Transitioning to a Semantic Collaboration Environment

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Ontolog Wiki Today

- ## Based on PurpleWiki

  - Collaborative work environment

  - Fine-grained access to wiki content

  - Transclusion (inclusion by reference)

- ## Large amount of content that is highly linked

- ## No support for semantics or ontologies

- ## Slightly dated wiki engine

  - Reaching limit of its scalability

Ontolog Wiki Wishlist

- Better collaborative work platform
  - More popular
  - Actively supported
- Semantics
- Ontologies
- Fine-grained access
- Transclusion
- Migration of existing content
- Extendability

Ontolog Wiki ➤ Ontolog PSMW

- **Collaborative work platform: MediaWiki**

    - Most popular wiki software (e.g., Wikipedia)

    - Very actively supported

- **Semantics: Semantic MediaWiki**

    - Most popular semantic wiki platform

- **Ontologies: Template/Form based**

- **Access and Transclusion:**

    - Coarse granularity supported by MediaWiki

    - Fine granularity supported by Purple numbers

- **Migration of existing content done by Tejas Parikh**

- **Extendability: Growing list of SMW plugins**

Purple Semantic MediaWiki (PSMW)

- A bundle of MediaWiki plugins that support semantic and fine-grained access.

- Semantics using RDF triples

  - Yaron Koren will give more details.

- Ontologies can be mapped to SMW

  - Uses templates and forms

- PSMW Home Page: PSMW Project

Transitioning to PSMW

- Purple numbers are hierarchical
  - Do not appear when one is editing a page
  - Can hide purple numbers
  - Hidden purple numbers reappear during mouse-over
- Table of Contents entries
  - Can be used for links if one avoids symbols
  - Mimics the purple numbers of the current Ontolog Wiki
- Transclusion
  - Inclusion of page or part of a page by reference
  - Use either purple numbers or table of contents entries
  - Can be the current version or a specified version of the part of the page being transcluded
- Semantics will be covered by Yaron Koren.

ConferenceCall 2012 12 19

OntologPSMW: Début, Tutorial and Possibilities - Thu 2012-12-19   (3JJP)

Invited Speakers: **KenBaclawski** (Northeastern U) & **YaronKoren** (WikiWorks)   (3JJQ)

Topic: **OntologPSMW: Debut, Tutorial and Possibilities**   (3JJV)

Session Chair: **PeterYim** (Ontolog, CIM3)   (3JJU)

Briefings: (3JY3)

- Professor **KenBaclawski** (Northeastern U) - "**The Ontolog wiki: from PurpleWiki (pw) to Purple SemanticMediaWiki (psmw)**" [slides]   (3JY4)
- Mr. **YaronKoren** (WikiWorks) - "**Working with MediaWiki and SemanticMediaWiki**" [slides]   (3JY5)

Archives: (3JY6)

- **Abstract**   (3JY7)
- **Agenda**   (3JY8)
- **Prepared presentation material (slides)** can be accessed by clicking on each of the title links below: (3JY9)
    - [[0-Chair]] . [[1-Baclawski]] . [[2-Koren]]   (3JYA)
- **[Audio recording of the session]** ... (coming) ... [_ :_ _ :_ _ ; mp3 ; _ _ _   MB]   (3JYB)
    - its best that you listen to the session while having the respective presentations (linked above) opened in front of you. You'll be prompted to advance slides by the speaker.   (3JYC)
- **transcript of the online chat** during the session ... (coming)   (3JYD)
- **Additional Resources**   (3JYE)

Conference Call Details   (3JYF)

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MeetingsCalls

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Wiki Search

http://ontolog.cim3.net/cgi-bin/wiki.pl?ConferenceCall_2012_12_19

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Editing ConferenceCall 2012 12 19

KennethBaclawski (preferences | logout)

```
= OntologPSMW: Début, Tutorial and Possibilities - Thu 2012-12-19 {nid 3JJP} =

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[http://ontolog.cim3.net/file/work/OntologPSMW/2012-12-19_Debut-Tutorial/ Archives:]
{nid 3JY6}

* '''[http://ontolog.cim3.net/cgi-bin/wiki.pl?ConferenceCall_2012_12_19#nid3JZL
Abstract]''' {nid 3JY7}
* '''[http://ontolog.cim3.net/cgi-bin/wiki.pl?ConferenceCall_2012_12_19#nid3JZT
Agenda]''' {nid 3JY8}
* '''Prepared presentation material (slides)''' can be accessed by clicking on each of
the [http://ontolog.cim3.net/file/work/OntologPSMW/2012-12-19_Debut-Tutorial/ title
links] below: {nid 3JY9}
```

Your Visited Pages

ConferenceCall 2012 12 19
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MeetingsCalls

Wiki Search

Summarize changes:

Save (Your user name is KennethBaclawski.) Preview

http://ontolog.cim3.net/cgi-bin/wiki.pl?action=edit&id=ConferenceCall_2012_12_19

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Page Discussion

Read Edit View history

Go Search

ConferenceCall 2012 12 19

[hide purple numbers]

OntologPSMW: Debut, Tutorial and Possibilities - Thu 2012-12-19   (1)   [edit]

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Topic: **OntologPSMW: Debut, Tutorial and Possibilities**   (1B)

Session Chair: **PeterYim** (Ontolog, CIM3)   (1C)

Briefings: (1D)

- **Professor KenBaclawski** (Northeastern U) - "**The Ontolog wiki: from PurpleWiki (pw) to Purple SemanticMediaWiki (psmw)**" [slides]   (1E)
- Mr. **YaronKoren** (WikiWorks) - "**Working with MediaWiki and SemanticMediaWiki**" [slides]   (1F)

http://ontolog-02.cim3.net/wiki/ConferenceCall_2012_12_19

Sidebar

Main page
Community portal
Current events
Recent changes
Random page
Help

Toolbox
What links here
Related changes
Upload file
Special pages
Printable version
Permanent link
Browse properties

Page Discussion   Read Edit View history   [   ] Go Search

Editing ConferenceCall 2012 12 19

Main page
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[http://ontolog.cim3.net/file/work/OntologPSMW/2012-12-19_Debut-Tutorial/ Archives:]

* '''[[ConferenceCall_2012_12_19|Abstract]]'''
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```

http://ontolog-02.cim3.net/w/index.php?title=ConferenceCall_2012_12_19&action=edit

Contributions, Issues, Suggestions...

- Demos, Prototypes and Examples:
  http://ontolog-02.cim3.net/wiki/Demos_Prototypes_Examples

- Migration Issues, Bugs and Suggestions:
  http://ontolog-02.cim3.net/wiki/Issues_Bugs_Suggestions

- Ontolog PSMW Statistics:
  http://ontolog-02.cim3.net/wiki/Special:Statistics

Mapping Ontologies to PSMW

- Classes map to Categories

- Properties of a category are specified with Templates

- Forms use one or more templates for data entry and display

- Applications use queries, including SPARQL

- Initial ontology is OASIS ICOM

- Yaron Koren will give more details about SMW.

Mapping Ontologies to PSMW

- The example is the AccessControlList class:

  - The accessControlEntry property is a set of AccessControlEntry objects

  - The object property is an Entity object.

  - Style information was omitted for clarity.

Template:AccessControlList

```
{|-
! accessControlEntry
|  {{#arraymap:{{{AccessControlEntry|}}}|,|x|[[AccessControlEntry::x]]}}
|-
! object
|  [[Entity::{{{Entity|}}}]]
|}
```

Form and Category Pages

Form:AccessControlList

```
{{{for template|AccessControlList}}}
{| class="formtable"
! accessControlEntry:
| {{{field|AccessControlEntry}}}
|-
! object:
| {{{field|Entity}}}
|}
{{{end template}}}
```

Category:AccessControlList

```
An access control list (ACL) is an object attached to an entity
to specify a list of permissions to access the entity.

[[Create a new access control list::AccessControlList]]
```

Data Entry Form of a Class

Example Application: PSMW Calendar

- Based on the OASIS Integrated Collaboration Object Model for Interoperable Collaboration Services (ICOM)

- For documentation and a demo of the PSMW Calendar see: PSMW Calendar

Read | Edit | View history ▾ [ ] Go | Search

PSMW Calendar

Sparql query:

```
{{#ask:
  [[Category:Occurrence]]
  [[StartDate::>Oct 01 2012]]
  |? StartDate
  |format=calendar
}}
```

October 2012   ◄ **Today** ►

October ⇕ 2012

Go to month

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22 PSMW Special call 2012 10 22	23 PSMW meeting call 2012 10 23	24	25	26	27
28	29	30	31	1	2	3

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Acknowledgements

- **Semantic MediaWiki**

    Markus Krötzsch, Denny Vrandečić, Rudi Studer at Institute AIFB, Karlsruhe

- **SMW Extensions**

    Yaron Koren, Jeroen De Dauw, et al.

- **The PSMW Team**

    Ken Baclawski, Tejas Parikh, Sumit Purohit, Viral Gupta, Yuwang Yin, Eric Chan, Jonathan Cheyer and Peter Yim

- **PurpleWiki to PSMW Migration**

    Tejas Parikh

- **PSMW Calendar**

    Yuwang Yin and Ken Baclawski

- **Other contributors**

    Anushri Mishra, Jie Bao, Niranjan Manjunath, Naveen BabuEde, Sam Jenkins, Jesse Wang, Chinmay Sawaji, Hai Yu, Jack Park

Purple Numbers Links and Citations

- Doug Engelbart's oNLine System (NLS) in 1968: "Mother of All Demos"
- "Precision browsing" added in the mid-1990s by Christina Engelbart
  - "Statement numbers" are now called "Purple Numbers" because of their color.
- Frode Hegland introduced link information and made purple numbers active elements in 2000.
- EugeneKim and ChrisDent developed PurpleWiki in 200

- PSMW: K. Baclawski, T. Parikh, V. Gupta, P. Yim and J. Cheyer. Fine-Grained Access to Online Content for Virtual Communities. *Intern. J. Knowledge, Culture and Change Management* **9**(12):109-126. (2010) [pdf]

- PSMW Home Page: PSMW Project

- Background/History: http://community.cim3.net/cgi-bin/wiki.pl?PurpleNumbers

Commemorating:

A 40th Anniversary Celebration

December 9, 2008 ▪ 1:00 PM to 5:30 PM ▪ Stanford University Memorial Auditorium

They call it the "mother of all demos".

On December 9, 1968, Douglas Engelbart and his team at Stanford Research Institute staged the first public demonstration of the computer mouse, hypertext, real-time text editing, and much more.

It changed what is possible. The 1968 demo foresaw many of the technologies we use today, from personal computing to social networking.

Join us on December 9 to hear original participants and others recount what led up to the 1968 demo and its impact—which no one could have imagined at the time.

Featuring:

Daniel Borel (Logitech)

Christina Engelbart (Doug Engelbart Institute)

Doug Engelbart (Doug Engelbart Institute)

Chuck House (Media X at Stanford University)

Alan Kay (Viewpoints Research Institute)

John Markoff (*The New York Times*)

Bob Sproull (Sun Microsystems)

Robert Taylor (formerly ARPA)

Andy van Dam (Brown University)

1968 demo participants **Don Andrews, Bill English, Bill Paxton, Jeff Rulifson**

www.sri.com/engelbart-event.html