

Topincs

Robert Cerny

Topincs

Topic Maps, HTTP and JSON

Outline

- Motivation
- Architecture
- Topincs Demo
- Outlook

Motivation

»What for?«

In the beginning

- Software to take notes
- Accessible from anywhere (Home, Office, Mobile phone)
- Meaning not burried in natural language
- Accessible by other software

Topincs

- Topic map editor
- Client-Server application
- Server: Apache, MySQL and PHP (AMP)
- Server runs on Windows, Mac OS X, Linux
- Client: JavaScript, XMLHttpRequest
- Client runs on Firefox and Opera 9
- Knowledge stores for individuals or groups

Vision

- A new web on the web
- The new web is a semantic web
- The new web is a topic map

How?

- Exposing item identifiers as URLs
- Links will become resources (Associations)

Motivation

» *What for?* «

- An application to take notes (TopicNotes)
- Can be used for collaborative knowledge creation
- Applications, semantic wiki, CMS
- **A** semantic web

Architecture

»How does it work?«

Stores

- A store is set of topic maps that a group of users work upon in collaboration
- A store has a URL <http://www.topincs.com/tmra/2006/>
- The URL landscape under the store

TMDM

- Topincs uses the TMDM
- Type-instance and subtype-supertype are mirrored in the database

JSON

- JavaScript Object Notation (JSON)
- Douglas Crockford: »The fat-free alternative to XML«
- Better content-markup ratio than XML
- Clients can specify what they want (REST)
- Parsing on browser is just evaluation
- Object augmentation

JTM

- JSON Topic Maps (JTM)
- Current version 1.0
- Based upon the TMDM (XTM 2.0)
- Example
- Coming soon: Specification

REST and the WWW

- Representational State Transfer
- Architectural style guiding the development of the WWW
- Roy Fielding (HTTP, Apache httpd) and his dissertation
- URI, HTTP and HTML
- Representations (HTML, XML, JSON)
- Scalabilty
- Stateless server

Stores

- A store is set of topic maps that a group of users work upon
- A store has a URL <http://www.topincs.com/tmra/2006/>

Architecture

»How does it work?«

- TMDM to express (almost) anything
- REST guiding API design and client-server
- JSON for small messages and easy parsing

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Topincs Demo

»Show me!«

Topincs Demo

»*Show me!*«

- Client-Server: Topincs Editor and Topincs Server
- Application within a web page
- Supports XTM 1.0, XTM 2.0, JTM 1.0 and XHTML

Outlook

»*What comes next?*«

Outlook

» *What comes next?* «

- Specification of JTM and the Topincs HTTP API
- Editing the topic additionally to an Editor for topic maps
- XHTML views based on the topic type
- Improving the Topincs Editor
- Documents
- Revision history

<http://www.topincs.com/yourname/>

- Personal stores for free
- <mailto:robert@cerny-online.com>
- <http://www.cerny-online.com/topincs/>

Group stores

- <http://www.topincs.org/emacs/>
- <http://www.topincs.org/http/>
- <http://www.topincs.org/javascript/>
- <http://www.topincs.org/programming/>
- <http://www.topincs.org/rest/>
- <http://www.topincs.org/topicmaps/>

Vision of the group stores

- Best content on the web in the domain
- Collaborative content creation
- Starting with Topic Mappers, then drawing in domain experts