

# **WebEx MediaTone™: Delivering on the Promise of Rich Media Communications**

*A White Paper From*

**Collaborative  
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## WebEx: Delivering on the Promise of Rich Media Communications

It is hardly an overstatement to say that communication and collaboration are the lifeblood of 21<sup>st</sup> century business. Without internal communication there is no product or service development. Without external communication there are no customers or partners. Indeed, Collaborative Strategies LLC's research suggests a strong correlation between companies that excel at communication and collaboration—this requires striking a delicate balance between *people, processes and technology*—and marketplace success.<sup>1</sup>

One can make a strong empirical case that the most successful companies of the past century have been those that excel at communication and collaboration. Particularly in their high-growth phases, many successful companies are characterized by a robust and innovative approach to communications. Part of this is built into the “DNA of success”: rapidly expanding companies add new customers and partners on a daily basis and the companies that are able to meet this challenge will by definition *survive* success. From this perspective, it's clear that communication and collaboration are not “nice-to-haves” but “must haves.”

Although recent marketplace events have tarnished its luster, few critics would argue against the notion that the Internet has ushered in a new era of communication and collaboration. The fusion of audio, data, and video technologies is creating huge opportunities for better, faster, and more effective communication.

***Robust multimedia communication services are no longer “nice-to-haves” but “must haves” since such interactions are the very lifeblood of 21<sup>st</sup> century business.***

Throughout this white paper we will use the term *rich media communications* as shorthand when referring to the intersection of audio, data and video related technologies and services. These multimedia tools may be used to connect individuals or groups in *real-time* (synchronously, like the telephone and teleconferences) or *on-demand* (asynchronously or non real-time, like e-mail).

Until now, few companies have been able to deliver on the promise of rich media communications. Over the past decade, an astonishing amount of marketing ink has been spilled hyping the potential upside of rich media communications while sweeping its shortcomings under the rug. As a result, many companies have invested in such products and services and then have found they fall far short of their expectations.

In part, this paper will explore the forces driving the adoption of rich media communications technologies and services today. We will then turn to **WebEx Communications'** new approach to these technologies and examine the infrastructure they have created. Our goals are to describe the WebEx platform, provide an example of its use through a real-world case study, and to examine the latest objective research on the expanding universe of rich media communications.

### Why Rich Communications Matter

Collaborative Strategies' research suggests we have moved into an era where individuals and groups must harness their collective power and intelligence more effectively and more often in order to succeed. In part, this is due to globalization: organizations now compete for customers at greater geographic distances than ever before. The increase in business travel and information exchange has removed or overcome boundaries that had previously existed. Additionally,

workers are more mobile in their own work environments, and millions more employees telecommute part-time.

Still, despite the increasing pace and shortened product lifecycles associated with business today, many organizations understand it is equally critical to maintain close working relationships both within their organization and with external partners and customers. Often, the only efficient way to maintain the strength of these ties is to rely on rich media communication tools.

Collaborative Strategies recently completed a comprehensive report on the rich media communications marketplace entitled, *The Real-Time Communication and Collaboration Industry Report 2002*.<sup>ii</sup> In it, we explore the drivers and benefits associated with various forms of virtual communications. Excerpted from that report, the following drivers and benefits have been culled from case studies, user surveys, and discussions with many thought leaders in the industry.

Whether or not your organization already uses rich media communication tools, consider which of the points below are most relevant to your business:

- Rich media communications cut costs and save time by reducing or eliminating travel. Research indicates the number of meetings has risen significantly in recent years (the average businessperson now attends 60+ meetings per month<sup>iii</sup>). Travel costs have also risen, up some 7% in 2001<sup>iv</sup>.
- The weak U.S. economy is compelling organizations to find less expensive ways to conduct business while maintaining quality. Put another way, a requirement for converged, rich business communication is rising as shortened development cycles and competitive pressures induce organizations to boost efficiency.
- Rich media communications help facilitate *knowledge management*, leading to improved productivity and enhanced customer satisfaction (our survey research found that seven in ten respondents believe increased productivity is the leading business driver behind their current implementations<sup>v</sup>).
- In the wake of September 11<sup>th</sup>, many businesses are concerned with the safety of business travel and have reinvested in virtual meeting technologies and services.

One of the most profound and visible trends in the rich media communications space is the rapid convergence underway between audio, video, and data technologies and services. While a number of standards and approaches are in use today, Collaborative Strategies research suggests Internet Protocol (IP) is becoming the *de facto* technical basis for this convergence. Without simplifying too much, it's fair to say that data/Webconferencing owes its existence to the Internet, and thus runs on IP.

In contrast, growth of ISDN-based videoconferencing—which uses the H.320 protocol that was adopted by businesses many years earlier—began to falter in 1999 and 2000. Most observers believe the future of videoconferencing is aligned with the H.323 standard, which is IP-oriented. Although we anticipate the demand for closed ISDN systems will slow substantially in the coming years, the demand for hybrid IP/ISDN systems is likely to remain high.

Meanwhile, although IP audio is making inroads into the standard Public Switched Telephone Network (PSTN) market, Cisco estimated that last year, just 4.4% of worldwide traffic was running Voice over IP (VoIP).<sup>vi</sup> Thus audio, both person-to-person and group-oriented, is likely to continue to be largely PSTN-based for some time. Moreover, industry deregulation and

competition are combining to drive down the cost of conference calls even further. Although Collaborative Strategies expects VoIP to continue to gain acceptance as the technology improves, we believe there will continue to be demand for hybrid systems that run data and video over IP and audio over PSTN. However, we also anticipate that the management of voice traffic (whether it be provided by traditional carriers like AT&T or by private companies) will become more IP-centric over time in order to take advantage of data/audio/video convergence.

If you stop to reflect, arguably *what has made PSTN so successful over the past century is that it is scalable, secure, low cost, ubiquitous, easy-to-use, reliable, and high quality.* When you pick up the phone, well over 99% of the time you have a dial tone. Cell phones, of course, are a different matter! In contrast, as we briefly discussed above, videoconferencing has languished as “the next big thing” in communications since the 1970s. Videoconferencing has clearly not met each of the key criteria that drove the adoption of the telephone in the early 20<sup>th</sup> century—especially in terms of ease-of-use, quality and price.

As peculiar as it may sound at first, it follows that the hallmarks of successful rich-media communications networks and platforms will be more akin to the PSTN switching systems than what we have seen from the videoconferencing industry to date. These networks must offer an IP-centric “dial tone” for multimedia interactivity. Such networks and platforms must be scalable, secure, low cost, ubiquitous, easy-to-use, reliable, and support high Quality of Service (QoS). Anything less will result in slow adoption and less-than-satisfied customers.

**WebEx Communications** has addressed both the underlying network and platform issues that until now have held back widespread deployment of rich media communications systems. These are delivered via the recently enhanced WebEx Interactive Network™ and WebEx Multimedia Switching Platform™. This approach represents an innovative and effective way to solve the major challenges associated with real-time, rich media communications delivery.

The WebEx Interactive Network provides strict control over reliability, QoS, and security, as opposed to other services that use only the Internet infrastructure. WebEx has hundreds of multimedia communication switches deployed at data centers around the globe, a number that is constantly increasing. The network features redundant high-speed dedicated lines, traffic routers, back-up power, and 24x7 monitoring.

***WebEx has addressed both the network and platform issues that until now have largely held back widespread deployment of rich media communications services.***

The WebEx Multimedia Switching Platform (WMSP) provides a suite of interactive communication components that can be assembled into customized services. These Web-based applications services deliver enterprise-level communications capabilities designed to bring people together via nothing more a standard Web browser. The WMSP provides real-time switching capabilities to balance traffic and can handle virtually any type of digital content.

The “multimedia communications switch,” upon which the WMSP is based, has a somewhat more difficult task than its cousin, the telecommunications switch. Information switches, such as the multimedia communications switch, must not only authenticate users for security and billing purposes, but also deliver this traffic to the correct recipient. They must make a persistent connection for virtually any computer system using TCP, HTTP or SSL. To solve the problem of representing virtually any form of content across differing computing platforms, the WebEx Multimedia Switching Platform incorporates its own lightweight graphics language called

“vectoring,” which delivers high-quality visual representation while consuming minimal bandwidth. (Vector graphics are a type of graphic rendering that is not proprietary to WebEx.)

Briefly, for those familiar with OSI’s seven-layer model, the WebEx Multimedia Communications Switch resides in Layers 5, 6 and 7 of the OSI Network model. The WebEx Multimedia Switching Platform’s multipoint and authentication components reside at Layer 5, the Session Layer. At Layer 6, the Presentation Layer, resides WebEx’s vector-based graphics language and WebEx’s new MediaTone™ multimedia signaling and information delivery technology. And, at the Application Layer, or Layer 7, are functions such as application sharing, slide presentations, polling, and text chat that are utilized by individuals and groups., such as The Application Layer is also where most of the WebEx API calls terminate, enabling companies such as Intuit to build real-time multimedia conferencing support into its QuickBooks product.

## WebEx MediaTone Technology

While WebEx’s pre-existing network and platform have provided the reliability, security and scalability to provision WebEx services for more than 5,000 customers to-date, new enhancements to both the network and platform, announced April 2<sup>nd</sup> 2002, deserve a more detailed look. The company describes these enhancements to its Multimedia Switching Platform as MediaTone technologies, which deliver the “dial tone” for multimedia communications. Advances built into this third-generation platform translate into several new features that extend *the number of services already provided to customers.*

MediaTone technologies incorporated in the enhanced WebEx Multimedia Switching Platform include:

- **Support for Universal Communications Format™ (UCF)** in high-performance “Presentation Mode.” UCF is WebEx’s proprietary technology for delivering nearly any piece of content or application both quickly and easily. With UCF, customers can now:
  - **Share PowerPoint presentations with full animation and transition support.** This is a critical capability that users have long sought but that most “store-and-forward” architectures (i.e. competitors whose technology essentially takes pictures of slides and sends them to users) cannot fundamentally deliver. WebEx’s new switching platform has truly solved this major issue in an elegant manner, and without complicating usage from the user’s perspective.
  - **Share Macromedia Flash files embedded in PowerPoint presentations.** Moreover, delivery of these Flash files can be completely controlled by the presenter(s) during the event (start, pause, stop, fast-forward, etc.).
  - **Within PowerPoint presentations, share Microsoft Windows Media and RealNetworks Real content** that is stored on any Website, also with full control of the attendees’ view. Similar to Flash, the presenter(s) has the ability to start, pause, stop, fast-forward, and rewind the streaming content “on the fly”.
  - **Share embedded 3D objects from any CAD application within PowerPoint presentations,** with full ability to manipulate the object. *These manipulations are viewable by all attendees in real-time.*
  - **Share previously recorded WebEx meetings embedded within PowerPoint presentations..**
- **Share multiple documents or presentations simultaneously.** Users may flip back and forth between several documents, presentations, CAD applications or other types of

content as needed. During in-person meetings, this is done regularly. A full set of annotation tools can be used with these documents and slides, and annotated files can be saved individually on local computers.

- **Access Anywhere™.** This technology provides the ability to securely access and share information in a meeting (or even or outside of a meeting) when the content or application resides on an unattended or remote computer. In effect, this allows meetings from anywhere with anyone while the information shared remains secure. Because it's based on MediaTone, access is controlled by the same high-level of security that governs other WebEx services. Multilevel security includes password protection, dial-out phone authentication, keyboard/mouse lockout, session timeout and log, and SSL encryption.
- **Multipoint Video Conferencing.** The ability to have true multipoint videoconferences with just a browser and a simple Webcam (commonly available for under \$50 each). Besides Webcams, MediaTone also supports ability to use Polycom cameras in a multipoint video conferencing session.
- **Wireless Personal Digital Assistant (PDA) Support:** Participate in meetings with PDAs or use Access Anywhere™ to remotely access information.

Sales demonstrations, marketing seminars, and training events should all benefit substantially from these additions to rich media communications. Inclusion of MediaTone-enabled sharing capabilities should provide a significantly richer and more engaging experience to users.

An important point to reinforce is that the presenter controls all participants' view of the shared content. When a video starts, for example, it pauses and stops when the *presenter* clicks—no one is left behind, clicking away. Because MediaTone supports tight control of rich media communications, the presenter can make his or her message heard and understood in a way that not previously possible.

Microsoft® Outlook™ integration also deserves consideration. From Outlook calendars, users can now schedule, send invitations, start, and join WebEx meetings. Additionally, users may customize their meeting invitations and leverage Outlook's access to corporate addresses and meeting coordination features.

Below is a summary of how the WebEx MediaTone-enabled Multimedia Switching Platform addresses today's requirements for rich media communications. As indicated in Figure 1 below, Collaborative Strategies believes that the WebEx Multimedia Switching Platform meets the same stringent requirements that made telephone service the most widely used virtual communication medium of the past century.

**Figure 1: WebEx Multimedia Switching Platform Vs. Traditional Telecommunications**

<b>Phone Requirement Fulfilled</b>	<b>WebEx Requirement Fulfilled</b>	<b>How WebEx accomplishes this...</b>
<b>Secure</b>	<b>Secure</b>	<ul style="list-style-type: none"> <li>• No external storage of meeting data</li> <li>• Firewall configuration not necessary</li> <li>• Industry standard SSL encryption offered</li> <li>• Multiple authentication mechanisms and in-meeting controls</li> </ul>
<b>Scalable / Ubiquitous</b>	<b>Scalable / Ubiquitous</b>	<ul style="list-style-type: none"> <li>• Hundreds of information switches at data centers around the globe</li> <li>• Capable of supporting millions of simultaneous voice and data users</li> <li>• Server-coupling makes services infinitely scalable</li> <li>• Can be integrated into other Web applications</li> </ul>
<b>Ease-Of-Use / Simplicity</b>	<b>Ease-Of-Use / Simplicity</b>	<ul style="list-style-type: none"> <li>• Web-based, simple user interface (UI)</li> <li>• No software installation or hardware requirements (“total transparency”)</li> <li>• Cross-platform</li> </ul>
<b>Reliable / High QoS</b>	<b>Reliable / High QoS</b>	<ul style="list-style-type: none"> <li>• Optimized switching for predictable throughput</li> <li>• Redundancy for fault tolerance</li> <li>• Vector-based rendering of graphic elements</li> </ul>

## **WebEx Interactive Services**

**WebEx has built four Interactive Services** upon the WebEx Multimedia Switching Platform to-date, and all of these services will now leverage MediaTone technology. These four services are **WebEx Meeting Center**, **WebEx OnStage**, **WebEx OnCall**, and the recently unveiled **WebEx Training Center**.

It’s worth noting that none of the WebEx services require preinstalled software for end users and all these services are delivered as a communications utility. Customers do not purchase any software or hardware—WebEx services can be provisioned almost instantly. Therefore, the services are ultimately easy to deploy and use, and are completely browser-, system-, and device-independent.

***Both in terms of lost productivity and higher costs, companies that fail to move in the direction of rich media communications may be more likely to experience negative business consequences over the next few years.***

**WebEx Meeting Center** is a virtual space in which meetings and events can be managed, held, and archived. These meetings can be spontaneous or pre-planned, and can have up to 1,000 participants. The latest release takes advantage of the new MediaTone technology and provides a number of MediaTone-enabled capabilities, including support for

PowerPoint animations and transitions, sharing of rich multimedia embedded within PowerPoint, Access Anywhere, and simultaneous sharing of multiple presentations and documents. Meeting Center also includes integration with Microsoft Outlook and a new WebEx Recording Editor.

**WebEx OnStage** is designed to allow organizations to communicate more effectively with prospects, customers, partners, and employees worldwide through Web-based seminars. Requiring nothing more than a browser, OnStage creates a rich multimedia forum for highly productive seminars. From sharing presentations and documents, to Web tours and full application sharing, OnStage offers a comprehensive, flexible, and dynamic seminar environment on the Web. MediaTone enhancements allow presenters to easily create highly engaging presentations, adding to the impact of these seminars.

**WebEx OnCall** enables rapid technical support problem identification and resolution, resulting in cost savings and increased customer satisfaction. OnCall enhances the effectiveness of traditional telephone-based technical support by allowing support professionals to interact with their customers live over the Web. Using OnCall, support professionals can instantly initiate online sessions to diagnose and resolve problems using a powerful set of interactive tools. Because WebEx services support Windows, UNIX and Linux, technical support can be delivered across multiple OS platforms.

The newly released **WebEx Training Center** service is a full-fledged “live” and “on demand” training delivery platform. WebEx Training Center creates a feature-rich online environment that simulates the engaging and participative experience of in-person training. The WebEx Training Center service allows companies to cut travel expenses and dramatically decrease many of the other costs associated with delivery of corporate training. Indeed, Collaborative Strategies understands that as of late 2001, approximately one-third of all WebEx customers used WebEx services to deliver some form of remote training for their employees, customers, and partners.

Collaborative Strategies anticipates that the virtual classroom segment of the real-time communication and collaboration market should grow at over 60% through 2005, and top the one billion mark in revenues by that point.<sup>vii</sup> Thus, the release of WebEx’s new online training delivery service coincides with a clear corporate shift toward such investments.

While Training Center includes a number of the same information sharing features of Meeting Center, it is worth noting that some of the MediaTone enhancements will have their greatest impact in the training departments. The ability to share animations, transitions, and streaming media within PowerPoint Presentations, as well as play back recorded WebEx sessions, are all features that are particularly valuable in remote online training.

WebEx Training Center is designed to deliver training both in real-time and on-demand (asynchronously). WebEx has developed features specifically for real-time, synchronous training and learning, including:

- Multi-point full-duplex audio/video support
- Streaming media support
- Improved online interaction:
  - The “question queue” enables the instructor and panelists to see the total number of questions and the best way to answer them;

- The “raise hand” button enables students to deliver instant feedback;
- The “Yes/No” quick poll button lets results be tallied and shown back to the class “on-the-fly”;
- The “Trainer’s Dashboard” includes a powerful set of class management features for the instructor;
- Threaded “Q&A” enables the students to ask questions and panelists to provide corresponding answers
- The Hands-on Lab allows sharing of remote lab computers during a session, enabling trainers and learners to view and control applications or desktops
- A richer testing environment, including support for “multiple choice” and “fill in the blank” tests. Trainers can administer tests, automatically track individual performances, and share correct answers within a session.
- Breakout sessions can integrate and share of any content, and separate text chat and VoIP channels. Trainers can conduct multiple, simultaneous breakout sessions, and allow learners to collaborate on remote applications or documents.

From the on-demand and offline training perspective there are also several key features built into Training Center. Most importantly, WebEx has developed robust record, playback and editing features. While previously all WebEx sessions could be archived, the new, enhanced set of capabilities clearly raise the bar. Another new feature is detailed session registration and reporting functionality that simplifies training-session scheduling and enrollment and generates reports that capture learner attendance and recorded access information.

Since WebEx treats audio, text, slides, video, and other events that take place during a training session as a separate yet related element, each of these “channels” can be played back independently or seamlessly synchronized. Thus, for example, students who don’t have the bandwidth to receive video can still playback the same learning object as other students who do have the bandwidth, but this channel can be turned off to improve performance. Moreover, instructors can record a session at their convenience with all the media options and let students select which of these channels they wish to see, hear, and interact with.

All of the Training Center testing features can be offered in on-demand mode, as well as in real-time mode. The integration of real-time and asynchronous features means that employees can find the right information to help them when they need it—not just when the subject matter expert is available. Because it leverages MediaTone technology, people can schedule training through the familiar and widely deployed Microsoft Outlook client. In addition, Training Center supports robust archiving and searching/indexing, threaded discussions and Web-based registration features.

*The new WebEx Training Center is a complete “live” and “on demand” training delivery platform.*

The extensibility of the Training Center also deserves a closer look. Because the e-training and e-learning markets are constantly in flux, new technologies and services are announced daily. In order to capitalize on the innovation in this market, WebEx has approached extensibility and integration from the broadest possible perspective. In terms of industry standards, both **SCORM** and **AICC** specifications are supported. Additionally, WebEx’s underlying XML learning object-tagging approach means that Learning Management Systems (**LMS**) and Learning Content Management Systems (**LCMS**) may leverage WebEx’s capabilities at a relatively deep level.

## WebEx Services in Action

Let's see first-hand how a company takes advantage of the WebEx Meeting Center service, particularly as it relates to the key organizational process of sales and marketing. **Onyx Software** is a leading global provider of customer relationship management (CRM) software. Based in Bellevue, Washington, Onyx has offices around the globe that support more than 900 customers. The Onyx suite of products helps businesses manage their customers with an enterprise-wide, scalable system that easily integrates with other applications. This suite includes the Onyx Employee Portal, the Onyx Customer Portal, and the Onyx Partner Portal.

Before becoming a WebEx customer, the Onyx sales cycle was characterized by lengthy lag-times. Often, salespeople had to conduct multiple presentations and demonstrations to various decision-makers in the customer's organization. These were made on-site to customers, which was a highly time-consuming and costly process. In mid-2000, Dan Mahowald, the Regional VP of Sales located in Bellevue, began evaluating technologies that could streamline this process. He spearheaded the company's evaluation process, including several vendors of online meeting and presentation tools. WebEx's Meeting Center quickly emerged as the obvious choice.

"Meeting Center was way ahead of the competition," says Mahowald. "It was easy to use and required little or no training to get people up and running. It had an elegant application-sharing capability, which is key to the sales process when demonstrating Onyx products." Another key factor in selecting Meeting Center was that WebEx provided a hosted solution, which meant Onyx avoided large up-front costs. Additionally, Onyx liked the "transparency" of the WebEx service, the idea that they would always be working with the most current version of Meeting Center and would not have to plan and implement costly upgrades when a new version of the software was released.

WebEx quickly became a standard tool in the sales process for making presentations to customers at a distance, doing demonstrations of the Onyx software using the application sharing capabilities, and conducting online meetings with customers. The sales organization quickly saw the benefits that resulted from the improved sales process using Meeting Center to communicate with customers.

Onyx has also customized its internal CRM portal with an embedded "Collaborate" link, enabling the sales staff to launch Meeting Center instantly when communicating with a customer to show presentation materials and demonstrate Onyx features on an *ad hoc* basis. Mahowald believes that WebEx Meeting Center has helped optimize his company's sales cost model, slashing the time and money spent on the sales process. The benefits of Meeting Center are shorter sales cycles and increased revenues.

***Onyx Software has saved "hundreds of thousands of dollars" since implementing Meeting Center, a service that has become "mission-critical" in the sales process.***

"Meeting Center has reduced the duration of the sales process, leading to transactions closing faster with customers. Plus, Meeting Center enables our salespeople to reach customers they previously couldn't reach due to time or distance," he confirms.

Mahowald estimates that Meeting Center has “saved Onyx hundreds of thousands of dollars since it was implemented.” Reduced travel time and costs of meeting with customers face-to-face have contributed largely to these savings. Web Ex Meeting Center has become “a mission-critical component of the sales toolkit at Onyx,” he concludes.

## Conclusion

As highlighted in the Onyx case study, WebEx’s services offer a number of significant benefits to its customers. The WebEx Meeting Center is helping their sales team shorten sales cycles, and thereby boosting revenues. It has also saved them significant resources in terms of travel costs and other related sales and marketing logistics. Usage at Onyx has virally expanded into technical support and training areas.

WebEx services are having similar impact at thousands of other companies. From mergers and acquisitions, to product development, to customer support, WebEx’s MediaTone technology platform delivers the dial tone for real-time business processes. Especially at a time when companies are looking for ways to run their organizations more efficiently without sacrificing quality, WebEx clearly offers a strong value proposition in the rich media communications space.

***At a time when companies are looking for ways to run their businesses more efficiently without sacrificing quality, WebEx services offer a powerful value proposition.***

The new WebEx platform is being released at a time when—despite, or perhaps because of the weak US economy—the demand for real-time communication and collaboration is reaching an all time high. Collaborative Strategies latest report on this market indicates that in 2001, companies spent roughly two-and-a-quarter billion dollars on real-time data/Web, audio, and video products and services.<sup>viii</sup> By 2005, we anticipate this figure will rise to just under \$6 billion. This figure does not include billions more that will be spent on related infrastructure, systems integration and other requisite products and services.

From the opposite perspective, we believe being “behind the curve” in terms of deploying and leveraging rich media communications would be bad for business. Both in terms of lost productivity and higher costs, companies that fail to move in the direction of rich media communications may be more likely to experience negative business consequences in the coming years.

***Collaborative Strategies believes WebEx’s recently enhanced MediaTone platform delivers on the promise of rich media communications and distances WebEx from the competition.***

## About Collaborative Strategies LLC

*Collaborative Strategies LLC is a San Francisco-based management consulting firm focused on collaborative technologies and knowledge management (KM). Founded in 1988, Collaborative Strategies believes people are critical in knitting together technology and culture to form vibrant organizations. Collaborative Strategies provides objective, timely research and expert advice to vendors and users of interpersonal and interactive technologies for electronic collaboration and KM. Our ability to meet and exceed client expectations is based on a commitment to the use of collaborative behaviors, methodologies, and technologies. Our clients have more time to focus on their core competencies because we devote our time to their specific information requirements. Collaborative Strategies can be found on these Internet at [www.collaborate.com](http://www.collaborate.com) or contacted by calling 877 209 2455.*

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<sup>i</sup> From a case study on the CS site: [http://www.collaborate.com/mem/case\\_studies/casestudy5.php3](http://www.collaborate.com/mem/case_studies/casestudy5.php3).

<sup>ii</sup> From the CS RTC report: [http://www.gatedway.com/cs\\_shop/csi\\_shop\\_rtc\\_Rev01.php](http://www.gatedway.com/cs_shop/csi_shop_rtc_Rev01.php).

<sup>iii</sup> From WorldCom: <http://e-meetings.wcom.com/meetingsinamerica/inperson.php3>

<sup>iv</sup> From a USA Today article: [http://www.infousa.com/homesite/03aug00\\_travel.html](http://www.infousa.com/homesite/03aug00_travel.html).

<sup>v</sup> *Op cit.*; the CS RTC report.

<sup>vi</sup> From the Cisco 2001 Analyst Conference; presented by Mike Volpi, Chief Strategy Officer.

<sup>vii</sup> From the CS e-learning report: [http://www.gatedway.com/cs\\_shop/csi\\_shop\\_ernl\\_Rev01.php](http://www.gatedway.com/cs_shop/csi_shop_ernl_Rev01.php).

<sup>viii</sup> *Op cit.*; the CS RTC report.