Lotus

White Paper

Lotus K-station Overview

The First Collaborative Portal–
from Access to Action!

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Contents

Introduction

Knowledge is key to business success in today's fast-changing markets. As a result, many companies feel a renewed pressure to learn more about their markets, competitors, practices, and various other factors that will put them ahead of the competition. Knowledge management technologies have emerged as an effective means toward this end, providing timely and valuable insight to business decision makers. These technologies not only tap into the inherent *competencies*, *relationships*, and *information* that exist throughout an organization, but also provide a context within which these insights can be applied toward business goals. Simply put, knowledge management technologies help companies access and cultivate the business knowledge that they seek.

While the development of knowledge management technologies may be a formidable task for many technology providers, for Lotus it is the next step in a software development tradition. In particular, the company's Knowledge Discovery System (formerly known as the project code-named "Raven") strikes at the heart of the knowledge management process by providing a series of integrated solutions that enable businesses to access, share, and thrive on the knowledge that they possess.

Lotus® K-station™ is the first product to emerge from the Knowledge Discovery System. This product, like all other emerging Knowledge Discovery System products, is governed by the Lotus/IBM® Knowledge Management strategy, which suggests that value is created when "People, Places & Things" are unified into a meaningful business context. In operational terms, K-station links *people* together and provides them with virtual *places* in which they can interact and a means to access the *things* that they need. Through its portal design, K-station delivers this rich orchestration through a single point of access.

K-station Portal Architecture

K-station is a browser-based portal, or access point, through which individuals can locate, share, and transfer knowledge. Unlike other portals that merely provide views into information, K-station provides powerful collaboration features so that people can take action on the information that they possess. This "do" versus "view" framework frees end-users from the rigid limitations of traditional portal technology and enables them to conduct business by the terms of their own communities, interests, tasks, and job responsibilities.
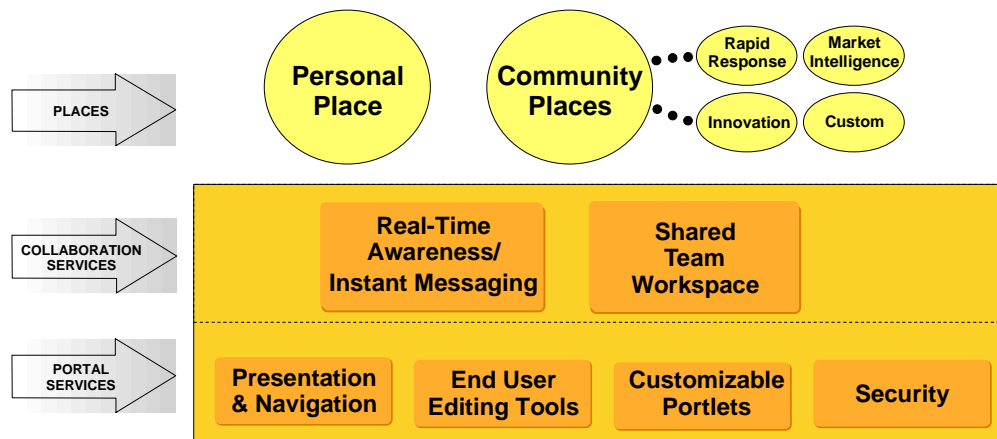
K-station integrates three essential technology tiers: places, collaboration services, and portal services.

K-station delivers its advanced portal functionality through the integration of technologies from three essential tiers — places, collaboration services, and portal services. Together, these tiers form the foundation for the K-station architecture and provide the engine behind its wide-ranging capabilities.

- **Places** — K-station provides end-users with two fundamental work environments: *Personal Places* and *Community Places*. The former is designed by the end-user and contains the essential resources that an *individual* needs to achieve their daily tasks. The resources in the Personal Place can include applications, Web sites, discussion groups, e-mail, and countless other tools. In contrast, the Community Place focuses on *group* needs and enables individuals to assemble in virtual environments and collaborate on business projects or tasks. Personal Places and Community Places are both accessed through Web browsers and can be used separately or in unison through an easy-to-use single point of access.

- **Collaboration Services —** K-station takes unique advantage of leading-edge real-time tools for instant collaboration. These tools, which are among the most advanced in the industry, include real-time people awareness features that indicate the online status of co-workers. This means that employees have the ability to not only access the documents created by their co-workers, but also

reach the co-workers themselves and engage them in instant online discussions. This is a powerful knowledge-bearing capability provided in the context of team workspaces that offer a structure, as well as the content and tools for effective team collaboration.

- **Portal Services** — K-station provides a single point of access to business content. Regardless of whether the end-user is accessing a spreadsheet, a business application, or a Web site, their content appears in individual *portlets* which can be dynamically dragged-and-sized. Portlets utilize DHTML for dynamic customization and advanced security functionality to ensure end-user privacy in both personal and shared environments.

K-station Components

K-station provides end-users with access to the essential competencies, information, and relationships that exist within and beyond organizational boundaries. The portal is best understood when it is described in terms of its components and the environments in which these components are used. The essential user interface components include *portlets*, which display application content in sizable, movable frames, as well as tab-delineated *pages* that help to categorize and arrange screen content. *Places* are the environments in which these user interface components are used; they are distinguished by either a personal or community focus.

In this example, a Personal Place provides the work environment to organize portlets and pages for an individual's daily work needs. People awareness capabilities provide the means for instant collaboration.

User Interface Components

The two essential components of the K-station interface are portlets and pages. These tools can be used to designate the look and placement of information that appears on the screen. A description of each follows.

Portlets — Portlets are windows into desktop applications, back-end systems, images, Web sites, and virtually any other piece of business knowledge. Unlike typical portal technologies that provide rigid interfaces into business content, K-station portlets are inherently nimble and can be dragged, re-sized, and customized based upon the end-user's preferences. Certain portlets also offer built-in filters so that users can change the way they view information without changing the information source. Portlets are essential to the presentation of information in Personal Places and Community Places.

K-station ships with *portlet templates* so that companies can access a wide variety of resources including: Web applications; Web sites; Lotus Notes® applications; Lotus Domino.Doc™; Microsoft Exchange; as well as many other formats. These templates enable businesses to quickly develop and deploy the portlets that best fit their requirements and thereby eliminate the need to recreate the wheel with each new project. Additionally, when it becomes available, IBM's Websphere™ Portal Server (WPS) will share a common set of portlets with K-station (for more information on this integration, see the *Solutions for the Community and the Enterprise* section of this document).

Pages — Pages enable end-users to categorize information by topic area or job function. Pages resemble physical file folders, with tabs at the top and space "inside" for assembling topic-specific content. This format displays information in an organized manner and reduces the need to scroll through the displayed data. In scenario terms, a marketing manager might create a page titled "Administrative Issues," which could include expense reports, e-mail, and Web-based airline schedules. In addition to this, the manager might create a second page titled "Advertising Campaign," which could include team discussions, layout catalogs, budget data, online news feeds, and other information relevant to the project.

Work Environments

K-station also provides two essential work environments in which end-users conduct their business tasks. The Personal Place is a a location for organizing and conducting individual work tasks and the Community Place is a setting for group collaboration. A description of each environment follows.

Personal Places — Personal Places are multi-page environments that contain the essential tools for achieving daily business tasks. The end-user assembles the Personal Place by organizing their portlets — such as e-mail, discussions, calendars, intranet applications, project timelines, Web sites, and back-end systems — around daily activities, tasks, and projects. By providing a *context* for the organization, development, and application of knowledge, K-station enables end-users to better manage and control information overload.

For example, a sales representative might create a page in his or her Personal Place to track existing and prospective customers. The representative might put items such as meeting calendars, account discussions, and contract files on this page so that all account-related items and resources are centrally located and instantly accessible. In this case, the Personal Place would also include K-station's "**people awareness**" tool so that the representative could engage other online team members in instant discussions. By providing immediate data access and communication, the Personal Place enables employees to focus on their business tasks and not their business tools.
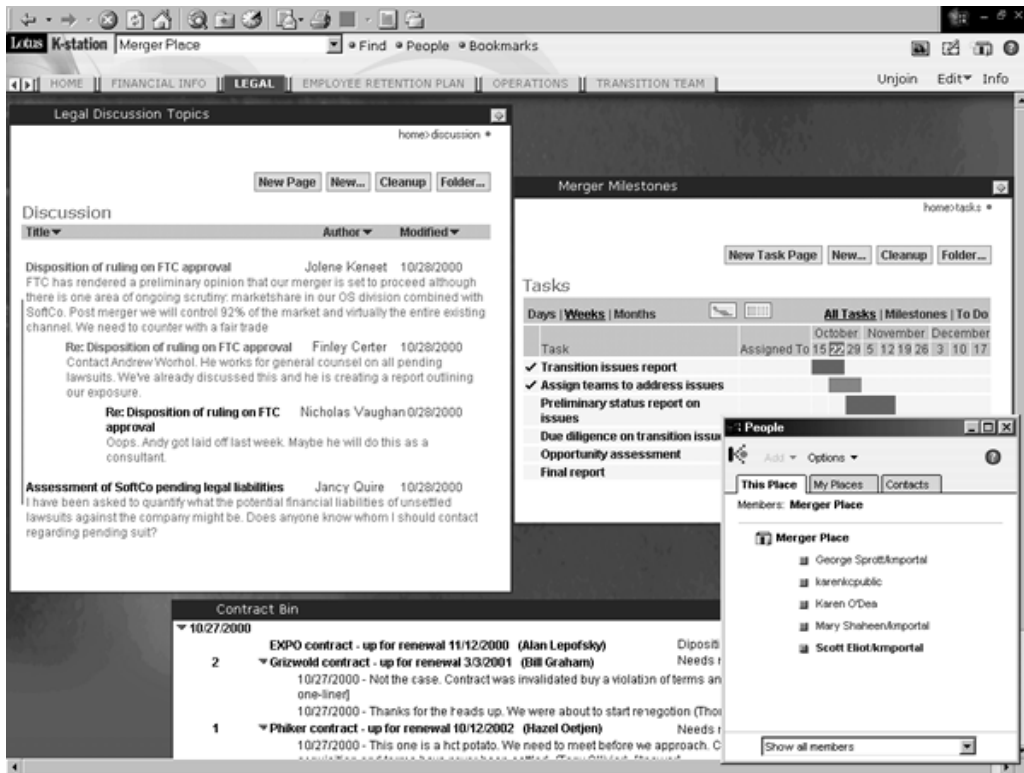
Community Places are a key differentiator from other portal technologies, as they allow users to securely collaborate with internal and external team members on projects and capture "reusable knowledge objects" for future use. Place-based people awareness capabilities facilitate instant collaboration.

Community Places — Community Places are similar to Personal Places, only they accommodate multiple individuals and provide workspaces and tools for team collaboration. Community Places can range from public forums, open to all company employees, to restricted workspaces with role-based access control. Additionally, Community Places can be based upon occupation, project, or task so that they meet virtually any business process. For example, an end-user could create a "Proposal Place" to assemble and gather the people and materials needed to create a service proposal. This place would become a locale for the development of the document and a forum for interaction among people both within and beyond company boundaries. K-station ships with templates that provide the specific tools for creating these places and addressing various tasks and projects.

Community Places also improve knowledge retention and reuse. In particular, they contain references to the people, content, and processes related to the execution of the task or project and thereby become a tool for uncovering and reusing the tacit and explicit knowledge that people generate. Moreover, they can be leveraged by others seeking to perform similar activities. For example, the information that is typically lost when employees change jobs — such as the details or contacts related to a marketing campaign — can now be preserved as knowledge assets available for reuse at any time. In this sense, Community Places do more than simply manage individual people or documents; they put people, content and actions into a living context.

The Request for Proposal (RFP) development process provides a good example of the way Community Places can be quickly deployed across an organization. In this business situation, a salesperson would use K-station to assemble the appropriate people and tools to create the RFP. The salesperson might start by selecting a rapid response template which includes tools such as a discussion area, a document library, a task planner, a project calendar, and message boards. The salesperson could then create new portlets to display content, such as the customer Web site and a corporate database with account profiles. After that, the salesperson could invite specific people, such as marketing representatives, contract representatives, and internal sales support people, to the space. Ultimately, the salesperson would establish guidelines and milestones for the team and provide a forum for meeting, researching, drafting, editing, and producing the RFP.

Through limited effort the salesperson creates a *spontaneous community* that preserves the RFP product and process, including the relationships, activity and people involved in the process. K-station provides the means to store this information so that it can be retrieved at a later date by other company employees who may be involved in similar RFP projects. The value they derive from this asset may pertain to the people who participated in the process; the conversations that took place; the supporting documents involved; or maybe the RFP itself. This preservation of knowledge assets is a key competitive strength, especially in high turnover environments.

Like the Personal Place, the Community Place provides a means for companies to focus on *solutions* and effectively transcend the technological and bureaucratic barriers associated with traditional project management. This transcendence makes the product ideal for both pre-planned and ad-hoc projects.

People, Places & Things

K-station delivers on the promise of knowledge management by providing end-users with a single point of access to the *People, Places & Things* that exist within and across their company boundaries. Through the product's place-based design, end-users not only access the presentations, documents, discussions, task lists, and countless other forms of business material that they need to complete their tasks, but also have a forum for acting on that material and engaging others in their efforts.

People — People are among the most valuable assets a company can possess. People retain critical business knowledge — including knowledge of processes, contacts, and resources — that can often make the difference between success and failure on any given business project. Online "people awareness" and real-time communication tools, such as the ones provided in K-station, offer a means for the end-user to view the status and online location of other users. Moreover, these tools provide a means to engage these users in instant online communications through an easy-to-learn and easy-to-use interface.

Places — Places provide a context for work activities. Just like a physical office space, an online workspace needs to be well equipped and well organized so that people can focus on their task and not the tools needed to achieve it. K-station provisions its online workspaces with out-of-the-box templates that can be used to immediately design and implement online workplaces. Additionally, application developers can create new templates to meet virtually any business need and can customize details such as its look and access status. When instituted, Places make it easy for non-technical end users to complete their business tasks and interact with others. The result of their efforts — perhaps a business plan or an RFP — then becomes a *reusable knowledge object* that can be accessed by others who may want to undertake similar work. Therefore, Places not only provide the context for the development of knowledge, but also a means for its preservation and ultimate reuse. This is a powerful capability in fast-changing and highly competitive markets.

Things — Things are the essential resources or content that people access and utilize to perform business tasks. The spreadsheet, the document, the Web site, are all things that are used in daily business activities. With K-station, these various types of content can be displayed and arranged in a meaningful context. In particular, users can arrange things in their Personal and Community Places so that they can improve the effectiveness of their personal- and group-based efforts. In both cases, content-bearing portlets can be built from templates or custom designs and can be easily re-sized and moved through drag-and-drop maneuvers.

People, Places & Things are the fundamental components of the K-station solution and they encapsulate several important K-station benefits. By uniting people through real-time technologies, K-station improves the speed and accuracy of business decisions. Moreover, through collaboration features, communities can assemble, collaborate, and ultimately innovate across geographical boundaries — all from a single point of access.

Solutions for the Community and the Enterprise

K-station is designed to address the collaborative knowledge management needs of virtually any business practice. However, companies with broad enterprise needs have the option of integrating K-station with a variety of IBM and Lotus solutions, including those listed below.

Lotus Notes R5 Client — Because K-station is designed for use by a Web browser or Notes client (R5 or higher) through embedded browser capabilities, Notes™ client users can leverage their existing preferences for Notes-based e-mail and applications. K-station can be accessed from within the Notes client and used as the Notes "Welcome Page." Additionally, Notes content displayed in a K-station portlet can be rendered via a Web browser or the Notes client.

Lotus Discovery Server — Available in early 2001, the Discovery Server will provide a number of powerful capabilities, including expertise profiling and location, as well as sophisticated content cataloging, search and navigation. To do this, the Discovery Server extracts, analyzes and categorizes structured and unstructured information to reveal the relationships between the content, people, topics, and user activity in an organization. The Discovery Server can be used either as a back-end service to K-station, or as a stand-alone knowledge management solution. In the former case, K-station can access a variety of Discovery Server features, including: a *User Profile* which links to expertise, or affinities, associated with a user; a *Knowledge Map (K-map)*, for search and navigation of organizational resources; and *K-map Search Portlets* to save searches and quickly access K-map search capabilities in the context of a K-station Place. The Discovery Server will also recognize all shared Community Places within K-station as an input of knowledge objects for context-based searching and retrieval. Real-time awareness features indicating end-user availability will be enabled wherever a user name appears.

IBM Websphere Portal Server (WPS) — Available in early 2001, WPS will serve as a horizontal enterprise portal infrastructure for portal development. Through its broad foundation and robust development tools, WPS will support e-commerce, business intelligence, wireless, employee information, partner services, customer relationship management, and a variety of additional portal functions. WPS is aimed primarily at business-to-consumer, business-to-business, procurement, and generalized enterprise information portal management. K-station will plug into this framework as a vertical knowledge management portal solution, delivering community and collaborative aspects to IBM's strategy. K-station will be ideal for quick implementations of knowledge-oriented activities, such as innovation and rapid response management, instant collaboration, best practices exchange, community sharing, and knowledge reuse. K-station is aimed primarily at employee, vendor, supplier, and business partner knowledge communities within and beyond the enterprise. WPS will leverage a similar set of presentation components as K-station; most notably, portlets will be interchangeable between the two platforms.

IBM Enterprise Information Portal (EIP) — EIP is a federated search and categorization subsystem that will connect to hundreds of data types, including DB2® and Oracle databases, documents, images, journals, and syndicated content. EIP will search all the appropriate content repositories in an enterprise to produce a relevant search response.

Conclusion

In today's competitive markets, the companies that access, foster, and apply knowledge, will thrive, while others will merely survive. The knowledge management discipline is aimed at growing business knowledge and its best technological manifestation is the Lotus K-station portal. The following is a realistic scenario of the way in which a product manager in a computer hardware company could use K-station to derive and apply critical business knowledge in the context of a serious competitive threat.

- The product manager arrives at work and peruses the news feeds that appear in a customized portlet frame in his Personal Place. He sees a news item on one of his competitors; it reveals the introduction of a new, low-cost PC that could effectively skewer the product manager's high-margin business.

- The product manager knows that he must not only develop a position on the matter for the press and analysts who will undoubtedly ask questions, but he must also develop a strategy to head off this highly competitive threat. So the product manager creates a shared place for a rapid response team and dedicates it to the exploration of the problem so he can determine whether his company is capable of assembling a similar low-cost solution.

- The product manager convenes representatives from around the company to his new rapid response Community Place. In particular, he invites people from manufacturing so he can find out if it is viable to produce a low-cost PC; people from engineering so he can find out if the company has the right components; people from accounting so he can find out if the project is economically viable; people from business development so he can find out if this would be of interest to the ISPs; and people from strategic marketing so he can find out how a low-cost PC would affect their high-margin market.

- K-station turns each of these questions into tasks which are then assigned to different members of this spontaneous community. Ultimately, the team members collaborate to create a proof-of-concept project to build a low-end PC and immediately seize this new market opportunity.

Spontaneous response, community formation, and knowledge reuse are among the most prominent benefits in this real-life scenario. They prove that knowledge management technology, and K-station in particular, can help companies succeed in fast-paced times. Through its innovative portal design, K-station delivers enterprise wide reach to individuals and communities so that they can take immediate action and successfully address business challenges of all types. This is the essence of knowledge management and it is the heart of the Lotus portal and knowledge management strategy.

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