



# Enterprise Adoption of Real-Time Collaboration

A Case Study based on  
Oracle Corporation

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## Introduction

## Adoption of Real-Time Collaboration at the Enterprise Level

This white paper analyzes the adoption of Real-Time Collaboration (RTC) technologies at the enterprise level. Although Internet-based RTC technologies have been around since the late '90's, few organizations have adopted them at the enterprise level, where the greatest benefits and ROI can be realized. This paper will examine some of the reasons for this by focusing on Web conferencing – a rapidly growing segment of the RTC market. In addition, it will present a case study of Oracle Corporation, which has succeeded in achieving a high level of adoption of their own Web conferencing solution throughout their organization – and what they did to accomplish this.

Enterprise-level adoption is achieved when an enterprise realizes improved productivity and efficiencies due to the use of RTC technology. In this case, RTC is integrated into existing business applications, processes and workflows of the enterprise, and employees use RTC technologies in their day-to-day business, whether it be for personal productivity or as a part of a line of business (LOB) for overall business efficiency. Enterprise-level adoption allows the overall enterprise to achieve greater productivity, business agility and reduce inefficiencies at an LOB level, as well as across the whole enterprise. This goes far beyond what a stand-alone online meeting tool can provide.

Estimates made by Collaborative Strategies in 2003 indicate the market for RTC technologies composed of audio, video, and Web conferencing will be approximately \$11.5 billion in 2007, of which Web conferencing will contribute almost \$3.0 billion. Whereas the audio and video conferencing segments are growing at approximately 20% annually, Web conferencing is expected to grow at 40% annually. Much of the growth in Web conferencing is predicted to be in adoption of these technologies at the enterprise level. Collaborative Strategies estimates only 15-20% of the potential market for Web conferencing has been penetrated to date. Of this, relatively few organizations have adopted Web conferencing at an enterprise level.

To date, Web conferencing remains largely a standalone meeting tool being used in a particular line of business. In large organizations, it is not uncommon to find they are using multiple Web conferencing solutions because the lines of business have independently sought out solutions on their own to meet their communication and collaboration requirements. A primary reason for this is the requirements for Web conferencing will vary from one LOB to another. Different sets of features and functions are required by different lines of business, as described below:



**Sales:** Sales teams frequently meet with customers during the sales process to make sales presentations, deliver product demonstrations, design solution architectures, negotiate terms and language included in purchase agreements, etc. This can be costly and time consuming. Being able to perform these functions and have complex interactions with customers online using Web conferencing can reduce travel time and costs, as well as accelerating sales cycle time. The key requirements for overall adoption in the sales line of business is to ensure that it is integrated into the sales process – from being able to start a session with anyone on a regular basis, to archiving the customer interaction into the sales application to allow sales managers to look at the metrics, and to see how the use of Web conferencing is impacting their overall business goals.

**Customer Support:** Product support can be a laborious and frustrating process in which the customer must explain their problem verbally to the support rep over the phone. The support rep, in turn, suggests courses of action to resolve the problem without actually viewing the customer experience. Enabling the support rep to share the customer's desktop, and supporting the ability to invite product experts into the online session when difficult problems are encountered, can significantly speed up the resolution process. The result is faster response to customer problems and increased customer satisfaction, as well as productivity gains by the support staff. The key requirement to enable adoption in the support line of business is to be able to integrate Web conferencing into the overall support process. The support analyst should be able to start a session with the customer within the context of the support application, and the service request should be automatically stamped with the customer interaction and the recording of the session.

**Marketing:** Bringing new products to market can be a complex process that involves strong communications both internally and externally with customers, partners, analysts, press, and media. This is often done via “traveling road shows” to major cities. The cost of doing this can be staggering. Being able to conduct these online using Web conferencing enables one to reach out to customers, partners and media in a shorter period of time. Another use of Web conferencing by Marketing departments is Webinars (Web-enabled seminars), which enable Marketing to build customer awareness by making it easy for customers to attend scheduled online events from their desktop. The key requirement to enable adoption in the marketing line of business is to be able to integrate Web conferencing such that Webinars can be scheduled from the event calendar in the marketing campaign management software, automatically flowing the leads from the Webinars into the sales application and making it available to the sales teams so that they can call the leads while they are hot.



## Barriers to Adoption

**Engineering:** Engineering departments generate design drawings of their products that must often be reviewed by other internal departments such as manufacturing and purchasing, as well as by outside suppliers and design firms that may participate in the design process. Meeting online to review and modify design drawings provides immediate benefits to the design process. Decisions are made faster, and misunderstandings leading to design mistakes can be eliminated when all parties are seeing the same thing at the same time.

**Training:** Internal training departments typically conduct training classes for employees (and customers, partners, etc.) at a central facility or by sending training teams to outlying offices to conduct the classes. In either case, travel time and cost are incurred that can be eliminated by scheduling and delivering online training classes that students can participate in at their desktop. Furthermore, online training classes can be recorded, stored, and accessed by participants at any time, allowing them to prioritize their time in meeting work commitments and eliminating disruptions in their work schedule. In order to maximize the benefits, RTC should be integrated into the overall learning management system being used by the enterprise to ensure the effectiveness and impact of the virtual classes that are conducted using Web conferencing.

In short, there are many Web conferencing solutions on the market. Careful consideration should be given when selecting a solution to meet the overall needs of the enterprise as opposed to a single line of business.

In addition to the reasons cited above about why Web conferencing has remained a LOB solution in most organizations, there are also several barriers to adoption that any organization encounters when trying to expand usage of real-time collaboration technologies like Web conferencing to an enterprise level. Common barriers include Technology, Culture, Economics, Politics, and Change Management.

### **Technology**

Consider the following points to ensure that the technology chosen can support enterprise level adoption.

- **Real-time Performance:** Performance is essential for creating a good user perception. Web conferencing solutions that are not able to provide close to real-time performance will create a barrier for users to use the technology.
- **Scalability:** Many Web conferencing solutions do not have the scalability to meet the needs of the entire enterprise in a cost-effective manner. The



capacity of the Web conferencing solution may have limitations based on the number of users that can log on to an online session at the same time. This can be prohibitive for large organizations that hold online employee meetings with management, or schedule product rollouts to large customer audiences.

- Network Utilization: Web conferencing solutions that consume a lot of bandwidth and network resources cannot be rolled out to the enterprise without negatively impacting the existing network infrastructure of an enterprise. This becomes a significant barrier to adoption at the enterprise level.
- Operational Simplicity: If the IT department is not able to manage and administer the system easily and efficiently, they will not be keen to roll the solution out to the overall enterprise. This, in turn, creates a barrier for adoption.
- Firewall / Proxy Support: Not all Web conferencing solutions have the ability to effectively traverse all types of firewalls and proxy servers. This restricts such systems to internal usage and makes them unsuitable to various external-facing lines of business, such as sales, support, marketing, and customer/partner training.
- Integration with Corporate Directory: The Web conferencing solution should be able to integrate with an enterprise's corporate directory such that every user has access to the system and can sign on to the RTC solution with their standard login.
- Integration with Existing Business Processes and Applications: For users to adopt Web conferencing, it is essential the solution be integrated into the existing business processes and applications. Without this, the users will have to learn new ways of conducting their day-to-day activities and will have to switch contexts in order to perform their daily tasks.

## **Culture**

Every organization develops and maintains an overall organizational culture. This can also include subcultures based on the size and distribution of the organization. Work environments that don't encourage and support open sharing of information among employees, as well as with customers and partners, are generally not good candidates for collaborative technologies such as Web conferencing.

## **Politics**

Organizations are political and reflect the behavior and goals of senior management. Opposing forces within an organization can make it difficult to



## Requirements for Enterprise Adoption

achieve cooperation and collaboration between departments so that communications occur only when necessary, making it difficult to develop a cooperative, collaborative environment. As with culture, political practices are difficult to change, and can inhibit the adoption of a Web conferencing solution at the enterprise level.

### **Economics**

There are two facets of economics that affect adoption of collaboration technology – the cost side and the impact of the technology. As with any type of solution, cost can present a major hurdle to adopting Web conferencing at an enterprise level. Although the market for Web conferencing solutions is very competitive, cost can still be a major inhibitor to enterprise adoption depending on budget constraints. In addition, the solution must deliver a clear ROI to all participating departments in order to justify the cost.

### **Change Management**

By nature, end users are resistant to change. They don't like being taken out of their comfort zone. Getting employees to adopt new technologies and change their work habits can be extremely difficult. Users are also very unforgiving. It only takes one or two incidents in which they experience difficulties with a new technology like Web conferencing, and they immediately go back to their old way of doing things.

A number of requirements must be met in order to successfully adopt Web conferencing at an enterprise level. These requirements include:

- Solving a Business Problem: There must be clear, critical business problems that exist across the organization that Web conferencing technology can help to solve.
- Clear ROI: Develop a realistic ROI for adopting Web conferencing across multiple lines of business. The ROI should be realized by the line of business in six months or less.
- Champions: Like any new technology, Web conferencing needs to have champions on the business and technical sides who drive the use of the technology throughout the enterprise. Top-level executives can start the process by using Web conferencing and require their subordinates to use it. This sends a clear message to the rest of the organization and generates visibility and interest in the technology.
- IT Infrastructure: A supportive computing environment across the enterprise is needed to ensure users have easy access to the technology



## A Case Study of Enterprise Adoption

and high levels of performance.

- **IT Support:** Web conferencing requires varying levels of technical support from the IT organization depending on whether it is hosted internally or externally by a third party provider. Regardless of approach, when problems or questions arise, the end user needs fast, responsive support
- **Education:** An internal marketing and on-going education program stressing the benefits of Web conferencing should be initiated to build awareness and visibility among end users in the organization. Developing and maintaining a “buzz” among prospective end users is critical until the technology becomes embedded in their everyday activities.
- **Usage Data:** Metrics data on usage of the Web conferencing solution at the corporate and LOB levels should be tracked and reported to management from the start. Downward trends in usage over time should be investigated to determine the reasons, and programs instituted to rectify the problems. This data is also useful for determining whether ROI objectives are being met.

As this white paper suggests, enterprise adoption of Web conferencing can be a difficult journey. There are many challenges and barriers that may have to be overcome. However, success is attainable if the opportunity is pursued in the right way. To demonstrate a successful approach, we will use Oracle Corporation as a model to discuss a best practices approach to implementing Web conferencing.

### **Background**

Oracle has 40,000 employees worldwide. The company developed and released its own Web Conferencing solution as part of its Collaboration Suite of products into beta in November, 2002. Oracle used Web conferencing internally while in beta to uncover and work through issues that made it a much stronger product when it was released into production in October, 2003. Web conferencing was not a new technology to Oracle. Oracle started using Web conferencing in some lines of business eight years ago. *In fact, the company had been using twelve different real-time collaboration solutions prior to Oracle Web Conferencing.*

### **Getting Started**

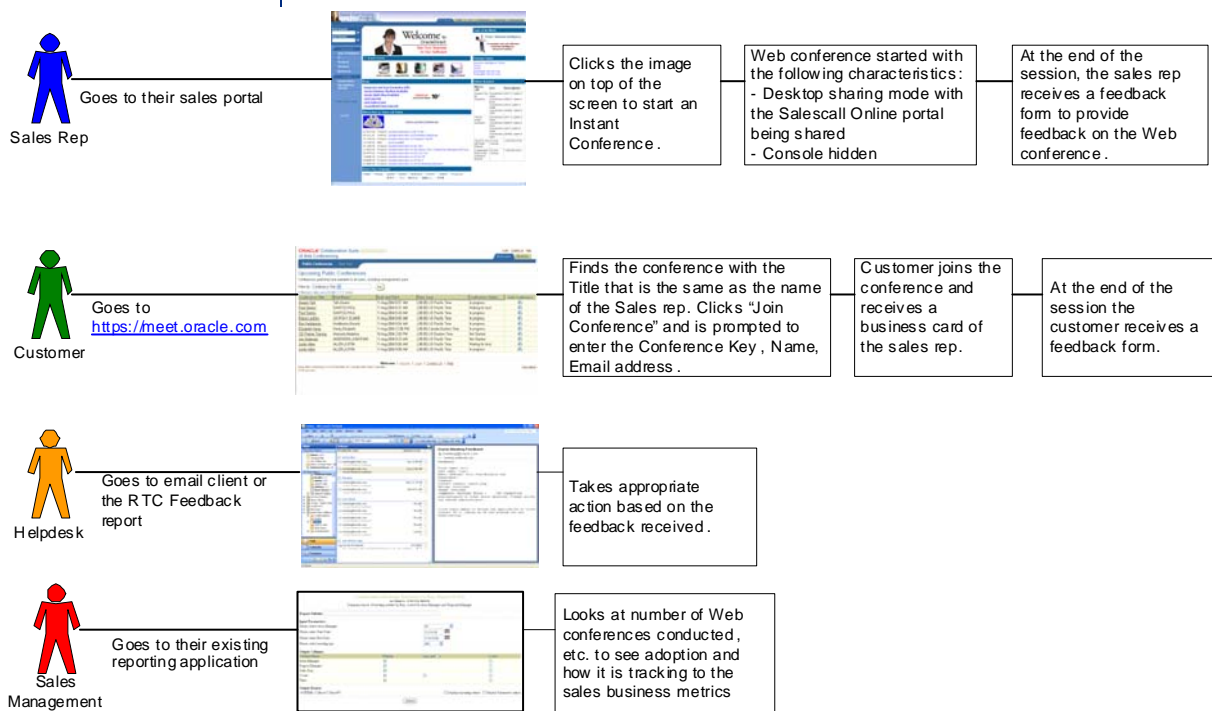
The Oracle Real-Time Collaboration development team started developing the application in 2001. They initially focused on understanding all the use cases for real-time collaboration in the enterprise. They talked with the lines of business at Oracle that were currently using other RTC tools to find out what worked



and what didn't work well for them. They discovered that the needs of the various lines of business varied between organizations.

**OracleDirect**, the telesales organization, had several hundred people working out of five offices around the world. Their needs included:

- Holding ad hoc meetings with customers without having to schedule them in advance.
- Ease of use – no user training required. OracleDirect experiences about 30% turnover with sales staff moving into field sales positions.
- Flexibility for customizing the user interface and integration capabilities without being locked out of future upgrades to the product.
- Integration into current work processes to make usage of Web conferencing seamless to the sales person. See the process flow for OracleDirect Americas in the diagram below.
- Tracking and reporting on usage metrics to ensure adoption goals were being met.
- Ability to collect feedback from customers about the session, as well as collect feedback from the sales reps on the product itself, to ensure that it is meeting their needs.



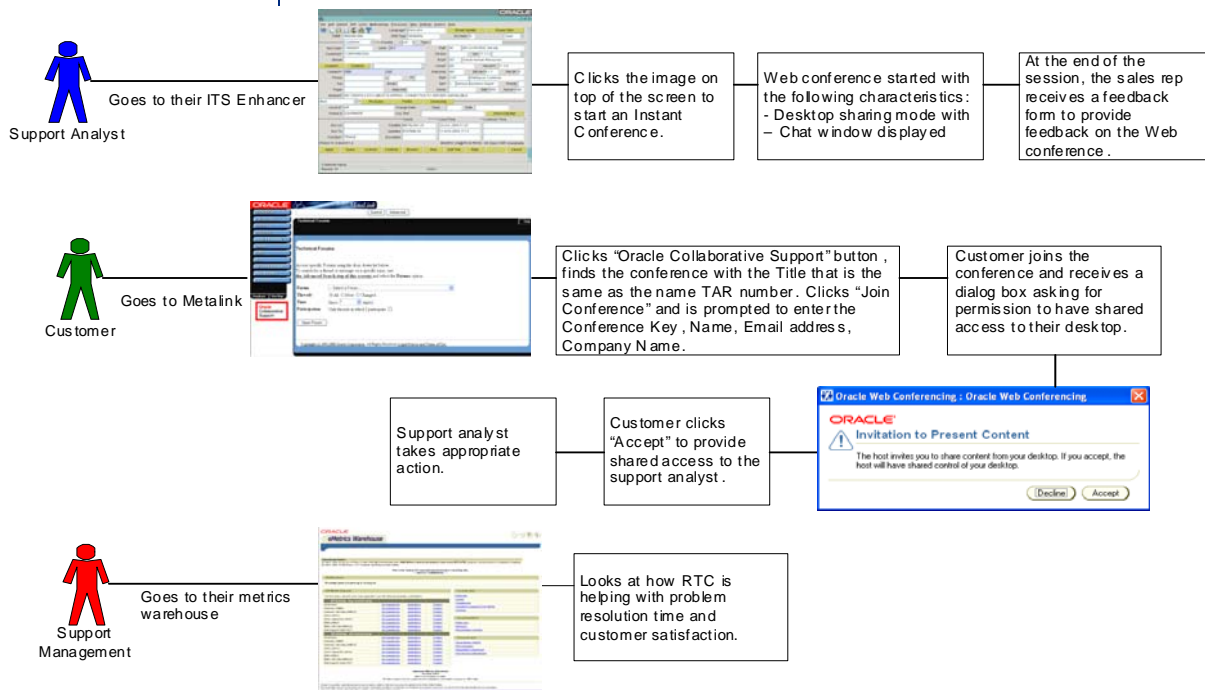


Note the conference is started by the Oracle sales person simply clicking on an image in the upper left corner of the sales portal. The Web conference automatically starts in desktop sharing mode with the sales portal being shared and the Web conferencing console hidden. The customer goes to [meet.oracle.com](http://meet.oracle.com) to join the conference. In the join flow, the customer's name and email address are captured and they are automatically pushed the business card of the sales person.

**Oracle Global Product Support**, an organization of 4,000 people centrally located, had other unique needs:

- True bi-directional viewing of the customer's computer desktop and the support rep's desktop during online troubleshooting sessions.
- Ability to get access to the customer's desktop quickly and in a way that does not require the customer to learn the product.
- Inviting multiple participants, including product experts, into a session as necessary.
- Compatibility with other Oracle tools required for storing product issues data directly into other applications and databases.
- Ability to capture meta data of the session and store it in a data warehouse for analysis of adoption goals and how Web conferencing is helping them meet their business goals

Refer to the diagram below showing the flow for using Oracle Web Conferencing in the product support process.





**Oracle Human Resources** focused on training issues. These included training Oracle employees on how to scheduling training sessions and on complex applications like recruiting software, completing performance evaluations using the HRMS system, etc.

### **Implementation**

The key to successfully implementing any new software solution is having a “champion” in the organization who uses, promotes and pushes the adoption process. Oracle found an early champion in their CEO, Larry Ellison, who was one of the first beta users. He used it in his weekly executive committee meetings, which encouraged his direct reports to use it in their respective organizations. In addition to CEO support from the top, other champions emerged in each of the organizations adopting Oracle Web Conferencing who became instrumental in the deployment process.

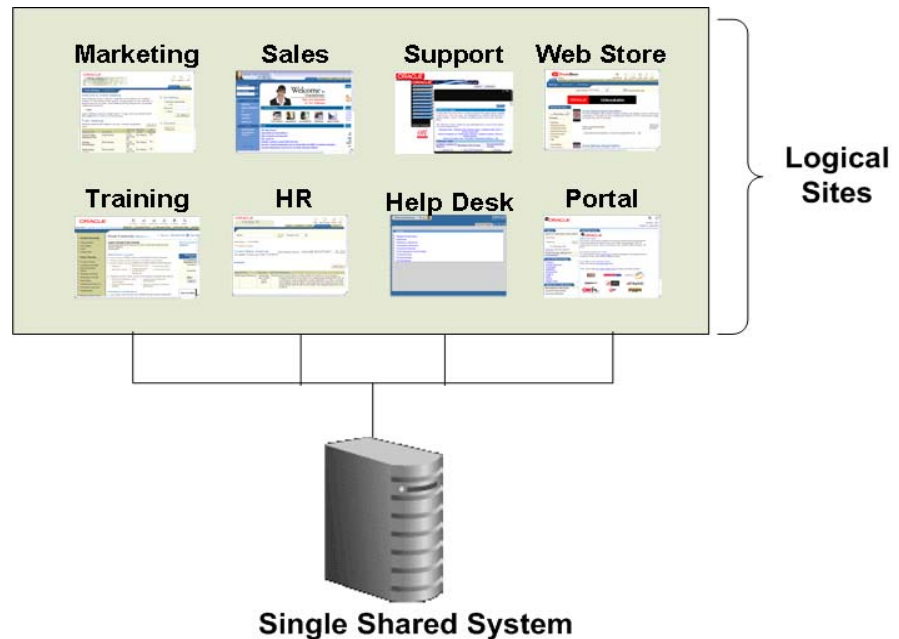
A six-month trial of the beta product was deployed and managed by the IT organization. They treated it like any other application they ran for the user organizations. Besides using it themselves, the IT group included users in OracleDirect and Oracle Global Product Support in the trial. No formalized user training was provided. An announcement told users they were able to access the beta product, and some additional brown bag sessions were held to discuss issues around usage. The IT Help Desk used Oracle Web Conferencing to work with users to troubleshoot and resolve issues with the beta product. New releases and patches were issued by the RTC development team on a weekly basis during the trial to correct problems as they were detected and reported by beta users. After the first six months, and as the product strengthened, the user base began to grow within Oracle as others found out about it.

Oracle Web Conferencing was run from a single location at Oracle’s Data Center in Colorado. Hardware requirements grew from three to six small Dell 2650 servers and an additional Network Appliance Disk when Oracle Web Conferencing went into production in October, 2003. The total cost of the hardware was approximately \$40,000. Oracle Web Conferencing continues to run on this configuration today supporting users around the world, which demonstrates its resource efficiency and scalability. The key technology capabilities of Oracle Web Conferencing that led to a successful implementation within Oracle are:

- Ability to meet line of business needs: Oracle Web Conferencing provides the capability to support multiple logical sites on a single shared system (see diagram below). These logical sites provide the ability to customize flows, preferences, reporting and monitoring capabilities to meet specific line of



business requirements. This capability enabled the creation of flows and integrations to support various lines of business, such as Oracle Direct, Support, or HR, while having the operational advantages associated with a single system.



- Operational efficiency: Oracle Web Conferencing can scale to thousands of concurrent users on a small Dell server running Linux. It also provides easy to understand administrative interfaces for system administrators, which do not require any DBA expertise, making it simple for IT professionals to monitor and manage the overall system.
- Low network impact with the ability to support disparate networks: Oracle RTC delivers real-time performance through highly efficient use of network bandwidth using an approach for capturing, adaptively compressing, and efficiently transmitting data to the participants. It also uses packet collapsing techniques to automatically adapt to attendees connected from low bandwidth networks, such as dial-up modems. This was important to ensure that there could be one system that could be shared by Oracle globally.
- Comprehensive security: Oracle Web Conferencing provides integration and authentication against LDAP directories, multiple levels of access controls, and 128-bit encryption for transmission of data. It also provides searchable and auditable records retention for every collaboration session that can help meet various corporate governance and regulation needs.



When the production version of Oracle Web Conferencing was released in July, 2003, a number of internal marketing activities were launched to create enterprise awareness and inspire interest with employees who had not been exposed to the product during the beta phase. Targeted email blasts were sent to employees, product demonstrations were done in the lobbies of Oracle's office buildings, quick reference cards were handed out at lunch, posters were put up in the building lobbies, and contest drawings were done to increase the exposure of the technology to all of Oracle. Oracle's internal Website was changed so that all pages referencing Web conferencing provided links to only the Oracle RTC product, and did not allow access to other competing products that were previously used.

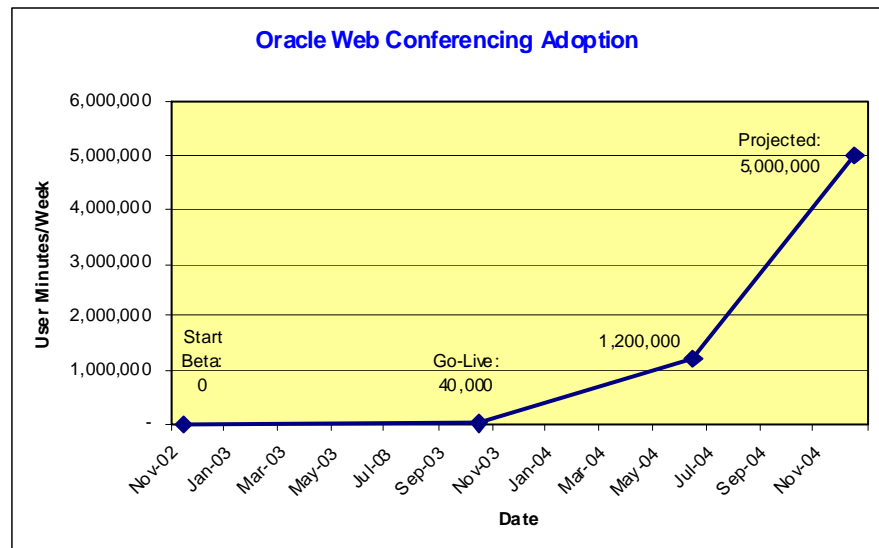
Other things that were done to promote adoption of Oracle Web Conferencing throughout the organization included:

- Incorporating information in the New Hire checklist on how to get access to and start using Oracle Web Conferencing.
- Automatically assigning an account for Oracle Web Conferencing whenever a new employee joins the company and is assigned an email-address. Oracle Web Conferencing uses the same single sign-on as the employee's email address and password.
- Listing Oracle Web Conferencing and how it can be used to conduct meetings on Oracle's Online Travel Reservation site.
- Providing a link to Oracle Web conferencing on the first page of [my.oracle.com](http://my.oracle.com) (the Intranet site used by Oracle employees).
- Ensuring immediate follow-up by the RTC development team to any negative feedback that was received from the users.

### **Current Usage**

Today, almost 35,000 of Oracle's employees are using Oracle Web Conferencing. Approximately half use it in conjunction with LOB processes they are directly engaged in such as OracleDirect and Oracle Global Product Support, while the other half are using it on an ad hoc basis. According to Michael Miller, Sr. Director, Product Management RTC Products, "Usage statistics show 1.3 million user minutes per week with expected growth to reach 5.0 million minutes by year-end."

Usage has grown dramatically since the product went into beta as seen in the diagram below.



Some LOB-specific metrics include:

**OracleDirect:** Oracle Web Conferencing is being used by employees in OracleDirect for internal meetings, sales training, and interactions with customers – more than 75,000 meetings a year. The usage of Oracle Web conferencing in OracleDirect has grown to 100,000 user minutes per week in 2004. Sales reps are averaging six Web conferences per week with an average call time of 15-16 minutes. The goal is to get them to ten conferences per week. Management is actively tracking the number of Oracle Web conferences in conjunction to total call stats, which is considered a good measurement of how well the sales reps are relating to their customers.

OracleDirect Japan conducts an “iSeminar“ service for prospective customers. In FY04, they hosted 62 iSeminars that generated several hundred business proposals. They began hosting iSeminars using Oracle Web Conferencing in February, 2004 and already have seen significant increase in customer participation as compared to the previous Web conferencing tool they were using.

**Oracle Global Product Support:** Oracle Web Conferencing is being used by all employees in Product Support. The use of Web conferencing by Product Support has grown to over 300,000 user minutes per week or 25% of the total conference minutes for the entire organization. They initiate about 3,000 online conferences per week, and project that the volume will level out at 10,000 conferences per week. Estimated cost savings per year are \$200,000, based solely on the cost of the licensed product they were using before adopting Oracle Web Conferencing. According to Tarek El-Sadany, VP of Oracle Global Product Support, “It is estimated they can reduce time to resolution on support



calls by 30%. Customers have been raving about it. We have more than 3,000 customer quotes saying how pleased they are with Oracle’s collaborative support using Oracle Web Conferencing.”

To keep customer satisfaction up, approximately 120 people participate in weekly conference calls to assess functionality enhancement requests, best practices and future visions for the product. This information is then provided as feedback to the RTC development team.

### **Total Cost of Ownership**

An extremely attractive metric of Oracle Web Conferencing is its Total Cost of Ownership. It is estimated the yearly cost per user is about \$19, well below that of other market leaders such as WebEx and Microsoft’s LiveMeeting. This is based on a two year cost model supporting 35,000 users as shown below:

Retail license cost (40% discount) = \$45 X 60% X 35,000	= \$ 945,000
Hardware costs to run Oracle Web Conferencing	= \$ 40,000
IT support staff costs for 2 FTE’s = \$160,000/year X 2 years	= \$ <u>320,000</u>
Total Cost (for 2 years)	= \$1,305,000
Annual Cost/User = \$1,305,000 ÷ 35,000 Users ÷ 2 Years	= \$ 19

### **Benefits to Oracle**

Besides reduced software costs associated with using Oracle Web Conferencing vs. other products, Oracle has realized a number of other tangible and intangible benefits by adopting it on an enterprise level.

- OracleDirect has eliminated a significant number of trips by the sales team and technical consultants to customer sites. Besides reduced travel costs, experts can be involved more readily and more effectively into online meetings, presentations, and training with prospective customers, allowing them to meet with far more customers than they could in person. This has helped customers view Oracle as a strategic partner, which, in turn, has lead to higher sales. When asked how critical Oracle Web Conferencing was to her organization, Hilarie Koplw-McAdams, SVP of Oracle Direct responded, “At this point in the game, you would be tying one arm behind my back if you took it away. I can’t see how we would function effectively without it. It would be setting us back six years. I think our reps would revolt and our customers would too.”
- Oracle Global Product Support is able to resolve customer issues significantly faster with Oracle Web Conferencing than possible by only using the phone. Bringing the right technical experts into the online conference when needed has impressed customers with Oracle’s commitment to rapid resolution of their problems as can be seen by over 3,000 customer quotes.



## Conclusion

- Oracle Global IT has improved their overall operational efficiency by being able to maintain a single shared system for Oracle employees globally. It is also able to meet every line of business need within Oracle by being able to create logical sites on the system and changing flows and preferences appropriate to that line of business. The low network impact and high scalability also enables Oracle Global IT to achieve high adoption within Oracle without impacting the operational aspects of the system.

Although it is not possible to quantify the total dollar benefits from deploying Oracle Web Conferencing at an enterprise level, it is contributing to Oracle Corporation's goal of saving up to \$1 billion annually in operating costs.

Oracle had a strong motivation for adopting Web conferencing in their organization because it was their own technology. The same methods they used can be used by other organizations that would like to adopt RTC technologies like Web conferencing on an enterprise level. A recap of some of the best practices that enabled Oracle to be successful are summarized below.

- Survey the lines of business to understand all the RTC use cases in the enterprise. The requirements for real-time collaboration will vary for one LOB to another. It's imperative the Web conferencing solution provide capabilities to meet the unique needs of all the lines of business.
- The solution must be easy to use for both internal and external users. Regular users must be able to operate the solution with little to no training.
- The solution must support operational simplicity making it easy to administer and deploy from a central location.
- Make the solution as transparent to the user as possible by integrating it into critical business processes where it can streamline and add value to the process.
- Make sure the solution is compatible with all internal and external computing environments that will be encountered.
- Get champions at the highest level in the organization to personally use the solution and publicly promote and support adoption of it by others.
- Implement pilot projects first and provide strong technical support to deal with implementation challenges immediately and directly when they occur.
- Get buy-in from one or two visible groups in the organization and make them successful.
- Use internal marketing venues to introduce the technology to the rest of the enterprise and create a "buzz" around its benefits.

There are clear benefits to be gained from using RTC technologies like Web conferencing. Maximizing the opportunity can be achieved through enterprise adoption. Although there can be many challenges to achieving this goal, this white paper has attempted to outline some key guidelines for success.



*Collaborative Strategies is a San Francisco based analyst and consulting firm focused on the areas of electronic collaboration and knowledge management. Since 1989, we have worked with vendors and end users of collaborative tools and technologies. Collaborative Strategies produces industry reports and provides advisory services on a variety of technologies in the areas of electronic collaboration and knowledge management. For more information on Collaborative Strategies, please visit our Web site at [www.collaborate.com](http://www.collaborate.com) or contact us directly at 415-282-9197.*

*If you wish to learn more about Oracle Real-Time Collaboration, please visit [www.oracle.com](http://www.oracle.com) or call Oracle at 800-633-0517.*