IBM Sales Training

Positioning Lotus Notes - Competitor Unit

The information included below represents an abstract from the 50 page unit written for IBM Education and Training in my team role as Sr. Tech Writer. It was delivered in Lotus Notes Learning Space, November 1996. Some text and the Self Check instructional design features are omitted.

Overview

A successful business has always been the result of individuals working with the right information to provide the best solution for a customer. Thousands of products have been developed and sold to accomplish this result. Technological advancements of recent years spawned offerings called groupware, combining the singular technologies of communication, messaging, and workflow automation. Today, the necessity for immediate and far-reaching mission-critical solutions has changed the expectation for groupware to a workgroup systems platform that seamlessly combines these technologies. The IBM/LotusTeam software strategy for providing such a workgroup system is fully met in the groupware offering, Notes R4.

Studies by trade magazine labs and research groups give Notes top rating in comparison to its competitors for robustly addressing business demand for collaborative document management, development, and communication by a company's individual department. These services extend from individual departments, to the enterprise and beyond.

This unit defines how Notes R4 meets world groupware client/server requirements when compared with its major competitors, Microsoft Exchange 4.0, Netscape SuiteSpot, and Novell GroupWise 5.0

Objectives

After you complete this unit, you will be able to:

- Articulate the development thrust that places Notes R4 at the forefront of the groupware industry.
- Identify Notes core features that set the measurement criteria for an enterprise workgroup system offering.
- Compare the measurement features with Microsoft Exchange 4.0 offerings.
- Compare the measurement features with Netscape SuiteSpot offerings.
- Compare the measurement features with Novell GroupWise 5.0 offerings.
- Summarize the overall ratings for existing optimum workgroup system features in Notes R4 and the products of Notes competitors.
- Discuss the strategies of Notes and its competitors that affect future positioning.

Measurement Criteria

Groupware as a Client/Server Workgroup Platform

Today, an organization's choice of a workgroup system comes down to determining what best fits and enhances the enterprise culture, combining strong messaging with a programming environment that can support whatever collaborative features an organization needs. In other words, groupware is not just a product but a commitment to manage in a way that provides seamless, dynamic support for communications, collaboration, and coordination any time in any place. Notes R4 meets the expectation of next generation groupware - a complete workgroup systems platform.

Studies report that Notes captured the largest percent of what industry calls "new groupware seats" by third quarter 1996, outselling the combined sales of its competitors. Representing more than twice as many new users as its nearest competitor Novell GroupWise. Microsoft Exchange was third and Netscape/Collabra Share (now Netscape SuiteSpot) placed fourth. Get ready for 50 million users by the year 2000.

Oracle, with its relational database strength, and Computer Associates, with its impressive market share of software sales, are said to be competitors in the workgroup arena. But, just as with smaller vendors, they offer solutions limited by narrow design emphasis. The focus in this lesson is on the major competitors for Notes, who are beginning to address the comprehensive groupware solutions in the enterprise distributed, client/server environment,

Competitors Operate From Single-Technology Strengths

Notes full implementation of a workgroup collaboration system has set the current standard for groupware offerings. There are diverse speculations about the future collaboration platform. Some industry experts say we are moving toward a universal interface, handling messages and data that will be moved and routed by a new message-transport technology. Others say that the wildcard is the Internet and every desktop need be nothing but a browser. Today, competitors are travelling the Notes road, mixing and matching to play catch-up while trying to shake the perceived image of their original single-technology offering. A brief recapitulation of the current efforts by Notes major competitors to remedy their individual narrow design focus is as follows:

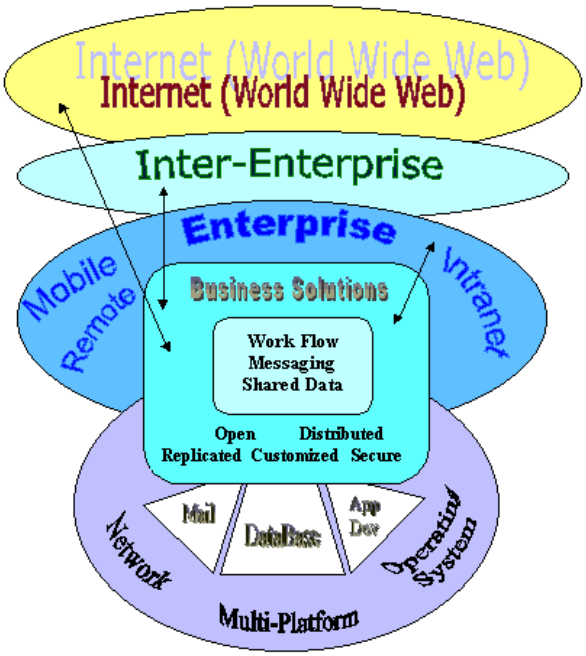
- **Microsoft**, the enterprise-wide messaging expert (though Notes meets and surpasses criteria for robust messaging in a distributed environment), released Exchange 4.0, about which reviewers said, "it treads lightly in the world of groupware." Except for Microsoft shops, its operating system dependence will continue to limit its groupware functionality.

- **Netscape**, the perceived Internet champion (though Notes InterNotes Web Navigator recently got a higher rating than Netscape's Navigator did), introduced SuiteSpot with a combination of servers aimed at groupware applications. Reviews gave it only a fair rating, saying it lacks advanced and integrated features and is a choice only if a system based on Internet standards, without customization facility, is required.

- **Novell**, LAN specialists combining state-of-the-art scheduling facilities of GroupWise (though Notes R4 can access robust scheduling technology through IBM OfficeVision and Lotus Organizer), unveiled Novell GroupWise 5.0. Despite new client/server technology, the product is given low marks because of its minimal Internet support.

Notes Sets Groupware Measurement Criteria

IBM with Notes R4, offers a product that weighs in far ahead of its competitors because the three basic groupware technologies of messaging, collaboration, and workflow (combined with client/server and cross platform strategies) have been considered as a package from the beginning of the Notes development cycle. To this depth of experience, has been added Internet integration, supplying feature-rich Web access for intranet users and positioning Notes at the forefront of the shift from the collaborative aspects of the Web to transaction processing and electronic commerce. A product combination unmatched in supplying the needs of the next generation electronic workplace has resulted, and by virtue of its core features, Notes R4 has set the measurement criteria for today's optimal workgroup system.



Workgroup System Core Categories

Notes core features, then, provide the essential workgroup system categories against which to consider competitor offerings. They are:

Intuitive user environment
Enterprise architecture
Messaging
Application development and deployment
Mobile user support

Internet integration
Security

Three-Tier Competitor Feature Comparison

Each Notes core feature will be discussed relative to Microsoft Exchange, Netscape SuiteSpot, and Novell Groupwise, using this three-tier structure:

- Does the competitor provide the feature?
- Is the feature functionality better met by the competitor?
- How well are the features integrated?

Features and Functionality Comparison

Finally, a feature summary matrix, will be display feature comparisons for each competitor, compared to Notes R4 core features.

The discussion of each groupware program relative to its features is omitted here and only the summary matrix is included.

Core Feature Comparisons Yield Summary Table

Optimum Workgroup System Feature Comparison Table

Notes has set the standard for today's optimum workgroup system platform against which competitors put together look-alike components. For this reason, when determining your customers' requirements, you will have to assess carefully the richness of the feature offered to address an application solution by Notes versus a competitor. The previous lesson topics in this unit were aimed at helping you do this.

The summary table below lists the core features identified for a workgroup system and indicates their availability in the products of Notes R4, Microsoft Exchange, Netscape SuiteSpot, and Novell Groupwise. Links to other units are noted within the table instead of at the end of the topic, as is the usual convention throughout this course.

Measurement Criteria Summary Feature Table

Core Features	Notes R4	Microsoft Exchange	Netscape SuiteSpot	Novell Groupwise
Intuitive User Environment				
Document Database	x			
Full-text search - query builder	x	x	x	x
Unified user interface	x	x	x	x
Customizable Views	x	x		x
Folders	x	x		x
Actions, Agents, Hotspots	x	x		
Enterprise Architecture				
Integrated client/server	x	x	x	x
Bi-directional synchronous field level replication				
Distributed synchronous directory services	x			x
Certificate-level security	x	x	x	
Object store	x			
Central administrative system management features and control	x	x		x
Fault-tolerant server-based agents	x	x		x
Unified routing and shared database work flow model				
32-bit server capacity- symmetrical multiprocessing (SMP)	x	1q97		x Windows
Multi-platform (OS,NOS) servers & conventions	x		x OS only	x NetWare NOS
Native Communication Protocol TCP/IP-IPX-/SPX, NetBIOS/NetBEUI, Apple Talk-Vines, SNA/APPC	x	x	x TCP/IP only	x
Interenterprise public networks	x		x	
Extended services: imaging, OCR, phone, video	x	x		x

Core Features	Notes R4	Microsoft Exchange	Netscape SuiteSpot	Novell Groupwise
Messaging				
Intuitive mail client	x	x		x
Server and Client-based rules	x			
Server-based rules only		x		x
Combined "Push/Pull" technology model	x			
Hot Links to Web Pages	x	x	x	
Message Transfer Agents (MTA), X.400, SMTP/MIME	x	x	x	MIME 2q97
Native MAPI, POP3, VIM, CMC mail protocol support	x	x	x	MAPI only
Messaging Object Store	x	x		x
Rich Text OLE2 support	x	x		x
Server-based single-copy object store protocol	x			
Threaded discussion database	x	x	x	x
Message tracking	x	x	x	x
Full service mobile and remote support	x			x
Integrated calendaring and scheduling		x		x
Internet Messaging Access Protocol (IMAP4) support	1q97	2q97	1q97	2q97
Lightweight Directory Access Protocol (LDAP), X.500	1q97	2q97	1q97	3q97
Application Development & Deployment				
Integrated development environment	x			x
Services for distributed application development - OLE2, ODBC, VIM, MAPI, SQL, C, C++ - APIs	x	x	x	x
Rapid Application and Deployment (RADD) model	x			
Rich set of design elements	x	1q97	3q97	Third-party
Design element object store	x			
Strong third-party market integration	x	x		x
Mobile and Remote User Support				
Location specific, scheduled connectivity	x		x	
Bi-directional, field-level replication	x			
Passthrough server support	x	x		x
SNMP-based OS	x	x	x	x

Core Features	Notes R4	Microsoft Exchange	Netscape SuiteSpot	Novell Groupwise
Internet Integration				
Unified client interface	x	x	x	x
Multi-protocol connectivity	x	x	x	x
E-mail exchange	x	x	x	x
Forms support	x	x	x	x
World Wide Web publishing	x	x	x	
Full-featured Web information Management	x	x	x	
Server-based access to World Wide Web	x	x	x	x
Native Internet protocol support (HTML, HTTP, JAVA, NNTP)	x		x	
Common Gateway Interface and APIs	x	x	x	x
Full-text search	x	x	x	x
Server-to-server replication	x	x		x
Security				
Authentication	x	x	x	x
Authorization	x	x	x	x
RSA encryption certification	x	x	x	
Digital signatures	x			
Secure Socket Layers (SSL)	x	2q97	x	
Access Control List	x	x	x	x

Strategies and a Look at Future Trends

IBM/Lotus Team Strategies: content, collaboration, and beyond the Web and Intranets

Notes and the Web

In addition to individual vendors, the Internet (specifically the World Wide Web) has been considered a Notes competitor. But for many organizations, which require a combination of Web access and other collaborative applications, Notes and the Web are complementary platforms. Notes has been positioned to provide the sought after marriage of information-sharing features with Web support that enables customers to deploy one infrastructure for authoring and management, while supporting several different means of publishing, distributing, and accessing information.

Notes and Intranets

Companies are setting up Intranets today reminiscent of the move from corporate networks to departmental LANs over the past ten years. But this time the driving force is not so much file and print sharing as it is easy access to corporate information. A significant amount of needed information exists outside the scope of enterprise-wide DBMSs. This is represented in images, documents and text, which can be crucial for decision making. The emergence of access frameworks such as the Web and the evolution of DBMS technology are encouraging organizations to learn to exploit such information more fully. Enterprises that do not develop an appropriate architecture to identify, bring online, and ensure access to unstructured information, will be left behind.

A recent market research study reports that every one of the U.S. Fortune 1000 companies will implement an Intranet by the beginning of 1997. Further, it is estimated that more than half of all large corporations will deploy Intranets by the end of 1998.The Intranet is said to compete with Notes because Intranet users only need a Web browser and a TCP/IP stack. But that's not entirely true. Transforming the collective world of HTML and Web browsers into useful, interactive applications with which a company can run its business is a daunting task. If an Intranet is to effectively allow organizations to share information in nearly any form and help users find what they need, it must provide group discussion functions and be able to interact with a document database.

With Notes, the clincher is the ability to integrate services into a unified groupware architecture that gives every application the benefit from all the services of its architecture. Specifically, this means replication of data throughout a company and the capability to use the Notes client as a distributed editing environment. Develop the following scenario for the prospective IS customer who has heard about using simple Intranet technologies. " You'll need a browser, TCP/IP, a subnet with a document database server and a remote server. Finally, you'll need a database administrator and advanced graphic arts and telecommunications management people. Even after you've put this configuration and support in place successfully you still can't serve your remote users. So what you really need is Notes."

Electronic Commerce

Notes rich development environments, which already support collaborative applications, are producing a new generation of development tools for the Web. Key among them are Web server application programming interfaces (APIs), enabling the Web to support interactive query applications, transaction services, and electronic commerce. Advise your customers that, by virtue of its application development expertise for programming beyond HTML, interoperability, and standards strategies, Notes is at the forefront of the shift from the collaborative aspects of the Web to electronic commerce.

A Web Product

Notes has given its users Web access with InterNotes Web Navigator and given Web users Notes access with InterNotes Web Publisher. Now with the Notes Domino Web server, Notes is itself a low-cost, standards-compliant, high value Web product. When a prospective client asks "Why shouldn't I put my internal discussions and internal and external publishing on the Web?" Your answer is "You should, and Notes Domino is the best Web server on which to deploy it." The Notes server provides client/server mail, high security, full document management, replication and much more.

Applet Components for Notes

Internet's Java has spawned the applet concept and the notion that Java could level the operating system playing field by providing a single operating environment compatible with myriad hardware platforms. Few issues have created as much confusion regarding the Internet as the role of network computer (NC) architecture and Java applets designed to run on it. But a well-defined NC will not take off until Java has matured sufficiently as a language and development environment for independent software vendors (ISVs) to efficiently build commercial-grade applications.

Suites are not so easily replaced because they meet the individual application needs of the vast majority of users in an organization, and can be used as an enterprise client. But the Internet phenomenon is accelerating the suites' metamorphosis into a component library, acting as a catalyst to the development of new component models and changing the competitive landscape. The IBM/Lotus Team has taken a step into that world and introduced Lotus Components, which are fast, focused applets for use in conjunction with Notes. Lotus components are enhanced object linking and embedding controls (OXCs) that can be used directly or by ISVs to build solutions. The enhancements, which included Internet versions, provide capabilities such as component to component interaction and user integration with Notes. Research studies say that by 2000, the majority of users in large organizations will use custom, component-based applications created by building components on top of a suite foundation.

Competitor Strategies

Microsoft

- Keep people using Microsoft applications and operating systems.
- Make Windows NT the Web-server platform of choice by giving away free Web browsers and providing the Internet Information Server free with Windows NT Server.

- Release a new mail client called Outlook with Office 97 that will improve calendaring and ability to view file formats.
- Establish links to all Microsoft applications from the Web. The next Exchange update will provide support for HTML and Internet Message Access Protocol (IMAP4), which synchronizes network and local stores when connected.
- Incorporate e-mail and groupware features such as ActiveX controls (Microsoft's Java alternative) that will reside in the Explorer universal client.
- Move to the Cairo operating system that will use Object Request Broker (ORB) architecture, handling the interaction between objects and applications. With ORBs, interactions can run on a single local computer or a remote system. Or they can be distributed across the network.

Summary: Microsoft will try to move into the interoperability world but will continue to own every technology with which it deals by developing systems with proprietary flavor. The Internet has prompted Microsoft to join industry leaders actively considering the development of new enterprise management standards based on Internet technology.

The faithful Simple Network Management Protocol (SNMP) is nearing the end of its useful development life and the new Hypermedia Management Protocol (HMMP) is being proposed. This protocol is aimed at enabling enterprises, using any browser, to manage any component of their infrastructure (e.g. router, PC or database) as well as value-added applications build by third parties.

Microsoft will concentrate on Internet technologies with its competitive concentration directed toward providing better Internet services with its Explorer browser as compared to Netscape's Navigator.

Netscape

- Capture the browser and Web-server markets and identify the browser as a new corporate desktop environment enhanced by giving away beta software.
- Stay on the technical leading edge to position the product line as the principal platform for Internet-based applications.
- Provide APIs for developers of Internet applications and integrate the Share software with all.
- Adopt "plug-in" architecture that enables a browser to integrate new enhancement programs that can be upgraded by the user on the fly.
- Include IMAP4 mail support with Galileo, the next major Navigator release.

Summary: Netscape will continue to concentrate on the Internet/Intranet world and add to its set of business tools, the pieces necessary to make the Internet an enterprise platform.

New "plug-ins" will be made cross platform by installing a Java port that uses the Java run-time engine to integrate new media types to a web browser. They will employ the Virtual Reality Meta Language to take advantage of this new medium.

Press releases from Netscape corporate officers describe their next shift, catalyzed by the Web, as the adoption of enterprise systems based on distributed objects and IIOP (Internet Inter-object Request Broker Protocol). To be part of a full-service Intranet, they say, different systems need to talk to each other, such as Java to C code on the back-end system. Applications need to communicate using open standards so that solutions can be scaled outside the boundaries of individual companies, making mission-critical information and resources available to customers and partners. The Intranet becomes the "extranet." Netscape officials say the next versions of Navigator and SuiteSpot will be IIOP-compliant.

Novell

- Use the NetWare Web Server NetWare Loadable Module to integrate browsers into GroupWise.
- Concentrate on networking services, particularly the directory.
- Execute the Smart Global Network strategy and take it one step further by including the Internet and corporate Intranet.
- Build on the client/network paradigm as begun by the licensing agreement with Sun to place the Java platform on NetWare.
- Become the premier provider of cross platform networking services.
- In the groupware area: enable developers to use the tool of their choice by relying on third party applications; provide development platform capabilities not provided by competitors; develop a customizable alternative for NetWare Directory Services (NDS) as the directory and authentication mechanism in GroupWise; and overall, establish a presence as the provider of a groupware product that is "a solution, ready to go, out of the box."

  Summary: Novell is leveraging its LAN expertise by entering Intranet competition with the introduction of IntranetWare, representing an evolution of the NetWare product line. It offers a host of enhancements to the NetWare core that are aimed at making it a more scalable network operating system and enterprise solution than Microsoft's NT Server 4.0.

  It is planned that Jefferson, the next major upgrade for GroupWise, will turn groupware features such as e-mail, calendaring and scheduling into Java applets, downloaded from the World Wide Web and extending GroupWise 5.0's library system to the Internet and Intranets.

The Next Major Evolutionary Steps for the IBM/Lotus Team

Each new version of Notes, mirroring industry trends, has added a new centricity to the definition of Notes. In each case, this new focus has changed significantly the way Notes-based companies do business. For example:

- Release 1 was about LAN-based conferencing
- Release 2 centered on information sharing
- Release 3 focused on workflow
- Release 4 encompasses inter-enterprise applications and integration with the World Wide Web

Businesses are changing the way they interact with each other. The emergence of more virtual companies heralds a new business model based on the electronic marketplace. Notes supports business beyond simple messaging, conferencing, and publishing. It provides customized applications, workflow and electronic commerce in an integrated, mobile environment and could become a key element of a company's Web and Intranet strategy. Plans are to give Notes clients full interactive access to the Notes server from any Web browser, including Notes own Domino, providing full server support for HTTP, HTML, Java and JavaScript.

Complementary strengths of Lotus "front office" and IBM "back office" are being combined into an extended transaction model, integrating Notes with IBM products such as MQSeries and CICS. The IBM/Lotus Team is implementing the component-based desktop strategy discussed earlier as well as integrated imaging and workflow products.

The Value of Notes Today

With the combination of mail, browsing and line of business activities, it should not be difficult to convince companies that are not yet looking at Notes that they need not wait for some combination of Microsoft, Netscape, Novell, and Java to configure Web strategies. Notes provides all the core features right now and the new developments planned by the IBM/Lotus Team insure leading edge advantages for doing business in the next century.

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