Prototyping Open Hypermedia Extension on LivingOM

IomScope and IomMirror

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A hypermedia system to support collaboration in a community

- to develop a common languages (Concepts)

- to share documents and links
  - automatically insert links to concept’s definition into artifacts in repository
Sounds great. What’s problem?

- Collaborative works of a community
  - does not be completed just by the community,
  - but also involves activities and artifacts by other groups.

- How to make external artifacts easier to understand for US?

- How to make OUR artifacts easier to understand for outsiders?
How?

Two prototypes:

- **lomScope**
  - proxy server with hypermedia functionality for insiders

- **lomMirror**
  - proxy object on a community’s server for both insiders and outsiders
What’s difference?

lomScope
- proxy server for single user
- adaptive to user
  - develops user model by watching words in HTML documents

lomMirror
- proxies a subtree under remote webserver
- shared by a community
- proxies OUR website
  - to make our artifacts easier to understand for outsiders
- proxies THEIR website
  - to make relationship to our interests easier to find out
lomScope

World Wide Web

1. read concepts

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4. HTTP request

5. build histogram

3. HTTP request

6. update

Browser

2. supply url

7. autoLink

Concepts

User Model
1. supply url

2. HTTP request

3. HTTP request

4. autoLink

5. replace URLs for local references

World Wide Web

WWW-1

WWW-2

WWW-n

LivingOM

lomMirror

Browser
Problems

Technical Difficulties

- Processing HTTP is complicated because...
  - different server can react differently to a same request.
  - different clients can make different request.

- Processing HTML is complicated because...
  - Many documents is not conformative to the strict standard.
  - Different versions of standards are used.
  - Each HTML standards is big, especially newer ones.

- Network connection is often unstable
  - sometimes stucks
  - servers and clients can disconnect connections
Future Words

- More use of user model
- Community model
- More collaboration with LivingOM