FAX SERVER TECHNOLOGY:

A guide to reducing costs and increasing productivity

A Lane Guide

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The introduction of e-mail and its exponential expansion into every aspect of business, presented a significant challenge in the fax industry and for some observers, it was a foregone conclusion that fax was destined for a rapid demise. It is interesting to note that faxing has continued on a steady growth path and is predicted to continue well into the future, across many industries.

So why is fax still relevant and prospering in the face of increasingly converged communications infrastructures? The answer lies in its ubiquitous nature, intrinsic security, and legal standing. Fax provides reliable, real-time, and verifiable point-to-point communications. In today's increasingly regulated world, faxing offers inherent security and meets compliance requirements. Whether it's to meet regulations, for archiving, legally binding contracts with signatures, or drawings and plans, fax still needs to be fully integrated into your business.

The issue for many businesses, is not how they should replace fax but how they can integrate and leverage it effectively into their broader communications infrastructure and deal with the all too apparent drawbacks and costs inherent in the traditional fax interface.

In the rush to converge systems and technologies that facilitate the free now of information around an organization, fax was often overlooked. Voice communications have increasingly moved onto IP networks and Voice over IP has become a mature technology employed by most large organizations and many smaller ones as well. However, fax was often left out of the convergence process and consequently often sits outside the core communications infrastructure. Even where organizations have upgraded their fax hardware with the latest multi-functional peripherals (MFP) there is little integration with mainstream business applications than before as MFPs do not come equipped with required interfaces as standard.

The answer to these issues can be a dedicated virtual environment or a cloud system. Businesses still operating with stand-alone fax machines or MFPs, are likely to derive considerable benefit from installing a fax solution such as

Lane's Passport Fax Server. A cloud environment is essentially a software application that allows users, applications and devices to send and receive faxes without using fax machines. Therefore, a fax can be sent from anywhere on a LAN/WAN or via a web browser over the internet using virtually any application including user's standard e-mail interface.

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 fax servers. These savings take many forms from hardware rationalization to infrastructure consolidation and lower call charges. The Lane Passport Fax Server, for example, will deliver the following cost savings:

- A centralized fax server can utilize its own cost routing rules and the organization's network infrastructure to make use of low or zero rate call charges while keeping full control over fax messages. One of our long-time customers, a global financial institution, has servers in France, Malta, Singapore, London and more. They were struggling with communicating across multiple locations around the world. Lane's Passport solution solved these challenges. If a call being sent from London had a routing code for Singapore, Lane Passport would pass the message to the Singapore system, via the internet, initiating a local rather than long distance call. With other systems, this might not have been possible, but we made faxing around the world hassle-free. The fax servers offer 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 organization, 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 realized by cancelling expensive direct analogue exchange lines for standalone fax machines or MFPs and freeing up costly extensions on the In-house PBX.

- Most standalone fax machines are idle for the majority of the day but 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 standalone fax machine found in an organization; a fax server needs no consumables.

- Default penalties caused by the mishandling of received fax messages can be reduced by ensuring that faxes are routed correctly and handled in a timely fashion.

- The cost of sending faxes can be significantly cheaper than using so-called premiere internet fax solutions. A customer of Lane's, Nomura, implemented Passport Fax Server solution which has saved them over £300,000 each year since working with our team.

- Costly compliance problems are massively lowered by having a centralized 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 realize even more operational efficiencies, cost savings and environmental improvements.

- The fax server environment can be virtualized with Fax over IP to save valuable computer room rack space and further consolidate communications over your IP network.

- Centralizing fax traffic through a fax server over the network reduces IT management time associated with operating multiple fax implementations across the company. Tracking of inbound and outbound faxes and monitoring fax configuration anywhere on the network becomes a simple task.

- Many organizations may already have a mix of various fax server systems and standalone 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 standalone 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 been sent.

Staff can use their familiar email interface (such as Microsoft Outlook) to send and receive fax messages directly to their desktop, in 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, 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 messages in the same way, greatly improving productivity and ensuring a fast and easy process 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 gets to the intended person. In addition, the ability to integrate fax into the organization's workflow not only

saves employee's time but also ensure that faxes enter the appropriate workflow which improves efficiency, security, and traceability.

Fax-enabling back-office applications allows the automatic delivery of invoices, purchase orders and other documents, which can be overlaid on to 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.

Compliance – The regulatory environment in which you operate has become far more stringent over recent years. And it's not just public companies which are subject to compliance requirements under codes such as Sarbanes-Oxley, HIPAA, and the Data Protection Act.

As a result, organizations must ensure that all communications, including those through fax machines and multi-function peripherals, are monitored, and that

the information transmitted is documented and archived. To do this, you need to identify which specific employee has transmitted each document—which is not possible with standard fax machines. In addition, critical incoming documents must be traceable: if they arrive as hard copy, their subsequent movements are not easily verified.

A fax server enables you to meet all current compliance requirements through seamlessly integrating fax and messaging into your broader communications environment. By enabling incoming and outgoing documents to be monitored and logged, it enables you to fulfil all compliance obligations, and in particular:

- 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 for a legally required period.

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 a company'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
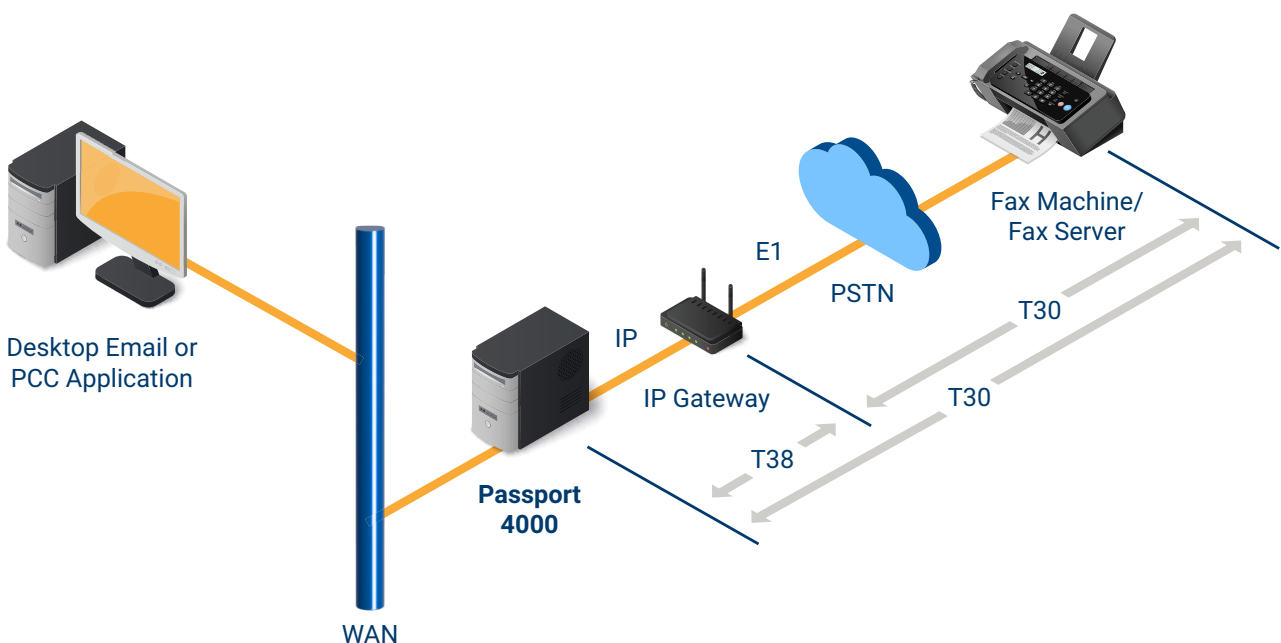
to fulfill compliance requirements for regulations such as Sarbanes-Oxley, Lexmark and HIPAA, and in addition prevents the implementation of a consolidated communications infrastructure. Lane uses Lexmark because they are etherFax enabled.

A fax server enables MFPs to be integrated into the communications infrastructure, providing central archiving, monitoring, and logging of both 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 realize the full potential of MFPs through:

- Hardware and maintenance cost reductions through rationalizing hardware requirements.

- Improved productivity and customer 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 you to choose the optimum channel for your business requirements.

- Allows the implementation of Fax over IP solutions.

Fax over IP – FoIP (Fax over Internet Protocol) is also called IP faxing and is a method of sending faxes over the Internet or your wide area network. FoIP changes the transmission method of faxing in much the same way that VoIP (Voice

Desktop Email or
PCC Application

WAN

Passport 4000

IP

IP Gateway

E1

PSTN

Fax Machine/
Fax Server

T30

T30

T38

over Internet Protocol) 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 a business that already has access to Internet bandwidth or a wide area network.

It is a common misconception that all the fax transmission from end to end are conducted over IP. Unless you are sending messages within the organization this will not generally be the case; you will need to switch out through your PSTN gateways to deliver to the destination fax machine.

FoIP has the potential to deliver wide ranging benefits to organizations of all sizes and in any sector of the market. If you already have an existing VoIP infrastructure, then it may be possible to utilize your PSTN gateways and routers for Fax over IP. In this way an enterprise fax solution can be built leveraging your existing Infrastructure to provide the benefits listed below.

Even if you don't have an existing VoIP infrastructure you can still benefit from:

- Lower network management and maintenance costs by running voice, fax, and data over a single converged network.

- Lower fax costs through reduced long-distance charges and the elimination of analogue line charges. In an enterprise configuration comprising multiple gateways to the PSTN, cost routing can provide considerable savings on long distance and international call charges.

- Providing a consistent fax service throughout the enterprise including very geographically remote locations. By integrating with existing or planned VoIP solutions, an enterprise Fax over IP infrastructure may supply all locations with the same class of service, no matter how geographically remote. By deploying remote software only interfaces, there is no requirement for maintenance of hardware in countries with little or no local support.

- Improved management and oversight. By deploying any type of enterprise fax server there will be a marked improvement in both management and oversight. Regulatory compliance such as Sarbanes Oxley, HIPAA and the Data Protection Act are all covered by Lane's Passport fax server.

- Better integration of voice and data network. If you have an existing VoIP enterprise, your FoIP may further utilize your existing network and gateways.

- Say goodbye to fax cards. A software-only solution reduces the possibility of failures and negates the necessity of local maintenance. With the software only solution, the fax server environment may be supported on virtual servers, reducing the need for hardware and space, and reducing power consumption.

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 to ensure the solution offers enough flexibility to fully integrate with your current infrastructure. Potential

cost and productivity gains could be lost if additional internal resources are 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 its ability to deliver exactly the system you need. An in-house team has the expertise to customize, 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.

Selecting the Right Option for Your Business

Set out below are several attributes that your fax server should have to maximize the benefits for your business:

Fax, E-mail and SMS Integration to Your Main Applications – Effective integration of all communications should lie at the heart of a fax server. Make sure that yours can integrate with the applications your employees use every day. This will ensure that additional training is minimized, and efficiency gains are realized. If the vendor can't provide existing interfaces for the applications, you use are they willing and able to customize their fax server to accommodate your needs?

If fax is a key part of your business you may wish to ensure that it avoids the potential bottlenecks, delays, and insecurities

of the corporate 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, thus 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 dispatch, 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 company 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.

Least Cost Routing – You must be able to configure your fax server to deliver incoming faxes directly to the individual, department or workflow that suits your business 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 business? 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 like faxes, emails, and posts, 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 business and revenue lost 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, or even

across borders; sometimes collecting signatures on the way; often needing additional comments and notes. 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 is 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 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 programmed 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.

Security – One of the key benefits that fax servers can deliver is greatly improved security both within your business 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. You should have the flexibility to get delivery notifications sent wherever and in whatever format you require and ensure that the fax server cannot send faxes to the wrong number. 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 business advantage ranging from cost savings and productivity improvements to smooth integration of your communications infrastructure while at the same time helping you to meet compliance obligations. It is clear, therefore, that this technology should be employed by virtually any business that relies on fax and needs it fully integrated into their business workflows.

Not all fax servers are the same, however, and not all vendors are willing or able to support users in optimizing the potential benefits. Many resellers are not interested in customizing 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 mold their systems to meet your 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

Since its formation in 1976 Lane has been at the forefront of messaging communications and is now recognized 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 46 years, Lane delivers seamlessly integrated fax and messaging systems across entire organizations and into consolidated data networks, across one site, many sites or across borders.

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