



**“The FIDO Alliance Today: status and news”**  
**November 20, 2015 | Tokyo, Japan**

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**Why FIDO?**

# Data Breaches...

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> **780** data breaches in 2014

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> **1 billion** records 2012-2014

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> **\$3.5 million** cost/breach



“76% of 2012 network intrusions exploited weak or stolen credentials”

*2013 Data Breach Investigations Report*



The world has a **PASSWORD PROBLEM**

# ONE-TIME PASSCODES

Improve security but aren't easy enough to use



SMS  
Reliability



Token  
Necklace



User  
Confusion



Still  
Phishable



WE NEED A  
**NEW MODEL**



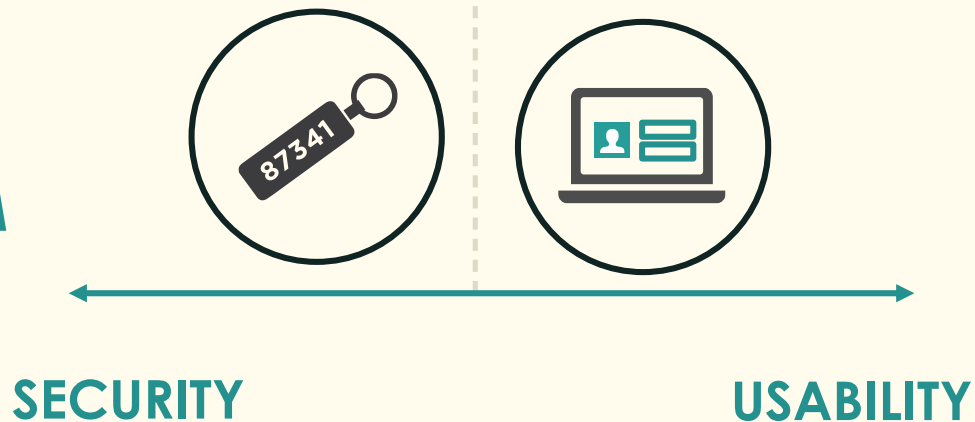
WE CALL OUR  
**NEW MODEL**

**F**ast **ID**entity **O**nline

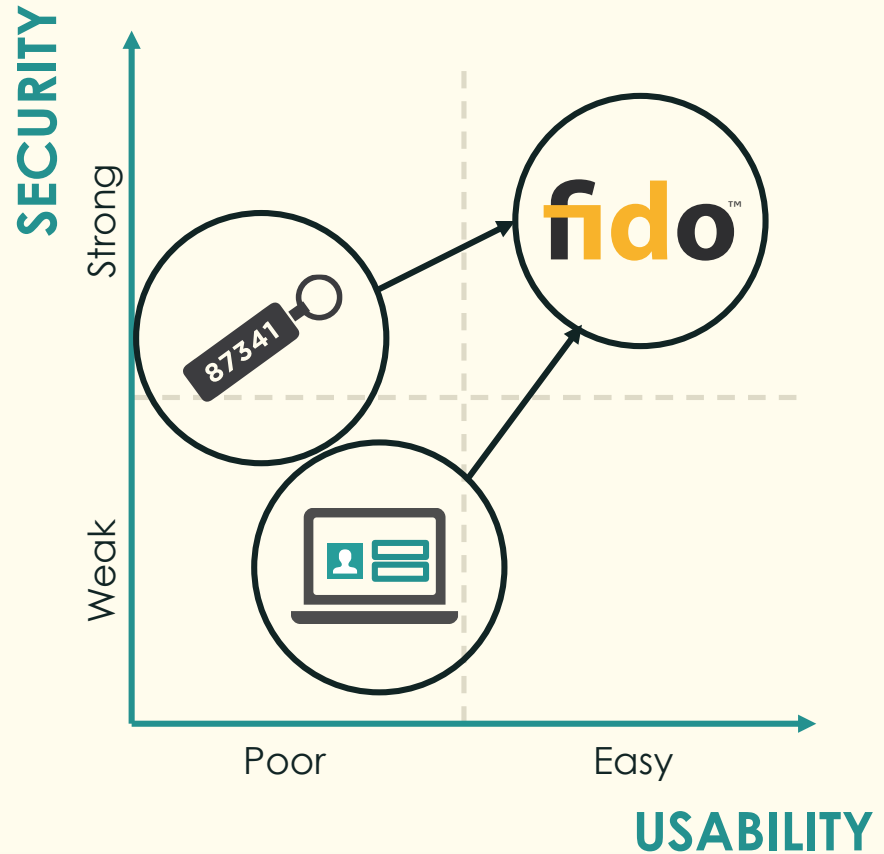
online authentication using  
**public key cryptography**



# THE OLD PARADIGM

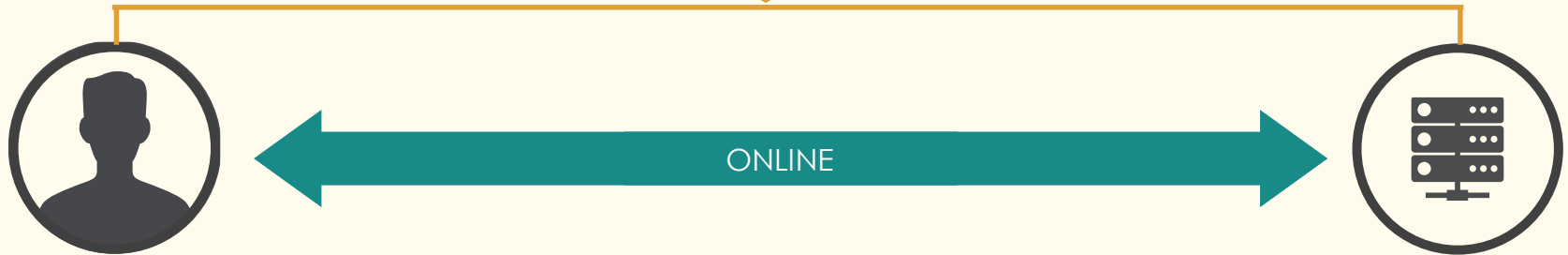


# THE FIDO PARADIGM

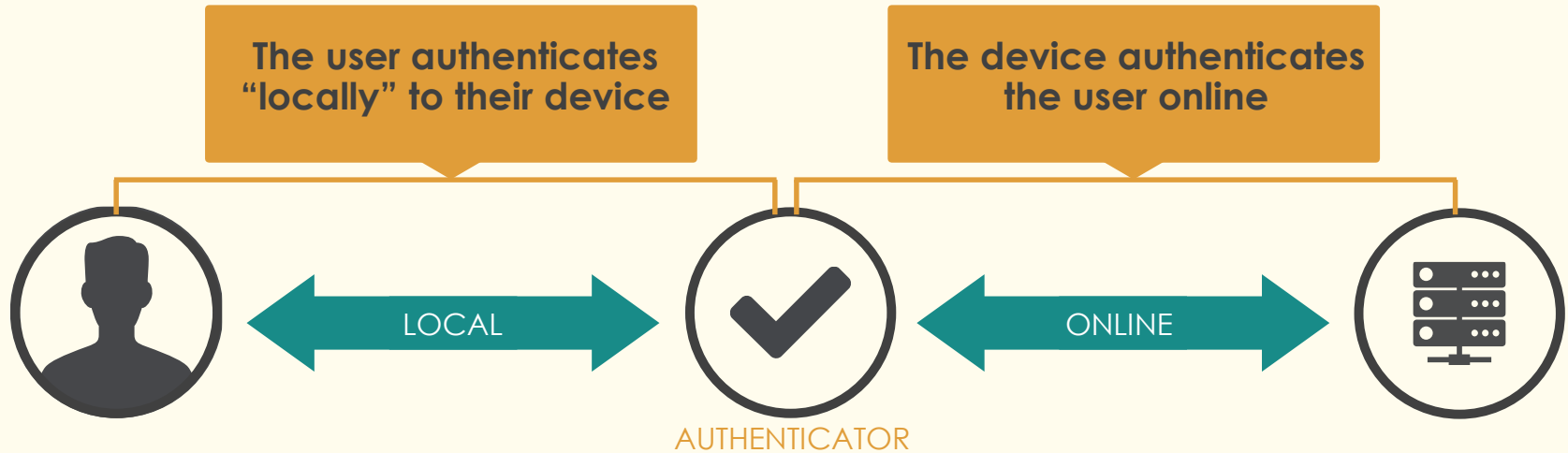


# HOW OLD AUTHN WORKS

The user authenticates themselves online by presenting a human-readable secret



# HOW FIDO AUTHN WORKS

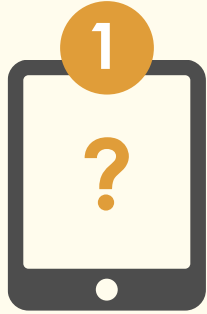




online authentication using  
**public key cryptography**

## Passwordless Experience (UAF Standards)

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Authentication Challenge



Biometric Verification\*



Authenticated Online

## Second Factor Experience (U2F Standards)

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Second Factor Challenge



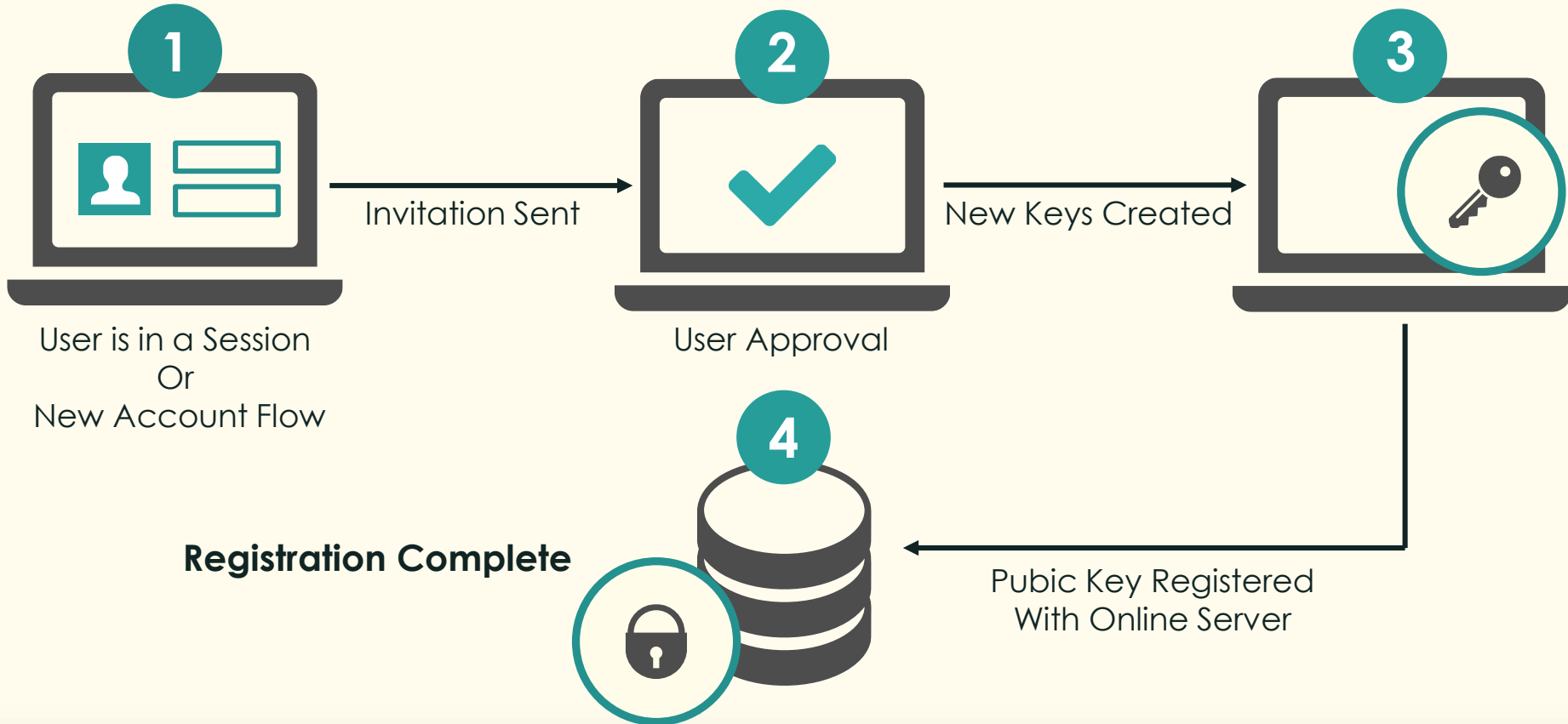
Insert Dongle\* / Press Button



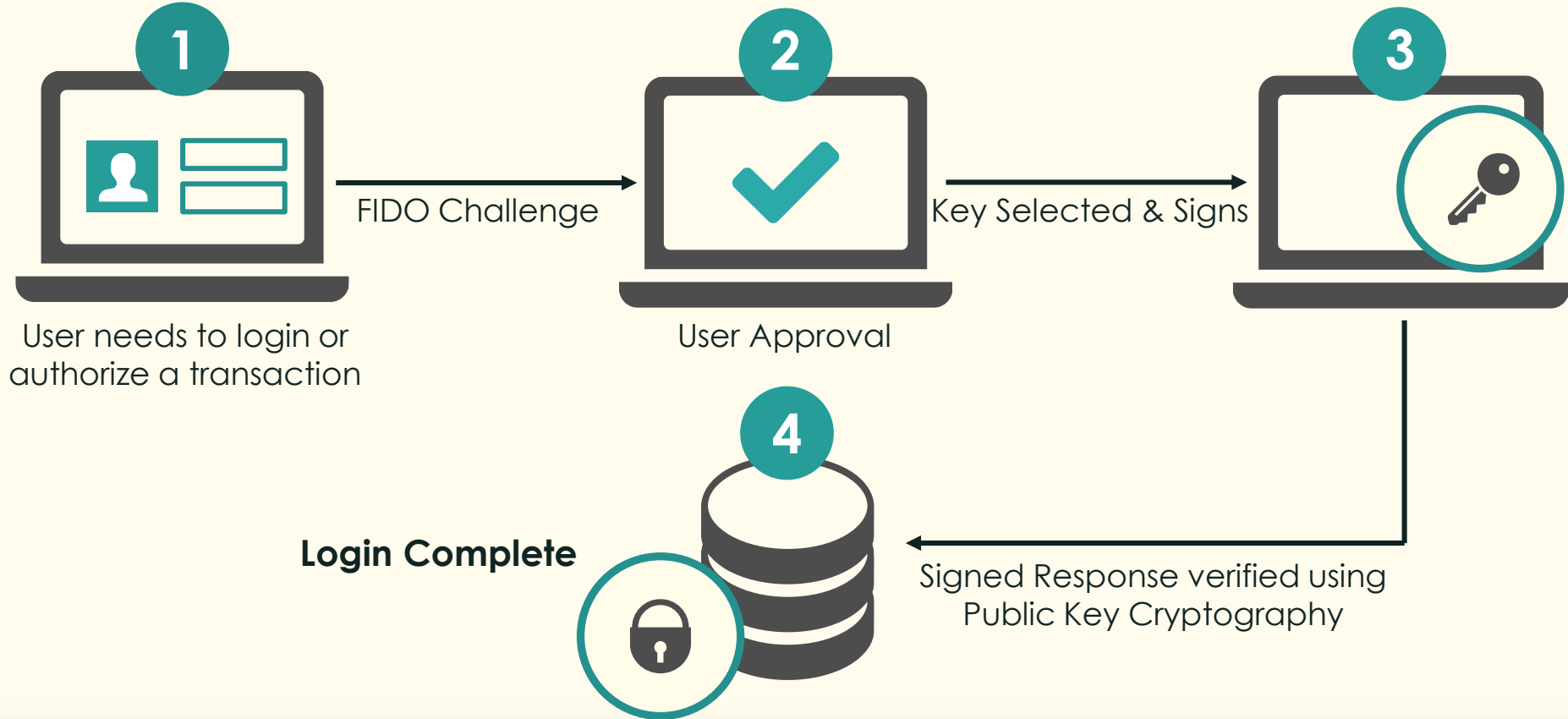
Authenticated Online

\*There are other types of authenticators

# FIDO Registration



# FIDO Authentication







USABILITY, SECURITY  
and  
**PRIVACY**



No 3rd Party in the Protocol



No Secrets on the Server side




Biometric Data (if used) Never Leaves Device



No Link-ability Between Services or Accounts



De-register at any time

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- Better Security for **online services**
  - Reduced cost for the **enterprise**
  - Simpler and Safer for **consumers**

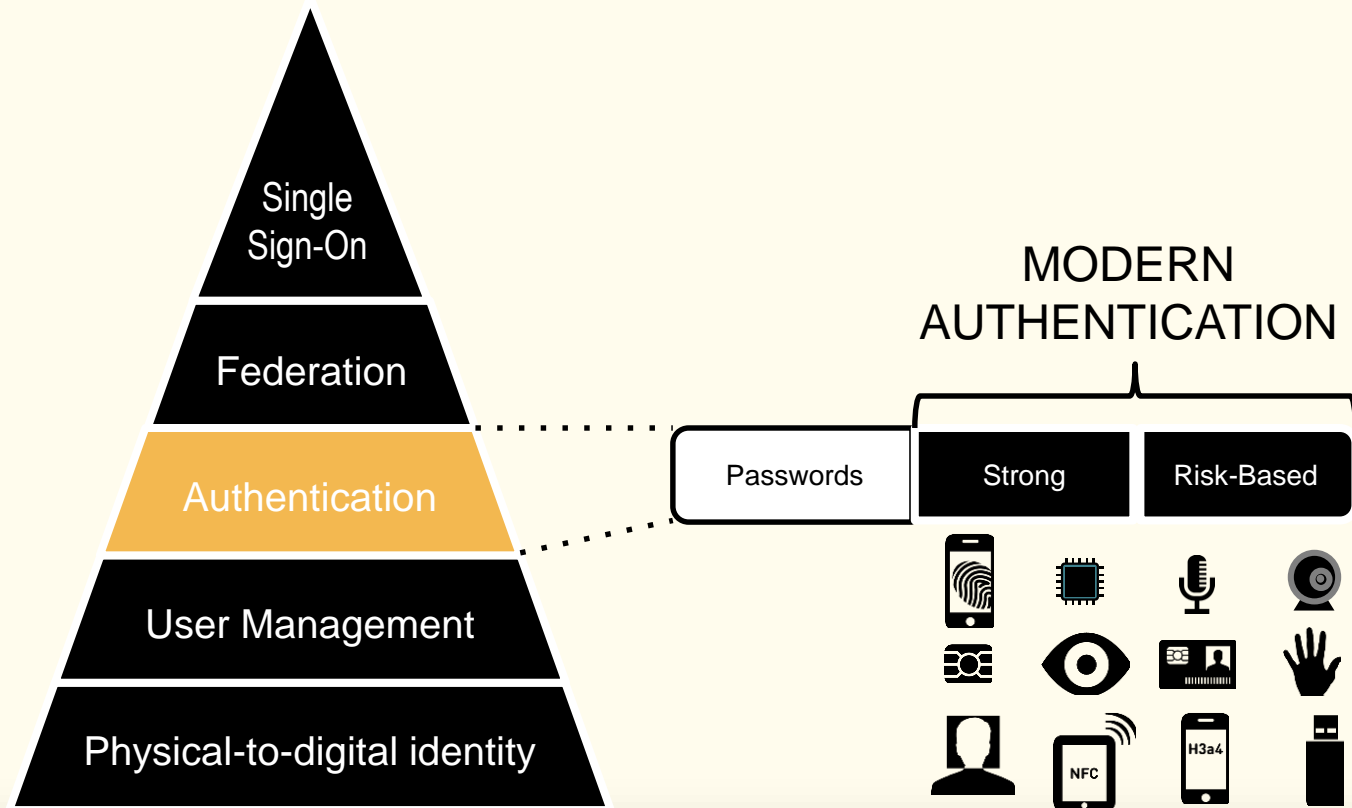


**Who is FIDO Alliance?**

The FIDO Alliance is an open industry association with **nearly 250** global member organizations



# FIDO SCOPE





# FIDO Alliance Mission

1

Develop  
Specifications

2

Operate  
Adoption Programs

3

Pursue Formal  
Standardization

- ✓ Services/Apps
- ✓ Devices/Platforms
- ✓ Vendors/Enablers



Board Members





✓ Public Sector



*“The fact that FIDO has now welcomed government participation is a logical and exciting step toward further advancement of the Identity Ecosystem; we look forward to continued progress.” -- Mike Garcia, NSTIC NPO*

Government Members



✓ Industry Partners

Our mission is highly complementary to many other associations around the world. We welcome the opportunity to collaborate with this growing list of industry partner organizations.



Liaison Program



# What's New?

# FIDO TIMELINE



Alliance Announced

FEB 2013

6 Members



FIDO Ready Program

DEC 2013



Specification Review Draft

FEB 2014



First Deployments

FEB-OCT 2014

October 2014



FIDO 1.0 FINAL

DEC 9 2014



Certified Certification Program

MAY 2015



New U2F Transports

JUNE 2015



FIDO 1.X Adoption

TODAY  
~250 Members

# 2014 FIDO ADOPTION

*"Secure Consumer Payments Enabled for Alipay Customers with Easy-to-Use Fingerprint Sensors on Recently-Launched Samsung Galaxy S5",  
**September 17, 2014***



*"Google Launches Security Key, World's First Deployment of Fast Identity Online Universal Second Factor (FIDO U2F) Authentication",  
**October 21, 2014***



*"PayPal and Samsung Enable Consumer Payments with Fingerprint Authentication on New Samsung Galaxy S5",  
**Feb 24, 2014***

# 2015 FIDO ADOPTION

*"Today, we're adding Universal 2nd Factor (U2F) security keys as an additional method for two-step verification, giving you stronger authentication protection."*  
**August 12, 2015**

*"Google for Work announced Enterprise admin support for FIDO® U2F "Security Key",*  
**April 21, 2015**

*"Qualcomm launches Snapdragon fingerprint scanning technology",*  
**March 2, 2015**



*"Microsoft Announces FIDO 2.0 Support Coming to Windows 10"*  
**Feb 23, 2015**



*"Largest mobile network in Japan becomes first wireless carrier to enhance customer experience with natural, simple and strong ways to authenticate to DOCOMO's services using FIDO standards"*  
**May 26, 2015**



*"the technology supporting fingerprint sign-in was built according to FIDO (Fast IDentity Online) standards."*  
**September 15, 2015**



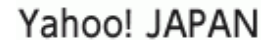
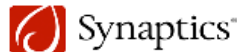
*"GitHub says it will now handle what is called the FIDO Universal 2nd Factor, or U2F, specification"*  
**October 1, 2015**



Deployments are enabled by  
**FIDO Certified™ Products**  
available today



Certified





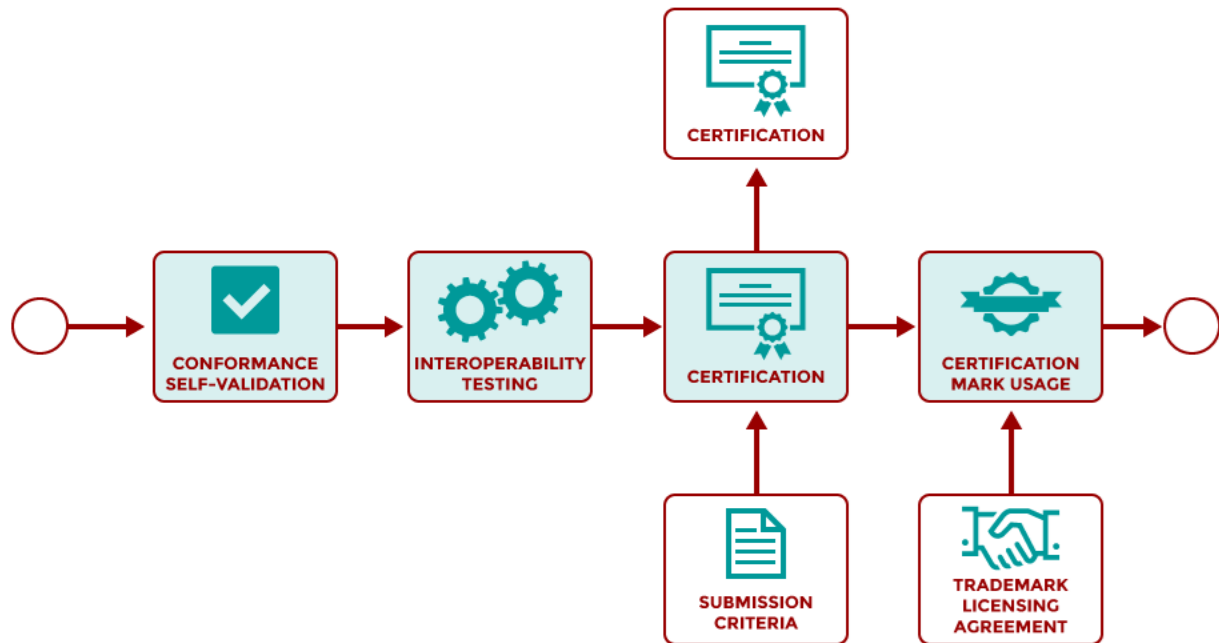


- ✓ Available to anyone
- ✓ Ensures interoperability
- ✓ Promotes the FIDO ecosystem

### Steps to certification:

1. Conformance Self-Validation
2. Interoperability Testing
3. Certification Request
4. Trademark License (optional)

[fidoalliance.org/certification](https://fidoalliance.org/certification)





# FIDO Alliance Mission

1

Develop  
Specifications

## **FIDO 1.X - UAF & U2F Technology Working Groups**

Continue to release updates and enhancements such as de-registration and iOS support in UAF and NFC+BLE transports for U2F

## **FIDO 2.0 Technology Working Group**

“The mission of the new FIDO 2.0 Specification Technology Working Group is to consider future requirements, and to ensure widespread interoperability within the authentication ecosystem among devices, clients, and servers.”

# Announcement

## ***FIDO Authentication Poised for Continued Growth as Alliance Submits FIDO 2.0 Web API to W3C***

- Today we announce the W3C has accepted our submission
- Specifications required to define a FIDO-compliant Web API
- Designed to extend FIDO's existing reach to all platforms
- OEM community should begin to plan their support now
- RP community should deploy FIDO 1.x now knowing FIDO standards are “future proof” -- strategically positioned as the de facto authentication scheme for the Web & OS Platforms

# Announcement

## ***From W3C:***

“Standardizing strong authentication in the Web Platform will help us to improve user and application security by moving beyond passwords. We thank FIDO Alliance members for bringing their work to W3C,” said Wendy Seltzer, W3C Technology and Society Domain Lead.

# Announcement

## ***From FIDO Alliance President:***

“The mission of the FIDO Alliance has always been stronger, simpler authentication: stronger to help protect data, and simpler to address the problems users face trying to create and remember multiple usernames and passwords. In order to achieve this mission, FIDO authentication needs to be available everywhere...on all the devices you use and with all of the apps & services you use,” said FIDO Alliance president Dustin Ingalls. “With FIDO support in the browser and in the platform, it will be easier than ever for apps and services to take full advantage of FIDO authentication helping to free the world from passwords. Today's announcement showcases how the work we've been doing in FIDO 2.0, and the submissions we are making to W3C will help us meet our goal of enabling FIDO authentication everywhere.”



# FIDO Alliance Mission

2

Operate  
Adoption Programs

## **FIDO Certification™ Program**

Adding “security certification program” and exploring possible biometrics program

## **FIDO UAF Metadata Service**

Launch of the UAF Metadata Service; will be adding Attestation Service for U2F

## **FIDO Alliance Liaison Program**

Launched new program to foster collaboration, expecting organic growth

## **FIDO Marketing & Education Programs**

More webinars, seminars, conference talks, and targeted outreach – esp. in APAC



# FIDO Alliance Mission

3

Pursue Formal  
Standardization

**Submit mature technical Specification(s) to recognized SDO's...**

- We will evaluate maturity for this purpose after more deployments
- We will use the Liaison Program to collaborate with SDO's, e.g. W3C
- All other specifications for FIDO 1.x & 2.x remain in the Alliance today

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- Relying Parties – **deploy FIDO 1.X now**
  - OEMs – **plan for FIDO 2.x now**
  - Vendors – **get FIDO Certified™**





**fido**<sup>TM</sup>  
alliance | simpler  
stronger  
authentication



JOIN THE  
**FIDO ECOSYSTEM**



**fido**<sup>TM</sup>  
alliance

simpler  
stronger  
authentication

JOIN THE  
**FIDO ALLIANCE**



**Thank You**