Introducing E-collaboration Technologies into your Organization: Opportunities and Challenges

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ABSTRACT

The purpose of this paper is the understanding of technical capabilities and the reasons for the popularity and widespread utilization of e-collaboration technologies by an increasing number of organizations. The paper examines the technical capabilities of eleven such systems. E-collaboration technologies bring together decision makers from around the globe to participate, collaborate, and coordinate diverse decision making tasks at a moderate cost. These tools expedite the implementation of complex decisions in manufacturing, marketing, and product design by bringing key executives into a virtual decision making room regardless of their physical locations. The Internet, its services, and supporting technologies have made e-collaboration available and accessible to nearly everybody that is connected to the Internet. Web 2.0 technologies have significantly enhanced the interactivness and user friendliness of these systems. This paper examines the evolution of e-collaboration technologies by reviewing groupware and electronic meeting systems and then explores Web 2.0-based e-collaboration systems. The paper then explains the new generation of e-collaboration technologies including telepresence and virtual worlds and their decision-making capabilities and offers some concluding remarks.

INTRODUCTION

In today's business environment, decision-makers often work in teams, and e-collaboration technologies are giving them a powerful tool to perform their duties in an efficient and effective manner from around the globe. E-collaboration technologies enable comprehensive distance collaboration for product development, manufacturing, and marketing. Because of their popularity, most major vendors are competing to enter this market or increase their market

share in this fast-growing field.

Another trend that has added to the popularity of e-collaboration technologies in recent years is the increased interest in the creation of virtual organizations, which are networks of independent companies, suppliers, customers, and manufacturers connected via information technologies so that they can share skills and costs and have access to each other's markets. Also virtual teams increasingly use e-collaboration technologies in order to implement complex organizational decisions in a timely manner. Telecommuters are among the other fast growing segment of the workforce that use e-collaboration technologies for day-to-day operations.

A virtual organization doesn't need central offices or an organizational hierarchy for participants to contribute their expertise. Advantages of virtual organizations include the following (Klein, 1994):

- Each participating company can focus on what it does best, thus improving the ability to meet customers' needs.

- Because skills are shared among participating companies, the cost of hiring additional employees is reduced.

- Companies can respond to customers faster and more efficiently.

- The time needed to develop new products is reduced.

- Products can be customized more to respond to customers' needs.

In 2001, Dell, Microsoft, and Unisys Corporation created a partnership to design a voting system for several U.S. states. Microsoft offered software, Dell offered hardware, and Unisys served as the systems integrator. This example illustrates the principle of virtual organizations—i.e., that several organizations working together can do what one organization can't. The key enabler for this growing phenomenal is "e-collaboration" technologies. These systems use computer, the Internet, and other network systems in order to connect decision makers around the globe. Smartphones, handheld devices, tablets, iPad have added increased power and popularity to e-collaboration technologies. So what is e-collaboration? For the purpose of this paper we define

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e-collaboration as using a combination of hardware, software, and communication technologies that enable decision-makers around the globe to communicate, participate, and collaborate in decision making activities. The Internet, its services, and supporting technologies play a major role in its popularity and for its efficiency and effectiveness. Using e-collaboration geography does not matter. Information can be collected anywhere, processed anywhere, delivered to whomever throughout the globe. The paper reviews the evolution of e-collaboration systems and explains the capabilities of electronic meeting systems and groupware as the foundation of this technology (Kock and Nosek, 2005). The paper highlights the capabilities of Web 2.0 technologies and its support for e-collaboration tools. The paper explores the new generation of e-collaboration technologies including telepresence systems and virtual worlds. Finally the paper offers summary and concluding remarks.

CONCLUSION

As the organizations become more cost conscious, teams become more geographically dispersed, and the Internet popularity and acceptance increase, more organizations will use e-collaboration technologies to achieve their productivity goals. Simple audio and video conferencing platforms have evolved into sophisticated virtual decision-making environments that are amazingly close to a real life face-to-face meeting. Cost saving, improved productivity, convenience, and enhanced capabilities offered by these decision-making tools have made them a household name in modern corporations.

Enhanced capabilities offered by mobile devices, improved capabilities and sophisticated services offered by the Internet and cost reduction of e-collaboration technologies have made them affordable even to small and mid-size organizations. As we move from Web 2.0 to Web 3.0 and beyond and the industry offers further improvements in telepresence systems, e-collaboration technologies should continue to serve as a true decision making companion for years to come. This paper explored three distinct generations of e-collaboration technologies and examined their technical and decision making capabilities and highlighted advanced

features to be expected from the new generation of this fast growing technology. Among the challenges to overcome are security issues and measure and the acceptance of these technologies by key decision makers. The implementation of a comprehensive security program and also enhancing the awareness of key decision makers regarding the strengths and limitations of e-collaboration technologies should reduce the challenges of introducing these technologies into your organization.

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