In terms of Ask Dan! email, questions about DSS software and DSS vendors ranks near the top. What DSS product is best? What is the largest DSS software company? What vendors should I look at for my DSS project? These questions can't be answered in any general way. The answers depend upon your situation, criteria, needs, and so forth. I think however that I can discuss what software vendors "dominate the DSS product space".

Ultimately an evaluation of a DSS vendor's product comes down to the company or department level -- can we use the product to develop the specific decision support capabilities our managers need and want. Once we answer that question in the affirmative, then we can examine cost, scalability, maintenance and other important issues. For readers wanting help in evaluating vendors for a specific DSS project check my 1997 article on "choosing enterprise-wide DSS software tips".

Near the beginning of each year industry analysts are tempted to look ahead, to look backwards and/or to bestow awards. This Ask Dan! serves a little bit of each of these purposes. I've consulted the trade press (DM Review, Intelligent Enterprise), the awards lists and nominees (InfoWorld, SIIA) and read the industry analyst's commentaries. I regularly visit vendor web sites and attend vendor conferences when I'm invited. I read many press releases and receive emails from some vendor PR people. Some PR people pay more attention to DSS News and DSSResources.COM than do others. I know I'm heavily influenced by "mind share" issues, i.e., some vendors keep me better informed than do others and I'm more familiar with some products than with others. Mine is not an "objective" answer.

In the discussion that follows keep in mind that Decision Support Systems development software is a broad, heterogeneous category of products. Second, products serve different purposes associated with building different types of DSS. Third, there is ambiguity in the term "dominate". "Dominate" can refer to market share, product quality, product leadership especially product innovation and even DSS "thought leadership". My analysis subjectively rolls all of these issues together. I'm not going to make detailed comparisons of feature lists or report reader surveys or benchmark results. I've organized the following discussion in terms of the five broad DSS categories in my expanded DSS framework (Power, 2002).

Communications-Driven DSS Development Products
The software product that provides the most capabilities for building a customized communications-driven DSS is IBM Lotus Notes/Exchange. The recent case study at DSSResources.COM by Matt Walton "Rebuilding an Emergency Operations Center for NYC following 9/11" showcases what is possible. Notes can be used as a generic communications-driven DSS environment or it can be customized to create a more specific communications-driven DSS. Microsoft is discontinuing NetMeeting. Groove Networks (http://www.groove.net) is aggressively pursuing some innovative solutions.

Data-Driven DSS Development Products
The most common data-driven DSS is built using a data warehouse product and a report and query product (OLAP/business intelligence software). This category involves billions of U.S. dollars in product sales each year. Recently, I bought a used copy of Bill Inmon's 1991 DSS book at Amazon.Com. Inmon's book provided the conceptual foundation for what I call data-driven DSS. Inmon and Ralph Kimball ("Dr. DSS") have had the major impact on what IS practioners think of when the term DSS is used. DM Review and Intelligent Enterprise broadly cover this part of the DSS product space with some overlapping coverage into other DSS product categories.

On October 24, 2003, DM Review announced its top 100 companies serving the business

intelligence community as identified by its readers. The top 5 were: #1 IBM, #2 Oracle, #3 Microsoft, #4 Hewlett-Packard, and #5 Business Objects.

From my perspective, IBM has lost its direction in terms of DSS and especially data-driven DSS. Researchers at IBM were clearly involved in the 1980s and 90s in DSS thought leadership, but that is no longer the case. Oracle database products are used to build data warehouses and marts, but Oracle has always been more oriented to transaction processing than DSS. Microsoft could dominate this space with SQL server and Excel, but there is no overarching DSS vision at Microsoft that I can identify. A Microsoft partner Proclarity is much more attuned to decision support needs and the folks at Proclarity have certainly made their product more visible to me. I'm not certain why Hewlett-Packard made the list. Business Objects sells a business intelligence product and the company was an early innovator in developing technologies for building data-driven DSS; Business Objects does not however dominate the product space, but it is an important vendor of software for building a reasonably sophisticated data-driven DSS. Bill Inmon noted recently (12/18/03) that Business Objects is "the workhorse of the data mart crowd, BO sets the pace for what is meant by end user business intelligence".

My pick for the company that dominates the data-driven DSS product space is NCR Teradata, especially in terms of building a data warehouse. I have had the most contact with Teradata staff of any DSS vendor and if they treat their customers as well as they have treated me (and I've heard they do) that is a big plus. Teradata leads in innovation, its parallel DB technology is superior and its product delivers outstanding query performance. Inmon noted "when it comes to innovation and understanding the value proposition of data warehouse on a vertical basis, nobody can touch NCR Teradata". Teradata software is not the best for building a web-based user interface for a data-driven DSS, but that is probably intentional so they don't undercut Business Objects, Cognos, Hyperion and MicroStrategy. In terms of the front-end for a data-driven DSS (business intelligence software) my pick is MicroStrategy. Inmon says "MicroStrategy has a whole houseful of happy campers". The BI software vendors have targeted various vertical markets and MicroStrategy seems especially strong in retailing.

The BAM (TIBCO) and BPM merchants are changing the dynamics in this product space. Mergers and consolidations are also having an impact. For example, Business Objects acquired Crystal Decisions, Hyperion acquired Brio, and Geac acquired Comshare. Vendors of GIS software (Intergraph) are also moving into this product space as did the vendors of statistical software (SAS, SPSS) in the mid-1990s.

Document-Driven DSS Development Products
I am not an expert on the knowledge management and document management software. So feel free to comment. The company in this product space that I have followed most closely is Documentum. In 2002, Documentum acquired eRoom which was an innovative environment for collaboration and communications-driven decision support. Recently EMC acquired Documentum. I think EMC/Documentum does and will dominate this DSS product space. The Documentum case at DSSResources.COM titled "Optimizing Aircraft Maintenance Operations using a Document-driven DSS" showcases some of the possibilities.

Knowledge-Driven DSS Development Products
In this product space the company that dominates is EXSYS (http://www.exsys.com/). The website proclaims that EXSYS is "the World Leader in Knowledge Automation Expert System Software and Services". It is in my opinion. Exsys CORVID version 3.0 was recently released. EXSYS has been around for almost 20 years, but the Web has really changed the dynamics of this type of DSS. Sophisticated distributed Knowledge-Driven DSS are now really feasible. The case I wrote with

: What vendors dominate the DSS product space?

Craig Pontz of the Pennsylvania Department of Labor and Industry used EXSYS technology. You can find it in the subscriber zone at DSSResources.COM.

Model-Driven DSS Development Products

This product space is the most fragmented and it has some large vertical market vendors. Frontline Systems (http://www.solver.com/) dominates in terms of optimization-based DSS development software. In terms of Excel simulation add-ins, I have had the most contact with Decisioneering/Crystal Ball. The product gets used however more for risk analysis in special decision support studies than for building DSS. Recently, I published a case study from ProModel Healthcare Solutions on a visual simulation-based decision support solution for MeritCare. There is no broad development environment for building model-driven DSS. This product market is not effectively dominated by any single vendor even though Microsoft Excel is the most commonly used development environment for Model-Driven DSS.

Vendors and developers always need to monitor product innovations and that is especially true in the five DSS product space categories discussed above. Please note that Iteration real-time suite (http://www.iteration.com) was named the 2004 technology of the year by InfoWorld. Software and Information Industry Association (http://www.siia.net) 2004 Codie Awards nominees for best business intelligence or knowledge management solution include: Celequest 2.0, Celequest, Inc.; Cymfony Brand Dashboard V2, Cymfony Inc.; Khalix, Longview Solutions; Noetix Enterprise Technology Suite (NETS), Noetix Corp.; and SageAnalyst IMDR, SageMetrics. In the best business software product or service is Ascential Enterprise Integration Suite 7.0 from Ascential Software.

As always your comments are welcomed and DSS software vendors are invited to send me email, press releases, and so forth. If I neglected a vendor, let me know.

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