Chapter 10
From ‘Collecting’ to ‘Deciding’: Facilitating the Emergence of Decisions in Argumentative Collaboration

Manolis Tzagarakis
Research Academic Computer Technology Institute, Greece

Nikos Karousos
Research Academic Computer Technology Institute, Greece

Giorgos Gkotsis
Research Academic Computer Technology Institute, Greece

Vasilis Kallistros
Research Academic Computer Technology Institute, Greece

Spyros Christodoulou
Research Academic Computer Technology Institute, Greece

Christos Mettouris
Research Academic Computer Technology Institute, Greece

Panagiotis Kyriakou
Research Academic Computer Technology Institute, Greece

Dora Nousia
Research Academic Computer Technology Institute, Greece

ABSTRACT

Current tools aiming at supporting argumentative collaboration either provide means to successfully tame wicked problems or offer advanced reasoning mechanisms to facilitate decision making creating a gap in today’s landscape of systems supporting argumentative collaboration. The consequences of this gap are in particular severe for communities of practice when they have to employ tools from both sides.

DOI: 10.4018/978-1-60566-711-9.ch010
INTRODUCTION

Argumentative collaboration can augment learning in formal as well as in informal group settings in many ways such as in explicating and sharing individual representations of the problem, maintaining consistency and focus on the overall process, thus increasing plausibility and accuracy, as well as to enhance the group’s collective knowledge (Koschmann, 1999; Andriessen et al., 2003). Over the years, a variety of tools supporting argumentative collaboration have appeared; they usually facilitate argumentative discussions among members of a group and range from simple ones such as e-mail, chat and Web based forums to dialogue mapping and argumentative collaboration tools, reaching even into the realm of sophisticated conferencing and formal argumentation systems (Conklin et al., 2001; Karacapilidis & Papadias, 2001; Robinson & Volkov, 1997; Buckingham Shum et al., 1993).

Tools that facilitate argumentative discussion are of particular importance to Communities of Practice (CoPs); many CoPs have already integrated them into their processes. CoPs deal mostly with wicked problems, i.e. problems which are difficult to express, have no “correct solution” and exhibit a high degree of complexity (Conklin, 2005). A well known approach to address these kinds of problems is through discussing them among the group members aiming at collecting available alternatives, elaborating them further and finally deciding on the proper solution. Given the many different technologies for assisting the process of discussing and decision making, the selection of the proper one that fulfills a CoP’s collaboration needs and successfully matches its processes is in general a critical success factor (de Moor & Aakhus, 2006).

However, in many cases, the basic building blocks for decision making, namely ideas and prospective alternative solutions do not exist beforehand and cannot be simply ‘collected’. Ideas and prospective solutions usually do not arise spontaneously or instantly with clear conceptual boundaries. They are harvested as they gradually ‘grow’ out of existing resources that may even at first bear no indication of their potential. This lack of clearly identifiable alternatives and ideas may hinder groups in using sophisticated decision support systems that would fit their purposes such as (Karacapilidis & Papadias, 2001). These tools – which can play an active role during argumentative collaborations - require that alternative solutions have already crystallized and are clearly and unambiguously expressed within the system.

In general, argumentative collaboration support systems focus either on “taming” wicked problems in an attempt to harvest and justify alternatives or on supporting actively the decision making process. The consequences of this gap for CoPs (and groups in general) are rather severe: the group has to employ different tools during the same collaboration session, something that introduces problems and obstacles that ultimately harms the group’s ability to address the problems at hand. One reason for this inflexibility of existing systems is their emphasis on providing rigid levels of formality.

In this chapter, we present how CoPe_it! – a Web-based tool to support argumentative collaboration (http://copeit.cti.gr) – attempts to bridge the