

# INTERNET IDENTITY

---

A Process of Adaptation

Andrew Nash – Google



LIBERTY



OpenID

Connect

IDENTITY TECHNOLOGY PROGRESSION...

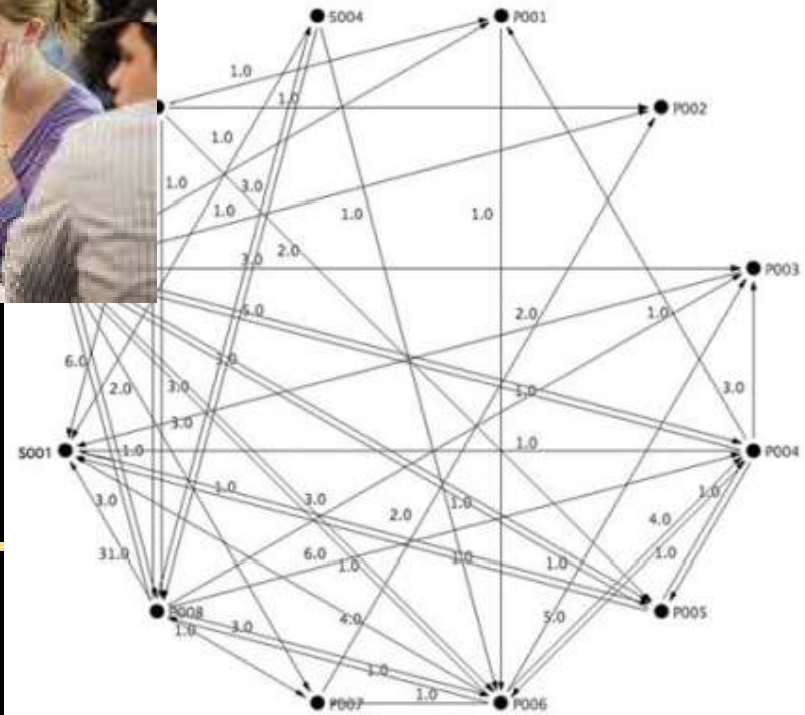
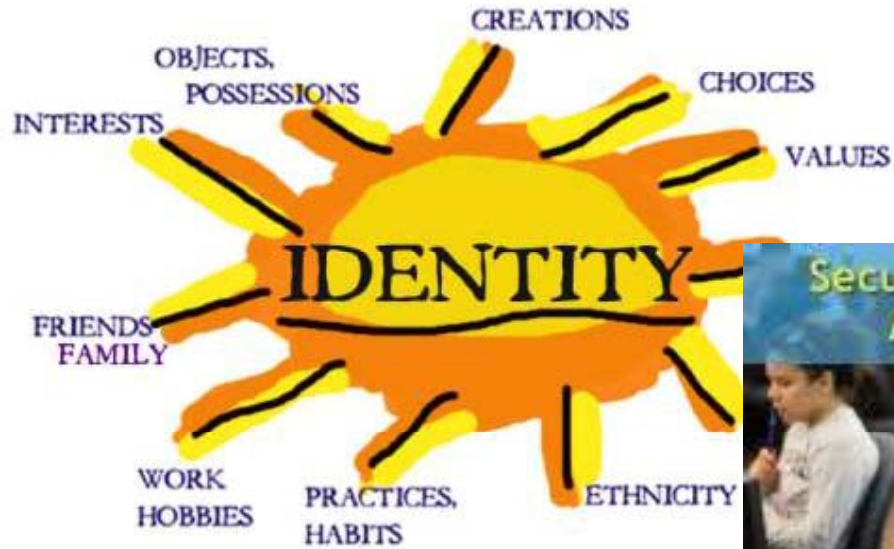


IDManagement.GOV

**NIST**  
National Institute of  
Standards and Technology  
U.S. Department of Commerce

**ICAM**  
Identity, Credential,  
& Access Management

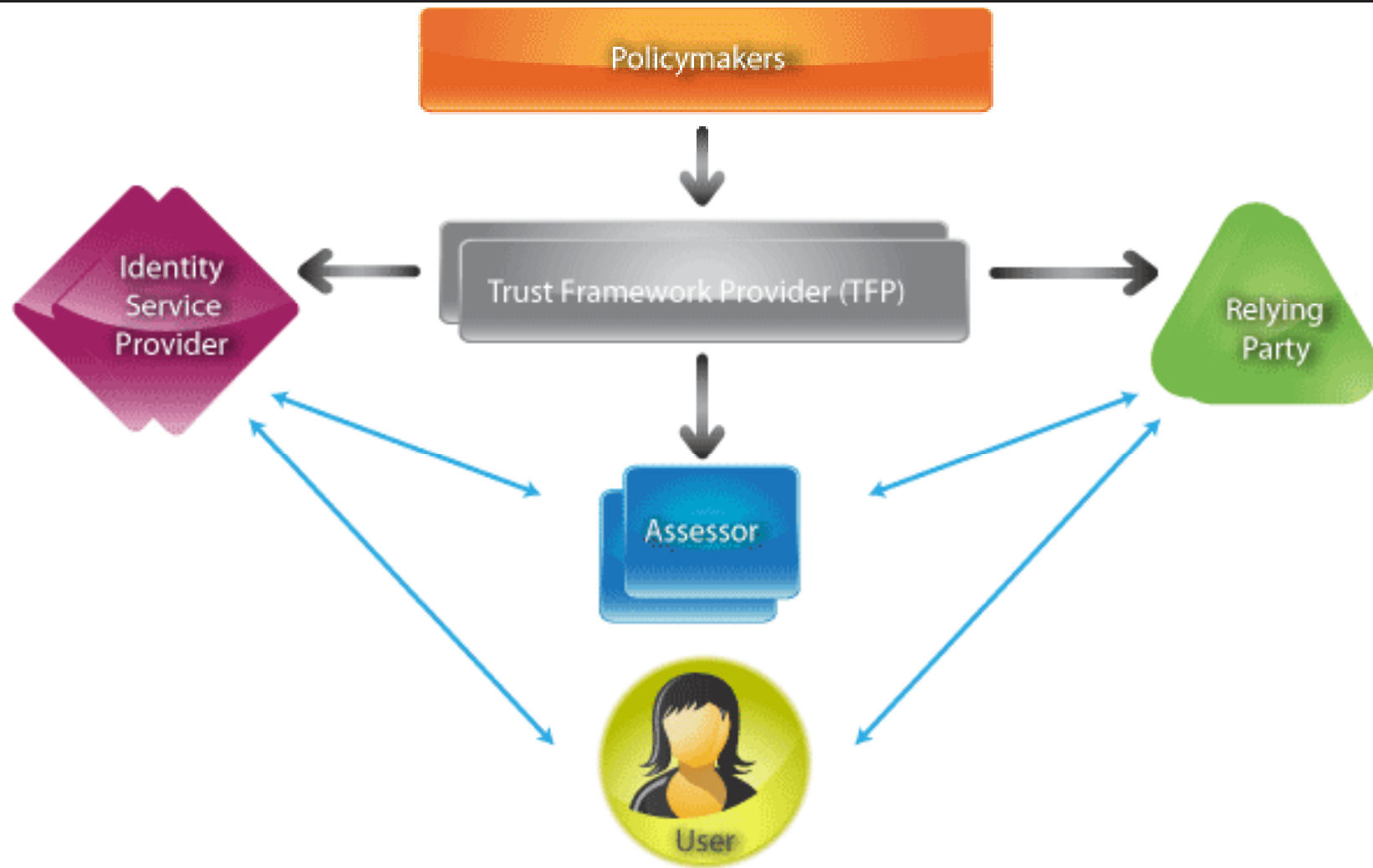
# RISK BASED IDENTIFICATION



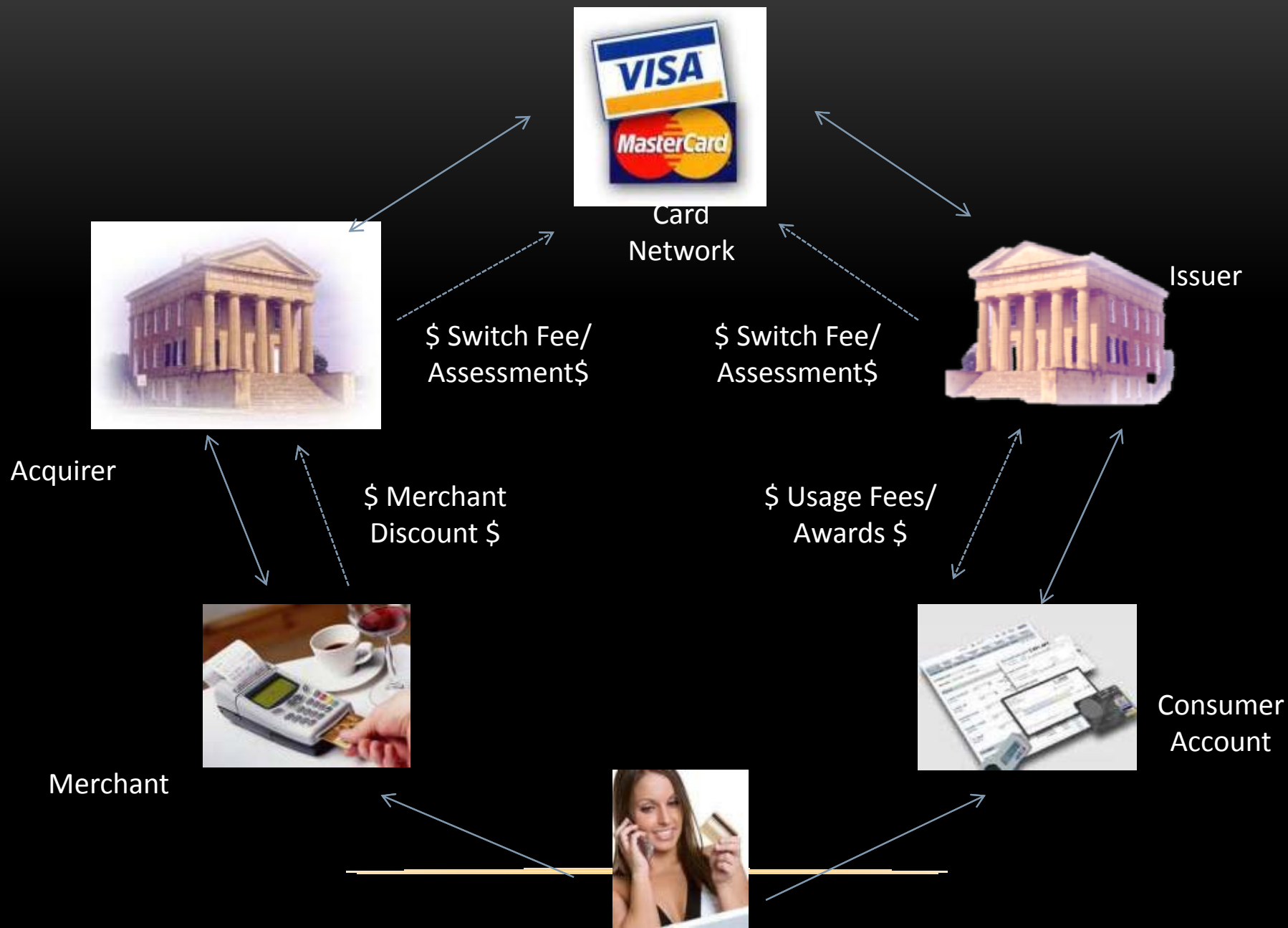
# IDENTITY INFORMATION PROVIDERS

- Providing claims is not as simple as it looks
  - Population coverage of RP needs
  - Information sets vary in content and confidence
    - Type
    - Quality
    - Verified
    - Freshness
  - Information sets are sparse
  - Impedance matching of market segment requirements
-

# OPEN IDENTITY EXCHANGE



-  Contracts with the Trust Framework Provider for implementing requirements set by Policymakers
-  Other agreements potentially affected by requirements set by Policymakers



Card Network



Acquirer



Issuer

\$ Switch Fee/  
Assessment\$

\$ Switch Fee/  
Assessment\$

\$ Merchant  
Discount \$

\$ Usage Fees/  
Awards \$



Merchant



Consumer  
Account



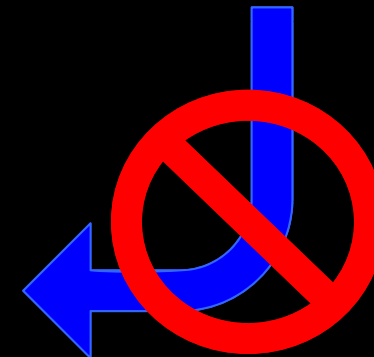


ME?



Is a legal person  
Has a name & address  
Pays taxes  
Has utility bills  
Has privacy protections  
Linked to a Financial Institution

Is an email address  
Has an identifier  
Has a transaction history  
Is a collection of Internet events



# THE SOLUTION...



ALL WE KNOW IS...HE'S CALLED THE

# STIG

Linking digital identity to verified identity  
required by “real world” services

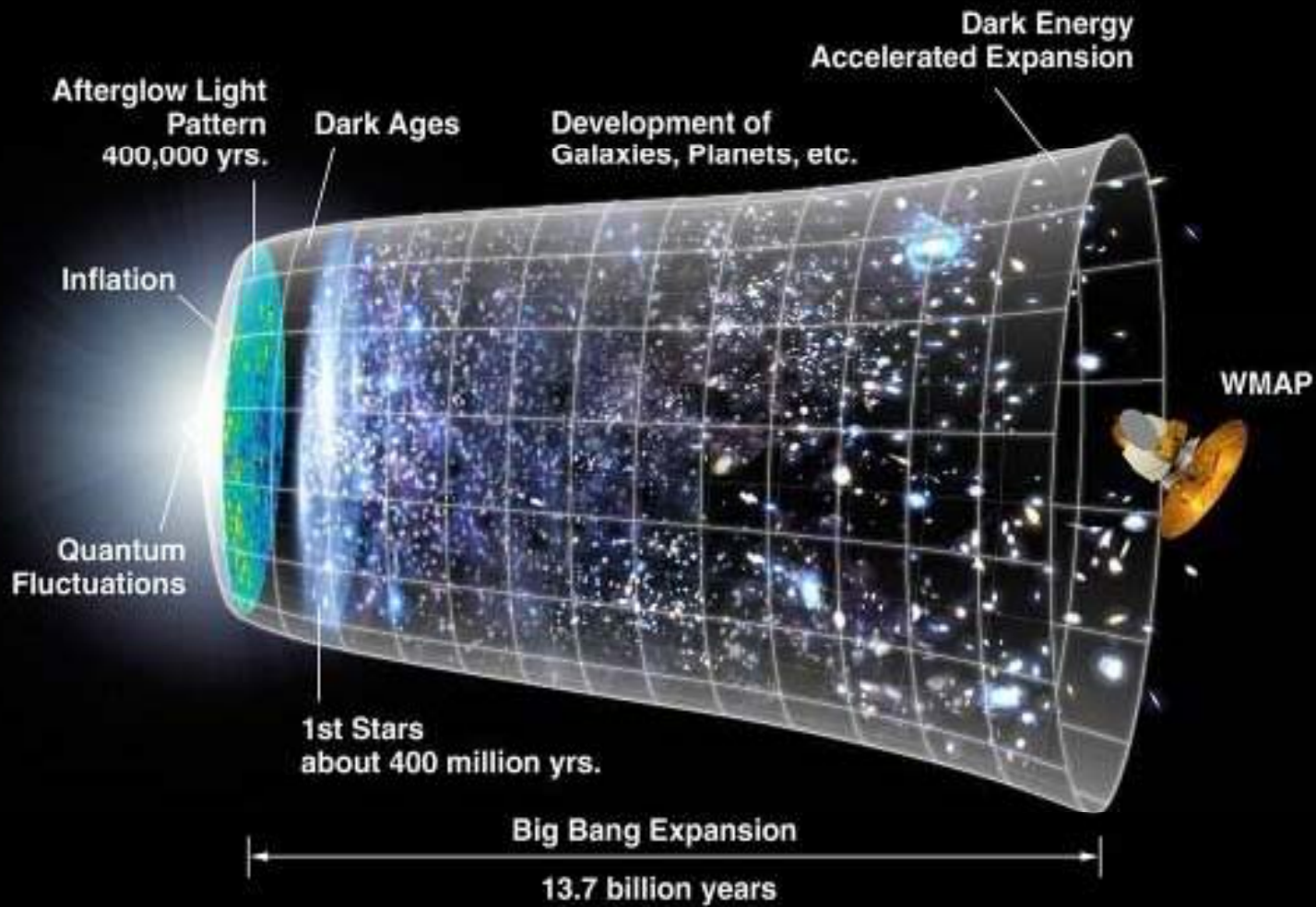
- Enabling scenarios where the real you is required
- User permissioned information sharing
- Affordable
- Reusable across services
- Utilizing a variety of authorities
- Supporting revenue model for attribute providers





STEADY STATE OF THE IDENTITY UNIVERSE





# ACCOUNT CHOOSER

---

Eliminating Passwords

Sign in

Email:   
ex: pat@example.com

Password:

Stay signed in

[Can't access your account?](#)

[Create an account now](#)

---

PASSWORD ENTRY ... SO MANY ISSUES

Google Accounts | Sign in to Yahoo!

https://login.yahoo.com/config/login?.done=http://groups.yahoo.com%2f&src=ygrp&intl=us

YAHOO! | Yahoo! | Help

AdChoices | Ad Feedback



zero TO card IN 60 SEC.

Find an offer that's right for you, risk free, all in under a minute.

Find My Card



Don't have a Yahoo! ID?  
**Create New Account**

OR

Sign in with:  
 Facebook  Google

Sign in to Yahoo!

Yahoo! ID  
  
(e.g. free2rhyme@yahoo.com)

Password

Keep me signed in  
(Uncheck if on a shared computer)

**Sign In**

[I can't access my account](#) | [Help](#)

Copyright © 2011 Yahoo! Inc. All rights reserved.  
[Copyright/IF Policy](#) | [Terms of Service](#) | [Guide to Online Security](#) | [Privacy Policy](#)

# Windows 7 Login

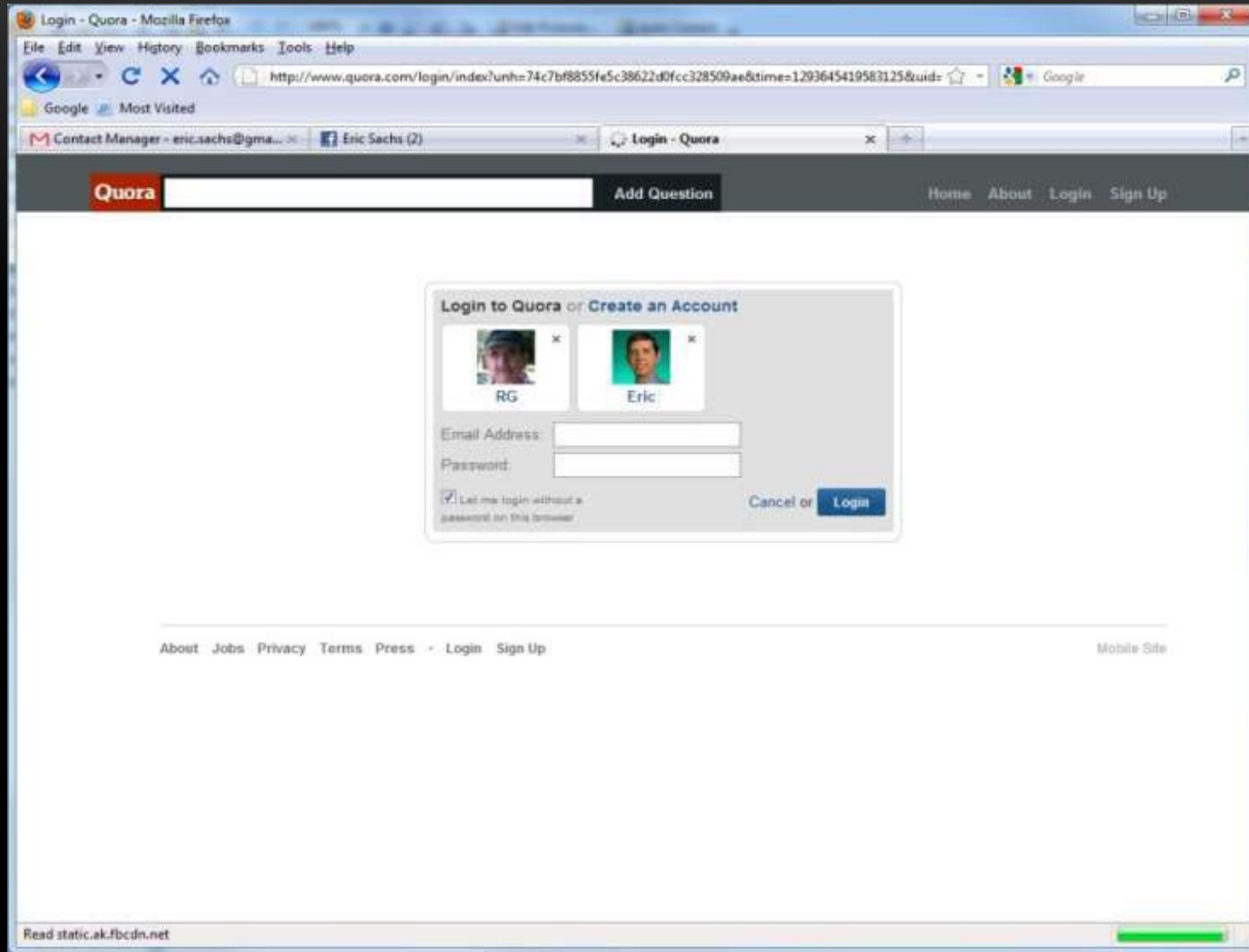


Windows 7 Ultimate

# Mac OS X

The image shows the Mac OS X login window. At the top is the Apple logo. Below it, the text "Mac OS X" is displayed, followed by "Jim Midnite's Computer". A white box contains two user accounts: "Jim Midnite" with a butterfly icon and "Other..." with a person icon. At the bottom of the window are three buttons: "Sleep", "Restart", and "Shut Down", each with a corresponding icon.

Google

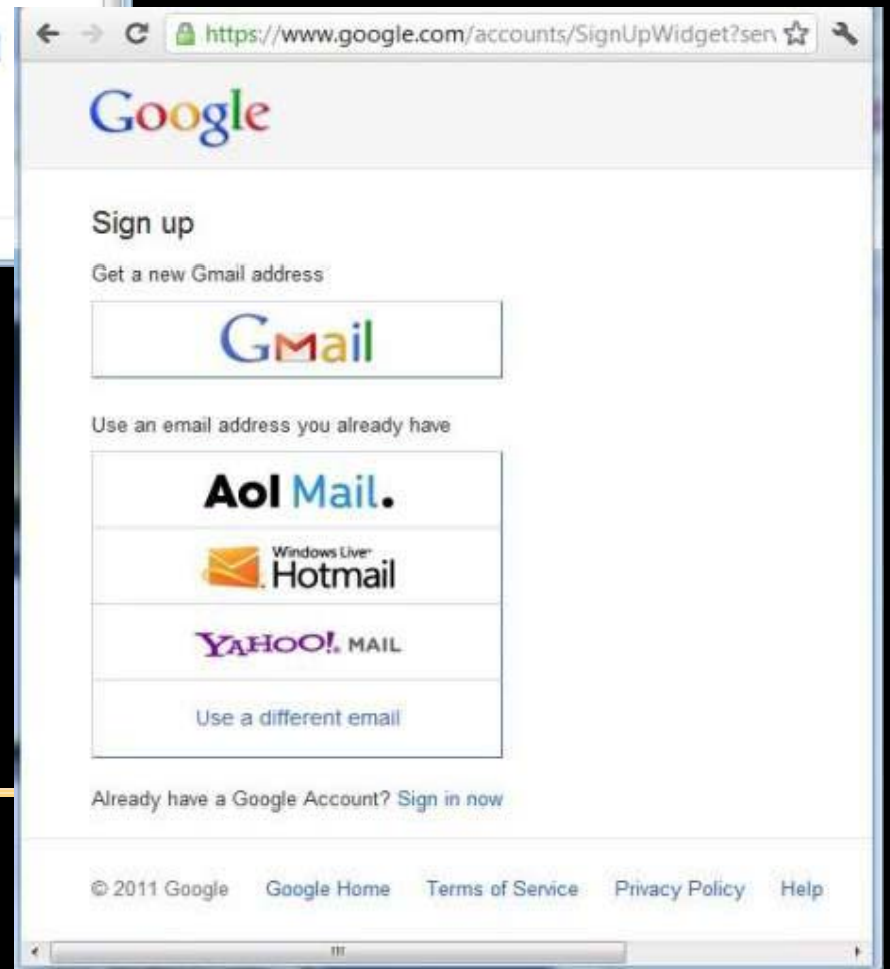


BRINGING ACCOUNT CHOOSER TO THE WEB



Live on Google Docs,  
Sites, Groups, and more  
services to come soon

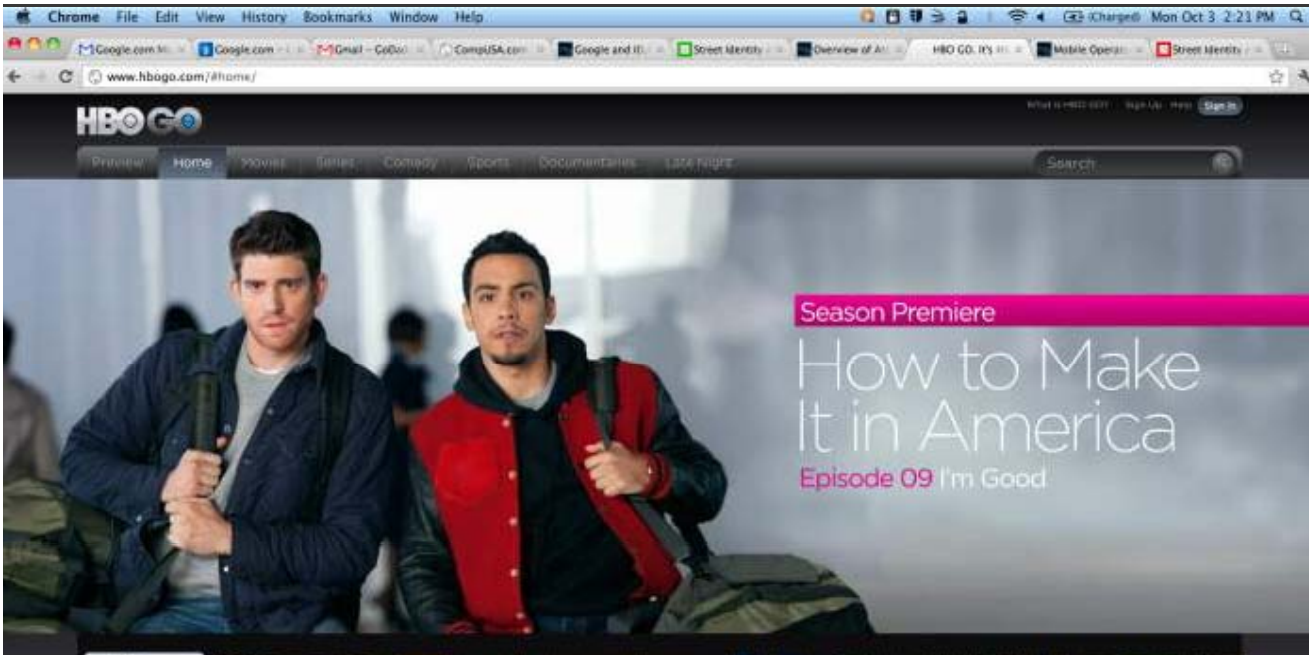
3 identity providers to  
start, more to come



# STREET IDENTITY

---

Connecting you to your digital Identity



Account linking ...  
or  
Address correlation  
... ?



Google

Billing Address (Max 500 chars) 901 South Mopac Expressway  
Barton Oaks Plaza One, Suite 300

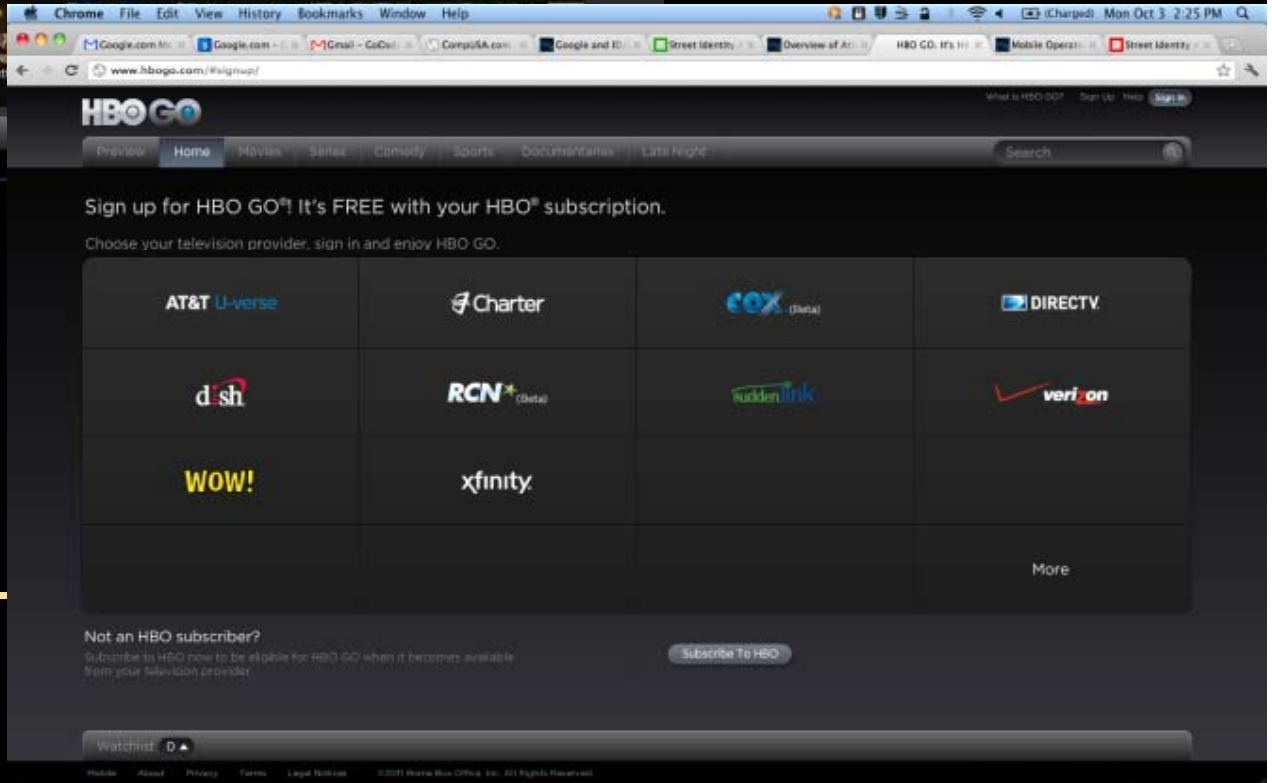
City Austin

State/Province Texas

ZIP/Postal Code 78748

Country USA

Fax



# Information Aggregation/Correlation...



In person proofing ...

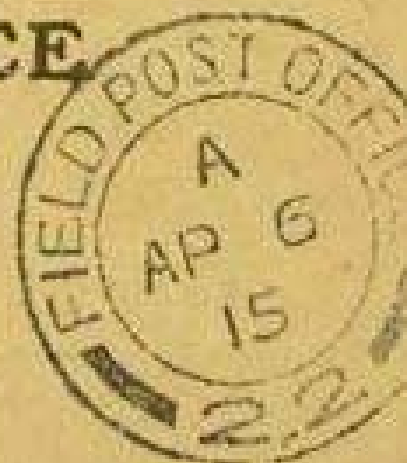


A. F. A. 2042  
114/Gen. No./5248

**FIELD SERVICE**



**POST CARD**



*The address  
only to be writ-  
ten on this side.  
If anything else  
is added, the  
post card will be  
destroyed.*

*Mr. H. King Hill  
King's Achley  
Hayfield Rd  
Sutton  
Surrey*



Address Label



Address

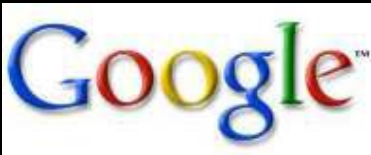
**verizon**

IDP



Service Providers

# Attribute Linkage Ecosystem



# STREET IDENTITY BROKER

- Range of address attribute providers
  - Fallback to postcard
- Amortize costs across multiple uses
  - Cost per validation at least halved
  - Drive cost to postage stamp + small  $\Delta$  (\$1 / user / year)
- Reduce friction
  - Previous users authenticate only
- IDPs as distribution points for attribute providers
  - US Post connection ensures fresh data

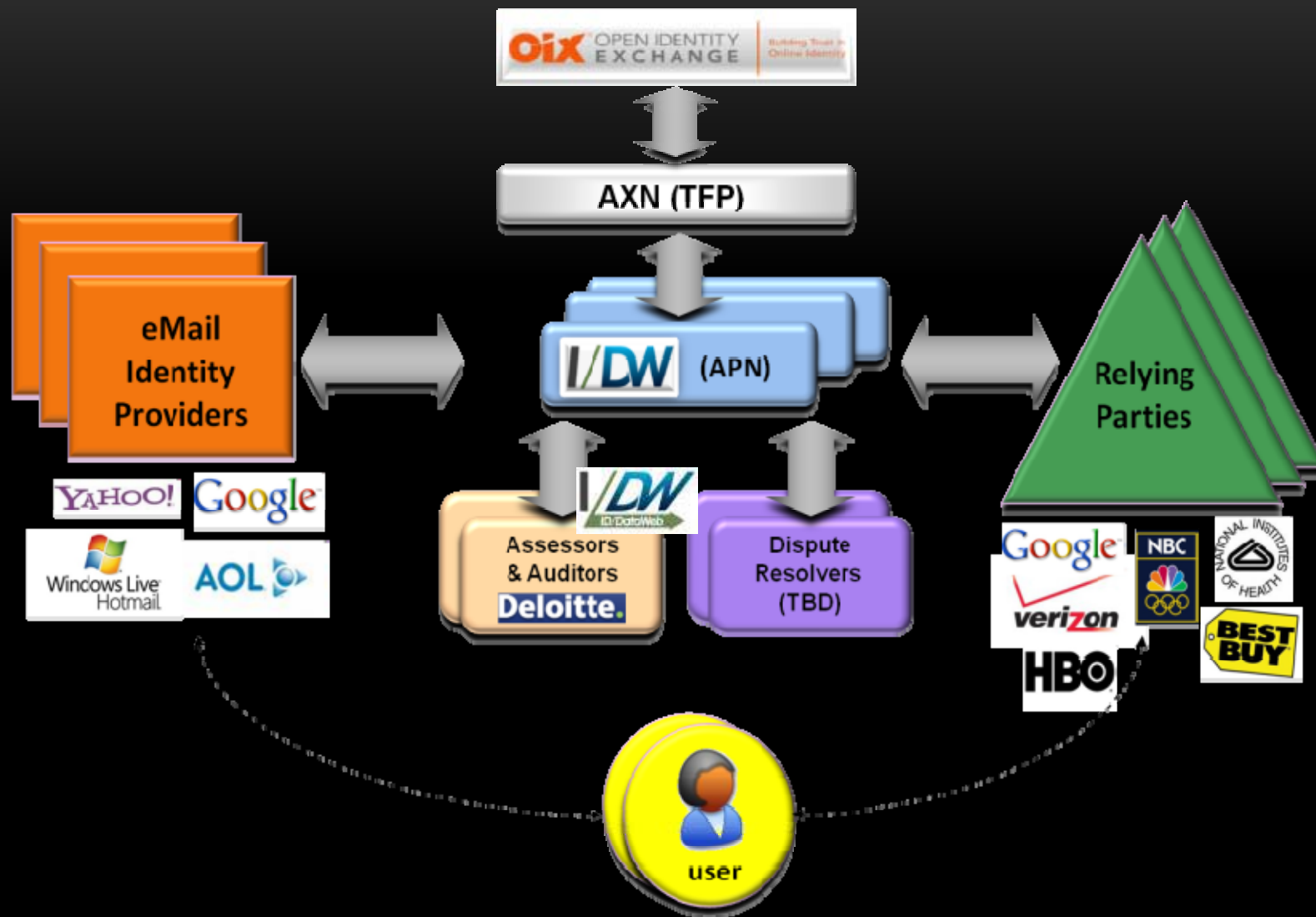
## Proof of Concept

- **Purpose:**
  - OIX progress milestone
  - Demo tool to enroll RP participation in pilot program
  - Demonstrate User, AP, IDP and RP interfaces and process/data flows
- **Technical Objectives:**
  - Complex AP with User interface
  - Will generate/accept a verification PIN code
  - Limited billing or postcard mailing capability
  - IDP features to support a Complex AP
  - Demo two sample RPs
  - Standard legal address/name formats – DPV
  - Telco attribute capture and verification
- **Target Delivery Date:**
  - October 2011

## Pilot Project

- **Purpose:**
  - OIX progress milestone
  - Demonstrate User, AP, IDP and RP interfaces and process/data flows with live User data
  - Demonstrate Legal, Policy and Technical interoperability, security and scalability
- **Technical Objectives:**
  - Complex AP with User interface
  - Will generate/accept a verification PIN code
  - Full billing (monthly) and postcard mailing
  - IDP features to support a complex AP
  - Pilot live data for 1+ Google RP, 2+ commercial RPs, 1+ Government RP
  - Standard legal address/name formats – DPV
  - Telco attribute capture and verification
- **Target Delivery Dates:**
  - Announcement - November 9/10, 2011
  - Operational Pilots – Q1 2012

**ATTRIBUTE LINKAGE POC / PILOT**



PILOT PARTICIPANTS