



Communications in the Converged Enterprise

White Paper

Abstract

Unified communication today needs to be multimodal; it needs to be able to seamlessly integrate with desktop communications to provide intelligent accessibility and the user needs to have dynamic, personalised control of their accessibility and availability. What end-users really want from converged communications is flexible, easy-to-use, mobile and remote communication services that will save them time and effort in communicating with others and will save others time in contacting them. This paper looks at the requirements and solutions available to meet them.

Beyond Unified Communications

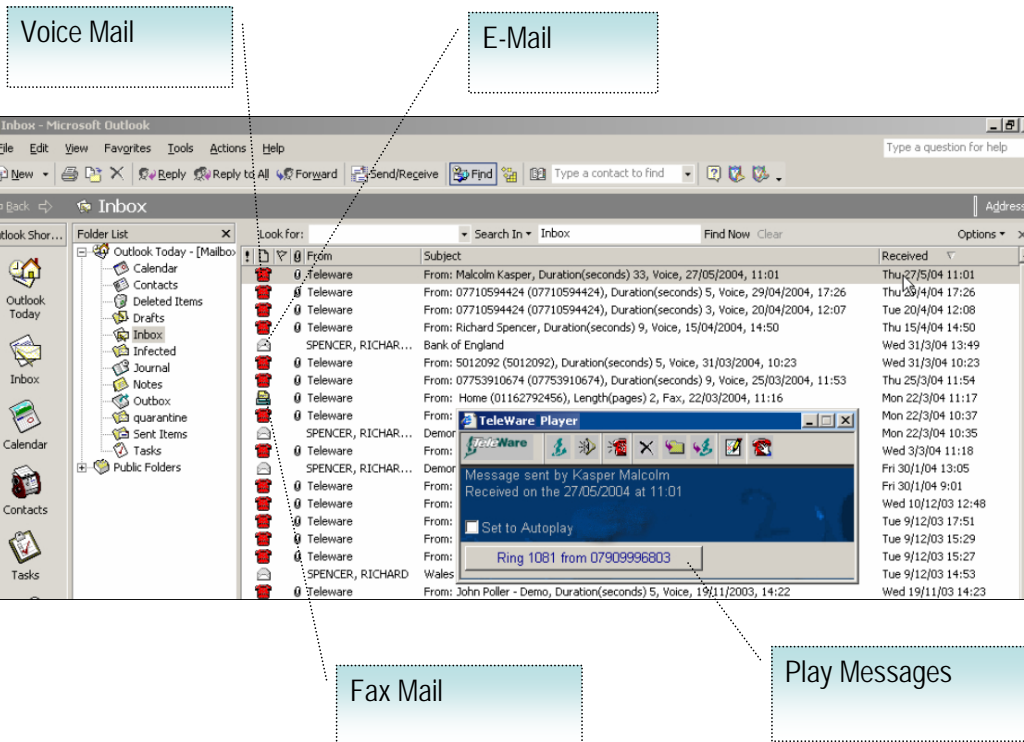
Ten years ago, unified communications at the enterprise desktop meant having a common inbox for voice, fax and e-mail. Today, this is still true, although the list of communication methods has been extended to include mobile phones, PDA devices and SMS messaging, with video capabilities included in many cases. Unfortunately, the concept behind unified communications, from an enterprise point of view, is somehow missed in this definition.

All forms of person-to-person contact and communication need to be considered in a unified solution, whether using asynchronous messaging, information exchange, voice- and videoconferencing, instant messaging are face-to-face conversations. Today, with Wi-Fi networking and the reducing costs and rapid uptake of handheld 'smart-phone' and PDA devices, everyone in an organisation needs to be more accessible and responsive, even when away from their desk and their PC.

Unified communication today needs to be multimodal, i.e., able to provide real-time connections and asynchronous messaging, with speech and visual interfaces. It needs to be able to seamlessly integrate with desktop communications to provide intelligent 'one-number' accessibility, which covers landline, mobile phone, PDA, PC, SMS and fax. The user needs to have dynamic, personalised control of their accessibility and availability.

Personal accessibility is not simply about pre-programmed, rules-based call and message screening, but about personal decision making with a high degree of flexibility for the individual. Creating a 'pull transfer,' where the user says where they are and the calls are pulled to that destination, provides this. This means that unified communications needs to allow the user to intelligently initiate and receive contacts with many types of communication devices, both wired and wireless, whether on or off-net, whether owned by the enterprise or provided through a wireless carrier and in any location worldwide.

In a normal working day, a user's communications needs will change. At their desk, they'll use a landline for telephone calls and a connection to the corporate network for their PC, laptop or PDA. When on-the-move, the user will often want to access emails from a mobile phone – using text-to-speech technology to read their messages – and reply to emails from their mobile by recording a voice message which is then sent as an email attachment. Flexible communications such as this require, not just media conversions for messaging but the ability to work from multiple devices with a common interface and common access to messages without duplication of material - plus the assurance that their communications is entirely device type and network type independent.



Communication Issues in the Enterprise

Enterprise communication issues today are primarily related to personal responsiveness and real-time accessibility and, because everyone sees things from their point of view, the greatest concern for the user is how quickly they can get a response to communications they initiate and not how quickly they can respond to incoming communications. But communications is, by definition, a two-way exchange and, from the enterprise point of view, their potential revenue and their perceived customer service levels and customer satisfaction is directly effected by how quickly their employees will respond to incoming communications.

A lost call from a customer ready to place an order that is dropped due to an extended hunt group or long announcement message can be related directly to loss of potential earnings. While there are no guarantees that an individual can always be made available when others want them, it is possible to ensure that a knowledgeable person can be contacted and, as a last resort, that the delivery of an urgent message, to the person and not just to his PC, is immediate. With unified messaging, email messages can be retrieved by phone using text-to-speech capabilities, including the option to "reply" with a voice message attachment to the originator's email in-box, or to initiate an immediate "call return."

Broadband has completed what the public Internet began – it has enabled the idea of “always on” access to information and messaging contacts. Rather than sending an asynchronous email or making a voice call, being aware of a recipient’s existing (Internet) connection the users are able to start an immediate chat or message exchange. This capability is expanding to real-time voice message exchanges with features such as Click-to-Talk. The ‘availability awareness’ that can be provided within IP Telephony, means that IT Managers will, in many cases, need to reconsider what their enterprise responsibilities are to mobile user communications. This new flexibility for merging real-time communications and messaging provides business benefits, but this convergence also means rethinking the traditional telephony mechanisms for voice communications alongside adding speech interfaces to traditional text messaging and information access.

Presence and availability are more than a desktop connectivity function. With the “always on” connectivity provided by broadband, the emphasis on availability will increase and it will have to extend to support all end user situations, both mobile and at wired desktops, as well as exploiting both speech and data based interfaces. The user information being integrated into presence and availability products will become increasingly personalised and dynamic, so it needs to be easily and fully controllable by the end users through interfaces, not simply by the enterprise system administrators.

Standards such as Session Initiation Protocol (SIP) are expected to play a key role establishing endpoint-to-endpoint device coordination for dynamically establishing person-to-person contact in a variety of environments – mobile, desktop, home, office, PDA, PC, etc. This dynamic availability will mean that availability management will be important for effective contact initiation, whether within the enterprise or outsiders, to “intelligently” enable the most effective form and method of contact for all parties. Such capabilities will prove valuable, not only for individual collaborative contacts, but also in routing customer-facing contacts to and from enterprise. If the recipient’s “availability” priorities are not pre-established for the contact initiator, the recipient needs to be prompted to accept or defer a contact, and determine a preferred mode of communication by which that recipient wishes to receive the communication. This will also enable “urgent” message by voice, SMS or data application and notification and delivery from a business or communication application.

Convergence Is About the Applications

The convergence of voice and data in our everyday business applications has been directly reflected in a convergence of enterprise data and voice communications departments and infrastructure management. Today, these roles are one because the solution is part of a unified communication application.

Convergence is not about the network, which is already becoming converged voice and data on IP-infrastructure. It’s not about the hardware at all - server platforms being installed today are “open” and commoditised. It is about the applications. For many TeleWare users, today, it is already the communication application software that is providing the single point of convergence for both end-users and their end-point devices. This convergence will be enhanced by network and telephony presence and availability across open standard IP networks but can be, and is today, already implemented in both traditional TDM, hybrid IP and Pure IP networks. The vision of “unified messaging” and “unified communications” does not have to wait for the practicalities of a converged voice/data network infrastructure to make implementation possible. The market

movement towards IP telephony and instant messaging is enhancing the solutions already available across traditional TDM voice networks, but these applications are not new. They have been available and actively in use by many of our customer for the last 10 years.

What end-users really want from converged communications is flexible, easy-to-use, mobile and remote communication services that will save them time and effort in communicating with others, and will save others time in contacting them. These applications are available today.

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