

The future of Voice

Communication is paramount for any business. Despite the recent dominance of email and the internet, the telephone is undeniably the heart of effective business communications.

But talk costs money and for most businesses, particularly in the SME and SOHO markets, telephony fills up a substantial part of the balance sheet. This simply doesn't need to be the case any longer. A new technology has emerged, allowing businesses to dramatically slash the cost of telecommunications: Voice over IP.

Voice over IP, commonly known as VoIP, has been creating a buzz in the IT industry for some time. Large corporate networks have already been exploiting the benefits of VoIP for many years: sending telephone traffic over their large internet pipes which cuts call costs, allows free international calls between offices and affordable outsourcing of call-centres to foreign countries. Unfortunately, because of the need for fast reliable internet connectivity, and the previous costs of implementation, VoIP has so far failed to break beyond big business, with smaller companies still paying out for ISDN and PBX systems.

The broadband internet boom, however, has made VoIP a feasible option for all and will inevitably change the way we make calls. With more businesses using leased lines and SDSL to connect to the internet the opportunities for VoIP have never been better. And now, with regulatory changes in the telecom industry, increases in affordable hardware and low cost broadband, the move to VoIP is a simple and affordable process.

Principle Features

VoIP brings together PBX functionality without requiring large hardware investment whilst significantly cutting call costs. Substantial savings are achieved because calls do not start on the PSTN phone network, but instead over the internet in the same manner as emails and web traffic. There is no charge between VoIP phones across the world and when calling landlines you only pay for the termination onto the PSTN network.

Whilst there are big savings to be had on outgoing calls, telephone conversations are a two way affair. Until recently one major drawback with VoIP was the inability to have inbound landline numbers. However, Ofcom have recently allowed telecom providers to offer geographic numbers on VoIP products. Businesses can now keep their local area codes and even route new area codes to the same office. For example, a site in Manchester can have a London area code, allowing sales and support teams to create new local identities. This principle can also be applied to international phone numbers, with a UK office receiving New York and Sydney numbers, creating global presence without extra cost.

Finally, advances in compression technology mean that VoIP can use less network bandwidth without reducing quality. For example, with normal network overheads, a 2Mb/s symmetric internet connection can support over 50 simultaneous calls, nearly double the capacity of a standard ISDN30 line.

The advantages of VoIP have made it a hot topic among company directors and IT managers. Indeed, VoIP offers so many benefits for business that you would be forgiven for wondering why we are not all already using it. When you get

beyond the basic principles, however, things are less simple, and the route to successful implementation can be something of a minefield.

Getting the Most out of VoIP

VoIP is a relatively new technology so it lacks the uniform standards and regulations that businesses would like. The marketplace isn't easy to navigate. There are a number of new companies offering a wide range of different products. It isn't always clear what factors a business should be considering and there is no real way of knowing what you will get until after you've bought it.

IT managers are left in a situation where the only products that are easy to evaluate are the free services offered by companies such as Skype. Whilst these are great for demonstrating the principle benefits of VoIP, they are designed for home users and fail to deliver business grade call quality, tariffs, functionality, hardware, reliability and customer support. They are driving a revolution and raising awareness, but they do not give a true demonstration of the power of VoIP.

With so many new products on the market, upgrading your business to VoIP requires shrewd consideration. The solution you decide upon should have been thoroughly tested and offer 24 hour support, because no business can tolerate any failure in their telecom solution.

There are three key areas to keep in mind when moving to VoIP to ensure your business gets all of the benefits and avoids the pitfalls: the internet connection, the VoIP equipment and the call routing.

Internet Connection

Is your existing internet connectivity sufficient and reliable? If it was originally implemented simply to cope with email and web-browsing then it will almost certainly need to be upgraded for voice traffic. The three crucial aspects to be aware of are – upload bandwidth, contention ratio and QoS.

Upload bandwidth. If you need to support more than half a dozen calls at once then ADSL simply will not cope. Consider SDSL and leased lines which will deliver better performance, lower latency and more bandwidth. There are plenty of good deals available now.

Contention ratio - the number of other businesses that share your bandwidth. Typically this is 20:1 for business ADSL, and 10:1 for SDSL. To be able to rely on your bandwidth you will probably need to look at reducing this to 5:1 or preferably 1:1. This will also help improve reliability as products with lower contention ratios tend to have better service level agreements and support.

QoS - Quality of Service. Prioritises different types of network traffic, so that your voice calls are not affected by Dave in Sales downloading the latest Star Wars trailer! Invest in a decent router which has QoS functionality, otherwise you'll find call quality will severely suffer.

VoIP Equipment

Make sure that the product offers full PBX functionality and that it is at least as good as your current solution. Know how easy it is to setup and whether or not you will need to contract in an engineer. If you're buying VoIP phones from your provider, find out if they will supply them pre-configured and if they offer remote management.

Some packages allow you to buy a VoIP server to keep in-house, offering greater functionality and more efficient call routing. You should consider the costs and benefits carefully to decide if an in-house solution is best or if it would be better to allow the provider to maintain equipment offsite, and to simply rent the solution for a fixed fee per phone. Both have benefits but suit different companies in different ways.

If there is management software make sure it has been properly developed and is easy to use – the simplest way to find out will be to test it, so don't be afraid to ask for a trial.

Ensure that the solution is fully supported. This way if you end up needing more help than you anticipated you know you will be able to talk to engineers and get problems resolved quickly.

Finally, with one of the major benefits of VoIP being free calls between users, find out what is offered for your remote and mobile workers as part of the complete solution.

Call Routing

The most important factor is call quality and it varies considerably between different providers. Realistically, you will only know for certain if calls are as clear as you expect once you have tried the service. Many VoIP providers offer starter packs or single user solutions, so it is worth fully testing a solution on a small scale before implementing it. Another concern is with geographic numbers. You need to make sure that they have been properly provisioned so that your business legally 'owns' the numbers provided through Ofcom.

Is it time?

Should your business make the move to VoIP now or wait a few years? The answer is definitely now. If you are prepared to spend a little time on market research and finding the right solution for your business then the benefits and cost savings to be had are immense. Your businesses can call countries around the world for less than a normal local call. National calls and those to mobiles are substantially reduced, and to other VoIP users are free!

VoIP is happening. The question is how long can your business survive without it?

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