

## **MANAGEMENT**

### **PRINCIPLES AND APPLICATIONS**

#### **UNIT-2**

#### **PART-XXI**

#### **TYPES OF DECISION SUPPORT SYSTEMS**

As mentioned earlier, DSS can be classified in many different categories. Amongst the common ones are the following:

**i. Data driven DSS**

These DSS has file drawer systems, data analysis systems, analysis information systems, data warehousing and emphasizes access to and manipulation of large databases of structured data.

**ii. Model driven**

The underlying model that drives the DSS can come from various disciplines or areas of speciality and might include accounting models, financial models, The underlying model that drives the DSS can come from various disciplines representation models, optimization models, etc. With model drive DSS the

emphasize is on access to and manipulation of a model, rather than data, i.e., it uses data and parameters to aid decision makers in analysing a situation. These systems usually are not data intensive and consequently are not linked to very large databases.

**iii. Knowledge driven**

These systems provide recommendation and/or suggestion schemes which aids the user in selecting an appropriate alternative to a problem at hand Knowledge driven DSS are often referred to as management expert systems intelligent decision support systems. They focus on knowledge and recommend actions to managers based on an analysis of a certain knowledge base. More it has special problem-solving expertise and are closely related to data mining i.e., sifting through large amounts of data to produce contend relationships.

**iv. Document driven**

These systems help managers retrieve and manage unstructured documents and web pages by integrating a variety of storage and processing technologies to provide complete document retrieval and analysis. It also ac documents such as company policies and procedures, product specification catalogues, corporate historical documents, minutes of meetings, important correspondence, corporate records, etc. and are usually driven by a task-specific search engine.

**v. Communication driven**

This breed of DSS is often called group decision support systems (GDSS). They are a special type of hybrid DSS that emphasizes the use of communications and decision models intended to facilitate the solution of problems by decision makers working together as a group. GDSS supports electronic communication, scheduling, document sharing and other group productivity and decision enhancing activities and involves technologies such as two-way interactive video, bulletin boards, e-mail, etc.

**vi. Inter-and Intra-organization DSS**

These systems are driven by the rapid growth of internet and other networking technologies such as broadband WAN's LAN's, WIP, etc. Inter organization DSS are used to serve companies stakeholders (customers, suppliers. etc.), whereas intra-organization DSS are more directed towards individuals inside the company and specific user groups. The latter, because of their stricter control, are often stand-alone units inside the firm.

**vii. New breeds of DSS**

- Hybrid Systems, which are combinations units using aspects of more than one different type of DSS. A very popular example is Web based DSS which can be driven by a combination of different models such as document driven, communication driven and knowledge drive. Web-based DSS are computerized systems that delivers decision support information or decision support tools to a manager or business analyst using a "thin-client" Web browser like Netscape Navigator or Internet Explorer.

- On-line Analytical Processing (OLAP)-a category of software technology that enables analysts, managers and executives to gain insight into data through fast, consistent, interactive access to a wide variety of possible views of information that has been transformed from raw data to reflect the real dimensionality of the enterprise as understood by the user.

Designed for managers looking to make sense of their information, OLAP tools structure data hierarchically-the way managers think of their enterprises. but also allows business analysts to rotate that data, changing the relationships to get more detailed insight into corporate information.

- OLAP and web-based Decision Support Systems are by far the more popular Decision Support Systems these days. Their definition and functionality extend far beyond the scope of this paper and consequently we will not explore these systems in detail. Many other Decision Support Systems are on the market today, but to explore all of them would, 'for now, be a farcical objective.

Keeping the various distinctions and classifications of DSS in mind, a DSS should be described in terms of:

- The dominant technology component or model underlying the system
- Targeted users

- Specific purpose
- Primary deployment of technology (mainframe, client/server LAN, web-based)

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