

: *What is a computer supported special decision study?*

by Dan Power

Editor, DSSResources.com

Frequently, computerized tools are used to prepare one-time special studies and reports in unstructured, nonroutine decision situations. This is the job of managers, management scientists, financial analysts and marketing researchers. We support these decision situations with computerized systems; the support focuses on retrieving information, creating a graphical presentation, summarizing data in tables, and preparing quantitative analyses. An analyst figures out what the data and analyses mean and summarizes the findings. Managers define information needs and usually specialists develop a computerized analysis to provide the needed information.

For example, a manager may be concerned about customer turnover and request a special study to identify characteristics of customers who are loyal and frequent buyers and those who are not. The study may involve data mining, statistical analysis, and possibly additional data collection.

As another example, a manager may want to compare the costs and benefits of building versus buying a component part or request a tradeoff study on building a new plant versus expanding the current plant.

We often develop computerized quantitative models as part of a decision support special study. We sometimes incorrectly identify these applications as DSS. In most cases in a special study, the application user interface is not as sophisticated and feature-laden as is one found in a DSS. Examples of one-time special studies that use models include merger and acquisition analysis, lease versus purchase decisions, new venture analysis, capital budgeting, and equipment replacement decisions.

A general tool used for special studies is called Cost/Benefits analysis. The benefits and costs are expressed in money terms, and are adjusted for the time value of money. The analyst will test alternative assumptions and conduct "what if?" analyses including sensitivity analysis.

When classifying computer applications, applying the seven characteristics of a decision support system can help avoid classifying model-based special studies as model-driven DSS. The seven characteristics of a DSS are: 1) Facilitation, 2) Interaction; 3) Ancillary, 4) Repeated Use, 5) Task-oriented, 6) Identifiable, and 7) Decision Impact (cf., Power,2003).

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Special studies use a broad range of computerized decision support. A manager may conduct a one-time analysis using Excel, a marketing researcher may use a data-mining tool for a market basket analysis, or a financial analyst may conduct a cost-benefit analysis for a new product.

References

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Author: Daniel Power

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