: When is a group DSS most appropriate?

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Communications-driven and model-driven group decision support systems (GDSS) help people overcome group communication and decision making problems. A GDSS is an interactive, computer-based system that facilitates solution of problems and making choices by decision-makers working as a group. The most basic group support software emphasizes communication tools including generating ideas, supporting discussion, and messaging. More sophisticated model-driven group DSS include decision modeling tools and structured group decision techniques to improve group performance. Managers need to know what group DSS should be used when?

A GDSS is either a communications-driven DSS that emphasizes the use of communications or a model-driven DSS that emphasizes group decision models. Group DSS is a broad category of software that provides shared access to data and decision aiding functionality. A GDSS may be used in a decision room or in a distributed meeting situation. A decision room is a physical arrangement for a group DSS in which workstations are available to participants. Simple data conferencing is a communication session in which two or more participants are sharing computer-based data in real-time. Any participants' keyboard/mouse can control screens of other participants. Voice communication may use a totally separate voice connection or simultaneous voice and data technology may be used.

Research suggests Group DSS can improve productivity of participants and result in more ideas. The effectiveness of a GDSS is a function of the design of the software, the composition and skills of group members, the task that is being supported, and the context of the meeting. Context refers to situational factors like the meeting room design, time pressures, and experience of and use of a facilitator.

Intuitively we know that no one set of tools or processes is best in all group decision making circumstances. DeSanctis and Gallupe present a typology with three dimensions that they argue are crucial for designing or choosing Group Support Software. The three dimensions are task type, group size, and group proximity.

Task Type

The particular group task is an important factor to consider in communications and model-driven GDSS evaluation and selection. The attributes of the task determine the need for information and

the communication practices in the group. Group goals and tasks include:

1) Generating ideas and actions. Includes planning and creativity.

2) Choosing Alternatives. Includes intellective tasks (choose the right answer) and preference tasks (select one; no right answer)

3) Negotiating Solutions. Includes resolving differing viewpoints as well as dealing with conflicting motives.

Group Size

Very small groups of 2 to 3 members that can meet face to face generally do not need extensive support from computerized tools. Very large groups may need much more sophisticated decision support tools than medium sized groups.

Group Proximity

"Decision room" groups that can meet at the same time and same place probably do not need as many communication and decision aiding tools as distributed groups that are meeting at different times and in different places.

Task Type and Media Type

A wide variety of tools can support group communication and collaboration. A number of studies have examined the relationship between task type and media type. Table 8.2 summarizes current thinking about which media best fits which types of decision tasks. In general, computer mediated communication is a good fit for generating ideas and plans. Negotiating conflicts of interest should be done face-to-face and computer support is not necessarily helpful.

Managers must decide "What group communication and collaboration support tools are appropriate

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or 'best' in a given situation?" Diverse GDSS tools like conferencing, brainstorming, video and audio conferencing, and whiteboards are usually included in integrated group support product. Having an integrated group support tool set lets participants choose different tools during a meeting without needing to change the software meeting environment.

Text Communications-driven

Model-driven

Video Communications-driven

Face-to-Face Meetings

Generating ideas and plans

good fit

marginal fit
   info too rich

poor fit
   info too rich

poor fit
   info too rich

Choosing a correct answer: an   intellective task

marginal fit
   medium too constrained

good fit

good fit

poor fit
   info too rich

Choosing preferred answer: a   judgment task

poor fit
  medium too constrained

good fit

good fit

marginal fit
  info too rich

Negotiating conflicts of interest

poor fit
  medium too constrained

poor fit
  medium too constrained

marginal fit
  info too lean

good fit

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