Chapter XVIII
Web–Based Template–Driven Communication Support Systems:
Using Shadow netWorkspace to Support Trust Development in Virtual Teams

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ABSTRACT

Teams whose interactions might be mediated entirely via Internet-based communication, virtual teams, are emerging as commonplace in business settings. Researchers have identified trust as a key ingredient for virtual teams to work effectively (Aubrey & Kelsey, 2003; Beranek, 2000; David & McDaniel, 2004; Iacono & Weisband, 1997; Jarvenpaa, Knoll & Leidner, 1998). However, researchers have not identified scalable methods that consistently promote trust within virtual teams. Improved interface design for communication support systems used by virtual teams may contribute to solving this problem. Interface cannot solve the problem of members trusting each other, but it can support the type of activities that do. This paper describes the development and some initial experiences with a web-based, template-driven, asynchronous communication support tool and how this system can be used to support trust development in virtual teams and performance goals of virtual teams. This article presents the capabilities and features of the communication support system. More detailed findings from an experimental study of this system's use can be found in another publication (Remidez, 2003).

INTRODUCTION

Communication support tools mediate an increasing amount of communication in work settings. In particular, communication support systems are critical to the functioning of virtual teams, as the systems often times mediate all interactions (Powell, Piccoli, & Ives, 2004). Although the importance of the systems in the communication process continues to grow, they do not provide support for constructing messages. They do not support creating a good introduction message or other key communication actions researchers have found to be characteristic of high functioning teams. This lack of support presents a problem for workers but at the same time an opportunity for system designers and researchers.

The use of templates is a framework for designing systems that engage forms of communication that support trust development. An example of a successful use of templates to support communication can be found in Microsoft Word. A Microsoft Word user who has no experience creating a professional letter can choose to create a new document based on the "Professional Letter" template available in the system. By using this template, a novice user can take advantage of the knowledge and experience of the publisher and is more likely to succeed in creating a professional letter. Similar templates are available for supporting the creation of brochures, resumes and memos. These templates no doubt have helped many workers communicate more effectively; similarly, we suggest message templates in online communication systems can facilitate successful collaborative work.

Trust has been identified as a key, yet challenging, ingredient for the effectiveness of virtual teams (Aubrey & Kelsey, 2003; Beranek 2000; Coppola et al., 2004; David & McDaniel, 2004; Iacono & Weisband, 1997; Jarvenpaa et al., 1998; Jarvenpaa et al., 2004). Researchers have not developed scalable methods that consistently promote trust within virtual teams. Given that virtual teams often interact entirely via communication support systems, part of the solution to promoting trust might lie in the design of the communication support systems these teams utilize. For a discussion of the multifaceted nature of virtual teams see Dubé and Paré (2004). Semi-structured message templates have been found to be helpful in designing a variety of computer-based communication and coordination systems (Malone et al., 1987) and might be a basis for designing communication systems that support trust. Specifically, Malone et al. (1987) conclude that semi-structured messages can serve as aids for composing messages to be sent; selecting, sorting, and prioritizing messages that are received; responding automatically to some messages and suggesting likely responses to other messages. Researchers have found that one key characteristic of high-trusting teams is the inclusion of affective statements early in the teams' lifecycle, suggesting that message templates of appropriate affective statements might be a useful means by which computers could support the inclusion of such statements and indirectly promote the development of trust. Te'eni (2001) proposed the use of message templates to promote the inclusion of affective statements in his discussion of a new model of organizational communication, cognitive-affective model of organizational communication (CAMOC), which he used as the basis for suggesting design principles for future communication support systems. CAMOC takes into consideration the impact of the communication strategy, task inputs, message form, and medium selection on cognitive and affective goals of the sender.

This chapter focuses on the design of the communication support tool itself. We present the flexibility of the tool, in terms of the user interface and interaction, the design and nature of the message templates and how they are organized. Our motivation for presenting details of the communication tool is that journal articles reporting on experimental studies often lack the space to detail the specifics of the tools used. In our case,

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