Chapter V

Collaborative Decision Making

Beomjin Choi, Arizona State University - Main, USA
T. S. Raghu, Arizona State University - Main, USA
R. Ramesh, State University of New York at Buffalo, USA
Andrew B. Whinston, University of Texas at Austin, USA

Abstract

This chapter introduces the collaborative decision making (CDM) framework as a means of employing a systematic approach to develop collaborative systems in an electronic business environment. It argues that the CDM framework provides a holistic view of the components that play critical roles for collaboration, which include group facilitation and coordination, knowledge repositories, dialectic decision support, and discussion strategy support. The framework emphasizes the importance of supporting dynamic collaboration across multiple aspects of the group decision making process as a basic requirement. This chapter identifies the major components of decision support functionalities that need to be embedded in CDM systems so as to reduce the cognitive burden of decision makers.
Introduction

Corporate business practices and strategic applications are becoming increasingly globalized through expansions, diversification, and joint ventures. Advanced telecommunications and computer network technologies have enabled the emergence of a new organizational model such as a virtual team or a virtual enterprise. In virtual enterprises and in the strategic, tactical, and operational communities, decision makers have distinct complimentary areas of expertise and are geographically and often temporarily distributed over the globe (Lipnack & Stamps, 1997; Raghu, Ramesh, Chang, & Whinston, 2001; Raghu, Ramesh, & Whinston, 2003; Ramesh & Whinston, 1994; Townsend, DeMarie, & Hendrickson, 1998). Most of the decisions have become increasingly complex, as the level of professional and technical skills required is becoming very sophisticated, reaching into deeper levels of specialization in narrower domains. A hypercompetitive business environment further emphasizes the need to collaborate and bring together geographically dispersed individuals and rally their contributions. These trends together emphasize the need for effective and efficient teamwork among distributed group members (Dennis, 1996; Panko, 1991). Group work includes problem solving, decision making, resource allocation and coordination, and task structuring. Since groups tend to have a broader range of skills and abilities than individuals, groups often can deal with complex tasks more effectively than individuals (Finnegan & O’Mahony, 1996). However, group decision making requires collaboration and continuous interaction of various parties involved in order to maximize the effectiveness of group decision making.

The key to achieving effectiveness in collaborative work lies in effective communication among group members. Collaborative decision making by a group of distributed individuals typically involves an informal structure where group members debate various decision alternatives, which requires effective conflict management and coordination. To arrive at an acceptable resolution, collaborative decision making occurs via the exchange of ideas, information, and data to enable an understanding of mutual positions on the decision issues. Over the last decade, many advances have been made in information technology to support collaborative work when faced with distance and time barriers. Ranging from teleconferencing and messaging systems (Nunamaker, Dennis, Valacich, Vogel, & George, 1991) and electronic meeting systems (Barua, Chellappa, & Whinston, 1995) to intelligent agents (Sheth & Maes, 1993) and workflow systems, computer-supported collaborative work (CSCW) has focused on studies of tools and techniques that enable effective distance communication in collaborative work processes, as well as their psychological, social, and organizational effects. Collaborative computing technologies such as group support
25 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the product's webpage:
www.igi-global.com/chapter/collaborative-decision-making/4752?camid=4v1

www.igi-global.com/e-resources/library-recommendation/?id=1

Related Content

Retail in the Digital City
www.igi-global.com/article/retail-digital-city/68173?camid=4v1a

Privacy Protection Via Technology: Platform for Privacy Preferences (P3P)
www.igi-global.com/article/privacy-protection-via-technology/1841?camid=4v1a

The Driving Forces of Customer Loyalty: A Study of Internet Service Providers in Hong Kong
www.igi-global.com/chapter/driving-forces-customer-loyalty/39495?camid=4v1a
Product Choice Strategy for Online Retailers
www.igi-global.com/article/product-choice-strategy-online-retailers/1898?camid=4v1a