

**ComputerWeekly.com**

# **Guide to buying Phone Systems**



**How to choose the right Phone  
System for your business**

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## INTRODUCTION

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Buying the correct business telephone system is an important decision, as that system will be an integral part of your business, helping you to grow and develop closer links with your clients. The wrong system, however, will at best be too expensive and in the worst case can cripple your business by stifling your means of communication and alienating your clients. Choosing the right phone system then, will be one of the most important decisions you make for your business. This guide aims to give an overview of the main systems and features currently available on the market, so as to help you in making that decision the right one.

### Assessing your needs

Understanding your needs is the most important part of choosing the right telephone system, as the closer your chosen telephone system comes to meeting your specific requirements, the greater the value it will add to your business. Consider these points before you choose:

- What call volume will your telephone system have to deal with now, and is that volume likely to grow?
- Do you have any current equipment or Customer Relationship Management software that needs to be compatible with the new telephone system?
- What special functions would you like your telephone system to perform?

Especially with traditional telephone systems, it is important to estimate how many lines or trunks and how many extensions you need, so that the phone system you eventually purchase is suited to the volume of calls you are likely to make. Trunks are outside lines and extensions are the individual handsets, modems or fax machines. As such, the number of extensions will always be greater

than the number of trunks, and as calls are made the telephone system you have in place will allocate an outside line for that call. If the ratio of extensions to trunks is too high, you are likely to encounter problems as callers have to wait for a free outside line, and clients calling in will find your phones to be constantly busy.

Likewise, if the ratio is too low your system will have vast amounts of costly spare capacity not being utilised. However, bear in mind that some spare capacity is necessary as your requirements are likely to grow with your business and therefore it is essential that the system you implement is capable of dealing with your future demands.

You may not know the answer to all these questions yet, but hopefully by the end of this guide you will know a little more about what's on the market and what would be right for you.

## KEY TERMS

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The world of business phone systems can be an endlessly confusing jumble of jargon and abbreviations. So if like most people, you don't know your VoIP from your PBX then the following list of terms may be helpful.

### KSU

The abbreviation KSU stands for key system unit. KSU type phone systems have a central hub (the key system unit itself) which allows some features that normal phones cannot offer, such as internal calling. This type of telephone system works most efficiently in setups with up to 50 users.

### KSU-less

As the name suggests, this is a system that offers similar features to a full KSU system, without a lot of the expensive technology. However although KSU-less systems are very cheap and simple to set up, they are really only suited to small systems with less than 10 users.

### PBX

PBX stands for private branch exchange, a term that comes from the era of the centralised switchboard operator. Although what it initially described has now become obsolete, the term still refers to a telephone system which automatically selects an available outside line for the user, unlike KSU type systems, where the user manually selects the line for an outgoing call.

Traditionally, PBXs have been regarded as very expensive and only suitable for large companies, capable of significant investment in their telephone system. Advances in technology have, however, now made possible virtual PBXs, most commonly using broadband internet to carry the data. This development has reduced costs and brought the advantages of this type of telephone system to small and medium sized businesses.

## **VoIP or IP**

VoIP stands for voice over internet protocol and the latter term IP or IP telephony just stands for internet protocol. This means that the call data is carried over the internet rather than over traditional telephone lines, as discussed above. This system has the benefit of reducing the cost of phone use, as data and voice calls can be carried by the same network. In some cases where networks have spare capacity, the additional costs associated with IP telephone systems can be very low indeed. IP telephone systems are now by far the most popular option for majority of businesses, as the adaptability of the systems, their relatively low running costs and their ability to integrate easily with client management software are great benefits over traditional phone systems.

## **IVR**

IVR stands for interactive voice response. This is the technology that allows clients to interact with your telephone system by entering information vocally. This technology is becoming ever more popular as it can vastly reduce the cost of service or sale requests. It can also be used to help guide clients to the most suitable department or operator.

## VOIP SYSTEMS

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VoIP or Voice over Internet Protocol is simply the packaging and transferring of voice data over the internet, so the data from your telephone conversations needn't be carried by traditional telephone networks. Understandably this has a number of benefits for the consumer but most significantly, VoIP is now lowering the cost of telephone calls.

VoIP is not a particularly new idea; in fact, the ability to transfer voice data over the internet has been around since the early 1970's. Its commercial applications however, have only become widely available in conjunction with cheap broadband. The greater data transfer speeds have made VoIP more reliable and the low cost of broadband has made it economically sensible.

### The basics

As VoIP carries data over broadband rather than traditional telephone lines you will, of course, need to have a broadband connection and a telephone capable of functioning on a VoIP system. These are the standard telephone options:

- A VoIP telephone is perhaps the most straight forward option. This is a telephone which looks like any other but is specifically designed to be used with VoIP, as it has an Ethernet connection to plug directly into your computer network. Furthermore, VoIP phones normally give you the best call quality, as they are specifically designed for the purpose.
- A VoIP adaptor will allow you to use your traditional touch-tone phone on a VoIP network. Usually these plug in to your phone at one end and then your network at the other.

- A software phone is a telephony program (like Skype) that is downloaded to your computer. Although these can be invaluable whilst on the move, they generally give a lower call quality than VoIP phones or VoIP adapters. This is because they rely on your computer's signal processing ability, which is usually worse at dealing with voice data than the dedicated processors built into VoIP telephones.

Once you have a broadband connection and phone, you simply need to arrange an account with one of the many VoIP providers and you are ready to start making calls. There is wide a range of private and business telephone suppliers who can offer a VoIP account, but often the cheapest option is to purchase a combined VoIP and broadband internet package.

## **Benefits of VoIP**

By sending data over the internet, VoIP providers can offer a whole range of benefits over and above traditional telephone systems, especially to businesses or high volume customers. Here are a few of the most important:

### **Cost**

Due to the nature of the internet, there's no such thing as a long-distance email. The development of VoIP may one day render the idea of a long-distance call just as ridiculous. As VoIP sends its data over the internet it has more similarities with email than it does with traditional telephony. Helped by cheap infrastructure and running costs, VoIP can cut the real price of phone calls to a fraction of traditional telephone rates. It is not unusual, for instance, to pay a fixed line rental and then to receive free calls to landlines anywhere in the world. Furthermore, features that incur additional costs with normal telephone suppliers, such as conference calling, video conferencing and itemised billing are usually much cheaper on VoIP systems.

## Multiple lines

With traditional telephone networks, the number of external calls you can make at any given time is determined by the number of physical lines or trunks your telephone network has, and as such, adding capacity usually means having more lines put in. With a VoIP system, however, your call capacity is determined by your internet bandwidth and you can therefore add lines with the minimum of expense – provided you have enough spare capacity to accommodate the extra data.

## Remote working

Working remotely from home or in multiple locations is becoming ever more popular and VoIP is a far more accommodating telephone system in these situations. All that is really needs to make VoIP calls is a broadband connection, so once connected to the internet (wherever you are) you can log on to a VoIP service provider and start making calls. Significantly though, you can retain the same “office” telephone number regardless of your location, so your actual location is indistinguishable to your client; alternatively, you can have a number of different “local” telephone numbers, all routed to one office.

## Reliability

The biggest initial barrier to VoIP was its reliability. As VoIP transfers data via the internet, it goes without saying that if you experience problems with your internet connection, you will also have trouble with your phone. Traditional phone lines are powered by the network provider and in the event of a power failure most lines will continue to work using the supplier’s back-up generators or batteries. However, this is not the case with broadband connections, as your network of routers and adapters will be dependent on your own power supply and will cease to function during a power-cut.

In most countries, power supplies are reliable enough for this to not be of any great concern. However, one must also consider the

reliability of your broadband connection. Although quality is always improving, some broadband connections can have intermittent reliability; especially when networks are congested. VoIP sends information in ‘packets’, and if these are lost or delayed, the call quality can drop and the caller will experience either jittery sound or periods of lost sound. The data is also moved comparatively slowly compared to traditional telephone systems and this sometimes results in frustratingly time-delayed conversations.

Reliability is perhaps most important to business customers, as many industries simply cannot function without a working telephone network. It’s certainly worth noting then, that VoIP is now the technology of choice in most call centre environments, which suggests that the industry has matured enough to allay the reliability fears of big business. With this endorsement, the future is undoubtedly bright for VoIP. Its success will continue to attract greater investment and competition will therefore continue to improve reliability and lower costs, all of which is great news for the consumer.

## OTHER PHONE SYSTEM FEATURES

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### Auto attendant

We've all been frustrated by the automated voice on the end of a customer service line, but when used correctly they can be extremely helpful for pointing callers in the right direction during heavy call volumes. They are part of KSU and PBX systems, and so generally not worth investing in for small offices.

### Voicemail

In the same way as a mobile phone, your office phone can record and manage messages left on your phone. This is useful if your phone lines are busy, you are out of the office or simply need to focus without the distraction of answering calls.

### Phone displays

Higher spec phones (especially IP phones) feature an LCD screen to display information about the caller and the call. They also allow you to scroll through directories of contacts and fellow employees to quickly find you want to talk to.

### Speaker phones

Most phones now come with speaker phones built in. Some also offer the option of a half-duplex speaker phone for use in conference calls – this system allows only one speaker to be heard at any given time, but many people to hear the conversation through the speaker.

### CTI

CTI – Computer Telephony Integration – is generally used in call centres and virtual offices, to enable the operator to view relevant information about the caller on their computer screen (e.g. customer records). CTI is a separate piece of software from the main system.

If you don't buy it with your system, but feel you may need it in future, make sure that the telephones you invest in are compatible with such software.

## **ACD**

Automatic Call Distribution is another piece of software used in large offices and call centres. From the KSU it monitors the number of calls coming in, who is answering them, and how long it takes them to answer. Using this information, the incoming calls can be distributed more evenly and increase your efficiency as well as monitoring the performance of your staff.

## **Call forwarding**

This allows you to redirect your office phone to another phone or a mobile device, so if anybody telephones you while you are away from your desk, the call is automatically forwarded to you wherever you are.

## PRICING GUIDE

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The total price of a phone system is difficult to put a figure on, not only because of the number of variables but also because more expensive systems may save you money in the long term (and vice versa).

Remember when buying your office phone system that you're not just buying a set of handsets. The system as a whole also includes the central unit and software that monitors all of your calls, network installation, support and training of your staff on the new system.

A KSU-less system will obviously be comparatively cheap because you are not paying for that central unit. Prices of handsets vary widely, with the cheapest being about £50, but expect to pay about £90 for a good office phone.

KSU and PBX systems are more expensive. The central hub of the system costs between £500 and £1,000. IP handsets (for VoIP systems) can cost as little as £70, but you should really look to spend over £100 per phone.

Broadly speaking, the total cost of phone system installation for a small to medium sized business, with between 10 and 20 phones, will cost between £1,000 and £5,000. As a guideline, think of the total cost as about £200 per user.

For larger companies and corporations, the system will have a wider range of sophisticated features (such as computer telephony integration – CTI) and hence require a more expensive central unit, a greater amount of maintenance and more training. For this kind of technology a more accurate guideline is about £500 per user.

## CHOOSING A SUPPLIER

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Since the market was liberalised the number of UK business telephone suppliers has grown dramatically, meaning that the number of options can seem daunting. However, try to bear in mind these points when considering a potential supplier:

- Will the supplier provide a complete package including cabling and hardware?
- What are the support and maintenance costs?
- Will they provide training for your new system, and if so, at what cost?
- Is it a well established company and if not, what are their credentials?

After deciding what you think the right telephone system is for your business, don't be afraid to engage with a number of suppliers. It is not uncommon for companies to provide demonstrations of their phone systems – it is usual to give the system a test drive before you buy.

Most importantly, talk to the dealer about maintenance. A faulty telephone system can cripple your business, so it's important to know that there will be reliable support on hand. A sensible estimate for a maintenance call out is about 4-6 hours. Find out who their past clients have been and ask for testimonials. And if you think you will be upgrading your system in the future, make sure you are not panned into an agreement that doesn't allow you to develop.