

Towards a commitment network on the Grid Shared Desktop

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As highlighted by Sampson and Fytros (2008), the concept of Knowledge Management (KM) has been approached from different perspectives, e.g., the organisational and sociological perspective, which addresses key questions such as how one can create and master knowledge in groups, focusing on social networks and communities of practice. In addition, the authors place Competence Management as an important research issue within the research framework of KM. Within the business context, competence maps have been exploited for identifying competence gaps necessary to deal with companies' needs (Sicilia, 2006). Identifying such gaps is an important step for triggering competence development programs within organisations, for instance, in learning communities (e.g. the tenCompetence project¹).

Competence maps can also be seen as *one* suitable source of information for managers to gather employees together in group projects. However, having individual (technical) talent is not a guarantee of performing well together (Rajendran, 2005). Most contemporary problems faced by the organisations and the society are recalling the paradigm of Complexity and its systemic, complex, and transdisciplinary perspective (Morin, 1984). This reinforces the need to achieve excellence in (multi, transdisciplinary) team work.

In an ongoing research project, we are particularly concerned with the above mentioned issues, and with the question of how technology can support team both formation and work within an organisation. The main goal of our project is then to design and to prototype a commitment network as both a conceptual framework and a compound of computational artifacts capable of supporting knowledge workers - connected under certain criteria - on safely engaging in group work, by taking

¹ www.tencompetence.org

into account past accomplished commitments, as well as by identifying incoming possibilities from the network dynamics. In order to attain this goal, a set of dedicated network services are being provided, retrieving information from three different sources: a *Competence Portfolio* of each individual in the network, a *Cases Library*, which keeps memory of all the previously performed Commitments, and a *Community Profile*, maintained to store its current needs and goals. The dynamics of the Commitment Network emerges from the life-cycle of each single Commitment. Such life-cycle is the result from adapting mainly the activities supported by each level from the DEGREE system (Barros and Verdejo, 2000). The phases composing the resulting Commitment life-cycle are Configuration, Negotiation, Performance, Analysis, and Synthesis.

From the technology viewpoint, the Commitment Network is being implemented as a number of Grid services on the top of the AGORA platform², within its Grid Shared Desktop (GSD) service (Dugénie et al., 2006). Thanks to the immanence principle of GSD, a group can configure in run-time its work environment according to its needs, in terms of tools/services necessary to accomplish the task at hand. This renders the Commitment Network services both domain and task independent.

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² <http://agora.lirmm.fr>