



# Maturing VoIP is finding a voice in the enterprise

Convergence is looking set to fulfil its early promise, writes Cath Everett

VOICE-OVER IP (VoIP) is generating a level of interest in the boardroom that the traditional voice and data networks have never achieved.

The big promise is huge reductions in phone call costs, and access to new, productivity-enhancing applications – many of which have yet to be conceived – that will revolutionise the business.

But the market remains immature, the technology still isn't as good as more tried and tested equipment, and, as ever, there's a danger of simply jumping on the bandwagon out of a fear of being left behind.

So who is deploying VoIP and why? And what are its pitfalls?

According to Zeus Kerravala, vice president of enterprise infrastructure at analyst Yankee Group, the market is still in its infancy, and although early adopters have been purchasing the technology for the last five years or so, the market has been slow to mature.

But concerns about security, lack of resilience and quality of service, particularly relating to voice, have largely been overcome, which means that Kerravala expects the sector to double in value over the next five years to \$4bn (£2.1bn).

In terms of adoption rates, this equates to between 10 and 20 per cent of all new private telephone exchange (PBX) extensions currently sold into organisations being IP-based and, in the small to medium business sector, between five and 10 per cent, says Peter Hall, research director at Ovum.

Among large organisations this figure is likely to grow to 50 per cent over the next three years, while VoIP will undoubtedly become almost



Value of the VoIP sector is expected to double in the next five years

universal over the next 10 years, not least because telcos plan ultimately to use the technology as a replacement for their existing core network infrastructure.

One of the key drivers of this adoption over the next couple of years is that many existing PBXs are coming to the end of their life or depreciation cycle, their last replacement being prior to 2000 to tackle the Millennium Bug.

But another factor relates to one-off events such as mergers

## Voice-over-IP will undoubtedly become almost universal over the next 10 years

and acquisitions or office relocation. In these cases, organisations review their requirements and introduce a converged network either in anticipation of future needs or for the potential cost savings.

These savings can come from lower management overheads, through only having to look after

one network and vendor rather than two, and from being able to use the web interface provided by VoIP applications to move telephone extensions.

This drastically cuts the amount of time and resources assigned to the task, especially in large organisations where staff movement is often frequent, says Hall.

But other cost savings can be derived from the reduced call fees that result from not having to use expensive public phone networks for internal communications. This, however, tends only to be true of firms with multiple sites that generate a lot of inter-branch call traffic.

As a result, although many VoIP implementations are currently limited to individual internal departments or branch offices rather than being enterprise-wide, sectors most likely to benefit from lower call costs in the future are those with distributed business models, such as retail, manufacturing, local government and professional services.

Other, softer benefits include possible productivity gains from being able to reroute →



→ calls and switch user profiles in software rather than having to reprogram the PBX, says Hall. This means remote or mobile workers can have their calls – or, in the case of unified messaging, their email, instant messaging and their videoconferencing – follow them wherever they go.

But implementing VoIP can be challenging, not least because it requires a mix of telephony and IT skills that many organisations simply lack.

'Customers tend to regard VoIP as a replacement phone system, and deploy the same skills, methodology and approach,' says Dave Tansley, technology and telecoms partner at Deloitte. 'But viewing it as an IT project is absolutely essential, because it's a distributed thin-client application and the skills required are quite esoteric.'

So it is crucial to have the right processes in place to undertake software distribution, configuration management and upgrades, but also to cost the project properly, as it is likely to

be as complex as any other applications-related initiative. As a result, Tansley warns: 'If you converge your voice and data network, you'll need to converge the organisations that deal with these two areas.'

But another issue is VoIP's upfront capital cost. While regular phones can cost as little as £40-£50 each, says Hall, IP handsets cost between £100 and £150, and their added complexity is likely to require staff training.

And, with interoperability between different products and systems still poor, it's advisable to buy a complete package from a single provider rather than from multiple manufacturers, despite this reducing negotiating power.

Many organisations also find they need to upgrade (or, at the very least, reconfigure) their network infrastructure to provide enough bandwidth to cope with voice calls.

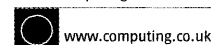
As VoIP significantly increases companies' reliance on their data network, the issue of redundancy must also be considered, says

Tansley. When infrastructure was available separately for both voice and data, if one failed, it was still possible to communicate using the other. But with IP telephony, some form of wireless communication or wider deployment of mobile phones may be necessary.

The challenge of security, with VoIP handsets just as vulnerable as data-based computers to threats such as viruses, eavesdropping and denial-of-service attacks, can be met by deploying systems over corporate intranets already protected by a firewall.

Despite all the considerations, Hall concludes: 'There's been a marked shift towards adoption of IP telephony in the enterprise, largely based on business case and return on investment, and the market is only set to grow over the next few years.'

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## Case study ○ Calumet Photographic

### Snapshot of a successful VoIP deployment

'OUR voice-over-IP (VoIP) network will improve communications internally, which will, in turn, hopefully improve customer service,' says Janesh Patel, IT manager at Calumet Photographic. 'This should also help us grow the business.'

Calumet, which supplies photographic equipment and accessories to professional photographers, is based in Chicago, although since its merger with UK retail chain Keith, Johnson and Pelling last year, its UK headquarters have been located in Milton Keynes.

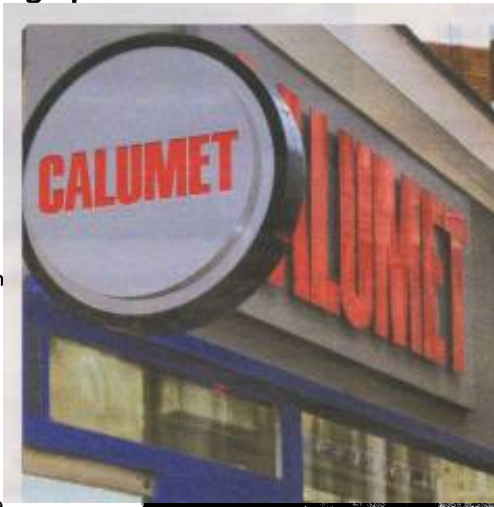
The organisation has 13 retail outlets across the country and employs 165 staff.

It was the merger that caused Calumet to re-evaluate its network. While its communications needed upgrading anyway, the company also wanted to standardise its infrastructure and hook up all of its different locations. It was also keen to be able to route customer calls seamlessly around the business, to boost the speed and efficiency of call handling and to make it appear that clients were being dealt with locally.

'We have an 18-person call centre in London that handles technical support and sales, but a lot of professional photographers like a hands-on service and prefer to come into our retail locations,' says Patel.

'As a result, we thought it was important to re-route calls into a single site when retail staff were busy, so that they wouldn't have to spend time on the phone when they should be dealing with the customer in front of them.'

Calumet opted for a managed service provided by Switch Communications using InPurple technology supplied by its business unit, SwitchIP. The firm has



already hooked up headquarters to its largest retail outlet in Euston, and has linked its Birmingham store to the call centre.

Calumet expects full implementation across all of its branches to be complete by next summer.

'Being able to transfer calls internally without going over the public network has already cut the costs of calls,' says Patel. 'Diverting a BT call costs between six and seven pence, but with VoIP it's nothing.'

These savings, together with a plan to replace the company's existing 0800 freephone number with a chargeable 0870 number next year, should offset the high upfront costs of introducing the new infrastructure, he believes, and should bring a return on investment within two years.

But, as Patel concludes: 'You really need to plan everything as far as possible in advance. If the network isn't up to scratch you'll have nothing but problems, and if it's a bandwidth issue you'll even lose calls, so the right infrastructure really has to be in place.'