An Interoperability Infrastructure for Distributed Feed Networks

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Structure of this talk

- Interoperability? What for?
- Blogging to Learn
- Technical Problems

- Feed & Interaction Standards
- Standard Compliance
- Shortcomings

- The Missing Link: FeedBack
- Examples & Usage Scenarios
- Future Work

Interoperability? What for?

“Interoperability is a property that emerges, when distinctive information systems (subsystems) cooperatively exchange data in such a way that they facilitate the successful accomplishment of an overarching task.”

(Wild & Sobernig, 2006)
Blogging to Learn (1)

- Blogosphere shows a bursty evolution (Kumar et al., 2003) in scale, community structures, and connectedness
- 57.5% of authors are pupils & students (Herring et al., 2004)
- 70.4% personal journals, clearly less for filtering & knowledge sharing
- Schmidt & Mayer (2007): k-loggers are workers, rarely pupils & students
- Key Motivations: community building and social networking (Nardi et al., 2005; Schiano et al., 2004)

Blogging to Learn (2)

- Notorious fragmentation of conversations
- Long response times
- Low number of links: only 51.2% of all blogs link to other blogs, only 53.7% to other websites, 30.5% not at all
- Low number of comments: 0.3 in average, majority none
- Multimodality puzzles: comments as comments, comment in own blog, ...
- Fuzziness of the audience
- Blogs often die when changing the social context (De Moor & Efimova, 2004; Herring et al., 2004; Krause, 2004; Gurzick & Lutters, 2006)

Technical Problems

- Ultimate holisticaity: not an isolated problem
- Limited control: packaged software ...
- Standards fragmentation: lacking support, productive standards, ...
- Lack of shared meaning: XML but ...
- Speed of change: maintaining is difficult …
Feed Standards

- Date back as early as 1995
- 11 different standards in 30 versions (Wittenbrink, 2005)
- Today: mainly three in use:
  - RSS 1.0, RSS 2, ATOM
  - RSS 1.0: based on RDF (Swartz, 2000)
  - RSS 2: nearly XML (Winer, 1999)
  - ATOM: XML, namespaces (Nottingham & Sayre, 2007)
- Similar expressiveness
- Additionally: OPML for blogrolls (Winer, 2000)

Interaction Standards

Standard Compliance
**Shortcomings**

- Lack of support for interaction standards
- No support for active networking & networked collaboration

**The Missing Link: FeedBack**

1. OFFER
2. REQUEST update notifications
3. NOTIFY

=> "Buffered Push"

**Example: WordPress (1)**

![WordPress Example Image]
Example: iLogue

Advertise your blog with Feedback, syndicate via RSS, then reflect on your learning process!

Other Usage Scenarios

- Simple Feed Management:
  FeedBack

- Rip, Mix, and Feed:
  FeedBack + Filtering + Aggregation

- Group Blog:
  Aggregation + FeedBack

- Learning Contract Tool:
  FeedBack + Reflecting + Aggregation

Future Work

- Study interaction behaviour with a trial