



## **Chapter 3**

# **Awareness Matters in Virtual Communities: An Awareness Ontology**

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## **ABSTRACT**

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*A methodology is introduced in this chapter for sharing the contextual knowledge in virtual communities. Context is represented by a set of semantic concepts and their relationships that form specific collaborative business processes within the virtual community. Two sets of objects/concepts are identified: (i) objects that make up a community member's actual contextual knowledge, and (ii) objects that make up the contextual knowledge expected from a community member, by a specific task object that the member performs within the community, that are sufficient to enable the member to perform the task and/or to participate in relevant interactions. The excess of the objects in (ii) compared to the objects in (i) is identified. These objects need to be put within the focus of the community member in order to enable him/her to successfully get involved in various initiations within the community.*

## Introduction

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With few exceptions, *awareness* has been regarded by CSCW (Computer-Supported Cooperative Work) researchers as a “kind of information that is highly relevant to a specific actor/role and situation of a process participant” (Baker et al., 2002, pp. 145-173). It involves information that is localised to, and has value in, a specific context. In milestone research Dourish et al. noted the importance of awareness in the shared workspace (1992). Some other earlier examples include *peripheral awareness*, that is, an awareness that is specific to co-located work, and is gained by implicit monitoring of the local work environment (Robinson, 1993). Also, Bentley (1995) notes the importance of a standardized display of the airspace to support air traffic controllers gaining *at-a-glance awareness* of the airspace others are controlling. More recent studies include *collaborative process awareness* (Daneshgar, 2000b) and focused awareness, customised awareness, temporarily constrained awareness and external awareness (Baker et al., 2002).

It is argued in this chapter that (i) there is a strong relationship between the awareness of people in virtual communities (VCs) and the concepts of focus and nimbus; and (ii) that people in VCs require a certain level of awareness about various channels of collaboration (referred to as a class of *contextual knowledge*) through which knowledge flows within the VC. Such contextual knowledge is a pre-requisite for the members’ effective involvements in various interactions/tasks within the VC. This approach to knowledge sharing is consistent with the growing view shared by many in the community of knowledge management that demands clear separation of context, narrative and content management with the aim of enhancing collaboration and self-organising capabilities of the communities (Snowden, 2002).

In this chapter the writer’s previously developed primitives, the *awareness net* and *awareness model*, that were originally developed for enterprise environments, are adjusted to meet collaboration requirements of people in virtual work environments.

## Previous Work

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In an effort to enhance collaboration in enterprise environments the writer has introduced a *process awareness framework* with the two components:

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