

Semantic Wiki in Environmental Project Management

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Common user, Environmental tools

- **Common applications**

- No semantics, tagging?
- Heterogenous Data
- Low adaptability

- **Tools requirements**

- Collaborative creation
- Social communication
- Specialization on data
 - Accessibility
 - Reusability
 - Repurposability

Wikis, Data Issues

- **Colaborative environment**
 - Semistructured data like:
 - Projects' metadata
 - Users, events, meeting notes
 - Timetables, etc.
- **Broad usage, alternative implementations**
 - Low-cost maintenance
 - Low requirements
- **Easy authoring vs. (semi)structured data?**
 - Wiki-tagging
 - Macro-APIs

Broader context of project management

- **Collaboration, broader activity**

- Project management and presenting is vital
- Usage of general technologies
 - SVN, Wiki, SSO...
- Open Source, open architecture (plugins)

- **Deep Thought**

- Trac system fork
- Bug tracking, wiki, issue reportings
- Internationalization, multiple projects
- Python component architecture
 - Plugins, macros

Wikis and semantics

- **Semantic Implementations**

- Ace wiki, KiWi
- *KnowWE*
- OntoWiki, Semantic MediaWiki, TaOPis, Wikidsmart

- **Requirements**

- Accessing the repository
- Semistructural data storage
- Easy data annotation
- Complex semantic queries
 - With easy wrapper GUI

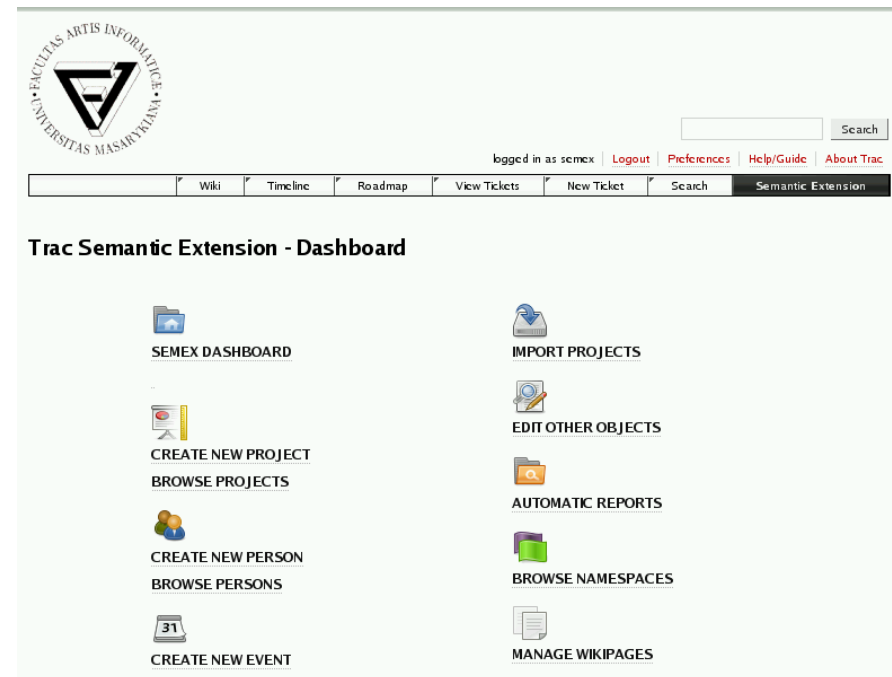
Semex

- **Ontologic concept annotation in wiki**

- Sesame 2 repository frontend, Python-based
- Deep Thought (and Trac) system plugin
 - administration
- Deep Thought Wiki macros
 - Visualization and authoring

- **Authoring**

- Project environment creation
- User-centered wizards
 - Form-based interface
- Wiki macros definition



Project management semantics

- **Linked data imperative**

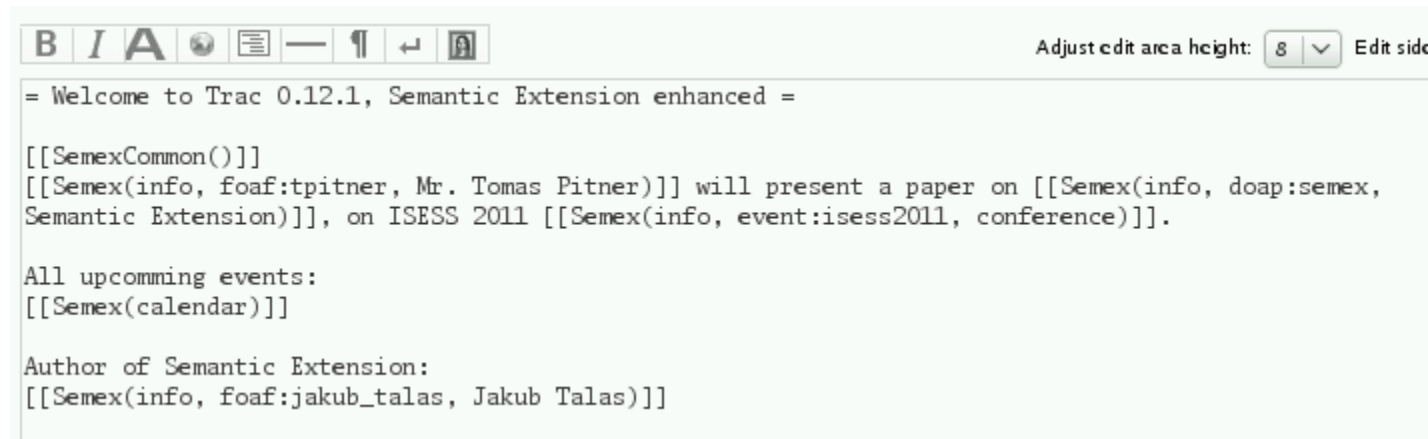
- Set of well defined specialized ontologies – identify!
- Cooperative description of the semantics

- **Ontologies:**

- FOAF (persons)
- DOAP (projects)
- DC (documents)
- WIKI (wiki pages)
- EVENT (events definitions)
- GEO (events location)

SemEx - GUI

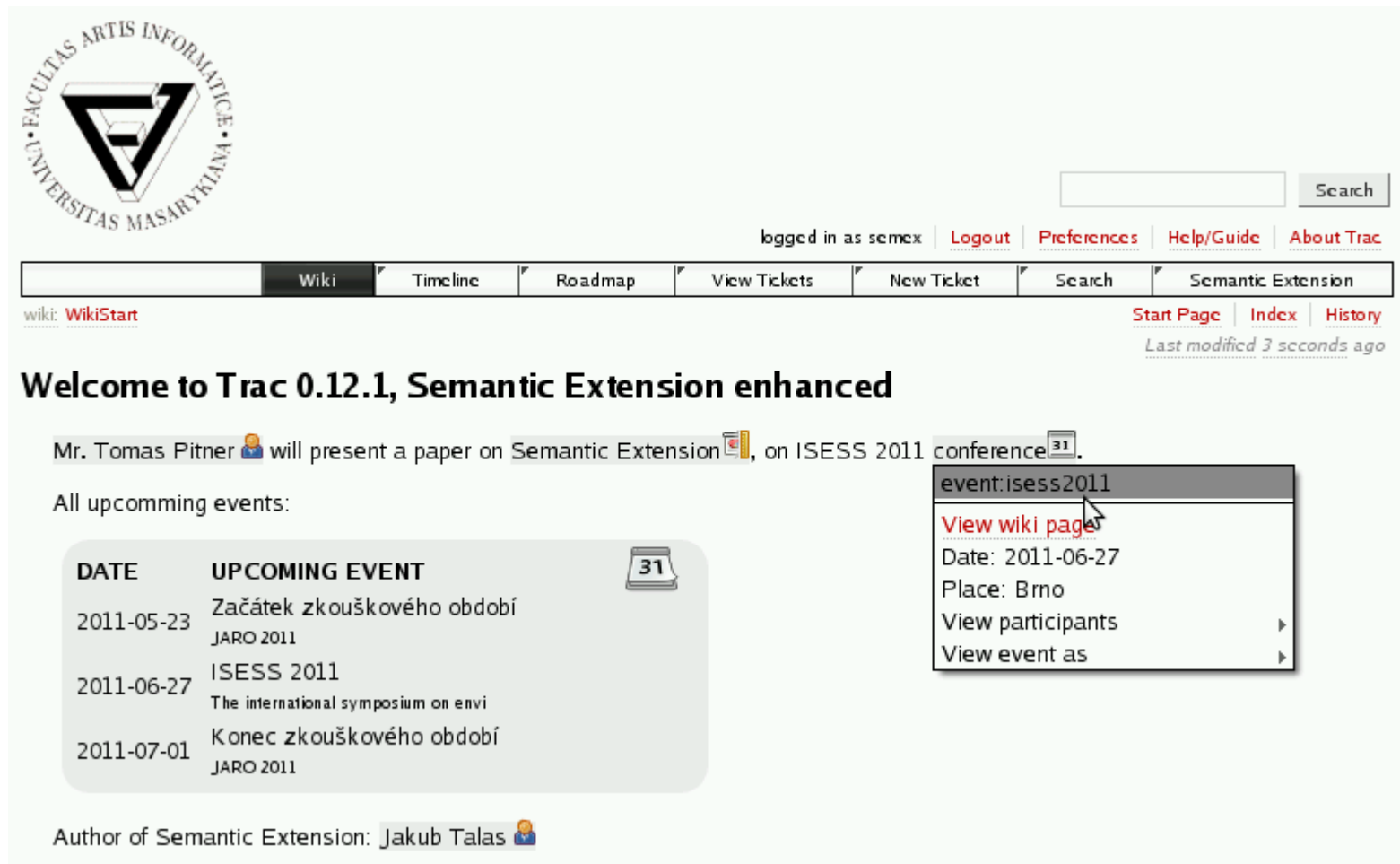
- **Visualization of semantic data**
 - Wiki Macros
 - Lists of other instances
 - Definition/detail dialog
 - Events calendar, etc.
- **Semantic relation browsing**
- **The low-level data view**



The screenshot shows a web browser window displaying a Trac page. The page has a light green header with a toolbar containing icons for bold, italic, link, and other editing functions. Below the header, the main content area contains the following text:

```
= Welcome to Trac 0.12.1, Semantic Extension enhanced =  
  
[[SemexCommon()]]  
[[Semex(info, foaf:tpitner, Mr. Tomas Pitner)]] will present a paper on [[Semex(info, doap:semex,  
Semantic Extension)], on ISESS 2011 [[Semex(info, event:isess2011, conference)]].  
  
All upcoming events:  
[[Semex(calendar)]]  
  
Author of Semantic Extension:  
[[Semex(info, foaf:jakub_talas, Jakub Talas)]]
```


SemEx - GUI (2)





logged in as semex | [Logout](#) | [Preferences](#) | [Help/Guide](#) | [About Trac](#)

[Wiki](#) | [Timeline](#) | [Roadmap](#) | [View Tickets](#) | [New Ticket](#) | [Search](#) | [Semantic Extension](#)

wiki: [WikiStart](#) [Start Page](#) | [Index](#) | [History](#)
Last modified 3 seconds ago

Welcome to Trac 0.12.1, Semantic Extension enhanced

Mr. Tomas Pitner  will present a paper on Semantic Extension , on ISESS 2011 conference .

All upcoming events:

DATE	UPCOMING EVENT	
2011-05-23	Začátek zkouškového období JARO 2011	
2011-06-27	ISESS 2011 The international symposium on envi	
2011-07-01	Konec zkouškového období JARO 2011	

Author of Semantic Extension: [Jakub Talas](#) 

event:isess2011

- [View wiki page](#)
- Date: 2011-06-27
- Place: Brno
- [View participants](#)
- [View event as](#)

SemEx & Deep Thought

- **Usage in situ, real projects**
 - User feedback (student projects)
 - System integration (academic system)
 - Semantic structure refining (domain identification, analysis)
 - Common user interface (visualization, semantic query wrapping)
- **Semantics “freed from DB”**
 - Flexibility of the data scheme
 - Communication improvement (LD)
 - Easier export to other methodologies

Further work

- **Usage of formal visualization**
 - Fresnel and FSS ontology based external visualizer instead of hardcoding (RDF stylesheets)
 - easier export to RDF or microformatted HTML, etc.
- **Integration (compare/combine)**
 - With other env. tagging tools like TaToo project
- **Further testing**
 - Larger-scale projects and datasets

The final slide

- Thank you for your attention.
- <https://sourceforge.net/projects/semex/>

