Chapter 12

The Activity Circle: A Social Proxy Interface to Display the Perceived Distributed Viscosity about Workflow Technology

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ABSTRACT

The chapter describes the Activity Circle, a social visualization mechanism based on the concept of Social Proxy, a minimalist graphical representation that portrays socially salient aspects of users’ interactions. The Activity Circle allows users to socialize how they perceive the accomplishment of work activities that are regulated by a workflow technology. The social information visualized by the Activity Circle should primarily allow people to share the distributed viscosity perception about the workflow technology used; perceived distributed viscosity concerns the perception of the extra amount of work required by this technology to fulfill the users’ organization goals, where “distributed” indicates that different groups of users perceive the impact of workflow technology differently. Making this information explicit may help groups of users reconcile the conflicts about disparities introduced by workflow technology. This information could also be used by management to design more equitable workflow technology.

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INTRODUCTION

Workflow technology has rarely been considered from a social perspective. In fact, literature on workflow technology has mainly focused on the technological aspects related to the design, enactment, and execution of business processes (Abbott & Sarin, 1994). Researchers emphasized how these technologies could facilitate the automatic accomplishment of work activities rather than how they could support interactions occurring among people who must accomplish related work activities. However, the CSCW research area (Schmidt & Bannon, 1992; Gerson & Star, 1986; Suchman, 1987; Brown & Duguid, 2000) has focused on “fields of work” studies, which investigate how people organize the coordination of interdependent activities; from a more technological perspective, CSCW research has considered the design of more effective collaboration technology, where effectiveness is about supporting people to accomplish interdependent activities related to common work flows.

Interdependent activities are central to CSCW because one can consider people as engaging in a cooperative work arrangement if they are mutually dependent in their work. This means that those people must cooperate to complete the work. Being mutually dependent in work means that every person relies on the work of the others to complete her work and vice versa (Schmidt & Bannon, 1992).

Recently, a trend drawing more general conclusions about workflow technology from a social perspective has emerged; specifically, Business Process Management (BPM) researchers have considered how to combine social software with BPM systems (Erol, et al., 2009). This intended to bring the richness of social relationships into technology supporting work organization. However, scholars tend to overemphasize a technological perspective without considering human interactions. These researchers often aim to build other workflow technology using social software (like Wikis) to benefit only of the functionalities promoting sociality (e.g., as proposed in Neumann & Erol, 2009).

We consider workflow technology from a social point of view because it supports people during the interactions occurring while coordinating interdependent work activities. We therefore propose to integrate standard workflow technology with the functionalities provided by social software to facilitate the acceptance of traditional workflow technology by their end users rather than to build a more advanced workflow technology.

According to Stowe Boyd (2006), Social Software is software built to provide support for the following: 1) conversational interactions between individuals or groups; 2) social feedback to rate others’ contributions; and 3) the creation and management of social networks to handle personal relationships. Visualization techniques that help people both recognize feedback from others and manage complex social networks can provide these different forms of support. Consequently, social software is tightly related to visualization; thus, the visualization of social data (e.g., collected by the social software) for social purposes (e.g., to help managing the network of personal relationships) is called Social Visualization (Karahalios & Viégas, 2006).

According to this perspective, we propose to integrate usual workflow technology with a social visualization approach to facilitate actors’ interactions. Using the Activity Circle, we seek to integrate social information about distributed viscosity perception when a workflow technology is used. Distributed viscosity is a specialization of the concept of viscosity, a cognitive construct first described by Green (1990) to explain how a new technology can affect a single user’s interactions to complete a single task and whether this technology requires extra effort from users (i.e., the viscosity of the task is increased). Yvonne Rogers (1994) extended this concept in technology to support work within organizations, including workflow technology, to consider the extra effort
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