards vs. Magnetic Stripe Cards for Healthcare Applications
6. Activities: CSEIP Registry
7. Publications
8. Activities: Education and Certification Programs
9. Activities: Next Conference
10. Applications: IoT
4. "CNP Fraud around the World" white paper
5. "Mobile and Digital Wallets: U.S. Landscape and Strategic Considerations for Merchants and Financial Institutions" white paper
6. Forum Members
7. Forum Overview
8. Forum Winter 2018 Snapshot
9. "Contactless Resources: Implementation Considerations and Clarifications" guide
10. Forum Management

U.S. Payments Forum

1. Upcoming Events
2. Forum Spring 2018 Snapshot
3. Forum Published Resources

EMV Connection

1. "Cardholder Verification Methods: Concepts, Implementations, and Impacts" video recording
2. EMV FAQ
3. "Understanding the U.S. EMV Fraud Liability Shifts" white paper
4. EMV 101 webinar recording
5. "EMV Testing and Certification White Paper: Current Global Payment Network Requirements for the U.S. Acquiring Community"
6. News
7. "PIN Bypass in the U.S. Market" white paper
8. "Implementing EMV at the ATM" white paper
9. "Minimum EMV Chip Card and Terminal Requirements" resource
10. EMV Resources

Socially Active

The Secure Technology Alliance has enhanced its presence on social media with robust activity on Twitter and LinkedIn. Here are some ways you can interact with the organization:

- Follow us on Twitter: [@SecureTechOrg](https://twitter.com/SecureTechOrg)
- Connect with us on LinkedIn: www.linkedin.com/company/secure-technology-alliance
- LinkedIn Groups include: [Government Smart ID](#), [Smart.Payments](#), [Healthcare Identity Management](#), [LEAP](#)
- Engage across platforms to help share news, insights and resources by liking and retweeting or sharing our posts
- Share our pages with colleagues



INDUSTRY COUNCILS

Through six active industry councils, the Secure Technology Alliance proactively addresses topics of concern in the different vertical markets for secure technologies. 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 implementations of both hardware and software security solutions in the U.S. and provide authoritative educational material for both the U.S. and international secure technology markets.



ACCESS CONTROL

The Access Control Council continued its support of government implementations of physical and logical access control systems. Through a well-attended webinar series, comments on NIST and OMB documents, PACS playbook and work with GSA, the Council provided detailed educational resources and best practices for the industry. Over 35 member organizations participate in the Council.



IDENTITY

The Identity Council's mobile identity landscape initiative expanded this year to include a webinar series. The webinars presented mobile identity credential use cases: mobile driver's license; derived PIV credential; physical and logical access control; healthcare; banking and transportation payment. More than 30 member organizations participate in the Council.



IOT SECURITY

The IoT Security Council focused its activities in 2018 on education and outreach. The Council hosted a panel, workshop and webinar on IoT security, provided comments to NIST on IoT security and privacy considerations, and created a LinkedIn Group to facilitate member discussions. Over 40 member organizations participate in the Council.



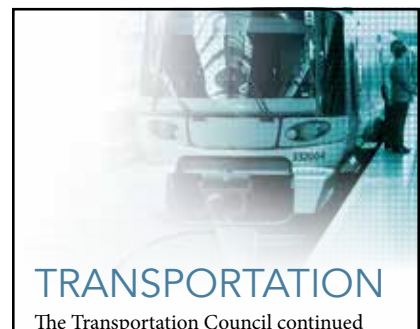
MOBILE

Mobile Council projects tackled the different approaches used to implement application and data security in mobile devices. Through a white paper on the Trusted Execution Environment (TEE) and briefings on biometrics and tokenization, the Council provided educational resources for Alliance members. The Council is made up of more than 45 member organizations.



PAYMENTS

The Payments Council focused attention this year on the next wave of issuance and acceptance – contactless. Through a white paper on contactless payment implementation recommendations and two well-attended webinars for merchants and issuers, the Council delivered fresh perspectives on contactless payments. Over 40 member organizations participate in the Council.



TRANSPORTATION

The Transportation Council continued work on multimodal payments convergence and mobile ticketing. The Council also expanded its collaboration with the U.S. Payments Forum by co-hosting a full-day transit payments workshop covering transit agency fare collection plans, contactless open payments and other emerging technologies. More than 45 member organizations participate in the Council.

YEAR IN REVIEW: INDUSTRY COUNCILS LETTER

Collaboration Allows Councils to Promote Secure Technology Implementations

The Secure Technology Alliance industry councils provide members with opportunities to collaborate on solutions to industry challenges and to participate in outreach efforts to promote secure technologies and implementation best practices. As with past years, 2018 saw strong member engagement in council projects, with 75 percent of member organizations participating in at least one council and over 70 individuals recognized as top contributors and Honor Roll members.

Councils projects this year spanned work on familiar topics – such as PIV-enabled physical access control systems and contactless payments – as well as emerging topics on secure technologies for IoT, mobile identity and transportation payments.

Collaboration among councils and with other industry groups was an organization priority in 2018. The Transportation Council, Payments Council and U.S. Payments Forum collaborated on a number of projects: a technical framework for transit contactless open payments; a white paper on contactless payments implementation; and an ongoing project on card-not-present fraud mitigation approaches. The Identity Council worked with members from the Access Control, Health and Human Services, Mobile and Transportation Councils to develop mobile identity use cases for a webinar series and white paper.

Councils also reached outside the Alliance organization to work on relevant projects with the American Association of Motor Vehicle Administrators, Federal Transportation Administration, GlobalPlatform, International Biometrics + Identity Association, Security Industry Association and other industry groups. This type of cross-industry collaboration is critical for achieving our goal of promoting best practices for secure technology implementations.

As we move into 2019, all our councils will elect new steering committees and officers and develop plans for next year. Expect to see continued commitment to promoting the technologies and best practices that improve security in the different vertical markets and to showcasing the leadership efforts of our members in driving those improvements.

The Secure Technology Alliance thanks all our members for their strong support and for the time and expertise that they contribute to Alliance projects and activities.

2018 SAW **STRONG**
MEMBER ENGAGEMENT
IN COUNCIL PROJECTS,
WITH **75 PERCENT** OF
MEMBER ORGANIZATIONS
PARTICIPATING IN AT
LEAST ONE COUNCIL AND
OVER 70 INDIVIDUALS
RECOGNIZED AS TOP
CONTRIBUTORS AND
HONOR ROLL MEMBERS.



Cathy Medich
Director, Strategic Programs
Secure Technology Alliance



ACCESS CONTROL COUNCIL

MISSION: Accelerate the widespread acceptance, use, and application of secure technologies, in various physical and digital form factors, for physical and logical access control, as applicable to both persons and non-person entities

OFFICERS

- Chair: Adam Shane, Leidos
- Vice Chair: Dave Helbock, XTec, Inc.

STEERING COMMITTEE

- Tony Damalas, SigNet Technologies
- Derek Greenland, Lenel
- Dave Helbock, XTec, Inc.
- Daryl Hendricks, GSA
- Martin Janiak, Veridt
- Mike Kelley, Parsons
- Stafford Mahfouz, Tyco Software House
- Steve Rogers, IQ Devices
- Adam Shane, LEIDOS
- Mark Steffler, Quantum Secure
- Bill Windsor, Dept. of Homeland Security
- Mike Zercher, NXP Semiconductors

TOP CONTRIBUTORS

- Mark Dale, XTec, Inc.
- Michael Kelley, Parsons
- Mark Steffler, HID Global

HONOR ROLL

- Tony Damalas, SigNet Technologies, Inc.
- Daryl Hendricks, General Services Administration
- Tom Lockwood, NextgenID, Inc.
- Stafford Mahfouz, JCI/Tyco Security Products
- Steve Rogers, IQ Devices
- William Windsor, Dept. of Homeland Security
- Rob Zivney, ID Technology Partners

ACTIVITIES

- GSA Physical Access Control System Reverse Industry Training Day: Industry Presentations (Sept. 2018)
- In-person meetings at Securing Federal Identity 2018, Washington, DC (June 2018)
- [“TWIC Card/Reader Use with Physical Access Control Systems: A Field Troubleshooting Guide”](#) (May 2018)
- Industry comments on draft OMB M-18-xx, “Strengthening Cybersecurity of Federal Agencies through Improved Identity, Credential and Access Management,” in collaboration with the Identity Council (May 2018)
- [“How to Plan, Procure and Deploy a PIV-Enabled Physical Access Control System”](#) webinar series (Oct. 2017 – April 2018)
- PIV-Enabled Physical Access Control System (PACS) Playbook for the GSA CIO (in process)
- Access control use case for the Identity Council mobile identity landscape white paper (in process)
- Relationships with International Biometrics + Identity Association (IBIA) and Security Industry Association (SIA)

ACCESS CONTROL COUNCIL MEMBER ORGANIZATIONS

ABCorp • Allegion • CardTek • Cubic Transportation Systems • Datawatch Systems • Defense Manpower Data Center (DMDC) • Entrust Datacard • Exponent • G+D Mobile Security • Gallagher North America, Inc. • Gemalto • General Services Administration • HID Global • IDEMIA • Identification Technology Partners • Identiv • Integrated Security Technologies • IQ Devices • Jacobs CH2M • LEIDOS • Lenel • NXP Semiconductors • Parsons • Quantum Secure • Secure Element Solutions LLC • SecureKey Technologies • SigNet Technologies, Inc. • Stanley Security Solutions • STMicroelectronics • Tyco Software House • U.S. Department of Homeland Security • U.S. Department of State • Veridt • Visa, Inc. • Wells Fargo • Xtec, Inc.



IDENTITY COUNCIL

MISSION: Raise awareness and provide thought leadership and education on real-world issues of implementing and operating identity and identity authentication and authorization systems

OFFICERS

- Chair: Tom Lockwood, NextgenID
- Vice Chair: Neville Pattinson, Gemalto

STEERING COMMITTEE

- Ahmed Mohammed, IDEMIA
- Neville Pattinson, Gemalto
- Steve Rogers, IQ Devices
- Rob Zivney, Identification Technology Partners

TOP CONTRIBUTORS

- David Coley, Intercede
- Neil Fallon HID Global
- John Fessler, Exponent, Inc.
- Judy Keator, SecureKey Technologies
- David Kelts, IDEMIA
- Jeff Nigriny, CertiPath, Inc.
- Suraj Sudhakaran, Gemalto

HONOR ROLL

- Tim Baldridge, Defense Manpower Data Center

ACTIVITIES

- [“Identity on a Mobile Device: Healthcare, Banking and Transportation Use Cases”](#) webinar (Sept. 2018)
- [“Identity on a Mobile Device: Physical and Logical Access Control Use Cases”](#) webinar (July 2018)
- In-person meetings at Securing Federal Identity 2018, Washington, DC (June 2018)
- Industry comments on draft OMB M-18-xx, “Strengthening Cybersecurity of Federal Agencies through Improved Identity,

Credential and Access Management,” in collaboration with the Access Control Council (May 2018)

- [“Identity on a Mobile Device: Driver’s License and Derived PIV Use Cases”](#) webinar (Mar 2018)
- Mobile identity credentials landscape white paper (in process)
- Relationships with the American Association of Motor Vehicle Administrators (AAMVA), American Association of Airport Executives (AAAE), Document Security Alliance (DSA), International Biometrics + Identity Association (IBIA), RTCA and SAFE BioPharma

IDENTITY COUNCIL MEMBER ORGANIZATIONS

CertiPath LLC • Defense Manpower Data Center • Discover Financial Services • Entrust Datacard • Exponent, Inc. • Fiserv • G+D Mobile Security • Gemalto • General Services Administration • HID Global • IDEMIA • Identification Technology Partners • Identiv • Infineon Technologies • IQ Devices • Kona I Co. Ltd. • Lenel • MULTOS International • NextgenID, Inc. • NIST – National Institute of Standards and Technology • NXP Semiconductors • Quantum Secure Inc. • Secure Element Solutions LLC • SecureKey Technologies • SEPTA • SigNet Technologies, Inc. • Tyco Software House • U.S. Department of Homeland Security • U.S. Department of State • Visa Inc. • Wells Fargo • Xtec, Inc.



IOT SECURITY COUNCIL

MISSION: Develop and promote best practices and provide educational resources on implementing secure IoT architectures using “embedded security and privacy”

OFFICERS

- Chair: Sri Ramachandran, G+D Mobile Security

STEERING COMMITTEE

- Sandy Carielli, Entrust Datacard
- Andrew Jamieson, UL
- John Neal, NXP Semiconductors
- Sri Ramachandran, G+D Mobile Security
- Christopher Williams, Exponent

TOP CONTRIBUTORS

- Sri Ramachandran, G+D Mobile Security
- Nick Norman, Consult Hyperion
- John Neal, NXP Semiconductors

HONOR ROLL

- Ilker Caner, Cardtek
- Sandy Carielli, Entrust Datacard
- Hank Chavers, GlobalPlatform
- Tara Gay, American Express
- Jack Jania, Secure Digital Payment Consulting
- Ranjeet Khanna, Entrust Datacard
- Mina Malak, G+D Mobile Security
- Nick Pisarev, G+D Mobile Security
- Srinath Sitaraman, Underwriters Laboratories (UL)
- Brian Stein, Intueor Consulting, Inc.
- Christopher Williams, Exponent, Inc.
- Stephane Wyper, Mastercard
- Erdal Yazmaci, Cardtek

ACTIVITIES

- [“IoT Security: Mitigating Security Risks in Secure Connected Environments”](#) webinar (Oct. 2018)
- [Secure.IoT](#) LinkedIn Group (Aug. 2018)
- IoT North America panel (May 2018)
- [Industry response](#) to NIST “IoT Security and Privacy Risk Considerations” Questions, (Apr 2018)
- Steering Committee and officer election (Feb./Sept. 2018)
- [“IoT and Payments: Current Market Landscape”](#) white paper, in collaboration with the Payments Council (Nov. 2017)

IOT SECURITY COUNCIL MEMBER ORGANIZATIONS

Allegion • American Express • Burden Consulting Ltd • CardTek USA • CPI Card Group • Datawatch Systems, Inc. • Defense Manpower Data Center • Discover Financial Services • Entrust Datacard • Exponent, Inc. • First Data • FIS • Fiserv • G+D Mobile Security • HID Global • IDEMIA • Identification Technology Partners Inc. • Infineon Technologies • Ingenico • Interac Association/Acsys Corporation • IQ Devices • Jacobs CH2M • Mastercard • Metropolitan Transportation Authority • NextgenID, Inc. • NXP Semiconductors • Quantum Secure Inc. • Rambus • San Francisco Bay Area Rapid Transit District (BART) • Scheidt & Bachmann • Secure Element Solutions LLC • SHAZAM • SigNet Technologies, Inc. • Southeastern Pennsylvania Transportation Authority (SEPTA) • STMicroelectronics • Tyco Software House • Underwriters Laboratories (UL) • U.S. Department of Transportation/Volpe Center • Valid • Verifone • Visa Inc. • Wells Fargo • Xtec, Inc.



MOBILE COUNCIL

MISSION: Raise awareness and accelerate the adoption of secure payments, loyalty, marketing, promotion/coupons/offers, peer-to-peer, identity, and access control applications using mobile and tethered wearable devices

OFFICERS

- Co-chairs: Sadiq Mohammed, Mastercard; Sridher Swaminathan, First Data

STEERING COMMITTEE

- David deKozan, Cubic
- Imran Hajimusa, Verifone
- Peter Ho, Wells Fargo
- Sadiq Mohammed, Mastercard
- Chandra Srivastava, Visa
- Sree Swaminathan, First Data
- David Worthington, Rambus

TOP CONTRIBUTORS

- Majid Bemanian, MIPS
- Hank Chavers, GlobalPlatform
- Jose Diaz, Thales e-Security
- Florent Joubert, Trustonic

HONOR ROLL

- Majid Bemanian, MIPS
- Hank Chavers, GlobalPlatform
- Jose Diaz, Thales e-Security
- Florent Joubert, Trustonic

ACTIVITIES

- Tokenization member briefing (Oct. 2018)
- Biometrics on mobile devices member briefing (Sept. 2018)
- “[Trusted Execution Environment \(TEE\) 101: A Primer](#)” white paper (June 2018)
- In-person meeting at Payments Summit (Mar. 2018)
- Relationship with GlobalPlatform

MOBILE COUNCIL MEMBER ORGANIZATIONS

ABCorp • Allegion • American Express • Burden Consulting Ltd • CardTek USA • Clear2Pay • CPI Card Group • Cubic Transportation Systems, Inc. • Datawatch Systems • Discover Financial Services • Entrust Datacard • Exponent, Inc. • FIME • First Data Corporation • FIS • Fiserv • G+D Mobile Security • Gemalto • HID Global • IDEMIA • Identification Technology Partners • Infineon Technologies • Ingenico • Interac Association / Acxsys Corporation • IQ Devices • Jacobs CH2M • Kona I Co., Ltd. • Lenel • Mastercard • NextgenID • NXP Semiconductors • Quantum Secure Inc. • Rambus • Secure Element Solutions LLC • SecureKey Technologies • SHAZAM • STMicroelectronics • Thales • Underwriter Laboratories (UL) • U.S. Department of Homeland Security • Valid • Verifone • Visa Inc. • Vix Technology • Wells Fargo • Xtec, Inc.



PAYMENTS COUNCIL

MISSION: Focus on securing payments and payment applications in the U.S. through industry dialogue, commentary on standards and specifications, technical guidance and educational programs

OFFICERS

- Chair: Oliver Manahan, Infineon Technologies
- Vice Chair: Nick Pisarev, G+D Mobile Security
- Secretary: Jamie Topolski, Fiserv

STEERING COMMITTEE

- Deana Cook, Wells Fargo
- Jose Correa, NXP Semiconductors
- Terry Dooley, SHAZAM
- Allen Friedman, Ingenico
- Melanie Gluck, Mastercard
- Imran Hajimusa, Verifone
- Simon Hurry, Visa
- Oliver Manahan, Infineon Technologies
- Ken Mealey, American Express
- Keith North, CPI Card Group
- Nick Pisarev, G+D Mobile Security
- Peter Quadagno, Thales
- Ellie Smith, Discover Financial Services
- Sree Swaminathan, First Data
- Jamie Topoloski, Fiserv

TOP CONTRIBUTORS

- Jose Correa, NXP Semiconductors
- Melanie Gluck, Mastercard
- Nick Pisarev, G+D Mobile Security

HONOR ROLL

- Andreas Aabye, Visa
- Philip Andreae, Philip Andreae & Assoc.
- Stefania Boiocchi, Infineon Technologies
- Charl Botes, Mastercard
- Roberto Cardenas, TSYS
- Hank Chavers, GlobalPlatform
- Brady Cullimore, American Express
- Jack DeLangavant, MULTOS International
- Allen Friedman, Ingenico
- Murat Guzel, Cardtek
- Kenny Lage, Discover Financial Services
- Josh Martiesian, Metropolitan Transportation Authority
- Nick Norman, Consult Hyperion
- Keith North, CPI Card Group
- Chandra Srivastava, Visa
- Sree Swaminathan, First Data
- Fatih Teksoy, Cardtek
- Christopher Tomczak, Discover Financial Services
- Jamie Topolski, Fiserv
- David Worthington, Rambus Inc.
- Erdal Yazmaci, Cardtek

ACTIVITIES

- [“Contactless Payments: Merchant Benefits and Considerations”](#) webinar (July 2018)
- [“Contactless Payments: Issuer Benefits and Considerations”](#) webinar (May 2018)
- [“EMVCo Payment Account Reference \(PAR\) 101: A Primer”](#) white paper (April 2018)
- In-person meeting at Payments Summit (Mar. 2018)
- [“Contactless Payments: Proposed Implementation Recommendations”](#) white paper (Jan. 2018)
- [“IoT and Payments: Current Market Landscape”](#) white paper, in collaboration with the IoT Security Council (Nov. 2017)
- Biometric payment cards white paper (in process)
- Approaches to secure the CNP environment white paper, in collaboration with the U.S. Payments Forum (in process)
- Relationships with GlobalPlatform and U.S. Payments Forum

PAYMENTS COUNCIL MEMBER ORGANIZATIONS

ABCorp • ACI Worldwide • American Express • Burden Consulting Ltd • CardTek USA • Clear2Pay • CPI Card Group • Cubic Transportation Systems Inc. • Discover Financial Services • Entrust Datacard • Exponent, Inc. • First Data Corporation • FIS • Fiserv • G+D Mobile Security • Gemalto • IDEMIA • Infineon Technologies • Ingenico • Interac Association/Acsys Corporation • IQ Devices • Jack Henry Processing Solutions • Jacobs CH2M • JCB International Credit Card Co., Ltd. • KONA I Co., Ltd. • Lenel • Mastercard • MULTOS International • NXP Semiconductors • Quadagno & Associates • Rambus • SecureKey Technologies • Servired, Sociedad Española de Medios de Pago, S.A. • SHAZAM • STMicroelectronics • Thales • Tri County Metropolitan Transportation District of Oregon • Underwriter Laboratories (UL) • Valid • Verifone • Visa, Inc. • Vix Technology • Wells Fargo • Xtec, Inc.



TRANSPORTATION COUNCIL

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

OFFICERS

- Chair: Gerald Kane, SEPTA
- Vice Chair - Transit: Katina Morch-Pierre, DART
- Vice Chair - Tolling: Carol Kuester, MTC and Bay Area Toll Authority (BATA)

STEERING COMMITTEE

- Francois Baylot, Thales
- Jeff Beach, Visa
- David Bibby, Discover Financial Services
- Patrick Comiskey, NXP Semiconductors
- Jennifer Dogin, Mastercard
- Greg Garback, WMATA (emeritus chair)
- Jamie Geleynse, G+D Mobile Security
- Kathy Imperatore, PATCO
- Jerry Kane, SEPTA
- Carol Kuester, MTC and BATA
- Rhonda Marx, American Express
- Katina Morch-Pierre, DART
- Eric Reese, Scheidt & Bachmann
- Craig Roberts, InComm (emeritus chair)

TOP CONTRIBUTORS

- Mike Dinning, U.S. Department of Transportation/Volpe Center
- Jennifer Dogin, Mastercard
- Peter Quadagno, Quadagno & Associates

HONOR ROLL

- Stephen Abbanat, Metropolitan Transportation Commission
- Robert Anyumba, Underwriters Laboratories (UL)
- Christina Belmont, Genfare
- Murat Guzel, Cardtek
- Carol Kuester, Metropolitan Transportation Commission
- Simon Laker, Consult Hyperion
- Tina Morch-Pierre, Dallas Area Rapid Transit
- Kirstyn Smith, Underwriters Laboratories (UL)
- David Weir, Metropolitan Transportation Commission

ACTIVITIES

- Transit Payments Workshop, in collaboration with the U.S. Payments Forum (Nov. 2018)
- Multimodal Payments Convergence - Part Two: Challenges and Opportunities for Implementation (Nov. 2018)
- In-person meeting at Payments Summit (Mar. 2018)
- Guest collaboration with the U.S. Payments Forum Transit Contactless Open Payments Working Committee on development of a framework for a contactless EMV technical solution for transit (in process)
- Relationship with U.S. Payments Forum

TRANSPORTATION COUNCIL MEMBER ORGANIZATIONS

ABC Corp • ACI Worldwide • American Express • Benefit Resource, Inc. • Burden Consulting Ltd • CardTek USA • Clear2Pay • CPI Card Group • Cubic Transportation Systems • Dallas Area Rapid Transit (DART) • Discover Financial Services • FIME • First Data • G+D Mobile Security • Gemalto • IDEMIA • Infineon Technologies • Interac Association/Acxsys Corporation • Invoke Technologies • Jacobs CH2M • KONA I Co., Ltd. • Lenel • Mastercard • Metropolitan Transportation Authority • Metropolitan Transportation Commission • NXP Semiconductors • Port Authority of NY/NJ • Port Authority Transit Corporation (PATCO) • Quadagno & Associates • Rambus • San Francisco Bay Area Rapid Transit District (BART) • Scheidt & Bachmann USA • Secure Element Solutions LLC • Servired, Sociedad Española de Medios de Pago, S.A. • Southeastern Pennsylvania Transportation Authority (SEPTA) • STMicroelectronics • Thales • Tri County Metropolitan Transportation District of Oregon • Underwriters Laboratories (UL) • U.S. Department of Homeland Security • U.S. Department of Transportation/Volpe Center • Utah Transit Authority • Verifone • Visa Inc. • Vix Technology • Wells Fargo • Xtec, Inc.

COUNCIL DELIVERABLES



The **Access Control Council** completed the successful [How to Plan, Procure and Deploy a PIV-Enabled PACS](#) webinar series. The six webinars provided a comprehensive workshop for government security specialists. Members and guests speaking in the series included: GSA; HID Global; Parsons; SigNet Technologies, Inc.; Software House; U.S. Capitol Police; U.S. Department of Homeland Security (DHS); XTec, Inc.



The **Access Control and Identity Councils** developed and submitted comments on the draft OMB M-18-XX “**Strengthening Cybersecurity of Federal Agencies through Improved Identity, Credential and Access Management.**” Members contributing to the comments included: DHS; GSA; HID Global; ID Technology Partners; Identiv; Intercede; Lenel; NextgenID, Inc.; Parsons; SecureKey Technologies; SigNet Technologies; Software House; XTec, Inc.



The **Access Control Council** white paper, [TWIC Card/Reader Challenges with Physical Access Control Systems: A Field Troubleshooting Guide](#), provides a comprehensive guide to troubleshooting potential issues with TWIC cards and readers. Members contributing to the white paper included: HID Global; ID Technology Partners; LEIDOS; NextgenID, Inc.; Parsons.



The **Identity Council** held a successful webinar series, [Identity on a Mobile Device](#). The webinars provided information on different mobile identity credential use cases, including: mobile driver's license; derived PIV credential; physical and logical access control; healthcare; banking and transportation payment. Members and guests speaking in the series included: AAMVA; Exponent, Inc.; Gemalto; HID Global; IDEMIA; Ingenico Group; Intercede; NextgenID, Inc.; SecureKey Technologies; Southeastern Pennsylvania Transportation Authority (SEPTA).



The **Internet of Things (IoT) Security Council** completed and submitted [comments](#) on the NIST draft “**IoT Security and Privacy Risk Considerations**” document. Members contributing to the comments included: Entrust Datacard; Exponent, Inc.; G+D Mobile Security; NextgenID, Inc.; NXP Semiconductors; Underwriters Laboratories (UL).



The **Mobile Council** white paper, [Trusted Execution Environment \(TEE\) 101: A Primer](#), provides an educational resource describing the TEE as a candidate for a mobile security solution and the use cases that may use a TEE. Members and guests contributing to the white paper included: Discover Financial Services; First Data; GlobalPlatform; JPMorgan Chase; Mastercard; MIPS; Thales e-Security; Trustonic.



The **Internet of Things (IoT) Security Council** hosted the webinar, [IoT Security: Mitigating Security Risks in Secure Connected Environments](#). The webinar identified key security risks for IoT implementations and discussed approaches and technologies that are being used to mitigate those risks. Member speakers included: Entrust Datacard; G+D Mobile Security; Infineon Technologies; NXP Semiconductors.



The **Payments Council** white paper, [EMVCo Payment Account Reference \(PAR\) 101: A Primer](#), provides an educational resource on the EMVCo PAR, PAR use cases, and the impact of PAR implementation on key payments ecosystem stakeholders. Members and guests contributing to the white paper included: American Express; Capital One; CPI Card Group; First Data; JPMorgan Chase; Mastercard; MTA; Rambus; Transportation District of Oregon (TriMet); TSYS; Visa.



The **Payments Council** held a successful webinar series, [Contactless Payments: Issuer and Merchant Benefits and Considerations](#). The webinars reviewed the status of contactless payment adoption, benefits of contactless for merchants and issuers, and specific implementation considerations. Speakers in the webinars included: Fiserv; Infineon Technologies; Ingenico Group; NXP Semiconductors; TSYS; Visa.



Access Control Council members presented in the **GSA Physical Access Control (PACS) Reverse Industry Training**. Members presenting included: ID Technology Partners; Integrated Security Technologies; Parsons; Signet/Convergent Federal Solutions; Software House; Systems Engineering, Inc.



The **Payments Council** white paper, [Contactless Payments: Proposed Implementation Recommendations](#), discusses the challenges of issuing, accepting and processing contactless transactions and summarizes best practices to promote contactless issuance and acceptance. Members and guests contributing to the white paper included: American Express; Cardtek; CPI Card Group; Discover Financial Services; Fiserv; G+D Mobile Security; Gemalto; Global-Platform; IDEMIA; Infineon Technologies; Ingenico Group; Mastercard; Metropolitan Transportation Authority (MTA); MULTOS International; NXP Semiconductors; Philip Andreae & Associates; TSYS; Visa.



The **Transportation Council** collaborated with the U.S. Payments Forum Transit Contactless Open Payments Working Committee to host a full-day **Transit Payments Workshop** in November. The workshop covered the Forum's technical framework for transit open payments, transit agency plans for next generation fare collection systems, and the latest developments in mobile ticketing and multimodal payments convergence. Workshop speakers included: American Express; Chicago Transit Authority (CTA); Cubic Transportation Systems; Dallas Area Rapid Transit (DART); G+D Mobile Security; Mastercard; MTA; Metropolitan Transportation Commission (MTC); NJ Transit; SEPTA; TriMet; Visa.



The **Mobile Council** held two interactive web briefings to provide members with up-to-date education. Briefings included **Biometrics on Mobile Devices**, presented by UL, and **Tokenization**, presented by Rambus Payments.

COUNCIL CHAIR THOUGHTS



“The Secure Technology Alliance Access Control Council plays an extremely important role in allowing industry to speak to Government with a greater authority and respect than any one person would have. The General Services Administration (GSA), National Institute of Standards and Technology (NIST), and the Transportation Security Administration (TSA) as well as countless other agencies have all responded to feedback from the Council.”

Adam Shane, Leidos



“The Alliance’s Identity Council is executing the Board’s vision to protect data, enable secure authentication, and facilitate commerce. The Council is re-orienting from a vertical product focus to a market-focused horizontal, crosscutting, enabling capability. The Council is partnering internally and externally to support major conferences, special reviews, and strategic efforts as well as leading the Mobile ID Landscape Assessment and webinar series. We have a strong 2019-20 program roadmap to benefit our community and the market at large.”

Tom Lockwood, NextgenID



“Security for the Internet of Things is a top of mind issue for the entire IoT ecosystem – including and not limited to device makers, solution providers and systems integrators. The IoT Security Council is doing a phenomenal job of educating the players involved, putting together best practices and creating the right partnerships to collectively solve the security problems. I am delighted to be the chair of the IoT Security Council, and desire to accelerate the key initiatives of the Council, along with raising the awareness of the activities and increasing membership and participation in the Council.”

Sridhar Ramachandran, G+D Mobile Security



“The Secure Technology Alliance Mobile Council plays a significant role in providing education and awareness to the industry in emerging technologies that revolve around mobile and connected devices. The Mobile Council interacts with various standards bodies such as EMVCo, GlobalPlatform, FIDO Alliance, NIST and payment networks. The Council also brings together domain experts from member organizations in providing white papers, webinars, best practices and awareness of secure technologies to various mobile-centric use cases. It’s an honor to serve as chairs of this vibrant group of professionals.”

*Sadiq Mohammed, Mastercard
Sridher Swaminathan, First Data*



“It was an exciting year again within the Payments Council. Contactless was a key focus this year. After publishing white papers and conducting two educational webinars on contactless payments, we’re now starting to see a move to dual-interface chip cards in the U.S. market. As of this writing, we’re also in the final stages of producing another white paper. I encourage everyone interested in Payments to get involved in our Council!”

Oliver Manahan, Infineon Technologies



“As a long time Alliance member I am ever grateful for the consistent delivery of member value by way of excellent technical conferences, webinars and industry papers. The increasing movement toward cross-cutting activities by Alliance councils, including the Transportation Council, of which I chair, further contributes to the Alliance value chain, as we seek to capture benefits of an integrated and constantly changing technology world.”

Gerald Kane, SEPTA



Forum Resources Provided Value for Issuers, Merchants, ATM Owners and Operators

The U.S. Payments Forum (the “Forum”) is a cross-industry body focused on supporting the introduction and implementation of new and emerging technologies that protect the security of, and enhance opportunities for payment transactions within the U.S. The Forum is the only non-profit organization whose membership includes the whole payments ecosystem, ensuring that all stakeholders have the opportunity to coordinate, cooperate on, and have a voice in the future of the U.S. payments industry.

Forum membership includes global payments networks, financial institutions, merchants, processors, acquirers, domestic debit networks, industry associations and industry suppliers.

FORUM AND ALLIANCE CONNECTION

The Forum resulted from the expansion of the charter and activities of the EMV Migration Forum, which was formed by the Secure Technology Alliance (formerly the Smart Card Alliance) in 2012 to support the U.S. move from magnetic stripe technology to more secure EMV contact and contactless technology. The transition of the organization to the U.S. Payment Forum took place in August 2016.

The Forum and the Secure Technology Alliance have membership levels that offer the most advantages for companies who wanted equal standing and benefits in both organizations. The Forum Principal PLUS and Alliance Leadership Council

PLUS membership levels have proved to be popular for those companies desiring full participation on both the Forum and the Alliance.

2017-2018 U.S. Payments Forum Officers and Steering Committee

OFFICERS

- Kristy Cook, Target (Chair)
- Jesse Lee, Wells Fargo (Vice Chair)
- Karen Czack, American Express (Secretary – through June 2018)

STEERING COMMITTEE

- William Bondar, PNC Bank
- Roberto Cardenas, TSYS
- Steve Cole, Worldpay
- Kristy Cook, Target
- Melanie Gluck, Mastercard
- Kara Gunderson, CITGO Petroleum Bank
- Scott Haney, Woodforest National Bank
- Kathy Hanna, Kroger
- Art Harper, PSCU
- Linda Horwath, JCB
- Simon Hurry, Visa
- Kara Kazazeen, Walmart
- Jesse Lee, Wells Fargo
- Oliver Manahan, Infineon Technologies
- Girish Menon, Discover Financial Services
- Manish Nathwani, SHAZAM
- Jesse Pamperin, McDonald's
- Nick Pisarev, G+D Mobile Security
- Tom Pouliot, China UnionPay USA
- Jamie Topolski, Fiserv
- Robin Trickle, American Express
- Joseph Vasterling, Best Buy
- Bob Woodbury, FIS/NYCE

A MESSAGE FROM RANDY VANDERHOOF AND CATHY MEDICH

U.S. Payments Forum Builds On Past to Usher in Future

More than six years have passed since the Smart Card Alliance created the EMV Migration Forum. Since then, both organizations have transformed into new ones with broader missions covering a wider range of technologies. The Alliance expanded beyond smart cards and the Forum evolved beyond card-present EMV adoption to take on implementation challenges of mobile and online commerce technologies that enable a new generation of in-store and online shoppers in the U.S. These additional payment delivery and acceptance technologies demand cross-industry stakeholder communication and collaboration on implementation best practices.

Usage statistics for U.S. adoption of EMV-powered in-store payment present a clear indication of a rapidly maturing marketplace. Visa reported in June 2018 that 97% of all payment volume was through EMV payments and nearly 70% of all payment value on credit cards were chip-on-chip transactions. Petroleum pay-at-the-pump remains one of the last non-EMV frontiers, as the retail petroleum industry is targeting 2020 to retrofit a half-million pumps to accept chip cards. Lately, the Forum has also hosted the transportation market discussing its requirements for enabling mobile wallets and a new generation of EMV contactless cards that could put the U.S. on par with other regions adopting contactless payments, like the U.K, Canada, Europe, and Australia.

A BRIDGE TO THE IMPLEMENTATION OF NEW AUTHENTICATION STANDARDS

The Forum has been preparing for the increase of fraud in online channels since EMV was first announced. More recently, merchants have been grappling with a flurry of new online authentication technologies, including a new version of 3-D Secure and a simplified online check-out specification called the Secure Remote Commerce Framework, both from EMVCo. An increased Forum Working Committee focus includes working with issuers and processors to determine how these new technologies – once implemented – improve security and reduce friction for merchants and consumers. The Forum is also keeping members informed about the new standards and specifications for remote payment and online authentication from the FIDO Alliance and W3C.

2019 AWAITS JOINT PAYMENTS SUMMIT AND U.S. PAYMENTS FORUM MEETING

In 2018, the U.S. Payments Forum held its March meeting at the Alliance Payments Summit for the first time, and both organizations benefitted. For 12 years the Payments Summit has been the Secure Technology Alliance's premier conference for the convergence of consumer payments, mobile payments, transportation payments and fintech. In March 2019, these two events will be integrated into one comprehensive event that raises the level of industry education, networking, and stakeholder collaboration to new levels. All U.S. Payments Forum members are invited to this event using their complimentary member passes.

Through the unique mix of payments industry stakeholders who are implementing the newest payments solutions, Forum members stay at the forefront of keeping the U.S. the most advanced payments market in the world. Thank you for being part of it during this past year.

USAGE STATISTICS FOR U.S. ADOPTION OF EMV-POWERED IN-STORE PAYMENT PRESENT A CLEAR INDICATION OF A RAPIDLY MATURING MARKETPLACE. VISA REPORTED IN JUNE 2018 THAT 97% OF ALL PAYMENT VOLUME WAS THROUGH EMV PAYMENTS AND NEARLY 70% OF ALL PAYMENT VALUE ON CREDIT CARDS WERE CHIP-ON-CHIP TRANSACTIONS.



Randy Vanderhoof
Director,
U.S. Payments Forum



Cathy Medich
Associate Director,
U.S. Payments Forum

ACTIVE YEAR

The U.S. Payments Forum had an active year, developing business and technical resources to assist with EMV migration, mobile and contactless payments implementation and emerging payments technology education, and continuing outreach and education initiatives for issuers, merchants and ATM owners and operators. All published resources are available on the U.S. Payments Forum and EMV Connection web sites.

EDUCATIONAL WEBINARS AND WORKSHOPS

- “Mobile Wallet Landscape: Merchant and Issuer Considerations Workshop,” Mobile Payments Conference. The workshop discussed the current state of the U.S. mobile wallet market, mobile wallet technologies and implementation approaches, and issuer and merchant implementation considerations.
- “Transit Payments Workshop,” in collaboration with the Secure Technology Alliance Transportation Council. The workshop included in-depth sessions on the technical framework for transit open payments developed by the Forum’s Transit Contactless Open Payments Working Committee, transit agency future fare collection system plans, and the latest developments in mobile ticketing and multimodal payments convergence.

STATE OF THE MARKET

In July 2018, the Forum produced its summer snapshot, which can be found on the U.S. Payments Forum website. Among the highlights and news:

- According to the global payment networks, chip-on-chip transactions had reached approximately 57 percent, which represented around 60 percent of payment volume
- Contact chip is enabled at 58 percent of all merchant locations and 85 percent of ATMs

A LOOK INTO THE FUTURE

The U.S. Payments Forum continues work on providing EMV implementation guidance for issuers and merchants. In addition, the Forum’s work on emerging payments technology has expanded. Priorities include: providing guidance on contactless and mobile payments implementation for issuers and merchants; documenting best practices for mitigating fraud in mobile and ecommerce channels; and delivering educational resources on emerging fraud trends and new payments technologies.

Business and Technical Resources

- [“Canadian Card Technical Acceptance”](#) white paper, providing implementation guidance on application selection logic used by U.S. POS terminals to enable interoperability when processing Canadian cards (Sept. 2018)
- [“Contactless Resources: Implementation Considerations and Clarifications”](#) resource, providing guidance to assist merchants, acquirers and issuers with contactless payments implementation (Apr. 2018)
- [“Dual-Interface Card Personalization,”](#) white paper, providing an educational resource on offline data authentication and recommendations for issuing and personalizing dual-interface cards for the U.S. market. (Nov. 2018)
- [“EMV Testing and Certification White Paper: Current Global Payment Network Requirements for the U.S. Acquiring Community”](#) white paper update, with new appendix on contactless EMV certification and testing processes (Dec. 2017)
- [“EMV Troubleshooting Guide for ATM Owners and Operators”](#) white paper, providing guidance for ATM owners/operators to help prevent and troubleshoot common transaction problems (Nov. 2017)
- [“Merchant and Issuer Error Data Collection Forms”](#) resource, providing tools for gathering information to determine the source of transaction errors (Mar. 2018)
- [“Mobile and Contactless Payments Requirements and Interactions”](#) white paper, describing how mobile and contactless payments requirements are collected from payments ecosystem stakeholders (Feb. 2018)
- [“Mobile and Digital Wallets: U.S. Landscape and Strategic Considerations for Merchants and Financial Institutions”](#) white paper, providing guidance to merchants and financial institutions on models, technologies and usage drivers for mobile and digital wallets (Jan. 2018)
- [“Signature Best Practices”](#) white paper, reviewing suggested best practices for capturing and storing signatures on receipts (June 2018)
- [“Transit Contactless Open Payments Technical Solution: Pay As You Go Use Cases”](#) white paper, describing technical solution guidance for implementing transit contactless open payments use cases with contactless EMV cards and NFC-Enabled Mobile Devices (Sept. 2018)
- [“U.S. Debit EMV Technical Proposal”](#) white paper update, describing the technical framework for U.S. debit EMV implementation (July 2018)

U.S. PAYMENTS FORUM WORKING COMMITTEES

The U.S. Payments Forum has seven working committees and three special interest groups active in 2018 focused on different topics relevant to EMV migration and emerging payments technologies. The working committee topics and activities are chosen by Forum members based on critical issues discussed in the Forum meetings.



ATM WORKING COMMITTEE

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.

- Working Committee co-chairs: Marcelo Castro, Diebold; Craig Demetres, Chase



PETROLEUM WORKING COMMITTEE

The Petroleum Working Committee is for all interested parties to work collaboratively to identify, review and resolve challenges associated with implementation of EMV within the

U.S. petroleum and convenience market.

- Working Committee co-chairs: Kara Gunderson, CITGO Petroleum Corporation; Terry Mahoney, W. Capra Consulting Group



CARD-NOT-PRESENT FRAUD WORKING COMMITTEE

The Card-Not-Present Fraud Working Committee goal is to create a comprehensive best practices strategy to mitigate card-not-present fraud, using a balanced approach considering

all key stakeholders – issuers, consumers, merchants, acquirers, networks and third parties.

- Working Committee co-chairs: Knud Balsev, Cryptomathic; Lesley Pollard, UBS Bank USA



TESTING AND CERTIFICATION WORKING COMMITTEE

The Testing and Certification Working Committee goal is to discuss the challenges with EMV certification and define approaches for achieving and streamlining certification.

- Working Committee co-chairs: Berke Baydu, Mastercard; Kevin Emery, UL



COMMUNICATION AND EDUCATION WORKING COMMITTEE

The Communication and Education Working Committee goal is to deliver communications best practices and educational resources for key

payments industry stakeholders that promote an efficient, timely and effective implementation of EMV and emerging payments technologies in the United States.

- Working Committee co-chairs: Lori Breitzke, E&S Consulting; Mansour Karimzadeh, SCIL EMV Academy; Cynthia Knowles, FIS



TRANSIT CONTACTLESS OPEN PAYMENTS WORKING COMMITTEE

The Transit Contactless Open Payments Working Committee goal is for interested stakeholders to work collaboratively to identify possible solutions that address the challenges

associated with the implementation of contactless acceptance devices at customer points of entry (POE) within the unique retail environment of the U.S. public transit market.

- Working Committee co-chairs: Jennifer Dogin, Mastercard; Nick Pisarev, G+D Mobile Security



MOBILE AND CONTACTLESS PAYMENTS WORKING COMMITTEE

The Mobile and Contactless Payments Working Committee goal is for all interested parties to work collaboratively to explore the opportunities and challenges associated with imple-

mentation of mobile and contactless payments in the U.S. market, identify possible solutions to challenges, and facilitate the sharing of best practices.

- Working Committee co-chairs: Deborah Baxley, PayGility Advisors; Bradford Loewy, NCR Corp.; Nick Pisarev, G+D Mobile Security



SPECIAL INTEREST GROUPS

The U.S. Payments Forum includes other organized member groups and project teams to facilitate discussion of issues for the payments industry. The Forum created three special interest groups (SIGs) for issuers, merchants,

and mobile providers for these discussion items.

- SIG leads are: Issuers – Jesse Lee, Wells Fargo; Merchants – Kristy Cook, Target, and Mobile – Deborah Baxley, PayGility Advisors

U.S. PAYMENTS FORUM MEMBERS

- ABCorp NA Inc
- ACI Worldwide
- Ahold Delhaize
- ALDI
- American Express
- Apple, Inc.
- Argotechno
- B2 Payment Solutions Inc.
- Bank of America
- Barnes International Limited
- Best Buy Co. Inc.
- Bluefin Payment Systems
- BMO Harris Bank N.A.
- BP Products NA
- CA Technologies
- Capital One
- Cardtek USA
- CETECOM INC.
- Chevron
- China UnionPay USA
- CHS Inc.
- CITGO Petroleum Corporation
- City National Bank
- Clear2Pay
- COMPRION GmbH
- Conduent
- Conexus, Inc.
- Consult Hyperion
- CPI Card Group
- CreditCall Corporation
- Cryptomathic Inc
- Cubic Transportation Systems, Inc.
- CULIANCE
- Debit Network Alliance
- Deltec Consulting, Inc
- Diebold Incorporated
- Discover Financial Services
- Dover Fueling Solutions
- E&S Consulting LLC
- EchoSat Communications Group
- Elan Financial Services
- Elavon, Inc.
- Electronic Transaction Association
- Entrust Datacard
- ePayResources
- Equinox Payments
- ExxonMobil
- Federal Reserve Bank of Atlanta - Retail Payments Risk Forum
- Federal Reserve Bank of Boston
- Federal Reserve Bank of Minneapolis
- Fifth Third Bank
- FIME
- First American Payment Systems
- First Data
- First National Bank of Omaha
- FIS
- Fiserv
- G+D Mobile Security
- Gemalto
- Gilbarco
- Heartland Payment Systems
- ICC Solutions Limited
- ID TECH, INC
- IDEMIA
- Infineon Technologies
- Ingenic Inc.
- Ingenutec, LLC
- Interac Association
- Jack Henry Processing Solutions
- JCB International Credit Card Company
- JPMorgan Chase
- KONA I co. Ltd
- Linxens Holding SAS
- Lowe's
- MasterCard Worldwide
- McDonald's
- Merchant Link, LLC
- Metropolitan Transportation Authority
- Multos International Pte. LTD
- National Retail Federation
- NCR Corp
- Nidec Sankyo Corporation
- NXP Semiconductors
- On-Line Strategies Services, LLC
- Paragon Application Systems
- PAX Technology Inc.
- PayGility Advisors
- PCI Security Standards Council, LLC
- Perfect Plastic Printing
- Phillips 66 Company
- PNC Bank
- Poynt Co.
- PSCU
- Q-Card Company/Brush Industries
- Rambus
- Reef Karson Consulting, LLC
- Safeway Inc
- Samsung Pay, Inc.
- Savage Consulting Group
- SCIL EMV Academy, Inc.
- SHAZAM
- Shubert Ticketing
- SPS
- Stripe
- Target Corporation
- TAS USA Inc.
- The Home Depot
- The Kroger Co.
- The National ATM Council, Inc.
- The Wendy's Company
- Toppan Printing Company, Ltd
- Toshiba Global Commerce Solutions, Inc.
- Trader Joe's Company
- TSYS
- U.S. Postal Service
- UBIVELOX Inc
- UBS Bank USA
- Underwriters Laboratories (UL)
- Utimaco Inc.
- Valid
- VeriFone, Inc.
- Visa Inc.
- W. Capra Consulting Group
- Wakefern Food Corp
- Walgreen Co.
- Walmart
- Wells Fargo
- WEX Inc.
- WISEKEY
- Woodforest National Bank

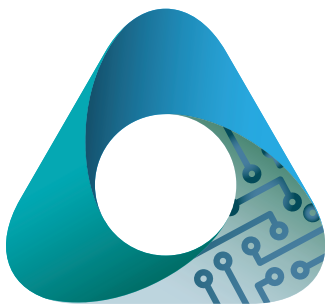
U.S. PAYMENTS FORUM MEMBERSHIP MIX



ACQUIRERS/PROCESSORS.....	13
ASSOCIATIONS.....	8
CONSULTANTS/INTEGRATORS.....	14
GLOBAL NETWORKS.....	6
GOVERNMENT.....	5
INDUSTRY SUPPLIERS.....	49
ISSUERS.....	11
MERCHANTS.....	22
MOBILE PAYMENTS.....	2
DOMESTIC NETWORKS.....	1
TOTAL MEMBERS.....	131

ADOPTERS/ INTEGRATORS = 63%
SUPPLIERS = 37%

As of September 30, 2018



DIGITAL INNOVATION ALLIANCE

SECURE TECHNOLOGY ALLIANCE LATIN AMERICAN CHAPTER

OVERVIEW

In 2018, the Digital Innovation Alliance (DIA) expanded the scope of its mission by:

- Changing its name from SCALA to Digital Innovation Alliance to reflect its movement into technologies relating to digital transformation
- Adding to its knowledge base of smart cards by leveraging the transformation from electronic to digital, supporting:
 - » User-centric solutions
 - » Advancements in interoperability technology
 - » Convergence of vertical markets

Throughout the year, DIA has produced white papers, encouraged collaboration between vertical markets including identity and payments, and identity and transit, received recognition for its Digital Center of Excellence, and held member-focused events.

WHITE PAPER/CONTACTLESS TECHNOLOGY

Contactless technology has been a great driving opportunity for DIA member organizations. DIA's white paper on "**Contactless Payments: Preparing the Infrastructure and Processes for Acquirers**" includes the mandates established by American Express, Discover, Mastercard and Visa. Acquirers have begun to prepare the infrastructure to process contactless cards and smart devices with the help of the information contained in the white paper. Users in Chile, Colombia, Costa Rica and Peru experienced speed, convenience, and a satisfying experience overall. National and global payment brands have begun to mandate the technology in other regions.

In 2019, DIA expects to see a significant increase in deployment of dual-interface

cards, contactless wearables and mobile payments.

WHITE PAPER/BIOMETRICS AND PAYMENTS

Biometrics is an innovative technology impacting users in both security and experience and helping to provide a unique experience for both the unsophisticated and experienced users. Biometrics can be incorporated as an add-on verification method to existing systems, such as mobile payments, and/or be deployed on its own. DIA's white paper, "**Biometrics Applied in Payments: Considerations for Development and Implementation**," addressed many of the concerns, opportunities, and considerations needed to successfully deploy biometrics in payments.

WHITE PAPER/VERTICAL MARKET CONVERGENCE

One of DIA's drivers for digital transformation is the convergence of vertical markets that previously had been separated and could not have had applications co-exist in the same device or use the same technology. Using the white paper, "**Considerations for the Development of Open Payments in the Public Transportation System in Latin American and the Caribbean**," some companies began issuing dual-interface cards with bracelets and other wearables that can be used for payment, transit, and other contactless applications.

VERTICAL MARKET COLLABORATIONS

2018 saw real world examples of convergence, most notably between transit and payments. DIA has also been working to encourage collaboration between vertical markets, including identity and payments, and identity and transit.

DIGITAL CENTER OF EXCELLENCE

DIA was recognized with the InnovaCiudad Medellin award for its efforts in education, training, and content development for digital transformation and technologies for smart city development through its Digital Center of Excellence. The Center is a joint effort of DIA, the National Bureau of Science, Technology and Innovation and the City of Knowledge Foundation.

EVENTS

Once again, the Digital Tour – Smart Cities held a successful event in 2018, this time in conjunction with The Technological University of Panama. Industry leaders, government officials, end users, academia and the general public attended the event, which focused on three themes: Social Media Night; Gaming Competition; and Smart City Concepts and Technologies. It was an ideal opportunity to interact with political figures, economists, government officials, and those in academics and technology. Each provided valuable perspectives on strategies for and the impact of digital transformation in cities.



DIA MEMBERS

Advantis • Gemalto • G+D Mobile Security • HID • IDEMIA • Magi-card • Linxens • Discover • Mastercard • Visa Inc.

As of September 30, 2018

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