

# INTEROP CASE STUDY

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## 1 Introduction

The goal of this study is to identify cases where the user acts as participant in research (users taking part in the transformation of a research idea into a research project).

According to the Users' Group, this approach has two main advantages:

- 1) it presents a gradual involvement of users, and it is therefore easier to be understood. Presenting case studies with different possibilities of users' involvement will show to KAL researchers what the different implications are, whereas going directly to the exemplification of users as stakeholders might not be so close to the researchers' perspective;
- 2) the 3 steps go also along with the plan of the UG going from users and researchers' workshop to dialogue in the users' conference to inputs to the research agenda.

The outcomes of the case studies will contribute to the elaboration of a set of tools which will be made available to KALEIDOSCOPE researchers (experts in Technology Enhanced Learning, TEL) to help them structuring their dialogue and negotiation with Users.

This case study reflects the involvement of non-TEL researches in solving problems related to their participation in particular TEL-related activities. This particular case study is based on the work done by the Kaleidoscope TEL experts, when collaborating with non-TEL researchers from the INTEROP Network of Excellence project. The aim is to identify the best possible ways of collaboration between TEL experts and non-TEL researchers in solving TEL-related complex tasks.

INTEROP Network of Excellence aims to create the conditions of an innovative and competitive research in the domain of Interoperability for Enterprise Applications and Software. INTEROP is an association of 50 partners from 15 countries coming from numerous sectors spanning academic institutions, research centres, industrial stakeholders and standards' communities. One of the main tasks of the INTEROP project partners is to provide intensive training in the research areas developed. The INTEROP project members are mainly researchers in non-TEL areas. **INTEROP** Network of Excellence is supported by the European Commission for a three-year-period. The Network gathers 176 researchers and 106 doctoral students.

The primary goal of INTEROP is the sustainable structuring and shaping of European research activities on Interoperability for Enterprises Applications and Software and the emergence of a lasting European Research Community that will influence standards, affect policy and solve recurrent problems in networked enterprises. By the end of the project a European virtual research laboratory on Interoperability will be set-up. INTEROP will impact education by creating a European Master programme on Interoperability of Enterprise Applications and Software and by proposing an e-learning service for both research and industrial audiences. INTEROP will contribute to innovative technology transfer to industry, specifically through its interaction with the Integrated Project ATHENA ([www.athena-ip.org](http://www.athena-ip.org)).

After a Selection Process, INTEROP has chosen the collaborative content-management platform PLONE in order to propose collaborative tools to its members. The reason for choosing PLONE was the Open Source Status, Software with a great community of users developing modules and add-ons. The development of this platform is subcontracted to a French provider. This platform is both the institutional website of INTEROP and the collaborative spaces for its members. INTEROP platform, 1<sup>st</sup> version, has been implemented since the end of May 2005, and proposes tools for content management, forums, chat, events calendar, news, polls etc. A new roll out is planned soon, to implement new functionalities: versioning, mailing list, task manager, bibliography and glossary etc .

The INTEROP WP10 “Training activities by e-learning and Education Program on Interoperability” is a spreading of excellence activity. The WP10 goal is to spread the results of the network between its members and outside the network. Training activities have been differentiated in internal and external, addressed to researchers, PhD students or enterprises. To achieve this objective tutorials and web courses about interoperability will be built.

Objectives of the WP10 are:

- To develop training activities for internal and external researchers, PhD students and enterprises.
- To define glossaries on interoperability matters in order to unify semantics.
- To create a virtual Library of papers about interoperability (Interoperability Explicit Knowledge Repository-IEKR).
- To build tutorials (interactive courses on CDROM) and courses on the web about interoperability.
- To coordinate the creation of a specialized European Master on Interoperability.
- To coordinate the creation of a European PhD Program on Interoperability.

The WP10 “Training activities by e-learning and Education Program on Interoperability” has as a concrete action the coordination of the creation of a specialized Master and a PhD Program on Enterprise Modelling, Architecture & Platform and Ontologies supported by e-learning methodologies. This Master and PhD Program will last beyond the finalization of the project. The creation of a master encounters legal and politic problems. The easiest solution seems to have a federal agreement, but the way to reach this point is not yet well precised.

The main problem for INTEROP WP10 researchers to achieve their goals is the lack of experience and expertise in applying modern information technologies to learning practice. For this reason they contacted Kaleidoscope project and become Users of the TEL research expertise offered by Kaleidoscope researchers.

**Why this case study is important? It shows a real example of transferring the TEL experience and expertise from Kaleidoscope researchers to one possible Users’ group – researchers from non-TEL areas, who need to implement TEL in practice. The joint cooperation between Kaleidoscope researchers and active involvement of their Users show one promising approach for mutual understanding between researchers and users.**

## **2 KALEIDOSCOPE – INTEROP cooperation**

KALEIDOSCOPE project used INTEROP as a “case” in the WP9 “Advance Training Institute” and a special task “Elearning engineering” for INTEROP was organised in 2005, in order to transfer to INTEROP researchers the methodology for elearning.

The cooperation between Kaleidoscope and INTEROP was planned in order to justify a general declaration of mutual interest for cooperation, approved by both projects and sent to their respective Project Officers.

At the beginning, a definition of the Memorandum of Understanding between Kaleidoscope and INTEROP projects has been defined. After that a working plan was developed and started with the identification of the real INTEROP needs.

Collaboration topics planned were summarized in the following action plan:

### **A1. Needs analysis**

KALEIDOSCOPE researchers (TEL experts) will provide a questionnaire to be used for identifying the needs of the INTEROP WP10 members (Users) for training/consulting in TEL, and will prepare a report based on the survey and some additional interviews. INTEROP WP10 management will organise a survey among INTEROP researchers based on the provided questionnaire by KALEIDOSCOPE TEL experts, and will take in additional interviews for identifying the concrete needs of INTEROP researchers for achieving competencies in TEL.

### **A2. TEL strategy, action plan and e-learning training implementation**

KALEIDOSCOPE and INTEROP will define a strategy and action plan for providing on-going support (training and consultancy) of INTEROP researchers in order to be able to design and implement e-learning based tutorials, web courses and other training activities, as well as design and implement e-learning based Master and PhD programs on Interoperability. KALEIDOSCOPE TEL experts will provide a focussed training and consultancy of a core group of INTEROP researchers, as well as a procedure for providing customized, on-demand training and consultancy in TEL issues by using the expertise of the whole KALEIDOSCOPE network.

### **A3. Designing and implementing e-learning activities and on-going support**

INTEROP researchers - WP10 members, will design and implement the e-learning based tutorials, web courses and other training activities, as well as design and implement e-learning based Master and PhD programs. INTEROP e-learning activities could be a pilot of some KALEIDOSCOPE advanced TEL methods and technological tools, especially for studying the joint collaboration between TEL experts and non-TEL researchers. KALEIDOSCOPE will provide on-going support and consultancy in TEL for all INTEROP researchers involved in planned INTEROP e-learning activities.

### **A4. Joint workshops and reporting.**

INTEROP and KALEIDOSCOPE will organise 2 joint workshops for presenting the achieved results and provide a consolidated report for the joint activities at the end of 2006.

## **3 Implementation of the Action Plan**

### **3.1 Needs Analysis**

It was difficult for INTEROP members initially to express the particular need of TEL services and to formulate clearly their expected outcomes. They have just sketched the idea about their intentions, but the exact need of training, technology or consultancy in TEL area was not clearly determined.

The usage of questionnaires for needs analysis, where all questions are predefined, did not give appropriate solution for identifying INTEROP needs. Thus, KALEIDOCPE researchers decided that the best solution for elucidating INTEROP needs is to involve INTEROP researchers more intensively in the discussions, and to organise several face to face meetings and personal interviews to clarify the specific needs for TEL training and consultancy of INTEROP researchers.

ATI members performed several interviews with INTEROP members in a face-to-face manner during conferences and project meetings (for instance during the Kaleidoscope Symposium, June 2005, Oberhausen, Germany). Some of the interviews were also provided via e-mail and telephone.

The first opportunity was used during the regular INTEROP meeting in Valencia, March 2005. Two meetings were organised to concretize the areas of collaboration (TEL expertise to be provided from Kaleidoscope researchers to INTEROP researchers), and to specify the next actions to be carried out. The questionnaires fulfilled by INTEROP members were also discussed.

It turned out that one of the first special problems for INTEROP researchers was the selection of e-learning platform to be used in INTEROP project. All problems and difficulties were carefully discussed and some possible solutions were highlighted.

As a result from these joint discussions it was decided that KALEIDOSCOPE experts will analyse all encountered problems in more details and will propose several alternative solutions to INTEROP researchers. It was decided that the next joint meeting will be organised during the KALEIDOSCOPE Symposium in Oberhausen, Germany, from 6<sup>th</sup> to 8<sup>th</sup> of July.

### **3.2 Design**

During this next meetings in Oberhausen, TEL experts from KALEIDOSCOPE proposed to organise training sessions, possibly linked with next INTEROP Workshops, directed mainly to the methods, theories, methodologies and practices used in TEL. They also proposed a new selection document, based on the available so far sources of information from INTEROP researchers, which clearly stated the system Moodle as the most appropriate for the INTEROP researchers to be used in their further e-learning activities.

Researchers from INTEROP, acting as Users of TEL, actively discussed the proposed ideas for training delivery from KALEIDOSCOPE TEL experts, and finally come up with a detailed description of the training needed (methodologies for design, development and implementation of e-learning programmes, based on the e-learning standards, and with the use of the e-learning system Moodle).

### **3.3 Implementation**

KALEIDOSCOPE researchers organize a call for course using the specified together with INTEROP researchers training programme, and finally choose TEL expert organization to provide the needed training for INTEROP researchers.

The training was planned and organized again as a joint cooperation activity during the INTEROP workshop in Genova, and the first training session started during the KALEIDOSCOPE Assembly in December 2005 in Porto, Portugal.

Currently INTEROP researchers started to apply the know-how and the expertise they gained as Users from the training sessions and joint research activities with Kaleidoscope TEL experts.

## **4 Conclusions**

This case shows the process of identification of specific user's needs for TEL services, the user's problems of clear definition of their needs either due to lack of knowledge about new technologies that can be used, or due to absence of clear idea how to use these technologies to solve their specific problems. One of the reasons for raising such problems is that INTEROP members are mainly researchers in non-TEL areas and they are not experts in TEL and thus are not familiar with new technologies achievements and solutions.

The usage of templates and questionnaires for identifying user's need is not suitable as solution in such cases, because they can not fit to the predefined scenarios. Researchers from non-TEL areas need help and assistance for identifying their specific needs. Thus, KALEIDOSCOPE solution for providing personal interviews for narrowing the process of clarifying and defining specific user's need, and the found solution for satisfying those needs, can be used as best practices example in such cases.

The process of identifying the needs of the project INTEROP was challenging, but at the end very successful for both projects.

The process of finding solution – recommendation of TEL platform to INTEROP – was very positive, and at the end the solution was very useful and important for the success of the INTEROP project. The call for courses performed resulted in very high quality training offer, fully satisfying the needs of the trainees. Further activities show that the active involvement of Users in the process was the most important factor for the successful implementation of this solution.

The presented case show that in order to solve some specific cases, it is necessary first to help the users, by providing some navigation and expertise in the process of identification and definition of their specific needs. Later on it is very important to find ways to involve the Users in the design and implementation of the solution, because this both is motivating users and is helping the finding of effective solution by stressing on important issues, and thus speeding up the whole process.

In this case our users were non-TEL researchers, aiming to involve TEL in their dissemination activities. Even being university researchers and lecturers, convinced in the TEL possibilities and opportunities, they feel not able to easily transfer from standard education to TEL-based training. Their main concerns were oriented to the lack o f the knowledge and skills in using the appropriate training methodology, and to not being able to understand how exactly new technologies can help them in training and teaching.

From the other hand, these users were very active, well motivated, and able to be involved in the training design process. Their involvement help us to successfully design the training activities best suitable for their needs.