Linked Widgets

- Extension of W3C standard web widgets with a semantic model
- Semantic lifting from arbitrary data sources
- Created and hosted by independent developers
Example: Data model of the POI search widget
Semantic Model: Use Cases

- Semantic Widget Search
- Terminal matching and validation
- Automatic mashup composition
- Tag-based mashup composition

Restaurant nearby Bank

http://dbpedia.org/resource/Bank
http://www.geonames.org/ontology#nearby
http://dbpedia.org/resource/Restaurant
Mashup execution models

- Persistent mashups
- Collaborative mashups
- Streaming mashups
- Distributed mashups

[Each execution result automatically includes a semantic provenance trail]
Distributed and collaborative mashup example

Ex: Combine and visualize sales data from three retail points of sale (POS)
Conclusions

- **LWP aims to**
  - make LD more accessible for general users
  - facilitate interactive integration and exploration
  - ease integration of LD with public and private data

- **Semantic background model has strong potential to**
  - facilitate end-user composition of data-driven applications
  - enhance usability (auto-validation, self-adapting UIs, auto composition..)
  - support exploration (guide users towards meaningful analyses, select appropriate visualizations,..)

- **To foster Linked Data adoption, we need to**
  - provide tools that **Link Open Data** (not just LD tools)
  - support ad-hoc integration of **public and private** data
Future Directions for LWP

- Various general extensions
  (generic widgets, simple process to create data widgets from open data, integration of transformation languages,..)

- Enterprise data integration platform
  [pending project proposal with a company partner]

- Data journalism
  [small-scale cooperation with derStandard]

- LWP for prototyping of cyber-physical social systems
  [pending proposal with Marta Sabou, WU, company partner]

- Natural language interface and mashup-driven QA
  [PhD project Peb Ruswono Aryan]
http://ldlab.ifs.tuwien.ac.at
(currently undergoing major redesign ;))

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References: Linked Data

Videos:
- Tim Berners-Lee: The next Web of open, linked data (16:52)
- Linked Data (and the Web of Data)
- Manu Sporny: What is Linked Data (12:09)
- Michael Hausenblas: Quick Linked Data Intro (3:14)
- Annenberg Networks Theory Seminar with Tim-Berners-Lee

Tutorial:
- Linda Project: Linked Data Primer

Articles:

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