DecisionWeb: a tool for asynchronous meeting support

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Extended Abstract

Among the many types of group activities that are supported by various group support technologies, perhaps the most widely studied is the group meeting. Meeting support systems have had two main goals in the past 20 years - *supporting* face-to-face (FTF) meetings and *replacing* face-to-face meetings with non-FTF meetings.

As FTF meetings first became supported by the use of computers, researchers developed a variety of software tools to assist the participants' activities. Group support and electronic meeting support systems were developed to create "electronic" communication instead of verbal communication, using structured problem-solving techniques to make the outcomes of meetings more efficient and effective.

In the 1980s, thanks to the local and wide area network infrastructure, more research was undertaken with non-FTF meetings, including computer-mediated communication. Although it has been argued that the most modalities for group communication are available at a FTF meeting, in some cases bringing people together is just too costly or logistically impossible. Our focus here is on *computer conferencing*, described by others as one of the three types of computer-mediated communication (besides electronic mailing and bulletin boards) used in *asynchronous, distributed* (or "any time/any place") context. It is increasingly apparent that a large variety of meetings, when properly supported by computer and by group facilitators, can be conducted asynchronously at least as effectively and efficiently as in a FTF context. This paper presents a meeting or conferencing system called *DecisionWeb*, designed for supporting such asynchronous, distributed problem solving and decision making.

Although DecisionWeb has been used, as have other computer conferencing tools, to replace at least some of the major activities that occur within FTF meetings (e.g., constructing lists of problems, opportunities, alternatives, or criteria), some situations demand that problem solvers must eventually meet together in the same room. In these cases, non-FTF meetings can be advantageous in the preparation and organization of FTF meetings. This is an important, third goal for meeting support systems developers - *preparing* for FTF meetings through asynchronous, distributed meetings.

Until recently, creating a meeting support system demanded fairly complex development work, including the establishment of appropriate hardware infrastructure for network communication, as well as composition of communications software for both hardware-related purposes and meeting-dependent procedures. Today, the situation has changed. Composite systems and methods can be built up from simple, pre-fabricated elements considered as *building blocks*. The emergence of basic group support tools (such as e-mail, World Wide Web, bulletin board, whiteboard, etc.) has created an important new opportunity for research and development, with the opportunity for constructing more complex systems. We have applied this building block principle to create a meeting support system, DecisionWeb, from existing groupware tools and problem-solving techniques that can be directed at the problem of providing more efficient and effective preparation for FTF meetings. The following criteria were defined as making the DecisionWeb system unique among other computer conferencing systems - reliant on any of the existing infrastructure of Internet facilities; usable in a variety of meeting/conferencing circumstances; facilitated, to insure more effective meeting outcomes; and inexpensive to initiate and routinely use.

As a groupware architecture, DecisionWeb connects participants in a *star-like* model. The basic communication channel is the Internet or any network including LANs or WANs. The sending and receiving of messages take place in one of many simple ways, using either (i) e-mail messages, (ii) e-mail attachments, (iii) file transfer by FTP, or (iv) file transfer by World Wide Web, depending on the user's easiest network access.

Each participant has the same "user" software to be able to read and write messages in a standardized way. Thus, the facilitator gets messages from every participant in the same format, and facilitator messages can be read easily by each participant. The system is also star-like with respect to group communication and interaction. The focus is not on intensive interactions among participants but on structured contributions to the group task. However, participants may send messages directly to each other at any time, though such interactions are not supported by structured way. The DecisionWeb software must be used for joining in any one of the *stages* of a meeting. A typical DecisionWeb conference moves through three stages: list building, categorization, and prioritization. These stages originated from non-computerized, structured problem-solving techniques of generating, organizing, and evaluating ideas.

The problem we illustrate here is *setting an agenda* which often is the responsibility of a group of people situated in geographically dispersed locations. This task is extremely important in the preparation of a FTF meeting. Since FTF meetings are relatively expensive when the organizers and participants arrive from different locations, there usually is a need to make FTF discussion as efficient as possible. One solution to achieve this result is creating a clear, properly scheduled agenda according to which each participant can prepare with information, questions, and concerns. The agenda setting situation can be well supported by DecisionWeb.

For this study, we chose the task of *setting discussion topics for a panel at an international conference*. Panelists were located in five cities and three countries. Altogether 28 categories of topics (culled from 66 separate proposals) were organized, rated, and ranked; 10 topics were selected which the entire panel deemed as important to address. The implication of this successful application is that complex asynchronous meeting support systems now are becoming available. Systems such as DecisionWeb will offer increasingly inexpensive and efficient means of convening "any time/any place" conferences world-wide with virtually no lead time for special arrangements or training requirements.