

The Need to Unify Your Business Information

An Osterman Research White Paper

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Executive Summary

When making an important decision in your company, putting together a business plan, forecasting sales for the next year or making other important business decisions, do you have all of the information you need? Is all of the related information easily accessible in one location? Do you know if there are relevant pieces of information missing from your analysis that might be useful?

For the vast majority of business decision makers, the answer to all three questions is “No”.

Information is spread across a large and growing number of data stores, ranging from email systems to customer databases to hosted collaboration tools. Because of the nature of the IT infrastructure and the management structure of most organizations, this content is stored in a way that is not meaningful to decision makers. For example, while different content types are normally stored in silos based on the system that was used to create it, users actually need this information in terms of its context – the business topics to which the content relates. As a result of the disconnect between the way that information is stored and the way users could make best use of it, inefficiencies are created. Individuals spend significant amounts of time searching for information, they make decisions without all the information they need, and they make decisions more slowly than they could.

What organizations and users need, therefore, is a capability that can automatically collect and present relevant information by business topics. For example, a decision maker might need content pulled from an email system (regardless of who in the organization has the email), data emailed by employees in the field (perhaps from an email system other than their primary, corporate one), a CRM system, a production database, an analyst’s report and a government database of economic information. Users could collect this information manually from the various data sources, but they would spend inordinate amounts of time doing so and then might not know if they’ve collected all of the necessary data. An automated system, on the other hand, could collect the information in the background and present it to decision makers whenever they need it. Further, such a system could add or delete relevant information as it is created and modified throughout the organization according to established compliance controls – all without intervention by individual users.

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This white paper, sponsored by PointCross, discusses the problems associated with silos of information, and it presents information on a unique solution that directly addresses this problem.

Information is Increasingly Critical...

INFORMATION IS CRITICAL TO THE WAY PEOPLE WORK

Anyone who works at a computer is highly dependent on information from a variety of sources. For example:

- An Osterman Research survey conducted in October 2008 found that users in smaller organizations (up to 1,000 employees) spend 33% of a typical workday doing work in their email client, including activities like searching for information in old emails, looking for documents that were sent to them as attachments, looking for information about clients, etc. In larger organizations, users spend an average of 40% of their day in email.
- The same survey found that for users in smaller organizations, 44% of the information they need to do their job is somewhere in email; for users in larger organizations, that figure is 48%. A February 2008 Osterman Research survey found that 93% of email users feel that email is either critical or important in helping them to do their work.
- One estimate finds that email users spend up to 14% of their day looking for email and other information.
- Email users in smaller organizations send and receive a mean of 124 emails during a typical workday; users in larger organizations send and receive 149 emails. This means that during a typical workyear, each year in an organization will send and receive more than 30,000 emails. All of the users in an organization of 2,500 email users will send or receive in excess of 90 million emails during a typical year.
- In addition to email, the vast majority of users create and work on documents generated with desktop productivity applications, such as word processing systems, spreadsheets and presentations, many of which end up attached to emails and distributed to one or more people multiple times. These documents end up being stored on individual or shared drives and, at best, only the final versions are posted to a document management system.
- In addition to the corporate email system, many employees use personal Webmail accounts to send work home, get around file size limitations in the corporate email system, or bypass content inspection tools, such as data loss prevention (DLP) systems.
- A growing number of email users also employ real-time communications systems, such as instant messaging, to communicate on time-sensitive issues and many send files to one another using these real-time systems.
- Many messages are generated automatically through workflow and other solutions. These messages are also subject to compliance rules that are embedded within the solution.

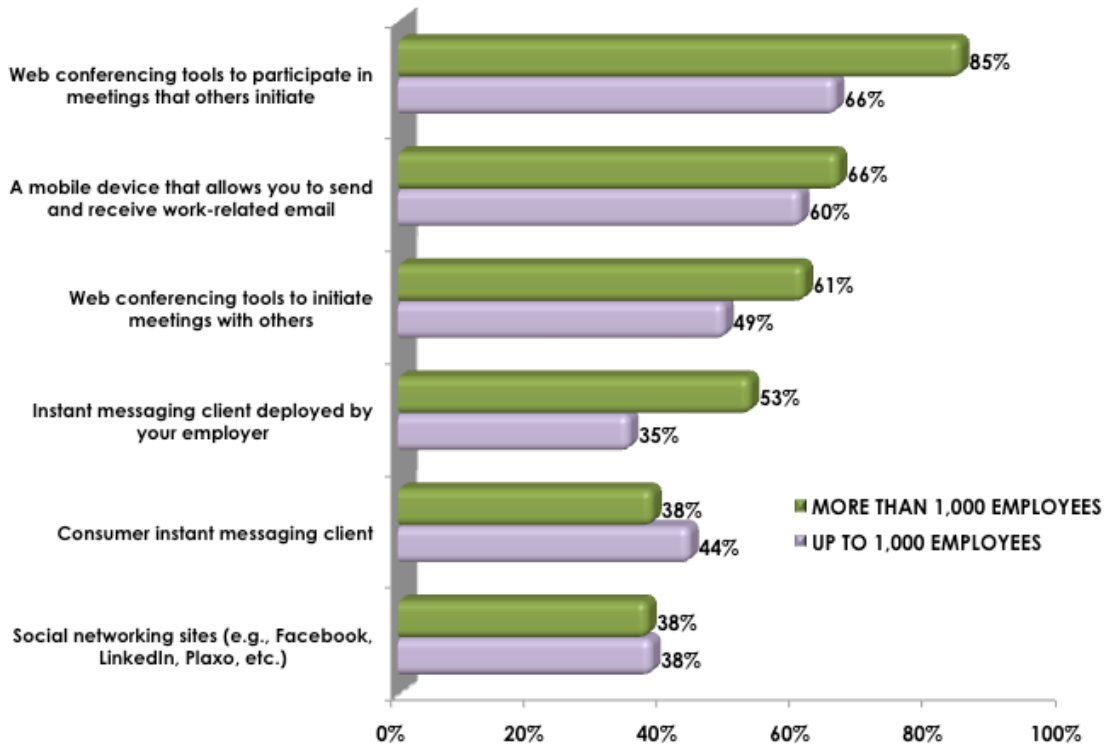
- Many users generate content using a variety of other applications, including databases of various types, CRM systems, ERP systems and a host of other information-laden sources.

ADDITIONAL DATA SOURCES ARE BECOMING MORE IMPORTANT

In addition to these commonly used systems, a variety of other data sources and repositories are also being deployed, including document-collaboration systems like Microsoft SharePoint, Lotus Quickr, Google Sites and Jive Clearspace; social networking sites like Facebook, LinkedIn and Plaxo; video sources like YouTube; information-sharing tools like Twitter; Web conferencing tools like WebEx, Sametime Unyte and Microsoft LiveMeeting; corporate wikis and blogs; and a host of other content-sharing systems and information repositories.

Illustrating the diversity of tools in use in the workplace is the following figure from an Osterman Research report that shows the penetration of different types of content sharing tools in use.

**Information Tools Used for Work-Related Purposes
February 2007 to February 2008**



VENUES, PLATFORMS FOR WORK ARE BECOMING MORE DIVERSE

In addition to a growing number of content creation tools and information repositories, the number of actual platforms in use continues to grow. For example:

- The vast majority of information workers use a desktop computer.
- An Osterman Research survey conducted in July 2008 found that 30% of email users have an employer-supplied laptop with Wi-Fi capabilities.
- The same survey found that 23% of email users use an employer-supplied mobile device, although this figure is significantly higher for decision makers (senior managers, traveling employees, etc.) than for the email user population at large in most companies.
- A February 2008 Osterman Research survey found that 75% of email users check their work-related email from home on weekdays and 74% do so on weekends.

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Further, the locations at which work is performed are becoming more diverse and more distributed. Many companies are embracing the concept of “mobility” – not just in the sense of providing mobile devices, but in the greater concept of allowing employees to work wherever they want. For example, more than 40% of IBM’s employees do not have a permanent work location, but instead work from home or on the road. Boeing has adopted the “hoteling” concept, in which workers do not have a permanent office or cubicle location, but instead are provided with temporary workstations when they are in the office. A growing number of organizations are adopting flexible work schedules that allow employees to work from home some or most of the time, a trend that will become only more pronounced in an era of budget cuts and cost containment.

The advantages of the trend toward mobility are significant: it is a “green” trend because it minimizes travel, it reduces real-estate and electricity costs, it allows employees more freedom of when and where to perform their work, and it allows greater operational flexibility for an organization that does not have to assemble all of its employees in one location for work to be performed. At the same time, however, mobility imposes a much greater burden on organizations to implement technologies like offline, remote and secure access to systems, data and the other information sources that individuals need to do their job effectively.

An important implication of mobility is that making mobile, remote workers more productive requires being able to immerse them into a business context rapidly and being able to switch contexts rapidly. These employees do not have the luxury of a support structure of people who can help create the context switch as they do when they are in the office with their peers. This is increasingly critical for teams that are globally dispersed.

A system that can provide contextually relevant content to employees can provide significant value. For example, consider a salesperson visiting a client: using presence information from the salesperson's mobile device, a backend system could automatically generate a page of the most pertinent information related to that client and make it available on the mobile device or on a laptop. Email threads, recent news, the results of previous contacts and other information would provide significant value in that particular context.

....and Increasingly Difficult to Access

Consider the following scenario: a marketing manager and her team are working on the company's new marketing plan for the coming year. To produce the plan, she and her team will need access to a variety of information sources:

- Emails from the product development team, manufacturing managers, sales managers, senior corporate managers, salespeople in various locations around the globe, legal counsel, resellers, distributors, etc.
- Word processing files, spreadsheets and PDF files with reports from all of these groups delivered over the past year or more. This content might be as diverse as a policy memo from a senior manager written in a Microsoft Word document to product feature requests from a reseller's salesperson buried in an email.
- Output from CRM or ERP systems, such as Salesforce.com databases, SAP databases and the like.
- Text messages sent from mobile devices.
- Archived instant messaging conversations from a large number of individuals, such as salespeople, product development staff members, etc.
- External content from a variety of data sources, including macroeconomic data from government agencies, resellers' financial reports, analysts' reports, relevant articles from trade publications, information from various Web sites, information from legal Web sites discussing new court rulings, etc.
- Content from social networking sites, wikis, blogs and other data sources.

Now, consider that all of this information will be housed on individuals' desktops, laptops, mobile devices, home computers, email servers, instant messaging servers, mobile messaging servers, file servers, a wide variety of databases (e.g., email databases, email archives, SharePoint repositories and CRM databases), databases of archived Webinars, Web sites and other external data stores, etc. Some of this information will be easy to find – a somewhat time-consuming search through an inbox could produce relevant emails, for example. However, some of the information will be very difficult and time-consuming to find, assuming it can be found at all.

Adding to the difficulty faced by this team will be the fact that work-in-process, incomplete information, draft copies and snippets of information – some of which might be relevant to the team as they develop the plan – will not be available until “officially” published at some point, assuming that the information ever is published. Further, the rigid structure inherent in some organizations’ information systems will not permit individuals without the appropriate permissions to gain access to data they might need, even if a lack of permission to access certain data is unnecessary or could be detrimental to work that needs to be performed. Being able to escalate accessibility to work-in-progress as the document approaches a publishable state, while maintaining tight control of access privileges, can provide significant value to users in an organization.

In short, there are a large and growing number of data types stored on a large and growing number of data sources, and accessing this information quickly and efficiently is difficult, if not impossible. Information that could be used to improve decisions and increase the operational efficiency of an enterprise is scattered across a large number of silos, largely inaccessible to those who need it.

DATA IS NOT STORED IN CONTEXTUALLY MEANINGFUL WAYS

Further complicating the lives of the decision makers in our scenario is the fact that the information that this group will need is not stored in ways that are useful to them. For example:

- Certain emails stored in individuals’ mailboxes will be relevant to all members of the group that are working on the marketing plan. However, that data is siloed in one or more email databases. Further, email systems are not designed to allow sharing of inbox content unless individuals manually send emails and attachments to one another.
- Data stored in other information silos – ranging from SharePoint repositories to instant messaging archives – will be largely unavailable to members of the group as they develop the plan, particularly if they are remote or working offline.
- An insight developed by a production manager about new product capabilities, a legal opinion from outside counsel discussing liability exposure, or information on a greenfield market opportunity from a reseller – all of which would be relevant to the team creating the marketing plan – will be stored in a wide variety of standalone information silos and will generally not be available to members of the team. In fact, they might not even know about the existence of this data.

The fundamental problem, then, with the current information infrastructure is that data is stored by system or database or repository and **not** by business topic.

Team members in our scenario may find that a specific email, PowerPoint presentation or PDF file are very relevant as they develop the marketing plan – all have the same context for purposes of developing the plan – but these files will be stored in an email system, on a

file server and in an online document repository, respectively, independent of the appropriate context for the task at hand.

A key reason that in many organizations information is not available in its appropriate context – aside from the fact that information is stored in independent silos – is that the corporate structure hides relevant information behind organization boundaries. For example, sections of a sales report may be relevant to marketing, or HR’s analysis of recent H1-B visa rulings might be relevant to production managers. However, this information is unlikely to be accessible to others who might be able to use it unless the information holder publishes the content.

The fundamental problem, then, with the current information infrastructure is that data is stored by system or database or repository and not by business topic; it is not in a context that is meaningful to decision makers; and its existence is often not known by those who might be able to use it.

AS A RESULT, INEFFICIENCIES ABOUND

The key problem with the status quo in information management in the vast majority of organizations is that users do not have the information they need to do their work effectively. This puts decision makers at a disadvantage in several respects:

- They spend far too much time looking for information. The American Records Management Association estimates that the average user spends between 1.5 and three workdays each month – fully 7% to 14% of their time – simply searching for documents.
- They do not have as much information as they need.
- They have too much information that they do not need, much like finding 25,000 “relevant” documents in a Web search when, in fact, all that is needed is the four documents that would be most helpful.
- Decision-making proceeds more slowly than it should.
- Those charged with making decisions are less well informed than they should be.

This results in less-than-optimal decision-making processes, the wrong decisions in many cases, and inefficiencies in a variety of business processes.

A New Approach is Needed to Address the Problems

To make faster, more frequent and better-informed decisions, individuals must have better tools with which to work. These tools must be able to access all relevant information to which the organization has access and present it to decision makers in a timely and contextually appropriate way.

For example, our hypothetical team charged with producing a marketing plan should have all relevant information available to them regardless of where it might be located or the method by which it was sent, received or stored. That means that for this particular project, all emails, spreadsheets, memos, customer data, macroeconomic data, etc. that are relevant to the development of the corporate marketing plan should be available to the team as they develop the plan. If the team members had contextual organization of this information and appropriate search capabilities, they could substantially reduce the time they spend looking for content. Contextually organized emails provide both the author and the recipients with a clear reference to the topic and the context. As a result, emails are more focused and their total length can be reduced by as much as 30% because it is not necessary to explain the topic of the emails. Further, because disparate information could be related to one or more business contexts, the total time to discover related, but not explicitly tagged, information can be reduced by as much as 10%.

However, what happens two months later when this same group of individuals is charged with identifying their employers' 50 best clients and 100 best prospects as part of a campaign to expand the markets that the company serves? Again, the same information sources might be appropriate from which to mine the data, but now the information presented to the decision makers needs to be relevant to this new project, not the marketing plan project. As a result, because the context of the information is different, a new set of data – but from the same data sources – should be culled and presented to the team.

Of even greater significance is a scenario in which legal teams must assemble relevant electronic information in response to a competitor's lawsuit about a specific element of a product's design. The legal team is required by law to produce all of the relevant information within a short time frame in order to be compliant with various requirements, such as the Federal Rules of Civil Procedure or a judge's specific instructions. Technology that can speed and streamline the e-discovery process can save an organization hundreds of thousands – if not millions – of dollars per discovery effort. The residual benefits of having a single copy of documents, coupled with records management and contextual organization of information in support of e-discovery can eliminate the need to procure additional applications, thereby reducing overall e-discovery costs.

In short, decision makers need access to all relevant data that the company can access, but they need to view this information contextually: by project, by client, by industry, by geography or by whatever other parameters the decision makers would find most useful. The result of providing information in its appropriate context will be faster and better-informed decision-making, less time spent looking for information, less legal exposure and, ultimately, more revenue.

The Need to Unify Business Information

What we have been discussing is the need to unify business information from disparate sources based on the contexts in which it would be most useful. For example, a salesperson sitting in front of a prospective client, a legal team preparing an organization for litigation, or a marketing team creating next year's business plan will all have a need to pull data from similar content sources and assemble it into a unified set of actionable content with the following characteristics:

- It must be relevant (i.e., in the appropriate context) to meet the specific requirements of the individual or group using the information.
- It must be culled from information sources that are applicable to current business requirements.
- It must be pulled from *all* relevant sources – individual email stores, content databases, business information systems, file servers, individual desktops, and whatever other sources are useful for the task at hand. This includes work-in-process, “unpublished” information, private content that its authors deem appropriate to share with other team members, discussion threads, and so forth.

THE NEED FOR UNIFIED BUSINESS INFORMATION MANAGEMENT

What is needed, therefore, is *Unified Business Information Management* – a method to store information contextually – or by business topics – that will unify business information in ways that are appropriate to specific contexts, and will then unify the same information in different ways suited to other contexts.

One such system is the PointCross Unified Business Information System (UBIS), which helps companies not only to store information in appropriate contexts, but also to share that information across the enterprise. UBIS consists of the Orchestra+Solo platform:

- **Orchestra** is a scalable, secure SOA environment for multi-tenant use within a global enterprise or across multiple organizations. Its unique platform has a pre-integrated, out-of-the-box set of applications for representing and managing all types of disparate unstructured and structured data. Orchestra integrates this content around a patent-pending technique of relational taxonomy management.
- **Solo** is a companion client to the Orchestra enterprise platform. As part of the enterprise infrastructure, it is a PC synchronizer that automatically replicates all content, on any business topic, to the server and the user's desktop or laptop. Companies can share all of their information through the portal or application of their choice—including an Orchestra portal, SOLO application, Outlook, Microsoft SharePoint or a SAP portal. Mobile-Solo is a client that provides unified business information services through a mobile device like a BlackBerry, Windows Mobile and other devices.

THE BENEFITS OF UBIS

Today, companies from a variety of industries have experienced the benefits of UBIS:

- Keeping a single copy of all information to reduce storage needs and growth by up to 30% and to reduce bandwidth from shuffling documents in the network.
- Working online or offline, or on a mobile device, with all of the most recent information.
- Better sharing of information across the company and coordinating between employees.
- Securely communicating very sensitive material via email without the hassles of a public key infrastructure (PKI).
- Automatically erasing all information from laptops when they are reassigned, hijacked or lost.
- Central controlling of information by IM and IT management.

In short, UBIS:

- Provides information in contextually meaningful ways.
- Provides users with a dynamic set of information that is most relevant to the task at hand
- Can be accessed from a variety of platforms

Further, because three-fourths of information workers access and communicate through their work email system from home, a unified business information environment like Orchestra makes it possible to allow people to work securely through their extended access when offline and through their Web-enabled mobile devices. Strengthening the virtual office improves productivity, reduces the costs to the company and the employee while allowing the company to become more green.

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Summary

Individuals must have access to information to do their work. Unfortunately, much of the relevant information that users might be able to employ is locked away in silos created by applications and databases. Further, organizational structure can further limit access to relevant data that users need. This creates a situation in which decision makers do not have the information they need, slowing the decision-making process and resulting in decisions that are not as well informed as they could be.

PointCross has developed the Unified Business Information System (UBIS) that stores information in appropriate contexts and then makes the information available to decision makers when and where they need it. This results in greater employee productivity by alleviating users of the burden of searching for information, it makes the right information available to employees who need it, and it allows for more complete and faster decision making.

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