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A Comparison of Audio-Conferencing and Computer Conferencing in a Dispersed Negotiation Setting: Efficiency Matters!

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ABSTRACT

The growing globalization of business is making face-to-face communications, decision-making, and negotiations more the exception than the rule. Internet communication in text-only, audio, and video form are all becoming feasible methods of communication between distantly located parties. However, in order for these new technologies to be used most effectively, more investigation is needed into the impact of various media on decision-making, such as that in negotiation. In particular, negotiators need to have a means of choosing the most appropriate communication medium, based on the amount of richness inherent in the medium, for the particular task at hand. This paper presents the results of an empirical study to examine the effectiveness of a computerized negotiation support system (NSS) in supporting bargaining carried out in a dispersed, but synchronous setting. In the study, pairs of college students, using the NSS, participated in a simulated industrial bargaining scenario that tested the impact of communication media employed and level of conflict on contract outcomes and negotiator attitudes. The subjects, located in separate rooms, played the roles of buyer and seller engaged in negotiations either by telephone (audio-conferencing) or Lotus Notes (computer conferencing). In both low and high conflict, the efficiency aspects of audio-conferencing — a richer medium in which more communication can take place more quickly — overshadowed any negative social cues transmitted.

Keywords: audio-conferencing; communication media; computer conferencing; dispersed negotiation; negotiation support systems

INTRODUCTION

Business collaboration is now possible anywhere in real-time, making it location independent. This trend has brought the management of dispersed decision-making activities to the forefront as a crucial managerial function (Chidambaram &

Jones, 1993). Dispersed meetings can now be facilitated by a variety of electronic communication media, such as audio-conferencing, video-conferencing, computer conferencing, and electronic mail. What is the impact of various types of electronic communication in different task environments? Previous communication research has already shown the dramatic effects that electronic media can have on communication in general (Bazerman & Carroll, 1987) and on mixed-motive tasks such as negotiation in particular (McGrath, 1984). Furthermore, the amount of richness inherent in a communication medium is also crucial to understanding its impact on negotiation outcomes (Daft & Lengel, 1986).

PURPOSE

This paper presents the results of an experiment that examined the effectiveness of a computerized negotiation support system (NSS) in supporting bargaining carried out in a dispersed, but synchronous setting. The focus of the study was to determine the relative effectiveness of computer conferencing and audio-conferencing — two communication media varying significantly in media richness — when using an NSS in a dispersed setting. The results of the study shed light on the following questions:

1. Which type of communication medium is more effective when using an NSS in a dispersed setting — computer conferencing or audio-conferencing?
2. How does the amount of conflict involved in a negotiation impact the effectiveness of a communication medium when using an NSS in a dispersed setting?

The paper is organized as follows. The review of the literature related to this study is divided into three sections, with the first focusing on negotiation support systems, the second on the role of conflict level in negotiations, and the third on the role of media richness in negotiations. The research model that serves as a foundation for the present research is presented, followed by the hypotheses tested in the study, the research methodology, the statistical analysis and results, a discussion of the results, and finally the conclusions reached from the results of the study.

NEGOTIATION SUPPORT SYSTEMS

Since first being used in the 1960s, computer support for negotiations has been employed in the form of stand-alone decision support systems, used to support either individual negotiators or both sides in a negotiation, and by various forms of electronic communication. NSSs are a category of group support systems (GSSs) designed especially to support decision-makers in non-cooperative, mixed-motive tasks. At a minimum, an NSS includes an individual decision support system (DSS) for each party in the negotiation plus an electronic communication channel between the parties (Lim & Benbasat, 1992-1993). Also suggested is the idea of a full-featured session-oriented NSS (Anson & Jelassi, 1990; Carmel et al., 1993; DeSanctis & Gallupe, 1987; Jelassi & Foroughi, 1989), which offers a structured negotiation process, DSS support, elec-