



Lotus Connections Reinvigorates the Community of Business

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The productivity and bottom line of most businesses have benefited greatly from the increasing pace and pervasiveness of technological support. In the process, the *community* that characterizes and supports businesses of all sizes has been given short shrift. Factors underlying this lack of community support in business include:

- the modularization of business,
- the move from internal development to a strategy of partnering and acquisition,
- the consequent mismatches of culture and expectations,
- job-hopping as the best route to broad experience and significant success,
- the rapid pace of change and frequent tweaks (if not outright disruptions) of business models, and
- the geographic dispersal of most large organizations.

These days, if you collaborate only with those you know, your scope will be too narrow. Expanding beyond the scope of whom you know is difficult. This is not to say that there are no tools to foster communication and participation. If participation is measured in e-mails, we are certainly participating more – but in a very inefficient manner.

What enterprises need is the kind of intellectual “public commons” that used to be a natural part of organizations when money and time were more plentiful. Such a commons is anchored in the full context of the business, not some outsider’s idea of it. It is best created by those active in the business – employees, partners, and other stakeholders. Over time, it persists, grows, and evolves. Anyone could use this commons to find the expertise needed to be fully productive. It would also probably be a well-controlled and secured asset. You don’t want some service provider mining this commons for insights.

One of the easiest and most effective ways of aggregating this highly relevant knowledge is by fostering the wide adoption of the habit of tagging documents with contextual and other key words. By enabling *organizationally-specific* tagging of activities, communities, documents, and other kinds of information via bookmarks, a group of people (the larger the better) build an enterprise glossary of relevant terms. These terms can be accessed, explored, and expanded by a variety of tools (dashboards, templates, unified communications capabilities) and vehicles (blogs, wikis, whiteboards, activities). With tagging, better-targeted collaboration and communities can be supported. As the product of a known community, in a secure space, audits tell who assigned the tags, which keeps things civilized.

IBM Lotus, building on its long collaborative heritage, has created a set of integrated capabilities called *Lotus Connections*. Lotus Connections uses tagging and the concept of a commons to build repositories of organizational knowledge, and provides the integrated tools to leverage the lore. In the process, Lotus Connections’ links people to single instances of information – something that can reduce the blizzard of information that besets inboxes and file systems. It provides a setting where individuals and groups can contribute and find expertise and build collaborations using it. This recaptures the business effectiveness that has been hampered by the pace of business change and the blizzard of

incoming information.

Five elements of Lotus Connections are available now: *Profiles*, *Activities*, *Communities*, *Blogs*, and *Dogear* (a.k.a. *social bookmarking*). All of the Lotus Connections elements are loosely coupled and can be used independently or together through a Web 2.0 user interface. They can also be accessed via the *Atom* protocol, which allows end-users to compose their client-side environment¹ to match the way they work. There are people for whom *Activities* best meets their job needs and others for whom *Communities* is the hitching post, by which they orient their workday. Others will be happy with *Profiles* as a place to start. Researchers and analysts may feel that *Dogear*, the environment of shared bookmarks, gives an array of information sources, pre-qualified in the context of the business, that is *to die for*.

Lotus Connections can be extended with the use of two related products, *Lotus Sametime* and *Lotus Quickr*.² *Sametime* complements *Lotus Connections* with Instant Messaging/Web Conferencing. *Quickr* provides teaming software that has a repository with more control features and connectivity to other enterprise systems than *Lotus Connections'* *Activities* and *Communities* provide. Together, these software elements can revitalize a work environment, replacing the cloying inefficiency of email with tools and environments with varying depths of control, all focused on facilitating “can-do” operations.

Lotus Connections – as a whole – can be embedded in everyday applications such as *IBM Lotus Notes*, *IBM Lotus Sametime*, *WebSphere Portal*, and *Microsoft* applications such as *Office*. *Lotus Connections* utilizes a variation of open standards, providing the flexibility to run the services from various access points, including *Microsoft Windows Server* and *Red Hat Enterprise Linux Server*.³ This puts it in a class by itself. For a deeper discussion of how *Lotus Connections* fills a need for any business, but particularly for large busi-

nesses, please read on.

Exposing Institutional Expertise

Businesses leverage publicly available information as a matter of course, but they can really *thrive* on the information derived from within the context of their business processes. This derivation can be difficult. Within the business, expertise is fragmented among individuals who, between multitasking and physical dispersal, find it hard to participate in the organization beyond the bounds of their job description. Many businesses, lacking a way to leverage the experience that they know they have within their organizations, have turned to consultants for advice but trying to harness expertise through explicit initiatives can be costly and surprisingly ineffective.

Somehow, the knowledge within today's organizations must become more useful – more parsable. This is a two-part problem that can be solved by both better characterizing what needs to be knowable, and improving exposure of that knowledge, either synchronously or asynchronously, without switching out of the context of the task at hand. This requires a new approach beyond just integrating collaborative, productivity, or conferencing products that are invoked in a binary *on/off* manner.

With the advent of Internet browsers, the *three C's* of *communications*, *collaboration*, and *content* have the potential to converge. This convergence is not useful if the result is an aggregation of silos of unread and often irrelevant content, as email so often is. We now have the technology to do better. Blogs and Wikis, developed in the context of a particular activity or interest group, can address institutional *ad hoc* documentation needs more directly than e-mail, and with fewer storage-bloat side effects. Metadata tagging makes information more specifically useful and more accessible to the people who, over time, find it useful. *SQL*, *XML*, and *XQuery* have brought database-style metadata to structured and semi-structured information. This allows consistent tagging to be done as broadly as desired, regardless of the format of the target information; but this just sets the stage. To use the system well, people need to contribute their expertise easily, and to leverage what others have contributed just as easily.

¹ This environment is either a WebSphere Portal in a browser or IBM's *Expedito* Rich Managed Client

² *Lotus Quickr 8.0* combines many of the capabilities of *Lotus Quickplace* and *Lotus Workplace Collaboration Services*, and has been recast to complement and integrate with *Connections*.

³ More platforms will be supported by the end of 2007.

Not Just Any Social Software

IBM, like most large organizations, has been striving for better institutional agility for most of its existence. For the last two years, it has been using Lotus Connections in a beta test with its over-300,000-person workforce. The IBM development team thought carefully of the domain they needed to address. As a global enterprise, IBM's "virtual teams" usually include remote workers who need to collaborate across firewalls from a wide variety of environments. It is counterproductive to try to dictate their client or device choice. They concluded that suppliers, distributors, and the existing customer base also needed to be included. Therefore, the Lotus Connections initiative required a browser and a client-based instantiation that could both integrate with a variety of platforms⁴ and support a full range of capabilities independent of a particular platform. IBM Lotus's answer was looser coupling of software elements—like that of SIM cards on cell phones that let them be reused. This kind of loose coupling, built on top of the *WebSphere Application Server* J2EE platform, together with open standards, allows Lotus Connections to be used on a wide variety of platforms and devices including mobile phones and Blackberries.

Meeting the requirements discussed above was only the first set of hurdles. The next was a matter of designing *usability* into the configuration and integration of different capabilities and into the details of the user interface. In architecting these capabilities, IBM developers found it most useful to think first of tasks, not of the tools. Tools limit thinking while tasks quickly move beyond tools to address business needs. A task focus was, they felt, the way to explore a wider range of possibilities for innovation – something less feasible if you are thinking merely of artifacts like documents or spreadsheets.

To be useful to a wide variety of people in a wide variety of contexts, the user interface has to be easy to use in an obvious way. Testing of *Lotus Connections'* ease of use was a big part of the long beta within IBM. The interface must be fully satisfying to the user, while optimizing the execution of their role in

the business. This involves soft, comfort-style measures in addition to the more easily measurable productivity and throughput. The Usability Lab at IBM Lotusphere 2007 gave many attendees a revelatory look at all the details that had to be done right. The interface has to be entirely relevant to what people are doing. It has to be well integrated and customizable so that people can make it their own and organize their dashboards as they see fit. It has to be secure and meet the organizational needs for accountability. This is different from design built on familiarity and non-business requirements.

Lotus Connections Elements

Profiles

Profiles is an expansion of the old corporate directory concept. It lists the members of a Lotus Connections domain, and also creates the necessary security boundaries defining who can do what with whom. Most of the elements of a profile, beyond the basic business card, are opt-in choices for the employee. This addresses many of the privacy concerns of social networking that are not yet well addressed by software targeted at consumers. All fields are searchable. They become a way for an individual to expand their network across organizational reporting structures.

In IBM, an opt-in opportunity allowed e-mail, chat, and blog patterns to be monitored for patterns in communication. This revealed who was the hub in a project. The knowledge of such organizational patterns can provide great value during an acquisition or reorganization. For a company seeking to implement cross-departmental projects and populate new initiatives, it would be a critical capability. For sales people, the ability to find specific expertise when they need it is a great boon to closing deals faster.

Activities

Activities lets you put to use your growing professional network. It gives you a dashboard where you and others set up ongoing or short-term collaborations. The dashboard surfaces all those ad-hoc tasks that you own or are working on with others. The dashboard allows you to find and focus on given tasks by selecting a tag, priority or even a person that you also assigned the task. It aggregates tags in a *tag cloud*, where the popularity of the tag is indicated by font size. Within an activity, all the content relevant to the

⁴ The Lotus Connections Database can be *DB2 9.1* or *Oracle 10g*.

task can be stored and accessed by everyone who needs it. Activities produces not just a well-completed activity but a cultural residue of relationships and tagged artifacts.

Activities differs from traditional project management software in that it is used for creating the lightweight processes needed for effective short-term or episodic collaboration, not for enforcing the completion of the workflows and dependencies that underlie a complex, long-term project. Activities can save tasks into a template for future retrieval and sharing of best practices. For more long term teaming, IBM Lotus offers Quicker⁵. All Lotus products are focused on empowering employees to do their jobs better (and, of course, documenting all that they do), not on enforcing particular workflows.

Communities

The *Communities* component gives longer-term, broader, and sometimes less-immediately tangible benefits. It lets employees find or create communities based on common interests discovered in Profiles and Activities tags. A community can allow public access and can be discovered through Dogear and Activities by any of the Lotus Connections participants in an organization. Alternatively, it can be private, known only to its members and those added by members to the list. While the Communities' dashboard is similar to that of Activities, it grows and gains coherence somewhat differently than Activities. By leveraging Dogear tags, community organizers can quickly gather a repository of useful links and set up Blogs and Wikis.

Communities have been used by some external beta customers to set up free-flowing but well targeted conversations with their customers and partners, as well as to support internal communities. Activities can be added to the Communities dashboard via feeds and vice versa. They are synergistic.

Blogs

*Blogs*⁶ are the narrative that, like the old-fashioned journals and account books of yesteryear, let you put notes of why things happened

in the margins and stick in other items of interest. They are what committee secretaries have always produced, but, because they can be written by and available to a group, they can be richer. They can give a fuller picture of the strategies and trade-offs that are made in a group effort. This documentation is invaluable as reference information for any organization going forward. Again, since there are no unknown players in this environment, decorum can be enforced. *Activities* and *Communities* both tend to include *blogs* created by individuals and by groups. In each case, blogs expand the addressable documentation (things reasonable people can find) beyond the cumulative view or reports.

Dogear

Dogear, named for what you do to a book, is a centralized storage of bookmarks. While the bookmarks can be private to an individual, in the IBM beta experience, only a few percent of the bookmarks were private. In aggregation, Dogear becomes a wiki-style, self-organizing classification system. Taken as a whole, it represents the topography of interests within the company. Taken in smaller subsets, Dogear gives sets of relevant links pre-vetted by subject matter experts.⁷ In Lotus Connections, one's bookmarks can be imported, exported, or accessed as a subscription from a single location. The bookmarks on a particular subject may be accessed as a feed. The vocabulary is controlled in the same way as other Lotus Connections tagging activities.

Dogear is a great example of leveraging the intelligence of a crowd in a useful, contextually specific way. It is far more explicitly useful than Amazon's "people who-liked-what-you-want-also-liked" popularity-based suggestions. This is because Dogear represents not buying decisions but some form of quality that makes a link worthy of later recall. Use of Dogear to pre-qualify information sources (and, in the process, to classify the people who Dogear) allows collaboration to be democratized across people who share the necessary context to make the collaboration productive.

How Connections Optimizes Business Operations

Tagging

Tagging, done frequently by a broad range of stakeholders in an organization, provides the

⁵ Lotus Quicker is not part of Lotus Connections but is well integrated with it. More information on Quicker is on page 6 of this report.

⁶ Lotus Connections Blogs are based on open-source *Roller*.

⁷ You can also assess the extent of that expertise.

means to add a fuller business context to any Lotus Connections element⁸, be it a Profile, Activity, Community, Blog, or Dogear bookmark. It is a contextually specific form of indexing. In its approach to tagging, IBM has chosen to tread the thin line between a controlled vocabulary (beloved by librarians and publishers) and a free-form vocabulary, preferred by just about everybody else⁹. When you tag in any Lotus Connections element, a drop-down box displays similar existing tags you might want to choose. These are just suggestions; you can put in your own unique term.¹⁰ The experience within IBM is that this gives adequate vocabulary congruence without imposing rigidity.¹¹ It also allows new terms to be added by popular acclaim, giving the vocabulary a more self-regulating currency. Once tagging becomes a broadly-adopted habit, as it has within IBM, the metadata structure of business information that is produced through use of Lotus Connections has a great and enduring business value, for all tags can become the focus of a pivot.

Pivot

Pivot, beloved by those involved in transaction analysis, works equally well, if not better, in navigating Lotus Connections' Activities, Communities, Profiles, Blogs, and Dogear. When you click on a tag, you see all the other documents and objects that have that tag. Like pivoting on a column in a database, the click exposes another dimensional view.¹² It is a far less constrained view than you get scanning the

skeleton of a file system looking for something that you know is there but may be hidden in a file folder. Because all the Lotus Connections elements are integrated, you can navigate or parse across the aggregate information of all the components in a domain by pivoting to see new dimensions of where you are.

Take the Dogear collection of bookmarks, for instance. You filter for relevance to your interests and then pick one tag. You then pivot and find the people who tagged it. You can then access Profiles, pick a person's profile, pivot there, and find out what Communities and Activities he or she is engaged in. This exploratory capability gives you a better context for deciding whom to ask for a quick overview of a topic or whom to ask to be on a new initiative. It meets a corporation's need to know who is working on what in the enterprise in a way that is contextually specific enough to be useful. Of course, more traditional means of locating this kind of expertise can be used in a single physical workplace of limited size, but most of us participate in larger, more dispersed communities whose expertise is of value, and where traditional methods of finding it do not work.

Enabling Corporate Productivity

This ability to explore an organization fosters productivity that goes far beyond the ability to produce more documents. Paperwork, or the digital equivalent thereof, does not make a business thrive. Building cooperation and leveraging expertise does. With Lotus Connections, you can be known not just by your profile but by the communities you join, the activities you take part in, the blogs you write, and the bookmarks that describe what you find interesting. Within the domain and focused strategy of a business of any size, leveraging these attributes can do a great deal for business productivity.

Lotus Connections takes an approach to collaboration that addresses a bottoms-up capture of the expertise of the people you have rather than the top-down of well-defined projects and six sigma efficiencies, to which it is a fine compliment. It lets an individual tap into the wisdom of colleagues, customers, and retirees – all the groups that have a valuable view of what it is that a business does. Of course, it also turbocharges cross-departmental projects and is a great tool to support the kind of participative culture that businesses need. So far, beta customers have tended to use Lotus Connections

⁸ For those readers familiar with the U.S. Security and Exchange Commission's *EDGAR* (Electronic Data-Gathering, Analysis, and Retrieval) system, the recent addition of metadata tags to all financial reporting values to document the context in which they were derived is roughly equivalent to what Lotus Connections brings to institutional collaboration.

⁹ IBM experience has found that explicit tags work better than general ones – something librarians would agree with.

¹⁰ Since all users of Lotus Connections are authenticated, the generation of spamming tags is an easily solved problem.

¹¹ This has worked for the 300,000 people inside IBM for two years; it is reasonable to believe it will work in most organizations.

¹² Pivoting is somewhat like the faceted navigation of some advanced search products. It is an immediate way to explore the extent and topography of topics in which you are interested. One might also describe it as a free-form, multidimensional version of the global file systems that storage administrators hope will ease management of their burgeoning storage environments.

within specific domains (Internet, Intranet, Extranet, and zones within these three). It makes a good deal of sense to start with specific communities of people who needed to be better connected, particularly those where more corporate awareness is beneficial.

Expanding the *Connections* Realm with *Quickr* and *Sametime*

IBM Lotus's Sametime and Lotus Quickr complement Lotus Connections and are part of a larger business optimization story. Sametime is Lotus' presence, instant messaging, and web conferencing product. It can interoperate with other instant messaging systems and supports VoIP conferencing. In its latest iteration (7.5.1), it features integration with *Microsoft Office* and *Outlook*, support for Macintosh users and Linux servers, and niceties like tabbed chat. It is used by seventeen million people worldwide. As a business-focused product, it includes authentication, and the ability to save and search chats, conferences and other communications, and the ability to disable chat during videoconferences as an option.

Sametime brings real-time communications options to bear on Lotus Connections. The Sametime presence awareness is supported in both Connections and Quickr, so a person can know what team members are available for a real-time chat. This collaborative tool greatly enriches the scope of what can be done – and how quickly goals can be achieved.

Quickr is Lotus' content service and teaming software. It is more structured than Lotus Connections Activities, in terms of the number of people, the amount and kinds of content, and the inherent structure it supports. As an example, Activities does not have a structured repository, with check-in and check-out and versioning discipline that Quickr does. Dogear stores tags and links but not the content behind the links, as Quickr can. Sometimes, when teaming becomes more long-term, or organizational boundaries are an issue, a business will want the structural support of collaboration that Lotus Quickr provides.

Quickr extends the scope of tasks that can be supported, and the richness of their documentation. It is still a people-centric product, not project or process management software. Quickr is also not enterprise content management – but it will connect to enterprise content

A Summary of Why Lotus Connections Elements Matter to Business

Social software gets conversation back into the technology-supported business. In order to make the conversations productive, you need more than just connectivity and shared spaces.

- *Blogs* document the state of projects and communities and can offload arguments from meetings to a more time-efficient venue.
- *Communities* aggregate insights on topics of current interest.
- *Activities* allow people to work with their network to execute tasks faster.
- *Tag Clouds* help you find and focus on information generated by your colleagues.
- *Templates* let you jumpstart tasks or store best practices for the next time.
- *Dogear* leverages the intelligence of the whole for the benefit of the whole.
- *Quickr* leverages the elements listed above and presents a coherent repository to be protected and leveraged as part of the IT environment.
- *All the above* make meetings, when you have them, more efficient.

management products, and export information to them for longer-term management. Quickr is developing connectors¹³ for *IBM FileNet* and *IBM Content Manager*, *EMC Documentum* and *Open Text*. Quickr connectors support *Lotus Notes 7.8* and *8.0*; *Microsoft Office 2000, XP, and 2003*; *Microsoft Windows 2000, XP and 2003*; *Lotus Sametime 7.5*, and, soon, *IBM FileNet*. Lotus Quickr services run on *Lotus Domino* and *IBM WebSphere Portal*.

Both Quickr and Sametime have devoted developer communities that extend the capabilities of the products and add industry-specific functionality. Sametime has many partners in the video and telephony space. Quickr's template library has been enhanced by several open source templates: *QDOC* for a document library, *QWIKI* for the creation of wikis and wiki entries,

¹³ Basically, these connectors are wizards that discover and integrate with other applications.

and *QBLOG* for team and individual blogs.¹⁴

Lotus Connections Availability

There are four licensing options for Intranet use: Lotus Connections Activities or Lotus Connections alone will cost \$55/user/year. All five components will cost \$110/user/year. An upgrade from Activities or Profiles to all five components will cost \$65/user. The Value Unit License for Extranet Use will be \$450 per Processor Value Unit¹⁵. All these licenses include restricted licenses for *WebSphere Application Server V6.1*, *DB2 Restricted Enterprise Edition V9.1*, and *Tivoli Directory Integrator V6.0*.

Lotus Connections' final code will be ready to download on June 29, 2007. That date is also the general availability date for Lotus Quickr.

Conclusion

Lotus Connections is business software targeted at pools of known participants who are linked by an organization and its particular interests. The Connections elements enrich the organizational view of its people and the people's view of each other. They provide the tools to expose tacit knowledge and the repository to document that knowledge, giving an organization a low-touch way to grow a foundation of institutional wisdom. For large companies, distributed sales forces and multinational teams can better leverage the wisdom of the organization. At a more tactical level, small companies can build highly-functional collaborative extranets for their suppliers and partners.

The heterogeneous compatibility of Connections, and the extension of that heterogeneous approach in Sametime and Quickr make the Lotus offerings an attractive choice for an enterprise over the long term. Their workers will have a variety of collaborative needs and preferences, which Connections, Quickr, and Sametime support. Businesses and organizations also have different business styles and different cultures. By offering a

range of collaborative products, IBM Lotus lets businesses leverage different collaborative modes – from opportunistic to highly organized – without having to make choices, or even switch contexts. The IBM Lotus approach builds into businesses the flexibility that they very much need. With the flexibility built into whatever environment is preferred, workers can focus on getting work done.

Social software for business is a separate market from the *MySpace* of the consumer market or even the invite-only business-focused community of *LinkedIn*, both of which are focused on the needs of the populations they serve, not institutional needs.

Lotus Connections is a powerful business tool as well as a tactical accessory. It allows communities to develop, function, and proliferate as is useful to the organization. It can capture institutional knowledge and support emerging interests and vocabularies. It can promulgate this knowledge across the enterprise, and export it for further analysis as is demanded by the ambitions that drive the business. It can help a business thrive and prosper. Think of how you could use Lotus Connections in your organization to enrich collaboration and improve organizational effectiveness.



¹⁴ IBM Business Partners are building templates for specific industry activities and workflows.

¹⁵ The Processor Value Unit approach to software pricing is a more granular structure that deals with the variabilities of use introduced by both virtual machines and multi-core processors.

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