

# INTERNET IDENTITY

---

A Process of Adaptation

Andrew Nash – Google



LIBERTY



OpenID

Connect

IDENTITY TECHNOLOGY PROGRESSION...

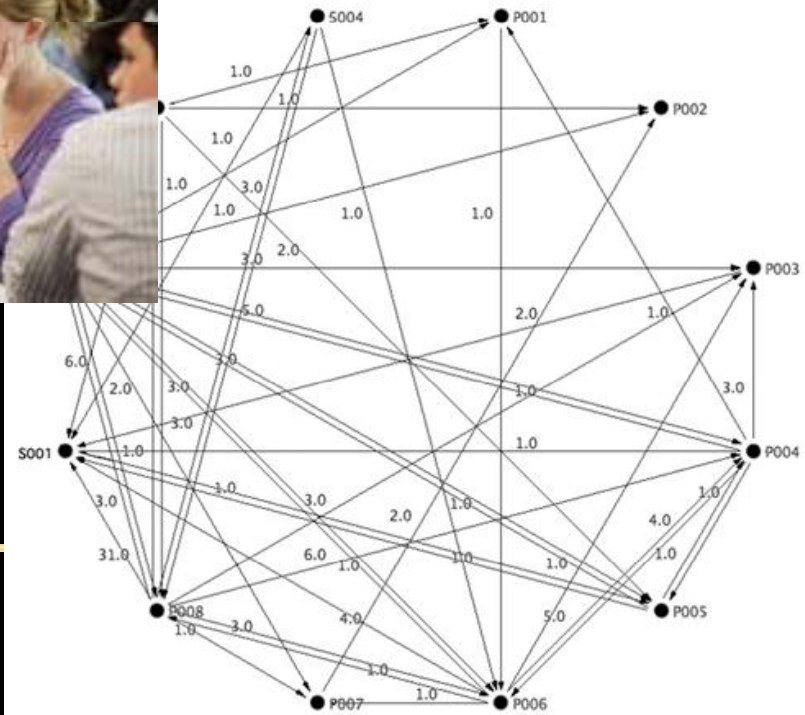
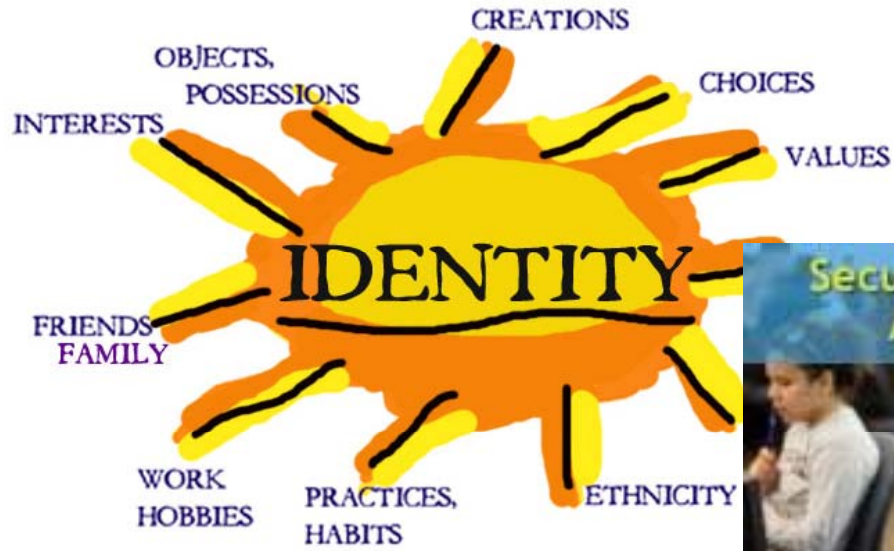


IDManagement.GOV

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

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

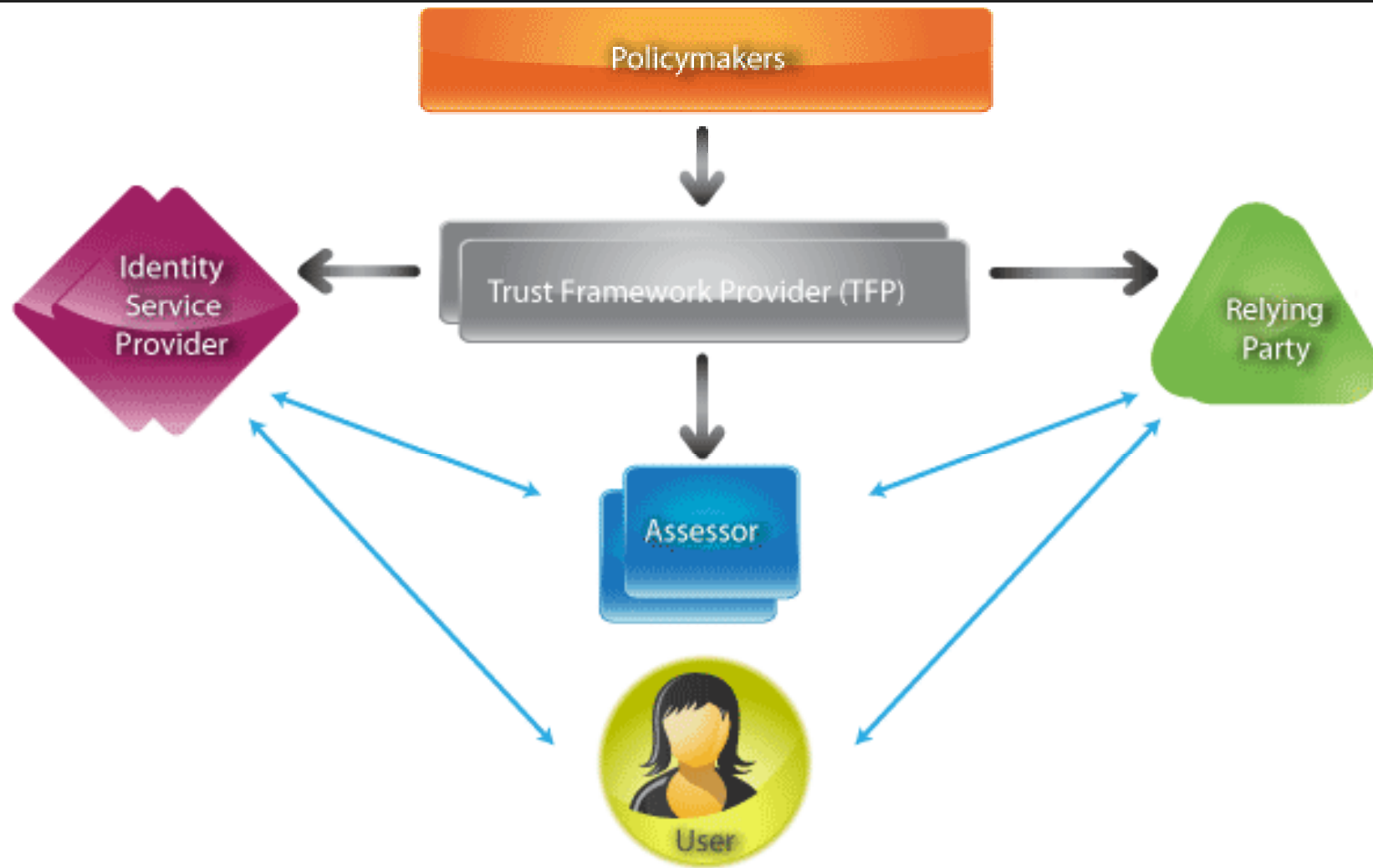
# RISK BASED IDENTIFICATION



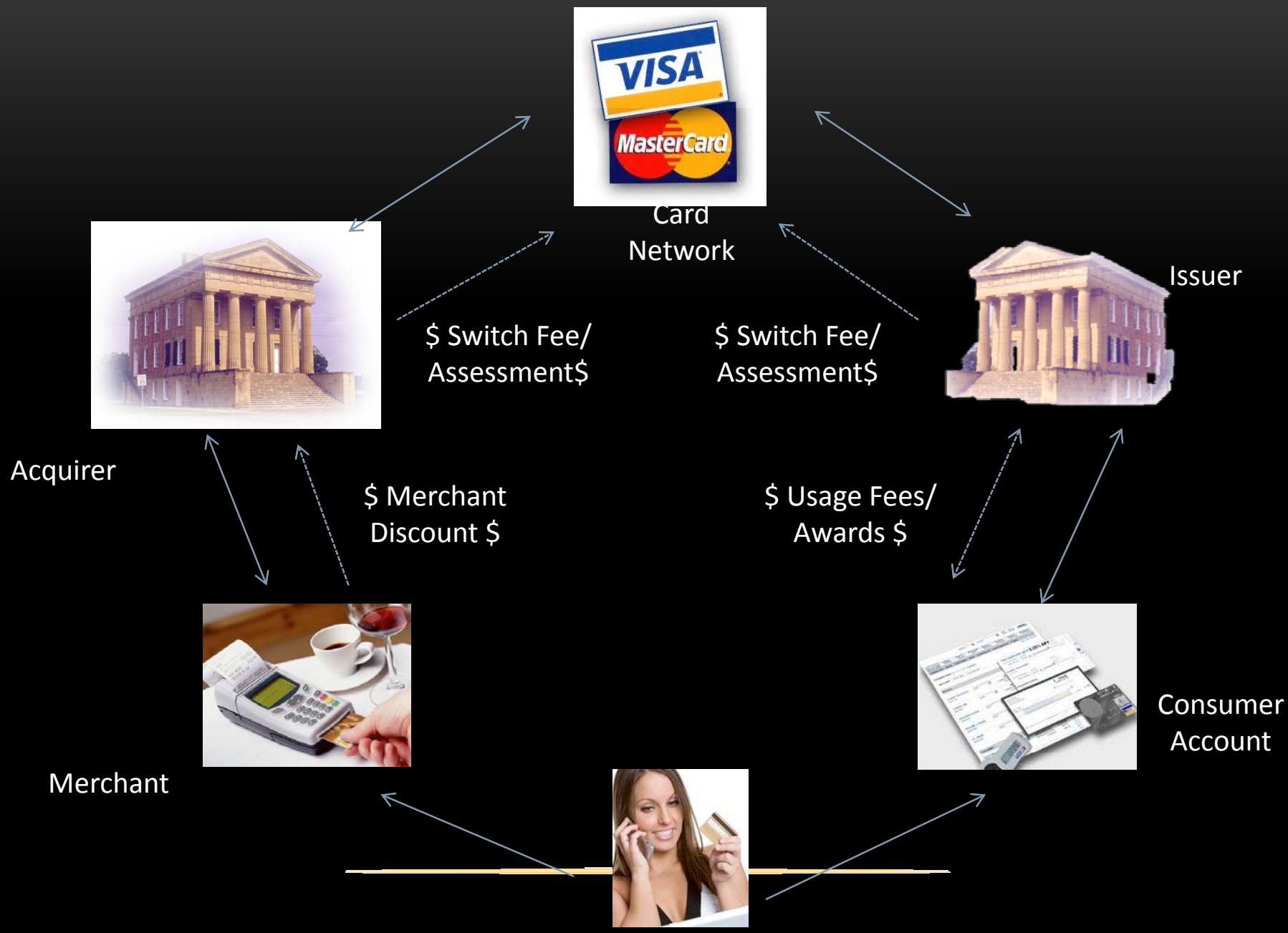
# IDENTITY INFORMATION PROVIDERS

- 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



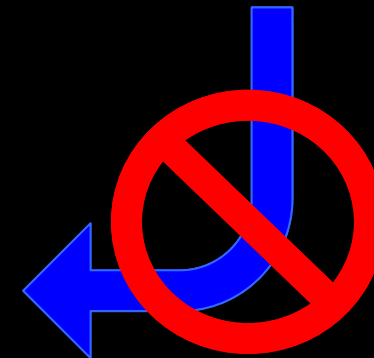


ME?



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

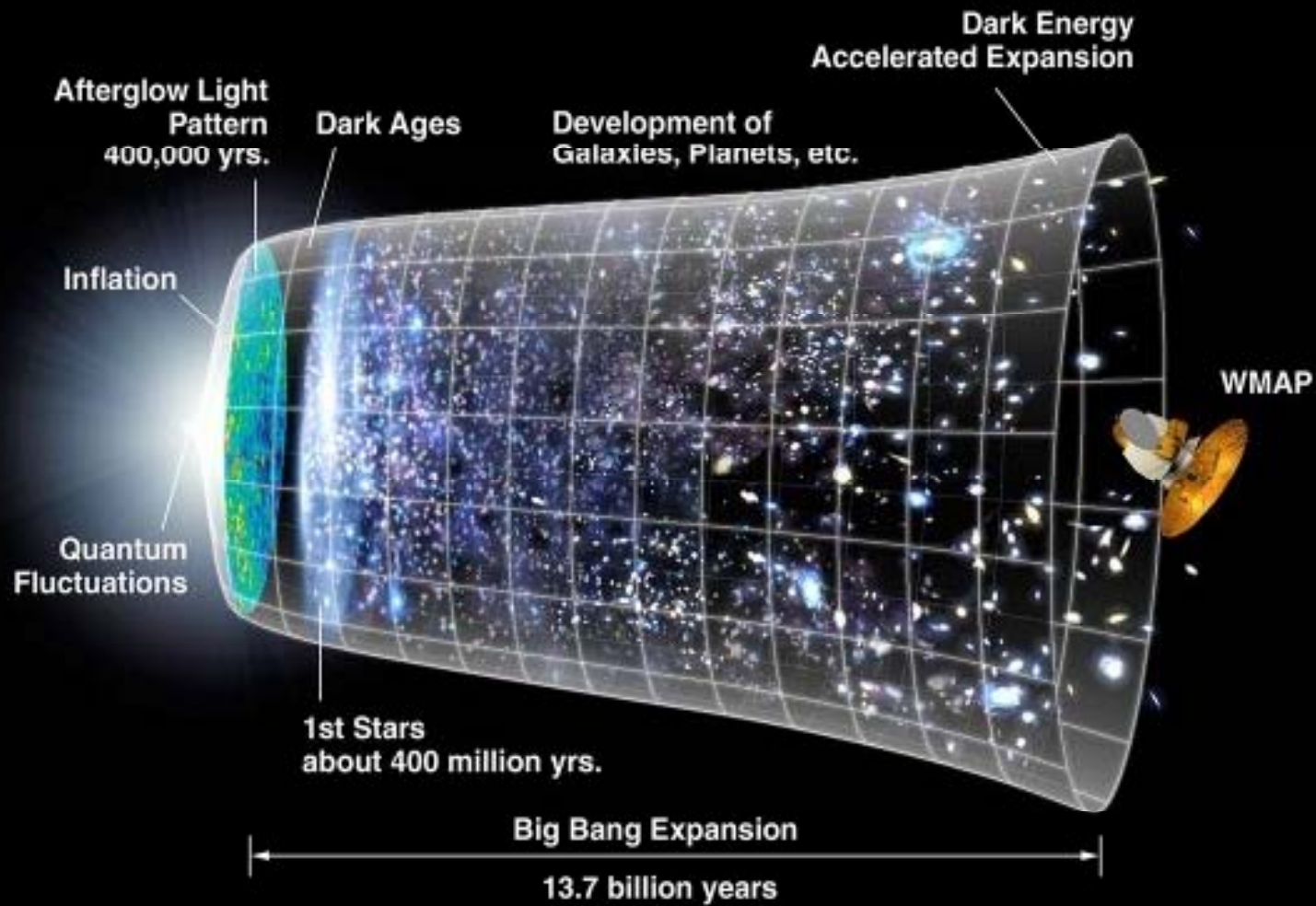
- Enabling scenarios where the real you is required
- User permissioned information sharing
- Affordable
- Reusable across services
- Utilizing a variety of authorities
- Supporting revenue model for attribute providers





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

Capital One

zero TO card IN 60 SEC.

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

[Find My Card](#)

VENTURE  
4000 1234 5678 9010  
12/13  
LEE R CARDHOLDER  
VISA SIGNATURE

**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/IP Policy](#) | [Terms of Service](#) | [Guide to Online Security](#) | [Privacy Policy](#)



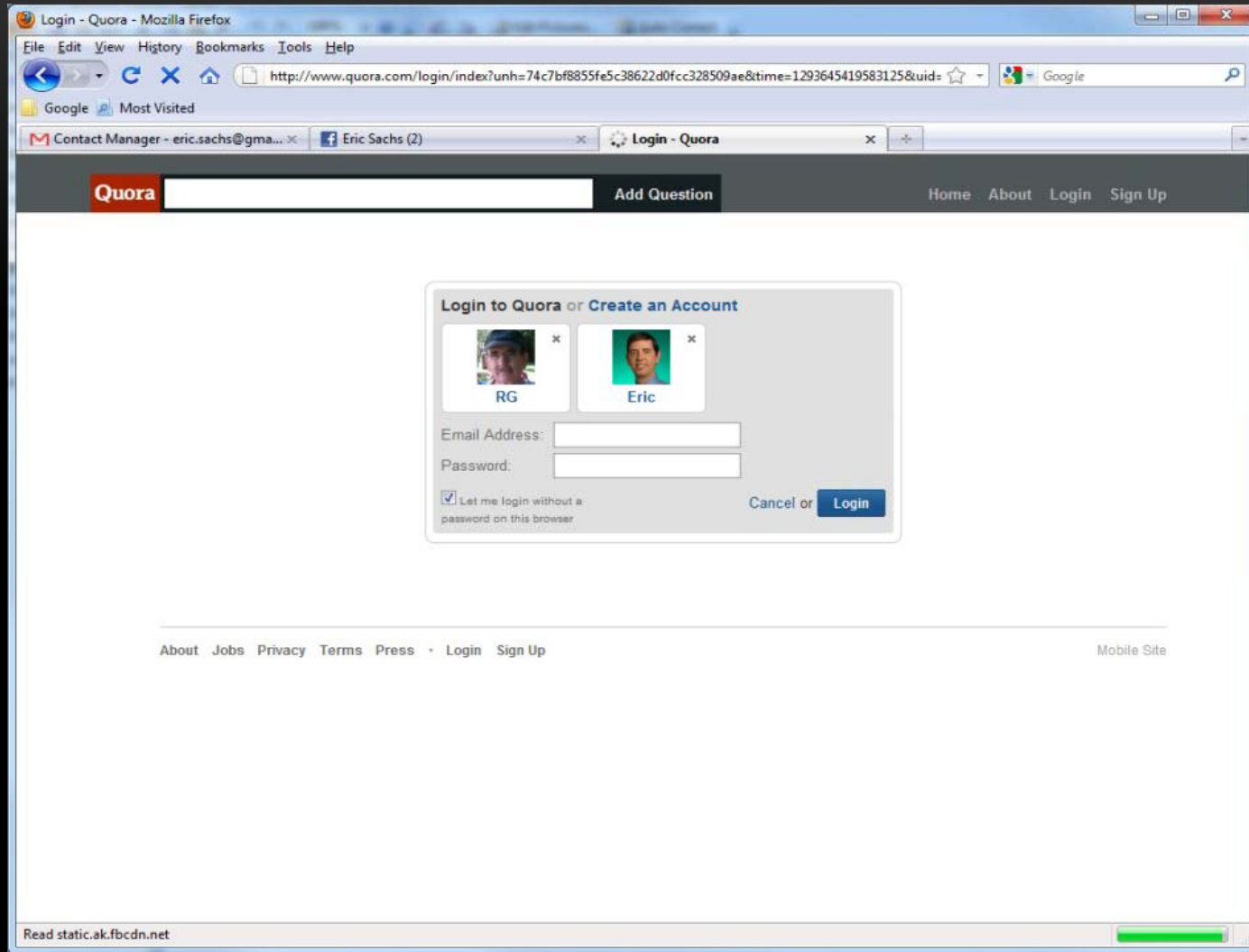
# Windows 7 Login



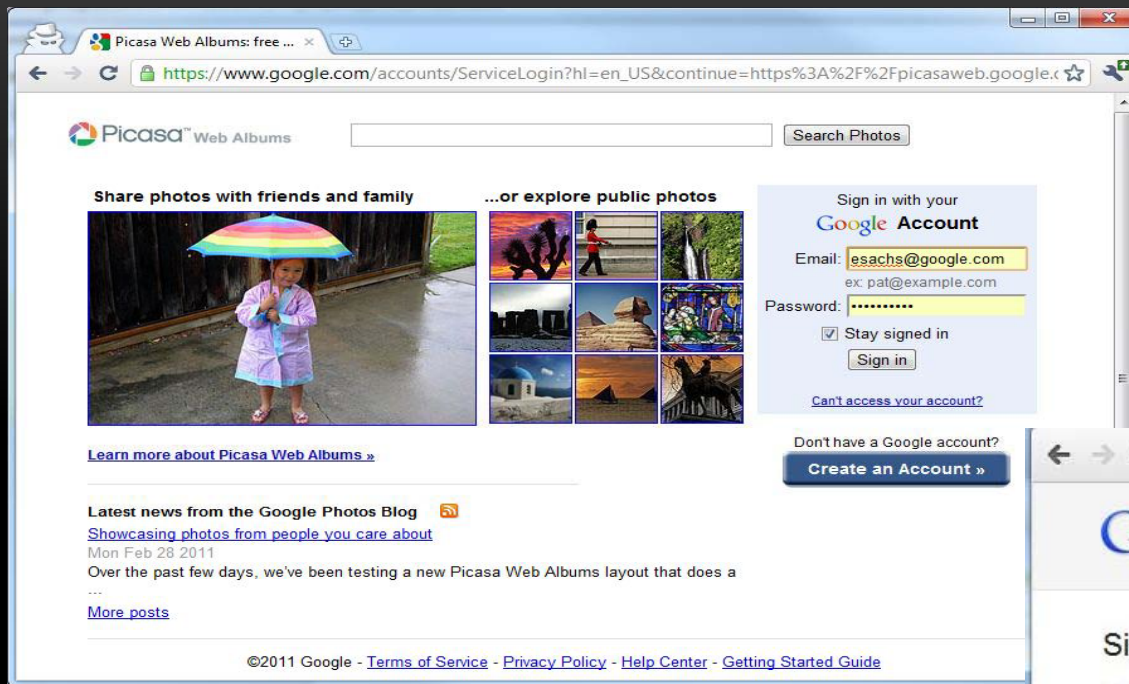
Windows 7 Ultimate

# Mac OS X

The image shows a Mac OS X login window. At the top is the Apple logo. Below it is the text "Mac OS X" and "Jim Midnite's Computer". A list of users is shown in a rounded rectangle: "Jim Midnite" with a butterfly icon and "Other..." with a person icon. At the bottom are three buttons: "Sleep" with a power button icon, "Restart" with a left arrow icon, and "Shut Down" with a power button icon.

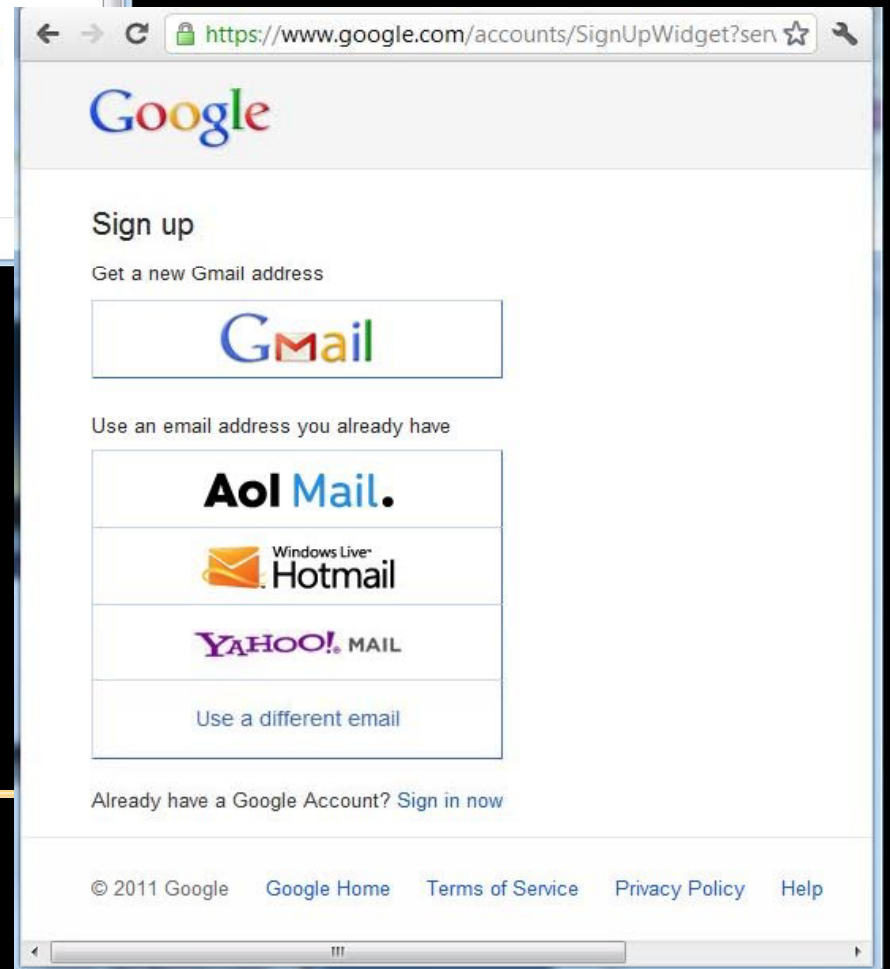


BRINGING ACCOUNT CHOOSER TO THE WEB



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

HBO GO

Preview Home Movies Series Comedy Sports Documentaries Late Night Search



Season Premiere

# How to Make It in America

Episode 09 I'm Good

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

Season Premiere

How to Make It in America Season 2 / Ep 9

Season Premiere

Hung Season 3 / Ep 21

Boardwalk Empire Season 2 / Ep 14

The A-Team

Bored to Death Season 2

Watchlist

Mobile About Privacy Terms Legal Notices ©2011 Home Box Office, Inc. All Rights Reserved.

Sign up for HBO GO®! It's FREE with your HBO® subscription.  
Choose your television provider, sign in and enjoy HBO GO.

AT&T U-verse	Charter	COX (Beta)	DIRECTV
dish	RCN* (Beta)	suddenlink	verizon
WOW!	xfinity		More

Not an HBO subscriber?  
Subscribe to HBO now to be eligible for HBO GO when it becomes available from your television provider.

Subscribe To HBO



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 ...

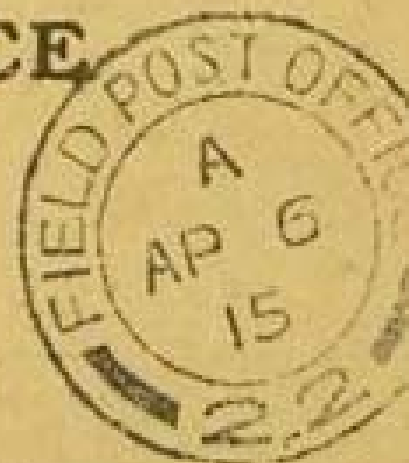


A. F. A. 2042  
114/Gen. No./5248

**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. Henry Hill  
Kent Stables  
Hayfield Rd  
Sutton  
Surrey*





Address Label



Address

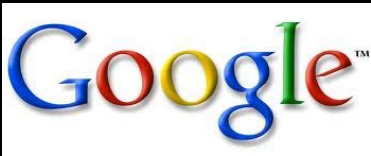
**verizon**

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

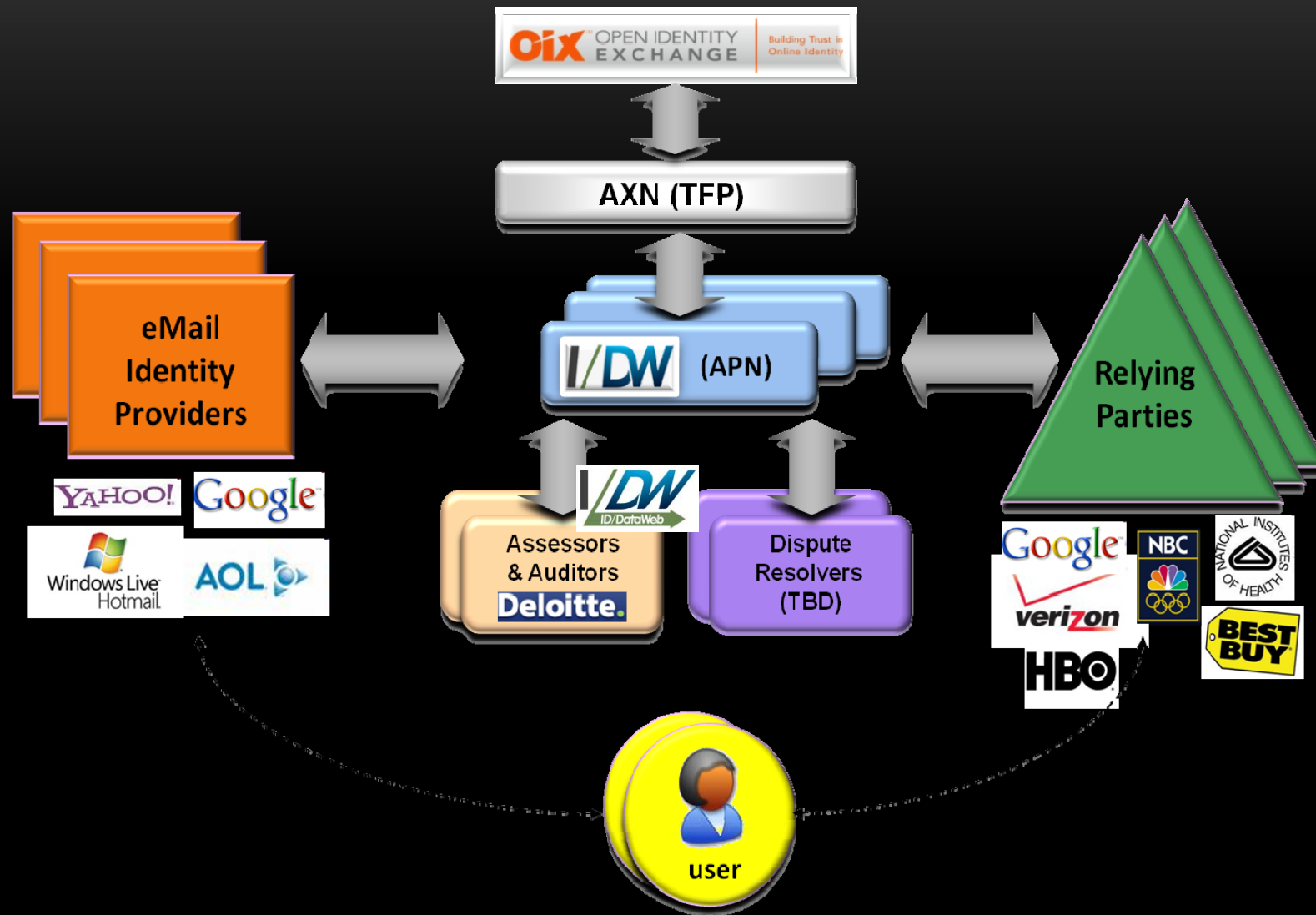
## Proof of Concept

- **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**