

The Higgins Project: Understanding the Architecture and Use Cases

January 22, 2007





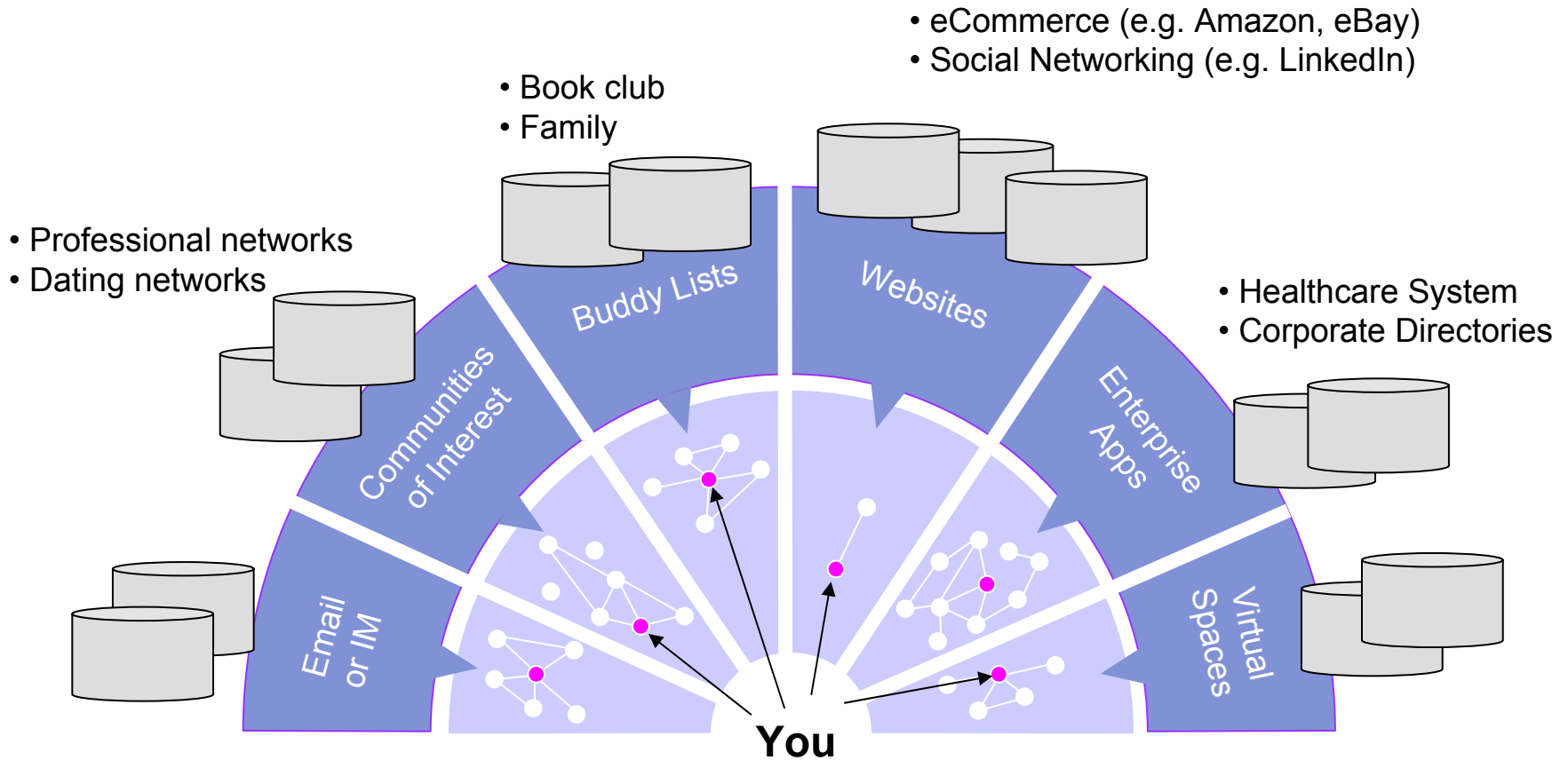
Higgins

1: a species of Tasmanian long-tailed mouse

2: the name of an open source project



Life On the Net Circa 2007





Home & Personal



- Child: *Sarah: born Jan 12 2001, Kindergarten, Heath School, friends: Lesley, Jacob, Tamara, Jesse*
- House: *123 Main street, Buena Vista, Colorado; Purchased 3/2005; GMAC Mortgage(owe:\$245,256)*
- Suppliers: *Jeremy's lawn service(303) 231-8899; Always Oil Delivery; Jim's Lawn Care;*
- Credit Card: *Capital One Visa: 4239-4876-3425-2980*
- Banking: *BofA: 9111-099-234-990 (\$1,222.98)*





Work

- Employer: *REI, 23 Chestnut Street, Buena Vista, CO 32040*
- Phone: *(303) 236-9981; Fax: (303) 236-9980*
- Employee: *#290-21; hired 5/4/2003; Salary: \$56,500; 2 weeks vacation; Blue Cross family medical; KeyCard: 23-09-23; permissions: level4; password: ******
- Email: *jjones@rei.com*
- *Top 100 Sales Club 2005; Manager: Fred Ferndale*





Alumnae

- University of Colorado
- Housing: *Harkness House*
- Graduated: *1995; BA Communication*
- Employer: *REI*
- Affiliations: *Varsity Softball 2003, 2004*





Healthcare

- HMO: *Blue Cross Blue Shield: Group Id #3236758-3*
- Primary: *Dr. James Levine*
- Physical: *O-neg, 149lb*
- Fitness: *Power Yoga, walk 5 miles/week*





Social

- Blog: <http://www.blogger.com/on-a-clear-day>
- Personal: *single, white, female, age 34; 148lb; 5'10"*
- Looking for: *friendship with opposite sex*
- Friends: *Rebecca, Samantha, Tamara, James...*



Travel

- Frequent Flier Programs

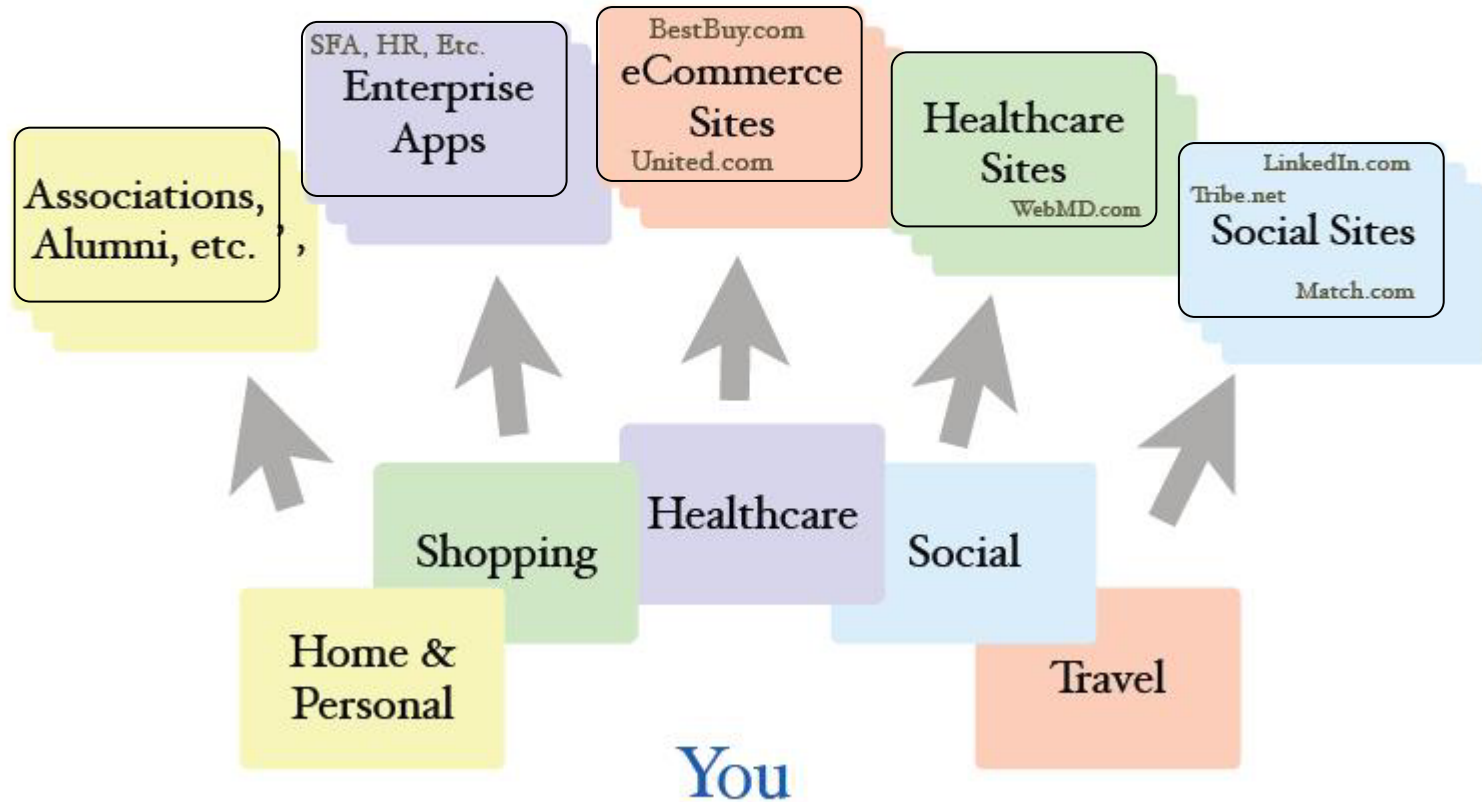
- United.com - *united.com, user id #00593045, password ****, window seat, 303-256-9976, emergency contact, Visa #4703-002-098-3988..., street, city, state, zip*
- American - *aa.com, user id #2038-334-430, password *****, window seat, no meal preference, 303-256-9976,...*

- Car Rental Programs

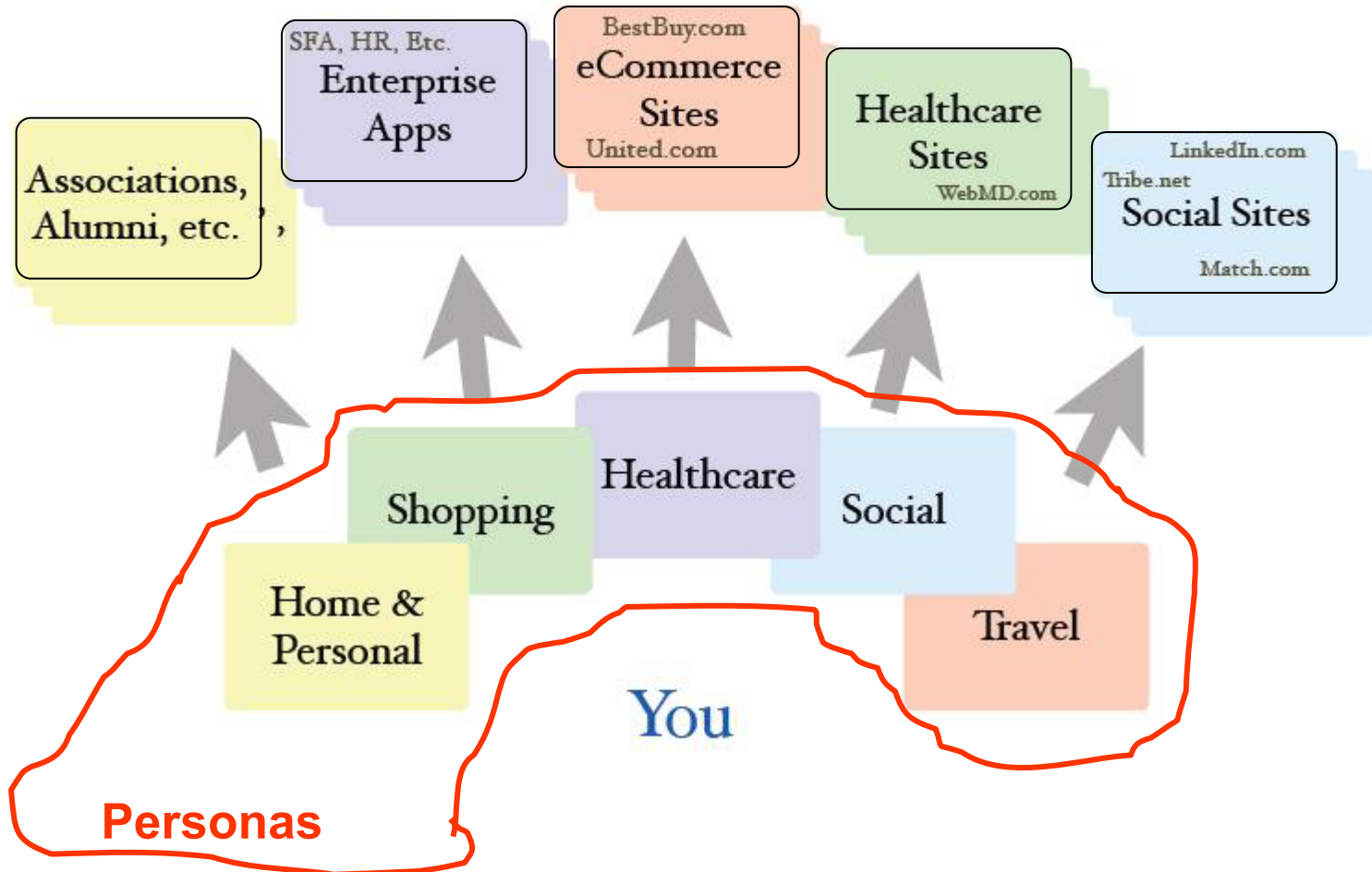
- *Avis: MyAvis profile: Country: USA, Avis Wizard Number: 234-523-783, personal itineraries, reservations, rental receipts, ...*



Multiple Identities with One Point of Control



Multiple Identities with One Point of Control



Card-based UI Metaphor



} Site-specific cards.
E.g. your relationship with BestBuy.com



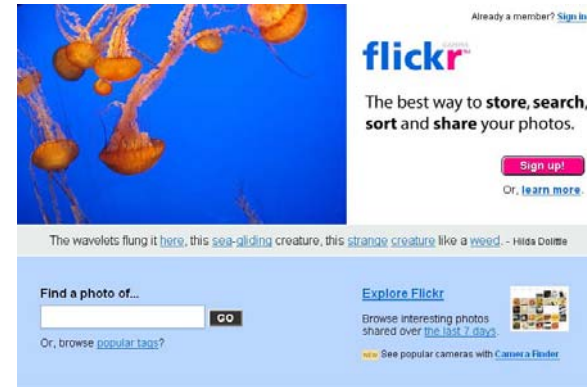
} Persona cards, for the roles you play





Relying Party





Browser Extension and Higgins Client

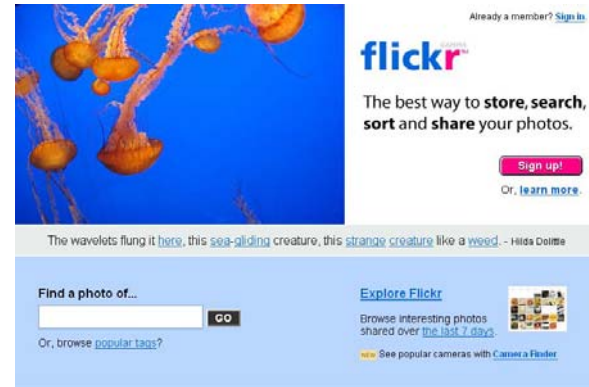




Browser Extension



Service

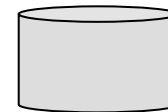
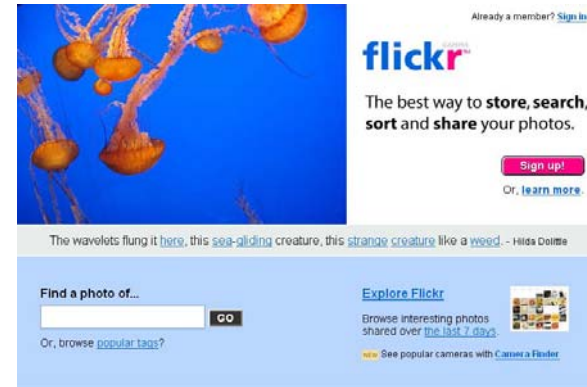




Browser Extension



Service



REI Employee



U of Colorado



Second Life

Data Sources (Token Services)

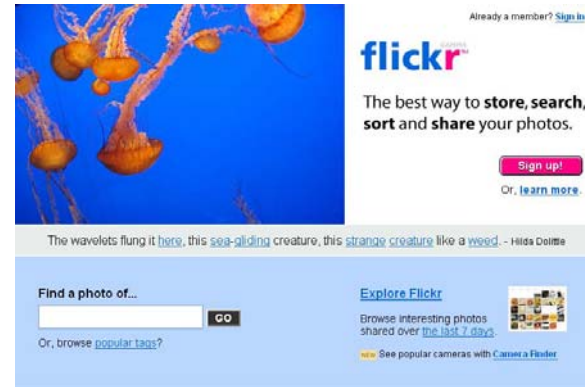




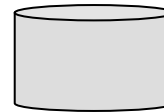
Browser Extension



Site



REI Employee



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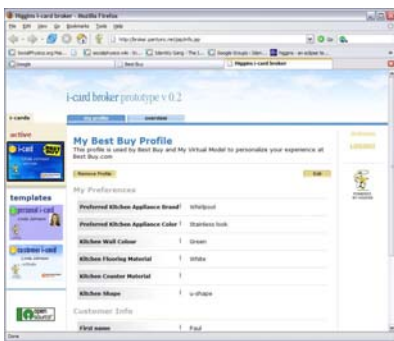


Second Life





Browser Extension



Site

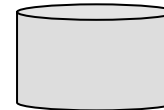
CardSpace

OpenID

CardSpace

LDAP

Liberty



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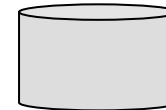
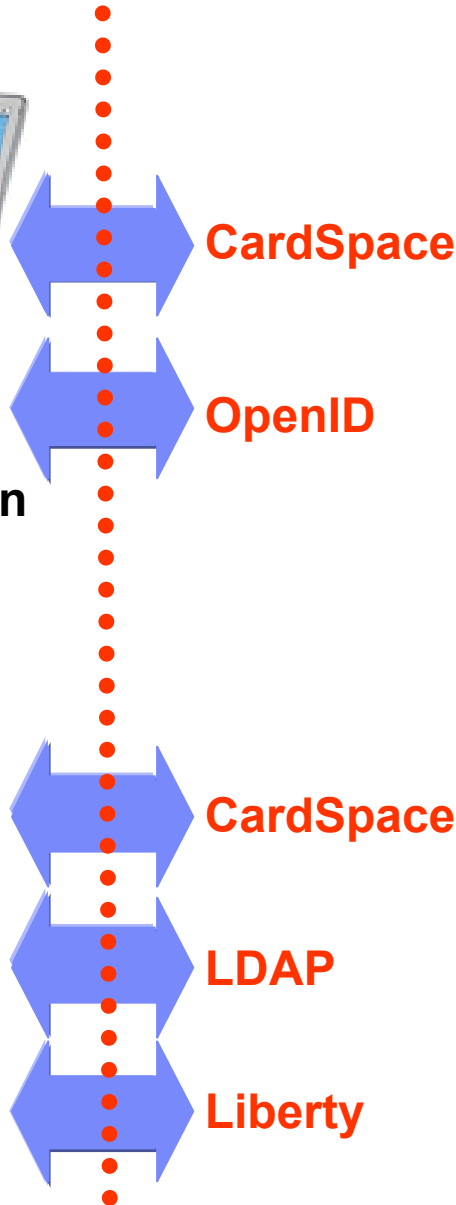
Second Life



Browser Extension



Site



REI Employee



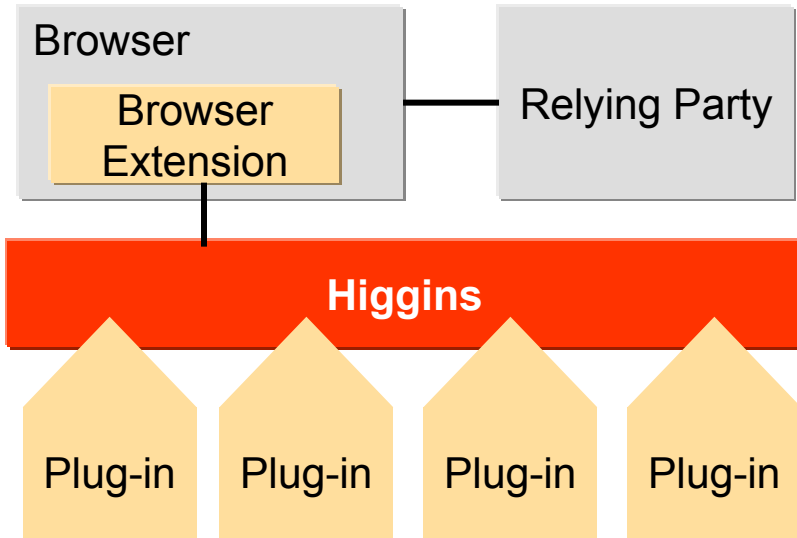
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Second Life

Interoperability Framework

1. Card-based UI Metaphor
2. Multiple Relying Party Protocols
3. Multiple Attribute Provider Protocols
4. Identity Data Model
5. Linux, OSX, Windows



RP Interaction Patterns:

CardSpace OpenID RSS HTML ...

Context/Attribute Providers:

LDAP RDF Liberty OpenID ...

Discovery:

XRI Yadis WS Addressing ...

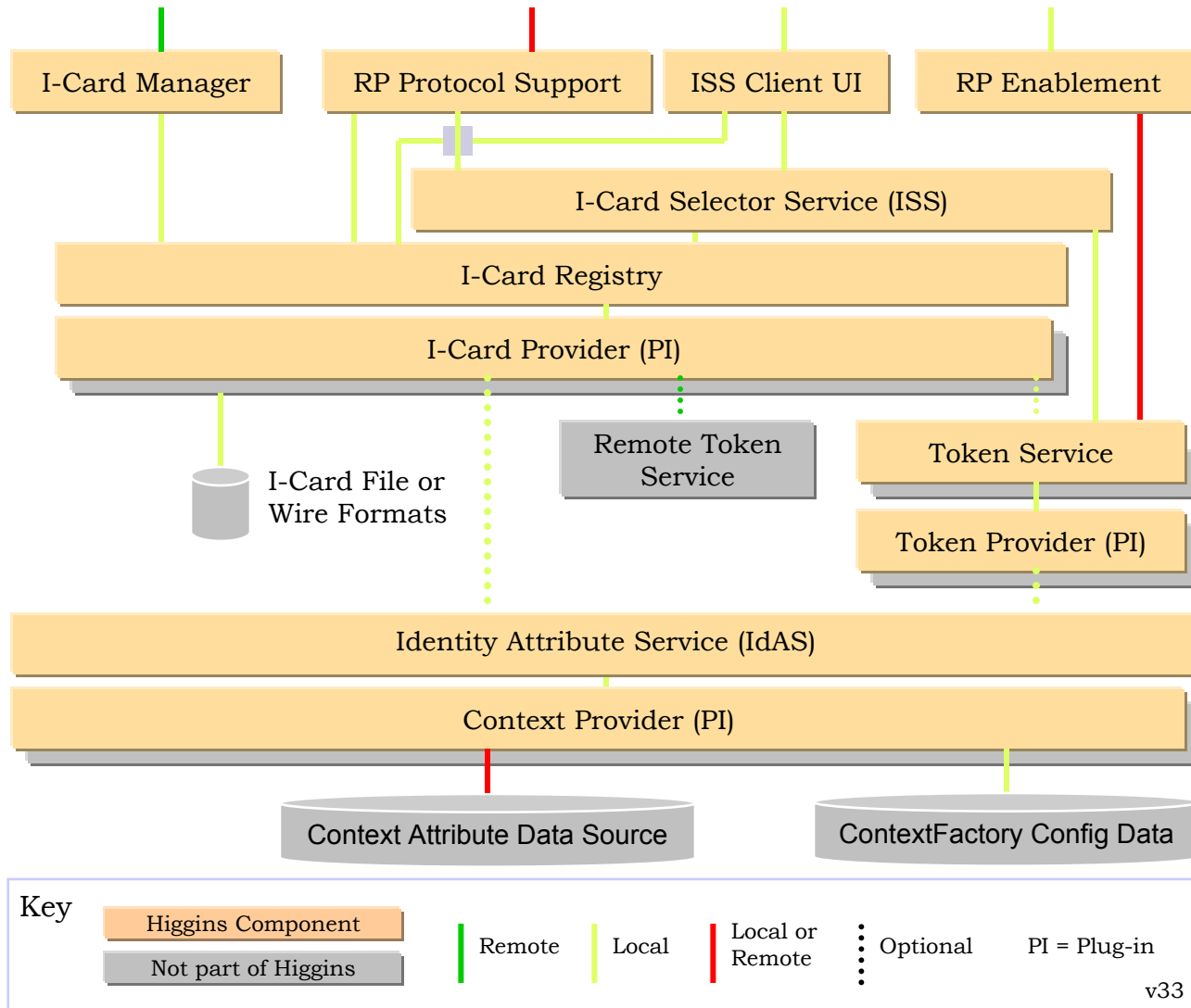


Higgins Scope

- Consistent user experience based on card icons
- Empower users with more control over personal information
- Provide an API and data model for the virtual integration of identity and security information
- Provide plug-in adapters to enable existing data sources
- Provide a social relationship data integration framework



Component Architecture



For Developers: Identity Tooling

- Identity management framework
- Saves developer from learning the details of multiple identity systems
- Only one API to learn
- Relies on plug-ins to support major protocols and technologies: CardSpace™, OpenID, RSS, XRI, LDAP, etc.



For End Users: Capabilities

User-centric authentication

- Provides a consistent user experience
- User picks from a selection of visual “i-cards”
- Privacy-enabled claims to share only what is needed (and protect private information)

Personal information “link & sync” services

- Remembers passwords, fills in forms
- Links and syncs your info across silos
- Gives you more control over your personal data



For End Users: Enabling Privacy

Manage private information

- Need to access consistent view of their data, metadata

Share and control access to private information

- Attach (privacy, access) policies at record (e.g. medical records) or attribute (e.g., salary) level

Present information on an “as needed” basis

- Transform attributes (e.g., bank balance = \$100k), to claims (e.g., bank balance > \$20K) as required
- Relying party only trusts the originating party (e.g. bank) and does not need to trust the transforming intermediary



For the Enterprise

- Integrate identity, profile, reputation, and relationship information across and among complex enterprises
- Create common interfaces to identity and networking systems
- Support advanced process automation by providing “data context”



For the Enterprise: Enabling Privacy

- Enterprise privacy policies
 - Necessary but not sufficient to enforce corporate policies through enterprise systems
- Meet scaling requirements
 - Empower users to control more of their private information
 - Empowering does not imply users can override all policies
- Consumer and employee satisfaction
- Ultimately privacy is about the user
- So let's give the user some control !



Use Case

- My credit card expiration date changed, so now I need to update it on all the websites I use



Use Case

- I'm writing a new application that is needs to
 - interact with a number of other systems, and
 - be implemented in enterprises with differing standards for security software...

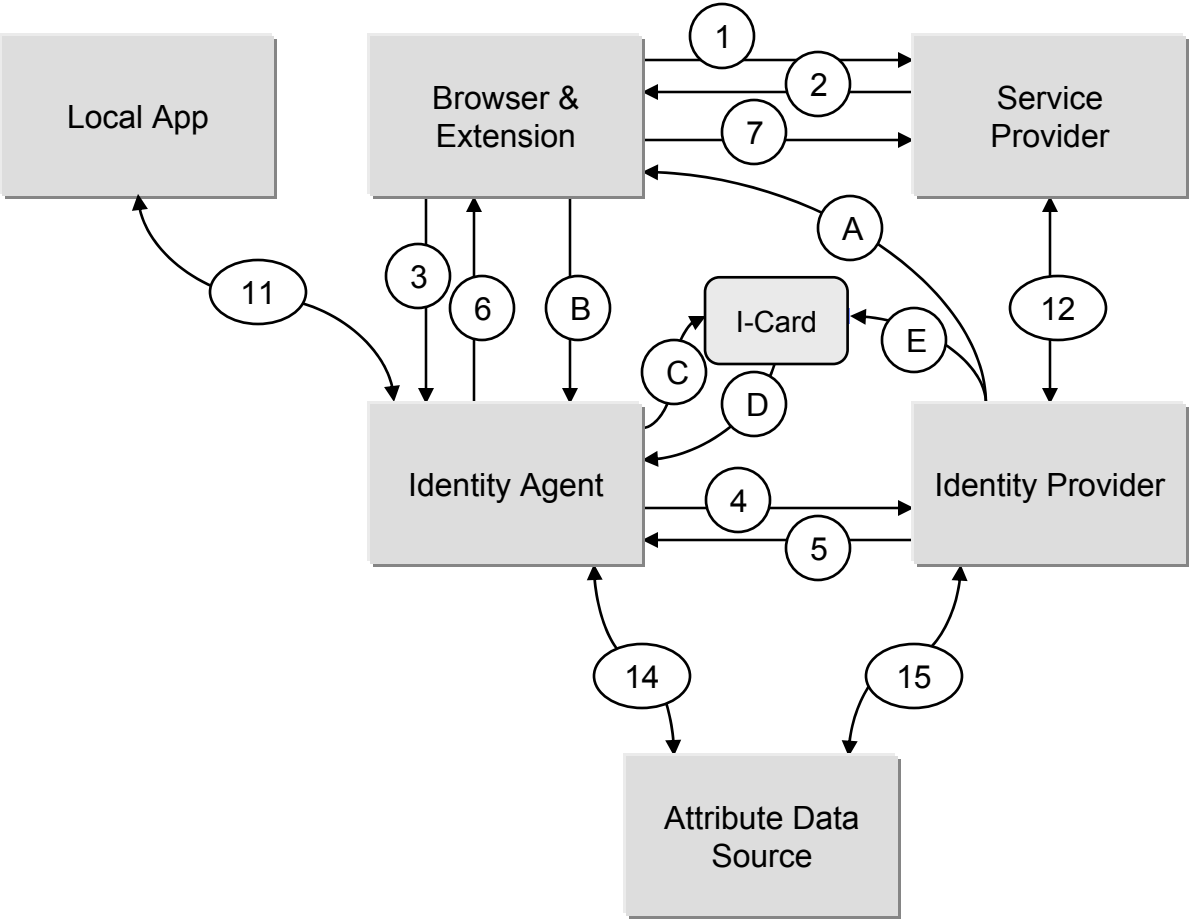


Use Case

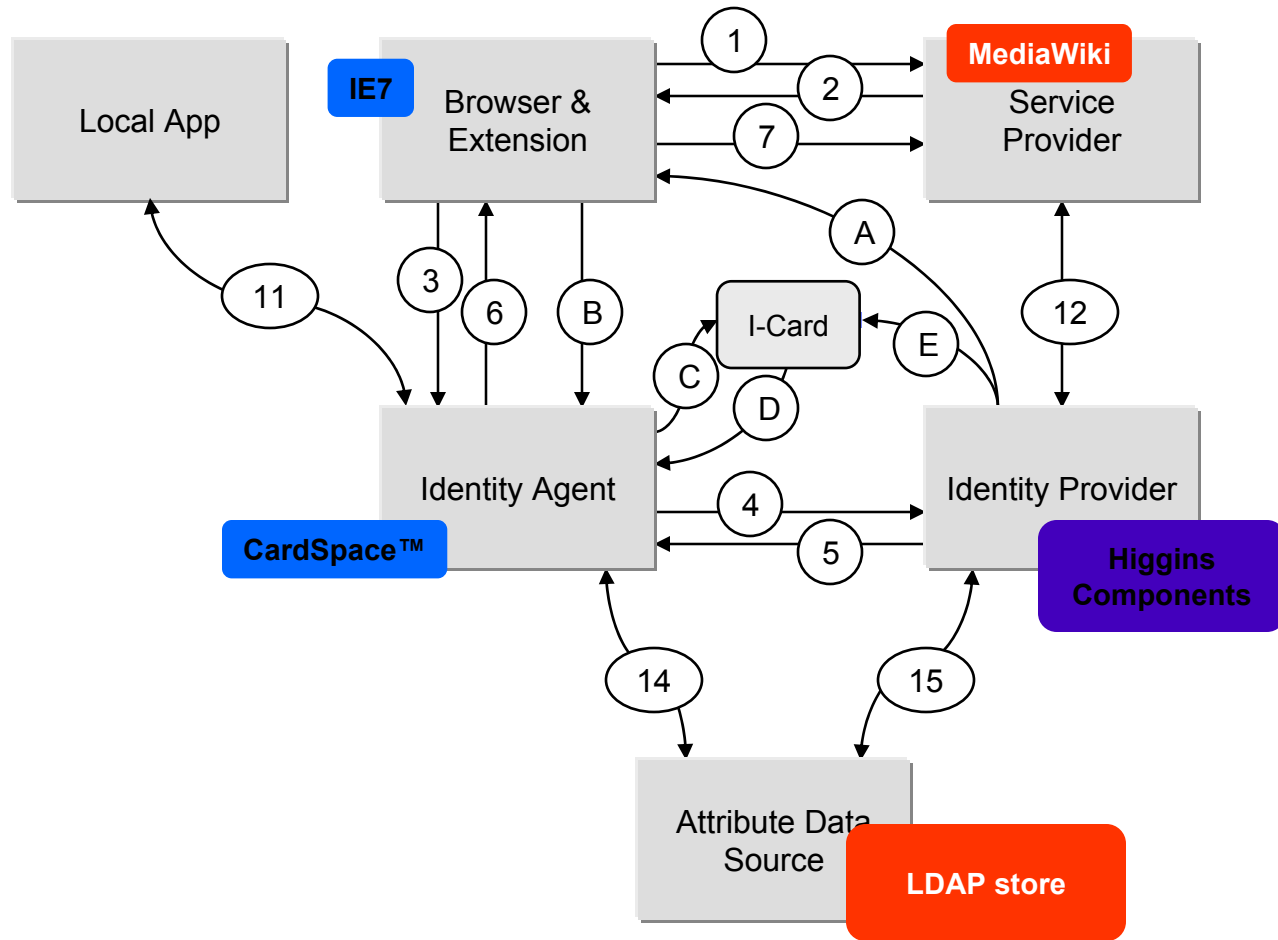
- I'd like to rent a car, and just provide proof that I have a valid driver's license and can pay without also providing my age and home address



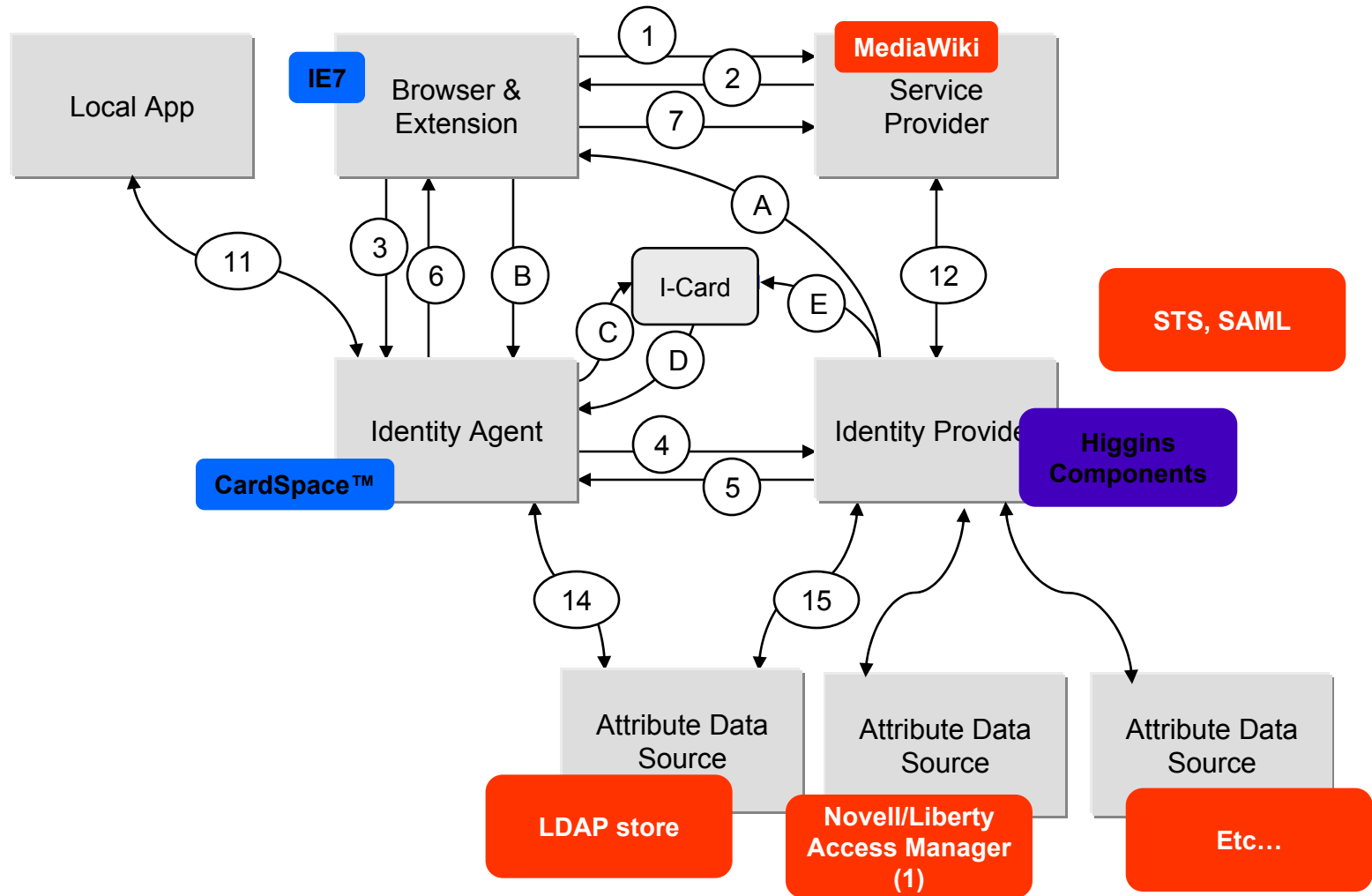
Base Interoperability Diagram



Interoperability Diagram v2



Interoperability Diagram v3



higgins is glue



higgins:

1: a species of Tasmanian long-tailed mouse

2: the name of an open source project

3: a kind of identity glue





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<http://eclipse.org/higgins>

