GLOBALPLATFORM®

The Standard for Secure Digital Services and Devices

2017 ANNUAL REPORT

Foreward

Executive Team

Kevin Gillick
Executive Director

Gil Bernabeu
Technical Director

Loreal LeGate
Marketing Director

Hank Chavers
Technical Program Manager

Alliances Management
Operations Secretariat

iseepr Ltd.
PR Agency

Service digitalization in today's connected world is changing how we engage with everyday products. To some this may be seen as a digital revolution but, to those working within GlobalPlatform, it's an evolution which reflects the capabilities of today's technology.

At the heart of this evolution is the requirement to establish an open and trusted ecosystem in which all stakeholders can deliver innovative services without compromising security, privacy, simplicity and end user convenience. GlobalPlatform solves the very real security challenge that the digital services landscape has created. Our technology framework empowers service providers and device manufacturers to protect against known threats and attacks.

Our diverse membership recognizes the ongoing work that needs to be done and the value of collaboration to support different market requirements and business needs on the same secure component in a single device. Members continue to demonstrate this through the commitment of time, energy and resources.

This commitment has been rewarded with significant and tangible successes for GlobalPlatform over the last year. This includes:

- **Enhancing our security evaluation program in response to market needs and to reflect member requirements.**

- **Expanding our IoT activity to sharpen our focus on consumer and industrial requirements.**

- **Growing industry partnership outreach to connect with relevant groups and optimize opportunities to deliver tangible outcomes that benefit the wider ecosystem.**

- **Engaging with the global developer community though unique and targeted programs to improve understanding and use of GlobalPlatform technology.**

- **Creating new workshops to address and collaborate on the specific technical and business opportunities and challenges faced by our members.**

- **Providing Asian regions that have a strong appetite for GlobalPlatform technology adoption and are ready to implement with the education tools and resources required.**

In this annual report, we present just some of the accomplishments achieved over the last 12 months as well as the long-term impact of our technology. I offer my sincere thanks to those that have supported our initiatives to ensure GlobalPlatform remains pivotal in the digital services ecosystem – increasing our relevance and influence in existing and new industries globally.

As we look to the future, our unique ability to bring service providers and device manufacturers together, in the true spirit of collaboration, will be fundamental to stakeholder success.

Kevin Gillick, Executive Director

GLOBALPLATFORM®

The Standard for Secure Digital Services and Devices

MEMBERSHIP

A NON-PROFIT INDUSTRY ASSOCIATION DRIVEN BY

2600 REPRESENTATIVES

FROM 100+ MEMBER COMPANIES

GLOBALPLATFORM TECHNOLOGY IS DEVELOPED BY

3 TECHNICAL COMMITTEES

13 WORKING GROUPS

7 MARKET TASK FORCES

33 INDUSTRY PARTNERS

TASK FORCES PROVIDE STRATEGIC REQUIREMENTS AND USE CASES IN ALIGNMENT WITH INDUSTRY PARTNERS

GLOBALPLATFORM ENABLES SECURE DIGITAL DELIVERY REGARDLESS OF DEVICE TYPE OR MARKET SECTOR

TECHNOLOGY

OUR TECHNOLOGY SUPPORTS A RANGE OF AUTHENTICATION, CONNECTIVITY, PRIVACY, & SECURITY SOLUTIONS

150 SPECIFICATIONS & TECHNICAL DOCUMENTS AVAILABLE

ADOPTION OF A STANDARDIZED **TRUSTED EXECUTION ENVIRONMENT (TEE)** TO SECURE SENSITIVE DATA IN DEVICES IS RAPIDLY GROWING

1 BILLION PROCESSORS
THAT CAN SUPPORT TEE ARE SHIPPED PER QUARTER

41% | 22 BILLION

SECURE ELEMENTS SHIPPED GLOBALLY SINCE 2010 ARE BASED ON GLOBALPLATFORM SPECIFICATIONS

CERTIFICATION

OUR PROGRAM BUILDS TRUST BY VERIFYING PRODUCT ADHERENCE FOR FUNCTIONAL REQUIREMENTS & MARKET DEFINED SECURITY THRESHOLDS

190 PRODUCTS | **18** TEST TOOLS | **14** ACCREDITED LABS

LABS IN CHINA, FRANCE, GERMANY, KOREA, NETHERLANDS, SPAIN, U.K., AND U.S.

EDUCATION

GLOBALPLATFORM IS COMMITTED TO EDUCATING STAKEHOLDERS ACROSS THE ECOSYSTEM

140 EDUCATIONAL MATERIALS AVAILABLE

18 EDUCATIONAL EVENTS HOSTED LAST YEAR

Standardizing Secure Digital Services and Devices

GlobalPlatform is a non-profit industry association driven by over 100 member companies. Members share a common goal to develop GlobalPlatform's specifications, which are today highly regarded as the international standard for enabling digital services and devices to be trusted and securely managed throughout their lifecycle.

GlobalPlatform protects digital services by standardizing and certifying a security hardware/firmware combination, known as a secure component, which acts as an on-device trust anchor. This facilitates collaboration between service providers and device manufacturers, empowering them to ensure adequate security within all devices to protect against threats.

GlobalPlatform specifications also standardize the secure management of digital services and devices once deployed in the field. Altogether, GlobalPlatform enables convenient and secure digital service delivery to end users, while supporting privacy, regardless of market sector or device type. Devices secured by GlobalPlatform include smartphones, tablets, set top boxes, wearables, connected cars, other Internet-of-Things (IoT) devices and smart cards.

The technology's widespread global adoption delivers cost and time-to-market efficiencies to all. Market sectors adopting GlobalPlatform technology include automotive, government and enterprise ID, healthcare, payments, premium content, smart cities, smart home, telecoms, transportation, and utilities.

GlobalPlatform's legacy of successful technical specification development is thanks to two decades of energetic and effective industry collaboration. Members influence the organization's output through participation in technical committees, working groups and strategic task forces. GlobalPlatform technology is developed in collaboration with numerous standards bodies and regional organizations across the world, to ensure continual relevance and timeliness.

Our Vision

To create fully collaborative and open ecosystems in which all stakeholders can efficiently deliver innovative digital services, while providing greater security, privacy, simplicity and convenience for users.

Our Mission

To develop specifications that enable collaborative and open ecosystems where digital services and devices can be trusted and managed securely while privacy is supported.

"We embrace every opportunity to work with associations, such as GlobalPlatform, that share a common desire to improve authentication through the development of open, scalable industry standards. SE and TEE technology play an important role in isolating and protecting sensitive applications, and there is real value to the market in bringing these standards together." – *Brett McDowell, FIDO Alliance Executive Director*

To explore GlobalPlatform solutions, please visit **globalplatform.org**

Leading Vision and Strategy

GlobalPlatform is governed by a Board of Directors, that develops and oversees the execution of the association's strategy while ensuring its alignment with the mission and vision. The Board consists of eleven directors who represent the interests of all GlobalPlatform member companies.

BOARD MEMBERS 2016-2017

Marc Kekicheff
GlobalPlatform
Chairman
Visa Inc.

Rob Coombs
ARM

Sebastian Hans
Oracle

Nils Gerhardt
GlobalPlatform
Vice Chairman
Giesecke & Devrient

Stéphanie El Rhomri
FIME

Mark Lipford
Sprint

Yves Moulart
GlobalPlatform
Secretary/Treasurer
STMicroelectronics

Rémi de Fouchier
Gemalto

Christophe Colas
Trustonic

Eikazu Niwano
NTT Corporation

Jeremy O'Donoghue
Qualcomm
(Not pictured)

STRATEGIC DIRECTORS 2016-2017

At the discretion of the Board, Strategic Directors may be appointed to provide additional advice or expertise on a particular strategic issue or vertical market.

Philip Hoyer
Strategic Director and Chair of the Identity Task Force
HID Global

Olivier van Nieuwenhuyze
Strategic Director and Chair of the Security Task Force
STMicroelectronics

*For more information on our Board, please visit **globalplatform.org***

Collaborating to Build Timely and Relevant Solutions

GlobalPlatform Members are the Organization's Greatest Asset

Our legacy of successful technical specification development is thanks to two decades of energetic and effective industry collaboration from our members. Members influence the organization's output through participation in technical committees, working groups and strategic task forces, then work together to foster adoption of technology standards and implementations.

GlobalPlatform brings together over 2600 professionals from more than 100 companies, who share a common goal of creating collaborative and open ecosystems to facilitate the delivery of secure digital services. We bring together service and platform providers, software vendors, device manufacturers, mobile network operators, chip manufacturers and testing laboratories from across the globe. This cross-industry collaboration provides the means to interact seamlessly when deploying device-agnostic secure digital services and ensures the continual relevance and timeliness of all technical outputs.

MEMBER COMPANIES 2016-2017

FULL MEMBERS
Advanced Micro Devices
American Express
Apple
Applus+
ARM
AT&T
Beijing Unionpay Card
  Technology Co. (BCTC)
Carrefour
China Academy of
  Telecommunication Research
  of MIIT (CAICT)
China Mobile
COMPRION
Discover Financial Services
Ericsson
FeliCa Networks
FIME
Galitt
Gemalto
Giesecke & Devrient
Hansol Secure
HID Global
Huawei
Infineon
Ingenico
Intercede
Mastercard
MediaTek
Morpho
NTT
NXP
Oberthur Technologies
ORACLE

Orange
Qualcomm
Rambus
Riscure
Samsung
Sprint
STMicroelectronics
Trusted Labs
Trustonic
Underwriters Laboratories (UL)
Verizon Wireless
Visa

PARTICIPATING MEMBERS
Beijing Beanpod Technology Co.
DPLS Lab
Brightsight
CTC advanced
Dai Nippon Printing Co.
Fingerprint Cards
ICTK Co.
Nagravision
SGS Group
Spreadtrum Communications Co.
Symantec
Synaptics
Thales Communications & Security
Toshiba
Valid Soluciones Tecnológicas
Winbond Technology

OBSERVER MEMBERS
Alcatel-Lucent
ALi Corporation
Alibaba

Barclays Bank
Beijing China Rainbow
  Technology Co.
Beijing Tongfang
  Microelectronics Co.
Cartes Bancaires
Dolby Laboratories
Eastcompeace Technology Co.
Fabrica Nacional de Moneda y
  Timbre - Real Casa de la
  Moneda (FNMT - RCM)
Feitian Technologies Co.
Financial Information
  Services Co.
Guangdong Chutian Dragon
  Smart Card Co.
Hengbao Co.
Imagination Technologies
Inside Secure
JCB
KONA International
Marvell Technology Group
MaskTech International
Motion Picture Laboratories
Precise Biometrics
Redsys
Samsung SDS
Secure Platforms
  Technology Co.
SELTECH Corporation
Shanghai COS Software Co.
Shanghai Fudan
  Microelectronics Group
Simility Labs
SK Holdings Co.

Sony Mobile Communications
SuZhou Rongcard Intelligence
  Information Technology Co.
Synapse Mobile Networks
Telechips Inc.
TELUS Communications Co.
Thales
Toppan Printing Co.
UBIVELOX
Verimatrix
Watchdata System
Wuhan Tianyu Information
  Industry, Co.
Xard Holdings
Zhongchao Credit Card Industry
  Development Co.

PUBLIC ENTITY MEMBERS
BSI - Bundesamt fuer Sicherheit
  in der Infomationstechnik
CEA-Leti
CESG
ITSO
Poste Italiane
U.S. Department of Defense

CONSULTANT MEMBERS
eID Consulting
Internet of Trust
Monetech
Nextendis
SafePay Systems

*To explore GlobalPlatform membership, please contact **secretariat@globalplatform.org***

Advancing GlobalPlatform's Technology

Our Technical Expertise

Technical activity and specification development within GlobalPlatform is carried out by three member-driven committees. The technical committees are comprised of representatives from our Full and Participating Member organizations. Each committee manages its workload by forming working groups, which discuss and progress specific technical deliverables. This approach allows members to channel their expertise and knowledge into targeted work initiatives. It also allows our organization to benefit from the output of debate and collaboration among the best technical minds in the industry.

Highlights 2016-2017

Our committes and working groups published numerous technical documents over the past year including:

- Consumer Centric Model Configuration
- TEE Management Framework (TMF)
- Web API for Accessing Secure Elements
- Managing Entity Specification
- E2E Simplified Service Management
  Framework Transport
- Card Privacy Framework
- Privacy-Enhanced ID Configuration
- Open Mobile API (OMAPI) Specification
- Secure Element Mobile Services Kit

Card Committee

Drives Secure Element activity
Chaired by Karl Eglof Hartel, Giesecke & Devrient
Working Groups
- Card Compliance, Chaired by the Compliance Secretariat
- Card Security, Chaired by Sarra Mestiri, Oberthur Technologies
- Card Specification, Chaired by Guillaume Phan, Trusted Logic
- Multi Secure Element, Chaired by Olivier Van Nieuwenhuyze, STMicroelectronics

Device Committee

Drives TEE activity
Chaired by Christophe Colas, Trustonic
Working Groups
- Access Control, Chaired by Alexander Summerer, Giesecke & Devrient
- Device Compliance, Chaired by Stéphanie El Rhomri, FIME
- SC Remote Admin, Chaired by Laurence Bringer, Gemalto
- Secure Component BLE Connector, Chaired by Phil Hoyer, HID Global
- TEE Specifications, Chaired by Don Felton, Trustonic
- TEE Security, Chaired by Herve Sibert, Apple
- Web APIs, Chaired by Hank Chavers, GlobalPlatform

Systems Committee

Drives messaging development
Chaired by Olivier Clemot, Morpho
Working Groups
- End-to-End Simplified Framework, Chaired by Paul Stovold, ITSO Limited
- TSM, Chaired by Patrice Amiel, Gemalto

GlobalPlatform End-to-End Simplified Framework

- Enables a service provider to launch a contactless offering in 3 to 6 months (a process which traditionally took between 12 to 18 months).
- Addresses market sector specific requirements for device, secure element, and messaging technology.

*For more information on GlobalPlatform committees or specifications, please visit **www.globalplatform.org***

Ensuring Relevance for Key Markets

Task forces provide a platform for strategic discussion and collaboration between all members of GlobalPlatform on requirements and use cases in targeted area of interest such as a new market sector or region. Task forces also seek collaboration with other industry bodies relevant to their central focus to ensure that GlobalPlatform's direction is aligned with wider industry efforts.

MARKET SECTOR TASK FORCES

Consumer Internet-of-Things Task Force
• Chaired by Nils Gerhardt, Giesecke & Devrient
• Sub-Task Force:
   • Transportation – Chaired by Paul Stovold, ITSO Limited

Identity Task Force
• Chaired by Philip Hoyer, HID Global
• Vice Chair Alexander Summerer, Giesecke & Devrient

Industrial Internet-of-Things Task Force
• Chaired by Sebastian Hans, Oracle

Premium Content Task Force
• Chaired by Kevin Gillick (interim chair), GlobalPlatform

Security Task Force
• Chaired by Olivier Van Nieuwenhuyze, STMicroelectronics
• Vice Chair Jean-Daniel Aussel, Gemalto
• Vice Chair Xavier Vilarrubla, Brightsight
• Sub-Task Forces:
   • RoT - Chaired by Olivier Van Nieuwenhuyze, STMicroelectronics
   • Cryptography - Chaired by Beatrice Peirani, Gemalto

Highlights 2016-2017

• Created separate task forces for Industrial IoT and Consumer IoT in line with market requirements

• Released Root of Trust Definitions and Requirements

• Published white paper *Ensure Interworking Between Multiple Contactless Card Emulation Environment*

• Produced an industry interview on Revenue Security

• Hosted workshops on Digital Identities and Premium Content

• Established liaision relationships with the FIDO Alliance, Car Connectivity Consortium and ISO/IEC JTC 1/SC 17

REGIONAL TASK FORCES

China Task Force
• Chaired by Vicky Guo, China Academy of Information and Communications Technology (CAICT)
• Co-Vice Chairs:
   • Fang Qiang – Third Party Payment Ecosystem, Alibaba
   • Victor An – Banking and Finance, DPLS Labs
   • Xinmiao Chang – Cutting edge technology including SE and TEE, Huawei
   • Michael Lu – Premium Content & DRM, Trustonic

Japan Task Force
• Chaired by Eikazu Niwano, NTT Corporation
• Sector Leaders:
   • Premium Content - Koichi Watanabe, Toppan Printing
   • Mobile - Masayuki Takezawa, FeliCa Networks
   • IoT - Takeshi Ohno, Dai Nippon Printing
   • Security - Ariyuki Kishimoto, Toshiba

Highlights 2016-2017

• Launched the China Task Force and established media presence for Chinese audience

• Established liaison relationship with the Internet Finance Authentication Alliance (IFAA)

• Jointly hosted the Secure Device Seminar in Japan with NICSS (the Next generation Ic Card System Study group)

• Commenced planning to host the first GlobalPlatform TEE Seminar in China (Sept 2017)

For more information on GlobalPlatform task forces, please visit **globalplatform.org**

Establishing Trust Through Certification

GlobalPlatform's work to develop and maintain a certification program allows stakeholders to verify product adherence to the organizations specifications and configurations. This is key to enable GlobalPlatform to support a collaborative and open ecosystem where digital services and devices can be trusted.

Device manufacturers that use GlobalPlatform certified secure components can proactively market their products as meeting the needs of digital service providers. They can effectively illustrate that their digital service management capabilities are interoperable and meet industry defined security requirements. This level of assurances aids service providers in selecting products which match their needs.

Functional Certification

Offered for SE and TEE products. The program evaluates the functional behavior of a product against the requirements outlined by GlobalPlatform configurations and associated specifications to achieve market interoperability. Independent testing of this nature provides confirmation that the digital service will perform as intended in the field.

Security Certification

Offered for TEE products. The program confirms conformance of TEE products to the Common Criteria recognized GlobalPlatform Protection Profile, through independent security evaluation. It ensures that secure components meet the required levels of security defined for a particular service, enabling service providers to comply with industry requirements and manage risk effectively.

Highlights 2016-2017

- 14 certified laboratories
- 190 products qualified
- 18 test suites available
- Dedicated certification secretariat
- Independent program
- Internationally recognized

Accredited Labs

GlobalPlatform has accredited 14 labs in China, France, Germany, Korea, Netherlands, Spain, U.K., and U.S.

- Applus+ (Shanghai) Quality Inspection Co., Ltd
- Applus+LGAI Technological Center S.A.
- Beijing UnionPay Card Technology (BCTC)
- CTC advanced
- CETECOM
- CAICT (China Academy of Information and Communication Technology)
- DPLS Lab
- FIME EMEA
- FIME Korea
- ICTK
- Riscure
- SGS
- Thales
- UL

"We are delighted to announce our membership of GlobalPlatform and look forward to sharing our experience of telecommunication technology communications policies and standards with GlobalPlatform. Our mission is to provide test and evaluations services to confirm product security and interoperability. GlobalPlatform Functional Certification Program will help us to further advance our offering. Membership is already helping us to stay up-to-date with the most advanced secure chip specifications available in the marketplace in order to continue our support for the government and the wider industry."
 - *Qu Yan, Vice Director of Global Project Management Department, CAICT*

*To learn more about certification, please visit **globalplatform.org***

Informing the Industry

GlobalPlatform is committed to educating stakeholders across the ecosystem. Our training, events and webinars are constantly evolving in line with market requirements, and are delivered by an experienced team of specialist trainers and subject matter experts.

Our spokespeople also present GlobalPlatform's technology at over 25 industry conferences worldwide annually, equipping stakeholders with the knowledge to accelerate deployment of GlobalPlatform compliant solutions.

Technical Training

GlobalPlatform provides training on its specifications worldwide, through classroom, in-house and online sessions. In addition to our successful card specification training program, we have expanded our dedicated TEE training program in response to increasing demand for knowledge in this area.
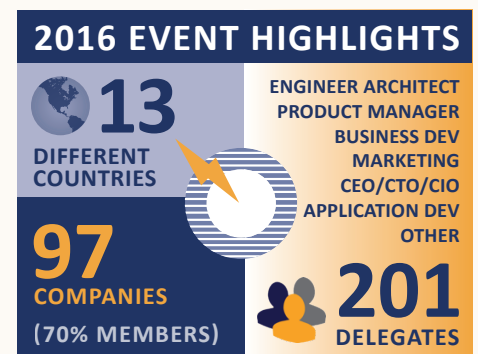
"Great training and facilitation, loved the interactive environment."
– *Past delegate, American Express*

TEE Seminar

For the past four years the annual GlobalPlatform TEE Seminar has provided a platform for influential industry players to network and discuss the key trends impacting security for digital services. It is attended by service and platform providers, software vendors, device manufacturers, and mobile network operators.

Over 200 delegates from 97 companies and 13 different countries attended the 2016 TEE Seminar.

2016 EVENT HIGHLIGHTS

13 DIFFERENT COUNTRIES

97 COMPANIES (70% MEMBERS)

ENGINEER ARCHITECT
PRODUCT MANAGER
BUSINESS DEV
MARKETING
CEO/CTO/CIO
APPLICATION DEV
OTHER

201 DELEGATES

Webinars

After successfully hosting our first ever public webinar in 2016, we have continued to provide online seminars on subjects important to our members. Our most recent webinar, Protecting Web Apps with Secure Components, was attended by members and non-members in the telecoms and financial services industries, as well as device manufacturers.

Over 1,200 attendees have participated in our webinars over the past year.

Hackathon

GlobalPlatform launched its TEE Hackathon in Silicon Valley. Developers from the IoT, FinTech, premium content protection, government, healthcare, and retail sectors were invited to create and present trusted applications.

67 developers and entrepreneurs attended the 2016 TEE Hackathon, creating 12 new applications.

Collaborating with Industry Partners

GlobalPlatform has established strong collaborative relationships with relevant industry partners across the world, from international standards organizations to regional industry bodies. Our culture of collaboration ensures GlobalPlatform resources remain relevant for emerging technologies and the evolving requirements of industrial and consumer end users. This collaboration is key to realizing our vision of fully open ecosystems that efficiently deliver innovative digital services across all vertical markets, while providing greater security, privacy, simplicity, and convenience for the user.

Our Current Industry Partners

- ACT Canada (Advanced Card Technology Association of Canada)
- L'Agence nationale de la sécurité des systèmes d'information
- AICF (Asia IC Card Forum)
- APSCA (Asia Pacific Smart Card Association)
- Car Connectivity Consortium (CCC)
- CEN (European Committee for Standardization)
- EMVCo
- ETSI (European Telecommunications Standards Institute)
- European Payments Council
- EUROSMART
- FIDO Alliance
- Global Certification Forum
- GSMA
- IFAA
- ISO/WG4
- Java Card Forum
- Mobey Forum
- Near Field Communication (NFC) Forum
- NICSS (Next generation Ic Card System Study group)
- NIST (National Institute of Standards & Technology)
- OMA (Open Mobile Alliance)
- oneM2M
- Payez Mobile
- PTCRB
- SD Association
- Secure Content Storage Association
- Secure Technology Alliance
- SIMAlliance
- Smart Ticketing Alliance
- STOLPAN
- TCG (Trusted Computing Group)
- Telecommunication Terminal Testing Technology Association (TAF)
- W3C

ETSI, GlobalPlatform and the NFC Forum published a joint white paper titled *Ensure Interworking Between Multiple Contactless Card Emulation Environments*. It offers a standardized approach to implementing and managing NFC services across all technologies and platforms. The shared work initiative explains how to ensure that NFC services successfully coexist within a device and operate as intended.

"This collaboration among three industry partners will have a positive impact on the market in the coming years." *– Paula Hunter, Executive Director of the NFC Forum*

"The benefits of a common approach [to testing] can only be realized if there is common interpretation and application of the specification. Businesses investing in Embedded SIM solutions will be assured that products qualified by the GlobalPlatform scheme will deliver the same level of functional integrity and security as the traditional removable SIM." *– Gloria Trujillo, Technology Director, GSMA*

For more information on GlobalPlatform's industry partners, please visit **globalplatform.org**

CONTACT US

Membership inquiries: membership@globalplatform.org

Media inquiries: globalplatform@iseepr.co.uk

General inquiries: secretariat@globalplatform.org

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LinkedIn: http://linkd.in/xjxsN5
WeChat: http://www.globalplatform.org/mediawechat.asp

ADMINISTRATIVE OFFICES
GlobalPlatform, Inc.
544 Hillside Road
Redwood City, CA 94062
USA

www.globalplatform.org