

Integrated Project

Priority 2.4.7

Semantic based knowledge systems



Information Society  
Technologies

The Social Semantic Desktop



## NEPOMUK Collaborative Portal

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## Versions

Version	Date	Reason
0.1	12.02.2006	First draft
0.2	25.03.2006	Review and enhancements
1.0	06.04.2006	Added web site screenshots and wiki definition, streamlining of layout
1.1	02.10.2006	Adapted to new deliverable layout

## Executive Summary

Online community building starts with a visual identity, a strong web presence, a set of striking taglines, descriptions conveying the main characteristics of the community's project, and a concrete flyer facilitating the dissemination of the project's big picture in the real world.

NEPOMUK's visual identity consists of two logos conveying the concepts of high connection level between people or ideas, knowledge work on the desktop and Semantic Web principles. With respect to web presence, NEPOMUK Consortium has decided to maintain two distinct web sites:

- the NEPOMUK portal hosting the project presentation and the internal collaborative knowledge base: <http://nepomuk.semanticdesktop.org/>,
- the NEPOMUK community web site aiming more specifically at raising community awareness on the topic of the Social Semantic Desktop: <http://www.semanticdesktop.org>.

The NEPOMUK portal consists of a public space and of a private space restricted to the Consortium. The public space provides essential facts about the project: the project identity, global project objectives, contact information, partners involved, duration and a summary of the presence of the project in various media. NEPOMUK prototypes will be showcased in this public area as soon as they become available. As of March 2006, the public web site has the second rank in Google search engine for the keyword "nepomuk". On the other hand, a restricted area on the site allows the NEPOMUK partners to work online in a collaborative manner and to shape the NEPOMUK system and the real world applications that can be designed on top of it. This collaborative process is supported by the NEPOMUK collaborative portal, relying entirely on open source software. The portal runs [Mandriva Linux](#) operating system and consists of the following modules:

- an internal wiki divided in several spaces: the main space hosts the internal knowledge base and is organized using a set of keywords ("tags"), the STC space stores documents related to the NEPOMUK Steering Committee work, while the IST space contains documents related to the dialogue with the EU IST Officers. The software used is [XWiki](#);
- a mailing-list server ([SYMPA](#));
- a Jabber server ([Wildfire](#)) hosting NEPOMUK chat room;
- a development server ([Subversion](#)).

The NEPOMUK community web site at <http://www.semanticdesktop.org> consists of following modules:

- a community wiki aiming at becoming the reference knowledge base on the topic of personal information management on the desktop;
- a space dedicated to the annual Semantic Desktop workshop;
- a registration area inviting users to take part in the community.

As of March 2006, around 50 persons external to the Consortium have registered on the community web site.

Besides achieving this web presence, the NEPOMUK Consortium has designed a flyer targeting academic researchers, enterprise managers,

consultants, as well as the man in the street willing to organize their personal information more efficiently. This flyer consists of a double-sided A4 sheet containing a set of taglines presenting the NEPOMUK approach, the project's URL, the list of NEPOMUK partners and some administrative information.

In the next months, the NEPOMUK dissemination and awareness activities will consist in increasing considerably the presence of the NEPOMUK project on the web, in opening up some of the NEPOMUK technical task forces to external partners, in showcasing online the first prototypes realized by the Consortium and in widening the audience of the community web site.

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## 1. Introduction

The value of the NEPOMUK communication system will depend on the number of users adopting it and on the number of implementations based on NEPOMUK technology. Work package WP7000 "Dissemination and community activities" aims at maximizing these numbers. This entails the creation of a wide community around the topics NEPOMUK is dealing with.

Community building starts with a strong web presence, a project's visual identity, a striking tag line, descriptions conveying the main characteristics of the project, a concrete flyer and a brochure facilitating the dissemination of the project's big picture in the real world. In addition, community building relies on the ability of the participants to shape the future of the community and of its common memory.

The NEPOMUK Consortium has decided to maintain two distinct web sites:

- the NEPOMUK portal hosting the project presentation and the internal collaborative knowledge base: <http://nepomuk.semanticdesktop.org/>,
- the NEPOMUK community web site aiming more specifically at raising community awareness on the topic of the Social Semantic Desktop: <http://www.semanticdesktop.org>.

This deliverable presents the collaborative portal of NEPOMUK. By this term, we denote both, the NEPOMUK portal and the NEPOMUK community web site. The report first introduces NEPOMUK's visual identity in Section 2. It then presents the NEPOMUK public web site in Section 3 and the NEPOMUK community website in Section 4.

## 2. The visual identity of NEPOMUK

The Consortium chose the logo shown in Figure 1 among other proposals submitted by several partners. This logo was designed by Paul Davies, chief designer of Not Square Ltd, a subsidiary of PRC Group. With a central pattern that conveys the idea of connection between people, concepts or machines, and with colours close to FOAF<sup>1</sup> logo ones suggesting richness of communication, this logo highlights Semantic Web ideas. The logo also contains the NEPOMUK tagline: *The Social Semantic Desktop*.

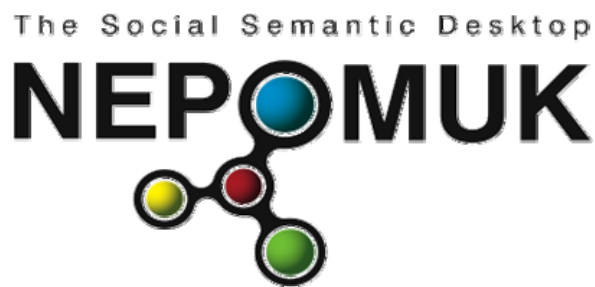


Figure 1: Logo of NEPOMUK

In addition to this logo, a logo guidelines and usage manual has been produced by Not Square Ltd. for ensuring a global consistency and harmony while designing NEPOMUK flyer, posters and other key applications.

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<sup>1</sup> FOAF <http://www.foaf-project.org> The *Friend of a Friend* (FOAF) project is about creating a Web of machine-readable homepages describing people, the links between them and the things they create and do.



### 3. The NEPOMUK portal: a web site and a collaborative work infrastructure

This Chapter first describes the NEPOMUK web site in Section 3.1 and the infrastructure for collaborative work in NEPOMUK in Section 3.2. The metrics for measuring the public acceptance of NEPOMUK's public web site are described in Section 3.3.

#### 3.1. NEPOMUK web site

Since February 2006, the NEPOMUK web site is available at the URL <http://nepomuk.semanticdesktop.org>. The partners have considered that using a single internet domain name, "semanticdesktop.org", both, for the project internal web site and for the community web site is the best option for maximizing the visibility of the NEPOMUK project and for facilitating community uptake.

Note: the web site design and layout will be updated by end of April 2006 for complying with NEPOMUK graphical charter.

##### NEPOMUK web site content and organization

The NEPOMUK web site consists of a public space and of a private space restricted to the Consortium.

The public space provides the visitor with essential facts about the project: project identity, project global objectives, contact information, partners involved, duration and summary of the presence of the project in various media. NEPOMUK prototypes will be showcased in this public area as soon as they become available. NEPOMUK's public deliverables will also be available within this public space. The main page of the public space is shown in Figure 2.

NEPOMUK web site private area is restricted to NEPOMUK partners and to EU IST officers. It consists of the NEPOMUK internal knowledge base.


 Search


Home Wiki STC IST Calendar What's New Search Help Administration StephaneLauriere Logout

Edit this Page Add Comment (0) Add an attachment (0) PDF History Print view More Actions

#### NEPOMUK

- [Project objectives](#)
- [Project summary](#)
- [Participants](#)
- [Press](#)

## NEPOMUK - The Social Semantic Desktop - FP6-027705

*Networked Environment for Personalized, Ontology-based Management of Unified Knowledge*

NEPOMUK brings together researchers, industrial software developers, and representative industrial users, to develop a comprehensive solution for extending the personal desktop into a collaboration environment which supports both the personal information management and the sharing and exchange across social and organizational relations.



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Figure 2: NEPOMUK web site home page

### 3.2. NEPOMUK collaborative work infrastructure

NEPOMUK's collaborative work infrastructure has been the subject of a dedicated task force. Requirements for efficient collaborative work have been expressed by all partners.

The NEPOMUK collaboration platform supports the collaboration of an international team and serves as a starting point to build up an international community around the project. Hence a large part of the collaboration platform follows a web based approach.

The detailed requirements of the collaborative work infrastructure as well as a study on most relevant tools is available in Annex 1 of this deliverable.

As of March 2006, the NEPOMUK collaborative portal consists of:

- a wiki (described in Subsection 3.2.1),
- a mailing-list server (Subsection 3.2.2),
- a Jabber server (Subsection 3.2.3),
- a subversion server (Subsection 3.2.4),

### 3.2.1. NEPOMUK internal wiki

A wiki is described by Wikipedia as “a type of website that allows anyone visiting the site to add, remove, or otherwise edit all content, very quickly and easily. This ease of interaction and operation makes a wiki an effective tool for collaborative writing”.<sup>2</sup>

As one of NEPOMUK’s objectives consists in “supporting the generation and exchange of personal thoughts via structured articulation in extended wiki-based semantic tools”<sup>3</sup>, choosing a state of the art wiki engine for managing the contents collaboratively produced by the project team was of course a natural choice. Figure 3 presents the home page of NEPOMUK internal wiki.

NEPOMUK internal wiki consists of several spaces summarized in Table 1.

NEPOMUK wiki space name	Description
Main	This space is the project’s main knowledge base
STC	This space is dedicated to documents related to NEPOMUK Steering Committee
IST	IST space contains documents related to the dialogue with EU IST officers
Main1	Public space

Table 1: NEPOMUK internal wiki spaces

<sup>2</sup> <http://en.wikipedia.org/wiki/Wiki>.

<sup>3</sup> NEPOMUK Annex I, page 4.


 Search


Home Wiki **STC** IST Calendar What's New Search Help Administration StephaneLauriere Logout

Edit this Page Add Comment (0) Add an attachment (0) PDF History Print view More Actions

#### NEPOMUK

- ◆ [Consortium](#)
- ◆ [Wiki guidelines](#)
- ◆ [Wiki wish list](#)
- ◆ [Task List](#)
- ◆ [All pages](#)
- ◆ [Document manager](#)

NewPageWikiName

Create!

#### All Tags

- ◆ [Bibitem](#)
- ◆ [ChatLog](#)
- ◆ [CleanMe](#)
- ◆ [Component](#)
- ◆ [ContributeNow](#)
- ◆ [Definition](#)
- ◆ [Deliverable](#)
- ◆ [DeliverableDraft](#)
- ◆ [ExternalPartner](#)
- ◆ [Meeting](#)
- ◆ [Minutes](#)
- ◆ [Organization](#)
- ◆ [Person](#)
- ◆ [Task](#)
- ◆ [TaskForce](#)
- ◆ [TeleCon](#)
- ◆ [Workpackage](#)
- ◆ [WP0000](#)
- ◆ [WP11000](#)
- ◆ [WP4000](#)
- ◆ [WP6000](#)
- ◆ [WP7000](#)

## Welcome To The NEPOMUK Wiki !

### Hot Topics

- ◆ Upcoming Phone Conferences
  - ◆ Teleconference #9: 2006-03-28 16h00 CEST, see [WP6000Telco2006-04-04](#)
- ◆ [External Advisory Board](#) - suggestions and then the final external advisory board
- ◆ [Task Forces](#) - which task forces are suggested, whats their state?
- ◆ [Upcoming Events](#) - options for meeting people, often across work packages
- ◆ [Potential Material/Software to be used](#)

### Work packages

### List of Work Packages

- ◆ [WP1000](#) - Knowledge Articulation and Visualisation (leader: [HeikoHaller, FZI](#))
- ◆ [WP2000](#) - Personal Semantic Web (leader: [LeoSauermann, DFKI](#) )
- ◆ [WP3000](#) - Knowledge Work Process Support (leader: [Uwe Riss, SAP](#))
- ◆ [WP4000](#) - Distributed Search and Storage (leader: [ManfredHauswirth, EPFL](#))
- ◆ [WP5000](#) - Semantic Social Networks and Knowledge Exchange (leader: [RalucaPaiu, L3S](#))
- ◆ [WP6000](#) - Architecture (leader: [Siegfried Handschuh, NUIG](#))
- ◆ [WP7000](#) - Dissemination and Community Activities (leader: [StephaneLauriere, EDG](#))
- ◆ [WP8000](#) - Bioscience Case Study (leader: [AlexanderPolonsky, COG](#))
- ◆ [WP9000](#) - Professional Business Services Case Study (leader: [GregorisMentzas, ICCS](#))
- ◆ [WP10000](#) - Organisational KM Case Study (leader: [Uwe Riss, SAP](#))
- ◆ [WP11000](#) - Online community helpdesk Case Study (leader: [StephaneLauriere, EDG](#))

(to edit this, see [WorkPackages](#))

### Deliverables

See the open deliverable drafts that are worked [deliverable drafts](#) (there you find [LicensingDiscussion](#), [ProjectFlyerIdeas](#), ...)

### Miscellaneous

- ◆ [DescriptionOfWork](#) - NEPOMUK Annex I "Description Of Work" (as PDFs)
- ◆ [NepomukInfrastructure](#) - what web services do we use?
- ◆ [Recommended Reading](#)
- ◆ [Sandbox](#) -to experiment with syntax
- ◆ [WikiWishlist](#)

### Page Tags

Tag this page

### Recently Viewed

[ExternalPartner](#)  
[Component](#)  
[WebHome](#)  
[WebHome](#)  
[Logo](#)



Figure 3: NEPOMUK internal wiki home page

## NEPOMUK wiki tags

NEPOMUK knowledge base is organized using tags. A tag is a keyword which acts like a subject or category. Everyone in the Consortium is allowed to create tags and to use them for classifying the pages: the whole group is involved both in the tagging process and in tags creation.

As of March 2006, following tags have been created:

Tag name	Description	Number of tagged pages
Bibitem	Bibitem are pages that hold information about exactly one bibliography item.	4
CleanMe	This tag means the corresponding pages needs cleanup. Authors are invited to review it. The person who adds the CleanMe is supposed to add a short explanation why cleanup is needed.	4
Component	Components of the NEPOMUK architecture	44
Contribute Now	Pages tagged with "ContributeNow" need the attention of every member, e.g. because there is some global voting or collection going on. The tag is to be removed when the contribution period is over.	8
Definition	Pages tagged "Definition" contain description(s) of a term	6
Deliverable	Description of the planned deliverable	10
Deliverable Draft	Draft versions of future deliverables, that we start here on the wiki and then convert to real documents.	9
External Partner	Pages tagged "ExternalPartner" relate to a person or an organization that is not part of the core NEPOMUK Consortium, but who is a partner in one of the task forces or work packages. This entity has limited access to NEPOMUK	6
Meeting	NEPOMUK meeting pages	6
Minutes	NEPOMUK meeting minutes	12
Organization	NEPOMUK partners	16
Person	NEPOMUK individual participants	57
TaskForce	NEPOMUK task forces	20
TeleCon	Teleconferences meetings	20

Table 2: NEPOMUK internal wiki tags

The partners have produced collectively a set of guidelines for the efficient use of the wiki. These guidelines can be accessed contextually from every page of the wiki. They will continue evolving during the whole project's lifespan, all the more as the wiki infrastructure itself is to take advantage of NEPOMUK semantic modules.

#### Wiki guidelines

The table of contents of the NEPOMUK wiki guidelines ist listed below:

1. The general principles
  - a. How to name pages
  - b. Page hierarchy
  - c. Tagging
  - d. Creating a new tag
  - e. Adding an event to the wiki calendar
  - f. Wiki Cleanup
2. Individual page organization
  - a. Workpackages
  - b. Taskforces
  - c. Tasks, subtasks

- d. Deliverables
  - e. Components
  - f. Organization
  - g. Personal pages
3. Things to avoid
  4. Things definitely not to do
  5. Various examples

#### Wiki improvements

A number of improvements have been requested by the NEPOMUK team. They concern:

- email notification
- advanced search
- minor edit feature
- page renaming
- personalized views of the contents
- questionnaire functionality to perform surveys

It is planned that some of these improvements will be brought to the collaborative platform within the next months.

### 3.2.2. NEPOMUK mailing-lists

The SYMPA (<http://www.sympa.org>) open-source mailing-list server has been installed on NEPOMUK server for managing the Steering Committee and Steering Support Committee mailing-lists.

A Mailman instance is used for managing the common NEPOMUK mailing-list.

### 3.2.3. NEPOMUK Jabber server

An open-source XMPP server has been installed for organizing chat conferences across the team, which proves to be especially useful during teleconferences.

Among other instant messaging solutions, the Jabber protocol has been chosen because it relies on an open standard protocol, it allows one-to-one chats, it can work with web based clients, semantic plugins such as Nabu that provides server-side RDF message archive, it supports encryption and it is flexible. Lastly, some NEPOMUK components will most probably build upon XMPP protocol.

The open-source server Wildfire has been selected and successfully installed on NEPOMUK server.

### 3.2.4. NEPOMUK source code repository server

A Subversion instance has been installed in March 2006 on NEPOMUK server for distributed code development and for ontology drafting. Contents can be browsed through a web interface, over WEBDAV protocol. As of March 2006, the contents are restricted to NEPOMUK Consortium.

#### 3.2.4.1 Monitoring of NEPOMUK's web presence acceptance

The public acceptance of NEPOMUK's web presence will be monitored on a continuous basis during the project's lifespan. Below, a recent snapshot of the result of this monitoring is given.

##### Web site fame measurement

The web site <http://nepomuk.semanticdesktop.org> has been running since the beginning of February 2006. It now ranks second in the results of Google for the term "nepomuk". The Consortium will make sure the Google page rank of the web site increases. Table 3 shows the ranking of other terms relevant to NEPOMUK in Google.

Term(s)	Google rank
nepomuk	2
social semantic desktop	11
semantic desktop	137

Table 3: Google rank for nepomuk.semanticdesktop.org (March 28, 2006)

##### Links to nepomuk.semanticdesktop.org

According to Google, 27 links to nepomuk.semanticdesktop.org web site. Now that the web sites are in place, all partners will make sure the site becomes much more visible throughout the web.

The corresponding query against Google is:

<http://www.google.com/search?hl=en&q=link%3A+nepomuk.semanticdesktop.org>

The query above returns two distinct numbers:

- the number of total links in the catalogue of pages stored by Google,
- the number of real distinct pages across this set of identified pages. The figures considered here refer to the latter, i.e. to the smallest of the two, that one can get only by browsing the last results page

Table 4 draws a comparison between the number of backlinks<sup>4</sup> of a few projects related to the Semantic Web.

Project	Web site	Backlinks number
NEPOMUK	<a href="http://nepomuk.semanticdesktop.org">http://nepomuk.semanticdesktop.org</a>	27
SEKT	<a href="http://www.sekt-project.com">http://www.sekt-project.com</a>	75
VIKEF	<a href="http://www.vikef.net">http://www.vikef.net</a>	30
JENA	<a href="http://jena.sourceforge.net">http://jena.sourceforge.net</a>	550
Open IRIS	<a href="http://www.openiris.org">http://www.openiris.org</a>	16

Table 4: Backlinks references in Google toward a set of Semantic Web sites, 28 March 2006

#### Wiki metrics and mailing list metrics

Some evaluation of the wiki and the email lists is shown in Tables 5 and 6.

Metric	Value
Number of wiki pages in the "Main" space	528
Number of wiki pages in the "STC" space	5
Number of wiki pages in the "IST" space	5
Number of wiki pages in the public space	10

Table 5: NEPOMUK internal wiki metrics (March 2006)

Metric	Value
Number of messages exchanged on main NEPOMUK mailing-list since January 1, 2006	225
Number of message exchanged on STC NEPOMUK mailing-list since January 1, 2006	10

Table 6: NEPOMUK mailing-list metrics (28 March 2006)

#### Web site traffic measurement

NEPOMUK's web presence can be measured by analysing the log files of the web site. The Tables 7 to 11 provide the main figures related to the web site traffic on the NEPOMUK web sites – both, the internal project site and the community web site. Since end of March, 2006, the data related to the community web site and the internal project web site is stored separately, which will allows for distinct monitoring. The Consortium expects the figures below to increase significantly in the next months.

<sup>4</sup> Backlinks are incoming links to a website. The number of backlinks is an indication of the popularity or importance of that website. [Source: <http://en.wikipedia.org/wiki/Backlink>]



Note: "viewed traffic" below excludes traffic generated by robots, worms, or replies with special HTTP status codes.

Viewed traffic, month March 2006	
Unique visitors	3565
Number of visits	6612 (1.85 visits/visitor)
Pages	70505 (10.66 pages/visit)
Hits	214256 (32.4 hits/visit)
Bandwidth	3.72 GB (589.16 KB/visit)

Table 7: Viewed traffic on NEPOMUK web sites (March 2006)

Country	Domain	Pages	Hits	Bandwidth
Germany	de	20067	54704	1.14 GB
Unknown	-	10476	32675	399.11 MB
com	com	10089	22560	368.99 MB
Network	net	6712	23965	321.71 MB
Ireland	ie	4578	14977	130.84 MB
France	fr	4192	15727	248.67 MB
Switzerland	ch	3546	11904	104.78 MB
Unknown	128	3485	5144	531.71 MB
Sweden	se	2954	8851	183.22 MB
Netherlands	nl	490	1543	20.14 MB
Others	-	3916	22206	331.51 MB

Table 8: NEPOMUK web sites visitors per country (March 2006)

Operating Systems	Hits	Percent
Windows	138483	64.6 %
Linux	36149	16.8 %
Macintosh	23238	10.8 %
Unknown	15832	7.3 %
FreeBSD	368	0.1 %
Sun Solaris	136	0 %
CPM	17	0 %
BeOS	17	0 %
NetBSD	16	0 %

Table 9: Number of hits per operating system (March 2006)

Browsers	Grabber	Hits	Percent
Firefox	No	94639	44.1 %
MS Internet Explorer	No	76156	35.5 %
Mozilla	No	12376	5.7 %
Safari	No	11077	5.1 %
Opera	No	6681	3.1 %
Unknown	?	4624	2.1 %
Konqueror	No	3458	1.6 %
Netscape	No	3258	1.5 %
Camino	No	998	0.4 %
OmniWeb	No	836	0.3 %
Other		15	0

Table 10: Number of hits per navigator

Referrer	Pages	Percent
<a href="http://www.stumbleupon.com/refer.html">http://www.stumbleupon.com/refer.html</a>	518	21.9 %
<a href="http://wwwnew.mandriva.com/en/company/press/pr/mandriva_to_parti...">http://wwwnew.mandriva.com/en/company/press/pr/mandriva_to_parti...</a>	419	17.7 %
<a href="http://desktoplinux.com/news/NS3270716126.html">http://desktoplinux.com/news/NS3270716126.html</a>	295	12.4 %
<a href="http://www.toolinux.com/news/logiciels/mandriva_participe_au_dev...">http://www.toolinux.com/news/logiciels/mandriva_participe_au_dev...</a>	42	1.7 %
<a href="http://www.linuxsoft.cz">http://www.linuxsoft.cz</a>	28	1.1 %
<a href="http://www.xwiki.org/xwiki/bin/view/Installs/WebHome">http://www.xwiki.org/xwiki/bin/view/Installs/WebHome</a>	26	1.1 %
<a href="http://www.cordis.lu/ist/kct/fp6_nepomuk.htm">http://www.cordis.lu/ist/kct/fp6_nepomuk.htm</a>	17	0.7 %
<a href="http://iswc2005.semanticweb.org/W_Workshops.html">http://iswc2005.semanticweb.org/W_Workshops.html</a>	16	0.6 %
<a href="http://www.semwiki.org">http://www.semwiki.org</a>	15	0.6 %
<a href="http://www.pro-linux.de/news/2006/9322.html">http://www.pro-linux.de/news/2006/9322.html</a>	15	0.6 %
<a href="http://deri02/mediawiki-1.5.2/index.php/Main_Page">http://deri02/mediawiki-1.5.2/index.php/Main_Page</a>	10	0.4 %

Table 11: Most important referrers to NEPOMUK web sites

### 3.3. The NEPOMUK community web site

This Chapter first describes the SemanticDesktop.org community web site in Section 4.1 and its visual identity in Section 4.2. Section 4.3 presents the site area devoted to the annual Semantic Desktop workshop. Section 4.4 sets out the current status of the community wiki contents and Section 4.5 presents the SemanticDesktop.org calendar.

### 3.4. Web site presentation

In addition to the main NEPOMUK web site, the NEPOMUK Consortium has created a community web site at [www.semanticdesktop.org](http://www.semanticdesktop.org) with the objective to

1. raise community awareness on the topic of the Social Semantic Desktop,

2. ease the NEPOMUK standards community uptake,
3. widen as much as possible the dissemination of NEPOMUK approach,
4. ensure the continuation of NEPOMUK initiative beyond the lifespan of the project itself.

[www.semanticdesktop.org](http://www.semanticdesktop.org) comprises a wiki area that is meant to become a reference knowledge base on the topic of the Social Semantic Desktop. It is a place where various communities can share ideas and references. The web site is also the home of the annual Semantic Desktop workshop. The main page is shown in Figure 5.

### 3.5. SemanticDesktop.org visual identity

Giving a visual identity to SemanticDesktop.org web site will ease the dissemination of the initiative. As of March 2006, the drafting of this identity is work in progress. The logo shown in Figure 4 has been proposed and is being worked on. The logo square symbolizes a desktop, and the nodes stand for people or concepts that are connected to one another in a friendly manner.



Figure 4: SemanticDesktop.org logo

SemanticDesktop.org

Home Wiki ISWC 2005 Workshop Calendar What's New StephaneLauriere Administration Logout

Edit this Page  Add Comment (0)  Add an attachment (0)  History More Actions

---

**Wiki Home**

- Tags
- Recent changes
- All pages

## Welcome To The SemanticDesktop.org Wiki!

---

- [Browse resources by tag](#)
- [View all resources](#)
- [View recent changes](#)

---

### Architecture links

- [The Long Tail of Recombinant Components](#)
- [DeepaMehta](#)
  - DeepaMehta combines interdisciplinary research with the idea of Open Source to generate a true benefit for workflow as well as for social processes.

Miguel de Icaza on the web desktop:

- [The Web Desktop](#)
- [Replacing D-Bus and CORBA by HTTP + REST](#)

### Various links

- [The Semantic Web as a Webized Database](#)
- [The web desktop \(by Miguel de Icaza\):](#)  
<http://tirania.org/blog/archive/2005/Nov-27-1.html>
- [Google + Firefox + Eclipse:](#)  
<http://www.eclipsezone.com/eclipse/forums/t59446.rhtml>
- [Collaborative Working Environments Initiative Launch Event](#)

### Semantic Desktop Scripting

- [Which scripting language for the semantic desktop?](#)
- See [Monad](#) by Microsoft

### Events

- [Workshop](#)
- [SemDeskHandsOn2005April](#) - third Semantic Desktop Hands On Workshop

**Tags**

---

**Page Backlinks**

- [WebHome](#)

---

**Recently Viewed**

- [WebHome](#)

**All Tags**

- AJAX
- Architecture
- Article
- Conference
- Eclipse
- Firefox
- Gnome
- Java
- KDE
- MailingList
- Ontologies
- RDF
- Ruby
- Security
- SocialNetworks
- SocialTagging
- Software
- Specification
- Syndication
- TextAnalysis
- TextEdition
- Wikis
- Workgroup
- Workshop

Wiki.Menu > [Wiki.WebHome](#) en Last Author: StefanDecker Date: 2006/03/23 17:19

Powered by XWiki  
SemanticDesktop.org

Figure 5: SemanticDesktop.org wiki

### 3.6. SemanticDesktop.org workshop section

With the first workshop on the Semantic Desktop held in Galway at ISWC 2005, an international community gathering academic and industrial groups of people has been formed. The NEPOMUK Consortium will build upon this community for disseminating its approach and for involving as many teams as possible into the initiative.

The SemanticDesktop.org workshop section can be reached at following URL:

<http://www.semanticdesktop.org/SemanticDesktopWS2005/>

### 3.7. SemanticDesktop.org wiki

The SemanticDesktop.org wiki is opened to all for registration. As of March 2006, 46 individual members have created an account on the web site.

Similarly to NEPOMUK wiki, the SemanticDesktop.org knowledge base is organized by tags. Table 12 lists the tags available and the number of pages using them.

Tag	Number of pages
AJAX	1
Architecture	7
Article	43
Conference	7
Eclipse	10
Firefox	5
Gnome	2
Java	13
KDE	5
MailingList	1
Ontologies	17
Ontology	6
Organization	5
P2P	12
Person	11
PersonalInformation Management	20
PHP	0
Project	16
Python	4
RDF	10
Ruby	2
Security	2
SocialNetworks	7
SocialTagging	6
Software	68
Specification	11
Syndication	1
TextAnalysis	4
TextEdition	5
Wikis	13

Workgroup	3
Workshop	6

Table 12: Most important referrers to NEPOMUK web sites

### 3.8. SemanticDesktop.org calendar

The SemanticDesktop.org calendar gathers events that relate to the topic of the Social Semantic Desktop. These events can be entered in a collaborative manner directly into the wiki.

#### 4. NEPOMUK flyer and project synopsis sheet

The Consortium has produced a flyer and a project's synopsis aimed at presenting the project's big picture to academic researchers, enterprise managers and consultants, as well as to the man in the street interested in organizing their personal information in a more efficient manner. The flyer and the project synopsis are available as the Annex 2 of this deliverable.

## 5. Conclusion

During the first three months of the project, the Consortium has laid down the foundations for a successful community building process. The project now has a strong visual and marketing identity, a clear presence on the web and a first set of external participants who have expressed their interest in taking part in the project, both by sending emails to the Consortium and by contributing to the community wiki.

In the next months, the NEPOMUK dissemination and awareness activities will consist in increasing considerably the presence of NEPOMUK project on the web, in opening up some of NEPOMUK technical task forces to external partners, in showcasing online the first prototypes realized by the Consortium, and in widening the audience of the community web site.



## Annex 1 - Study on relevant collaborative infrastructures for NEPOMUK portal

This study examines several collaboration platforms for usage within the NEPOMUK project. We start with a requirements analysis for the platform, and then compare several possible existing software systems.

### Requirements

The NEPOMUK collaboration platform has to support the collaboration of an international team of researchers and serve as a starting point to build up an international community around the project. Hence a large part of the collaboration platform will follow a web based approach.

The main web site will be <http://nepomuk.semanticdesktop.org> and <http://www.semanticdesktop.org/> to increase community awareness. These sites will contain pages restricted to the NEPOMUK Consortium, as well as dedicated spaces for storing documents related to the dialogue with IST officers and within the projects task forces. The web site serves as an important communication and collaboration platform for the project members, and should allow easy knowledge publishing and retrieval.

We wish for an integrated solution, to reduce maintenance overhead and allow a consistent user experience. With this in mind, we start out with the basic requirements for the web site and then formulate the more specific requirements for each component. Components which are to be integrated in the web site ought to be integrated in a way that the basic requirements hold for them as well.

#### Basic requirements for web site

In this section we describe the basic requirements for the collaboration platform. We assume that most functionality is directly accessible with any standards compliant web browsers.

With that, the basic functional requirements for the platform are the following:

- Editing of existing pages/objects (wiki style preferred)
- Creation of new pages/objects
- Support for unstructured, semi-structured and structured data
- Support for semantic information
- Support for several distinct organizational spaces (task-forces, ...)
- Support for tagging or another advanced possibility to categorize pages
- User management
- Access rights management
- Revision control for all content
- RSS feed (should contain the difference of the change)
- Email notification of changes (subscription should allow easy selection of area of interest)

- PDF generation
- UTF-8 support
- Customizable to adapt to future project requirements

The basic non-functional requirements for the platform:

- Easy usage
- Easy customizable

#### Calendar component

The functional requirements for the calendar component:

- Support for public events
- Support for private events (restricted to certain user group)

#### Project management component

The functional requirements for the project management component:

- Task and issue tracking
- Definition of milestones
- Support for different task forces working in parallel

#### Mailing-list component

The functional requirements for the mailing list component:

- Supports an arbitrary number of mailing lists
- Standard maintenance abilities
- Public/private mailing lists

#### Mailing-list archive component

The functional requirements for the mailing list archive component:

- Archives accessible via web interface, respecting access rights
- Gateway to a web forum (optional/later)

#### Instant messaging component

The functional requirements for the instant messaging component:

- Standards compliant instant messaging (XMPP)
- Message archive (optional/later)

#### Development component

The functional requirements for the development component:

- Modern (i.e. comparable to Subversion) code repository for distributed development

#### Code access component

The functional requirements for the code access component:

- Code browser via web interface
- Code revision history via web interface
- References from change set descriptions to other objects within the web site

## Overview over existing solutions

In this section a collection of existing solutions are presented. We examine two commercial products, CollabNet Team Edition and SourceForge Enterprise Edition, both leaders in the field of collaboration support for software development, as well as two wiki based, open source products, Trac and XWiki. For each product we will give a short description and a list of their main features. The assessment of those products then follows in the next section.

### CollabNet Team Edition

CollabNet Team Edition ([http://www.collab.net/products/team\\_edition/details.html](http://www.collab.net/products/team_edition/details.html)) is an integrated, web-based collaboration platform for software development, available as an on-demand service from CollabNet. As such, it offers the following features:

- Support for distributed development based on CVS or Subversion
- Document management (upload/view/download documents)
- Issue tracking
- Mailing lists
- Discussion forums
- Announcements
- Cross project search

### SourceForge Enterprise Edition

SourceForge Enterprise Edition (<http://www.vasoftware.com/sourceforge/>) is an integrated, web-based collaboration platform for software development, which offers the following features:

- Support for distributed development based on CVS, Subversion or Perforce
- Document management (upload/view/download documents)
- Issue, request tracking
- Task management
- Software release system
- Mailing lists
- Discussion forums
- Announcements
- wiki
- Cross project search
- Change notifications (via email, RSS)
- API (SOAP based)

### Trac

Trac (<http://projects.edgewall.com/trac/>) is an open source, integrated, web-based collaboration platform based on an enhanced wiki and issue tracking system for software development projects. It offers the following features: Editing of existing pages, creation of new pages (standard wiki functionality)

- Support for distributed development based on Subversion
- Document management (upload/view/download documents) (Attachments)
- Ticket (issue, request, task) tracking
- Project roadmap (based on tickets)
- Code browser and code revision browser
- Can use wiki functionality throughout the system (pages, tickets, changeset descriptions)
- Extensions via macros (Python)
- Change notifications (via email, RSS)
- Search in tickets, changeset descriptions, pages

#### XWiki

XWiki (<http://www.xwiki.org/>) is an open source, web-based collaboration platform following the spirit of a wiki, though it comes with a very extended and powerful wiki engine, which allows XWiki to be entitled as a collaborative knowledge exchange framework.

Even though XWiki is not a collaboration platform specifically for software development projects, it is one of the most advanced wiki engines currently available, and the only one supporting arbitrary types for structured data and scripting within wiki pages. Also, the wiki concept seems to be adequate to capture and exchange human knowledge, an important point for this project. In addition, one member of the NEPOMUK project already used XWiki in other projects, where it proved its scalability and extensibility.

Its main features:

- Editing of existing pages, creation of new pages (standard wiki functionality)
- WYSIWYG editing of pages
- Document management (upload/view/download documents) (Attachments)
- Support for several distinct organizational spaces
- Support for tagging of pages
- Integrated user and access control management
- Support for structured, typed data objects
- Integrated class editor to create new types
- Integrated object editor to manipulate existing and create new objects
- Supports scripting (via Velocity or Groovy) within pages
- Plugin system (Java)
- Search in structured data and normal pages
- Change notifications (via email, RSS)
- PDF export

## Assessment of presented existing solutions

In this section we present an assessment of the products presented in the previous section. The assessment is done by comparing each product with the requirements presented in the first section, and listing the negative points.

### CollabNet Team Edition

Although CollabNet Team Edition comes with a rich set of features targeted to support collaborative software development, it does not match well with the basic requirements. In addition, it is only possible to use CollabNet Team Edition as an on demand service, which makes the integration of additional components and required customizations probably more difficult or even impossible. In detail, the following requirements are not met:

- No wiki style of editing/creating pages
- Supports only few, hard coded structures to store structured data
- No support for semantic information
- Support for several distinct organizational spaces limited to projects
- No support for tagging pages, only categorization tree for documents
- Insufficient access control (e.g. for single documents, pages)
- No PDF generation
- Ability of customizations questionable (only on demand service)
- No calendar component
- Project management abilities in Team Edition much reduced, only issue tracking available
- No instant messaging component

### SourceForge Enterprise Edition

The conception and set of features of SourceForge Enterprise Edition is comparable to CollabNet Team Edition, though more rich on features. But it has the same problem that it does not match well the basic requirements. In detail, the following requirements are not met:

- Supports only few, hard coded structures to store structured data
- No support for semantic information
- Support for several distinct organizational spaces limited to projects
- No support for tagging pages or categorizing documents
- Insufficient access control (e.g. for single documents, pages)
- No PDF generation
- No calendar component
- No instant messaging component

### Trac

Trac seems to match quite closely to the projects needs and meets many of our requirements, but not all of them. In detail, the following requirements are not met:

- Supports only few, hard coded structures to store structured data
- No support for semantic information
- No support for several distinct organizational spaces
- Tagging of pages only supported through backlinks
- Insufficient access control
- No PDF generation
- Easy ability of customizations questionable (Macros available, but no scripting in the wiki)
- No explicit support for several groups working in parallel
- No calendar component
- No mailing list archive component (The trac project itself as well as other projects using trac normally utilize Mailman as external mailing list component)
- No instant messaging component

XWiki

XWiki meets the basic requirements of the Consortium better than any other surveyed tool, but it lacks the integration of support for a software development project. In detail, the following requirements are not met:

- No support for semantic relations (but extension may be developed )
- No project management component
- No mailing list archive component
- No instant messaging component
- No development component
- No code access component

## Conclusion

None of the surveyed products met all of our requirements, they all would need further extensions and work to integrate other components to deliver the wished result.

Our basic requirements were met best by XWiki, though it is missing an integrated set of project management and software development tools. But many of the basic functionality required to implement those features are already present in XWiki through its support for arbitrary structured, typed data objects and thus could be implemented rather easily. In contrast to this, all other products missed important structural features (like insufficient access control and limited support to store structured data), which might be difficult to implement.

Besides those reasons, choosing XWiki as the basis to implement the collaboration platform will allow the project to benefit from some of the achievements of the project itself, such as the usage of a semantic wiki model..

With this line of argument, following system is recommended:

- XWiki as integration platform
- Common mailing list software such as SYMPA as mailing-list component

- Common jabber server as Instant Messaging component
- Subversion as code repository for the development component
- Custom developments for XWiki:
  - Ticket system for task and issue tracking, together with support for milestones
  - Mailing list archive
  - Code browser for subversion

## Annex 2 - NEPOMUK flyer and NEPOMUK fact sheet

The Social Semantic Desktop

# NEPOMUK



Networked  
Environment for  
Personal  
Ontology-based  
Management of  
Unified  
Knowledge

### NEPOMUK - The Goal

NEPOMUK gathers together researchers, industrial software developers, and representative industrial users, to develop a comprehensive solution for extending the personal desktop into a collaboration environment which supports both the personal information management and the sharing and exchange across social and organizational relations.



### NEPOMUK - The Social Semantic Desktop

NEPOMUK's solution is called the Social Semantic Desktop. This new desktop is:

- Semantic: it makes knowledge processable by the computer
- Social: it supports the interconnection and exchange with other desktops and their users

### NEPOMUK - Open source tools and standards for smooth collaboration

NEPOMUK provides a freely available open-source framework with a set of standardized interfaces, ontologies and applications. NEPOMUK's standardized plug-in architecture combined with usage experiences opens up manifold business opportunities for new generic or domain-services.

<http://nepomuk.semanticdesktop.org>



Information Society  
Technologies



SIXTH FRAMEWORK PROGRAMME



The Social Semantic Desktop



Networked  
Environment for  
Personal  
Ontology-based  
Management of  
Unified  
Knowledge

## Partners



the management  
house



## Project coordinator

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NEPOMUK is funded by the European Commission as an Integrated Project in unit INFSO.E2 under the IST activities of the 6th Framework Program.

Duration: 01.01.2006 – 31.12.2008

Total budget: 17.000.000 EUR

Total EU funding: 11.500.000 EUR



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FP6-027705 NEPOMUK

**FP6-027705 NEPOMUK Project Synopsis**



<http://nepomuk.semanticdesktop.org>

## **NEPOMUK – the Social Semantic Desktop**

Networked Environment for Personal Ontology-based Management of Unified Knowledge  
NEPOMUK brings together researchers, industrial software developers, and representative industrial users, to develop a comprehensive solution for extending the personal desktop into a collaboration environment which supports both the personal information management and the sharing and exchange across social and organizational relations. This solution is called the *Social Semantic Desktop*.

### **Impact**

NEPOMUK addresses the every-day activities of individual knowledge workers.

The social semantic desktop will support the *personal* aspects of knowledge work by developing tools for knowledge articulation and visualization, the interfaces and data structures of the personal semantic web, and integration of personal work process support. It will support the *social* aspects of communication, distributed collaboration, and social exchange by providing solutions for distributed search and storage and of semantic social networks and knowledge exchange.

NEPOMUK aims at maximum possible uptake by concentrating on integrative and open architectures and actively promoting community involvement.

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FP6-027705 NEPOMUK

The project delivers a freely available open-source framework for social semantic desktops, and a rich set of standardized interfaces and reference implementations. The project result will form the basis for commercial exploitation via consulting activities (introducing the new possibilities of knowledge work support to users), tool development (integrating new services into the framework), and application-specific solution development (adapting the social semantic framework to the needs of particular or branch-specific industrial application scenarios).

### **NEPOMUK main innovations**

Human knowledge work mainly consists of the reception, interpretation and structuring of information, the explicit articulation of thoughts in suitable representations (like texts and pictures), and the sharing, exchange and discussion of such resources with other people. The way people proceed in this is heavily influenced by the tools they use: The personal workspace – and the personal computer in particular – support and reflect the individual ways of information processing, thought articulation, and knowledge sharing across social and organizational networks.

NEPOMUK intends to realize and deploy a comprehensive solution – methods, data structures, and a set of tools – for extending the personal computer into a collaborative environment, which improves the state of art in online collaboration and personal data management and augments the intellect of people by providing and organizing information created by single or group efforts. This solution is called the *Social Semantic Desktop*. This enhanced personal workspace (the Desktop) will be Semantic since it will give information a well-defined meaning, making it processable by the computer. It will be Social since it will support the interconnection and exchange with other desktops and their users.

Main visible results of NEPOMUK are

1. the architecture and implemented middleware of the Social Semantic Desktop, published as open-source software and where relevant submitted to semantic web standardization processes,
2. an active scientific and user community that adopts the results of NEPOMUK and continues to extend them to their needs,
3. a set of reference solutions in use at SAP, PRC, or Institut Pasteur, and a body of documented experience and methodological know-how gained in their application domains.

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NEPOMUK

FP6-027705 NEPOMUK

## More details

More details on NEPOMUK are found on the project website <http://nepomuk.semanticdesktop.org>

NEPOMUK is part of the overall scientific and technical vision gathered under <http://semanticdesktop.org>

## NEPOMUK upcoming work

The project started on January 1, 2006. Within the first year, NEPOMUK will develop a first comprehensive architecture and system prototypes and will initiate the application case studies.

## Administrative details

<b>Start Date – End Date</b>	01. January 2006 – 31. December 2008
<b>Duration</b>	36 months
<b>Total EU funding</b>	11.500.000 EUR

## NEPOMUK project partners

- German Research Center for Artificial Intelligence – DFKI GmbH, Kaiserslautern, Germany
- International Business Machines (IBM) – IBM Product Distribution Ltd., Ireland
- SAP AG, Germany
- Hewlett-Packard Galway Ltd, Galway, Ireland
- Thales SA, France
- PRC Group – The Management House S.A., Greece
- EDGE-IT, France
- Cognium Systems, France
- National University of Ireland, Galway, Ireland
- Ecole Polytechnique Fédérale de Lausanne, Switzerland

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 NEPOMUK

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- Forschungszentrum Informatik an der Universität Karlsruhe, Germany
- L3S Research Center, Hannover, Germany
- Institute of Communication and Computer Systems of the National Technical University of Athens, Greece
- Kungliga Tekniska Högskolan, Sweden
- Università de la Svizzera Italiana, Switzerland
- Irion Management Consulting GmbH, Germany

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NEPOMUK