

: Are Executive Information Systems (EIS) needed?

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At least 30 years ago, Chief Executive Officers (CEOs) began going online for information (cf., Rockhart, 1979; Rockhart and Treacy, 1982; Houdeshel and Watson, 1987). Specialized Executive Information Systems (EIS) were developed to support senior management. By the mid-1990s, these systems were losing favor in IT departments and in corporate board rooms. Some perceived having a system only for executives was elitist, others saw EIS briefing books as hard to maintain, or under used and redundant with other systems, and some managers felt EIS had low quality data. Some IT managers saw web-based, enterprise-wide business intelligence systems as a replacement. So what do we need today? Modern EIS? Decision Intelligence Systems (Imhoff and White, 8/27/2008)? Portals? or Executive user views to the enterprise-wide data warehouse?

Let's look back. Jack Rockart's (1979, 1982) field research stimulated the development of executive information systems (EIS) and executive support systems (ESS). These systems evolved from single user, model-driven decision support systems and from the development of new relational database products. The first EIS generally used pre-defined information displays maintained by analysts for senior executives. For example, in the Fall of 1978, Lockheed-Georgia began development of an EIS called Management Information and Decision Support (MIDS) system (cf., Houdeshel and Watson, 1987).

An Executive Information System (EIS) is a computerized system intended to provide current and appropriate information to support executive decision-making. The emphasis has been on graphical displays and an easy-to-use interface that presents information from the corporate database. Also, EIS often provide canned reports or briefing books to top-level executives. An EIS should offer strong reporting and drill-down capabilities. The goal was to have executives as "hands-on" users of the EIS for email, calendar, reading reports, finding information and monitoring key performance indicators.

Executive Information Systems differed from traditional information systems in a number of ways (cf., Kelley, 1994):

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1. EIS were specifically tailored to an executive's information needs. So there was a targeted user group.
2. Managers using EIS were able to access data about specific issues and problems as well as read aggregated reports.
3. EIS provided extensive on-line analysis tools including trend analysis, exception reporting and "drill-down" capability.
4. EIS accessed a broad range of internal and external data.

In my opinion, we still need targeted systems like EIS. Certainly BI, DSS, Group DSS and EIS applications are overlapping. The features, intended audience, and development technology used are often common between these applications. In addition, many decision support technologies have related and overlapping purposes. Differentiating the concept of an executive information system (EIS) may help IS/IT analysts understand senior executive decision support needs. Some specific information system capability should focus on the direct information needs for decision making of senior managers. EIS were intended to help senior executives find problems, identify opportunities, forecast trends and make "fact based" decisions. These remain important goals.

Executive Information Systems, business intelligence and data warehousing technologies are converging in the marketplace. Twenty years ago, EIS used proprietary databases that required many staff people to update, maintain and create. This approach was very expensive and remains hard to justify. Organizing external data may however be best done in a dedicated database. Today executives need both structured and unstructured external data. Realistically external data becomes obsolete quickly and IS/IT staff aren't the appropriate maintainers for such data. Today data warehouses, business intelligence technologies, the Web and OLAP have made Executive Information Systems potentially more powerful and more practical.

Modern EIS should report key results to managers. Performance measures in an EIS

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must be easy to understand and collect. Wherever possible, data should be collected as part of routine work processes. An EIS should not add substantially to the workload of managers or staff. EIS should create value.

So a modern EIS should be an enterprise-wide, data-driven DSS that helps senior managers analyze, compare, and highlight trends in key internal and external variables, a store of reports and briefings, and a tool to monitor performance and identify opportunities and problems. Effective EIS should increase the ability of senior executives to monitor many diverse activities and may help reengineer decision tasks and increase managerial productivity by reducing the number of management levels in an organization.

An Executive Information System (EIS) was intended as a type of management information system to facilitate and support the information and decision making needs of senior executives. According to Wikipedia, an EIS is commonly considered as a specialized form of a Decision Support System (DSS).

EIS, portals, strategic business intelligence and data warehousing technologies have been converging in the marketplace. Modern EIS are needed.

We need information systems that are easy for senior executives to use! Modern EIS should provide timely delivery of secure, sensitive decision relevant company information; present information in a context that helps executives understand what is important and what is happening; provide filters and drill-down to reduce data overload; assist in tracking events, finding reports and monitoring results; and finally, a modern EIS should increase the efficiency and effectiveness of executive decision makers.

The truth is that it does not matter what we call information systems targeted to senior executives. In reality, executives should be an important targeted user group for corporate information. Some would say the most important user group! So let's commit resources and build modern EIS, or create decision intelligence systems, or create an executive portal with links to appropriate decision support applications.

References

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Houdeshel, G. and H. Watson, "The Management Information and Decision Support (MIDS) System at Lockheed-Georgia", MIS Quarterly, 11, 1, March 1987, 127-140.

Imhoff, C. and C. White, "Full Circle: Decision Intelligence (DSS 2.0)," B-Eye-Network, Published: August 27, 2008, URL <http://www.b-eye-network.com/view/8385> .

Kelly, F., "Implementing an Executive Information System (EIS)", DSSResources.COM, 11/07/2002, HTML File. This is a review paper from 1994 that was featured at ceoreview.com.

Power, D. J., Decision Support Systems Hyperbook, Cedar Falls, IA: DSSResources.COM, HTML version, Fall 2000, URL <http://dssresources.com/dssbook/>.

Power, D.J. A Brief History of Decision Support Systems. DSSResources.COM, World Wide Web, <http://DSSResources.COM/history/dsshistory.html>, version 4.0, March 10, 2007.

Rockart, J. F. "Chief Executives Define Their Own Data Needs," Harvard Business Review, 67, 2 March-April 1979, 81-93.

Rockart, J.F. and M.E. Treacy, "The CEO Goes On-Line," Harvard Business Review, January-February, 1982, 82-88.

Watson, Hugh J. and Frolick, Mark (1992). Executive information systems: Determining information requirements. Information Systems Management, Spring 1992, pp. 37-43.

Watson, Hugh J., and Rainer, R. Kelly Jr. (1991). A manager's guide to executive support systems. Business Horizons, March-April 1991, pp. 44-50.

: *Are Executive Information Systems (EIS) needed?*

Watson, Hugh J., Rainer, R. Kelly, and Houdeshel, George (1992). *Executive Information Systems: Emergence, Development, Impact*. (New York: John Wiley & Sons Inc.)

Watson, H., G., Houdeshel and R. K. Rainer, Jr., *Building Executive Information Systems and other Decision Support Applications*, New York: John Wiley, 1997.

Wikipedia, "Executive Information Systems," URL
http://en.wikipedia.org/wiki/Executive_Information_System .

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