Microsoft Exchange Integrated Faxing

Leveraging Your Messaging Investment in Microsoft Exchange by Unifying Fax and Email Communications in a Single Interface

The NET SatisFAXtion & Microsoft Exchange combination packs a "1-2 punch" that offers the ability to streamline business processes while reducing costs

FaxBack

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Executive Summary

Microsoft's unified messaging architecture gives users a single Inbox that contains email, voicemail and pager messages. Unified messaging also makes faxes appear in Inboxes. However, faxing is probably the most overlooked aspect of the architecture, and many if not most enterprises that employ Microsoft's solution continue to rely on standalone fax machines.

As much as companies have tried to reduce the use and dependence on fax, they still find that email communications can't replace all faxes. Furthermore, organizing, managing, and keeping track of fax information is a tedious task, and one that companies that use standalone fax machines often overlook.

The pressure for companies to streamline document delivery and messaging processes, boost productivity while reducing costs has never been greater. _These pressures include eliminating manual processes such as hand-feeding documents through a fax machine, faxing from single modem supported applications such as WinFax PRO as well as traditional LAN-based fax servers that are unable to seamlessly integrate with popular email applications such as Microsoft Exchange._

Many companies are quickly realizing that these methods not only waste valuable employee time, but they can be costly in terms of doing business effectively. When you consider that nearly 90% of the documents that are faxed originate on a computer, it is easy to see how a fax solution like NET SatisFAXtion has become an everyday staple of standard business communications.

These days, the best way to deal with faxing is to truly integrate it with your messaging application. Any business that is interested in integrating fax with groupware applications such as Microsoft Outlook will immediately realize the significant cost savings not only an monthly, yearly but long-term basis compounded over years of faxing.

This whitepaper is designed to be a guide for companies looking to integrate fax with Microsoft Exchange/Outlook. It provides an overview of the NET SatisFAXtion Email Gateway, outlining the server and client functionalities as well as the benefits for administrators and Outlook users by combining email-and-fax technologies for any sized organization.

The Challenge in Today's Competitive Business Environment

Building business cases to justify the integration of various systems and applications can be a tricky task. A great business case or ROI calculation may be a prerequisite before implementing new technologies. FaxBack has long recognized that IT is both concerned about and accountable for their company's bottomline and provides customized ROI valuations to help businesses compute their own fax savings analysis.

For system administrators choosing the right technology to integrate with existing applications while enabling seamless communications can be a daunting task. And, finding a solution that best fits a company's unique document delivery environment is critical not only for IT but for Outlook users. Building on existing messaging foundations, such as Microsoft Exchange — technology with which most employees are already familiar — is vital to implementation and acceptance.

According to a recent IDC report there is a real drive to adopt solutions that tightly integrate with existing business processes and that truly enhance a company's ability to communicate and this is especially important as it relate to fax communications. Few businesses can survive without being able to fax documents such as sales quotes, invoices, purchase orders, business contracts and more.

The reliance on email and faxing for business to business correspondence has driven explosive growth in the daily number of documents companies are handling. Being competitive means getting time-sensitive, mission-critical information into the hands of customers, suppliers, partners and employees quickly and easily.

Business Benefits of Fax and Email Integration

Integration is an essential requirement in virtually every IT strategy. Many companies today are leveraging their existing investments in Microsoft Exchange/Outlook as their core messaging platform by deploying NET SatisFAXtion fax servers. By automating the fax transmission process, businesses are realizing substantial cost savings and increased productivity. The NET SatisFAXtion/Microsoft Exchange combination packs a "1-2 punch" that offers the ability to streamline business processes while reducing costs.

Merging fax and email provides a number of significant benefits, designed to meet the rigorous demands for immediate, cost-effective and reliable messaging solutions.

For CIO's and IT Administrators these benefits include:
- Reducing document transmission costs by eliminating dependence on manually faxing via traditional fax machines while incorporating a solution that supports V.34 or "Super G3" fax to cut connection times 20-80%
- Leveraging existing Exchange infrastructures that are already in place
- Providing centralized administration
- Incorporating a schema that end-users are already familiar translating to easier rollout and deployment gains

For end-users these benefits include:
- Ease of use for Outlook users to quickly and easily send faxes with full File Menu Integration with popular Microsoft Office applications
- Easy-to-use, providing a "one-stop" universal inbox for both faxes and emails
- Increased productivity as reliance on traditional fax machine declines
- Less strain on department budgets (much faster to send/receive faxes from a desktop PC versus time spent walking to a fax machine and waiting to send or receive documents)
- Greater confidentiality for private documents
- Assurance that faxes were delivered with email delivery confirmations
- Improving service, saving on overheads and enhancing communications efficiency as users can perform their fax-duties right from their desktops, saving invaluable time
- Using V.34 and JBIG technologies users enjoy much faster response times on inbound fax deliveries so urgent and time-sensitive faxes processed more efficiently than ever

Going Beyond Traditional Fax Server Capabilities
FaxBack, the first fax messaging vendor to do so, incorporated V.34 fax support and JBIG Document Compression technology into its NET SatisFAXtion product line at the end of 2002. The increase in speed performance that V.34 fax support and JBIG Document Compression provides is staggering, especially considering users now have the ability to send what was once a 60-second fax document *in less than 15 seconds.*

With V.34 and JBIG companies are able to enjoy significant performance increases in fax transmission times. Outlook users have the ability to send what was once a 60-second, high-resolution fax document *in less than 15 seconds* using V.34 and JBIG compression technology. For example, a fax document sent at 33.6kbps is more than twice as fast as

one sent at 14.4kbps. So a document that would take 60 seconds to fax using 14.4 can be sent at 30 seconds with V.34. FaxBack goes one step further and utilizing JBIG compression technology is able to deliver this same 60-second fax in less than 15 seconds (results will vary depending on content and graphic intensity of the document).

Getting urgent faxes into the hands of your audience much faster increases your ability to respond to inquiries, process requests and do business more effectively. Delays in delivering your message negatively impact a company's bottomline.
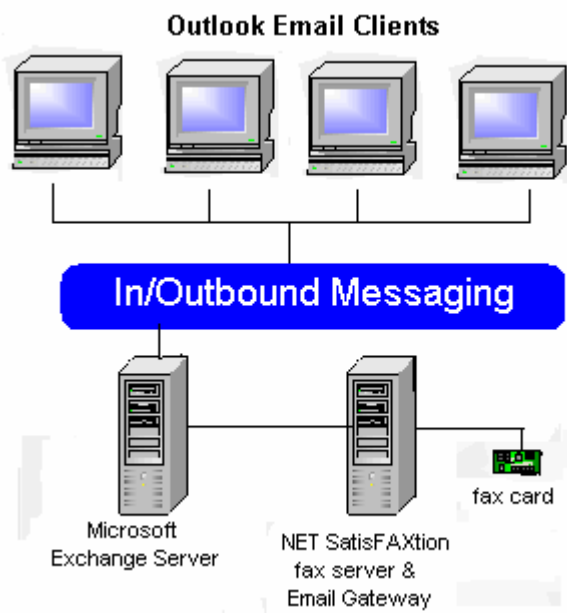
Integration with Microsoft Exchange/Outlook

NET SatisFAXtion is designed to fully complement and integrate with Exchange/Outlook functionality. The Exchange Gateway offers the perfect solution for fax-enabling Microsoft Exchange/Outlook environments. Working as a universal messaging center for e-mail and fax messaging, NET SatisFAXtion allows users to easily send and receive faxes right from Microsoft Outlook exactly as they would send and receive e-mail. So, even if your mail server goes down, NET SatisFAXtion will continue to receive incoming faxes.

The fax server has been engineered to work with your Exchange server(s) without having a significant impact upon your existing system's performance. For example, if your current time for inbound e-mail message deliveries is 20 seconds, you should expect to receive that same performance with the NET SatisFAXtion Exchange Gateway software installed.

Designed to unify fax and email communications in a single user interface, the NET SatisFAXtion Exchange Gateway provides true integration with the Microsoft Exchange Server. The Gateway *operates as a native Exchange service*, providing automatic routing for messages that contain the NET SatisFAXtion address type.

Installed anywhere on your network, NET SatisFAXtion is designed to take advantage of your optimal network design. FaxBack recommends not choosing products that require you to install third-party software on your Exchange server or modify the Active Directory schema. If a fax server adds extra 'tabs' to user settings in Active Directory, then the schema is modified. This can filter down to other domains or cause headaches when upgrading to newer Windows or Exchange versions or installing service packs.

Outlook Email Clients

In/Outbound Messaging

fax card

Microsoft Exchange Server

NET SatisFAXtion fax server & Email Gateway

A key advantage, appreciated by many administrators, is that the fax server and Gateway software are not installed on the Exchange server.

Many network managers prefer to keep their Exchange server(s) only for Exchange and the idea of installing additional software on a dedicated box can pose large potential problems.

Thus many companies avoid such fax solutions as they want no residual effects on the operation of their Exchange server(s) or have to worry about rebooting the Exchange server each time a new service pack, version or license is installed.

Server-Side Feature Set:
- Extensive logging with SQL provides data integrity and scalability
- Advanced, easy-to-use reporting tools provide in-depth snapshot of system use
- Notification engine to instantly alert administrators to potential problems
- Key modules built with .NET code to ensure rock-solid stability
- Flexible inbound routing options including CSID, DID/DTMF/DNIS, AIR, manual routing to individual user's inboxes and printing to a network printer
- Supports Super G3 (v.34 fax) and JBIG document compression technology to reduce traditional fax connection times from 20-80%
- Delivers inbound faxes as PDF or TIF file attachments to Outlook users' inboxes
- "WYSIWYG" (What you see is what you get) file-to-fax rendering of email attachments
- In depth reporting/billing tools
- Hassle-free installation and configuration
- Validation feature to control outbound faxing (prevent faxing to 900#'s, 911, etc.)
- Keep track of fax activity with detailed logs
- View the real-time status of all fax activity
- Create both personal and system-wide cover pages
- Supports Exchange 5.5, 2000, 2003
- Optimized to take advantage of security and stability features unique to Windows 2000/2003/XP
- Supports popular fax boards for multi-line faxing and routing at a fraction of the price
- Automatic back-up and restore of all server settings, registry information and more

Client-Side Feature Set:
- Use Outlook to send, receive, manage and track faxes
- "Print-to-Fax" print driver allows users to send fax directly from popular Office applications like Microsoft Word. Faxes "printed" and sent from within Office applications are stored in the Sent folder of Outlook.
- Send to fax numbers and email addresses in one message
- Enables users to click toolbar buttons for quick fax sending from their Outlook client
- Flexible cover page design options for personal or system-wide use
- Phonebooks/fax contact list integration so there's no need to maintain separate address books
- Preview faxes and cover pages before they are sent
- Outlook users can attach files for "WYSIWYG" rendering to fax images by the fax server
- Notification and real-time status information lets email users be alerted to a variety of messages about send and received faxes in the Outlook inbox

Administering NET SatisFAXtion

For a successful network fax server deployment several key ingredients must exist to ensure hassle-free, seamless communications. First, powerful monitoring and configuration tools combined with detailed reporting and tracking capabilities are essential to make managing your fax server(s) a snap.

Secondly, centralized administration lets you easily set-up and manage users and groups, analyze system usage and perform real-time systems monitoring. For a distributed or tiered office or workgroup, administrators also have the option to allow department heads and other MIS managers the ability to manage their own fax server for localized control and flexibility.

A third critical element to a successful fax server implementation, is the ability to set-up and configure Outlook users easily. Within the administration program, network managers can quickly specify user defaults and assign custom attributes.

Routing methods, transmitting options, accounting codes for tracking fax-related costs, fax page header information, retry schedules, and cover pages for individual users or system-wide can all be set-up. Administrators may also assign Outlook users to "groups" for quick fax distribution. Just as a sales manager may email a large group with a new pricing or product information sheet, he or she may also fax to a group for rapid distribution.

Routing Schemes

Administrators will need to determine how network users will receive incoming faxes. NET SatisFAXtion can route inbound faxes to users, public folders, distribution lists and network printers. The fax server supports a variety of schemes allowing administrators to choose the most effective method of routing faxes in their environments. These include CSID, DID, DTMF and AIR (round-robin method of distributing faxes within a defined group of users). Faxes can also be manually routed.
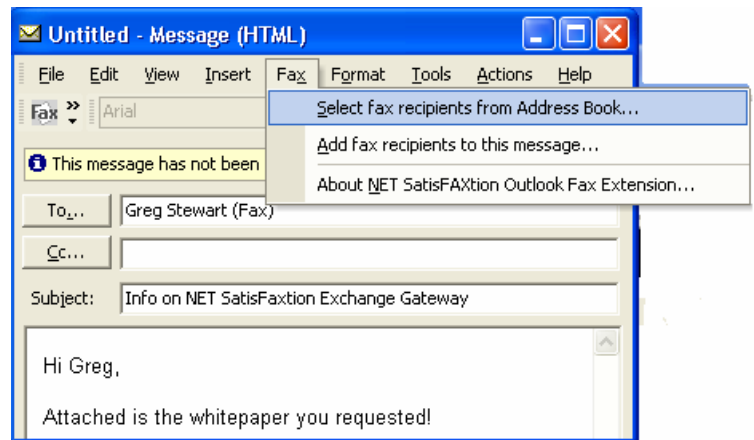
Incoming faxes are routed to the Outlook inbox as email messages with attachments containing the fax pages as images. Attachments can be TIF or even PDF file. Once a fax been routed to a Outlook user's mailbox, they may view, store, print, re-route, fax, or forward these faxed messages exactly as they would with an inbound email.

Using the Microsoft Outlook for Faxing

With the NET SatisFAXtion Exchange Gateway, Outlook users can send/receive faxes as easily as they send/receive email. Users have a choice of fax addressing options including:

- Select fax recipients directly from Outlook Address Book Contacts
- Click the "Add Fax Recipients to this Message" from within the Outlook new message dialog box to specify addressing information
- Manually address a fax by entering a syntax string in the "To" field of Outlook Example: [NS: faxnumber]
- Print-to-Fax directly from popular Office applications such as word. Select File > Print > Email Attacher to automatically fax a document or set of documents via fax using Outlook.

File Attachments

Outlook users simply compose a text message, and attach any document(s) into the body of the e-mail message. Users can send files from different applications so that they appear as a single fax. Combine Microsoft Word documents, PowerPoint files, HTML pages into one fax.

After clicking Send, the message is directed to the NET SatisFAXtion server where attachments are auto-converted into faxable images and then delivered as clear, crisp faxes. Outlook users can also send mixed emails and faxes in one message for quick distribution.

Users receive faxes in their Outlook inbox as attachments to email messages – exactly they would receive an email message with an attachment such as a Word document. File attachments may be TIF or PDF files. An Outlook user simply double-clicks on the attachment to open the fax in Adobe Acrobat (as a PDF) or their Windows default viewer.

File-to-Print Integration from within Windows Applications
Desktop users can easily send faxes from whatever
Windows application they are using by simply
select File > Print from the menu bar of their
application.

Right from PowerPoint, as seen in the example, a user can
select a document or multiple documents to combine into
one fax. Preview, Save or Send your fax immediately through
Microsoft Outlook.

A contact can be selected from your Outlook contact manager
and include a message in the body if you would like it to appear
on a cover page.

Notification of Sent Faxes from Outlook
Most fax servers use a "store-and-forward" method for delivery.
The message and delivery instructions are forwarded from the
desktop to the server. At this point, the user is disconnected
from the status of the message. Only after the message has been
delivered (or has failed) does the user receive any feedback. The
server sends a confirmation message back to the user's Outlook
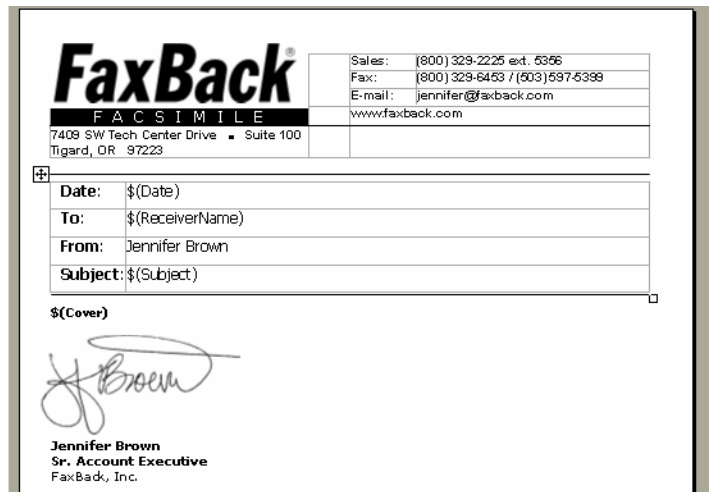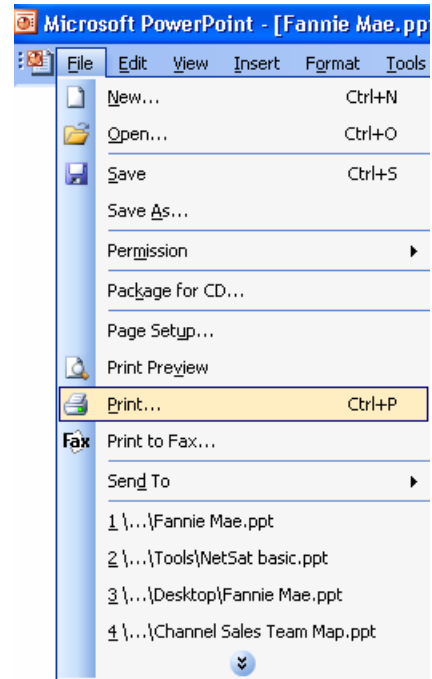Inbox.

In an effort to provide the highest level of delivery assurance, FaxBack designed NET SatisFAXtion to
provide real-time message status from any desktop for users that need this type of assurance.
FaxBack's real-time message monitoring technology allows end-users to view the actual progress
of their fax to the receiving fax device.

So, just as if standing at a fax machine, the user can actually view the receiving fax device handshake
with the fax server and begin receiving pages. Thus, NET SatisFAXtion preserves the real-time delivery
confidence in fax delivery that has been lost with other email-to-fax implementations. Users know
instantly if their email-to-fax message was received, was incomplete or failed.
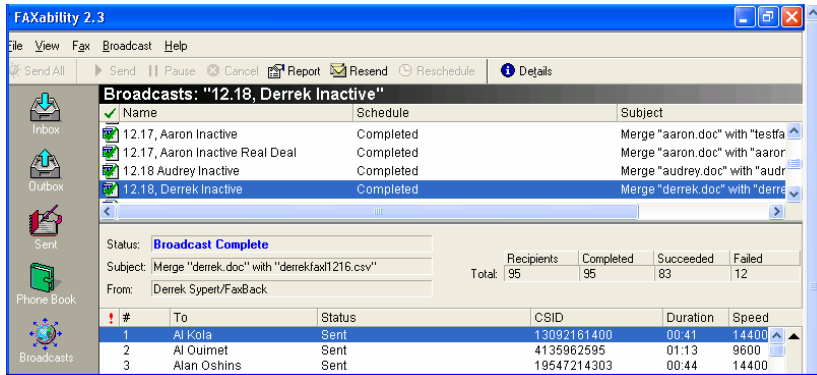
Cover Page Design Options

NET SatisFAXtion's flexible cover page design
options allowing users to create their own RTF
(rich-text formatted) business-quality cover
pages using any word processing application like
Microsoft Word, WordPad or Corel WordPerfect.

Once an Outlook user hits the Send button,
their message is directed to the fax server
where it automatically fills in the email-to-fax
generated cover page with recipient
information, fax number and subject.

Expanded Client-Side Flexibility with FAXability

Another client option for Outlook users is FAXability. Every NET SatisFAXtion fax server includes an unlimited user license file.

At less than 1 MB in file size, FAXability is a browser-based fax application for network users to connect and send and receive faxes from virtually anywhere.

FAXability also functions as a print capture utility. It is essentially a client print driver that installs on any Windows application and allows end-users to convert, save, e-mail and fax any document in just a few easy steps from their desktop. Once installed on a user's desktop it appears as a printer choice in all the Windows applications that your attachments originate from.

Fax Hardware Support

FaxBack is unique in that it writes directly to the fax hardware which translates to even greater reliability than other fax server manufacturers are able to provide. This gives you the ability to mix-and-match fax hardware in the same box as well as allowing for a hassle-free installation. With our ability to automatically detect network protocols, ports and fax hardware you save the painstaking and complex process of installing a fax server. FaxBack engineers have written directly to the fax hardware so companies aren't caught in the "whose fault is it" dialog that can occur between fax server vendors and hardware manufacturers.

Recommended hardware includes fax cards from:

- **Brooktrout**

- **Eicon Networks**

- **Mainpine Ltd.**

Capacity and Scalability

For many companies, faxing volumes vary widely and over time. Entry-level software starts at 2 fax ports and scales to support a maximum 96 ports of fax per server (4 T1's per system).

A FaxBack account representative can help you sort out several factors to keep in mind when determining how many ports your organization requires:

- How much existing fax traffic will the fax server have to support?
- How much new fax traffic will the existence of a fax server create?
- How much fax traffic must be handled during peak hours and/or the execution of major fax applications, like broadcasts?
- What kind of fax boards will be used and what are the relative throughput speeds they support – and, to complete this equation.
- How much queuing delay is tolerable for outbound faxes (in other words, how much time is tolerable to have a fax wait in a queue before it is sent)?

Summary

In most companies, the unified messaging approach means integrating fax functionality with Microsoft Exchange Server. Such integration means that your Outlook clients serve as the locus of user interaction for email and fax communications. Outlook users can easily originate outbound faxes from any client computer, and the integrated fax server software uses Exchange to deliver the faxes to their destination Inboxes. Moreover, Fax/Exchange Server integration has the added benefit of simplifying fax service rollout across the enterprise. When users take advantage of Outlook's fax functionality, they don't need to learn a new application – a few simple Outlook toolbar buttons give them access to the fax service.

For over twenty years FaxBack has been a leading fax messaging company with solutions that radically simplify the way organizations communicate. We provide award-winning network fax servers, fax-on-demand, broadcasting and web-to-fax solutions that streamline information processes, get time-sensitive information into the hands of your audience faster than ever before while reducing the cost of doing business.

First introduced in 1990, NET SatisFAXtion is an award-winning fax server with tens of thousands of fax servers installed in North America alone. Designed for organizations that need to control and simplify their fax communications, it is enjoyed by thousands of global organizations including AT&T, Arco, Bank of America, Compaq, Kaiser Permanente, Kodak, NEC, Sherwin-Williams and Wells Fargo. Countless other organizations in nearly every industry from real estate to manufacturing and travel to education and healthcare trust FaxBack and NET SatisFAXtion for their fax communications needs.

NET SatisFAXtion was a recent recipient of the Windows .NET Magazine Reader's Choice Award for network fax servers.

Backed by our software and years of industry expertise, companies can drastically reduce their costs, increase efficiency and position themselves to meet the business communication demands of today. Any business that is interested in integrating fax with groupware applications such as Microsoft Exchange will immediately realize the significant cost savings not only an monthly, yearly but long-term basis compounded over years of faxing.

More Info

FaxBack, Inc.
7409 SW Tech Center Drive, Ste. 100
Tigard, OR 97223

Voice: (503) 597-5350 or 1-800-329-2225 ext. 5350
Fax: (503) 597-5399 or 1-800-329-6453
Web: www.faxback.com
E-mail: info@faxback.com