Digital Identity
Tutorial for WWW2007

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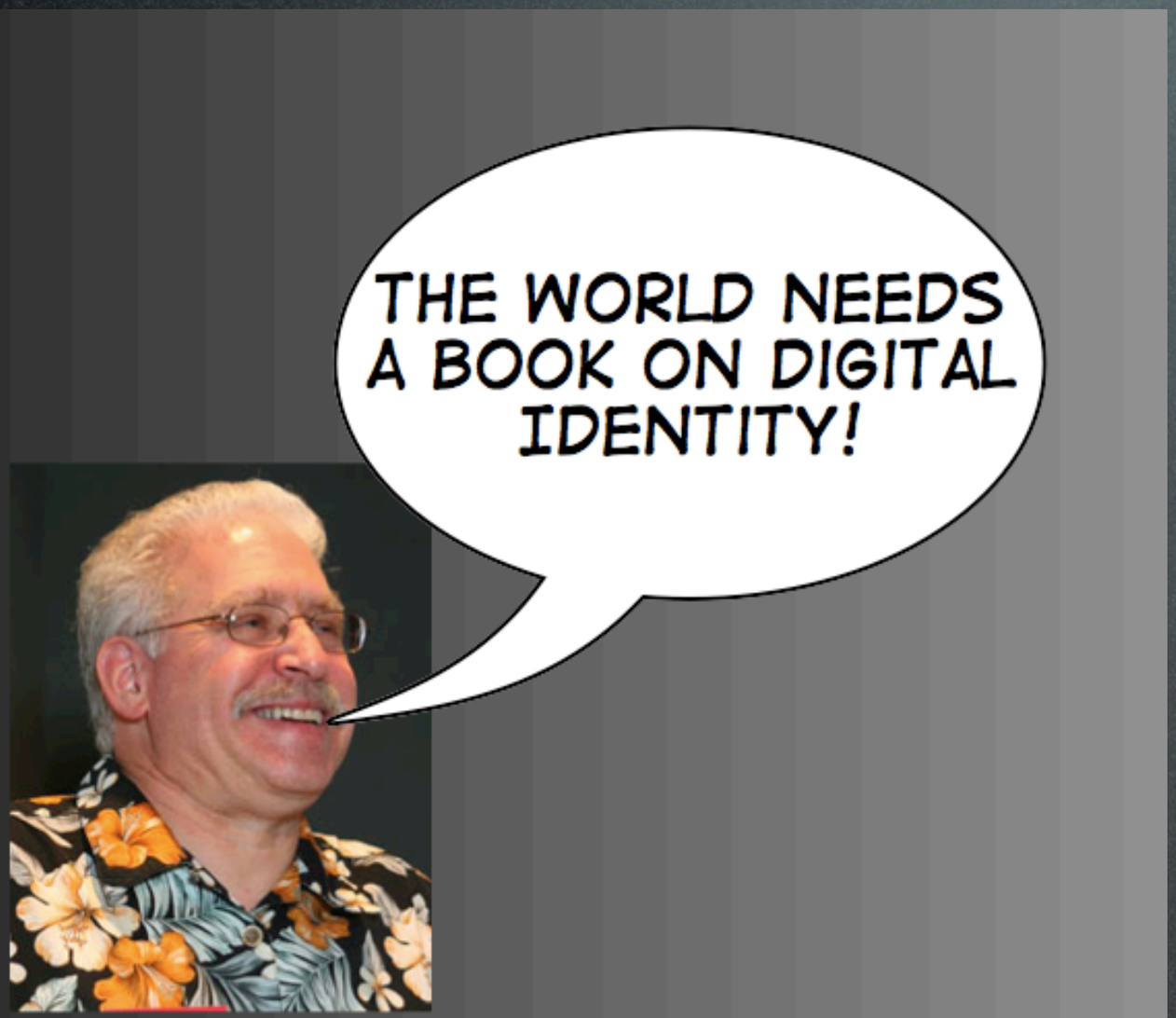
www.windley.com



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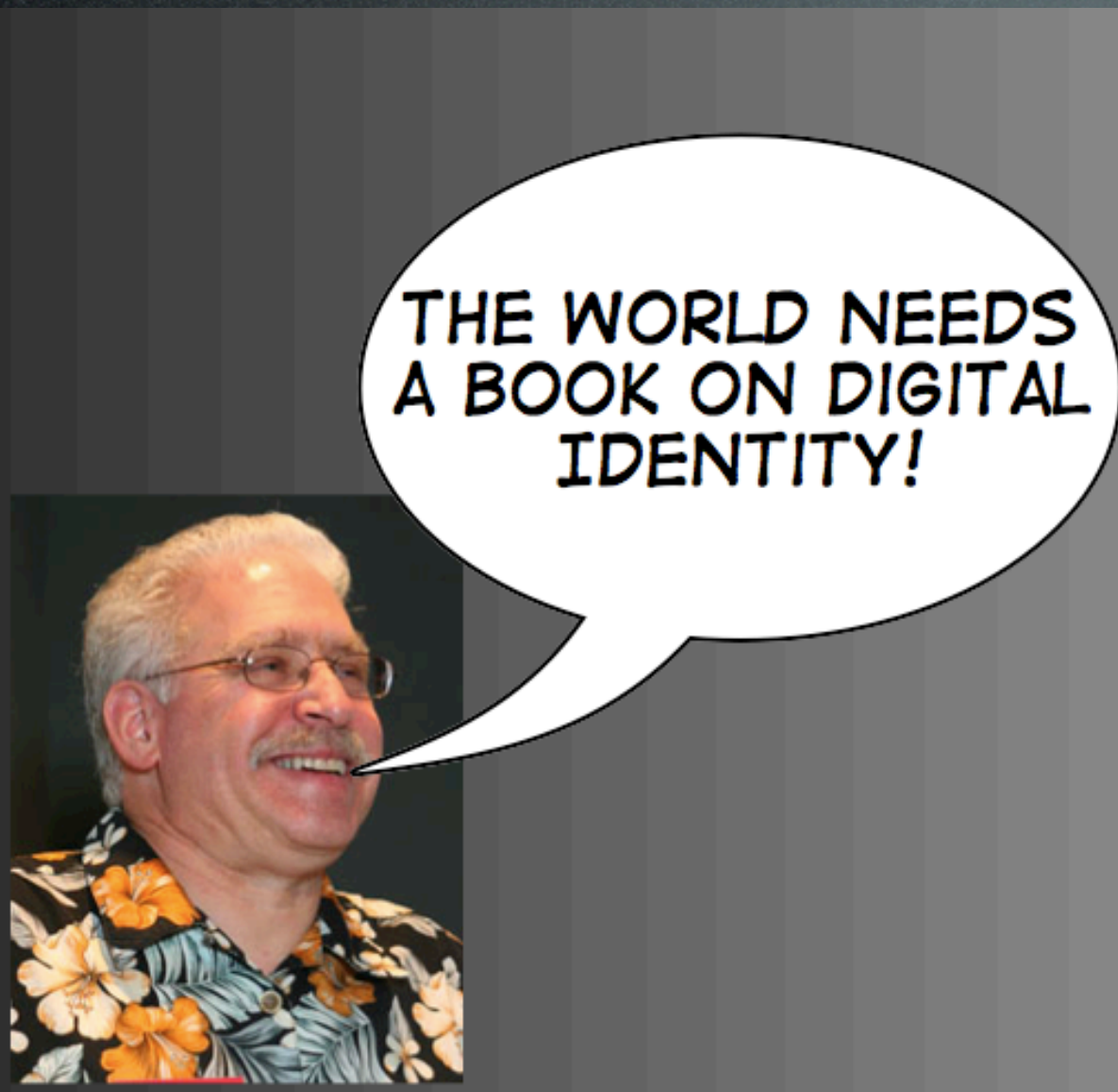

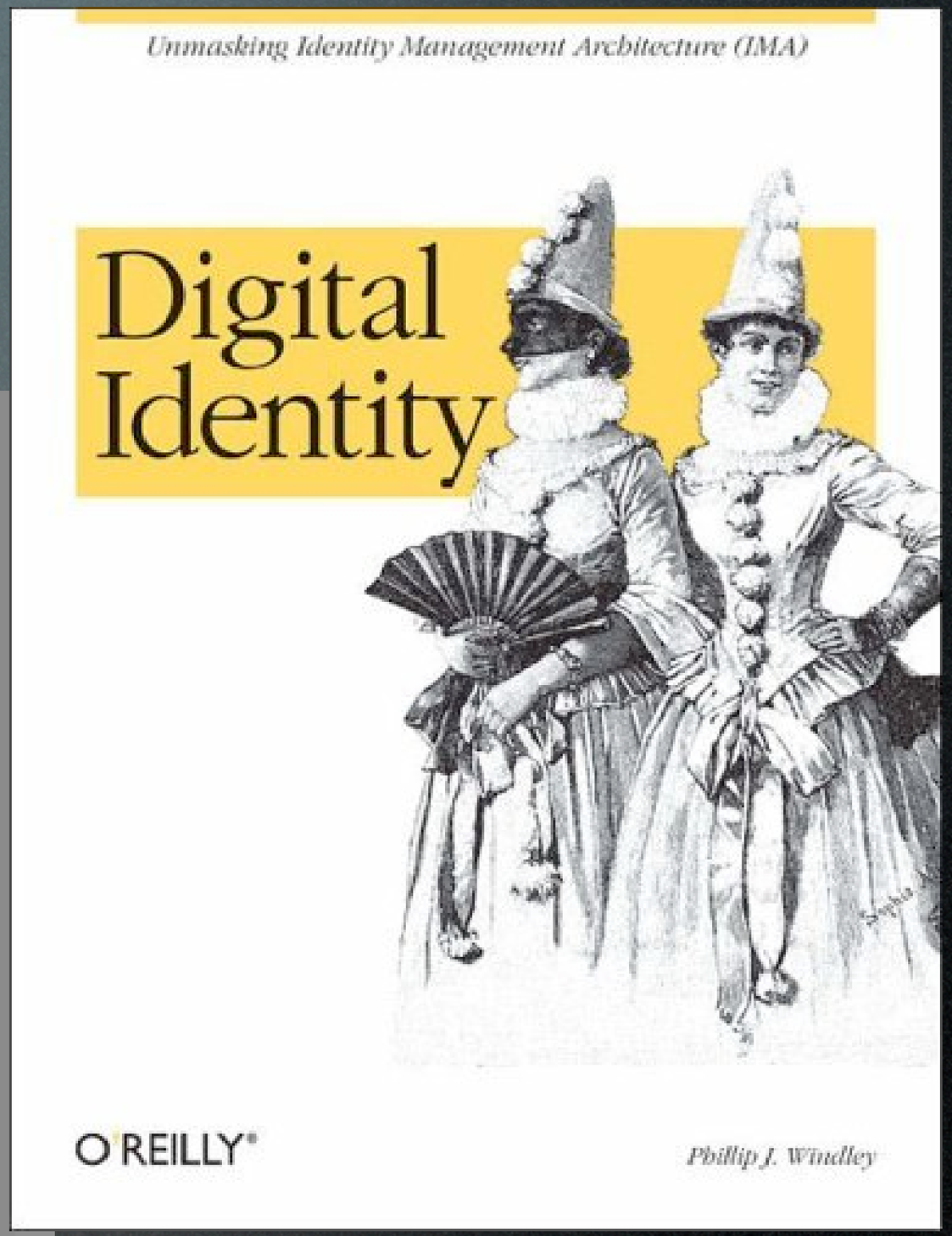

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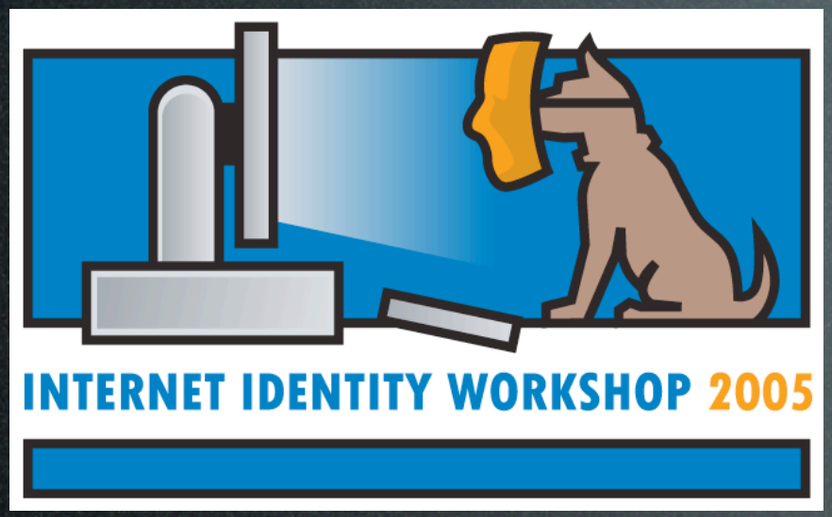

October, 2005

May and
Dec, 2006

May 14-16, 2007
Mountain View, CA

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ORGANIZATIONS GET THE IT THEY DESERVE

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ESSAYS
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TOPIC GUIDES
Understanding RSS
Digital ID Policies
Understanding VoIP
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September 09, 2005

Identity 2.0: The Movie

If you missed Dick Hardt's presentation on Identity 2.0 at OSCON this year, he's turned it into a movie. This is well worth viewing if you've got any interest in identity.

02:42 PM | Comments (0) | Recommend | Post to del.icio.us | Print

XQuery Apache Module

From Freshmeat:

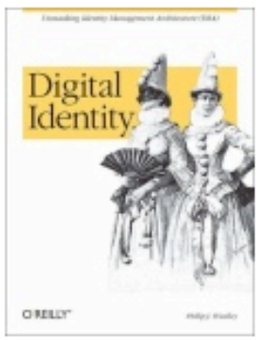
> *Native XmlDB Query Daemon is a client-server version of the Sleepycat native XML database deployed as an Apache module. The client is a pure Java API, supporting XQuery, XPath, and an Xml:DB API layer. It comes with a graphical admin console. Server binaries are provided for Linux x86 and x86-AMD64; for other platforms, compile from source.*
>
> ***From freshmeat.net: Project details for Native XmlDB Query Daemon***
> ***Referenced Fri Sep 09 2005 09:54:31 GMT-0600 (MDT)***

09:53 AM | Comments (0) | Recommend | Post to del.icio.us | Print

September 08, 2005

IIW2005: Hotels and Wiki

Digital Identity



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September 11, 2006

Vitamins, Pain-killers, and Viagra

Dick Hardt
(click to enlarge)

Dick Hardt intro'd a panel on identity at big sites (meaning eBay, Yahoo!, Google, MSN, and so on). He used a great analogy of vitamins, pain-killers, and Viagra. We've been selling ID Management as vitamins. Everyone knows that they're good for you, but there's no urgency. With pain-killers, there's urgency. Viagra, on the other hand lets people do things they couldn't do before. User-centric identity is a pain-killer for users, but only a vitamin for big sites.

How do you turn user centric identity into Viagra? He uses eBay as an example. By using a user-centric, federated identity system, they could allow other sites to use their reputation system and charge for the privilege. That's a good example of enabling behavior from shared identity.

Posted on 05:57 PM | Comments (1) | Recommend | Print
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permalink

the identity of entries

enables conversation

Does Identity Matter?

Inside. Lots and lots of....HARDWARE!

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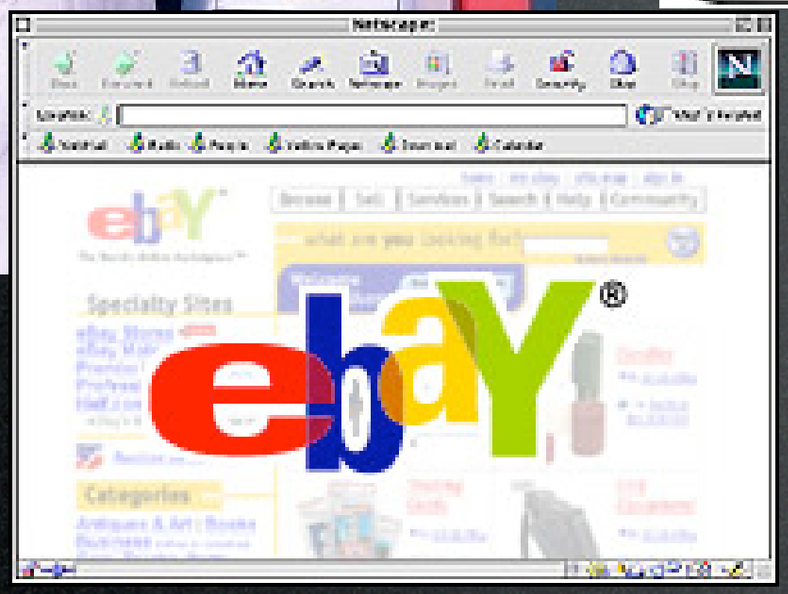
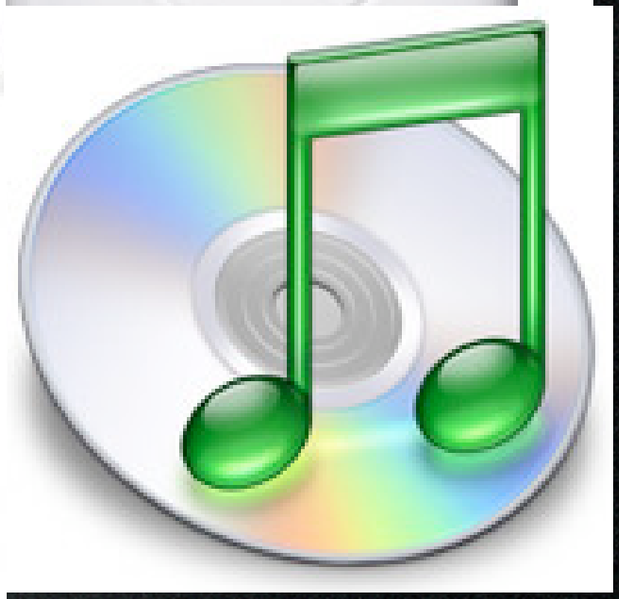
Does Identity Matter?





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identity is the foundation for commerce

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What Happened to the Walls?

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What Happened to the Walls?

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The Border Patrol

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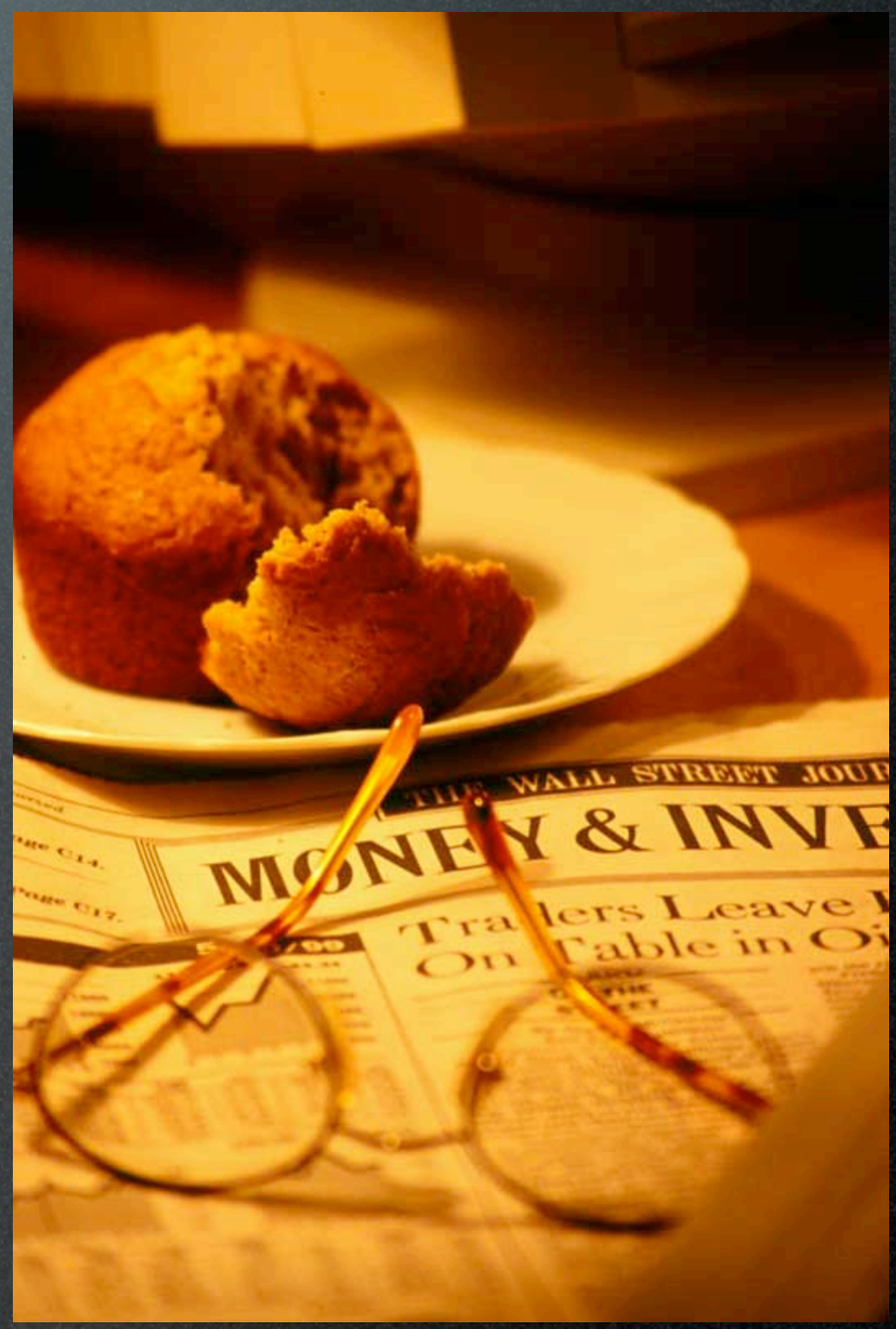
Business Context of Identity

vs



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identifiers

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what's in a name?

Samantha

Matsuhiro

Fred

Alice

George

Greta

Steve

Cindy

Kristen

Lynne

Betty

Monty

Phil

Tonya

Rumplestiltskin

3 Phillip Windleys

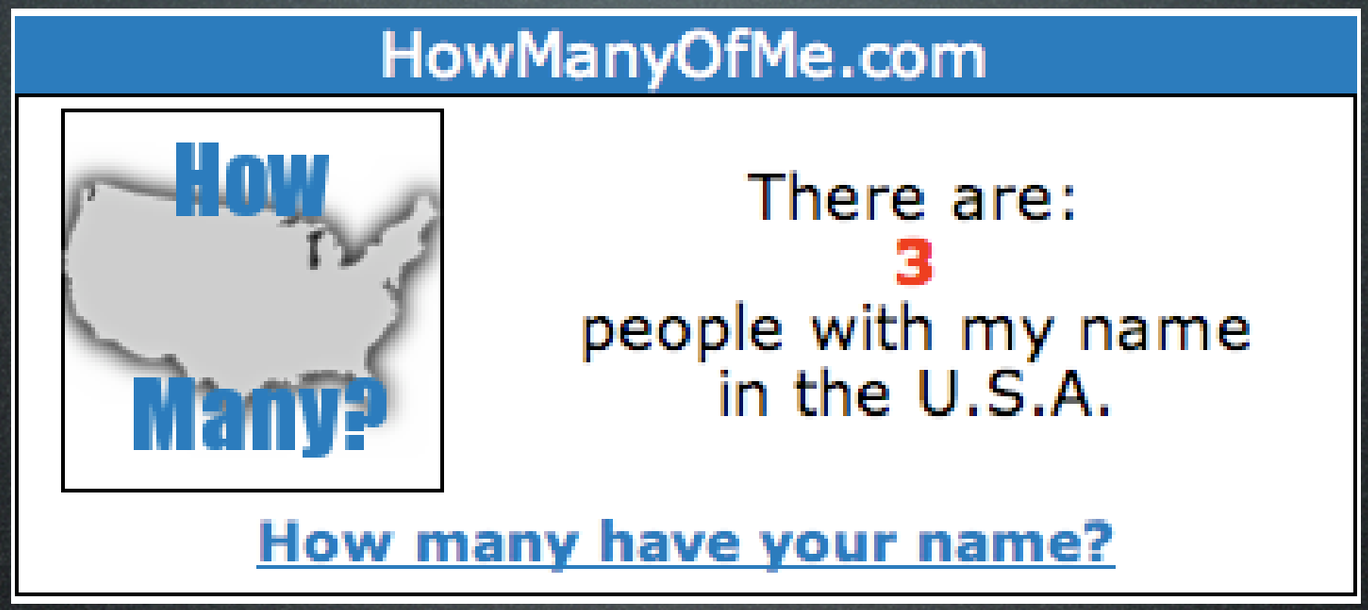
HowManyOfMe.com

There are:
3
people with my name
in the U.S.A.

How many have your name?

www.windley.com

3 Phillip Windleys



50,000 John Smiths

phil@windley.org

windley.com

http://www.windley.com/essays

xri://=windley

www.windley.com

credentials

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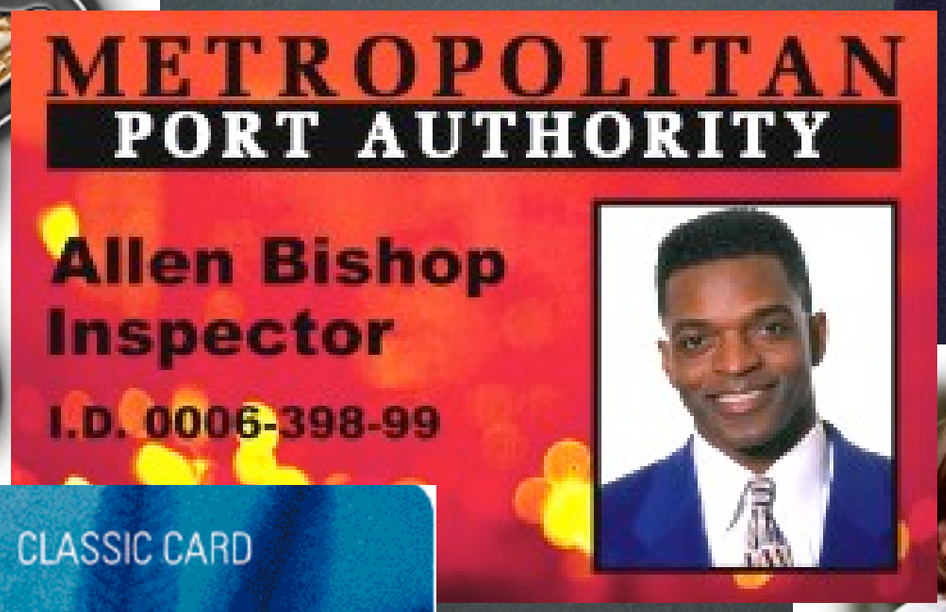
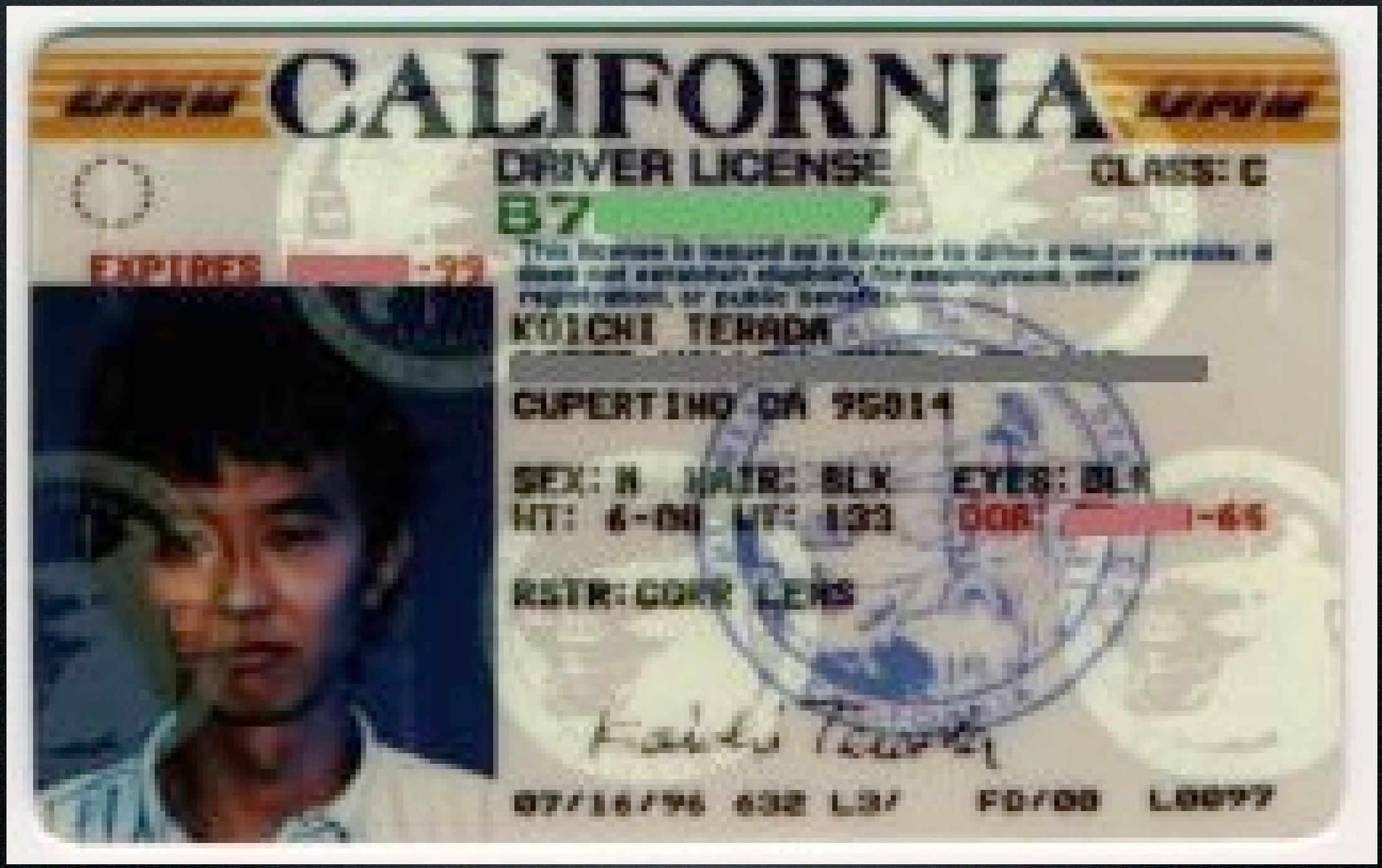
One of these things is not like the others!



Credentials & Identity



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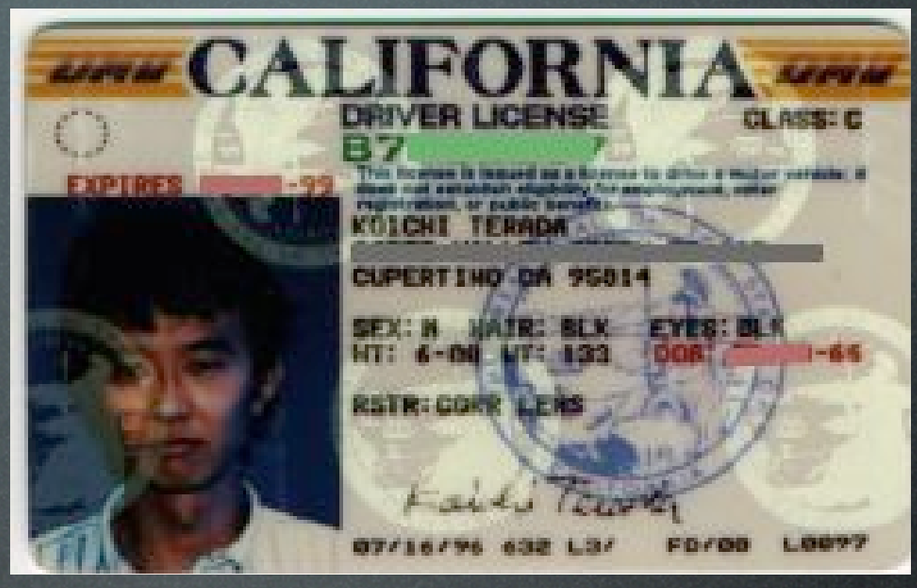
Buying Beer



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accountability & reputation

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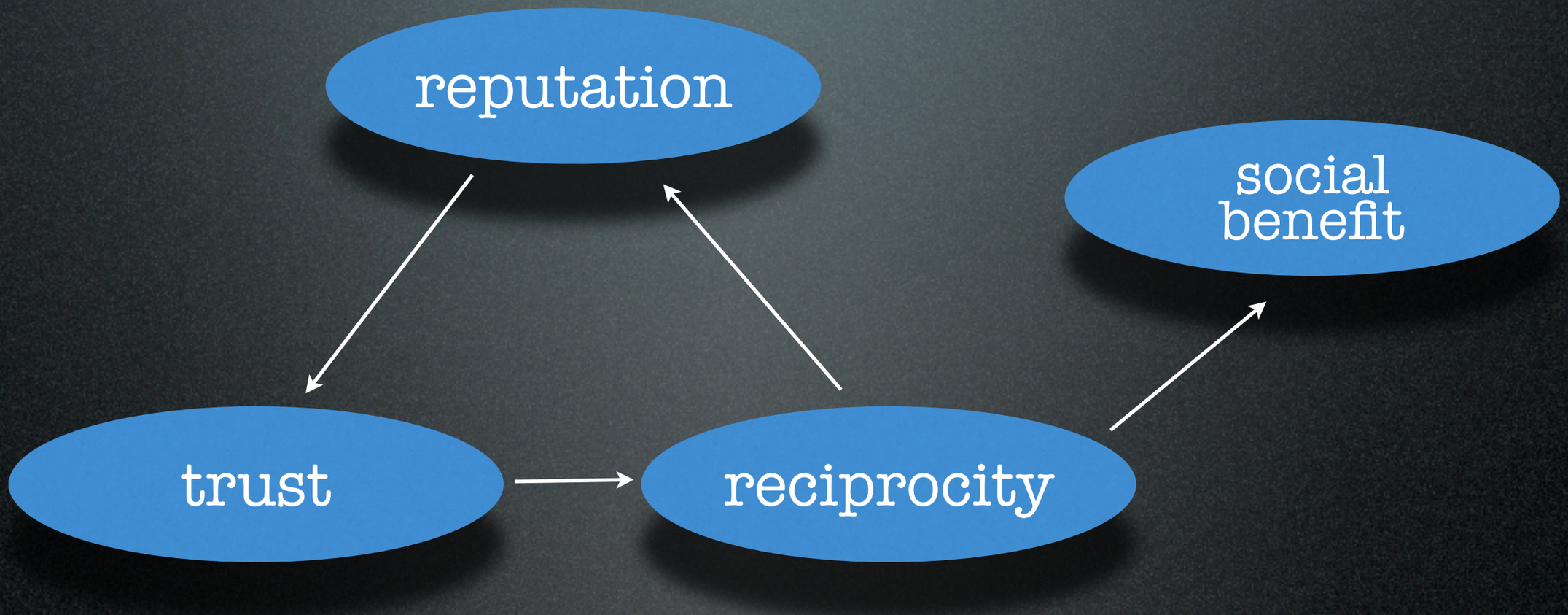
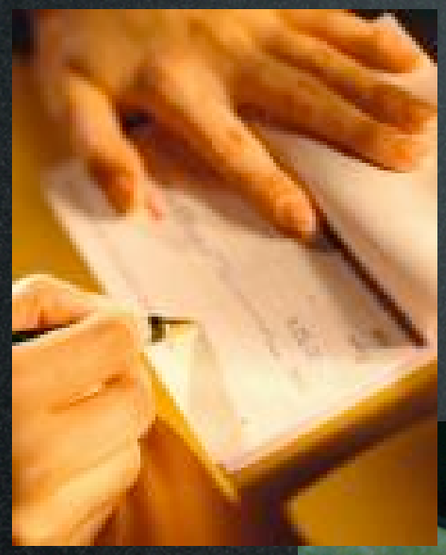


Mui et. al., A Computational Model of Trust and Reputation


STARBUCKS
COFFEE



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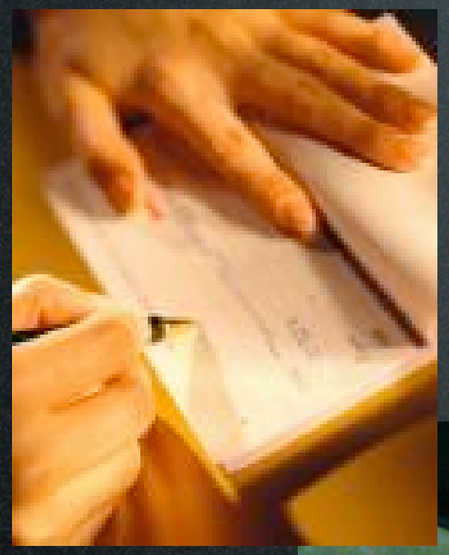
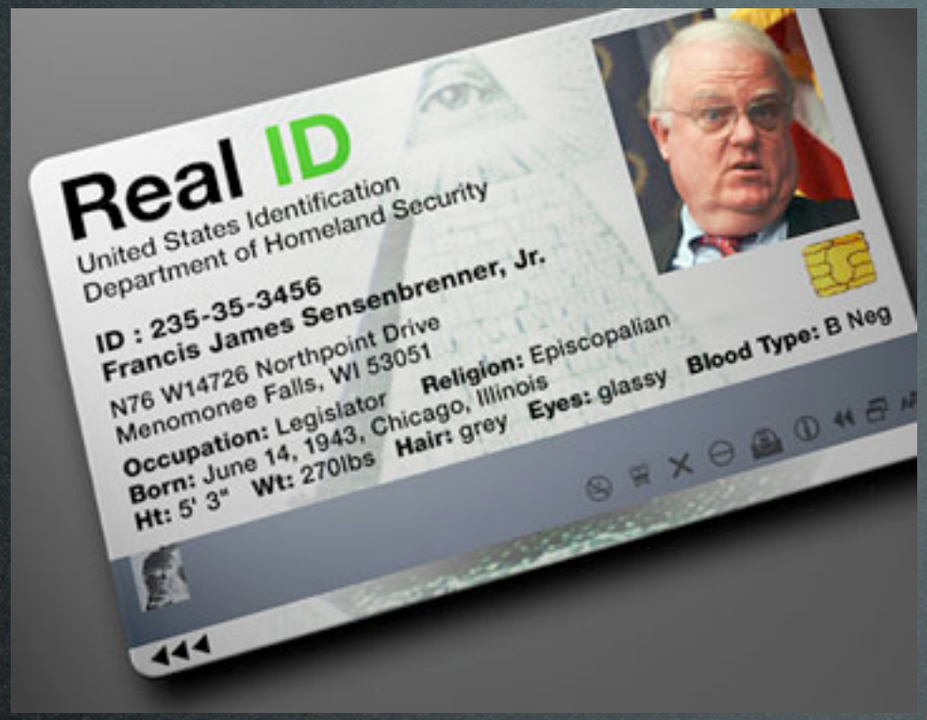



STARBUCKS
COFFEE


PASSPORT
United States
of America


Real ID
United States Identification
Department of Homeland Security
ID : 235-35-3456
Francis James Sensenbrenner, Jr.
N76 W14726 Northpoint Drive
Menomonee Falls, WI 53051
Occupation: Legislator
Religion: Episcopalian
Born: June 14, 1943, Chicago, Illinois
Ht: 5' 3" Wt: 270lbs Hair: grey Eyes: glassy Blood Type: B Neg


PASSPORT
United States
of America

privacy

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YOU HAVE NO PRIVACY ANYWAY. GET OVER IT!

Scott McNealy,
CEO Sun

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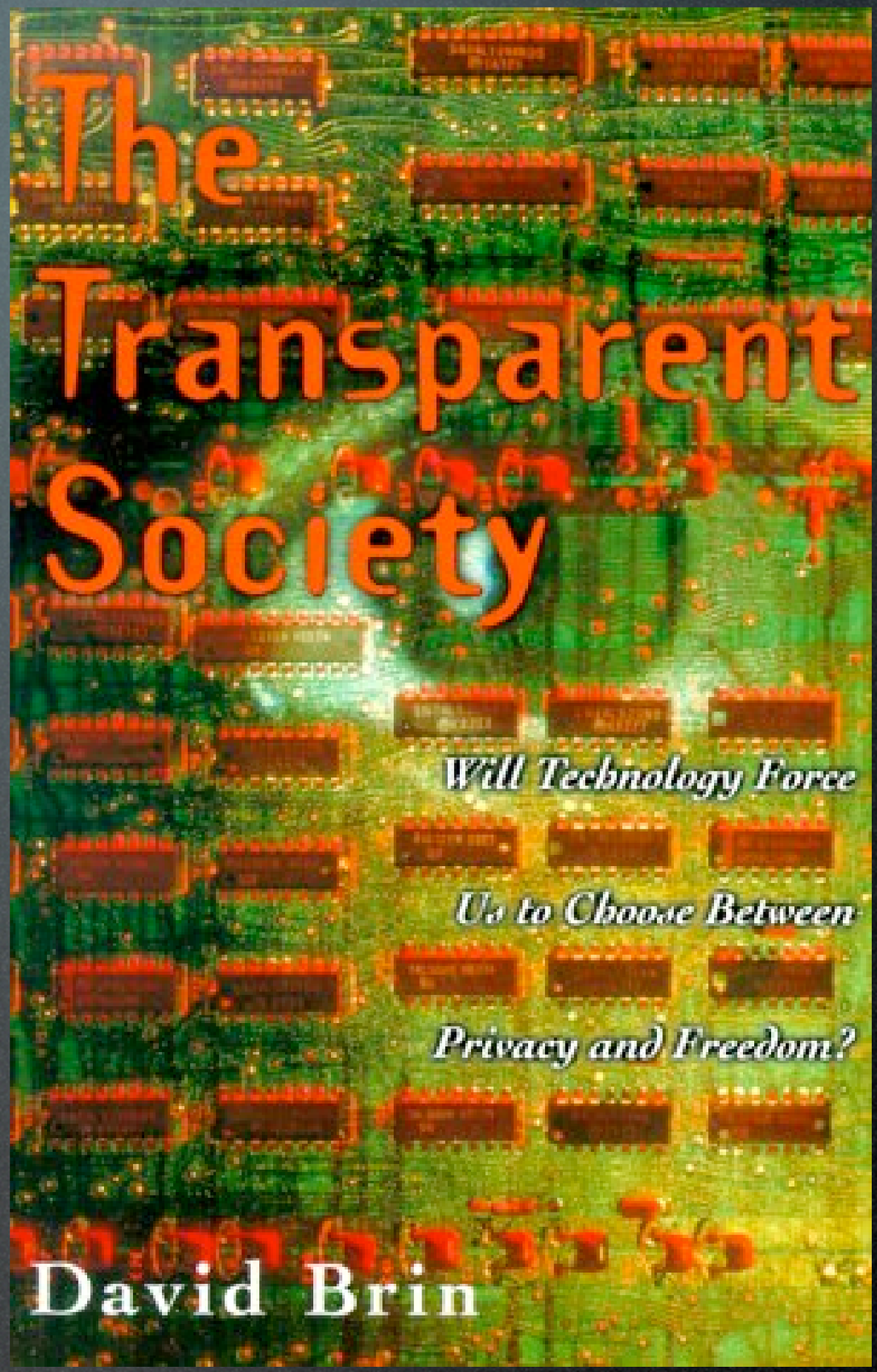
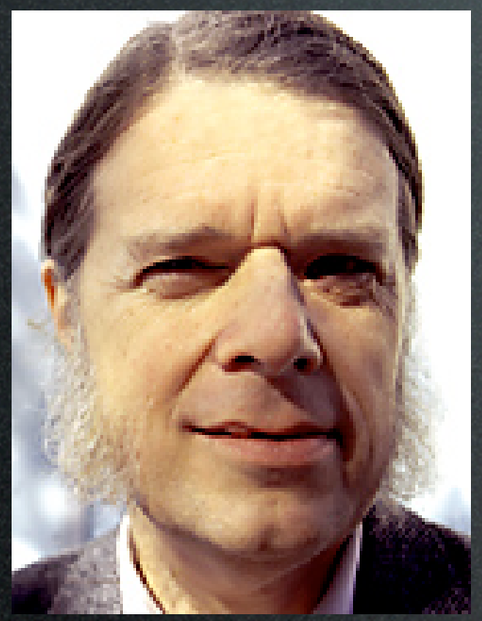

The Transparent Society
Will Technology Force
Us to Choose Between
Privacy and Freedom?
David Brin

Accountability: Pick Two

1. Tools that help me see what others are up to.	2. Tools that prevent others from seeing what I am up to.
3. Tools that help others see what I am up to.	4. Tools that prevent me from seeing what others are up to.

Accountability vs. Enforcement



"Accountability is a log processing problem"

-Dan Geer

- Access control scales geometrically (its a multi-dimensional table)
- Accountability scales linearly
- Access control systems are incredibly vulnerable to DDoS attacks

anonymity enables social good

anonyms and pseudonyms

CHEAP!!!

pseudonyms

Today
Only!!

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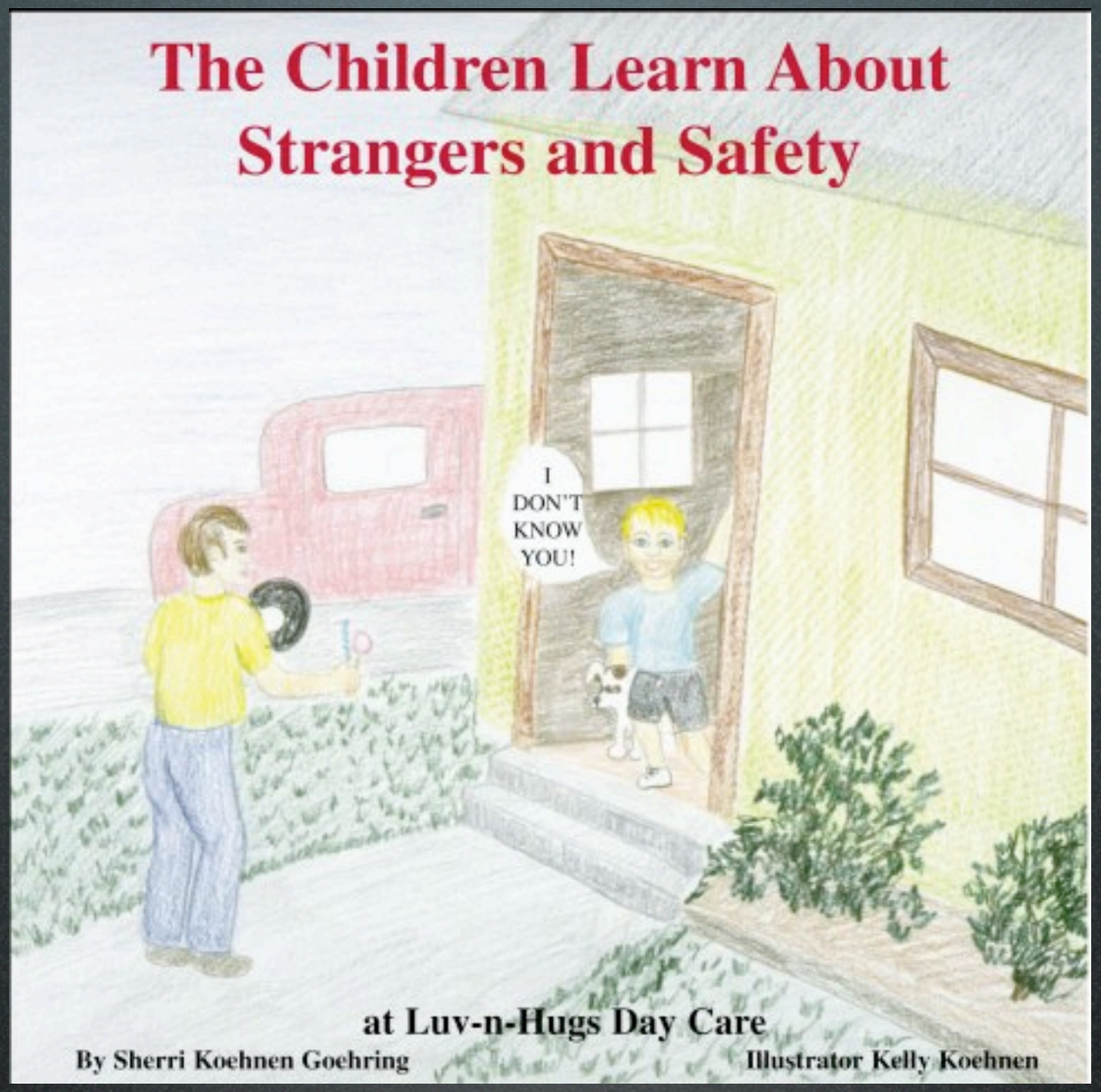
positive reputations are valuable

negative reputations don't stick...



Distrust Strangers

Stratgies:

- Distrust strangers
  - No strategy does better
- Make name changes more costly
- Commit to name permanence
  - Anonymous

Friedman and Resnick, The Social Cost of Cheap Pseudonyms

Authorization

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Traditional View

- Enforcement
- U x R x A table
  - U => Users
  - R => Resources
  - A => Actions

Authorization Problems

- Scaling
  - Roles help
- Control of identities
  - Cheap pseudonyms
- Two ways to scale:
  - Accountability (audits)
  - Reputation

Examples

- eBay
  - Pseudonyms and reputation
- Credit cards
  - simple authorization combined with fraud monitoring

reputation

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your story about me

principles of reputation

- Reputation is personal
- Reputation is a currency
- Reputation is narrative and dynamic
- Reputation is based on identity
- Reputation is based on claims, transactions, and opinions
- Reputation exists within specific contexts
- Reputation quality should be continually assessed

Reputation Components

Reputation Components

1. Verified claims (identifiers)

Reputation Components

1. Verified claims (identifiers)
2. Transaction data

Reputation Components

1. Verified claims (identifiers)
2. Transaction data
3. Opinions, ratings, and endorsements

reputation vs. privacy

CS601 - 2006

- Reputation theme
- Reviewed dozens of papers
- Class project
  - Agile methodology
  - 3 two-week sprints
  - 9 students

Design Philosophy

- Reputation is a calculated score
- Multiple computational models supported
- Users have multiple identifiers
- Factors
  - verified facts and credentials
  - transactions
  - opinions, ratings, & endorsements
- Transparency
- Transactions jointly owned and immutable

Architecture

- ID system neutral
- Data model for users and credentials
- Rules engine
- Plug-in architecture
  - adds data model
  - adds rule operations
- Plug outs to online systems

you've got to start somewhere

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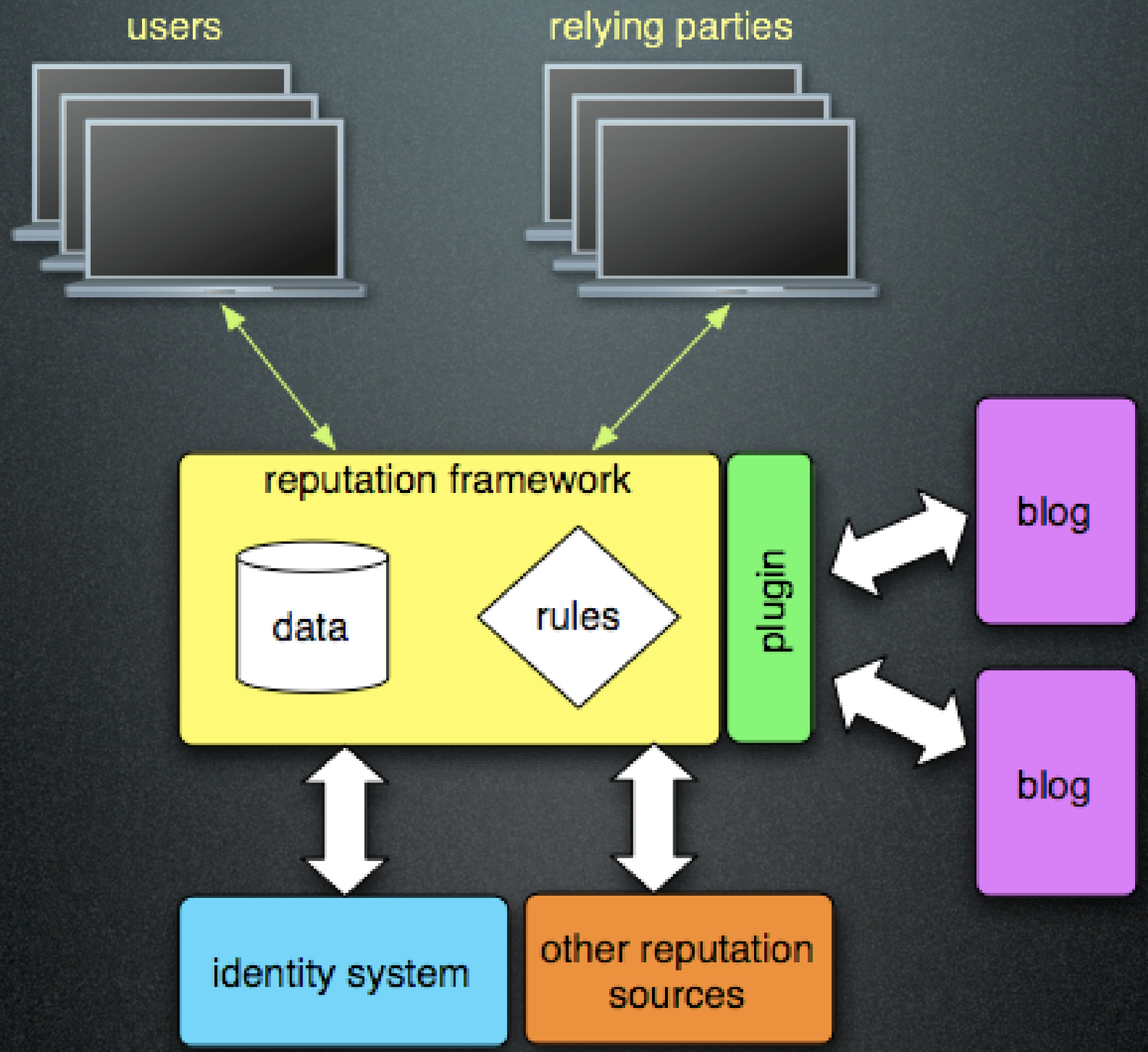
users
relying parties
reputation framework
data
rules
plugin
blog
blog
identity system
other reputation sources

2007

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Reputation for OpenID

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CS601 - 2007

- Reputation theme
- Reviewed dozens of papers
- Class project
  - Agile methodology
  - 3 two-week sprints
  - 9 students

Use Case One

- George enters his OpenID at a Web site and gets redirected to a Web site that looks like his OpenID provider. Is it really? (protect user)
- Browser bar make automatic query
- Unathenticated or authenticated

Use Case Two

- George enters his OpenID at a Web site. What can the Web site know about George based on the reputation of that OpenID?
  - George doesn't have to be a stranger
  - George can selectively reveal other factors to the Web site

results

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Identity in the Enterprise

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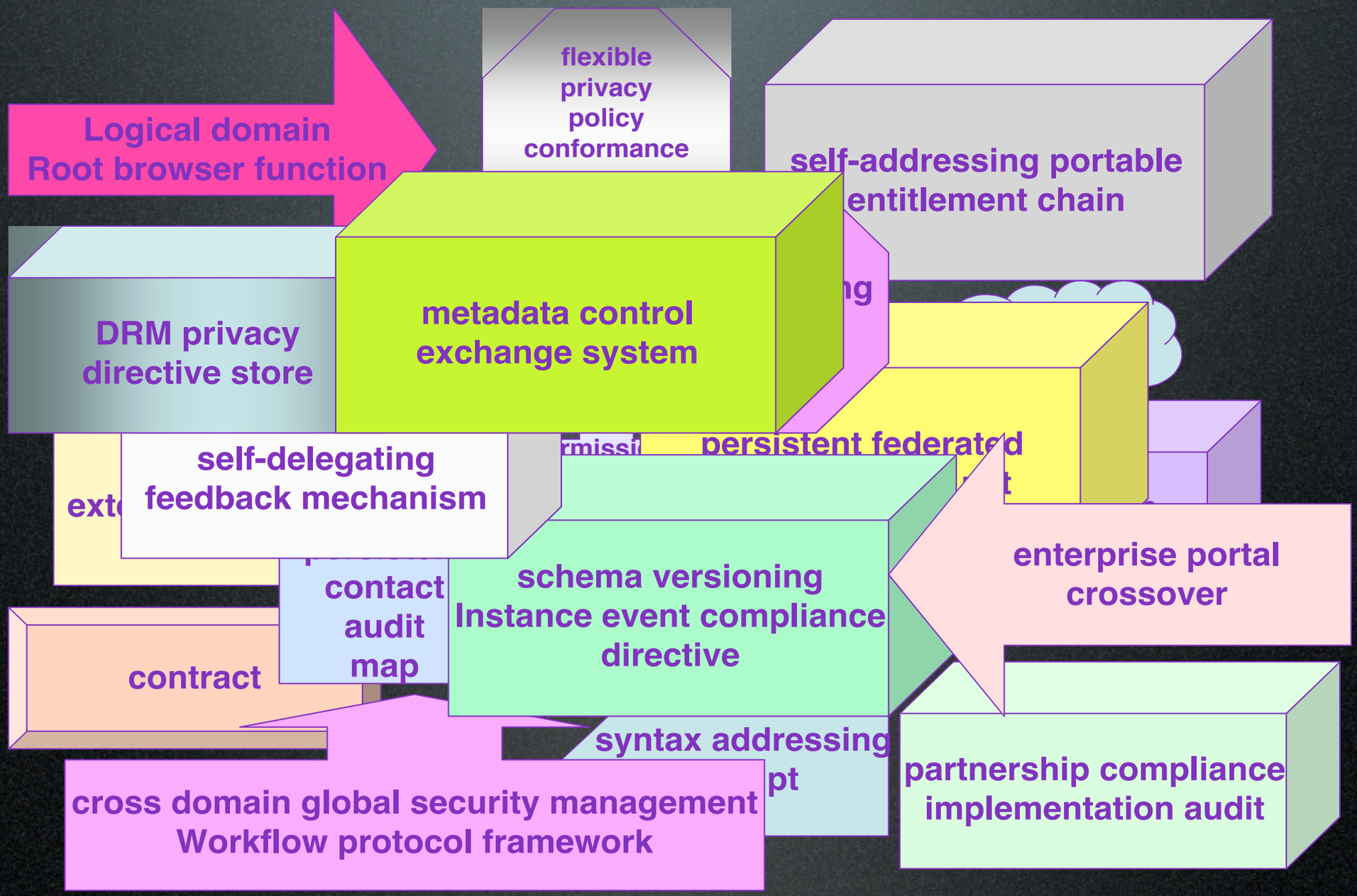
Identity Infrastructure (as built)



Architecture courtesy of Doc Searls

Identity Management Architectures

City Planning

- Standardization
- Certification
- Management
  - Rules
  - Regulation
  - Enforcement

Creating a IMA Strategy

Key Steps

1. Governance
2. Business context
3. Resources
4. Policy
5. Interoperability framework
6. Reference architecture

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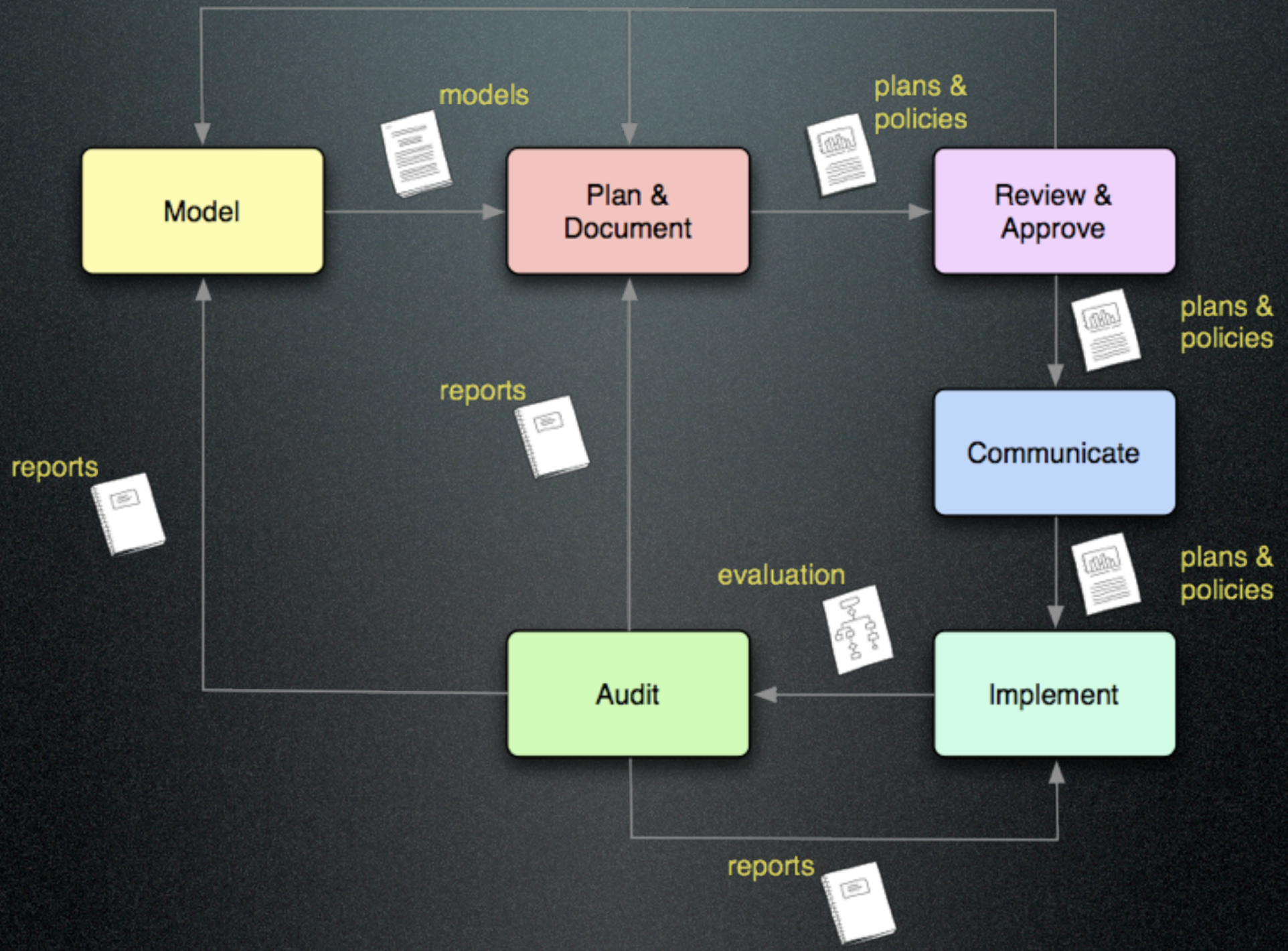
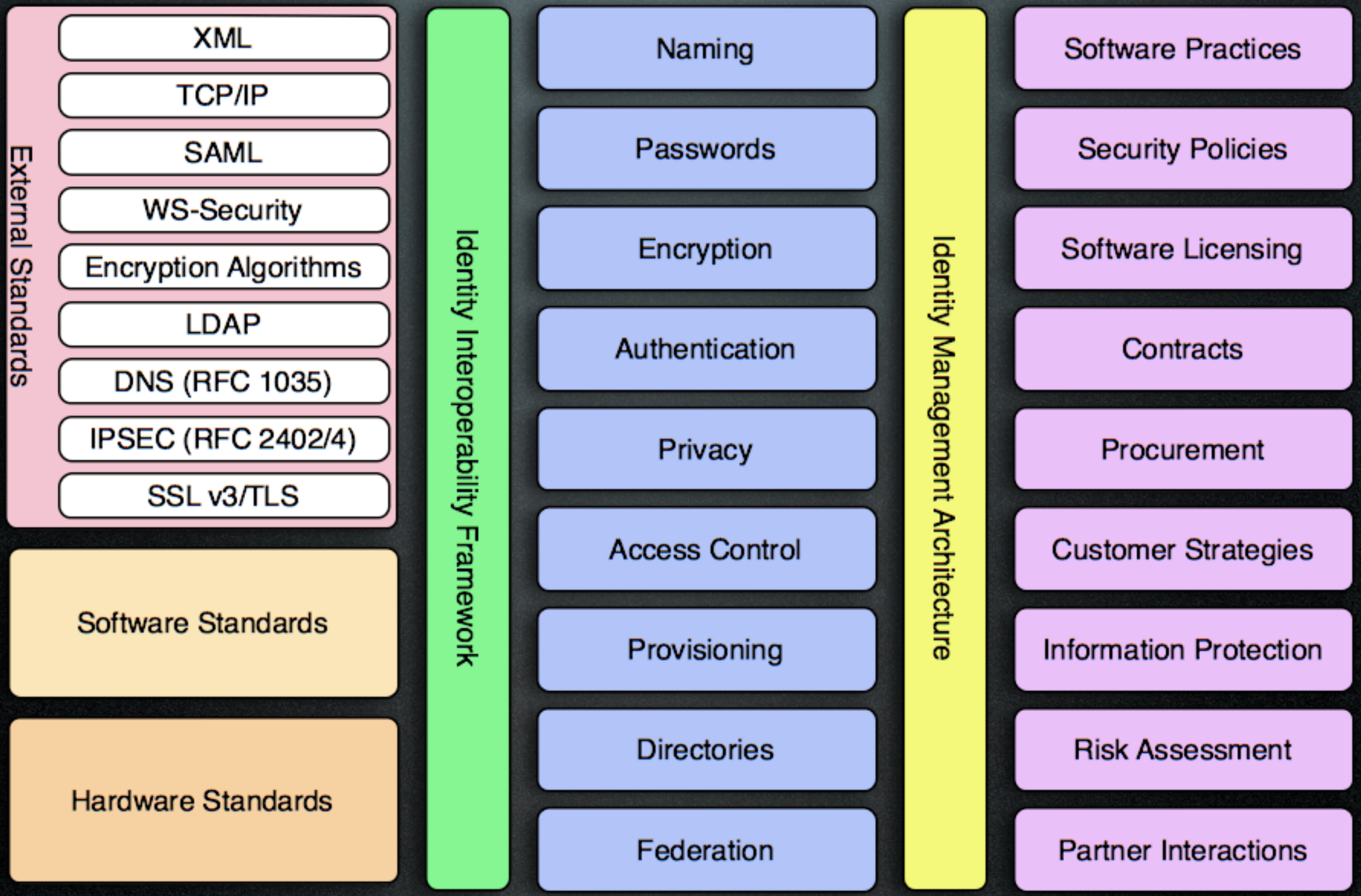
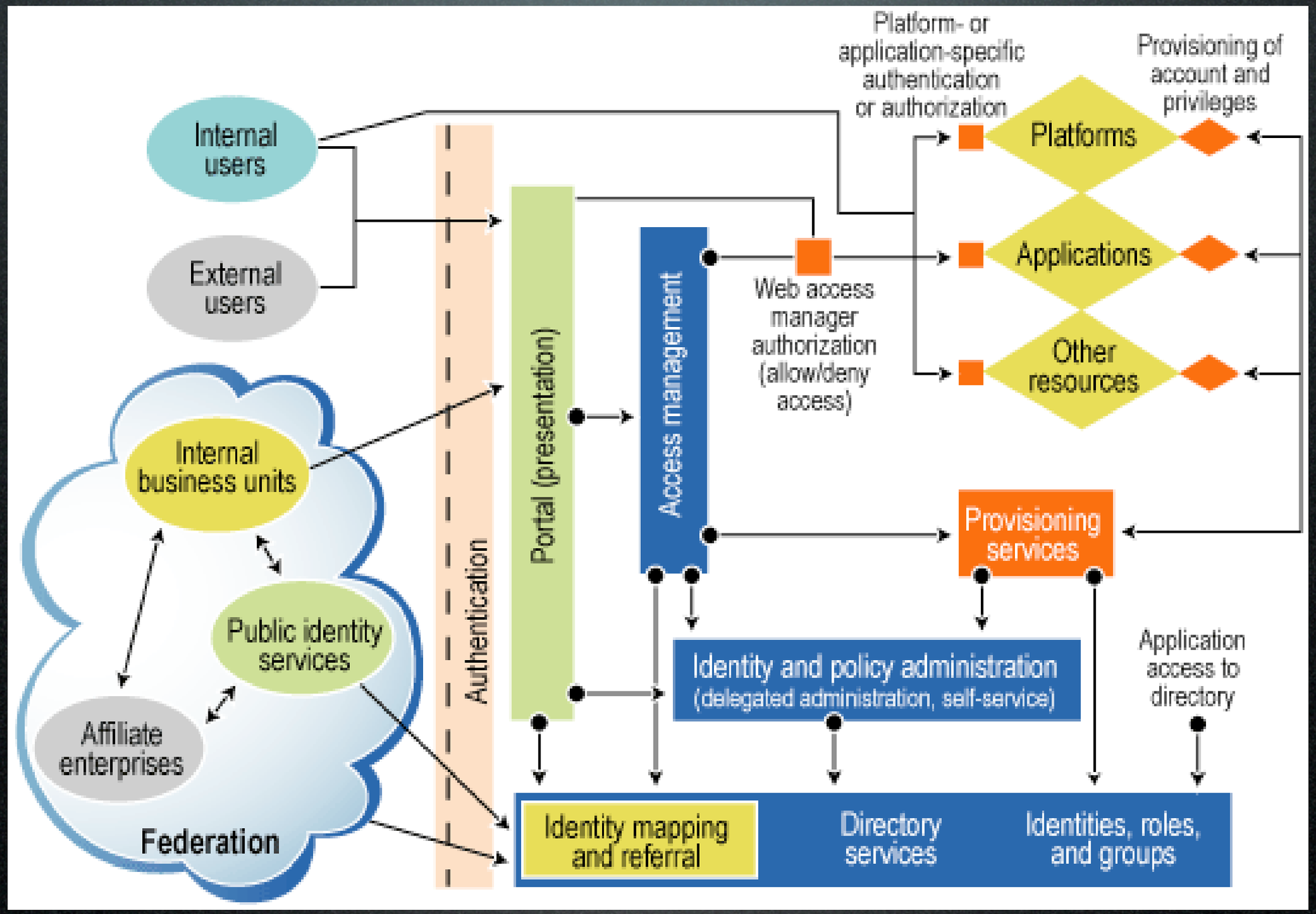
IMA Lifecycle



Identity Policy Stack



Reference Architecture



Courtesy of The Burton Group

break

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federation

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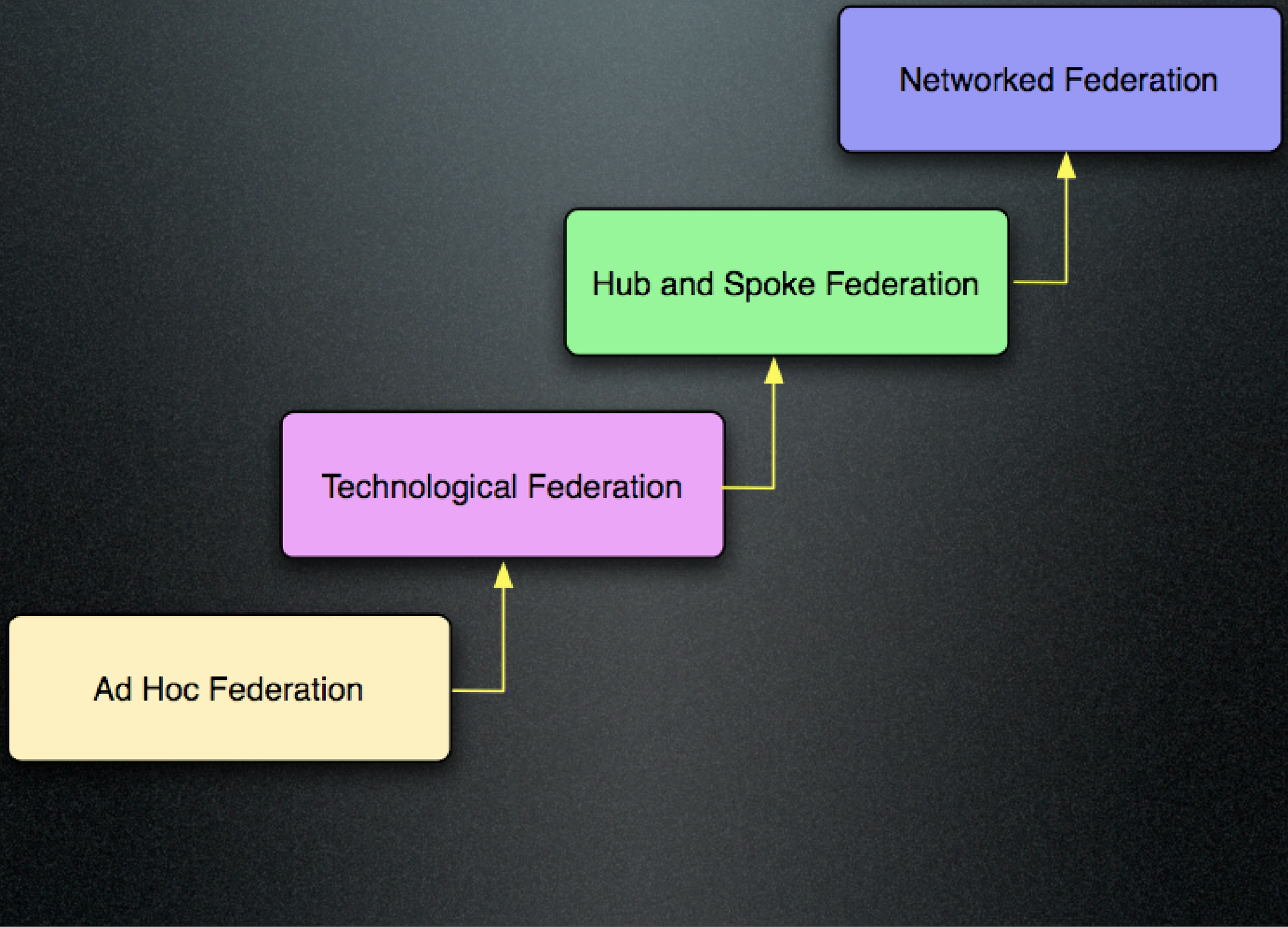
Identity Federation

WS-Federation

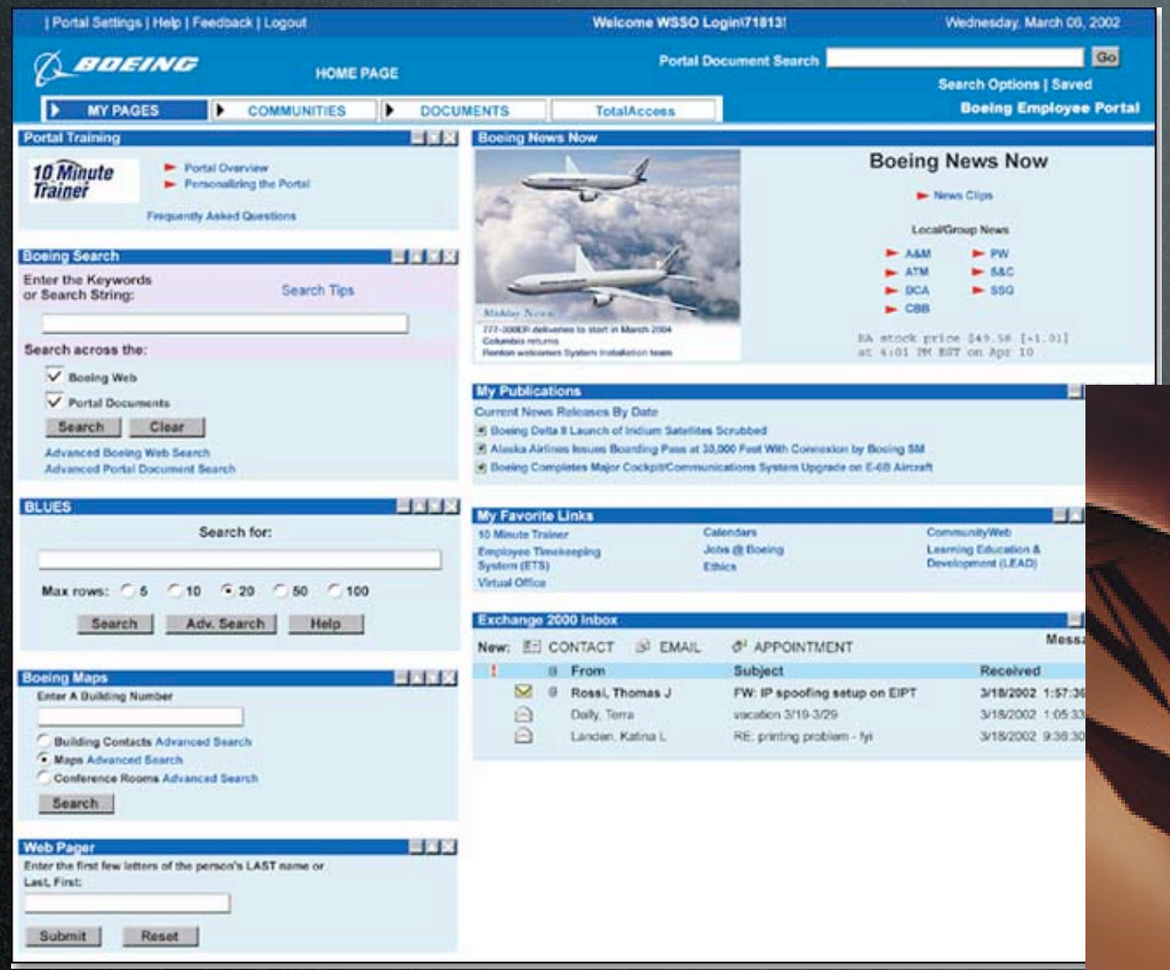
WS-Federation

- Linking identities across organizations
- Sharing attributes and authentication
- Loose coupling
- Goes beyond technology standards
  - Policy
  - Liability
  - Governance
  - Trust

Federation Maturity



Liability and Policy



Linking 401K site to employee portals

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user-centric identity

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An identity layer for the Internet

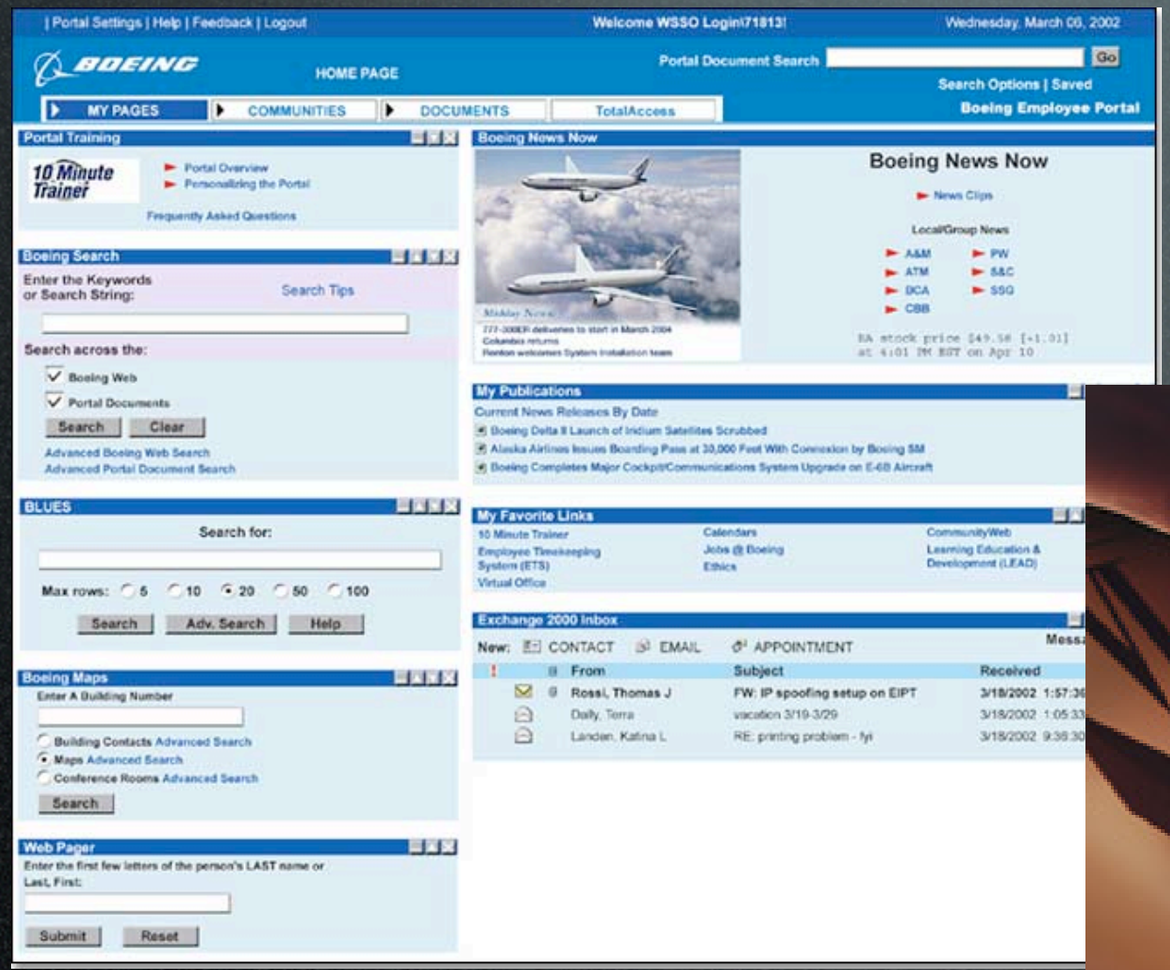
Vint Cerf

Cameron's Laws of Identity

1. User consent and control
2. Minimal disclosure
3. Justifiable parties
4. Directed identity
5. Pluralism
6. Human integration
7. Consistent experience across contexts

Federation Problems

Linking 401K site to employee portals



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Roles

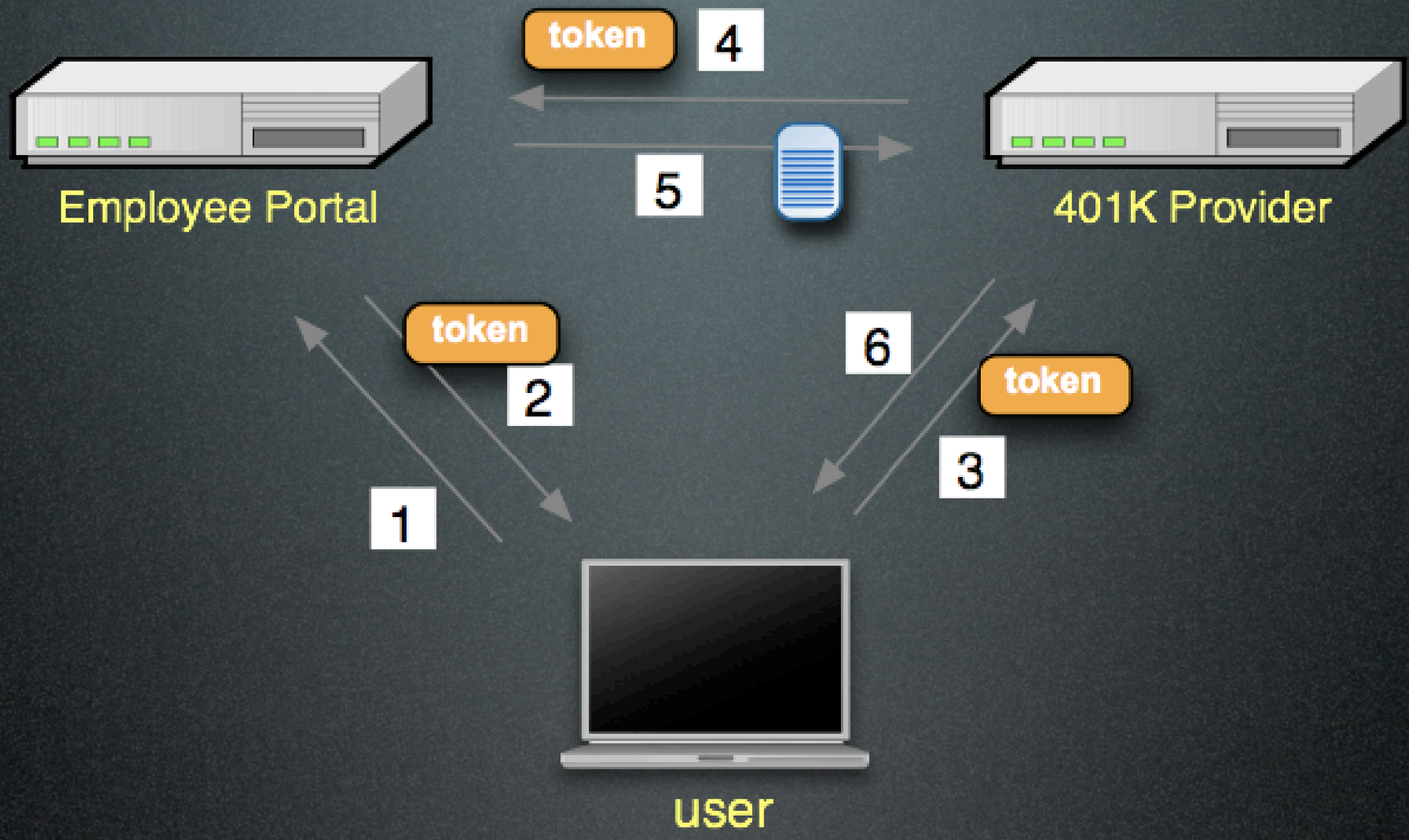
1. Identity Provider
2. Relying party

Roles

1. Identity Provider
2. Relying party
3. User

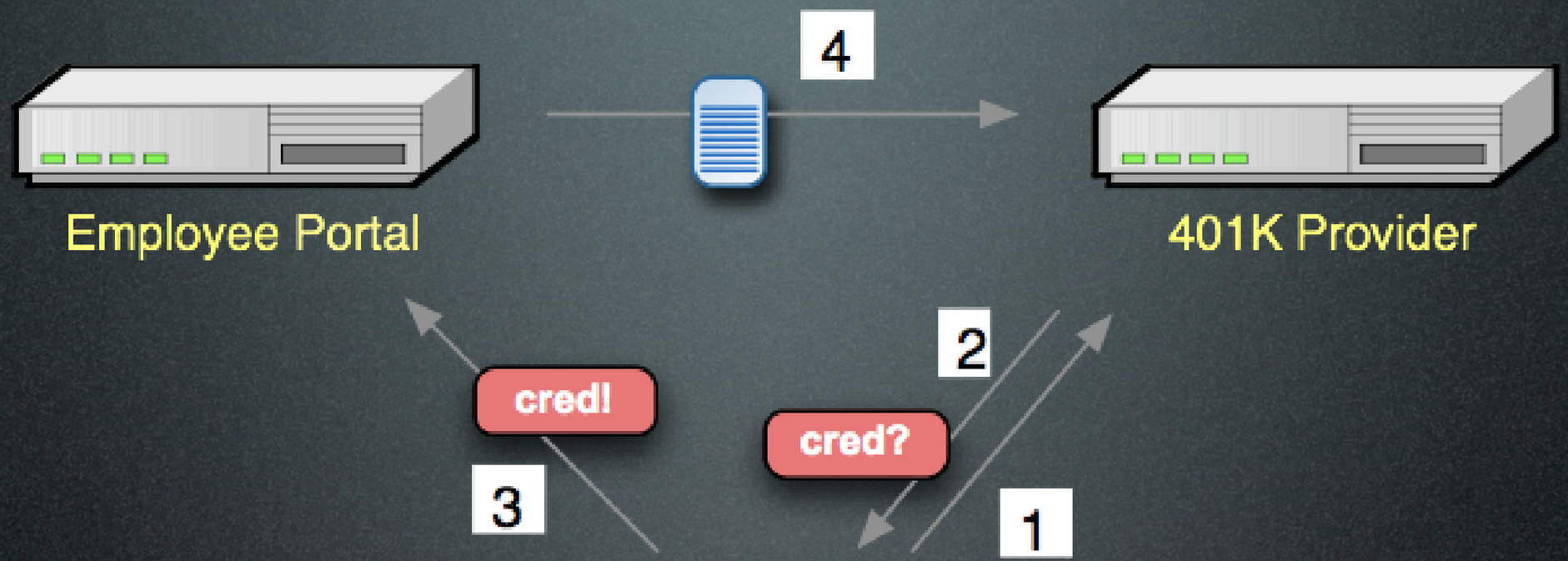
Identity Provider

- provides testimony regarding the accuracy of claims
  - maintains records about a user
  - maintains account with the user
  - may assume liability
- provides registration process for account establishment
- provides authentication services
- user may act as their own identity provider



scenario one

- ID issuer and relying party have prior arrangement
- User is only involved peripherally and because of policy



scenario two

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- ID issuer and relying party need no prior agreement
- User involved structurally

User-Centric Identity Technologies

Name	Type	Comments
XRI, i-names	address	URI-like, complete
OpenID	address	URL
LID	address	URL, attributes
CardSpace	token	ubiquity, complete
SXIP	token	complete solution
Higgins	token	interop framework
Liberty	token	enterprise
Shibboleth	token?	higher ed

OSIS Announcement

June 20, 2006, Berkman Identity Mashup

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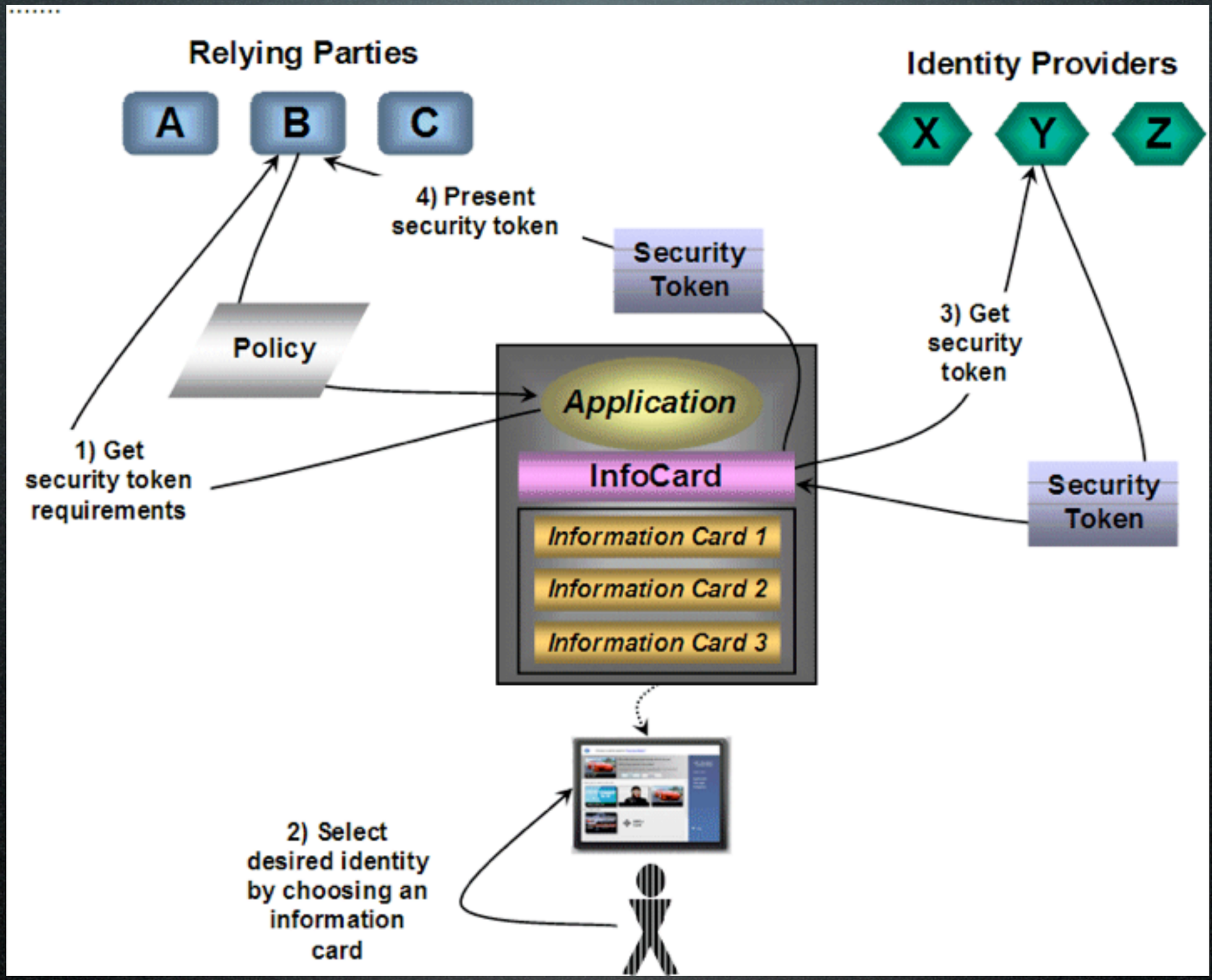
Interoperable Layer

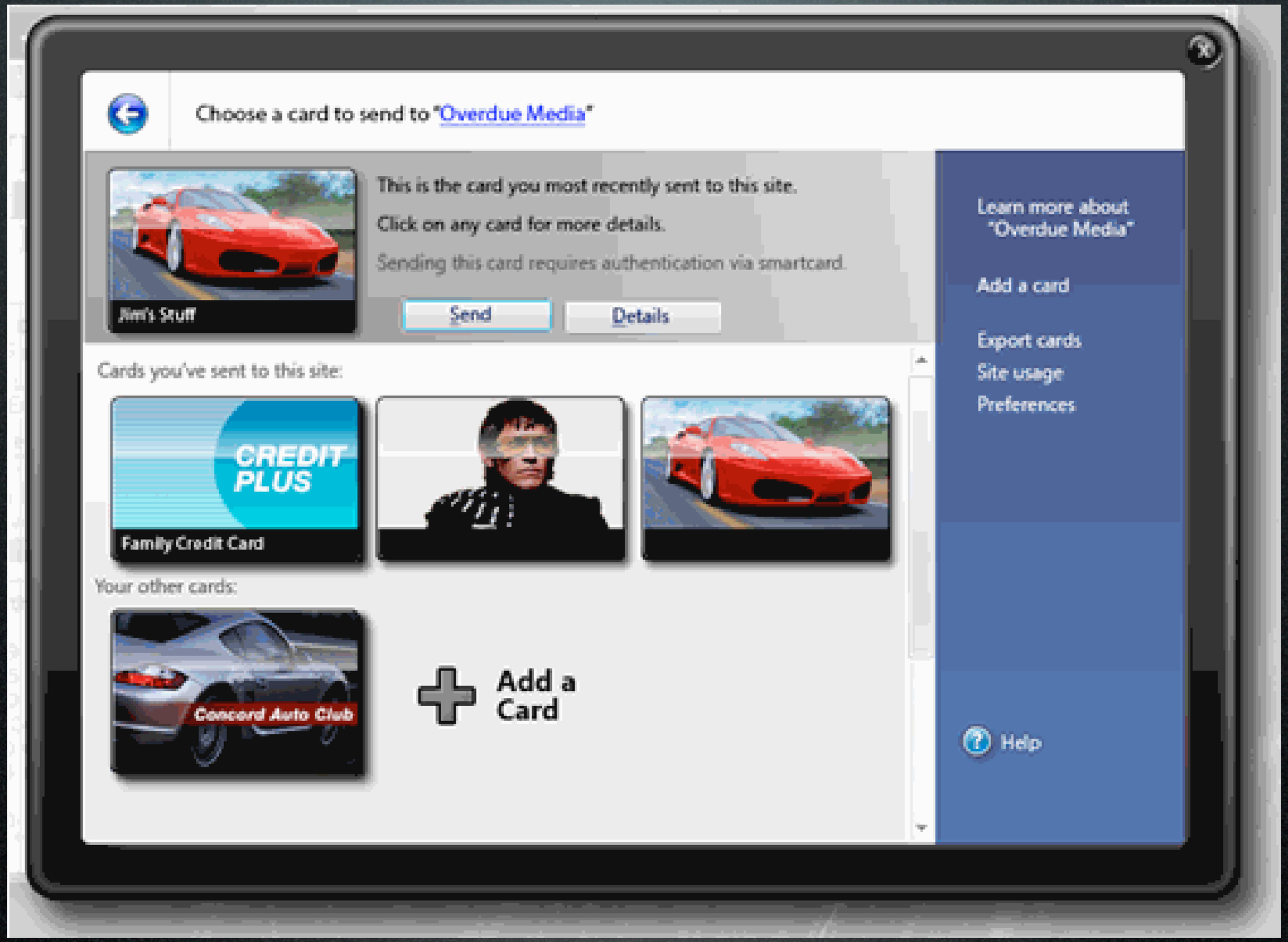
- Cross OS
  - Windows
  - Linux
  - OS X
- Cross Browser

CardSpace

- Open
- Decentralized
- Based on WS-* standards



InfoCard Interactions



CardSpace Identity Selector

CardSpace demo

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www.windley.com

http://openid.aol.com/pjwindley

www.windley.com

http://www.windley.com

delegation

www.windley.com

```
<head>
...
<link rel="openid.server"
      href="https://www.myopenid.com/server" />
<link rel="openid.delegate"
      href="http://windley.myopenid.com" />
...
</head>
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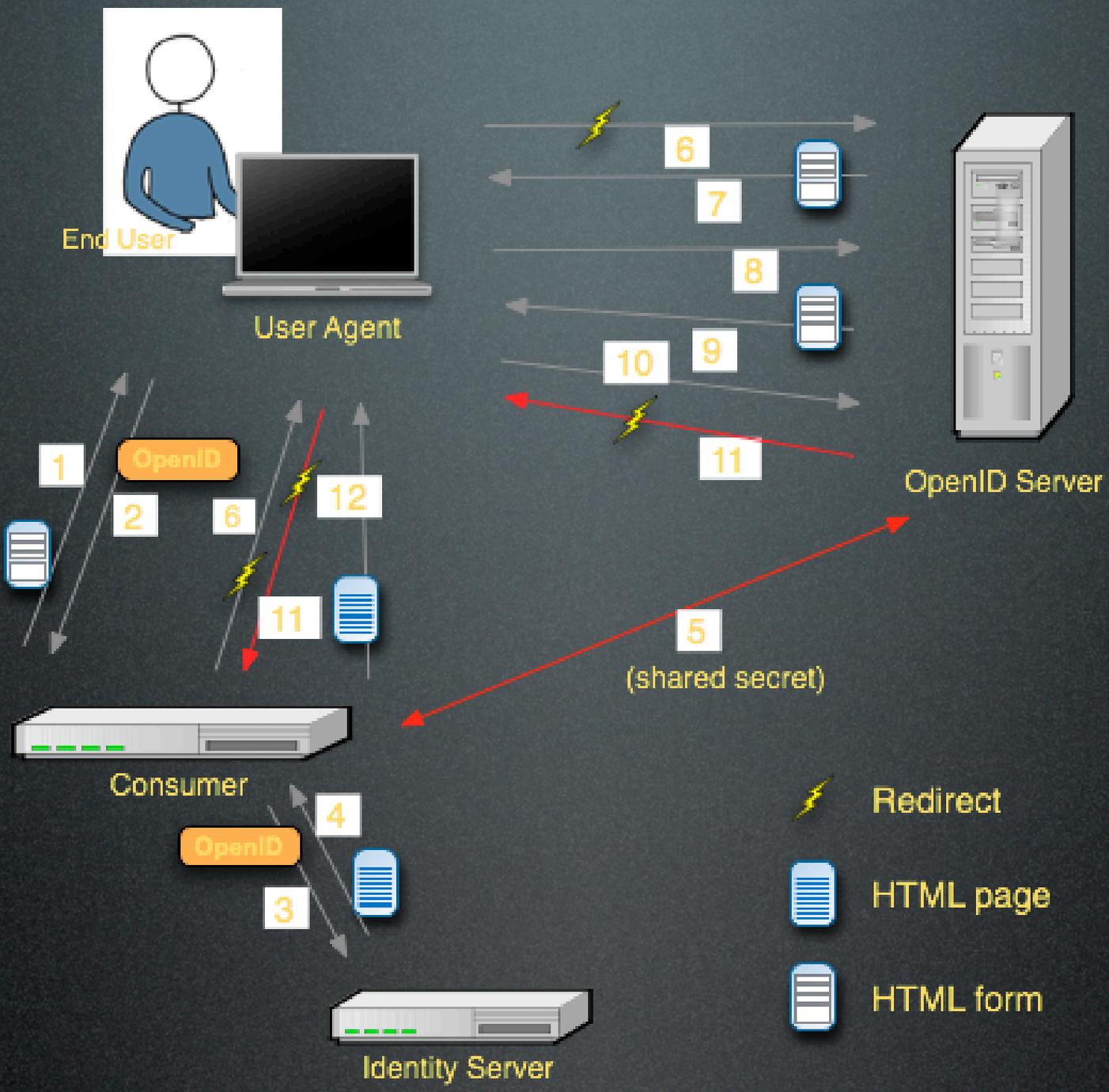

OpenID Interactions

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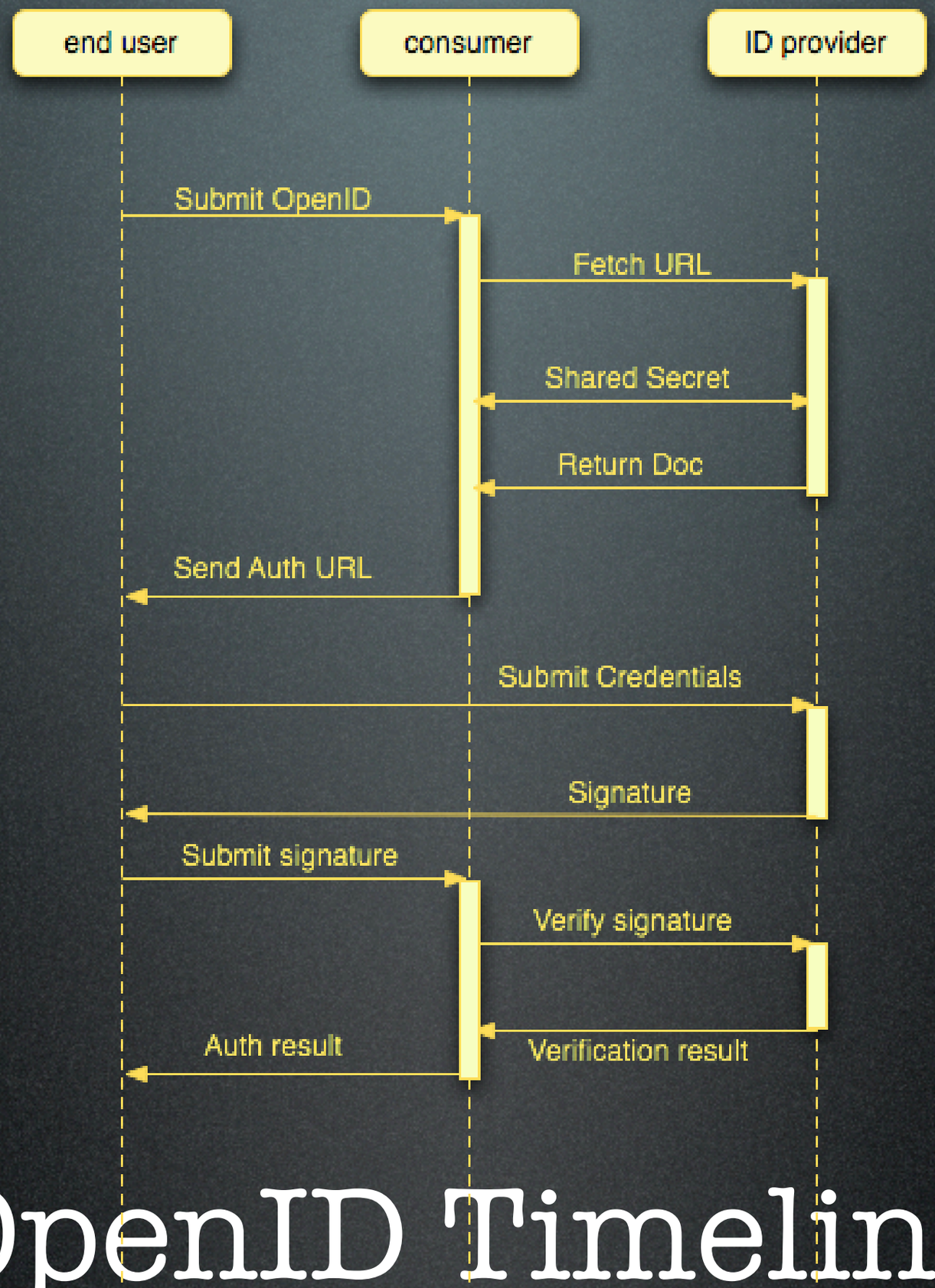

OpenID Timeline

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OpenID Demo

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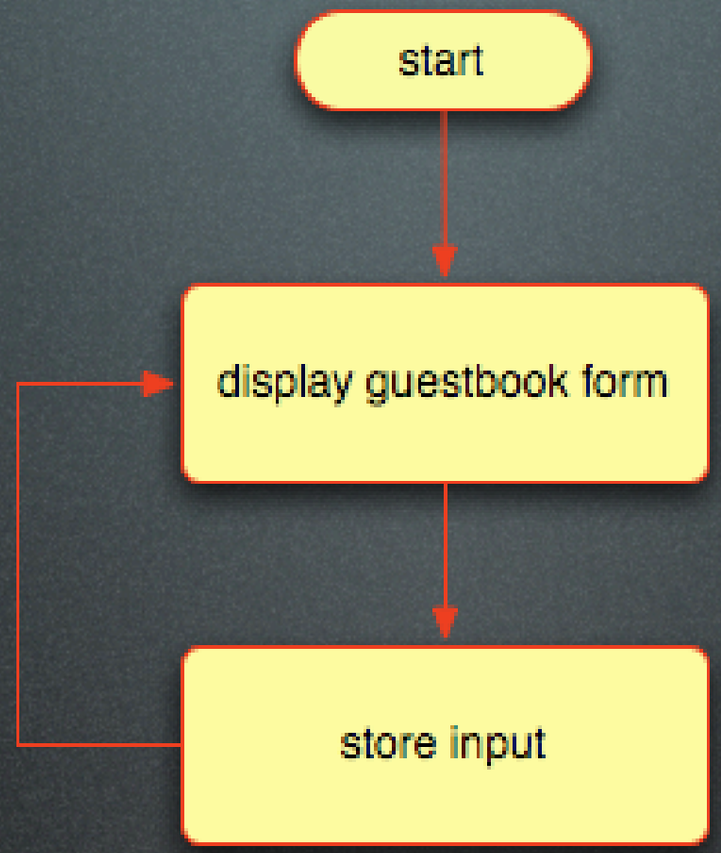
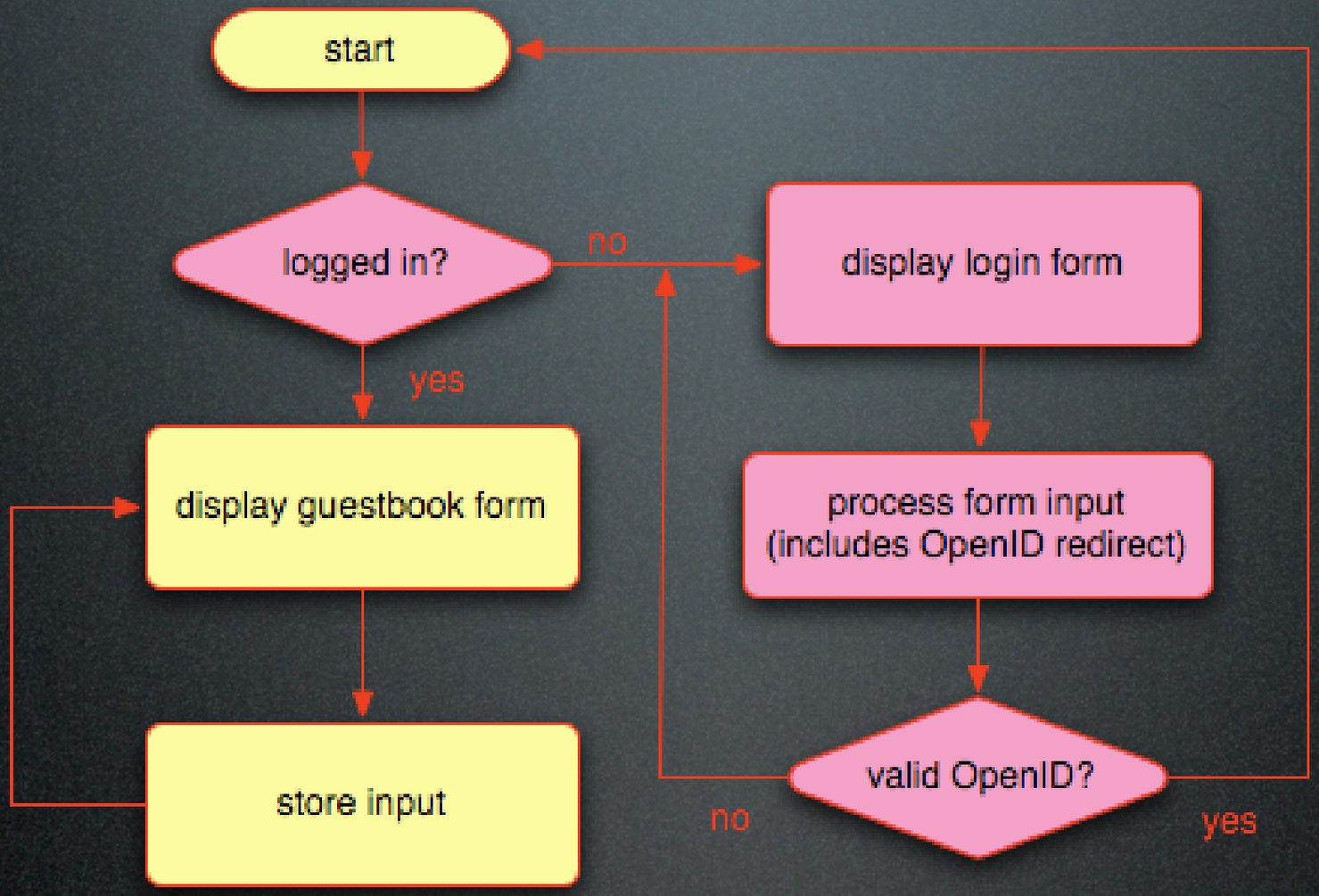
guestbook example: factoring out authentication

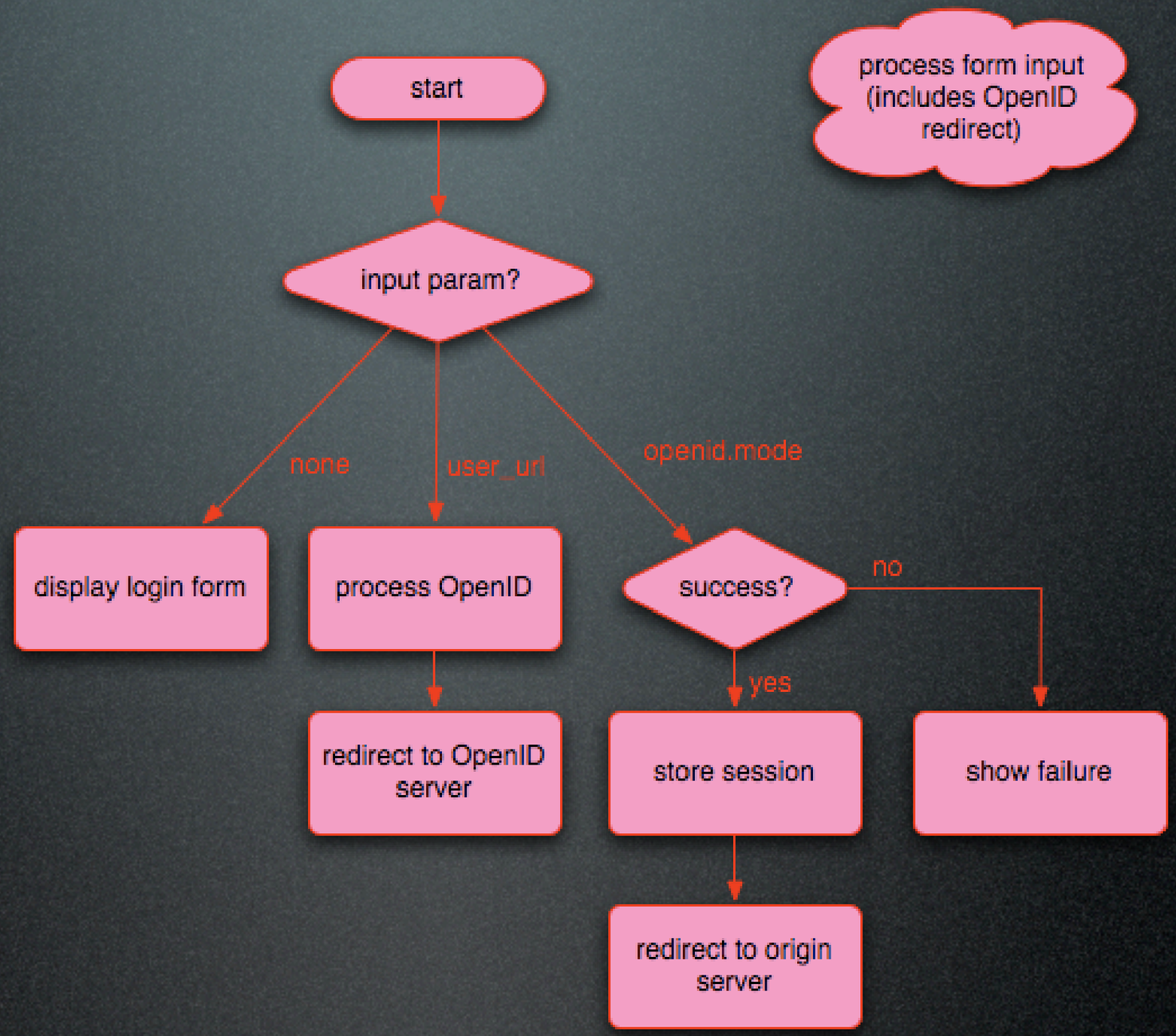
Simple Flow



Adding Authentication



More Detail


start
process form input (includes OpenID redirect)
input param?
none
user_url
openid.mode
display login form
process OpenID
success?
no
yes
redirect to OpenID server
store session
show failure
redirect to origin server

demo time

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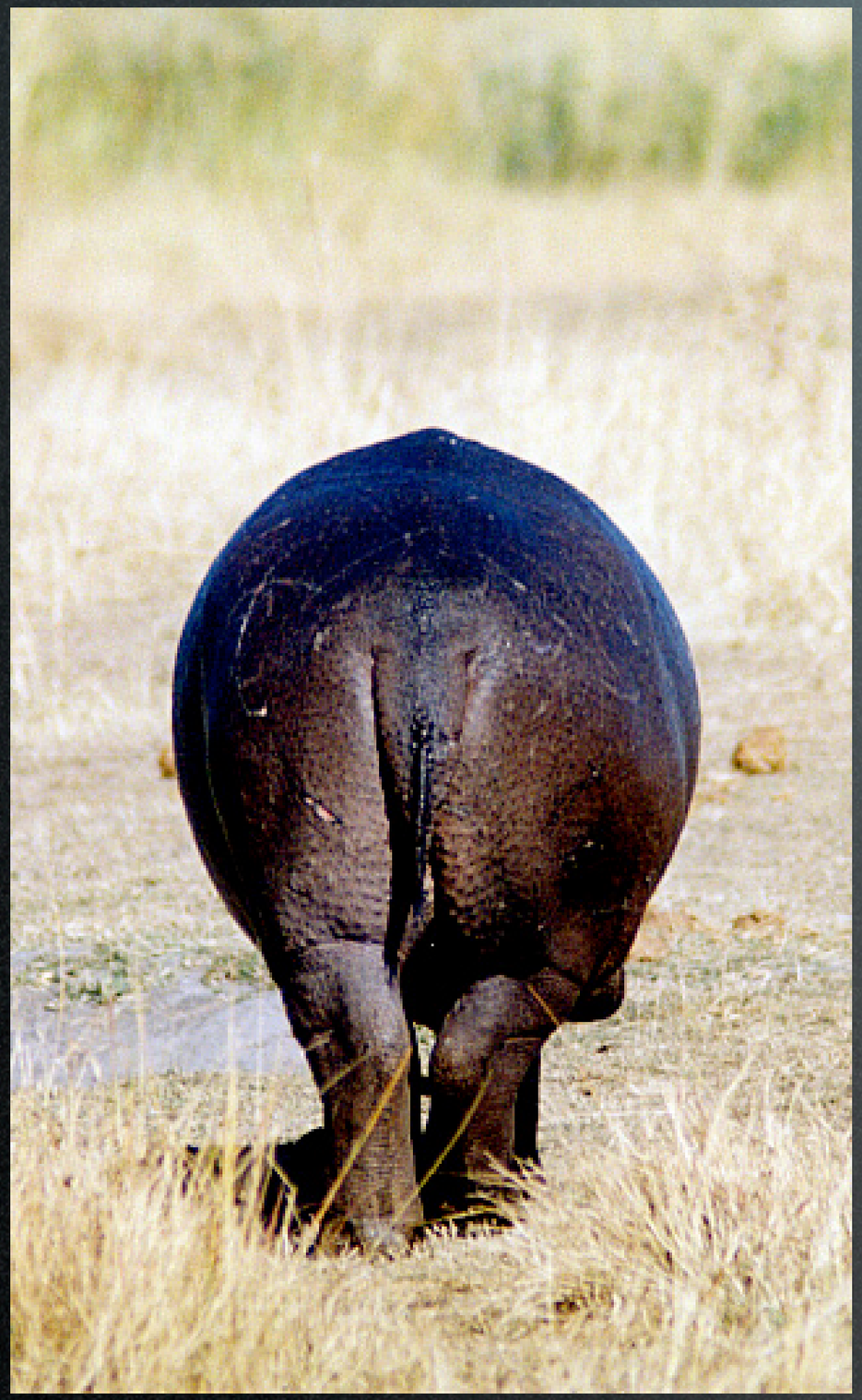

the end

Contact Information

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Questions?