

Group DSS: What is a Group Decision Support System (GDSS)? How do GDSS work?

Let's start with a definition. A Group Decision Support System (GDSS) is an interactive, computer-based system that helps a team of decision-makers solve problems and make choices. GDSS are targeted to supporting groups in analyzing problem situations and in performing group decision-making tasks (cf., DeSanctis and Gallupe, 1987; Huber, 1984). The name is very descriptive. A GDSS is a hybrid system that uses an elaborate communications infrastructure and heuristic and quantitative models to support decision-making.

Over the past few years I have received a number of questions related to Group Decision Support Systems and groupware. I'll try to answer some of them a bit more systematically in this Ask Dan! In Reply to a question on GDSS posted by Teong Siew Meng *"Describe the principal characteristics of a traditional Decision Room-based Group Decision Support System (GDSS)."*

A Decision Room refers to the physical arrangement for using a Group DSS. In a single room, workstations are made available to participants. The objective in using a Decision Room is to enhance and improve the group's decision-making process.

Characteristics of a Decision Room include: 1) Each participant has a computer workstation; 2) A leader (facilitator) coordinates the meeting; 3) The room has a display screen that all participants can view; 4) Computers are networked and client/server architecture is used; and 5) Specialized software is available to all participants

"Discuss relevant design issues relating to the development of GDSS."

The design issues are changing because of the Web. Researchers focused for many years on what tools to provide and how to collect and aggregate input. Those issues are still important, but I think output display and "mixed" meetings (some participants are meeting at the same time and other will participate at different times) are creating new design challenges...

In Reply to a question on GDSS posted by Scott Sobek *"Would Email and Lotus Notes be considered GDSS? How about Domino?"*

I would classify them as group support systems or groupware, but not as group decision support systems. GDSS should have tools that specifically support collaborative decision making.

In Reply to another Email *"Why don't you have more information on GDSS at DSSResources.COM?"*

This type of question is the hardest for me to answer. It points up the limits of maintaining a Web site. I haven't done much research on GDSS -- only one paper with some colleagues (Roth et al., 1993) and I worked with George Huber in the early 80's. I have used groupware and Ventana's GroupSystems, but I hadn't planned to create many GDSS resources for DSSResources.COM. Chapter 8 of my DSS Hyperbook book discusses "Implementing Communications-Driven and Group Decision Support Systems". I have classified groupware, collaborative computing, computer-supported cooperative work systems, electronic meeting systems, GDSS, and video conferencing all together. I refer to this class of information systems as Communications-Driven Decision Support Systems.

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Until recently I relied on other sites for Group DSS links like GroupWare Central. That approach hasn't worked too well and I'm trying to remedy the limited materials on Communications-Driven DSS and especially GDSS at DSSResources.COM.

Check the page on Communications-Driven DSS Resources and the related page on Multimedia Decision Support. Please suggest links and other resources.

References

DeSanctis, G., and R. Gallupe, "A Foundation for the Study of Group Decision Support Systems," *Management Science*, May 1987, 33(5).

Huber, G. P., "Issues in the Design of Group Support Systems," *MIS Quarterly*, Sept. 1984.

Roth, R., Wood, II, W., Hahm, R. and Power, D., "Building Group Decision Support Rooms Using 'Off-the-Shelf' Computing Resources: Prospects and Issues", *Data Base*, June 1993, 24(2), 21-31.

The above response is from Power, D., What is a Group Decision Support System? DSS News, Vol. 2, No. 7, March 25, 2001.

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