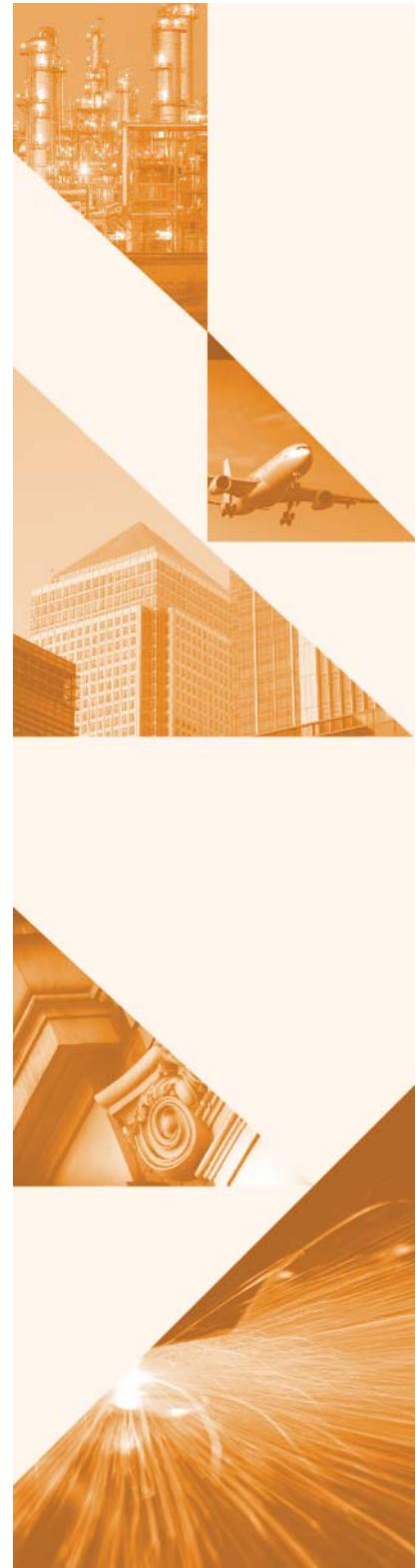


# *Managing Fax In The Public Sector*

A Lane Telecommunications White Paper





## Introduction

It is a harsh fact of life that the crisis centred on the global financial markets will have some of its most acute and long term effects within UK Public Service organisations. Budget setting for years ahead will be influenced by the needs of Central Government to manage and reduce the massively increased national debt.

Inevitably, this means that local authorities in particular will see their budgets squeezed but the effects will be exacerbated by the combination of greater demand for council services and falling receipts from council tax, business rates and council services due to the recession. When combined with pressure from Central Government to keep council tax rises under control, the raft of UK and EU legislation, strategies and initiatives, such as the mandatory Carbon Reduction Commitment, and the demand from local residents for high quality services, the task facing local authorities is challenging to put it mildly.

Clearly, as ICT spending is a significant cost to local authorities, ICT budgets will not escape this pressure for immediate and longer term reductions. This is also an area, however, where public bodies can justifiably claim that prudent investment can deliver sustainable efficiency improvements by reducing costs and rationalising infrastructure while at the same time contributing towards key aspects of Government strategy regarding the delivery of services, 'transformational Government', efficiency, sustainability and data security.

There are few areas within the ICT sphere that offer local authorities a better return on investment than the installation of a centralised fax server. In the rush to converge systems and technologies that facilitate the free flow of information around an organisation, fax was often overlooked. Voice

communications have increasingly moved onto IP networks and Voice over IP (VoIP) has become a mature technology employed by most large private sector organisations and by many public bodies as well. But fax was often left out of the convergence process and consequently often sits outside the core communications infrastructure. Even where organisations have upgraded their fax hardware with the latest multi-functional peripherals (MFPs) there is no more integration with mainstream business applications than before as MFPs do not come equipped with required interfaces as standard.

Any local authority or public body still operating with stand-alone fax machines or MFPs is likely to derive considerable benefit from installing a fax solution such as Lane's Passport Fax Server. A fax server is essentially a software application that allows users, applications and devices to send and receive faxes without using fax machines. So a fax can be sent from anywhere on the LAN/WAN or via a web browser over the internet using virtually any application including users' standard e-mail interfaces.

Fax servers also integrate with business workflow processes and automate faxing from ERP, CRM and business management software. This allows the smooth and secure exchange of electronic documents within an organisation and to any external destination via fax, e-mail or over the internet and even provides integration of SMS and telex messages if required.

Legacy applications can be fax-enabled and the latest MFP devices can be fully integrated into the communications network. Faxing to and from the organisation is achieved more quickly, efficiently and securely leading to cost reductions and productivity improvements. In addition, consolidation of fax infrastructure saves energy and supports the mandatory Carbon Reduction Commitment, particularly if the fax server is virtualised as part of an integrated voice, data and fax network.

## A closer look at the benefits delivered by fax servers

Fax servers deliver a multitude of benefits ranging from cost reductions to productivity improvements, better security and compliance with statutory regulations. The most significant of these are:

**Cost reduction:** This is one of the more obvious benefits of implementing a fax server. These savings take many forms from hardware rationalisation to infrastructure consolidation and lower call charges. The Lane Passport Fax Server, for example, will deliver the following cost savings:

- A centralised fax server can utilise its own least cost routing rules and the organisations network infrastructure to make use of low or zero rate call charges while still keeping full control over fax messages. The fax server offers seamless integration of fax into an efficient communications system. It enables intelligent and automatic delivery of information to and from users, workgroups or workflows, whether they are inside or outside your organisation, without user intervention.
- Consolidation of fax operations into a single robust fax server reduces the number of distributed fax lines required and makes better use of the lines being used. Savings are realised by cancelling expensive direct analogue exchange lines for stand alone fax machines or MFPs and freeing up costly extensions on the in-house PBX.
- Most stand alone fax machines are idle for the majority of the day but they are still using electricity and taking up valuable office space; a fax server eliminates these costs.
- Consumables are required for each make and model of stand alone fax machine found in an organisation; a fax server needs no consumables.
- The cost of sending faxes can be significantly cheaper than using so called premiere internet fax solutions. Lane recently implemented their Passport Fax Server solution for Nomura International and it saves them over £300,000 each year.
- Costly and time consuming compliance issues are massively lowered by having a centralised audit and archive of all fax messages.
- Compliance for manual fax handling is greatly improved and costs reduced by implementing a fax workflow.
- Multi Function Peripherals can be fully integrated with a fax server to realise even more operational efficiencies, cost savings and environmental improvements.
- The fax server environment can be virtualised with Fax over IP to save valuable computer room rack space and energy - further consolidating communications over your IP network.
- Centralising fax traffic through a fax server over the network reduces IT management time associated with operating multiple fax implementations across the organisation.

Tracking of inbound and outbound faxes and monitoring fax configuration anywhere on the network becomes a simple task.

- Many organisations may already have a mix of various fax server systems and stand alone fax machines resulting in high maintenance fees. Much lower annual maintenance costs can be achieved by consolidating all fax functions into a single robust fax server and retiring stand alone fax machines.

**Productivity Improvements:** Often as significant as cost savings, productivity improvements also deliver significant financial payback on fax server investment. Enabling users to send faxes directly from their desktop PC saves time in printing out documents, finding a free fax machine, sending the fax and waiting for a confirmation that it has gone.

Staff can use their familiar email interface (such as Microsoft Outlook or Lotus Notes) to send and receive fax messages directly to their desktop, in exactly the same way as they would use email. The fax server's document conversion process enables users to create faxes simply by addressing the email to one or more fax destinations, entering the message text and attaching any relevant documents, just as you would with any standard email message. Lane's Passport Fax Server also offers the option to send and receive SMS and telex messages in the same way, greatly improving productivity and ensuring a fast and easy take-up of the messaging service with minimal user training.

Receiving faxes routed directly to the recipient's desktop also saves time in retrieving them from group fax machines and ensures the fax actually gets to the intended person. In addition, the ability to integrate fax into the organisation's workflow not only saves employee's time but also ensures that faxes enter the appropriate workflow which improves efficiency, security and traceability.

Fax-enabling back-office applications allows the automatic delivery of documents, which can be overlaid onto pre-prepared fax templates and printed directly to fax. A highly scalable fax server, such as Lane's Passport integrates with host, legacy, CRM and ERP systems and can handle thousands of fax pages per hour with improved security, greater efficiency and reduced costs.

**Sustainability:** Driven by the mandatory requirements of the CRC Energy Efficiency Scheme, the public sector is now being forced to address the huge task of re-organising its ICT systems in order to show reductions in energy usage. Sustainability and Green IT are no longer optional as from April 2010, senior executives were required to bring these new responsibilities into their risk management planning for ICT operations.

The introduction of fax server technology can make a significant contribution to reducing a local authority's ICT carbon footprint. Multiple fax machines held on standby across the whole organisation result in considerable energy consumption. Every one of these can be scrapped if a centralised fax server is installed to manage fax and messaging traffic across the entire

organisation. Additional energy savings can be made if the organisation has switched to Voice over IP for its telephony as the infrastructure can then be used to host a virtualised fax server which reduces the number of energy-hungry servers needed in the data centre.

In addition to energy savings, the installation of a fax server has other environmental benefits including the reduction in paper usage as faxes are transmitted, received and archived digitally.

**Multi-Functional Peripheral (MFP) Integration:** It isn't surprising that MFPs have increased in popularity during recent years: they combine printing, scanning, copying and fax functions in one machine and have significant cost and space advantages. However, they often remain separate from an organisation's communications network, which makes it much harder to implement all embracing automated document management and workflow systems. The isolation of the MFP also makes it difficult to ensure compliance with the requirements of the Data Protection Act amongst others, and in addition prevents the implementation of a consolidated communications infrastructure.

A fax server enables MFPs to be integrated into the communications infrastructure, providing central archiving, monitoring and logging of all incoming and outgoing messages. This automatically meets all internal and legal requirements for logging and auditing document transmission. Lane's Passport Fax Server, for example, allows companies to realise the full potential of MFPs through:

- Hardware and maintenance cost reductions through rationalising hardware requirements.
- Improved productivity and stake-holder relations through integration with ERP, CRM and document management systems.
- Fulfilment of compliance requirements for both internal management and legal obligations.
- Full integration with the communications infrastructure, allowing network managers to choose the optimum channel for communications requirements.
- Allows the implementation of Fax over IP solutions.

**Fax over IP:** Where fax is managed within the organisation, the next logical progression could be to move fax communications fully onto the IP network through the introduction of Fax over IP (FoIP). Many local authorities have already implemented Voice over IP (VoIP) telephony systems and the large majority of new telephone system sales are for VoIP enabled systems. The adoption of VoIP systems is being fuelled by the lower costs and greater flexibility afforded by routing calls over the internet rather than through the traditional PSTN.

Although initially overlooked by many organisations deploying VoIP systems, FoIP offers significant benefits and now that standards have been set the migration of fax onto integrated data networks is gathering pace.

FoIP changes the transmission method of faxing in much the same way that VoIP changes the transmission method of a phone call. In both FoIP and VoIP, data makes most of the connection between sending and receiving devices on a packet-switched network, often avoiding the long-distance phone lines of the telephone network. This reduces the cost of transmission and can be a more efficient setup for an organisation that already has access to internet bandwidth or a wide area network.

FoIP has the potential to deliver wide ranging benefits to organisations of all sizes and in any sector of the market. If a VoIP infrastructure already exists then it may be possible to utilize the PSTN gateways and routers for Fax over IP. In this way an organisation's fax solution can be built leveraging its existing infrastructure to provide the following benefits:

- **Lower maintenance costs:** With an IP fax solution fax traffic enters the IP environment via a gateway rather than through the PBX. As the maintenance costs of routers are significantly less than those for a PBX regular maintenance contract costs can be greatly reduced.
- **Lower operating costs:** Complex network infrastructures made up of disparate technologies are common in medium to large organisations. Complexity is forced onto the organisation as it expands and having to operate separate data and telephone networks adds to this issue. Integration of data, voice and fax communications over the IP network eliminates the need for a telephone network and allows support resources and personnel to be focused on the data network.
- **Easier deployment and maintenance:** In a VoIP/FoIP environment the location of the IP fax server is independent of the PSTN network access point as gateways provide the connection to the PSTN. The fax processing resources simply need access to a data network, Local Area Network (LAN) or Wide Area Network (WAN), where the gateway resides.

The various application servers on the organisation's WAN can now deliver services to all locations from one central data centre, using the gateways in remote offices to gain access to the PSTN. This arrangement reduces the number of parts that are remotely managed, consolidating maintenance and lowering costs. This also simplifies deployment to remote locations, enables greater consolidation of fax services, lowers disaster preparedness costs, and enables least cost routing via the WAN.

Traditionally, provisioning fax services to employees in remote locations required installing an on-site fax server in those remote locations, which usually required a large user base to cost-justify. However, with an IP fax server, employees can access the fax image and signal processing capability that resides in a remote data centre.

The gateway that resides in the field office provides the ramp onto the PSTN. With FoIP, therefore, adding remote employees to an IP fax server is now done entirely through

software, e.g., purchasing a seat license for the fax server, and no additional equipment is needed in remote locations. FoIP enables a remote employee to use the organisation's central fax server just as easily as if it were located in the local office.

- **Better disaster readiness:** With a FoIP solution in place, the location of the fax server is independent of the user. Fax server deployment can, therefore, be reduced to one or two strategically located data centres. The number of sites requiring rapid response is significantly reduced and the fax servers can be located in the most secure and stable environments.
- **Lower risk of connection failure:** FoIP networks provide the flexibility to route traffic via fully functional nodes even if part of the network is down. A single fax server, or multiple load balanced redundant servers can be installed on multiple network nodes effectively eliminating the risk that the fax server will be without access to the network. This is critical where fax is the method of delivery for vital health or security alerts.
- **Enhanced business productivity:** Fax server technology sits at the heart of the communications infrastructure and can be used to enhance an organisation's ability to streamline business process automation and improve document management. Investment in FoIP solutions provides an opportunity to integrate communications and document management more fully into workflows.

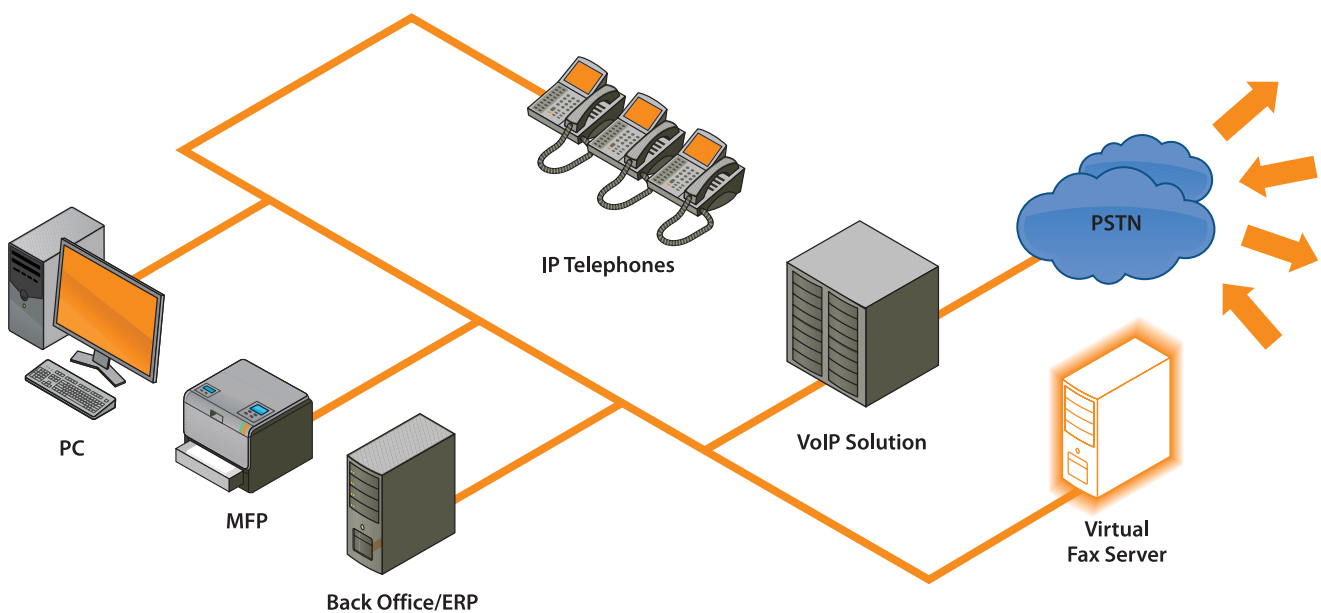
- **Virtualisation:** New virtualisation software technologies are becoming increasingly popular as organisations seek to improve efficiency, consolidate hardware resources and reduce energy consumption. Software only FoIP solutions that are compliant with leading manufacturers of virtualisation software, such as Lane's Passport Fax Server, can co-exist in a virtualised environment.

**Data Security:** Although the protection of personal data is more of a concern in medical/health environments where a 'safe haven' policy would usually apply to protect patient identifiable and confidential information, local authorities do handle sensitive personal data which they have a legal obligation to protect. Setting up a 'safe haven' for a fax machine means locating it in a secure, area with restricted access - usually a locked room.

In practice, when operating stand-alone fax machines or MFP's it is very hard to ensure that sensitive data is protected as the law requires. Quite apart from the issues surrounding control of access to the fax machine and authentication of users, there is no way of monitoring or managing the flow of information through the device, of controlling where information is sent or of providing an audit trail if required.

A fax server enables organisations to deal with these issues and to meet all current compliance requirements through seamlessly integrating fax and messaging into the broader

*This local authority has implemented FoIP through its VoIP solution and has virtualised its fax server.*



communications environment. By enabling incoming and outgoing documents to be monitored and logged, organisations regain control:

- Users can be automatically authenticated by the system and their access permissions controlled.
- Originating applications can be validated.
- Restrictions can be placed on the destination and types of files included in outgoing messages.
- Document records are securely retained and readily available in a central archive.

## Selecting the right option for your organisation

Set out below are a number of attributes that your fax server should have in order to maximise the benefits:

**Fax, E-mail, SMS and Telex Integration to your main applications:** Effective integration of all communications should lie at the heart of a fax server. Make sure that yours is able to integrate with the applications your staff use every day. This will ensure that additional training is minimised and efficiency gains are realised. If the vendor can't provide existing interfaces for the applications you use are they willing and able to customise their fax server to accommodate your needs?

If fax is a key part of your organisation you may wish to ensure that it avoids the potential bottlenecks, delays and insecurities of the main e-mail system. In this case look out for a client application, such as Lane's Personal Communications Center which provides an alternative to traditional email interfaces for preparing, sending, tracking and receiving fax messages. The PCC communicates directly with the fax server, so avoiding any email latencies, storage problems and audit compliance issues. It allows users to:

- Create messages containing both text and attachments and addressed to multiple destinations, with options including priority settings, delayed despatch and user selectable coversheet.
- Track, resubmit, re-route or cancel messages. You can historically retrieve messages or query the system audit trail on a personal or departmental basis.
- Set up automatic approval systems, while designated approvers can be prevented from approving their own messages. Reasons for rejecting a message can be created and appended.
- Documents which would normally be printed on printed stationery and sent by mail can be transferred direct to fax using pre-prepared fax templates.

Not all fax server vendors offer this amount of control and functionality.

**Intelligent Routing:** You must be able to configure your fax server to deliver incoming faxes directly to the individual, department or workflow that suits your needs. The fax server should also control the route that outbound faxes take in order to meet business objectives such as least cost routing while following rules for desired outcomes such as speed of delivery, avoiding bottlenecks and receiving confirmations of delivery.

Delivery rules can be simple: for example, delivering incoming faxes to a single email address or linking incoming fax numbers to specific email addresses. In addition, routing can involve the automatic capture of data from incoming faxes - the server should then route them to a destination based on that data. A variety of technologies are used to achieve this, including OCR, mark reading, keyword look-up, and barcode reading.

**Document Management:** Sending and receiving messages in an efficient, secure and user-friendly way is a vital function of the fax server but what happens to that information once it arrives within your organisation? You should ensure that the fax server vendor you choose is also able to provide a means of managing and processing the flow of paper documents quickly and securely. The movement of paper documents - faxes, emails and post - creates opportunities for messages to remain inactive for long periods or even go missing forever.

Inconsistent processes or inexperienced staff can cause costly errors, with service levels reduced through delays or failures in executing these messages. Your fax server vendor should be able to provide a more robust way to move these documents: between departments and sites; sometimes collecting signatures on the way; often needing additional comments and notes. And in today's increasingly regulated world, transparency in this paper trail is vital to prove compliance and display validity of transactions.

**Track Record and Accessibility of the Vendor:** The track record of the vendor you choose is important as is their commitment to future support. Most large vendors will only deliver their fax server technology through intermediaries in the reseller channel. While this has its advantages for the vendor the advantages for you the end user are less clear. A fax server implementation is rarely simply a case of installing off-the-shelf solutions. There are always unforeseen integration issues and legacy applications that you don't want to update but which you do need to integrate. Make sure that the vendor you choose is both willing and able to customize their fax server to suit your exact requirements.

**Easy Administration:** It is clearly important that any investment in a fax server does not simply replace one set of administration overheads with another. Installation, maintenance and back-up should be intuitive and easy. Remote monitoring and SMS or text alerts to key personnel should be possible to ensure that the server is operating effectively and the back-up brought online quickly if problems do occur. The fax server should also make compliance with regulations easy as all necessary information from across the network is available at one location.

**Interface Options:** Many fax servers provide a range of interface options to enable connectivity with existing in-house systems and applications but check that they meet your requirements. You will need proven interfaces for standard protocols such as FTP, IP, SMTP and WebSphere MQ, and for most existing back office systems and applications. If an interface is not covered as standard you will need access to fax server specialists able to develop custom interfaces.

Look out for Message Objects as an option; this open application programme interface (API) enables your in-house developers to integrate the fax server into your own systems and applications. Message Objects is supplied as standard on Lane's Passport Fax Server and allows you to create, manage and retrieve messages. It can be used in C++, Visual Basic, VB Script and .NET applications as well as Active Server Pages.

**Seamless Integration with legacy systems:** An important benefit that the fax server should deliver is seamless integration with legacy systems. Be careful when selecting a fax server that the solution offers enough flexibility to fully integrate with your current infrastructure. Potential cost and productivity gains could be lost if additional internal resources need to be used to modify legacy systems or if full integration is not achieved.

One important difference between the Lane fax server and those supplied by other companies is their ability to deliver exactly the system you need. The in-house team has the expertise to customise, configure and install the system, and will interact directly with end-users to meet exact requirements. Buying an off-the-shelf solution through a channel intermediary can limit flexibility and restrict your ability to fully utilize your existing infrastructure.

**Security:** One of the key benefits that fax servers can deliver is greatly improved security both within your organisation and at the receiver's end. The server should provide secure authentication of users, a full audit trail and records that comply with your legal obligations for data security. Some documents may need to be sent as encrypted files or via certified e-mail and you should ensure that the fax cannot be altered or viewed on route. You need to be sure that the system can handle this and that the fax server cannot send faxes to the wrong number. You should have the flexibility to get delivery notifications sent wherever and in whatever format you require. The fax server should allow you to comply with these requirements automatically and without undue management involvement.

**Scalability:** This is an important issue because some of the cheaper fax servers on the market are simply unable to handle the volume of fax traffic generated by some users. You should question the track record of the vendor in this regard and ask for examples of installations that match your requirements both now and in the future. You should also consider licensing issues and whether the fax server you install now can be extended in a modular way if required.

## Conclusion

Fax servers have the potential to deliver very significant cost savings and productivity improvements through smooth integration of fax and messaging into communications infrastructures. These benefits deliver very rapid return on investment and represent one of the most cost-effective ICT enhancements that a local authority can undertake. But it isn't simply a case of financial payback; fax servers allow public bodies to move towards their sustainability objectives and improve their quality of service to all stake-holders.

Not all fax servers are the same, however, and not all vendors are willing or able to support users in optimising the potential benefits. Many resellers are not interested in customising fax servers or integrating legacy systems into the wider communications infrastructure and yet virtually all vendors insist that you buy their systems through the channel network. The few vendors that are prepared to interact directly with end users tend to be the real specialists in the market, able to mould their systems to meet specific requirements because they have the expertise and experience to do this. It is worth seeking them out and comparing not only the core capabilities of the technology but the practical implementation of these systems and the implications for your current infrastructure.

**About Lane Telecommunications**

Since its formation in 1976 Lane has been at the forefront of messaging communications and is now recognised internationally as a leader in fax integration, across the financial, healthcare, manufacturing and transport industries. Based in the UK, US and Singapore, Lane has implemented systems across 50 countries and provided professional services in all time zones. Lane offers the very best solutions for integrating fax servers as a part of wider communications networks. As specialists in messaging solutions for over 30 years, Lane delivers seamlessly integrated fax and messaging systems across entire organisations and into consolidated data networks, across one site, many sites or across borders.



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