Interacting with the Web of Data through a Web of Inter-connected Lenses

Igor Popov, m.c. schraefel, Gianluca Correndo, Wendy Hall, and Nigel Shadbolt

Linked Data on the Web Workshop @ WWW

Lyon, France 2012
Outline

• A bit of motivation
• End-user access to Data
• Generic browsers vs. Custom made interfaces
• mashpoint: Concept + Demo
• Implementation
• Ongoing research challenges
Users interact with data on a daily basis
People experience data through apps

Data-powered applications are lenses for data that allow people to view, browse, and interact with data within a specific context.
Linked Data

From Tim Berners-Lee and Hans Rosling talks @ TED
Apps on the Web of Data

Linked Data: Evolving the Web into a Global Data Space, Tom Heath, Christian Bizer, 2011
RESULT: Links between information reflected only in the data, but not between applications. Applications are again isolated silos of data.

Consequence: Access to a Web of Data is lost in the application creation process.

From Tim Berners-Lee and Hans Rosling talks @ TED
Generic Browsers

- Directly through resolving it in the browser/use generic data browsers
- Indirectly by using applications built over Linked Data
- Level of configurability varies
Problems with generic browsers

- One size fits interface for all data on the Web using generic representations: table, graph visualisations etc.
- Data is often too complex and too granular for your average users to use
- Information overload a problem
- These tools may be good for some classes of users (e.g. data journalist or enthusiast that are not hard core computer geeks)
- Not so much for your typical everyday user accustomed to rich, customised interfaces of apps
Goal

1. How do we enable novel interactions by surfacing (to some degree) the richness of the links in the data on the application level?

2. How do we design this to make it usable for end-users? What are the interaction challenges we need to address?

3. How do we enable this such that it is a minimal effort to hook up data powered apps?
mashpoint: linking data-powered apps

• Basic idea: enable users to pivot with selections of the data between applications, thus enabling navigation

• Similar to a copy-paste clipboard, but data for applications on the Web
Example

Select or Filter items
Countries income per capita

Countries birth rate vs. death rate

Choose from applications that can take selected items as input

Pivot with selected items on selected application
Demo
Implementation

- Offer Data-centric features
- Use of URIs (Reconcile - we currently use Freebase URIs)
- Be able to select multiple resources
- Be able to represent multiple resources on input
Lightweight state capture

http://application.com/#?mashpoint=uri1

http://application.com/#?mashpoint=uri1,uri2
Architecture

1. Send URIs in current view
2. Receive apps that can represent URIs
3. Pivot to other apps
Interaction challenges

- Distributed and different applications used for data browsing as opposed to a single mashup application
- How well can multiple applications be used to solve complex data-intensive tasks (what are the potential problems in discovering the right application to pivot to?)
- Users jump from one application to another with a set of things - how do we design interfaces that convey complexities of operations over sets?
  - e.g. Pivoting between an app that shows data about all countries, to another which has data just about EU countries.
Potential Benefits and Incentives

• Social Contribution Factor
  • You’re Web app is useful by itself, by linking it you are making it more useful

• Low Barrier for Entry
  • Just use URIs, no RDF required!

• Incentives for Publishing and Linking
  • Show immediate value of reconciling your data
right now just a few simple apps...
what we would like to see is...
Thank you!

Questions?

Demo at http://mashpoint.net/

http://enakting.org/
contact e-mail: ip2g09@ecs.soton.ac.uk