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initiative for open authentication

OATH: Initiative for Open AuTHentication

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VeriSign

Who Are You Really Doing Business With?

"On the Internet, nobody knows you're a dog."

The New York Magazine, July 5, 1993, Peter Steiner,

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Static Passwords are bad...

Everyone complains about the weather,
but no one does anything.

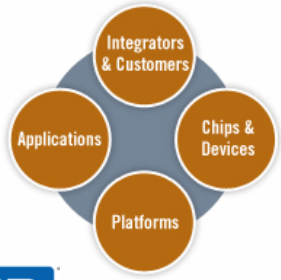
What is OATH?

The Open Authentication Reference Architecture (OATH) initiative is a group of companies working together to help drive the adoption of open strong authentication technology across all networks.

OATH : Mission

- Expand secure and safe on-line transactions for consumers and business users with strong, 2-factor authentication
- Leverage existing standards and create an open reference architecture for strong authentication which users and service providers can rely upon, and leverage to interoperate
- Reduce the cost and complexity of adopting strong authentication solutions

OATH Membership (80+)



Coordinating

Actividentity
Diversinet
Entrust
gemalto
security to be free
HID
IBM Tivoli
InCard Technologies
InfoSERVER
N-CRYPT
SanDisk
UPEK
VeriSign

Contributing

Aladdin
ANX eBusiness
aradiom the phone reborn
Authenex
BIO-key INTERNATIONAL
BR TOKEN
Clareity Security
COMARCH INFORMATION TECHNOLOGY
CRYPTOMATHIC
DNP Dai Nippon Printing
DEEPNET SECURITY
DIVERSID AUTENTICACIÓN
DynamiCode Revolution for Your eAccess
FEITIAN WE BUILD SECURITY
fireID
Giesecke & Devrient
hp invent
i-sprint
IRONKEY
iretn
IdentiTa
KONICA MINOLTA
mobilEGOV THE DIGITAL DNA
movilok FOCUSED ON MOBILE INNOVATION
MXI SECURITY
nordic edge
PointSharp
nagraID SECURITY
PortWise
symwave
SmartDisplayer
THALES e-SECURITY
SALT GROUP
TOPPAN FORMS

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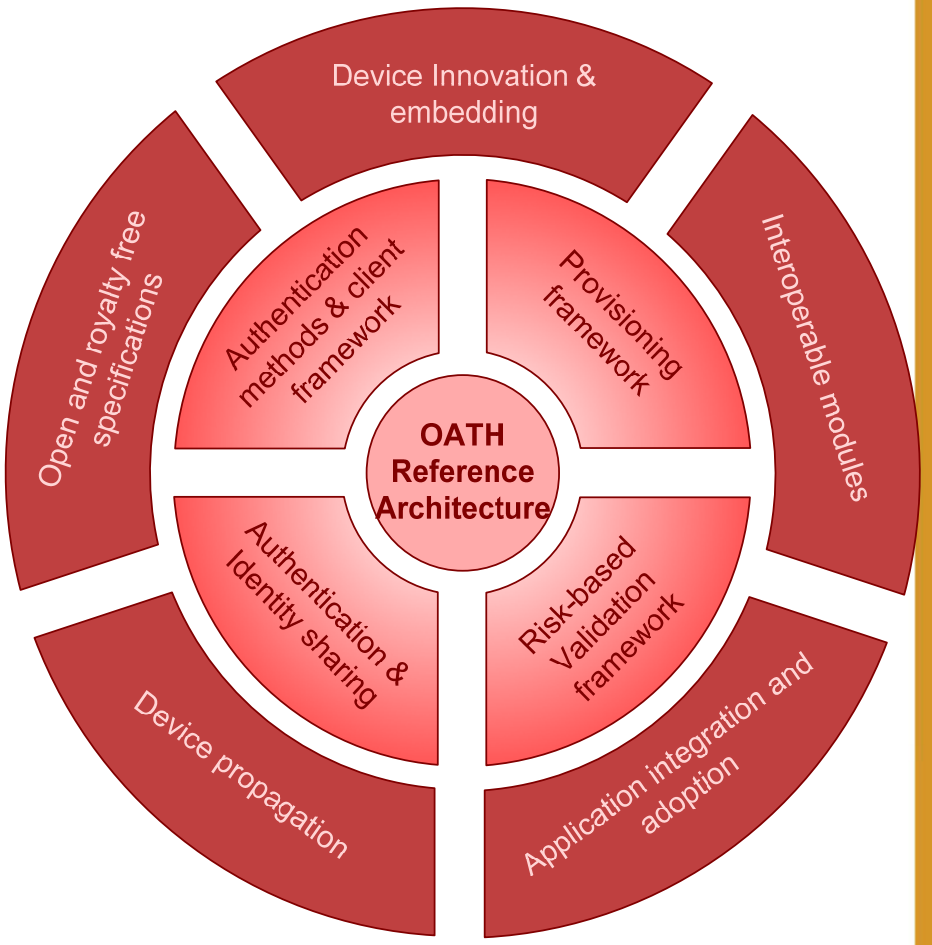
OATH Reference Architecture:
Establishes the 'common ground'

- **Sets the technical vision for OATH**
- **4 guiding principles**
  - Open and royalty-free specifications
  - Device Innovation & embedding
  - Native Platform support
  - Interoperable modules
- **v2.0 published in 2007**
  - Risk based authentication
  - Authentication and Identity Sharing



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Standardized Authentication Algorithms

-Open and royalty free specifications

-Proven security: reviewed by industry experts

-Choice: one size does not fit all

HOTP

-**Event-based OTP**

-Based on HMAC, SHA-1

-IETF RFC 4226

-Dec 2005

OCRA

-Based on HOTP

-**Challenge-response authentication**

-**Short digital signatures**

-8th draft, expected RFC 2009

TOTP

-**Time-based HOTP**

-2nd draft submitted to IETF

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OATH Adoption

50+ shipping products

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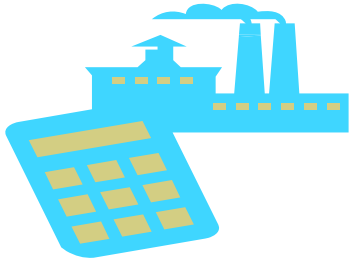
Q11

Credential Provisioning

Token manufacturer offline model

- Portable Symmetric Key Container standard format (PSKC Internet-Draft)



Dynamic real-time model

- Dynamic Symmetric Key Provisioning Protocol (DSKPP Internet-Draft)
- OTA provisioning to mobile devices, or online to PC/USB

IETF KeyProv WG

- working toward RFC submissions

IETF

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Q5

OATH Progression

CHOICE of AUTHENTICATION METHODS

- HOTP ☑
- OCRA ☑
- TOTP ☑

2006-08

CREDENTIAL PROVISIONING & LIFECYCLE

- PSKC ☑
- DSKPP ☑

2007-08

APPLICATION INTEGRATION & ADOPTION

- Certification program
- WS Validation
- Auth & Identity Sharing work

2008+

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OATH Authentication Sharing Models

Enables sharing of 2nd factor credential across sites – force multipliers!

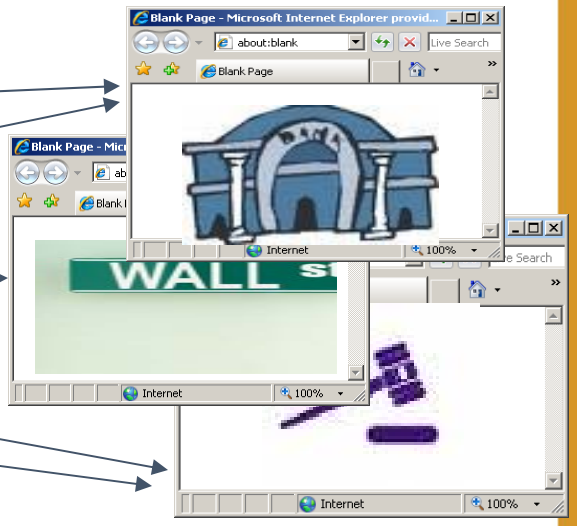
"Token Necklace" Dilemma

Sh
Ano
2nd

	A	B	C	D	E	F	G	H	I	J
1	1	7	3	9	3	4	5	5	4	9
2	9	2	5	3	6	2	8	4	1	3
3	4	6	9	1	4	6	2	8	0	7
4	1	5	2	4	8	5	0	1	7	2
5	6	8	6	8	1	7	4	0	8	0

OATH Token
ng Models

ralized
n Service
el
. Distributed Validation Model
3. Credential Wallet



Online Bank, auction, brokerage, e-commerce sites, etc.

Simpler liability models…

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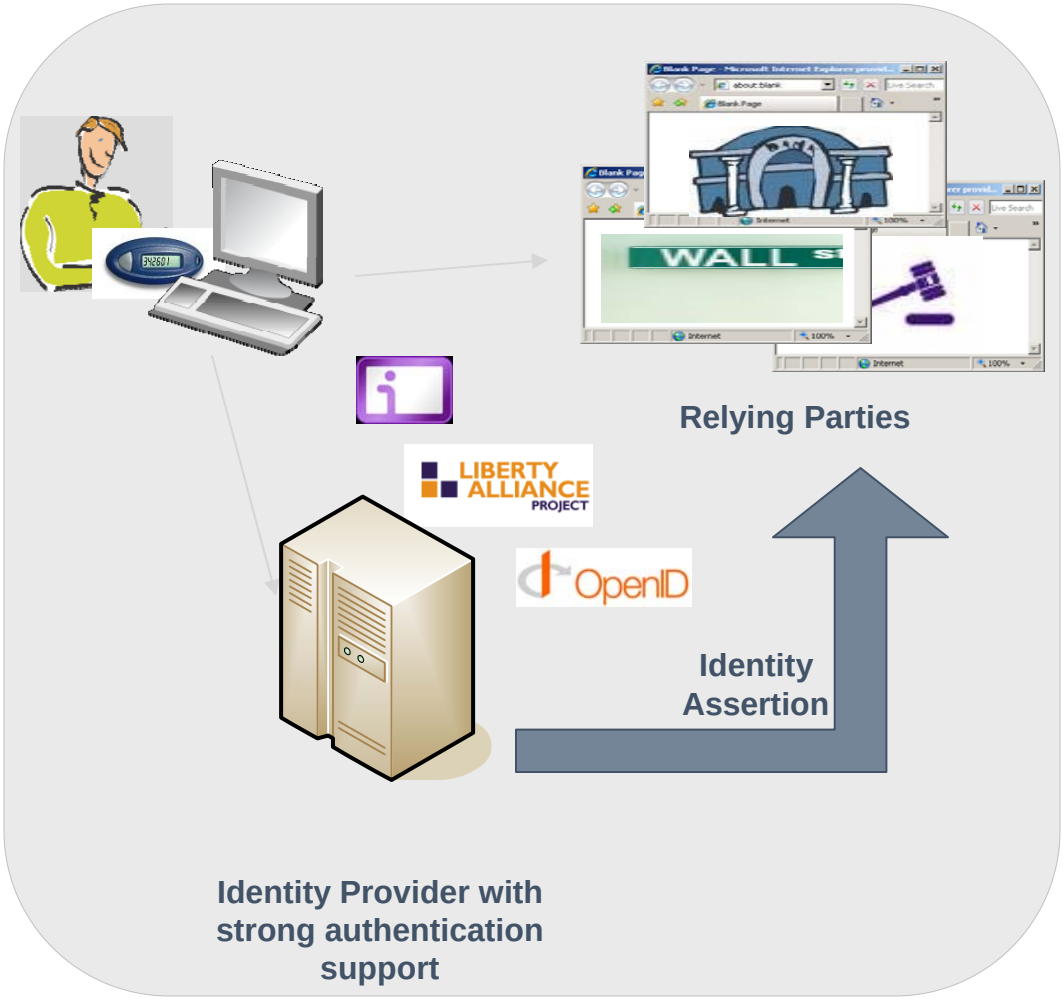
Identity Federation & OATH



- **Identity is federated/shared across multiple sites**
  - Traditional federation (Liberty)
  - User-centric models (OpenID, CardSpace)
- **Single Identity becomes more valuable**
  - Needs to protected using strong authentication

Enable OATH credentials as first class citizens with these technologies!

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Moving Toward More Pervasive Strong Auth

Lower barrier to adoption!

- **User Convenience**
  - Leverage devices users already carry today
  - Shared Credential
- **Lower TCO**
  - Interoperable multi-vendor solutions
  - Leverage existing devices
- **Reduce Time to Implement**
  - Online/OTA provisioning
  - Easier to integrate - standard web services and protocols

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Q10

OATH: *Driving a fundamental shift from proprietary to open solutions!*

- Open & Royalty free specifications
- User friendly form factors
- Embedding in existing devices

Device Innovation

Lower Cost

- One size does not fit all – risk based authentication
- Cost effective devices
- No vendor lock-in

- Interoperable standards enable enterprises to deploy components from multiple vendors in a single deployment
- Proven security!

Best of Breed Deployments

Device Portability

- Authentication & Identity Sharing models enable use of single device across multiple application and networks

Visit www.openauthentication.org

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Questions & Answers

Thank You!

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Get Involved!

- **Visit the OATH website**
  - Download Reference Architecture v2
  - Download and review draft specifications
- **Engage - contribute ideas, suggestions**
  - Review public draft specifications
  - Get involved in developing specifications
- **Become a member!**
  - 3 levels - Coordinating, Contributing, Adopting
  - Join the TFG mailing list

References and Resources

- Initiative for Open AuTHentication (OATH)
  - http://www.openauthentication.org
- HOTP: An HMAC-Based One-Time Password Algorithm – RFC 4226
  - http://www.ietf.org/rfc/rfc4226.txt
- OATH Reference Architecture
  - http://www.openauthentication.org
- Other draft specifications
  - http://www.openauthentication.org