

## *: How does the use of a Communications-Driven DSS impact a decision-making meeting?*

by Dan Power

Communications and computing technologies have made it possible to have distributed decision-making meetings. Initially such meetings employed a narrow channel like a telephone connection and a fax machine for a synchronous meeting or a computer-based bulletin board for an asynchronous meeting. As communications bandwidth has expanded and software has improved, the possibilities for Communications-Driven DSS have also broadened.

As Communications-Driven DSS have evolved, companies/organizations have become more geographically dispersed and more work is now often performed by distributed teams. During the past 4 months, I have been working with a distributed team of people to establish the Midwest United States Chapter of the Association for Information Systems (<http://www.sba.uwm.edu/MWAIS>). Traditionally we would have used extensive email and one-to-one phone calls to make decisions. We wanted more interactive group participation in decision making so we began having multi-party conference calls on November 7, 2005. We had our share of problems finding times to meet, dealing with differences in time zones, and technology glitches in making the actual connections. BUT we were able to meet and make shared decisions. Our meeting minutes document the decisions we made. The major problem we had was that the teleconferencing system was limited to 5 distributed participants. On January 23, 2006 we agreed to evaluate an online video conferencing system from Marratech as a replacement for the voice teleconferencing. We have had two subsequent meetings on January 30 and February 6, 2006 with 5 and 8 participants respectively. This Ask Dan! is primarily based upon my participant observations.

The expanded DSS framework (Power, 2002) defines Communications-Driven DSS as systems that use network and communications technologies to facilitate decision-making collaboration and communication. Communications technologies are central to supporting decision-making. Technologies include: LANs, WANs, Internet, ISDN, and Virtual Private Networks. Tools used include groupware, Videoconferencing, and Bulletin Boards.

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The current Treasurer of MWAIS, Chelley Vician, Associate Professor of Management Information Systems at Michigan Technological University (<http://www.mtu.edu>) in Houghton, Michigan, arranged for us to use the Michigan Tech Marratech® server (<http://emeeting.mtu.edu>). The Marratech website (<http://www.marratech.com>) describes the technology scenario. "Imagine holding meetings and video conferencing on the web, face-to-face, whenever you want. To talk, see each other and share applications and documents without being in the same room, the same building, or even the same country - that's exactly what Marratech® will do for you."

To participate in the video conferences I purchased a Logitech QuickCam IM with a headset for approximately USD\$35 at Wal-Mart. The camera has a flexible clip so I could mount it easily on the top of my flat panel display. Installation was easy. I also downloaded and installed the free Marratech client software. Chelley sent me some directions and a web link. I signed on about a half hour prior to the first meeting on January 30 and Chelley helped familiarize me with the operation of the talk button and the whiteboard. I had trouble remembering to push the talk button so I changed the setting so that my microphone was always "on". With the headset that change didn't seem to create a problem.

Spradley in his book on Participant Observation (1980) prescribes methods for conducting ethnographic research. This Ask Dan! is a preliminary set of observations and notes. My inquiry about the impact of a specific Communications-Driven DSS on decision behavior and decision-making meetings is just beginning. I'm also a newcomer to ethnographic research.

It seems that key research issues for Communications-Driven DSS include impacts on group processes, performance, awareness and affect, design issues associated with multi-user interfaces, control and direction of such meetings, communication and coordination problems and benefits within the group, and the role and impact of a shared information space. Communications-Driven Decision Support Systems are often categorized according to a time/location matrix using the distinction between same time (synchronous) and different times (asynchronous), and between same place (face-to-face) and different places (distributed). My current focus is on technology-supported, synchronous, on-going, interacting, distributed

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decision-making groups. I sent my colleagues on the Board of Directors of MWAIS, Ilze Zigurs, Vance Wilson, and Chelley Vician, an initial set of 10 questions on January 31, 2006 following our first video conference. We are all interested in this topic and I have received their responses, but I'm waiting to read and analyze their responses until after I write this column. So I'll use my notes and answer the same questions I sent them in the following paragraphs.

1. What did you like and dislike about the audio conferencing? What worked well and what needs to be improved?

The audio conferencing we used generally worked well. The sound quality was good, but my phone had some static on a few occasions. Also, on a few occasions we had problems getting everyone in the same conference and my guess is that the user interface for setting up the voice conference calls was primitive. The meetings seemed impersonal, but we stayed focus on the tasks and seemed to reach agreement quickly.

2. What did you like and dislike about the video conferencing? What worked well and what needs to be improved?

The conference on January 30, 2006 was my first attempt at a video conference over the Internet with multiple participants. I had tried using Microsoft Netmeeting on a few occasions in approximately 2001 and I have been in a number of group video conferences, but this was a new experience for me. I liked seeing the people in our group. I have met Ilze, Vance and Chelley at conferences, but it became more personal to see their moving images on my computer. Only Vance and Chelley had cameras during the first meeting and I had to "remember" what Ilze looked like. We gained a team member during our first video conference, Matt Germonprez, University of Wisconsin-Eau Claire who is the new Membership Chair, and it would have been great to "see" him, but he didn't have a camera. The meeting was new and novel for me, I could see people. The technology novelty led to some experimentation. We finally used the whiteboard for an agenda and that helped create a task orientation. We were doing online work like sending emails and processing documents during the meeting. Some people also used the Chat feature for side conversations. The first video conference had a "social" component as well as the "task" component.

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3. How would you compare the meeting with video conferencing to our last audio conferencing meeting?

The video conference was less organized and we engaged in more socializing. In retrospect the videoconference was fun. That observation may be biased by my technology orientation. The length of the meeting was similar to prior meetings about 1 hour, but it was probably not as productive given our unfamiliarity with the technology.

4. Is one type of conferencing always superior or inferior to the other? If not, explain based upon your experience?

Based upon my experiences, I think that a video conference will always be superior, but the audio conferencing is adequate for many tasks. Sitting here typing I can not imagine returning to audio conferencing if video conferencing is available. The "richness" of the experience has stayed with me for almost 2 weeks and the second experience on February 6 reinforced my impressions. I had the wrong time for the meeting on February 6 so I signed on 20 minutes late and that was disruptive and disconcerting for me and probably for the other members of the group as well. We have all arrived late for a meeting and the feeling is about the same if not worse for a virtual. In general, the audio conferencing seemed more focused and might work best for a quick meeting or consultation.

5. How did you feel about "seeing some of the participants" and not others?

As I mentioned, I liked "seeing" the participants in the meeting. I wasn't looking at the pictures much, especially my own. My focus was more on what was being said and the whiteboard. Everyone in a distributed video conference should have a camera, voice and a high-speed internet connection. Those with less capability seemed like "second class" participants.

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6. Who and how was the meeting conducted in the audio only vs. audio and video mode?

In the audio only conferences, I planned an agenda and used a "round robin" approach to insure everyone had input on each issue. I worked hard to ensure participation. It was much harder for me to facilitate the meeting in the video conferencing mode due to my lack of familiarity with the technology. I deferred to Chelley Vician who was our technology expert. I didn't realize this problem would occur so I hadn't asked Chelley in advance to prepare to assume the leadership role. It worked out, but the meeting leader needs to understand the features of the technology and prepare for a technology supported meeting like one would for a face-to-face meeting. My guess is that even more preparation is needed for a technology-supported meeting. In our second meeting, I arrived late but Chelley had assumed a coordinating role and notes/agenda were on the whiteboard. The group functioned without me for about 20 minutes. My guess is that one or more of the participants finally took charge after a few minutes of "waiting".

7. Did you notice any decision process issues in either conferencing mode that was especially interesting or unusual?

The audio conferences were very linear in terms of the decision process. As I noted, more was happening using secondary channels like Chat in the video conferencing and hence the decision process seemed more non-linear and even disjointed. The altered process may have been due more to my process skills in the video conference than the presence of the side channels. I'll try to track our process in future meetings.

8. Do you think the dynamics of our decision meeting will change as our group becomes more familiar with video conferencing? If so, how? What is the impact of repeated use of video conferencing on group decision making?

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YES. As we become more familiar with the technology, the novelty will wear off and we will learn new behaviors for participating in meetings conducted using a Communications-Driven DSS. I'm optimistic that we can make this technology solution work to enhance and facilitate shared decision making in our group.

9. How do you think a newcomer feels joining an established group using a video conference?

I think it might have been a bit intimidating for a newcomer. The person probably feels like any newcomer joining an established group. The use of technology may have made the situation harder for a newcomer.

10. What problems will we encounter with a larger group (8-9 people) in a video conference versus having a smaller 5 person group?

As noted the plan for the February 6, 2006 meeting was to expand the size of the group. We are planning the first inaugural conference of MWAIS in Grand Rapids, Michigan on May 5-6, 2006, so we wanted to meet with the Conference Co-chairs Simha Magal and Paul Leidig of Grand Valley State University, and Program Co-Chairs Barbara Klein and Cheri Speier. My late arrival makes it hard for me to describe and document what happened. One group member had bandwidth problems and had trouble joining. I'm sure the newcomers needed to learn about the technology and that also disrupted the meeting.

### References

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