

## Chapter 6.18

# Supporting Communities of Practice by Advancing Knowledge Management between Hybrid Collaborative Environments

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### **ABSTRACT**

In this chapter the authors investigate a tool integration perspective to support knowledge management and exchange between Web-based and traditional collaborative environments. In particular they discuss the integration between a tool (CoPe\_it!) supporting collaborative argumentation and learning in Web-based communities of practices and a hypermedia and sense making tool (Compendium) acting as a personal and collective knowledge management (KM) system in traditional collaborative environments. The authors describe the tools and drive a comparative analysis of the two groupware by focusing on the general applicability of the tools integration for

supporting communities of practices and, more generally, collaborative works. Moreover the authors present the results of a case study in which the tools integration has been applied within a real community of practice. Finally they discuss main results of the tools integration in order to leverage communities of practice to a truly collaborative environment with no communication boundaries.

### **INTRODUCTION**

Communities of Practice are increasingly demanding for new ways of working together. The introduction of disruptive Web 2.0 social networking and groupware tools with self-organising user communities, have radically changed the way in

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which people perform knowledge work. Information and knowledge are gathered and created in real world settings and then diffused on the web; while at the same time a growing amount of information and knowledge is made accessible by web services which extend the concrete impact and influence that these information and knowledge exert on traditional social networks. Knowledge works are increasingly looking for new ways to manage and integrate knowledge created and exchanged within and between virtual and traditional environments. However the information and knowledge exchange between these hybrid collaborative environments is not codified, and there are not specific means or tools to blend between virtual and real world information, knowledge and communities.

In this chapter we investigate a tool integration perspective to support knowledge management and exchange between web-based and traditional collaborative environments. In particular we propose and discuss the integration between a tool (CoPe\_it!) supporting collaborative argumentation and learning in web-based Communities of Practice and a hypermedia and sensemaking tool (Compendium) acting as a personal and collective Knowledge Management (KM) system in traditional collaborative environments. We focus on the general applicability of this integration for supporting Communities of Practice and, more generally, collaborative works. In particular we present results of a case study in which the tools integration has been tested and evaluated with a community of practice. A community of farmers in southern Italy has been engaged with the tools testing and evaluation. On the base of the case study results we finally discuss objectives and challenges to be addressed to support a transparent knowledge integration and exchange between hybrid (virtual vs traditional) collaborative environments.

In the first section we present the background issue and propose the concept of Hybrid Community of Practice (HCoP). Moreover we motivate and propose the integration of Compendium and

Cope\_it! in order to support knowledge works in Hybrid Community of Practice. In the second section we briefly present both tools showing their functionality, outlining their complementarities and identifying potential mutual benefits of their integration (third section). In the third section we discuss possible technical solutions for the tools' integration and we describe the integration scenario that has been implemented. The fourth section is centered on the description of a real case study in which the integration project have been applied and tested to support a real community of practice. Results of the experimentation are described and discussed in the light of the evaluation results. Finally in the last section we discuss main results of the tools' integration in order to leverage Communities of Practice to a truly collaborative environment with no communication boundaries.

## **HYBRID COMMUNITIES OF PRACTICE (HCoP): BLENDING BETWEEN VIRTUAL AND TRADITIONAL COLLABORATIVE ENVIRONMENTS**

Communities of Practice (CoP) naturally generate and act in real world settings like work contexts, leisure and family or familiar places (Lave & Wenger 1991). Contextual and contingent situations can bring people to discover common aims, desires, needs or problems and then trigger new unpredictable ways of collaboration towards shared objectives. Starting from these objectives people communicate and organize their actions towards common goals. In this process of community definition, specific roles, tasks, and expertise start emerging within the group (Wenger 1998). Eventually, the different roles are legitimated by social relationships of trust among the community members, forging the overall identity of the group as a whole (Brown & Duguid 2000).

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