

PRODUCT SPOTLIGHT

Executive Information Systems

LAN-based EISs are all the rage, but unless you plan carefully, they can fall under the weight of burgeoning databases and user populations

BY MARY BRANDEL

At Lockheed Aeronautical Systems Co. in Marietta, Ga., executives and middle managers love the fact that up-to-the-minute corporate data is delivered to their personal computers. They love the way it appears in a readily understood format. The only thing they don't love about their executive information system (EIS) is the five to 15 seconds it takes to call up a display.

For their part, the IS department isn't so thrilled with the expense of maintaining the in-house-built, host-based EIS. Not only does the system rely on technology so out-of-date that it borders on being un-maintainable, but the department also requires people skilled in expert systems to keep it running.

Any time a user wants to change a screen format or report structure, it's just another entry on a long list of requests. Considering the fact that the system delivers from 70 to 100 screens per day pertaining to safety, quality, manufacturing and financial data, that's an entry the IS department doesn't need.

Lockheed is hoping to turn both of these tides when its new EIS is implemented — this time, on a local-area network with an off-the-shelf package, Comshare, Inc.'s Commander EIS.

Speed needed

"We required a LAN for speedy delivery," says Don Woodward Jr., information services technologist at Lockheed. "There's a significant increase between updating the executive PC from a file server as opposed to a host. On our current system, it could take 30 seconds to download one screen." Woodward says he also expects to greatly reduce his maintenance and support costs.

Many IS managers are being lured by LAN-based EISs, according to a recent report from Pizzano & Co., a market research firm in Cambridge, Mass. According to the firm, 48% of 132 current

EIS users said they were turning their attention to LANs; 12% are contemplating mainframe purchases or improvements.

In addition, all of the major EIS vendors have sensed the appeal of smaller platform EISs. Pilot Executive Software and Comshare — the top contenders in the EIS marketplace (not to mention noted mainframe diehards) — now market LAN-based EISs, as do IBM, Epic Software, Inc., IMRS Co. and Information Resources, Inc.

Reasons for the attraction include promises of reduced maintenance, easier implementation and faster response time. However, economics is the biggest reason for the downsizing move.

Business Intelligence Ltd., a research and information company in London, recently compared the costs of two EIS implementations of similar project duration (12 to 14 months) and number of users (10 to 12 users). The LAN-based implementation was less expensive than the host-based system by about 46%.

A big reason for the diminished maintenance and support costs on LAN products is that much of the responsibility for applications development is pushed down to the end users, with much less dependence on IS.

At Collins Air Transport Division of Rockwell International Corp. in Cedar Rapids, Iowa, "We call our system 'EUIS,' or 'end-user information system,'" says Dan Kiesey, manager of EIS/microcom-

How to determine EIS functionality

- Quality of user interface.
- Flexible, intuitive navigation of reports.
- Ad hoc reporting.
- Flexibility and quality of (integrated) graphics.
- Easy-to-use data analysis tools.
- Ability to access external data.
- Electronic mail with executive information systems users and corporate systems.

Source: Business Intelligence - London

puter systems.

Using a PC-based product from a major vendor, Collins Air Transport wants its professional programmers to work on new development and its end users "to develop much of their own applications in a point-and-click approach," Kiesey explains.

The choice of languages ranges from purely object-oriented, as in Pilot's Lightship, to a combination of text and icons, as with Comshare's Commander.

Costs add up

Just because an EIS is LAN-based does not guarantee a cheap system, however. For one thing, once you add in hardware, personnel, training, consulting and ongoing costs, you're looking at an expenditure of about \$100,000.

In addition, not all LAN-based packages are suitable for all organizations. You may start out spending very little, but as the system grows, the cost gap between host-based and LAN-based EISs may narrow.

The most important thing to realize when shopping for one of these packages is the wide range of functionality available in the software. Traditional mainframe packages offer total EIS functionality — including the graphical user interface, executive database and tools for developing applications and building screens — in one very expensive package, usually reaching the \$100,000 range.

There are also LAN-based packages that offer a full set of EIS functions, including those from Comshare, Epic Software, Information Resources and IBM. Because these packages provide links into the host database (some even require a mainframe version of the software), they too can be pricey, although ongoing costs may not be as high as the host-based packages.

The newest and lowest cost trend, however, is for LAN-based vendors to unbundle much of the EIS' functionality and offer just a PC-based EIS engine, which creates the graphs and performs functions such as exception reporting and drill-down. These products typically cost in the mid-hundreds of dollars, but it is up to users to purchase the graphical user interface, database and applications development and screen-building tools from third parties.

"The general thinking for a LAN-based EIS company is to provide some kind of graphical interface to databases and let secondary companies fill in the holes," says Thomas E. Doyle, vice president at

The Lehmann Group, a consulting firm based in New York.

For instance, Pilot's Lightship, which sells for \$795, provides a Microsoft Corp. Windows-based graphical front end through which users can access data from other PC applications. The product does offer an object-oriented applications development language, but in order to build screens, you need to purchase Information Builders, Inc.'s Focus or Easel.

Although consultants generally discourage people from building EISs completely from scratch, they look favorably on the unbundled option.

"You need to ask, 'What do we really want to give the executive?'" Doyle says. "Rather than the whole suite of tools, you may find the scaled-down LAN products fit your needs. As micro players develop slick interfaces to server databases and as specialized companies develop applications to work across network environments, you'll find the sheer cost of developing applications, purchasing hardware, staffing and maintenance a lot less in LAN-based."

The cost benefits of these lower cost LAN products diminish, however, once you get into large user populations. Sure, you can add more file servers to the LAN to accommodate a larger store of data. But that will just increase the time it takes to update EIS data because each file server must be treated separately.

Sticking with a small user population is just fine for many companies. The trend today is for EIS use to trickle down from the top of the organization into separate, decentralized business units that either don't have a mainframe or can't justify the high cost of host-based software.

But what happens if the system grows? "People start out and say, 'Yes, we can do a LAN-based EIS and fit it all on this one server,'" says David DeLong, an EIS researcher at Boston University. "What they don't realize is 20 years down the road, they're going to have 200 users on the system instead of 20."

It may not be apparent at the start, but growth is one thing all EISs have in common. "Maybe not initially, maybe not even in the first year, but eventually, if the EIS is going to be a success, it's going to have to tap into a very large percentage of the corporate databases," says Bob Konrad, vice president at The Executive Insight Group in Bryn Mawr, Pa.

Which platform?

LAN-based executive information systems (EIS) offer many advantages, but planning is crucial for inevitable growth

HOST-BASED EISs

+ Strengths

- Excellent systems and data integrity.
- Instantaneous delivery of new data to the workstation.
- Large-scale storage and processing resources.
- Can support large user populations.
- Ease of integration with other corporate systems.
- Robust security.

— Weaknesses

- Expensive hardware and software.
- May pose problems of reliability (down time).
- May provide inadequate response times.
- Inflexible (e.g., cannot use portables).
- Development may require significant IS involvement.

LAN-BASED EISs

+ Strengths

- Low-cost software.
- Easier to install for small user base.
- Faster response time.
- Integration with other PC tools.
- Reduced maintenance.
- Less dependence on IS for ongoing applications development.

— Weaknesses

- More difficult to support large or geographically dispersed user populations.
- May need mainframe link if database grows or if more access to corporate information is required.
- More difficult to update EIS database frequently.
- Poor integration with decision support system.
- Risk of data redundancy and inconsistency.

Source: Business Intelligence — London
CW Chart: Doreen St. John

"EIS is fundamentally a systems integration project," says Ian Meiklejohn, director at Business Intelligence. "You're consolidating data from a variety of different sources, and that number can be surprisingly large."

That doesn't disqualify LAN-based systems from supporting a large user base. Meiklejohn cites Frito-Lay, Inc., whose

LAN-based EIS delivers information to hundreds of managers.

However, anyone considering a large implementation needs to have some sophisticated IS capability, especially in a complex environment. "I wouldn't recommend the LAN-based EIS in a LAN-over-LAN, big corporate environment," says Richard McGeary, president of McGeary & Associates, a Berlin, Conn.-based EIS consulting firm.

Ready to grow

One way to prepare for growth is to make sure the software supports any currently installed or planned LAN architectures and hardware platforms. Another way is to make sure the product supports many different protocols and has strong import/export facilities, including extract editors and tools that parameterize information before it is sent to the server database.

"The quality of tools in this area is important," Meiklejohn says. "PC tools tend to be weaker than host-based, since they sometimes assume the environment is going to support standards."

One example is Lightship, which currently supports Windows and the Microsoft Dynamic Data Exchange protocol. Pilot says it will be shipping a version that supports mainframe connectivity within the next six months.

It is actually not uncommon to maintain access to the mainframe database with a LAN product that supports mainframe links. With these products, "the LANs are used to present and deliver the final screens, but the storage is taken care of by the host," Meiklejohn says.

This setup is intended not only to support a large database but also to speed response time. "You've got one download to the file server rather than 100 separate

Keep in mind

BY M.J. RICHTER

After you've deliberated for weeks and maybe months over which EIS software to buy, here's something you probably don't want to hear:

The software won't guarantee a successful implementation.

"Take two guys with exactly the same software package who spend exactly the same amount of money on exactly the same computer environment. One has a great success and one has a great failure," says Alan Paller, president of AUI Data Graphics, a market research division of Computer Associates International, Inc.

"We see almost no sign that the success of the project correlates with the choice of product," agrees Ian Meiklejohn, director at London-based Business Intelligence Ltd. However, he adds, "that doesn't say that some products are better than others for certain requirements."

Paller says you should also consider the following questions:

- Do you know precisely what busi-

ness payoff you will reap from investing in an EIS and how it will affect the bottom line, your client relationships and your growth?

- Do you have a driver as well as a sponsor? While the sponsor is an executive-level person who champions the project, the driver is responsible for the actual implementation of the system.

- Does the driver have senior management's confidence?

- Do you personally want to work 18 hours a day for the next six weeks to six months?

If an organization cannot answer all of the above questions in the affirmative, it should avoid an EIS altogether, Paller warns.

For those that have answered yes to all of the questions, he suggests finding another company that has a working EIS and similar hardware and software architectures.

"You want to find a model that others have already used," he says, "so that you not only get the software but a mentor to go with it."

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downloads to PCs," Lockheed's Woodward says.

When planned well, a LAN-based EIS can work to your advantage, even as it grows to support more databases and more applications. This is especially true when you're first trying to rally support for the system.

"Many EISs are not successful because of a lack of organizational responsiveness

or a lack of sponsorship," McGeary says. "Rather than implementing a corporatewide, host-based system, the LAN is more controlled. You can be more successful implementing an EIS among 20 people than 200." •

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