Real Time Communication in Enterprise

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Workplace Tools Communications Difficulties
- Phone system unlinked to PC
- Not easy to share applications and data
- Lack of rich SW for meetings and conferences
- Lack of contextual routing of communications
- Lack of seamless operation between channels
- No single archive

Instant Messaging Market Development
- Although mature on the consumer side, the corporate instant messaging (IM) market is in its infancy and will experience rapid growth during the next five years. We expect more than 90% of Global 2000 knowledge workers to have IM capabilities by 2007.

Business Impact
- Next-generation collaboration services, such as IM, can accelerate business cycles by reducing coordination costs endemic to most business processes

What You Need to Know
- Gartner estimates that consumer instant messaging (IM) is in use in more than 50 percent of U.S. businesses and 30 percent of non-U.S. businesses, but that less than 1 percent of businesses are managing their IM environment
Tactical Guidelines

- Begin a structured assessment of the business and regulatory risks that the use of consumer IM poses to your enterprise
- Consider the use of an IM logging tool to assess how widely consumer IM is being used
- Decide whether to shut off consumer IM use, based on an objective risk assessment
- Assess those business functions that would most benefit from IM use
- Begin to develop baseline functional requirements for an enterprise IM system
- Develop a strategy for migrating from consumer IM to an enterprise IM system

Delivered the right way, IM adds value & reduces IT pain

Pervasiveness of IM growing at record rates

- 200M world-wide IM users - 500M by 2006 (mostly consumers)
- Enterprise IM market on pace for $1B in 4-5 years
- Enterprise IM grows from <5% to 70% over that period

Security & manageability issues top of mind for IT folks.

- 30% of information workers have at least one public IM client
- Public IM moves as clear text across the firewall
- Entry point for viruses and software conflicts
- Not integrated with your namespace or authentication

Delivered the right way, IM adds value & reduces IT pain

- Strategic response to security and manageability issues
- Standards based and extensible platform

RTC Vision

- Bring “voice”, “screen”, “computation” together to improve:
  - How calls are initiated and received
  - How visual information and data are shared during the call
  - How calls are intelligently routed based on user context and preferences
  - How communications are archived, indexed, and browsed on-demand
  - With seamless interoperation between communication channels
  - With seamless interoperation with all other productivity tools
- The goal and challenge are to make such capability pervasive

Result: Improved Productivity

The Problem with Unmanaged Enterprise IM Use

Top 4 Reasons: Why you might need IM & real-time communications within your enterprise

- If you find yourself calling a fellow employee with a query ...only to see a response 4 days later...you might need IM and rtc
- If you find yourself receiving “urgent” mails w/ fancy red exclamation points stuck on...only to find out that they were support questions for Flight Simulator...you might need IM and rtc
- If you find yourself answering phone calls that you wish had gone thru to voicemail ...you might need IM and rtc
- If you find yourself calling a fellow employee with a query that needs immediate answering...only to be sent to voicemail 75% of the time ...you might need IM and rtc

Instant Messaging Landscape

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RTC History

RTC Time Line

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**IM and RTC**

- Instant messaging is a done deal
  - Just instant messaging misses the point
- Communications systems are about connecting people
  - And then communicating
- RTC implies that breakage
  - Presence then...
  - Most often text, but often more

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**IM position in KM**

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**Enterprise IM Done Right**

- Encryption of IM traffic
- Integration with enterprise directory
  - Authenticated user search (GAL browsing)
- Logging and Archiving of IM
- Easy to use and familiar client
- Server-side contact lists
- Multi-party IM
- Extending to voice, video, data collaboration

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**Key Requirements**

- **Secure**
  - Authentication and encryption turn IM into an enterprise communication asset
- **Manageable**
  - Easy to deploy and administer using existing enterprise infrastructure assets
- **Extensible**
  - Powerful APIs for building innovative applications and customized solutions
- **Standards Based**
  - Builds on Session Initiation Protocol (SIP) enabling better device and infrastructure interoperability

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**Richer Presence And IM Scenarios**

- I know whether Steven is active on desktop, I know whether Steven is active on telephone, at a meeting, so that I can adjust what communication channel I use to contact him.
- Presence of people I am to meet today is automatically shown on Netbar; my team members have much richer access to my presence information than others.
- I can monitor the presence of my colleagues at Accenture across the company firewalls and can initiate a screen-call with one click.
- During a business plan review, both Bill and I have IM open on our Tablet PCs. We scribble IM notes back and forth during the meeting.
- At the end of our call, I send a record of our conversation and IM notes as an email to the MS sales reps for Ford.
- I will take Flight 366 to New York on 10/2. When I made reservation, flight was automatically added to my buddy list and I am notified of all delays.

Many rich scenarios are yet to be reality / pervasive.

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**Rich Presence and IM Challenges**

- Bridging islands of Instant Messaging systems
- Rich contextual presence with controlled sharing
- Lack of federated enterprise-to-enterprise IM
- Seamless integration with other communication channels
- Integration with all other i-Worker applications
- Primitive user interfaces
Tomorrow’s Opportunities

- Integration of experiences
  - IM along with Presence is the killer app!
- Definition of a standard infrastructure
  - Presence enabled Session layer
  - With SIP and SIMPLE at the core
- Creation of People-to-People web
  - People first class “citizens” on the Net
  - Reachable through multiple device

Creation of People-to-People Web

- Address users by their email name
  - Regardless of their device and location
- Proxy the user connectivity on smart devices or on a service
  - PC, Tablets, PDA, smart phone
- Seamless roaming across devices and networks
  - not through phone number mapping...
  - But thanks to presence...

IM and presence applications

Enterprise Applications

- Core value-add is adding presence to bring context to communications
- Applications are being built for both internal & external (CRM) solutions
  - Building on the web services models and delivering compelling business value
- Early adopter verticals
  - Finance
  - Telecommunications
  - Healthcare

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Microsoft RTC Roadmap

- Integrating business value
  - Multi-party IM
  - Peer-to-Peer Voice and Video conferencing
  - Peer-to-Peer data collaboration
  - One-click email generation
  - AD integration
  - Windows/MSN Messenger client
  - User-side contact list
- Server side contact list
- User search via GAL
- VoIP support
- Integrated logging/archiving
- Authentication/Encryption
- Multi-domain support
- Alerts/Notifications
- Federation support
- GPO based policy mgmt
- APIs

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Microsoft IM Offerings

There are three types of Microsoft IM:

- .NET Messenger Service
  - Free consumer service
  - MSN Messenger client downloadable from Web
  - Web-based service using MSN Passport for authentication and identity control
  - Also available for Pocket PC and Microsoft TV

- Exchange 2000 Instant Messaging Service
  - Enterprise IM service
  - Exchange specific, MSN Messenger or Windows Messenger client downloadable from Exchange site
  - Exchange 2000 Server-based service using Active Directory for authentication and identity control

- Windows .NET Server-based solution
  - Using Active Directory for authentication and identity control
  - Additional encryption, authentication and integrating archiving/logging capabilities

What is “Greenwich”?

The advantages of a complete enterprise instant messaging solution

Encryption, authentication, logging/archiving

The flexibility of an extensible platform

Standard protocols, APIs, presence integration

Windows Infrastructure (Client/Server Components)

Greenwich Features

Secure
- Cross-forest authentication with Windows Server 2003
- Transport Layer Security (TLS) connections
- Kerberos and NTLM for client security levels
- PC2PC – A/V Encryption – RTP/RTCP encryption
- Transport Layer Security (TLS) connections
- Cross-Forest authentication with Windows Server 2003
- Forest authentication with Windows Server 2003
- Access to the SIP foundation (routing engine)
- Store, Registrar, and Presence agent server
- Apps and solutions – creating a broad ecosystem
- SDK for Client and Server APIs – enabling the building of compelling client and server solutions
- Integrated archiving and logging capabilities

Manageable
- Familiar with Windows-based management tools
- WMI/MMC/MOM

Extensible
- SDK for Client and Server APIs – enabling the building of compelling client and server solutions
- Group Policy Object (GPO) for granular control of bandwidth usage, allowed session types, and auto-update
- SIP provides a bridge from IM signaling to other multimodal signaling

Standards Based
- Standard protocols, APIs, presence integration
- Encryption, authentication, logging/archiving
- Gateways

Application Opportunities

- Hosting
- Gateways
- Telephony interworking
- Conferencing

Greenwich Platform

IM Solution Completion

LOB Integration

Information Worker Integration

Windows .NET Server 2003 Integration

- Information Worker Infrastructure
  - SharePoint Team Services (STS) for integrated collaboration experiences

- IT Infrastructure
  - Higher availability and scalability
    - Security and Reliability
    - Consistent manageability & security framework
    - Trustbridge for B to B scenarios

- Application Platform
  - Built-in standards: XML, SOAP, WSDL, UDDI
  - Write less code with .NET Framework
  - Easy Web service creation with ASP.NET

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