Chapter 14
An Approach to Defining Social Processes Based on Social Networks

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ABSTRACT

Social networks are very liquid organizational forms, in which the participants operate by carrying out actions that fall into a small number of types and, what is more, their actions are not usually part of structured sequences. This chapter shows how to enable a community of people to achieve a certain goal through structured actions; such structured actions are organized in processes called social processes, for which a notation called SPN (Social Process Notation) is proposed. Social processes are compared with business processes and task management techniques in order to emphasize similarities and differences.

SPN is illustrated with the help of a case study concerned with the election of a condominium administrator. SPN basically defines networks of tasks, documents, and teams. Tasks can be individual or cooperative and teams indicate the performers of the tasks. Cooperative tasks are the most important feature of SPN; they rely on cooperative objects, i.e. shared documents, wikis, and voting objects.

INTRODUCTION

This chapter starts from the consideration that "organizational processes lie on a continuum from highly specified and routine processes at one extreme to highly unspecified and dynamic processes at the other extreme" (Bernstein, 2000, p. 280), and tries to position social processes on that continuum by taking advantage of recent research on business processes, task management and social networks.

Highly specified and routine processes imply precise process models and predefined tasks. The process models are interpreted by workflow engines that assign tasks to the participants by adding entries to their to-do lists. By clicking on the items of their to-do lists, participants can perform the corresponding tasks. Participants are

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only performers of assigned and predefined tasks: they cannot carry out tasks that have not been assigned to them nor can they invent new tasks.

On the other hand, highly unspecified and dynamic processes are at the heart of knowledge intensive work (KIW), which calls for some degree of creativity and adaptation to specific circumstances (Alvesson, 2004). The support for KIW still consists of to-do lists which, unlike those handled by workflow engines, are made up of (KIW) tasks directly introduced by their owners. KIW tasks include resources, e.g. emails and documents (Bellotti et al., 2004), and do not impose a specific implementation effort on their owners. In addition, they may be composed of sub-tasks, thus making the enclosing to-do lists hierarchical.

People involved in KIW may cooperate by sharing tasks or to-do lists (entirely or partially). Several support systems have been proposed: in UAM (Moran, Cozzi & Farrell, 2005) a to-do list may be shared among different actors who can modify and extend its definition; the major sub-tasks may come from patterns representing best practices for the problem at hand.

On the continuum, called specificity frontier (Bernstein, 2000), from routine processes to dynamic ones, several intermediate points are possible and recent research keeps on proposing new ones.

A lot of work is being done to make business processes less rigid. While at the beginning business processes were mainly identified with workflow processes, now the possibility of making choices at run-time is emphasized and, as a consequence, the control-flow rules become more flexible. Instead of precisely prescribing what is to be done, flexible processes emphasize the constraints to be observed (van der Aalst, Pesic & Schonenberg, 2009).

Social processes are an important portion of the specificity frontier and this chapter intends to show that they can be positioned in the middle of the specificity frontier thus taking advantage of the achievements coming from both sides.

In this chapter, social processes are meant to define structured actions that enable a community of people to achieve a certain goal. Although there is no bias against spontaneous actions, this chapter is interested in proposing a modeling notation for the explicit a priori representation of such processes. This notation is called SPN (Social Process Notation); it basically defines networks of tasks, documents and teams.

Social processes are meant to operate on social networks in order to take advantage of the many services they provide, e.g. forming groups of users with common interests and sharing content within a group. On the other hand, some extensions are needed, such as the handling of personal to-do lists and the assignment of tasks to other members of the group. These extensions can be facilitated by recent implementations of online social networks, such as Persona (Baden, Bender, Spring, Bhattacharje & Starin, 2009), aimed at providing flexible access to shared information.

Cooperative tasks are the most important feature of SPN; they rely on cooperative objects. Examples of cooperative objects are shared documents, wikis, and voting objects.

Cooperative objects may have a life cycle consisting of a number of phases in which different operations have to be carried out possibly by different performers.

In SPN a cooperative task is handled by its manager through a pattern of actions selected from among those available for the type of cooperative object to be used. This pattern of actions amounts to a hierarchical to-do list that guides the work of the task manager.

This chapter is organized as follows. First, the major features of business processes and some extensions proposed to improve their flexibility are illustrated; then, the handling of personal tasks is addressed and the sharing of tasks as a means to obtain bottom-up collaborative processes is discussed. Subsequent sections illustrate SPN with