# Incorporating Parallel Lines of Communication

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Decentralisation and greater division of labour have increasingly isolated workers and processes within many organisations and increased the need for collaboration and communication between diverse teams. The profusion of communications options, though, has resulted in productivity losses. The integration of corporate communications, using second generation IP communications systems, reduces repeated, failed contact attempts and voice mail phone-tag . Only one contact attempt is needed to complete an interaction. This immeasurably increases the efficiency, and reduces the cost, of doing business.

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When we look through the prism of history at the last few years, we see a broad spectrum of new media, devices and networks that has subsequently changed technology, business and everyday life, as we know it. "The split second has been growing more and more important to us. And as human activities become more and more intermeshed and integrated, the split tenth of a second will emerge, and then a new name must be made for the split one hundredth," remarked John Steinbeck in the classic novel East of Eden.

What is perhaps even more remarkable is the speed and intensity with which these innovations have evolved. We now enjoy a remarkable array of information and communications access methods, media and devices ranging from IP telephones to PDAs. This is all good news, but in too many cases these innovations have developed parallel to one another. They function more efficiently as individual avenues of communications, rather than as a collaborative and thus complete solution.

This is having serious consequences in terms of cost and decreased productivity for enterprises at a time when businesses are already suffering from the degeneration of business processes. In a nutshell we have too many strikers when we should be developing a cohesive passing game to hit the goal more consistently.

## The Productivity Paradox

In 1987, Nobel Prize winner for Economic Science, Robert Solow made the controversial observation that You can see the computer age everywhere but in the productivity statistics . He was referring to the fact that in spite of massive investment in IT infrastructure at the time, productivity growth has been minimal. By the same token, business transaction costs have increased from 50 per cent to 65 per cent across the board over the last 30 years. During the same period, the volume of information processed by enterprises has increased 60 times. Simply put, businesses are less profitable, despite increased turnover and investment in IT for support and optimisation of business processes. How do we explain this paradox?

Businesses and their corresponding workforces have evolved from centralised, easily controlled organisations to de-centralized global organisations that demand more sophisticated management with less turnaround time. Where a letter to a supplier across town once sufficed, now an ad hoc videoconference across the world is more likely. Even within the remaining centrally organised business entities, like a company headquarters, new divisions of labour such as teleworkers, mobile sales staff, field service personnel, et cetera require non-localised resources and support. Thus, in many ways IT support has isolated and subdivided work processes and decreased collaboration by making each worker's tool set more powerful, albeit more individual. The consequence of this is more isolation, where an increased need for collaboration and communication between diverse teams should be cultivated instead. This need to support more individual process steps is decreasing productivity.

## Parallel Lines Never Intersect

In addition to these challenges, the rapid proliferation of parallel communications over the last few years has further aggravated the deficiencies in productivity described above. The profusion of communications options has resulted in unsynchronised process steps leading to

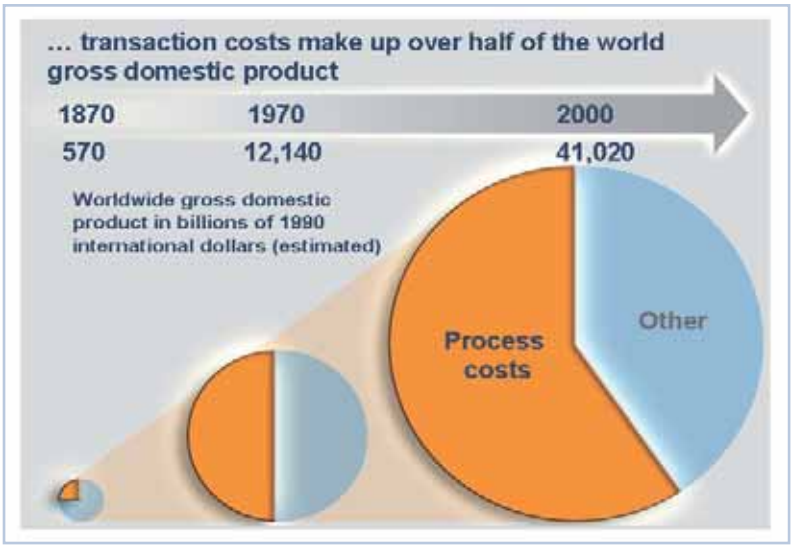


*Figure 1: Business transaction costs have increased from 50 per cent to 65 per cent across the board over the last 30 years*

substantial delays in productivity. We are spending too much time each business day to convey and obtain information from the individual procedural elements.

This is confirmed by a recent study by the market research firm, Radicati Group, which discovered that the average worker spends approximately 30 minutes a day just accessing messages through various parallel media. By the same token, considerable time is wasted every day with unsuccessful contact attempts or the procurement of information from different applications. A similar study conducted by Siemens and Accenture indicated that only one-third of surveyed companies are able to use the data and analysis functions provided by enterprise solutions for supporting daily work. Less than half of the companies exchange information with clients or suppliers using the IT systems installed for that purpose. This problem is especially acute in Europe, Asia-Pacific and the USA, where a highly diverse landscape of communications options is already built in.

Only the integration of parallel communications, both within and between separate process steps, will boost productivity. We can do this simply by better managing the powerful communications tools we have in place today. By doing so, we will be able to enjoy the best of both worlds, combining the power and versatility of the new, on-the-fly communications paradigm, with the directness and ease of use we previously enjoyed with simple telephony.

## Managed Presence

Presence enables users to see if those on a buddy list are most directly available via office phone, e-mail or a mobile device. This makes it possible to initiate phone calls or even videoconferences simply by clicking on an icon embedded in the user's graphical user interface (GUI).

As such, managed presence is the most important communications breakthrough since the mass introduction of e-mail. Why? Because it 1) puts the power of availability in the hands of the individual rather than under the control of the respective device, and thus 2) increases productivity and lowers costs by leveraging the diverse range of commonly available devices.

Caller priority profiles in the buddy list also give the user easy control over how incoming contacts are handled based on importance and urgency. Users can set up priority profiles according to who can reach them, when they can be reached and over what device. For example, calls from the users family members and or important colleague/customer are set to always ring through (via one-number service, which forwards the calls to a preferred device). Less urgent calls might ring only to the office desk phone and if unanswered, can be handled by voice mail.

Presence-management reduces repeated, failed contact attempts and voice mail phone-tag . Users need only one call attempt to complete the interaction, whether via voice in real time/message or via text, multiple attempts; parallel attempts are not needed. The impact of this on business processes and the cost of doing business are immeasurably positive.

## The Technology Behind Real-time

As such, real-time can best be described as collaboration without the limitations imposed by location and time. Phones, voice mail, e-mail, text messaging, calendaring, instant messaging and conferencing services can be combined using a portal interface that also manages online presence, communications and collaboration services. A so-called, Communications broker encapsulates real-time communications through an open development platform. The platform simplifies the embedding of advanced communication features — presence-based session management, multimedia session management, multimodal user interfaces, system management — into common business applications.

This is supported by recent innovations in Session Initiation Protocol, SIP, based real-time communications introduced by Microsoft in Windows XP and enhanced with their Real-time Communication (RTC) server. SIP smoothes the integration between enterprise IT infrastructures, IT management tools, third-party communication devices, business applications and, as well, with PBX, VoIP, PSTN and mobile networks.

In this scenario, all media and terminal equipment can exchange data via a com-

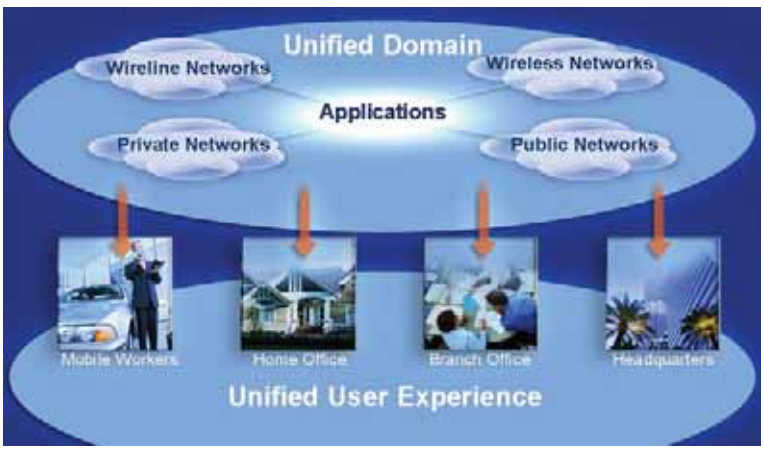


*Figure 2: New divisions of labour such as teleworkers, mobile sales staff, field service personnel require non-localised resources and support*

pany's existing commercial IT applications. All employees and partners would communicate via one universal and optimised medium — access being based on the most convenient and effective option for each individual. Such real-time co-ordination is the first step in reducing delays between process steps and can leverage the dormant productivity potential of any enterprise. An increase in productivity ranging from 30-50 per cent was recently documented for technical service, sales and purchasing/receiving — critical components of any business model.

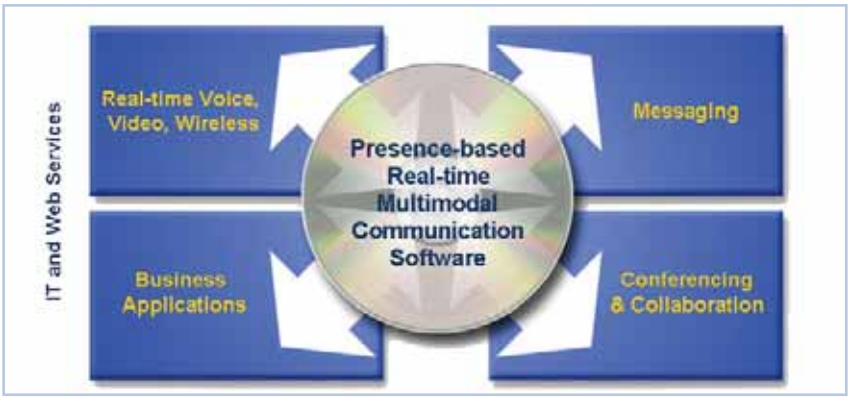


*Figure 3: A so-called, 'Communications broker' encapsulates real-time communications through an open development platform*

## IP Convergence Was the First Step

First generation IP convergence (1gIP) laid the groundwork for the intelligent integration of real-time communications in business processes. This first step in network convergence combined parallel voice and data communication networks. Enterprise, operating costs were reduced considerably as a result of the centralised management of IP and improved bandwidth usage. This provided immediate access from anywhere in the enterprise network to a host of easily managed new services and applications including global WANs. Converged real-time IP platforms are compatible with all common analogue or packet-switching network technologies found in today's market. As such they offer companies the advantages of IP systems without having to sacrifice the ease-of-use of familiar communication applications. Past investments are protected, as parts of the legacy communications systems can be re-used and terminal equipment left in place as required. The convergence process creates a network that supports all media and real-time systems, which handles traditional computer server tasks and media types more efficiently, and most importantly, where workplace resources are more efficiently utilised.

## Step Two: Integrating Applications

Second generation IP convergence (2gIP) encompasses the integration of real-time communication into data centralised business processes, hence the business value pictured in the graph. It also fosters the integration of applications and helps individual users be more efficient team members. 2gIP's primary applications, such as Unified Messaging, Managed Presence and Collaboration not only provide seamless integration with existing systems, but vastly enhance their use as business tools. In essence, 2gIP brings about integration with business applications and processes, connects the virtual enterprise and adds value all along the chain. These applications fully enable the mobile worker and provide higher value connectivity for inter-dependent parts of a company large or small.

Furthermore, given the 2gIP strategy employed, enterprises are not required to install, use or maintain different networks, servers or a mixture of software at the user interfaces. Instead, there is only one network, standard servers and integrated software supporting all of the business and communication processes via a single user interface. That is to say the network offers access to all services and applications from any location over any device.

All in all, 2gIP addresses key business needs and challenges outlined above. These applications fully enable the mobile worker and business partner and provide higher value connectivity for all the interdependent parts of a business.

## The Bottom Line

The bottom line comprises two major advantages. First, the integrated communications portal reduces transaction costs by removing unproductive steps from everyday business processes. By seeing what people are available and how they can be reached right now , problems can be solved, questions can be answered and processes completed without delay or wasted steps. This can positively impact collaboration, task and project completion times, decision-making processes and customer responsiveness. The portal also complements familiar communications and Internet resources already in place while providing unprecedented openness and adaptability for future innovation — the lifeblood of the economy.

Second, 2gIP's cost savings are unquestionable. In one real life scenario featuring a large enterprise with over 200,000 users, the economics are proved. With 2gIP, all of the enterprise communications are handled by three data centres on three continents, that eliminated the need for multiple IP PBXs at hundreds of locations around the world — a huge departure from the TDM world. To duplicate the resilience and capabilities of a hosted softswitch, LAN telephony, for example, would require many, many more servers, routers, power sources, etc. There are returns even for small implementations, but the advantages are more striking still at medium or large installations.

We know from our customers that communications expenses are escalating in three key areas: voice conferencing, web collaboration and mobile communications. Without 2gIP applications, voice, web and cellular costs associated with conferencing can run at 1.9 million dollars for a 1,000 user enterprise over the course of a year. But with 2gIP applications like those described above, cost goes down to about $900,000 for savings of almost $1 million in only one year. The raw cost savings, when combined with the productivity gains and efficiencies outlined in this article make presence-enabled, second-generation solutions a revolutionary new approach to communications.

Hence the value proposition is straightforward — improved communications, co-ordination and collaboration that significantly improve business processes, productivity, efficiency, competitive differentiation and, the bottom line.

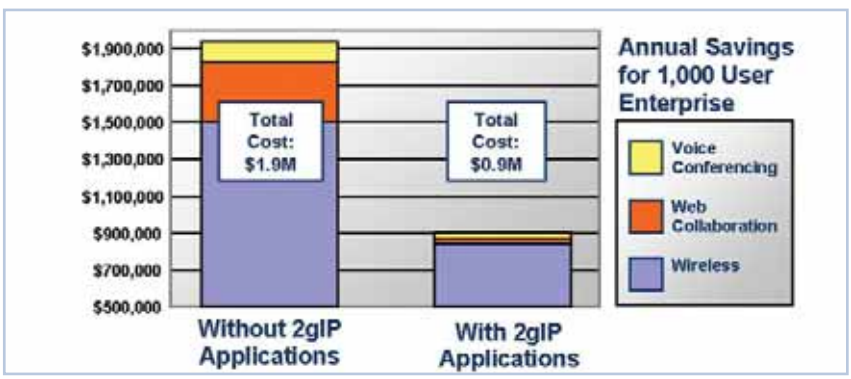


*Figure 4: Business value of 2GIP*