

**'97 Business Applications
Strategy Briefing:
Business-enabling the Internet**

WhitePaper
Lotus

Executive Summary

The “connected world,” in which tens of millions of computers throughout the world are interconnected, is a defining characteristic of business today. This connectivity offers software providers and users the opportunity to tap the vast potential of the Internet.

There are many ways in which traditional desktop applications can be both enhanced and empowered by interconnectivity with the Internet or intranets. Some of the more valuable Internet-focused applications enable business people to use the Web for collaboration on documents of all types, and for sharing business-critical information dynamically with anyone who needs it. Even greater value can be delivered by applications that use the Internet to extend an organization’s line-of-business activities to targeted third parties.

Since 1982, Lotus® Development Corporation has been developing innovative, practical solutions to real business problems. Recently, Lotus’ vision has led to the development of a new class of applications that allows users to access and communicate information in ways that were never before possible. Together, Lotus’ business productivity and communications applications, particularly Notes™ and Domino, enable users to extend collaborative, practical business functionality beyond their organizational boundaries to business partners, customers and prospects via the Internet.

This paper details Lotus’ approach to “Business-Enabling the Internet,” through business applications. Specifically, you will learn more about:

- how the “connected world” is affecting business practices and how Lotus’ suite software leverages the power of the Internet/intranets by enabling new and richer forms of collaboration and interactivity among business computer users;
- Lotus’ two-pronged business application strategy to evolve its suite software to accommodate the changing demands of conventional users who “live” in their familiar productivity applications, while developing a new class of business-application software for users migrating to an Internet-centric model;
- Lotus’ strategy for Component software, including the development of Java-based applets for Web developers and business users;
- Lotus and IBM®’s commitment to providing solutions that give businesses maximum competitive advantages in an Internet-connected world.

Lotus and its parent, IBM Corporation, believe that the interconnection of computers will continue to accelerate in years to come, bringing with it fundamental — and often, unpredictable — changes in what businesses do and how they do it. In this environment, Lotus and IBM are committed to delivering business solutions that help people seize the opportunities and avoid the pitfalls of the connected world.

The “Connected World” Comes to Business

Two-thirds of the way through the 1990s, a decade of unprecedented growth in the number of interconnected computers, the “connected world” is a defining characteristic of business. As everyone knows, the popularization of the public Internet and private intranets has connected tens of millions of computers to each other. What is less obvious is the impact this development is having on the fabric of business, from the largest multinational corporation to the smallest entrepreneur. To the business owner, it must be both exhilarating and unsettling to awaken to the reality that *all* of one’s employees now enjoy unlimited access to:

- data on almost any subject, from a staggering array of sources;
- people around the globe with whom they might want to do business; and
- the public Internet, a new site in which to explore, to “live,” and to be productive.

The reality of the “connected world” represents enormous opportunity, accompanied of course by a measure of risk, for businesses and for individual business people. Lotus and IBM are committed to delivering complete business solutions (encompassing hardware, software, services, and much more) that help businesses and individuals take advantage of the opportunities offered by today’s connectivity.

The “Connected World” Changes Business Practice

Forward-thinking managers in businesses around the world are seizing the opportunity that the Internet/intranet provides to redefine how they do business, both internally and externally. They are rethinking how they build, market, sell and support their products and services, so as to take advantage of rapidly expanding capabilities for:

- *communicating* with practically anyone else who might be a business partner;
- *collaborating* across time zones and geography on shared projects; and
- *coordinating* the flow of work among employees and third parties, such as resellers, brokers, suppliers, customers, and prospects.

This redefinition of business takes place along at least three axes. First, businesses are using the Internet/intranet’s universal connectivity to uncover knowledge that would otherwise be buried within the organization, or on some distant server, and get it into the hands of those who need it most. The employee who needs a quick answer to a question — no matter how far-fetched — or who needs to tap the expertise of “knowledge providers” in any field can now do so, with a speed unimaginable just a few years ago.

Second, businesses are encouraging their people to use the World Wide Web as a medium for collaborating with remote coworkers and with selected third parties. Increasingly, they rely on these “virtual teams” to plan and execute shared projects that span many departments and locations, such as proposal generation, contract preparation, or budget rollup.

Third, businesses are taking internal applications that had been the software embodiment of core business processes — such as sales, order entry, inventory management, customer-service requests, and claims processing — and either extending them, or rewriting them, to take advantage of the Web’s connectivity and thus involve external business partners directly in those processes. For example, electronic commerce applications allow customers to order products directly from a vendor online.

It’s important to note, however, that there is no free lunch: the business-transforming capabilities that the Internet/intranet *in theory* places at the service of managers are not, in practice, available to every organization that acquires an IP address. Rather, managers intent on exploiting the new connectivity find that they require a host of diverse software tools for navigating, retrieving, interpreting, and delivering data and services from the Internet “cloud.”

Maximizing the Internet's "Value-Add" to Business

Business-application software providers, including Lotus, have adopted different strategies for creating applications that tap the potential of the Internet for business PC users. It is possible to model their Internet-focused applications as a continuum, in which one axis represents the Internet activities the applications focus on, and the other indicates the delivery of progressively more value to business.

Many developers of business-productivity software are concentrating on the delivery of "information dissemination" capabilities — creating Internet tools that enable the user to search the Internet/intranet for desired content, to retrieve it, or to publish static material to the Web. Examples of such tools include search engines integrated within familiar applications such as word processors, spreadsheets, or presentation-graphics packages; and the ability to translate information created in such products into HTML pages, for posting on a Web server.

Businesses derive much greater value, however, when they use the Internet for more than simply retrieving files and publishing documents. A second class of Internet-focused applications enables business people to use the Web for collaboration on documents of all types, and for sharing business-critical information dynamically with whoever needs it. For example, a geographically scattered team of designers who share responsibility for defining the specifications for a new toothbrush could use both an intranet, and the group review-and-consolidation features in Lotus SmartSuite®, to drive the creation of better, more inclusive, specifications in less time.

Even greater value is delivered to businesses by applications that use the Internet to extend the organization's line-of-business activities to targeted third parties. For example, a mutual-fund company could offer its individual-investor clients an interactive portfolio review with their broker conducted in real time, over the World Wide Web. The client could use an on-demand spreadsheet component to do live "what if" analysis, and both he/she and the broker could see the results of that analysis, using their Web browsers. Investor and broker alike benefit by having a shared foundation of data and assumptions; the investor would likely make faster, and more informed, decisions about investment alternatives; and the investor's increased sense of participation and loyalty benefits the fund company.

A New Imperative: Extracting Competitive Advantage

A new yardstick is now being applied by organizations evaluating the usefulness of business-application software: to what extent does it enable the organization to extract concrete competitive advantage from its “connected-ness” to the Internet/intranet?

Some of the metrics these organizations are looking for include improved performance (of employees, workgroups, or the organization as a whole); reduced costs; enhanced quality of finished goods and services; and the introduction of superior processes into the execution of daily business.

Lotus business-application software products have been designed to translate the potential of the Internet/intranet into just such advantages for businesses. They are distinguished by their emphasis on the most “leveraged” Internet business activities: dynamic sharing of up-to-the-minute information, collaboration on shared projects, and making business partners active participants in the organization’s line-of-business activities.

For example,

- a global financial services company creates an application which dynamically pulls exchange rates from online financial sources into a Lotus spreadsheet. The spreadsheet is updated automatically, every time new information is imported, providing up-to-the-minute views in worldwide currencies for use by each of their global subsidiaries.
- a brokerage firm builds a Web application that allows an investor to query and analyze his/her portfolio from a Web browser. With the portfolio information presented inside a Lotus Spreadsheet Component, the investor analyzes the portfolio, using the spreadsheet to do interactive “what if ” analysis. Any changes in the portfolio made by the investor are automatically transmitted back to his/her broker at the brokerage firm, who can then make requested changes.
- a management consulting firm uses web calendaring to enable clients to access the professional calendars of its consultants. Clients may schedule consultations, view consultant activity and review important events and dates that the consulting firm would like them to be aware of.

What This Means to Businesses

When buying software essential to their business, organizations are likely to focus on the product features and benefits. But the company behind a product is just as important as the product itself. When considering a relationship with a software vendor, organizations should think about:

- the company's understanding of what they need to work efficiently and effectively;
- the company's vision, quality standards and ability to take advantage of the latest hardware and software technology;
- the company's resources; and
- the company's dependability and depth of commitment to its markets.

Since its founding in 1982, Lotus has been focused on finding practical solutions to real business problems. This approach has led to a deep understanding of the information and communication needs of modern business professionals and the kinds of environments in which they can be most productive.

As the company that defined groupware nearly a decade ago, Lotus has long recognized that the future will belong to those who are able to work together efficiently in different places at different times. More recently, this vision has led to the development of a new class of applications that allows users to access and communicate information in ways that were never before possible, both within and beyond the boundaries of their own organizations. This new class of applications — including Notes, SmartSuite® and Lotus Components — provides more than critical communication and information tools. It also makes possible the creation and effective management of today's complex business relationships.

But Lotus went beyond merely creating these new applications. It brought them to the Internet, with Lotus Domino, SmartSuite and other products that have built-in Internet/intranet functionality. In fact, Lotus applications are the most tightly integrated with the computing infrastructures organizations are likely to be using today and tomorrow, including LAN, WAN, Groupware, E-mail, the Internet and intranets. And with an open architecture, mail-enabled Lotus desktop applications support all commonly-used standards.

Never content to rest on its laurels, Lotus is continually anticipating users' needs — working on new and innovative solutions to problems that users may not even realize they have yet.

“Business-Enabling the Internet”

Lotus’ Business Application Division is dedicated to the mission of “Business-Enabling the Internet,” which means providing solutions that give businesses maximum competitive advantages in an Internet-connected world.

Lotus believes that, in the Internet/intranet arena, the greatest opportunity for software providers to make a contribution to business effectiveness lies in facilitating new and richer forms of *collaboration* and *interactivity* among business computer users. These two characteristics of Internet-focused applications correspond closely to what organizations most need in order to get the greatest return on their Internet investments. And, not coincidentally, collaboration and interactivity are two aspects of software development in which Lotus has long demonstrated innovation and leadership.

The strategy of “Business-enabling the Internet” includes Lotus’ initiatives in the development and marketing of business-application software, including:

- extending the Lotus SmartSuite team computing features to exploit the Internet;
- exploiting new technologies, including Java and JavaBeans, to enable users of browsers to easily and speedily “work the web,” with Lotus Components.

Shift from Desktop Applications to Network-Centric Usage

The connected world is driving a major shift in usage patterns of individual PC users. Until recently, business people performed most of their everyday computing tasks in business-productivity applications like word processors and spreadsheets. But increasingly, people are “living” in browsers, Web-based e-mail and network-centric tools.

Given the significance of this trend, Lotus sees an opportunity for an entirely new class of business-productivity tools that are small, fast, task-focused, resource-efficient, platform-independent, and designed for a network-centric environment. In other words, applets.

However, a large percentage of users will want to continue to do the kinds of tasks they’ve been performing in their suite applications, *and* be able to access the Internet from within their traditional suites. This combination of conventional users and those moving toward a new, “network client metaphor” presents a challenge to software providers to do two things at once. Lotus is addressing this challenge head-on.

Lotus has developed a two-pronged strategy that addresses this shift towards a browser-based, network-client model, while simultaneously serving traditional users who want simple, effective access to the Internet directly from within their business productivity applications. The company is evolving its suite software to accommodate the changing demands of conventional users and developing a new class of business-application software that is optimized to meet the needs of users migrating to the Internet-centric model.

Suite Software: Collaboration Comes to the Web

The office-suite category, which is a mainstay of businesses' current investments in information technology, is responding to new user expectations that have been driven by the emergence of seemingly universal connectivity.

Among these new criteria are:

- support for distributed, remote work forces (the “work from anywhere” model);
- support for the Internet's open standards;
- tools for performing the “Internet basics” — searching, retrieving, linking, importing, and publishing — easily;
- tools for dynamic sharing and collaboration, which can be used on all major communications platforms — LANs, E-mail, groupware, and the Internet/intranet; and
- tools for collaboration *specifically via the Internet/intranet*.

Lotus SmartSuite 96 set the standard in the suite category for both Internet capabilities — it was, simply, the first Internet-enabled suite — and collaborative capabilities, embodied in groundbreaking “Team Computing” features such as TeamReview™, TeamConsolidate™, TeamShow™, TeamMail™, and Version Manager™.

SmartSuite 97 represents the second generation of the suite category's best tools for working collaboratively, and for exploiting the Internet. It breaks new ground with even stronger Internet integration, giving users easy-to-use, collaborative, Internet/Intranet (I-net) functionality directly from within the familiar suite environment. SmartSuite 97 extends its six fully-featured productivity applications to the Internet in three key areas:

- efficiently finding and accessing practical online information and incorporating it into everyday work — for example, integrating CNN Financial Internet data feeds directly into a 1-2-3® spreadsheet for analysis;
- creating and saving materials like spreadsheets, reports and presentations to a Notes database, then publishing them out to a Domino server with top-notch HTML editing support; and
- sharing information and collaborating on joint projects with partners and colleagues, using Lotus' Team Computing features.

Design priorities for future versions of Lotus SmartSuite focus on the emerging reality of the suite as an Internet-centric, component-suite hybrid that will offer the ultimate in power, performance and flexibility. SmartSuite 98 and its successors will continue to “push the envelope” for both Internet-access and collaborative capabilities, by converging with the emerging category of component software — making SmartSuite applications containers for components. Users will be able to configure their desktop application suites with components and content from their corporate intranets, or continue to operate in the traditional SmartSuite mode.

Component Software: Foundation for a New Class of Interactive Web Applications

The relatively new category of component software went through a metamorphosis during the course of 1996: this much talked-about idea for “bleeding-edge” technology, susceptible only to developers, became a reality when Lotus Components Release 1.0 shipped. Instantly, component software became a fast, focused, resource-efficient alternative to conventional business-application software, accessible to end-users and developers alike.

Lotus Components Release 1.0 is a set of ActiveX controls for Lotus Notes®. Released in August 1996, it has generated enormous interest among corporate users, among Lotus Business Partners (who are incorporating it into their Notes applications), and within the Notes end user and software communities. In addition to being the first-ever component offering to deliver value to both end-users and developers, Release 1.0 offered innovations in how it is sold — from the Lotus Web site, as well as via traditional channels — and supported, primarily via the Web.

But the potential of component technology extends beyond the Notes environment. In order to meet the needs of users who are spending an increasing portion of their work day in browsers, Lotus is developing Java-based applets, a new class of applications that give Web developers essential “building blocks” to easily develop interactive, line-of-business applications for the Internet. Web developers will be able to incorporate business productivity applets such as spreadsheets, charts and diagrams in their applications to build powerful, interactive Web applications using any Web server or Lotus’ Domino Web platform. For users, Lotus’ Java-based applets will provide fast, task-focused, easy-to-access business productivity that can be used within their Web-based applications or on an ad hoc basis.

In the future, Lotus will continue to support and enhance the capability to integrate Components with Notes and the Internet. New applications will support a variety of platforms, including browsers, Notes, SmartSuite and network computers, providing users with simplified application management and a significantly reduced cost of ownership.

The Lotus and IBM Commitment to “Business-Enabling the Internet”

Recognizing that living in the “connected world” is a reality for businesses today and into the future, Lotus and IBM will continue to enhance their complementary family of Internet-focused software products, which includes Lotus SmartSuite, Lotus Components, Lotus Notes, Domino, Lotus cc:Mail™, Lotus Net.Apps, and many more.

In designing and developing business-application software such as Lotus SmartSuite and Lotus Components, they will continue to focus their innovations on those Internet/intranet capabilities that have the greatest positive impact on business results, such as collaboration, interactivity, and extending line-of-business applications.

With continued investment in Notes and the development of Domino, Lotus extended groupware to the Internet, allowing businesses to take full advantage of Notes’ unique capabilities in this emerging business environment. Adding SmartSuite and Lotus Components to the mix equips businesses and business people with the full set of tools they need to take maximum advantage of the Internet and intranets.

Moving forward, Lotus and IBM will continue to capitalize on the unique competencies that each brings to the business-application software arena, including Lotus’ leadership in collaborative software and IBM’s mastery of designing and implementing comprehensive Internet solutions for businesses. And they will never lose sight of the mission that “Business-Enabling the Internet” articulates: the mandate to deliver solutions that give *business organizations* maximum competitive advantage, in an increasingly “connected world.”

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