

Editor's Corner



The launching event of the second wave of Living Labs in Brussels on 17 October 2007 has most probably been a very important milestone in the construction of the European Network of Living Labs (ENoLL). On the previous day, more than 150 participants attended the Living Labs Open Innovation Community event composed of several workshops preparing the Living Labs roadmap. Both events are reported in this issue including links to interesting available material. Though, one may think that both together the European Network of Living Labs and the Living Labs Open Innovation Community would deserve to have their own regular newsletter...

Inside this fourth issue you will find an invitation to contribute to the latest 2 online surveys dedicated to collaborative barriers and enablers. There is also a very instructive article describing how the "Composite Collaborative Services", called CoCoS, operate within the CWE architecture in making the link between the Basic Service Layer and the Application Layer through the Semantic Layer.

You might be surprised by the article about the ECOSPACE collaborative tools as there is already a quite impressive list of tools. Several prototypes have entered already in the experimentation and observation phase within the various ECOSPACE Living Labs. Inside this issue, there is also an article introducing a hot topic discussion subject about the User Interface of a Collaborative Web Environment and provides a quick overview of the use of Dashboard, Widget and Blidget components.

As usually, this issue is closing with articles reporting about relevant past events. There are also announcement of up-coming events such as ICE'2008, to be held in Lisbon from 23 to 25 June 2008, where, no possible doubt, there will be specific sessions and workshops devoted to both CWE and Living Labs & Open Innovation.

Let's hope that you will enjoy reading this wiki based issue as much as the previous one which has got about 4000 hits.

Marc Pallot, ECOSPACE Newsletter Editor

On-line version:

http://www.ami-communities.eu/wiki/ECOSPACE_Newsletter_No_4

October 2007 Newsletter n°4

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Coordinator's Message



The strategy of ECOSPACE to start the first developments already in the first phase of project has lead to a number of new tool and middleware developments. Some of these developments are already in use by the ECOSPACE Living Labs. This issue of the newsletter presents some of the first developments and I hope they provide you with some inspiration about the opportunities that ECOSPACE yields for the support of your cooperation processes.

Within the next months the project will aim at a further integration of these tools towards a cooperation environment that enables users to tailor the various cooperation modules in a portal. This will go hand in hand with users during the evaluation of the tools in the Living Labs. Although some developments are still in Beta (which appears to be a natural development stage nowadays), we are happy to share our developments with interested projects and communities. Thus, if you also want to take advantage of ECOSPACE, please do not hesitate to contact us.

During the recent months, ECOSPACE has been participating to the following events:

- 5-7 November 2007, ACM Group 2007 Sanibel, Florida
- 2-5 September 2007, Mensch und Computer 2007 Weimar, Germany
- 24-28 September 2007, 10th European Conference on CSCW Limerick, Ireland
- 15. October 2007, Living Lab Projects Meeting, Brussels, Belgium
- 15. October 2007, Living Lab Portfolio Leadership Group Meeting, Brussels, Belgium
- 17. October 2007, Co-creative Research, Development and Innovation to Connect the Lisbon Strategy to People: Launch of the 2nd wave of the European Network of Living Labs, Brussels, Belgium

ECOSPACE has (co-)organised / supported the following events:

- 24. September 2007, ECSCW 2007 Workshop on Realising and Supporting Collaboration in e-Research, Limerick, Ireland
- 16. October 2007, Living Labs Open Innovation Community interactive day, Brussels, Belgium

**Wolfgang Prinz, Fraunhofer-FIT,
ECOSPACE Project Coordinator**



Survey on Collaboration Barriers and Enablers

Marc Pallot, EsoCE-NET

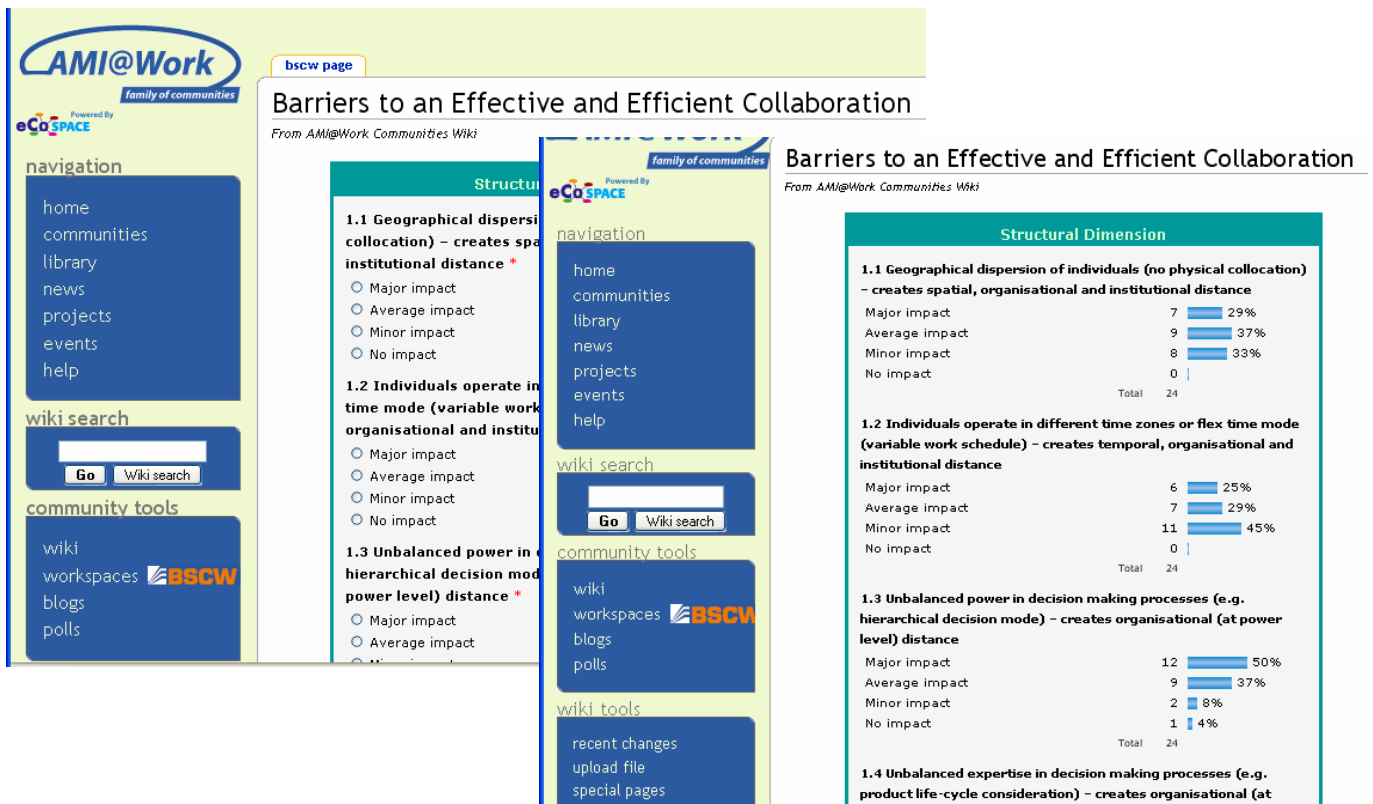


You are kindly invited to take part in the second and third ECOSPACE surveys:

- [collaboration barriers](#)
- [collaboration enablers](#)

Both are an electronic survey where responding to the eSurvey means voting into the different polls organised through the structural, social, technical and legal dimensions. As usual, it doesn't take a while to complete, based on your own collaboration experience, both eSurveys.

Thanks per advance for your valuable contribution. Resulting figures are available without to necessarily have to respond (just to avoid someone is dropping any response just to get access to the resulting figures). Furthermore, as it is done within the framework of the Wiki community under "Creative Commons", not only all resulting figures are always available but the analysis will also be available as an article (as for the previous ECOSPACE eSurvey) in one of the next ECOSPACE newsletters



AMI@Work family of communities
Powered By **eCoSPACE**

navigation: home, communities, library, news, projects, events, help

wiki search: Wiki search

community tools: wiki, workspaces **BSCW**, blogs, polls

wiki tools: recent changes, upload file, special pages

bscw page

Barriers to an Effective and Efficient Collaboration

From AMI@Work Communities Wiki

Structural Dimension

1.1 Geographical dispersion of individuals (no physical collocation) – creates spatial, organisational and institutional distance *

- Major impact
- Average impact
- Minor impact
- No impact

1.2 Individuals operate in different time zones or flex time mode (variable work schedule) – creates temporal, organisational and institutional distance

- Major impact
- Average impact
- Minor impact
- No impact

1.3 Unbalanced power in decision making processes (e.g. hierarchical decision mode) – creates organisational (at power level) distance *

- Major impact
- Average impact
- Minor impact
- No impact

Barriers to an Effective and Efficient Collaboration

From AMI@Work Communities Wiki

Structural Dimension

1.1 Geographical dispersion of individuals (no physical collocation) – creates spatial, organisational and institutional distance

Major impact	7	29%
Average impact	9	37%
Minor impact	8	33%
No impact	0	0%
Total	24	

1.2 Individuals operate in different time zones or flex time mode (variable work schedule) – creates temporal, organisational and institutional distance

Major impact	6	25%
Average impact	7	29%
Minor impact	11	45%
No impact	0	0%
Total	24	

1.3 Unbalanced power in decision making processes (e.g. hierarchical decision mode) – creates organisational (at power level) distance

Major impact	12	50%
Average impact	9	37%
Minor impact	2	8%
No impact	1	4%
Total	24	

1.4 Unbalanced expertise in decision making processes (e.g. product life-cycle consideration) – creates organisational (at power level) distance

Creating Composite Collaborative Services (CoCoS)



*Antonia Martínez-Carreras - Antonio F. Gómez-Skarmeta - Antonio Ruiz-Martínez,
University of Murcia*

Introduction

Both social and economic changes have favoured the appearance of eProfessionals as workers whose business and tasks can only be achieved using modern cooperative technologies. With the aim of providing these eProfessionals with the necessary elements in their system, there is a need of researching and developing new Collaborative Working Environments (CWEs) that improve the different activities of the eProfessionals. This is the main goal of the ECOSPACE project. As part of the research in this project, in this paper, we introduce a prototype based on Service-Oriented Architecture (SOA) and the ECOSPACE Reference Architecture described in (Peristeras V. et al). More concretely, the ECOSPACE Reference Architecture divides the building of a CWE in the following layers.

- **Basic Services.** This layer represents the set of basic/atomic services. A basic/atomic service is any kind of service which performs a functionality that makes sense in a collaborative working environment.
- **Composite Collaborative Services.** In the *Composite Collaborative Service (CoCoS)* layer, we combine basic/atomic services to build composite functionalities or orchestration of services.
- **Applications.** This layer is the set of applications which allow users to collaborate in the CWE.

- **Semantic Infrastructure.** This layer provides the necessary metadata and addresses semantic issues in Basic Service layer, CoCos layer, in Context Rules and Users Profiles.
- **Directory/Repository Infrastructure.** This layer is intended to store the description of the services (Basic Services and CoCos) and applications.
- **ECOSPACE Desktop.** This layer is on top of the Application layer and consists of a personalized front-end tool. It may act as a portal and it provides access to the other applications.

In the following section we describe the scenarios to model and the tools provided by several partners in the ECOSPACE project. After that, we explain how we have developed a prototype which cope with these scenarios and is based on Web Services standards and bearing in mind the layers of the ECOSPACE Reference Architecture.

Defining the scenario and services

Regarding the Reference Architecture described in the introduction, we have developed a prototype using different applications such as BSCW¹, Presence and Instant Messaging (IM) (Martínez-Carreras M. A. et al) and OpenLDAP², which are described below. The aim of this prototype is to

¹ <http://bscw.fit.fraunhofer.de/>

² <http://www.openldap.org/>

validate the design of the architecture proposed by means of a comprehensive example that covers the different layers of the architecture. Moreover, this prototype shows how heterogeneous groupware and applications with different purposes and developed with different programming languages, can be used to perform complex activities, avoiding eProfessionals changing from one application to another.

Therefore, we fulfil one of the objectives of the “Experts Group on Collaborative Working Environments” of the European Commission, which has the vision that “The Network” (in fact the Internet and the web of people) will become a global virtualized collaborative workplace where the contextual social exchange will be located through people-concepts connectivity (Prinz W. et als).

By means of this global virtualized collaborative workplace, workers will be able to get access to both, their individual shared workspace and groups or communities shared workspaces wherever they are, whenever they need it independent of organizational boundaries.

This exchange of information should include “common mechanisms” for the communication among different groupware systems and “common data format” for exchanging information as well (Martínez-Carreras M.A. and Gómez-Skarmeta A.).

Following SOA paradigm helps in making available interoperable and reusable services components. More concretely, the use of Web Services standards helps in creating interoperable systems by means of exchanging XML information. In this way, using Web Services standards we benefit from the usage of a common protocol for communication and services’ description (Erl T.).

Bearing in mind the abovementioned outstanding features of the SOA paradigm, we have decided that our implementation is based on the use of Web Services technologies and standards such as WSDL (Chinnini et al), SOAP (Gudgin M., Hadley M., Mendelsohn N., et alts) and BPEL (Alves et al).

One clear example of collaborative workplace of this kind is the following. Imagine workers cooperating in teams, in the same or different organization, and each member need to notify the team members about the end of his/her work, such as the uploading of a document in a shared space. Each member would prefer to be notified by means of different mechanisms. Thus, an efficient and “intelligent” collaborative system should include the notification preferences of each member, for example the kind of system to receive the notification.

Other feature dealt in this integration is the use of “intelligent” scenarios which allow taking decisions based on the user context rules, that is to say, the rules which define how to act in the environment. The use of these rules in the way users work in electronic environments is also known as “Ambient Intelligence” (Ducatel et al). Considering the technologies to manage decisions according to these rules, we use Semantic Web Rule Language (SWRL) for describing the rules, Ontology Rule Editor (ORE) (Muñoz A. et al) tool for editing the rules and Jena³ inference motor for helping in taking a decision.

Previous to describe the implementation of the architecture, we are going to describe briefly the existing systems and legacy applications we use in our prototype.

- BSCW (Basic Support for Cooperative Work) is a 'shared workspace' system which supports document uploading, event notification, group management, forums, polls, and much more. It constitutes a good basis for exchanging information among the different co-workers of an organization. This system has been developed using Python language.
- OpenLDAP is an open source implementation of Lightweight Directory Access Protocol (LDAP), which is an application protocol for querying and modifying directory services running over TCP/IP. This implementation helps us in storing personal information about users or workers inside an organization.
- ORE (Ontology Rule Editor) is an open-source Java-based ontology rule editor tool. By

³ <http://jena.sourceforge.net/>

means of ORE we can define rules based on ontologies about the users' preferences. In principle, ORE can help us in defining and storing the rules. With the aim of obtaining a decision, we need to use an inference engine. One of the important features of ORE is that it can use whichever inference rule engine and rule language to work with.

- Jena is a Java framework for building Semantic Web applications. It provides a programmatic environment for RDF, RDFS and OWL as well as it includes a rule-based inference engine.
- The Presence and Instant Messaging infrastructure is based on a tool and a set of services developed in the ECOSPACE project. This new tool and the services have been developed in Java and are based on WS-Messenger (Huang Y. et al.) for the delivery of messages. It provides a tool for exchanging messages between the connected users in the system, and a service for maintaining a list of the online users and their status (online, away, disconnect).

More concretely, the scenarios implemented in the actual version of the prototype are the following:

- a) NotifyUsers: This activity aims to notify a list of members about important events. The notification considers the users' context rules stored in the system. Therefore, members who have context rule such as "If I'm online, notify me by IM" will receive notification in their IM. If not, the notification is sent by e-mail.
- b) Upload Document and Notify: Upload a document in a shared workspace, and notify team members about this event

Creating Composite Collaborative Services

In this section, we are going to describe the implementation of the prototype following the design of the ECOSPACE Reference Architecture. More precisely, in the described prototype we deal with Basic Service Layer, CoCos Layer, Application Layer and the Semantic Layer.

Considering the Basic Service Layer, it constitutes the ground for the rest of Layers in the architecture. As it is described in the Reference Architecture, CoCoS are based on the composition of Basic Collaborative Services. With the aim of providing interoperable services, we have based the development of these services on WSDL for the description of their functionalities and parameters.

Regarding the services we have integrated the following in the current prototype:

1. ContentManagement Service: This service provides functionalities for creating documents and folders, deleting documents and folders, getting information about users and documents in the shared area.
2. Directory Service: This service allows the retrieval of information from a directory server where users' profiles are stored.
3. PresenceAndAvailability Service: This service provides the information about the online users and their status in the IM tool.
4. InstantMessaging Service: This service makes available functionalities for sending messages through the synchronous infrastructure developed in the project.
5. Context Information Service: This service allows getting information about the users' rules. These rules are based on the information stored using ORE.
6. E-mail Service: This service provides the necessary functions for sending e-mails.

Several of these services are based on existing systems or legacy applications such as BSCW, OpenLDAP, IM and ORE. In order to integrate the existing software in this layer we have used "wrappers". The major aim of a wrapper is to translate the information from the architecture to the application it models, and vice-versa. More concretely, the wrappers are managed as web services in our architecture, thus the WSDL provided refers to the wrappers. This kind of communication is depicted in the lower part of the Figure 1.

Bearing in mind the existing software, ContentManagement and E-Mail Services are built on the top of BSCW, the Directory Service is built on the top of OpenLDAP, Presence-And-

Availability and Instant-Messaging Services are built on the top of the Presence and Instant Messaging infrastructure. The Context Information Service is a new service which includes the use of ORE and Jena.

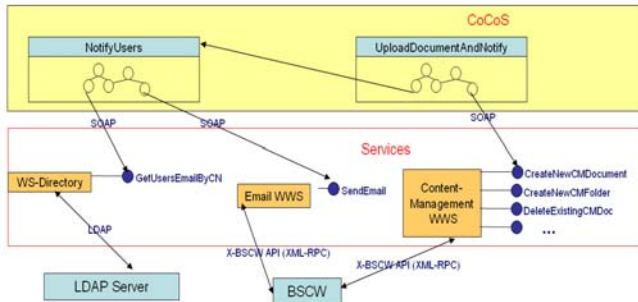


Figure 1: Relationship between the service layer and the CoCoS layer. This figure also depicts the relationship between wrappers and legacy applications

In several collaborative working environments, the definition of complex tasks is required. These tasks may involve the execution of several Basic Collaborative Services. More concretely, in the architecture these complex tasks are covered in the CoCoS layer. What is more, CoCoS may use also existing CoCoS to describe a more complex task. For example, in the case of Upload Document and Notify CoCoS, the process of notification is done using the NotifyUsers CoCoS.

With the aim of providing the description of activities of this kind, we have use BPEL for the description of CoCoS due to its maturity and the fact that the two scenarios described in section 2 are tasks which follow a specific flow of information.



Figure 2: Screenshot of the Upload a Document and Notify CoCoS. In this screen we can appreciate the three steps to retrieve information

Regarding the NotifyUsers CoCoS, it uses the PresenceAndAvailability, Context Information, InstantMessaging, Directory and E-mail services. First, this CoCoS gets the users' status, and for those users who have online status and have a rule indicating that they prefer to be notified by IM, the CoCoS sends the notification by IM. Otherwise, the notification is sent using e-mail, considering the information stored in the OpenLDAP server.

The second scenario, Upload Document and Notify CoCoS uses the ContentManagement service and the NotifyUsers CoCoS. Thus, the first step in this CoCoS is uploading a document in the system and then executing the NotifyUsers CoCos. The relationship between these CoCoS is depicted in Figure 1.

As already discussed, not only does the CoCos Layer use the Basic Service Layer but it also makes use of the Semantic Layer by means of the users' context rules.

With the aim of making available the CoCoS to users, we have developed a graphical user interface (GUI) using the AJAX ZK⁴ framework. In this way, the application shows a set of forms to retrieve the necessary information for the execution of the CoCoS.

Figure 2 depicts the necessary forms in the Upload a document and Notify CoCoS.

⁴ <http://www.zkoss.org/>

Conclusions

Through this prototype we have shown how we have coped with several of the layers described in the Reference Architecture. In this way we have solve how manage complex activities which can enrich and favouring the work of the e-Professionals.

More concretely, the use of Web Services constitutes the ground for the building of these complex tasks. The use of XML grammar favour the interoperation between software developed with different programming languages.

References

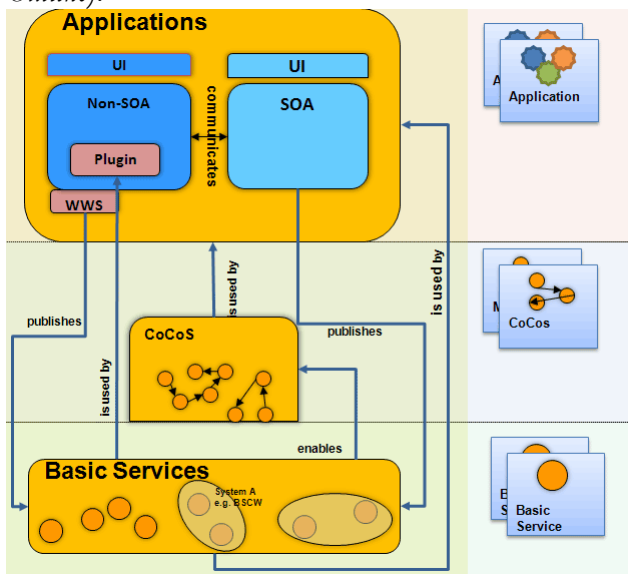
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On-going ECOSPACE Tools Development

Michael Vonrueden, Fraunhofer FIT



The tool development of the ECOSPACE-Project emphasises the broad range of different aspects of collaborative working environments and the enormous competencies bundled in the consortium. Although all presented tools differ in the way they support collaborative working, each is designed to fulfil the requirements of the ECOSPACE-Architecture (see Figure *Architecture Outline*).

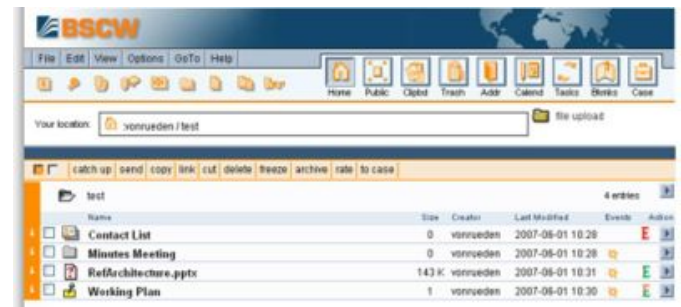


The tools are ensuring the availability of so called Basic Services (see bottom of Figure *Architecture Outline*) on the one hand and the usage of third-party Basic Services on the other hand. Furthermore each toolset uses or specifies a composition of Basic Services (CoCoS) to comply to the goal of an action related focus of a collaborative working situation.

The following collaborative tools are developed within the ECOSPACE project:

Expectation Awareness

Expectation Awareness - is a new approach in the scope of task-management within cooperative working environments that will be experiment with in ECOSPACE.




User can formalize a private expectation about a user-behaviour in relation to a shared artefact (e.g. Document, Folder, etc.)

This approach enables a user to express an expectation about what other users are supposed to do with a shared document or shared folder (e.g. read or creates a document). The tool supports the scheduling of an expectation (e.g. a document should be read by the end of month), the indication or hiding of an expectation to the co-workers (e.g. a co-worker can see if someone expects him to do something). Furthermore it allows a sophisticated addressing of an expectation to multiple groups, roles or single members. As an extension of the BSCW the expectation-

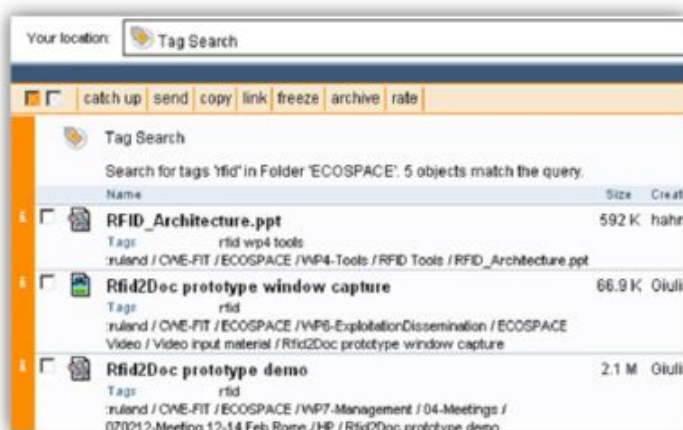
awareness-component is completely integrated into the Web-GUI and enables the user to attach and define expectations about the future use of a shared object.


Development status: Prototype, BSCW required
Category: Team Setup, Project

 Watch the recorded demonstration to ADD and Fulfil an Expectation: [Part 1](#) and [Part 2](#)

Document Tagging

For documents stored hierarchically in a big repository tagging becomes more and more important to find and view the documents in a different context. In particular in collaborative environment it is import. Members, who work on a special topic, normally store their documents in a special sub tree of the document hierarchy, which is in this case their current context. If now all documents in the repository will be tagged, the members easily can find documents of other sub groups, which are related to their work.




 Implementation of the popular Web2.0 tagging-paradigm in relation to artefacts like files and folders

Tags in BSCW are a list words, which are divided by blanks and each word only have lower case letters.

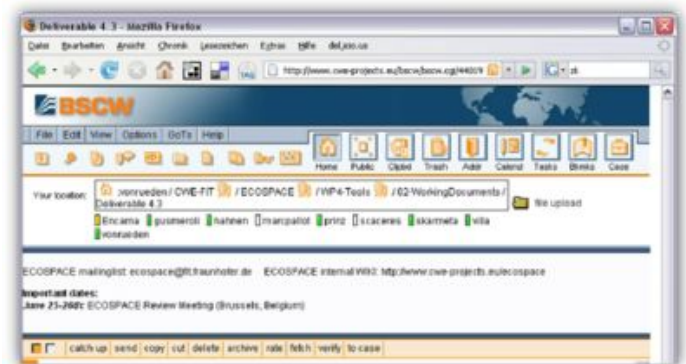
On adding, replacing or revising of a document tags can be added or changed. Further on tags are also allowed on folders and blog entries. They can be changed with the BSCW action Change attributes.


In a folder listing tags are shown in the description area of a document and linked with a tag search. It searches for objects in the current workspace, which have set the same tag and displayed them as BSCW search result. This gives a new view for documents located in different folders.

Development status: Fully Usable, BSCW required
Category: Knowledge Discovery, Personal Workview, Activityspace.

 Watch the recorded demonstration to ADD and SEARCH Tags: [Part 1](#) and [Part 2](#)

Workspace based Presence Awareness








 Combination of Shared Workspace and Instant Messenger, that provides availability information of different users in a workspace

To extend the asynchronous shared workspace system BSCW by synchronous component - the online status of the members in a workspace - integration with the presence and instant messaging system Post-@ Communicator was implemented. Here BSCW connects to a Post-@ server to get the presence state of the members. On the other side the Post-@ Communicator shares the BSCW user database and imports

BSCW member lists, such as the personal BSCW address book or the members of special BSCW workspace groups.

The Post-@ Communicator defines the following presence states:

-  available and active
-  recently active
-  inactive
-  unavailable
-  don't disturb

 Presence status

BSCW shows these states of members of the current workspace as a kind of toolbar below the navigation line. By clicking on a user name one can send this user an instant message. The toolbar itself can be toggled by the display states: Hide (don't show the toolbar), Show online (show only members which are connected to the Post-@ Server, i.e. not unavailable) and Show all (show all members of the workspace).

*Development status: Prototype, BSCW & Post@ required
Category: Synchronous Communication.*



Watch the recorded demonstration of [Workspace based Presence Awareness](#)

Individual, Group and Community Blogging

The publicity of the web 2.0 is deeply linked with the success of blogs. Blogs enable authors to publish articles to a wide audience without the need to share a direct connection between author and recipient. The communication is mainly based on the usage of RSS to receive the articles of a special author or an author-group. This XML-based message-protocol enables the user to stay informed about recent updates of a blog. The simplicity of use, like the passive notification service or the simple subscription-mechanism, permits a dynamic and user-driven information

portfolio which incorporates a high rate of information-sources.



Integration of blog-software as own artefact-type in Shared Workspaces-System

The BSCW-Blog supports the personal distribution of information via a flexible communication channel. The BSCW-Blog-Functionality enables every workspace-user to create an own blog, with a custom topic and – if needed – a limited accessibility of other users. As a recipient of blogs, each user can comment any article of a blog, with respect to the access-rights. Based on RSS as an information-transport infrastructure, the user is enabled to produce and consume a highly personalized information-portfolio in his or her shared workspace.

*Development status: Usable Beta, BSCW required
Category: Personal Workview, Activityspace.*



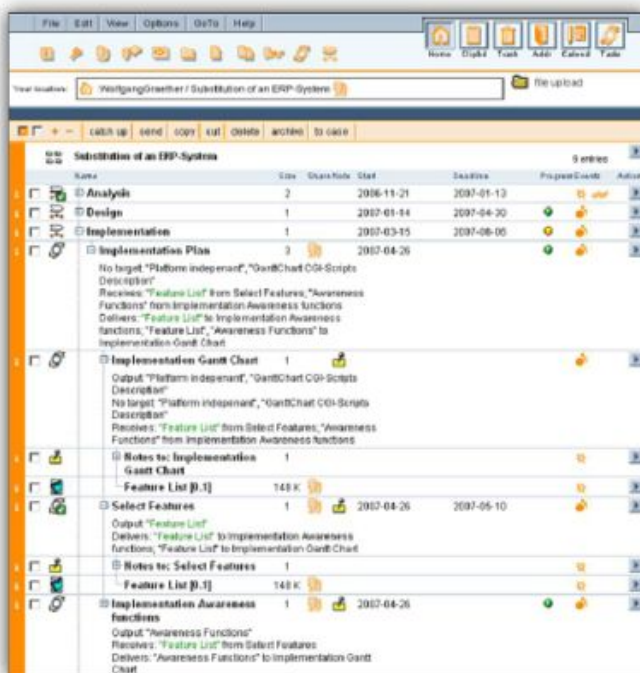
Watch the recorded demonstration of Blogging: [Part1](#) and [Part 2](#)

Usage & Dissemination: Already used by a number of projects either as internal project blog and/or single- and multi-author public blogs, including the ECOSPACE Professional Community Living Lab Projects, 14plus (Internal), Frascati LL (Public

Blog) and members of the Living Labs Open Innovation Community.

Task Management

Today's coordination support focuses mainly on management of artefacts such as documents of different types but provides less assistance for weakly structured processes performed by eProfessionals in distributed teams.



Extension provides full functional task-management system in relation to shared documents and resources

Workflow management systems support structured processes on top level, but they are too rigid for inter- and intra-team coordination of agile processes.

On the other hand CSCW systems offer flexible tools, however, a lot of coordination and monitoring activities are left to the user.

BSCW Task Management supports self-organized cooperative task management and group awareness by combining approaches from workflow technology with CSCW methods.

The BSCW task management offers flexible means to support coordination. The support ranges from simple to-do lists over hierarchical work structures to complex work breakdown structures.

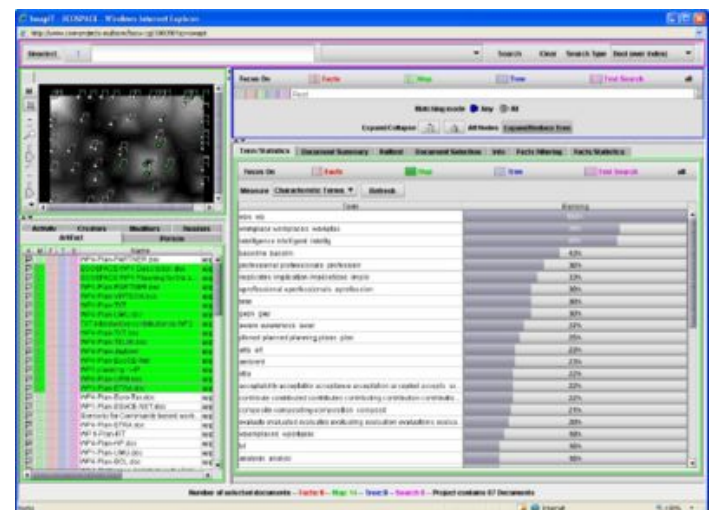
Task-oriented awareness, which informs about the state of artefacts, e.g. tasks and deadlines, is provided in different shapes to facilitate coordination of processes.

Development status: Usable Beta, BSCW required. Category: Project Management, Personal Workview, Activity Space.

Watch the recorded demonstration of [Task Management](#)

SWAPit

SWAPit Application for Shared Workspaces - SWAPit is an interactive tool for visualization and exploration of the contents of shared artefacts as well as user activities in cooperative workspaces.



Application provides (visual) retrieval functionalities for measuring the involvement of a user in respect to a special topic

The tool enables a user to investigate relationships between participants of shared workspaces, and to discover topics people are working on. SWAPit is designed to support overall awareness of eProfessionals during their daily work. Presumably, project and information managers may benefit

most from the enhanced overview of the actual progresses in the project, going beyond traditional awareness mechanisms.

A map of artefacts and topics is displayed by a cluster map which represents similarities of contents. Actors and folders are represented in a tree (over-)view. A table shows artefact metadata. Three activity tables (create, modify, read events) list time and actor for respective activities. Interactive tools comprise facilities for searching, term and data statistics, and time filter. The views are coordinated according to the natural associations within the data: Artefacts have metadata (1:1) and belong to categories (m:n), actors work with artefacts at certain times (m:n:k), and so on. SWAPit's views and the interactive selections within are colour-coded in order to allow specifications in multiple access dimensions at a time.

*Development status: Prototype, BSCW required.
Category: Knowledge Discovery, Personal Workview,
Teamsetup, Project Management.*

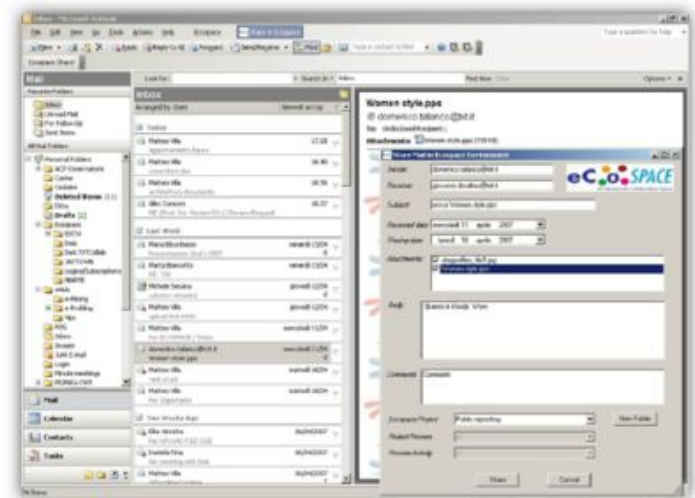


Watch the recorded demonstration of [SWAP-IT](#)

Sharing Support

TXT Sharing Support is a new tool, (composed by a set of CoCoS, Services, ad-hoc plug-in and user interfaces), featuring sharing support functionalities based on the concept of user-centric interoperability.

The tool will help users to exchange knowledge and files in total transparency, based on their collaborative context, without taking care of the system or application they are using and irrespectively of the syntactic and semantic heterogeneity in which such knowledge has been represented and formalized.



Tool transforms Documents in application independent formats (e. g. MS-Word to XML); makes these online available and provides mechanisms for sharing these documents

In fact the tool is designed to support data-interoperability services, meaning that shared data can be automatically transformed according to the each user's preferred format. In this way, the documents and messages exchanged within a project will no longer be scattered over the attachments of emails in email folders, the local disk and a shared file system or a shared workspace.

TXT has designed and implemented two different plugins to demonstrate these functionalities: an Outlook 2003/2007 plug-in, to share e-mail attachments together with email text, and a Microsoft Explorer extension, to browse the shared repository in a windows-like style and accessing shared files and their meta-information.

Outlook Plugin: This plug-in creates a new toolbar in MS Outlook, which allows users to select one or more e-mail attachments to be shared in ECOSPACE and to provide context information. Thanks to a pop-up form activated by the "ECOSPACE Share" button, the user is able to choose the file(s) to be shared and to add metadata in a semi-automated way. For example, the email body, as well as the sender, receivers, etc.. are information that are part of the metadata.

Explorer Plugin: This plug-in for Microsoft Explorer allows users to access the shared repository as it would be a virtual drive mounted on the local machine, so they are able to interact with their own shared files and associated metadata, wherever they are, in the simplest way: resources will be shown according to the user collaborative context. The virtual drive appears under “My Computer” resources, labelled as “ECOSPACE Environment”, and provides access to data (optionally transformed according to the user's format) and the associated meta-information (i.e. the email body). Data are organised according to the user's collaborative context, and can be copied, updated, uploaded, moved, etc...

Data Transformation Services: The tool offers a standard interface to generic data-transformation services (which can be supplied by third parties), and it is able to invoke them according to the user's context - meaning that the same file can be made available in two different formats for two different users.

Development status: Usable Beta.
Category: Communication & Collaboration, Knowledge Discovery.



Watch the recorded demonstration of *Sharing Support*: [Part 1](#) and [Part 2](#)

Teambuilder & Evaluator Tool

TXT “Team Builder and Evaluator” is a new web-based tool, composed by a set of user interfaces, ontology and an inference engine, which supports the creation of working- or community-groups or the evaluation of user-skills or -capabilities.

The tool helps community administrators or people like project managers to set-up a working group, whenever a new collaborative project or situation needs to be addressed. This is done by suggesting the most suitable people for a certain activity, comparing the (situational) abilities with the requested ones.



Supports the retrieval of adequate manpower in respect to the requirements of a project

TXT has studied and achieved two different groups of functionalities: a team administration instrument, where group administrators can create new teams by selecting the competencies and skills levels required, and a team-members instrument, where single users can update their own abilities profile and give marks to other known users.

Further research aims at extending this tool in order to semi-automate the process of updating people's competencies depending on the activities they perform in collaborative situations.

Development status: Usable Beta.
Category: Team Setup, Project Management.



Watch the recorded demonstration of [Teambuilder & Evaluator Tool](#)

Collaborative Workflow Environment

TXT Polymedia® Workflow module is a web-based and distributed platform for project management in collaborative environments: it supports the creation and execution of complex workflow-based projects and processes, enabling the management of the working groups and their allocation on the various tasks.




*Development status: Usable Beta.
Category: Sync. Communication, Personal Workview, Activityspace.*

Watch the recorded demonstration of Collaborative Workflow Environment: [with audio](#) and [without audio](#)

AJAX Application for CoCoS

"Upload Document and Inform User". An important requirement of ECOSPACE is to develop and provide a higher level of applications that make use of both CoCoSes and web services in order to make easy the day-by-day work of people. Besides, these applications should offer a user-friendly interface to improve user experience. An AJAX-based application has been developed which represents a way how to use the concept of ECOSPACE-CoCoSes.

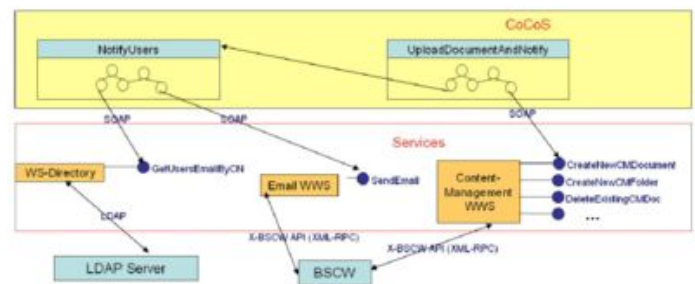
 Application of CoCoS which combines a workflow with a chat and video application


Project managers and team members can dynamically contribute to the execution of the various steps of the workflow, having access to shared documents and they are supported by collaborative functionalities, such as notes, a shared calendar and agenda, and personal messages.

This approach is based on asynchronous collaboration: within the context of ECOSPACE project, this tool has been extended in order to support synchronous collaborative functions:

- It has been integrated with the Post-@ instant messaging (by JayTown), enabling the possibility for the users to chat in any moment of the execution of the collaborative tasks of their workflow.
- The integration of the Marte (by UPM) video-conferencing system allows users also to have video sessions linked to their collaborative context (i.e. to have a video conference only with those users involved in a specific task, rather than all users involved in a specific project, etc...).

The resulting environment can be defined as a "Collaborative Workflow Environment".



 Application performs exemplary a common working task. Provide a created document and inform co-workers about the new document

The application is based on ZK-Ajax framework. The framework is intended to offer resources and interface to simplify the development of AJAX-driven web applications by providing functionalities to make easy requests to the server or reducing the delay in each request.

As web application, the access to this application is done via a web browser. The user has to provide his/her username and password in order to be identified, and then allow to the CoCoSes to work with his/her workspace, calendar, etc.

*Development status: Prototype.
Category: Sync. Knowledge Discovery.*



Watch the recorded demonstrations of *AJAX Application for CoCoS*:

- [Upload a Document and Discuss it in a Videoconference](#)
- [Upload a document and Notify](#)
- [Create an event and Notify](#)
- [Upload a document and Notify with semantic](#)

Synchronous Collaborative Tool

Collaborative software is designed to help people involved in a common task to achieve their goals.



Tool provides synchronous communication functions for two or more people. These functionalities will be used for Webservice-purposes in the ECOSPSPACE

Collaborative systems are the basis for computer supported cooperative work. These systems are divided into: asynchronous, where the points of interaction are separated by relatively long periods of time, and synchronous, where the interactions are simultaneous or separated by short periods of time.

Synchronous collaborative systems are not nearly as prevalent as asynchronous. Applications devoted to synchronous collaboration are

developed with the aim of allowing multiple users to work cooperatively in real-time.

The main difference between synchronous and asynchronous collaboration is that synchronous systems require users to be connected at the same time to allow collaboration among them.

These applications include: instant messaging, chat, shared whiteboards, etc.

Development status: Prototype.

Category: Sync. Communication, Activity Space.



Watch the recorded demonstration of *Synchronous Collaborative Tool*

Virtual Calendar with Presence Information


Virtual Calendar with Presence Information is based tool for managing calendars from different sources, which enables the composition of arbitrary calendars from various sources. The customized orchestration of different calendar enables the improvement of team management- and collaboration-purposes, which will be extended by the possibility to define presence based events and automatic IM based notifications in a calendar.



Application provides functionalities to combine different calendars and calendar-sources

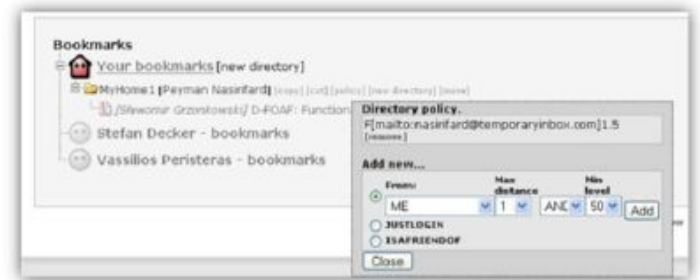
The “Virtual Calendar with Presence Information” is a Web 2.0 based tool for managing calendars from different sources. An eProfessional will be able to compose arbitrary calendar from various sources. A new way of team management and collaboration will be possible with the calendar orchestration capabilities. Each team member will be able to construct the best fitting calendar for its own purposes. Besides the calendar orchestration capability, the eProfessional will be able to define presence based events and automatic IM based notifications. One weakness of the Web 2.0 based applications is the lack of offline support e.g.: the currently available Web 2.0 based calendar application can be used only if the user has network access. This could be a very strong retentiveness from using Web 2.0 applications. To overcome our solution, there will be a Level 2 application. The eProfessional will be able to manage the Web 2.0 based virtual calendar offline. After coming online, the application will automatically synchronize the state.


Development status: Prototype.
Category: Team Setup, Personal Workview, Activity Space.

 [Watch the recorded demonstration of *Virtual Calendar with Presence Information*](#)

Role Based Access Control Standard with D-FOAF

D-FOAF (distributed FOAFRealm) is a distributed identity management system that utilizes social/professional networks to enable role-based access control. D-FOAF uses the idea that information inherent in social/professional networks can be utilised to provide community driven access rights delegation and distributed authorisation. D-FOAF enables e-Professionals to relate themselves to other people and set a numerical trust level to each related person, which can be also used in access control.




 *Based on FOAF, this tool supports the construction of trusted people-networks based on weighted person to person relations*

D-FOAF (distributed FOAFRealm) is a distributed identity management system that utilizes social/professional networks to enable role-based access control. D-FOAF uses the idea that information inherent in social/professional networks can be utilised to provide community driven access rights delegation and distributed authorisation. D-FOAF is based on FOAF which is an ontology for describing people. Currently, it supports the “foaf:knows” relationship that enables e-Professionals to connect themselves to their friends using this property. In addition, they can set a numerical trust level to each friend that can be also used in access control. In other words, distance and trust level are two key elements in D-FOAF.

Current version of D-FOAF has been tested within a semantic digital library framework which is called JeromeDL at DERI Galway. This library allows users to upload and share different documents and resources like articles and e-books. The presented snapshots in following sections have been taken within this test framework.

Development status: Prototype.
Category: Team Setup.

 [Watch the recorded demonstration of *Role Based Access Control*](#)

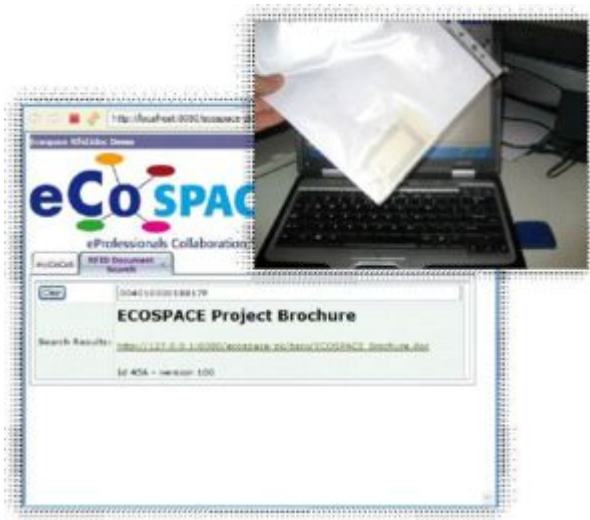
RFID2Doc

This tool is used to bridge the gap between physical documents and their digital representation, and position itself inside the ECOSPACE project both as tool which can be used directly or integrated inside an application, and as one supplier of information for the Distributed Document Context (described in the next section).

The primary goal of Rfid2doc is the automatic recognition of a physical printed document, allowing the user to gather extended information regarding the document itself (e.g. the URL of the digital version of the document) and the history/evolution of the document before and after it has been printed (e.g. available versions, change history, etc.)

Development status: Prototype.

Category: Knowledge Discovery, Personal Workview.



Watch the recorded demonstration of [RFID2Doc](#)

Toolset (RFID-Reader, Document-Management-System) enables retrieval of meta-information of printed documents

Dashboard, Widget and Blidget

Marc Pallot & Rudolf Ruland



What a User Interface (UI) of Collaborative Working Environments or Collaborative Web Environments (CWE) should look like? Should it be designed for an individual user or for a group of users whatever is its size from a small project team, also known as "team collaboration", up to a very large community, also known as "mass collaboration"? Should it be more socially oriented like Web2.0 applications? What about using dashboard, widget and blidget components in order to enable users to design their UI by themselves?

- First of all, users are requesting intuitive and flexible UI that they can easily personalise according to their needs.
- Secondly, it seems that users do prefer intuitive web application UI rather than more complex desktop application UI.
- Thirdly, the web is offering an open (standard) environment while desktop is by nature a closed (proprietary) environment.



iGoogle dashboard example

Nowadays, the "dashboard" type of UI is becoming more and more popular as it provides

users an overview of what's going on and lets users define the content in selecting the appropriate "widgets" needed for a specific context. Looking at the iGoogle dashboard example figure, it is obvious to see different types of widget corresponding to different natures of content. The "public" ones, such as meteo, date & time, dictionary and TV program and the "professional" ones like getting access to specific project application data as the example shown in the figure with projects and blogs events extracted from BSCW (shared workspace).

[CWE NewsBlog blidget](#)

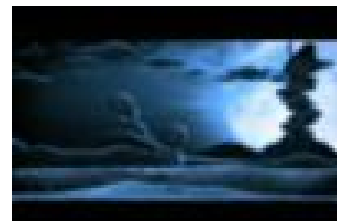
A lot of "public" content type widgets already exist and lot of people are developing new ones every single day that are shared and re-used by many other people. At the opposite, the "professional" content type widgets still need to be developed like the BSCW widget shown in this iGoogle dashboard example. For sure, the level of difficulties to develop a widget is not the same depending on its content type and targeted functionalities.



The easiest way to start playing with widgets is to visit, for example, the WidgetBox website which has an impressive widget gallery of various kinds of widget and to re-use some of them that you

may find the most interesting. There is a preview function which is playing the widget. Then, the easiest way to start creating widgets is to build-up a blog widget, also called "blidget", which is a particular widget dedicated to displaying the blog entries through the RSS feed mechanism. The most advanced level is to build-up your own widgets but, up to now, one needs to be able to play with the JavaScript programming language. All those widgets, as soon as they are published into the widget gallery, are usable by anyone onto his community websites and webpages. Anyone can very easily re-use those existing widgets or blidgets onto a widget panel (dashboard) using either "drag and drop" or through a more traditional "copy and past" of the widget code into a HTML page.

- widgets executable on all platforms (i.e. NetVibes is proposing the Universal Widget API - UWA)
- a common API to access web application data like the "OpenSocial" initiative launched recently by Google (Open Social is a set of social networking application APIs that Google is encouraging all social networks to adopt as their application architecture) for accessing social-network data whatever is the service provider (i.e. Orkut, FaceBook, MySpace, Blogger, linkedIn).



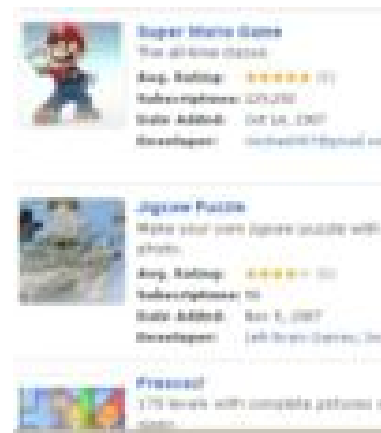
[!\[\]\(699fce369c645530d9ea4f6be4fab9f8_img.jpg\) Webergence Blog blidget](#)

Here are recently created two examples of blidget (just click on the picture and you will see a preview of the blidget). One is about the "CWE NewsBlog" (an ECOSPACE collection of news related to CWE); the other one is Marc's "Webergence blog" and one special widget encapsulating a video of a singer having the same family name posted on YouTube.

[!\[\]\(48cbc4d844241af1843ee6dbfb122086_img.jpg\) Learning to breathe YouTube video Widget](#)

There will be plenty of opportunities for follow-up articles on this subject....and why not launching the "OpenSpace" initiative for accessing Shared Workspace data (i.e. objects, events, owners) whatever is the service provider (BSCW, SharePoint).

Don't hesitate to take a look at the widget gallery on [widgetbox](#) or [widgepedia](#) where you will find plenty of great game widgets and other widgets designed just for having fun...



[!\[\]\(56042c2ab25e94bc788127770e20389c_img.jpg\) Widget Gallery on WidgetBox](#)

For sure, there are still remaining questions/aspects to be further discussed such as:

- authentication within a widget to make sure that one can get access to data from his own restricted environments

ECSCW'07 Limerick, Ireland 24-28 September 2007

Wolfgang Prinz & Steffen Budweg



Monday, 24 September 2007

Realising and Supporting Collaboration in e-Research

During this years ECSCW, Alex Voss, Gary Olson, Meik Poschen and Steffen Budweg have been co-chairing a follow-up workshop on Collaboration in and for eResearch. The event was a follow-up workshop to the CWE-VRE workshop in Edinburgh in May 2007 (also with participants from ECOSPACE). Organized with a number of colleagues from the UK, US and Germany and participants from Europe, the US and Canada the workshop explored various issues and mutual benefits in bringing together both CWE/CSCW and eScience/eResearch experiences and bodies of knowledge.

From an ECOSPACE perspective the workshop brought insights and results especially for the WP5 Research Community Living Lab and is expected to inspire more follow-up activities.

Tuesday, 25 September 2007

- **Workshop on Web 2.0 and CSCW**

Michael Koch (UniBW München) and Wolfgang Prinz (Fraunhofer FIT, ECOSPACE) organised a workshop on the relationship between CSCW/CWE and Web 2.0. Results of the workshop can be found in Michael's blog.



ECSCW'08 photo1

Wednesday, 26 & Friday, 28 September 2007

- **Conventions and awareness**

Today Carla Simone (Univ. Milano Bicocca) presented an interesting paper on conventions and awareness that aims at linking the provision of awareness information with cooperation conventions. This research confirms our approach as it is closely related to the expectation awareness concept that has been implemented in BSCW in the context of ECOSPACE.

- **Conflict Detection and Resolution in Asynchronous Software Development**

Presun Dewan (Univ. North Carolina) and Rajesh Hegde (Microsoft Research) present an interesting approach to resolve version conflicts that occur in

distributed software development. It is based on an automatic notification about potential conflicts based on an observation of the current user activities in distributed software development environments. The notification mechanism is combined with synchronous communication tools and automatic watch-daemons such that users can resolve the conflicts immediately or at a later stage.



 ECSCW'08 photo2

Although this application area is slightly different from the ECOSPACE areas, the presented approach has relevance for our concepts on integration of different shared workspace systems, as well as the support for online/offline work on shared documents.

- **Activity Centric Aggregation based on Tagging**

Michael Muller (IBM research) presents an approach to aggregate activity relevant data based on a tag search. It allows the collection of information (tasks, documents, bookmarks, etc.) into an "activity", based on the tags associated with the objects. An activity can be a document, a task, or a person. This research is part of IBM's work on activity centric computing and it fits very nicely with the ECOSPACE concept of an activity

space. The evaluation of the system has shown that consistent tagging is essential to make the approach successful. Thus Michael suggests research in tag quality metrics. It also raises the question if we need a folksonomy or taxonomy to make such an approach successful.

Related sidebar systems are: Microsoft Side Show and Vista, Desktop Sidebar, Google Sidebar. Related systems based on implicit query by user activity: Watson, Dashboard, Task-tracer.

Even more Tagging related work was presented by Michael Muller during the poster sessions. Abstracts of the posters presented can be found [here](#)

- **Virtual Office on Move**

Dr. Yu You and Panu Åkerman from the Nokia Research Centre in Tampere, Finland were presenting a poster about their Virtual Office Program. Their aim "is to explore new mobile technologies and architectures and leverage web technologies to enable smooth and ad-hoc collaboration and office work for enterprise and normal users with their PCs and mobile phones."

Amongst their main research areas are unified communications in unified collaborative places, activity awareness, the development of new workplaces UI including collaborative interfaces as well as context-issues.

- **Past and Future of CSCW**

ECOSPACE was represented in a panel on the past and future of CSCW by W. Prinz. A short summary of this panel can be found in this [blog](#)

Living Lab Events, Brussels, 15- 17 October 2007

- **Living Labs Open Innovation
Community interactive day**



✉ *Roberto Santoro*

On Oct 16th, more than 150 people from the Living Labs Open Innovation Community got together in a series of interactive workshops, to share experience, look into the future, and get to know each other.

We have addressed 3 challenges for mobilizing Europe, become self sustainable and develop collaborative ICT as rich as to provide an experience close to the ones of those live interactive workshops. ECOSPACE is trying hard...

- Policy, Business Models & Sustainability. Chair: Alvaro de Oliveira & Roberto Santoro
- Users, Buyers, Citizens as Drivers. Chair: Veli-Pekka Niitamo
- ICT Research & Development: Results and Future Needs. Chair: Mikael Börjeson



✉ *View of the Living Labs Open Innovation Community, Interactive day, Brussels, 16.10.2007*

In the session I have chaired on sustainability, I have been very pleased to learn that the Community is seeking to "institutionalize" the movement, by giving it a legal structure and is

even ready to pay some membership fees to contribute to the foundation of an open innovative Europe.

- **Launch of the 2nd wave of the
European Network of Living Labs**



✉ *Steffen Budweg*

The last day of the Brussels Living Lab events dedicated to "Co-creative Research, Development and Innovation to Connect the Lisbon Strategy to People" was opened by the welcome address of Ulf Dahlsten, Director of 'Emerging Technologies and Infrastructures Applications', DG INFSO, European Commission and Luis Magalhães, President of the Portuguese Agency for Information Society, followed by panel discussions including company representatives from SAP, Nokia and IBM Europe.

With 32 new Living Labs joining the European Network of Living Labs, the network now consists of more than fifty members from all over Europe. Together with the Frascati and Knowledge Workers Living Labs as members from the first wave and the newly joined Virtual Innovation & Research Cooperation Lab, ECOSPACE continues the established base for cooperation and strong relations to these European Network activities.



✉ *Carlos Zorrinho, National Coordinator for the Lisbon Strategy and the Technological Plan, Brussels, 17.10.2007*

All presentations are available [here](#)

Up-Coming Events

ICE'2008 Lisbon, Portugal, June 23-25 2008

2008 Conference theme: "*A New Wave of Innovation in Collaborative Networks*"



[14th International conference on Concurrent Enterprising](#)

Call for Papers (submission of Extended Abstracts)

The Organising Committee invites high quality papers to be presented at this premier international event on Concurrent Enterprising which includes among other areas: Concurrent Engineering, Collaborative Environments, Front-End Innovation and Product Concepts, Interoperability for Networked Businesses, Living Labs for Innovation and Regional Innovation Systems, Tools and Methodologies to support Collaborative Innovation (see the full list of topics on the Cfp).



[Download the ICE2008 Call-for-Papers \(PDF format\)](#)

Submissions are invited on substantial, original and previously unpublished research in the topics of the conference. This includes, but is not limited to:

- Theoretical research papers

that provide new concepts for the design and operation of the Concurrent Enterprise.

- Empirical evaluations and qualitative case studies that develop new insight into the behaviour of the Concurrent Enterprise.
- System design and development papers that go beyond the pure description of systems and give insight into theory and effectiveness of the approach.
- Verification and validation papers that evaluate the application of CE solutions.

Conference papers will be selected in a two step refereeing process:

- For the first step authors are requested to submit an extended abstract, 1200-1500 words, for blind refereeing by two independent reviewers.
- For the second step successful authors will be invited to submit their full paper which will undergo a second review in order to ensure that the authors have been taken into account the comments made by the independent reviewers.

Online submission

Important Dates:

- Online submission opens: 1 November 2007
- Submission deadline : 8 January 2008 (extended abstracts)
- Notification of acceptance: 20 February 2008
- Submission of final papers: 30 March 2008

For any questions please contact the ICE Programme Secretariat by email at submit@ice-conference.org

Up-Coming Events

COOP'08, Carry-le-Rouet, Provence, France, May 20-23, 2008



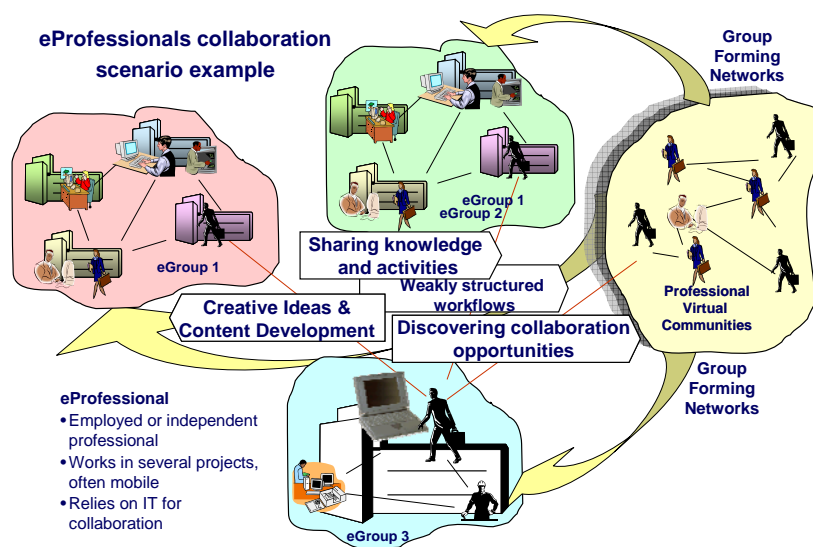
8th International Conference on the Design of Cooperative Systems - COOP2008

CSCW'08, San Diego, California, USA, November 8-12 2008



ACM conference on Computer Supported Cooperative Work - CSCW 2008

eProfessional Collaboration Space



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Editorial Coordinator:

Marc Pallot

ESoCE-NET

Marc.Pallot@ESoCE.net

Editorial Board:

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