

# Interaction Model in Groupware Use for Knowledge Management

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## INTRODUCTION

In the modern and highly changing marketplace, organizations need to find strategies to achieve sustainable competitive advantage. Knowledge management is employed in many different functions and business processes in organizations. As the organizations realize that by identifying, extracting, and capturing the “knowledge assets” of the firm, they can be both fully exploited and fully protected as a source of sustainable competitive advantage (Newell, Robertson, Scarbrough, & Swan, 2002). Suggestions that specialized knowledge has become an essential ingredient for business success are becoming commonplace since productivity is dependent on the application and development of new knowledge (Blacker, 1993; Drucker, 1993; Zack, 1999).

This article focuses on the use of Lotus Notes, a well-known groupware application studied in the literature for cooperation, because its features cover the broad definition of groupware as technologies providing “electronic networks that support communication, coordination and collaboration through facilities such as information exchange, shared repositories, discussion forums and messaging” (Orlikowski & Hofman, 1997, p. 12). It advances the debate on the potentials of groupware in knowledge management. It posits that although Lotus Notes has been the focus of existing research, a paucity of studies has examined its functionality in relation to knowledge management. Therefore, the authors aim to illustrate the use of Notes for cooperation, which leads to organizational knowledge management.

## BACKGROUND

Whereas information technologies (IT) are considered as basic requirements for individuals and organizations to necessitate flexibility and responsiveness in today’s competitive and dynamic business environments, organizations are increasingly compelled to invest in IT that enable them to manage knowledge-based resources. This is because knowledge-based resources enable sustainable competitive advantage (Alavi & Leidner, 1999), and a variety of IT have been designed and implemented to facilitate knowledge management. The advancement of IT leads to boundless cooperation. IT enables access to broader information and knowledge, which increase creativity and innovation (Gurteen, 1998). The new technologies are making it possible for organizations to operate relatively independently from geographical location, thereby blurring the boundaries between one organization and another, and freeing internal communications within organizations (Blackler, 1995). Groupware is an exemplar of these technologies (Ciborra, 1996; Hayes, 2001). As mentioned by Vandenbosch and Ginzberg (1996), groupware systems such as Lotus Notes enable organizations to create intra-organizational memory in the form of both structured and unstructured information and to share this memory across time and space.

## LOTUS NOTES AS A KNOWLEDGE MANAGEMENT TOOL

The use of Lotus Notes for knowledge management activities has been studied in different types of organizations. Lotus Notes, a combination of document

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Table 1. Summary of the previous studies on the use of Lotus Notes

Study	Site and size	Lotus Notes functions	Method	Length
Robertson, Sorensen, and Swan (2001)	Universal consulting: Medium	E-mail Discussion databases	Interviews Non-participant observation Documentation	Over 2 years (1996-Spring 1998)
Vandenbosch and Ginzberg (1996)	American insurance firm: Large	Lotus Notes databases	Interviews Surveys	Ten months (began after decision to expand use of Lotus Notes from 200 users to whole firm)
Orlikowski (1993)	Alpha: Large consulting firm: competitive culture	Electronic mail, discussion database, some databases for browsing	Unstructured interviews Documentation Participant observation	Five months (began prior to Lotus Notes installation)
Hayes (2001)	Compound UK: Large multinational pharmaceutical	E-mail Strategic selling databases Discussion databases Contact recording databases	Semi-structured interviews Informal discussions and interactions	Two-and-a-half year period (18 months after first Lotus Notes implementation)
Brown (2000)	Narajo: Large oil firm	Public forum databases: firm notice board and "challenge" database Workflow database Tracking database	Participant observation Interviews	3 months (began after Lotus Notes implementation)
Ciborra and Suetens (1996)	EDF: Large, an international distribution part of a French energy provider	E-mail Discussion forum and databases such as world culture, news forum, expert databases.	Interviews	Over a year and a half (began after Lotus Notes was implemented)
Ciborra (1996)	Roche: Large Diagnostic division of multinational pharmaceutical	Cosis applications: multidisciplinary knowledge base	Interviews	Over 2 years (began after Lotus Notes was implemented)
Orlikowski (1996)	Zeta: Large software firm	Incident Tracking Support System Training database six firm-wide bulletin boards with electronic mail	Unstructured and semi-structured interviews. Non-participant observation Documentation	6 months (began two years after the ITSS developed on Lotus Notes.)
Karsten and Jones (1998)	CCC: Small computer consulting firm	Discussion and news databases, project databases	Participant observation Interviews Documentation	3 years (began prior to Lotus Notes implementation)

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