Publishable Executive Summary – Year 2

The main goal of the PALETTE project is the facilitation and enhancement of both individual and collective learning through Communities of Practice (CoPs). Cross-fertilizing pedagogical and technological researches, in order to elaborate, implement and, validate new learning environments, enhancing learning through knowledge building and sharing in CoPs, are the main challenging issues addressed by the PALETTE project.

To reach this goal, a Participatory Design Methodology (PDM) has been adopted for the development of a **palette of services** - technologically and pedagogically sustained - to support the *participation* (social interaction, verbal interaction and presence), the *constitution of common resources* (to formalise tacit knowledge, to make available common resources and, to make them retrievable and reusable) and, the *commitment of participants* as well as the realization of their activities.

The CoPs currently working in collaboration with the PALETTE researchers have the opportunity to analyse their current situation, to imagine and make effective improvements of their practice, through the design of new activities and the associated use of integrated services supporting these activities.
The collaboration between the PALETTE stakeholders allowed progress towards main targeted research objectives, at the leading edge of pedagogical and technological domains.

During the first step, the "Design for use", the participatory activities have been conducted within teams composed of IT researchers, pedagogical designers and, CoPs' members to guide the development of services and scenarios of use. Specific scenarios have been elaborated in collaboration with the CoPs involved in the project. This first phase of the Participatory Design Methodology is almost completed. All of the deliverables and development performed during this first phase are public and, available on the project Web Site.

The project is entering the second phase of the PDM, called "Design in Use". Scenarios written and validated during the second year of the project through the PDM may be considered as a basis for the representation of the original configuration of practices for each CoP. To reach the targeted dissemination level, i.e. a wider adoption of services, generic scenarios are now produced to support the main activities of a CoP (reification, debate and decide, CoP animation). Additionally, Learning and Organisational Resources – LORs - are designed to support the choice, use and adaptation of the services and scenarios by further communities.

A generic scenario describes a chain of operations and associated functions of PALETTE services, as well as the way these ones interact to address a generic CoP activity.

The generic scenarios put the emphasis on:
- the identification of interactions between the services in order to sustain the efficient implementation of the associated interoperability;
- the reusability of such scenarios for different CoPs, even though this might necessitate some slight adaptation to suit the specific context and domain of the CoP;
- the usefulness and crucial importance of the activities carried out by CoPs;
- the feasibility of the integration of functions according to the current state of PALETTE services, the capacities of the development teams, and the compliance to standards;

- the capacity to provide evidence of innovation, both at organisational and technical level, brought by the distinctive way they are designed, implemented and validated according to PALETTE principles.

Teams of researchers and CoPs have been reorganised to focus the efforts on the validation of generic scenarios, the integration of services and the design of Learning and Organisational Resources.

This period is a challenging one. A major effort is put on the conceptual and technical integration to produce the **palette of services and scenarios**.

Fourteen contractors participate in the project:

1. European Research Consortium for Informatic and Mathematics (ERCIM, France)
2. Ecole Polytechnique Fédérale de Lausanne (EPFL, Switzerland)
3. Université de Fribourg (UNIFR, Switzerland)
4. Institut National de Recherche en Informatique et Automatique (INRIA, France)
5. Research Academic Computer Technology Institute (CTI, Greece)
6. Centre de Recherche Public Henri Tudor (CRP-HT, Luxembourg)
7. University Abou Bakr Belkaid (UT, Algeria)
8. University of Liège (ULG, Belgium)
9. Association de l'Enseignement Supérieur Commercial Rhône Alpes (AESCRA-EM Lyon, France)
10. GATE – CNRS – Université Lyon 2 (GATE-CNRS, France)
11. Center for the study of Education and Training (CSET, United Kingdom)
12. Association ePrep (ePrep, France)
13. Support IT (UK) Ltd T/A Nisai Group (Nisai, United Kingdom)
14. MindOnSite - Integral Coaching SA (MindOInSite, Switzerland)

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The work performed during the second year of the PALETTE project has been mainly dedicated to the following activities

- refinement and documentation of the methodological framework to establish the communication and the participatory processes between partners and, with CoPs

- development and integration of services addressing the targeted scenarios in respect to the scientific and technological objectives of the project; a major consideration has been given to usability feedbacks and requests of the CoPs members;

- data collections and analysis for the elaboration of a learning model for CoPs

Refinement and documentation of the methodological framework
The implementation of the PDM has been supported by a set of methodological instruments that were designed, tested and used to collect and analyse the data collected, to document our work, and to serve as boundary objects among partners. These instruments: grids of analysis, templates of documents, elements to support the interactions with the CoPs, etc., are specific outcomes of PALETTE for other R&D projects. They are presented in a contextualised manner according to the methodological process, concepts and actors.

Conceptual integration through generic scenarios
The implementation of the PDM has led to a further step of refinement, the generic scenarios. Generic scenarios will be less specific of the current activities of the CoPs and more oriented towards innovative activities typical of CoPs in general; they will be less influenced by the current state of PALETTE services and more focussed on innovative functions of integrated services; they will suggest possible improvements to better sustain the CoP development by innovating both at organisational and technical level; they mill promote the implementation of such improvements through innovative architectures and interfaces.

Development and integration of Palette services
A special focus has been put on the *technical integration of PALETTE services*. Technical integration in PALETTE concerns the adoption of relevant standards and development guidelines that facilitate interoperability of services, as well as the implementation of appropriate software components for integration and delivery of the PALETTE services. To proceed with integration of services and to allow interaction between services, PALETTE developers provided Web services to expose the functionalities of all interactive services, following the guidelines established. This was a necessary step to be able to develop miniaturized versions of the current applications, implementing subsets of their functionalities, to be integrated as widgets into the composable PALETTE portal, or eventually, as widgets into other interactive services. This is also a necessary step to be able to compose several functionalities in the existing applications and propose new composite services or new mashups of services.

Elaboration of CoPs learning model
Based on a phenomenographical approach, a research has been conducted for highlighting the CoPs members individual learning experiences. Three dimensions of learning in CoPs have been explored and detailed.

- Reasons for participating in CoPs

- Perception of how learning occurs in CoPs

- Expected outcomes

In the last year of the project, it is expected that the model will allow producing specific resources for CoPs animators and members in order to situate their own experience into the table. In addition, advises could be provided to the animators for the organisation of specific activities or the adoption of relevant attitudes regarding the CoPs members.

These resources will be part of a larger set of resources for CoPs animators: Learning and Organisational Resources (LOR). Based on outcomes of different tasks of the project, LOR will allow CoPs animators to:

- Assess learning within their CoPs;

- Assess activities of their CoPs;

- Assess the needs of their CoPs;

- Choose specific tools or services in order to meet their needs;

Dissemination

An important objective of the PALETTE project is the dissemination of produced outcomes, in order to make publicly known the availability of open-source services issuing from a multidisciplinary research activity, dedicated to communities of practice.
During the second year, the PALETTE partners participated in a series of conferences, workshops and dissemination activities to advertise the project findings and foster the participation of communities of practice. A second International Workshop on Building Technology Enhanced Learning solutions for Communities of Practice has been organized by CTI (Research Academic Computer Technology Institute) in conjunction with the second European Conference on Technology Enhanced Learning in 2007.

The exploitation of results and their dissemination are based on an open-source strategy and, aims at providing the conditions for engagement of further communities of practice issuing from a variety of application domains. It also encourages engagement from organizations, companies and academic institutions; the adoption of PALETTE services are intended to accommodate various environments that adhere to a number of recognized standards.

Training

The project has defined a multiple level training strategy, in order to share and evolve knowledge and expertise among the partners of the project, to propose awareness learning resources which can be used by a large set of learning/teaching situations (internal, external, self learning, blended learning, etc.) related to technology enhanced learning and, to support CoPs in terms of coaching.
The corner stone of PALETTE training policy will be the external Summer School, organised jointly with the PROLEARN and EATEL networks, which will take place in Orhid in June 15-21, 2008.