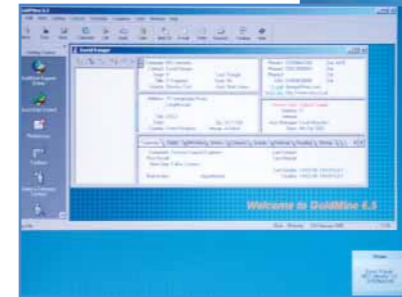




Aspire IP – a total voice, IP Telephony and messaging solution



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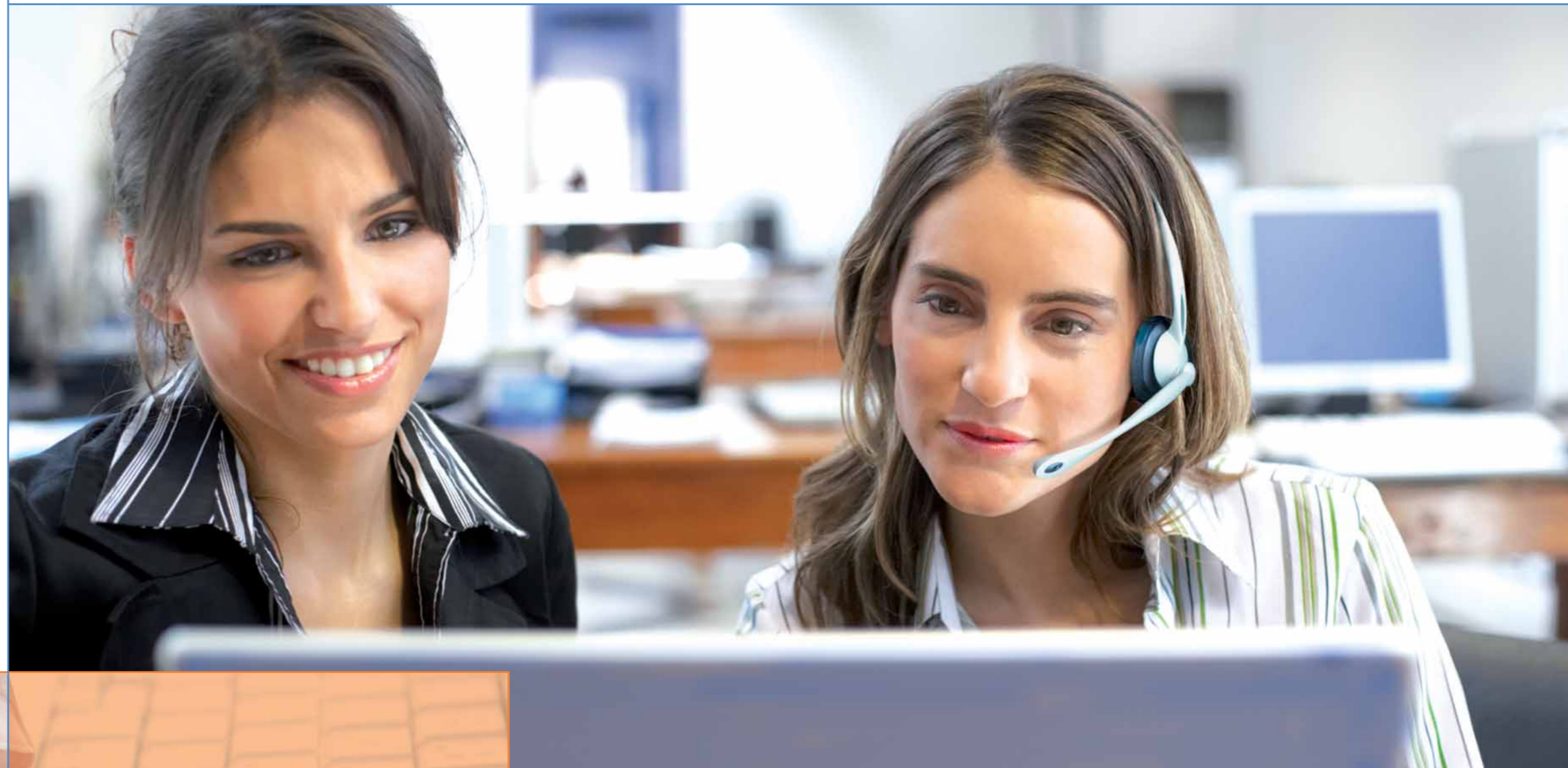
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## Technology with a human touch

James Thurber, the American humorist, wrote about his grandmother's fear of electricity. She thought that dangerous rays escaped from empty light sockets to pose a serious health hazard.



It's only natural to be apprehensive about the new and unfamiliar. Take Internet Protocol (IP) Telephony, for example.

Installing a telephone system that converges voice and data functions may well seem daunting. Isn't linking sites in Local or Wide Area Networks expensive and liable to go wrong? Managing, analysing and monitoring

your call traffic to increase efficiency and improve productivity must surely present a steep learning curve. And getting free phone calls over the Internet – are you kidding?

Well, no, we're not. NEC is one of the world's great telecommunications companies. Our R&D budget exceeds £1 billion a year, we register over 60,000 new patents and our market

share in business telephone systems makes us a leading global supplier.

Our Aspire system is, we believe, the most reliable, cost-effective and feature-rich IP telephone system on the market. It has delivered its promises to thousands of businesses, with anything from start-up companies to worldwide multi-site companies.

*“...the most reliable, cost-effective and feature-rich IP telephone system on the market.”*

A trusted network of specialist dealers project manage, install and maintain the Aspire to the highest standards and help you to deploy it to the maximum benefit of your business.

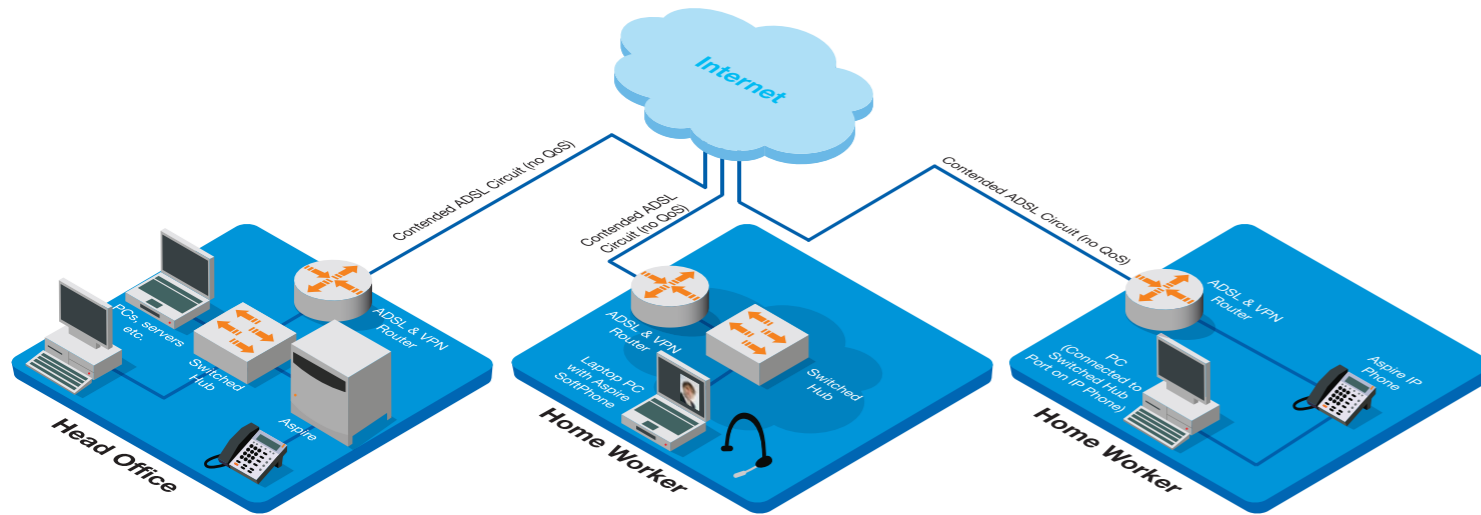
It's easy to find out more. When you do, we think you'll be impressed. Once your Aspire is installed, we are certain that you will be even more impressed.

**Quite simply, the Aspire delivers at the flick of a switch. Which takes us back to Thurber's grandmother – if only she had taken advice from people like us.**

# IP Telephony

IP Telephony can be introduced into a company's infrastructure in a number of ways. These, to some extent, are dependent on what the IPT objectives are. Another consideration is how IPT will be used within

the organisation. These factors influence both the benefits and the cost of implementation. Whilst 100% IP working is an option, the examples below relate the suggested options to the likely cost benefits.



A typical diagram showing broadband connectivity

## Infrastructure savings – basic IP Telephony

If the objective is to reduce infrastructure costs by using common cabling for data and voice, the focus needs to be on introducing IP Extensions to replace legacy phones. This immediately creates cabling cost benefits and management benefits such as moves and changes, again creating immediate cost savings by not having to rewire or reconfigure the telephone system each time you move or recruit a new member of staff.

These savings can be achieved by using IPT on the phone side of the system and still retaining your existing ISDN or analogue exchange lines for off-site calls. This scenario still

allows your business to deploy phone extensions off-site, thereby supporting the growing number of remote and teleworkers. Using an Internet connection, remote workers have access to all the traditional telephony and data features, just as if they were located in the main office.

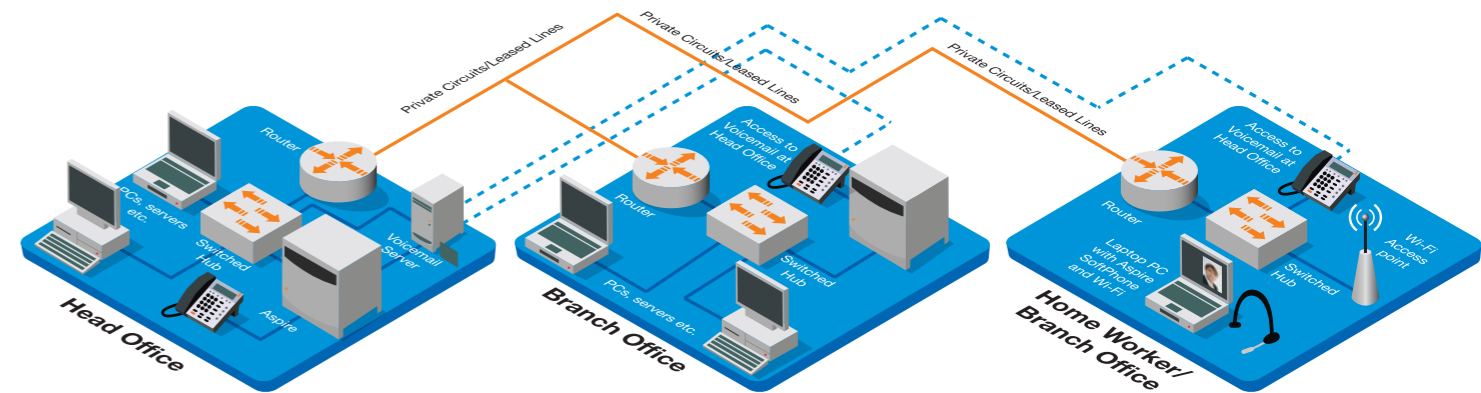
Broadband can be implemented to replace ISDN lines, but for a single-site business there may be no identifiable savings in call charges and at this point in time any calls that may be routed via the Internet may, at times, be of unacceptable voice quality, even with Quality of Service (QoS) Routers.

## Multi-site network benefits – the normal WAN option

Implementing IPT within a multi-site operation maximises both the infrastructure and cost savings from routing calls over an IP network. Using data network services from service providers such as BT, quality of service can be maximised, whilst ensuring intra-site calls are free. This requires the installation of specialist circuits from BT – Kilostream, Megastream, LES (LAN extension service) and EPS-8/9, which is particularly cost-effective, are just a number of the available options. Both voice and data will use these same circuits, so maximising the use of these private circuits.

This type of infrastructure uses any combination of IP or legacy phones and intra-site calls are routed free of charge with guaranteed quality of service. It also allows the AspireNET inter-site networking protocol to be used, providing centralised services such as a unified messaging, voicemail, feature transparency and centralised operators. Inter-site calls are no different from calls made from desk to desk.

For PSTN or off-net calls, Internet connection or ISDN lines can be used for exchange line connection to the PSTN carrier and other users. Again, no identifiable cost benefits are realised at this point in time. Any call cost savings will be offset by possible call quality issues.

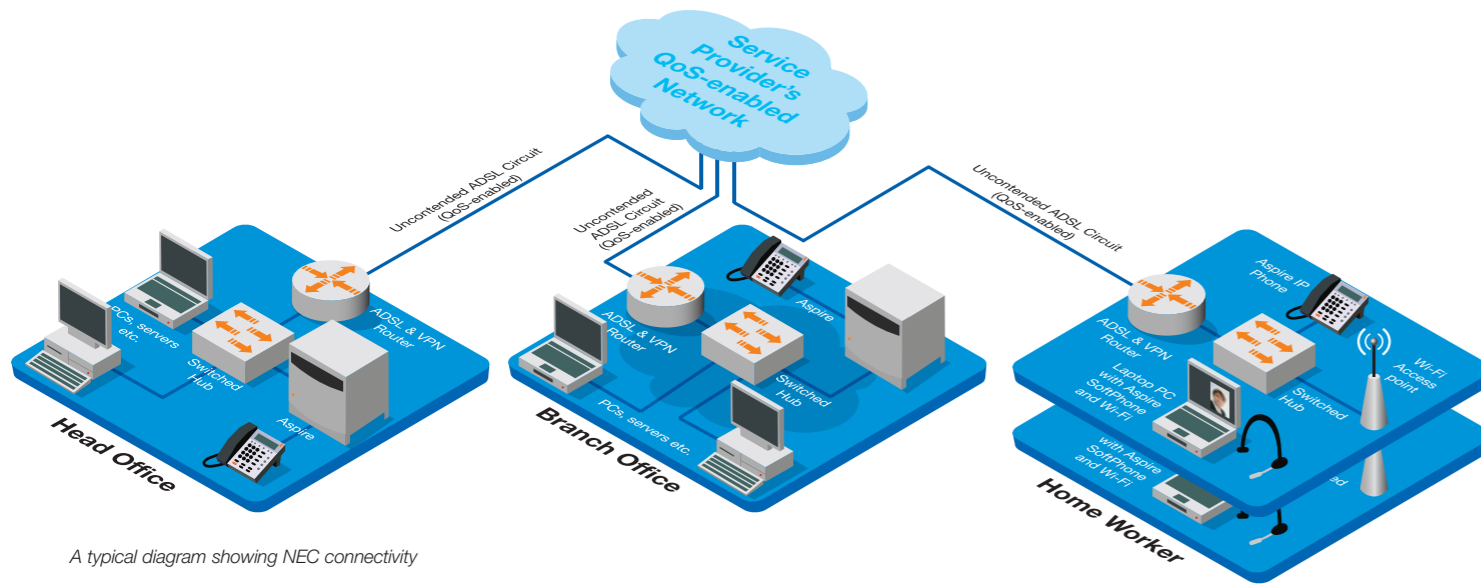


A typical diagram showing WAN connectivity





“Quite simply, the Aspire delivers at the flick of a switch.”



A typical diagram showing NEC connectivity

### Multi-site network benefits – the NEC VPN option

NEC has partnered with a number of IP carriers. This allows us to bring to you all the advantages of an inter-site IP VPN, but at much lower cost than the WAN option. This enhances the cost savings generated by the multi-site WAN option, so making the business case for IPT even more realisable with shorter payback periods.

By working with a small number of certified VPN carrier partners, NEC Infrontia can remove the uncertainty of

choosing unknown carriers who may not be able to guarantee the service levels of the NEC VPN option.

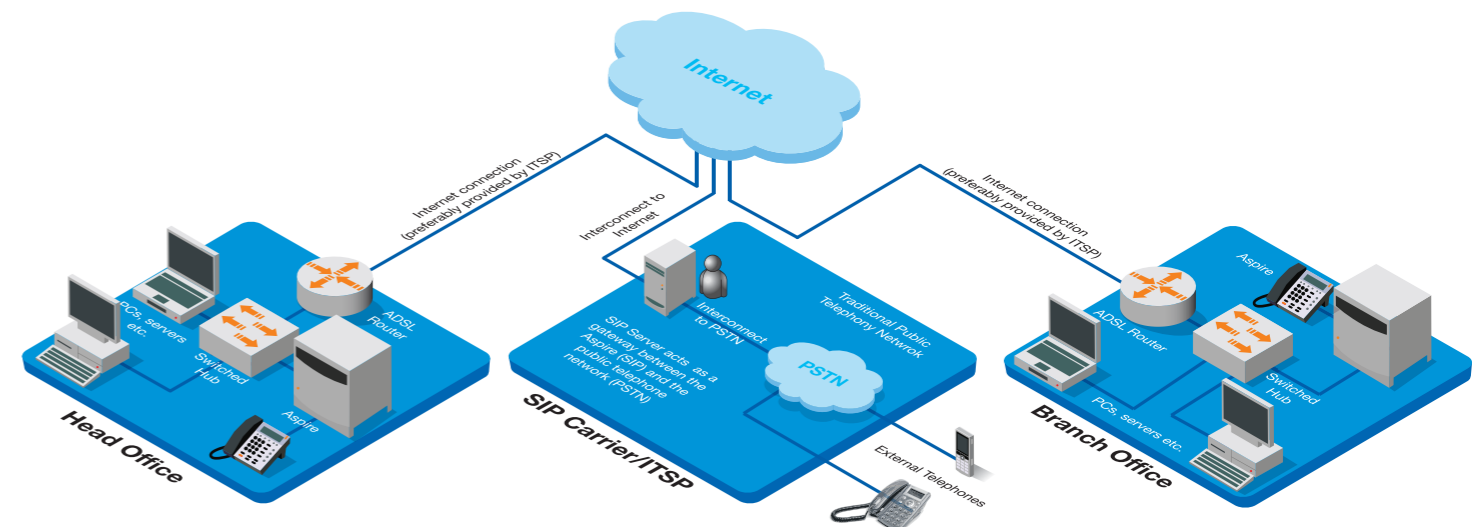
For calls off-net to the PSTN or Internet, as above, either broadband or ISDN connections can be used, depending on your business strategy.

### Future proofing – SIP carriers

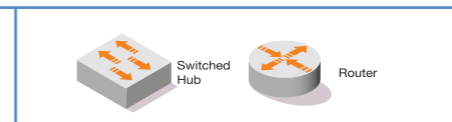
The IP network is continually evolving. SIP is now the new standard for IP Telephony, quickly replacing the older H.323 standard. BT's multi-billion pound project to totally replace the current PSTN network with an all IP network is called 21CN. 21CN will be the next major revolution in communications. Businesses who want to ensure compatibility with this evolving new-generation network can implement SIP on the Aspire platform. Using any

combination of SIP, IP or legacy phones, Aspire can quickly deliver infrastructure savings.

Although SIP today may not deliver call cost savings with Aspire, you can install ISDN or SIP trunks to connect to the PSTN. You do not have to use BT for SIP connectivity. Alternative SIP carriers exist and NEC can assist you to make the right choice.



A typical diagram showing SIP carrier connectivity



## Your IP phone options

Implementing IP Telephony means that wherever you can connect your PC or laptop you can now make IP calls. Wi-Fi Hotspots, hotel rooms, airports all become your office space. You could use our hard-wired IP phones in your home office and, when at a Wi-Fi Hotspot, use the IP softphone installed on your laptop or PDA.

### Teleworking

Teleworking reduces the head office overhead and encourages staff flexibility. Remote workers may be geographically remote, but Aspire IP allows them to work as if they were on the main site, with all the head office IT and voice telephony features. Broadband makes that

possible. Whether it is the managing director or a call centre agent remote worker, your business will operate more efficiently. The phone options are not limited by location — use either IP wired phones, IP softphones or a USB phone option.

### Home office

Broadband IP is revolutionising our attitudes to home working. With a simple broadband router with quality of service implemented, it becomes both practical and economic to locate more workers at home. Whilst the business case for home working has always been strong, it is only now that the broadband IP connections are available at a realistic price. Kilostream just has not been an economic option for the home worker, with ISDN not

becoming a popular alternative for the home office. A growing number of companies are now retaining the services of key staff, some in a part-time capacity, by deploying Aspire IP with remote extensions. Using broadband to route both the data and voice calls via a QoS Router, acceptable levels of voice quality can be secured. With the Aspire IP Phone Fallback Module phone, contact can still be retained even if the IP connection fails.

### Unified communications

NEC's experience in voicemail is unrivalled. Many businesses have used both voicemail and auto attendant facilities for many years. However, as with voice telephony there is a growing trend to converge these applications onto the data network. Email is the preferred method of messaging for most of us, being both easier to use and more accessible. However, voicemail still has a role within the overall messaging environment.

AspireMail DMS brings voicemail into the 21st century by posting voice messages into your Microsoft

Outlook inbox. Click on the message, listen to it, forward it, save it. Voicemail becomes as easy to use as email.

Aspiremail DMS still retains our market-leading auto attendant application, which is seamlessly integrated to DMS, allowing callers to bypass the operator and drill down to the part of the organisation they wish to contact.

Aspire IntraMail is the alternative messaging application for those users who still rely heavily on voicemail.

## Aspire IP applications



### MyCalls

MyCalls is unique. It is the first phone monitoring application that introduces the concept of Performance Measurement. Prior to MyCalls, the only phone monitoring device was the call logger, which measures cost of calls. MyCalls is a real-time performance monitor that tells you at a glance how efficiently your staff are using the phone and what service

levels are being achieved. If you are losing calls, you need to know now.

What's more, MyCalls can also be upgraded into a fully featured, multi-site call-logging device, giving you the best of both worlds.

Just a few of the benefits include:

- How many calls received

- How many calls abandoned
- Average waiting time per call
- Longest waiting time
- How many calls waiting to be answered
- How many calls made
- How many staff available to answer calls
- Conversation length
- How much time spent talking



### MyCalls Call Centre Manager

MyCalls Call Centre Manager supports the call centre features of the Aspire. It is a real-time call centre monitoring application supporting multiple supervisors and up to 64 agent groups. Its flexibility allows the

supervisor screens to be tailored to suit the requirements of each business. The Aspire Call Centre package is an enterprise-class call centre supporting skill-based routing, multiple call queues, look-back

routing and remote agent working. Integrated with voice mail, CTI and announcement devices, the Aspire Call Centre provides a fully integrated customer service solution.



### SoftPhone

Aspire SoftPhone is a Windows-based IP Telephony and Videophone application. Take your telephone extension wherever you go with

the Aspire SoftPhone that works on a PC to deliver the advantages of a converged voice and data network using VoIP. Make and take calls from

your PC keyboard or through a USB handset and enjoy advanced functions too.

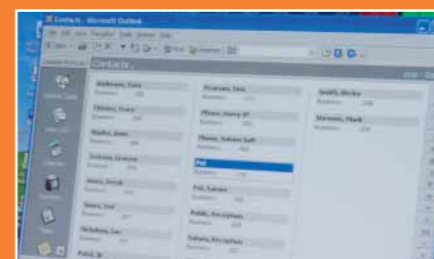


### MyVision

NEC's newest screenpop application suite is written in the latest .NET technology, is totally modular — and is future proof. It works out of the box with Outlook, Access, Microsoft CRM, Goldmine and ACT. If your

package isn't currently supported, we can probably join the developer programme and have a driver created for you. MyVision works in Windows XP and 2000 and is easy to install. Choose whether you want

it to pop on CLI/DDI, before or as you answer the call. What's more, it can write information in XML for integration into any third-party application.



### MyPhone

Convergence at the desktop is made easy. The Aspire IP MyPhone browser application integrates phone and PC for maximum convenience.

It links to Outlook using your contacts to provide point-and-click out dialling and screen popping for incoming calls.

## Handsets



24TIXH IP phone

- ¥ Three-line/24-character display
- ¥ 24 Programmable BLF/call appearance/multi-function with dual-colour LED indication
- ¥ 10 Speed dial/fixed features buttons
- ¥ 2 Call buttons — current/waiting call
- ¥ Hold/conference/mic mute/volume/redial/message buttons
- ¥ 4 Context-sensitive navigation menu buttons
- ¥ Hands-free loudspeaker/paging
- ¥ Message waiting indicator
- ¥ Dedicated headset jack
- ¥ Dual-port switch (10/100) RJ45
- ¥ Supports plug-in adaptors — call record, analogue TDM fallback adaptor
- ¥ POE — IEEE 802.3af
- ¥ Optional local mains power adaptor
- ¥ G.711, G.723, G.729a Codec option
- ¥ QoS options — DiffServ, IP Precedence, 802.1pq VLAN
- ¥ IP address assignment — DHCP client or statically configured
- ¥ Resilience — can register on up to 4 Aspire nodes
- ¥ Expansion port for DSS/DLS add-on modules
- ¥ Embedded applications — personal/enterprise directories, missed call log, CLI/DDI name tagging, voice messaging, conferencing, call centre
- ¥ Multi-language display support (14, including all major European languages)
- ¥ 5 Tones options with variable pitch selections
- ¥ Reversible desk/wall mount



4TIXH IP phone

- ¥ Three-line/24-character display
- ¥ 4 Programmable BLF/call appearance/multi-function with dual-colour LED indication
- ¥ Hold/conference/mic mute/volume/redial buttons
- ¥ 4 Context-sensitive navigation menu buttons
- ¥ Hands-free loudspeaker/paging
- ¥ Message waiting indicator
- ¥ POE — IEEE 802.3af
- ¥ Optional local mains power adaptor
- ¥ G.711, G.723, G.729a Codec option
- ¥ QoS options — DiffServ, IP Precedence, 802.1pq VLAN
- ¥ IP address assignment — DHCP client or statically configured
- ¥ Resilience — can register on up to 4 Aspire nodes
- ¥ Embedded applications — personal/enterprise directories, missed call log, CLI/DDI name tagging, conferencing, voice messaging, call centre
- ¥ Multi-language display support (14, including all major European languages)
- ¥ 5 Tones options with variable pitch selections
- ¥ Reversible desk/wall mount



Aspire IP Voice/Video SoftPhone

- ¥ Windows voice and video telephony application
- ¥ Windows versions XP Pro or Windows 2000
- ¥ Three-line/24-character display
- ¥ 320 x 320 or 680 x 680 video window
- ¥ USB camera required for video telephony application
- ¥ 24 Programmable BLF/call appearance/multi-function with dual-colour LED indication
- ¥ 10 Speed dial/fixed features buttons
- ¥ 2 Call buttons — current/waiting call
- ¥ Hold/conference/mic mute/volume/redial/message buttons
- ¥ 4 Context-sensitive navigation menu buttons
- ¥ Hands-free loudspeaker/paging
- ¥ Message waiting indicator
- ¥ G.711, G.723, G.729a Codec option
- ¥ QoS options — PC dependent
- ¥ IP address assignment — DHCP client or statically configured
- ¥ Embedded applications — personal/enterprise directories, missed call log, CLI/DDI name tagging, voice messaging, conferencing, call centre, freedial
- ¥ Multi-language display support (14, including all major European languages)
- ¥ 5 Tones options with variable pitch selections
- ¥ Reversible desk/wall mount
- ¥ Compatible hardphone — Aspire USB phone
- ¥ Compatible headset — Plantronics CS60 DECT



Aspire USB phone

- ¥ Connects to PC or laptop
- ¥ USB 1.1 interface
- ¥ 4 Function buttons
- ¥ Message waiting indicator
- ¥ Dedicated headset jack
- ¥ Configured via IP SoftPhone



Wireless LAN phone

- ¥ Wi-Fi phone option
- ¥ Sending caller ID
- ¥ Receiving caller ID
- ¥ Answer incoming calls (extension, DISA, DDI, DUD, STG)
- ¥ Hold and transfer calls
- ¥ Call forward (all options)
- ¥ Voicemail operation
- ¥ CTI integration (third-party TAPI integration)
- ¥ SMDR output



24TIXH IP fallback adaptor

- ¥ Analogue PSTN or extension fall over
- ¥ HQ user fallback to Aspire analogue extension port
- ¥ Teleworker fallback to analogue exchange line
- ¥ Cost-effective fallback when IP line quality falls or fails



Aspire digital phone IP adaptor

- ¥ Plug-in IP adaptor for Aspire TDM system phones
- ¥ Converts TDM phone to IP phone
- ¥ POE — IEEE 802.3af
- ¥ Optional local mains power adaptor
- ¥ G.711, G.723, G.729a Codec option
- ¥ QoS options — DiffServ, IP Precedence, 802.1pq VLAN
- ¥ IP address assignment — DHCP client or statically configured
- ¥ Resilience — can register on up to 4 Aspire nodes



For a range of wireless LAN phones, please contact NEC or your nearest reseller.

