



WHITE PAPER

Electronic Fax Integration Solutions for IBM Lotus Notes

Streamline Business Communications by Leveraging
the Combined Technologies of Fax, Email and Notes Mail

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EXECUTIVE SUMMARY

With significant investments in their IT infrastructure, successful businesses around the world know that developing an efficient and economical document delivery strategy depends on finding a solution that not only leverages the capabilities of individual messaging systems such as email, voicemail and fax, but also integrates these technologies in a way that saves both time and money.

This white paper is intended as a guide for companies looking to streamline business communications by integrating fax with applications such as IBM Lotus Notes. It also presents an overview of the Captaris RightFax Lotus Notes Module, outlining the robust technology that lets Notes' users send and receive faxes from the familiar Notes client. RightFax takes into account the needs of users, IT administrators and business managers by providing the most complete, seamlessly integrated, scalable and reliable electronic fax and document delivery solutions available today.

BENEFITS OF FAX AND EMAIL INTEGRATION

While many businesses have invested significantly in corporate email infrastructure to link their companies and employees to the rest of the world, fax continues to play a key role in providing secure and reliable document exchange. Emerging technologies today offer unparalleled opportunities to integrate fax and email, even voicemail—to streamline business processes and reduce costs.

Choosing the right technology to enable seamless communication is critical for both system administrators and users. Building on the foundation of email messaging—technology with which most employees are familiar—speeds up implementation and acceptance, as well as reduces the need for training and end-user support. This one interface can connect everyone in the organization regardless of workstation type or location.

Integrating fax and email provides a number of substantial benefits, all designed to meet the demands for immediate, cost-effective and global business communications solutions.

For IT administrators, the benefits of fax and email include:

- Leveraging existing IT network infrastructure
- Single-point administration, including remote access to administrative tools
- Reduced document transmission costs
- Lower system maintenance, support and training costs
- Rollout and deployment gains

For network users:

- Easy-to-use, centralized universal Inbox in which to manage communications
- Improved productivity
- Global, remote access to critical business documents whether on the Local Area Network (LAN), Wide Area Network (WAN) or the Internet
- Reliability of document delivery with confirmation and customizable notifications
- Document confidentiality and enhanced security

RIGHTFAX ARCHITECTURE ADVANTAGES

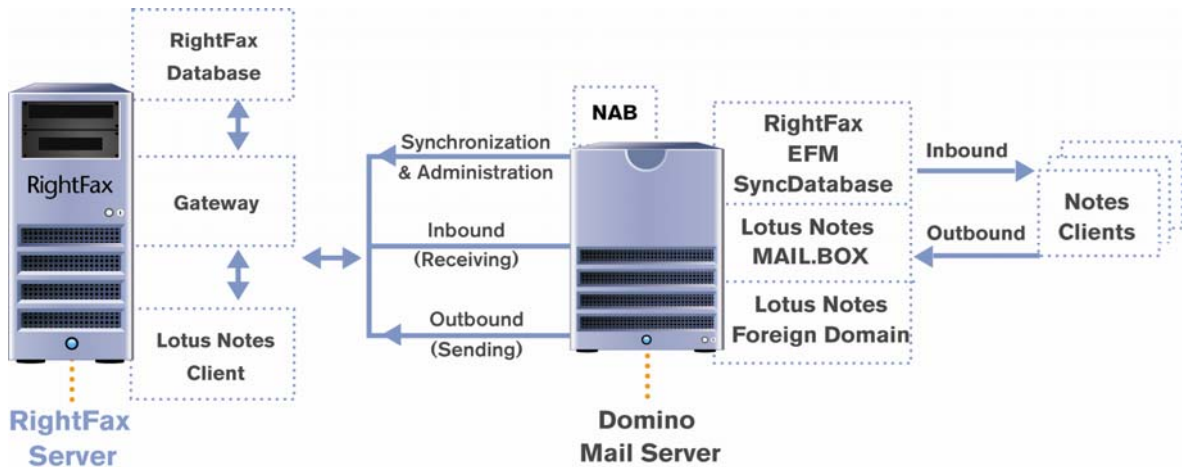
RightFax Servers and email modules offer a distinct design advantage over less robust fax servers. Built exclusively to serve as a document delivery engine, RightFax does not rely on the operation of a mail system to enable the sending and receiving of faxes. Even if the mail system is down, faxes can still be received and transmitted with RightFax.

Other fax servers that boast complete integration with mail servers actually rely on these mission-critical business systems for fax transmission processing. In such cases, any downtime on the email server means that fax service is also interrupted. In some instances, a company's entire messaging system can be brought to a standstill, cutting off vital business communications. In addition, mail-dependent fax servers cannot connect to other business applications without integrating through the mail system.

The RightFax Lotus Notes Module RightFax technology is uniquely designed to complement and extend Notes/Domino functionality, without drawing resources away from those critical systems and applications. Throughout the development of RightFax, Captaris focused on four key points: (1) The product must be easy to use; (2) the product must not tax the already processor-intensive Domino services; (3) RightFax document delivery processes must be able to successfully complete regardless of the status of the Domino server; and (4) the integration should provide advanced fax functionality without requiring modifications to the Notes mail template.

Figure 1 highlights several of these points. By off-loading the module to a Lotus Notes client installed on the RightFax Server, the module runs independently of the Domino server and its processes. By creating efficient and independent fax technology, RightFax moves ahead of other applications in the areas of server stability and independence.

Figure 1. The RightFax Lotus Notes Module Architecture



As seen again in Figure 1, the RightFax Enterprise Fax Manager (EFM) Sync Database resides on this server. As a component of the Lotus Notes Module, this critical database allows for complete administrative autonomy of RightFax from within Lotus Notes. This means that Notes administrators never need to leave the Notes client in order to administer RightFax. This efficiency is possible because of unmonitored database synchronization.

As far as routing of inbound and outbound faxes, the standard Notes mail messaging transport architecture is among the finest available. After all, your company has invested in Notes and Domino because it is a proven leader in document-based delivery and workflow application development. Captaris recognizes the advantages of this best-of-breed technology. The diagram illustrates users' Notes clients configured to transport fax documents through the standard MAIL.BOX and mail router databases.

Finally, this diagram confirms the sensibility of the RightFax gateway architecture—a solid architecture with a simple workflow that offers fault-proof independence while taking advantage of the best strengths of the Domino system.

SINGLE-POINT ADMINISTRATION

The flexible architecture of RightFax lets decision-makers determine how best to leverage the power and functionality of corporate email systems such as IBM Lotus Notes. The RightFax Lotus Notes Module allows inbound and outbound faxing via RightFax directly from the Notes client application. The module also permits database synchronization between Notes and RightFax, as well as unified administration of both servers.

Both the RightFax Lotus Notes Module and a Notes client are installed on the RightFax Server. Using this Notes client, the gateway securely logs on to the Domino server, routes incoming faxes as mail messages to Notes client mailboxes, picks up mail messages with outgoing faxes and delivers them to the RightFax Server for transmission.

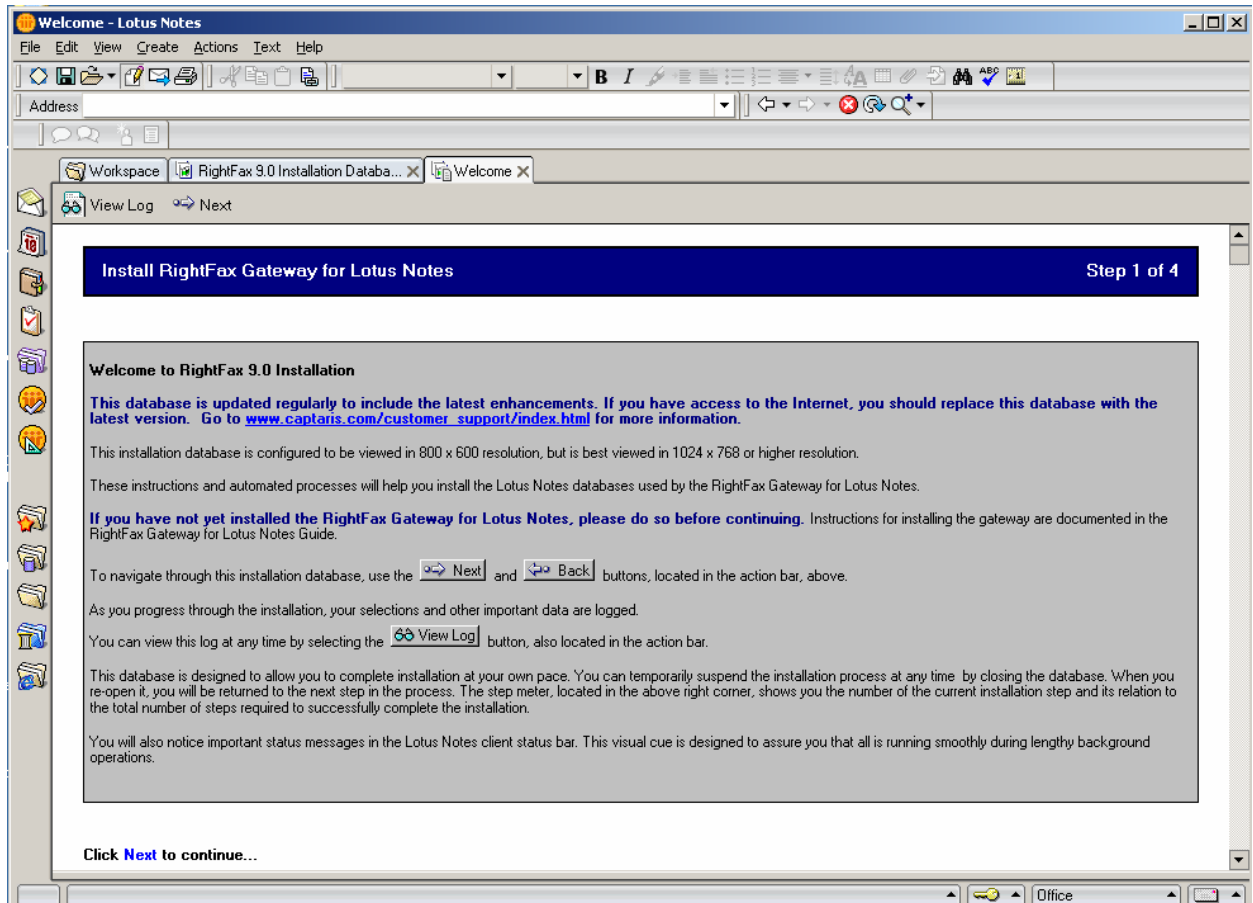
The RightFax Lotus Notes Module also installs several RightFax-specific databases on the Domino server. Because the RightFax database is stored on both servers, RightFax configuration and administration can be performed on either server and then automatically updated.

RightFax offers a number of features designed for ease of administration and system efficiency:

- **Scheduling Options:** Fax transmissions can be scheduled to balance workload or to take advantage of off-peak rates.
- **Least-cost Routing Options:** Sophisticated RightFax dialing rules ensure that a fax is sent successfully by the best method, using many different levels of dial-string matching, including fax number pattern, priority, time and day restrictions, initiating user/group and server availability. The system is flexible so that administrators can construct rules to send the fax correctly every time, regardless of the format in which the user enters the fax number.
- **Reporting and Billing Analysis:** RightFax can track two billing codes and one unique document ID per fax and validate the codes for accuracy before sending. In addition, a wide selection of built-in models can be used to generate usage and billing reports with the RightFax Reporter.
- **User Account Synchronization:** RightFax can automatically synchronize user accounts in Lotus Notes with RightFax user accounts.
- **Unified Administration:** Mail and fax user properties can all be maintained within the Notes mail system.
- **Auto-Enrollment:** RightFax gateways can be configured to allow any email message with the correct fax format to be sent via RightFax. In addition, the Lotus Notes Module features Auto-Enrollment, which allows user accounts to be created the first time a fax is sent, if they do not already exist on the RightFax system.
- **Integration options:** Leverage iNotes "no mail," "minimal mail" and "full mail" integrations including linking to Web-based faxing forms and access server-side contacts and settings using the same requirements and use-cases of the Lotus Notes client.

Native Notes Installation For Notes administrators, RightFax includes native Notes installation and on-demand synchronization. Providing complete administrative autonomy, RightFax allows Notes administrators to access and modify RightFax settings and configuration options from directly within Notes. With this built-in efficiency, fax administration becomes effortless.

Figure 2. Native Notes installation, written entirely in LotusScript

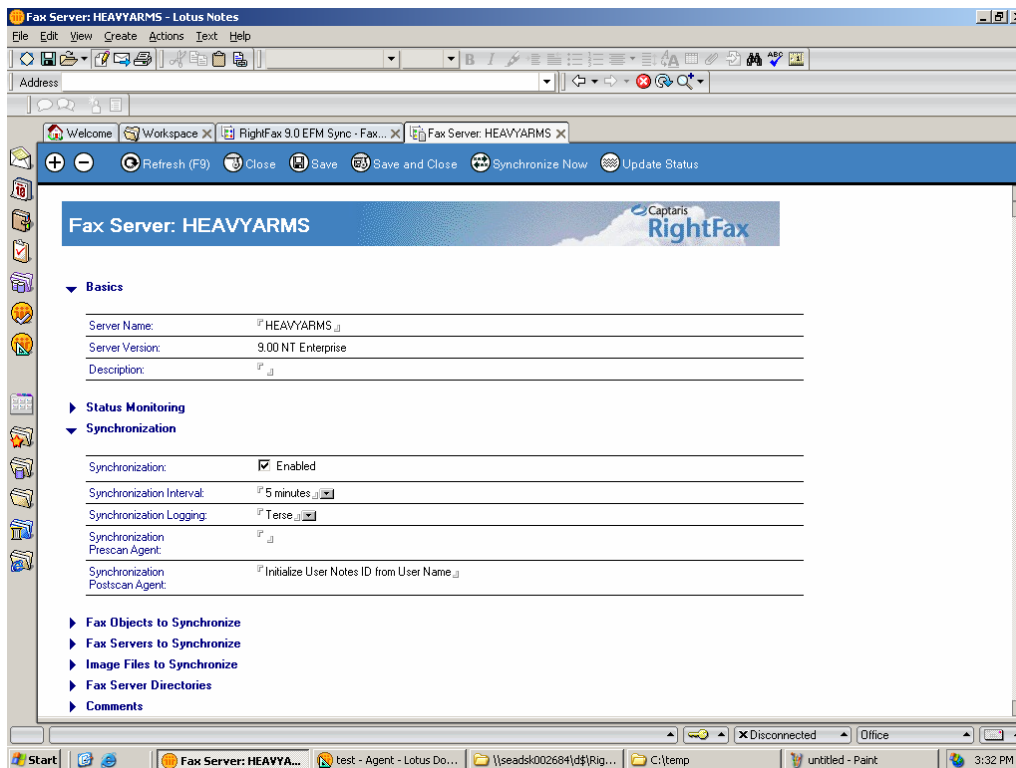


Once the RightFax Lotus Notes Module has been installed, fax objects in the RightFax database are replicated to the Domino server. This mirrored RightFax Sync Database lets Notes administrators access and modify RightFax settings and configuration options directly within Notes. Because no modifications to the Notes Name and Address Book (NAB) are necessary, the integrity of the Domino server is preserved, simplifying upgrades.

Fax Object Administration and On-demand Synchronization The RightFax EFM application houses such fax objects as fax user records, fax user groups, billing codes, cover sheets, overlay forms and library documents. These objects supply the options available to users when they compose a new fax document.

The RightFax EFM Sync Database mirrors fax objects found in the EFM application on the Domino server. The module synchronizes the two data stores, so that fax objects can be created and modified in either location. This architecture results in the benefit of being able to manage the RightFax application from within the familiar IBM Lotus Notes client. Fax administrators can therefore ramp up quickly, without having to learn to use the RightFax EFM application.

Figure 3. Synchronization configuration of the mirrored fax objects in the EFM Sync Database in Notes



As part of the module configuration, Notes administrators can specify intervals for a wide range of processes. The RightFax Interprocess Communication Document (ICD) provides more flexible options for administrators to override set intervals and allows for on-demand processes, such as "Synchronize Now." This feature is available to system administrators or users with administrative rights to EFM.

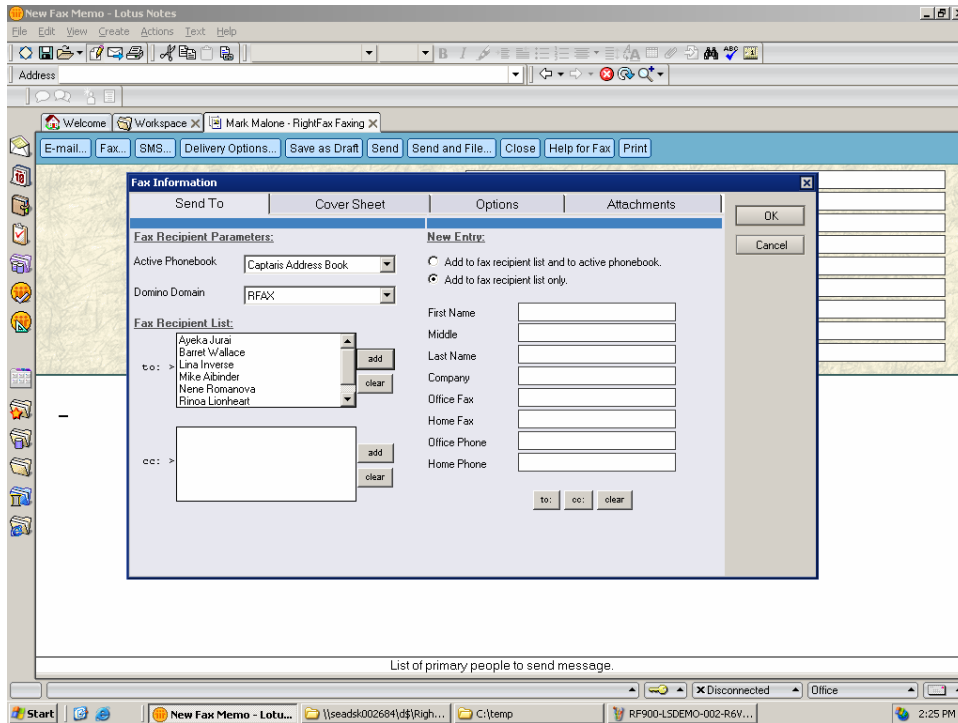
Using Notes Fax Forms The Advanced Fax Form is an example of how the architecture of the RightFax Lotus Notes Module is designed to enhance the user experience. It is an optional design element that can be changed to the Notes mail database to provide finer control over the details of an outbound fax document. This form is based on the standard Notes memo form, but contains additional fax addressing fields. This form allows the user to send a fax document using the advanced features of RightFax but without requiring the potentially inaccurate methods of standard fax addressing and embedded codes. It does this via the Fax Form dialog.

The "Send To" tab allows the user to address the fax by selecting Person or Group entries from the Notes Personal Address Book, from up-to-five Notes Public Address Books or Domino directories, or from the RightFax public and private phonebooks. In addition, the fax can be addressed simultaneously while adding new address book or phonebook entries on the fly. This shortcut allows fax users to manage their fax contacts from within their Notes mail database, and negates the need to manage fax address data across multiple sources.

The "Cover Sheet" tab permits the assignment of a cover sheet from the cover sheet library, stored in the EFM application and EFM Sync Database. Also, the fax document can be delegated as from another user. Both of these options can be secured or disabled by the fax administrator, completely from within IBM Lotus Notes.

There are several other options available to the advanced fax user. The outbound fax can be addressed to be delivered at a future date and time. If enabled by the fax administrator, billing codes can be assigned or library documents attached from the library document store in the EFM Sync Database. Finally, each user can configure how Server Side Applications (SSA) attachments will be rendered by the RightFax Server engine. SSAs are popular software products with powerful graphical interfaces that can be instructed to modify their appearance to such devices as printers, fax devices or mobile devices. For example, a fax user can request that RightFax not render the cell patterns and shading formatted in an attached Microsoft Excel worksheet.

Figure 4. Sending a fax within Notes using Fax Information Dialog and NAB



RightFax administrators can install a customized fax form on desktops to expand and simplify the process of sending faxes via Notes. The Notes fax form can be installed on each client workstation with standard Notes "push" technology to ease deployment.

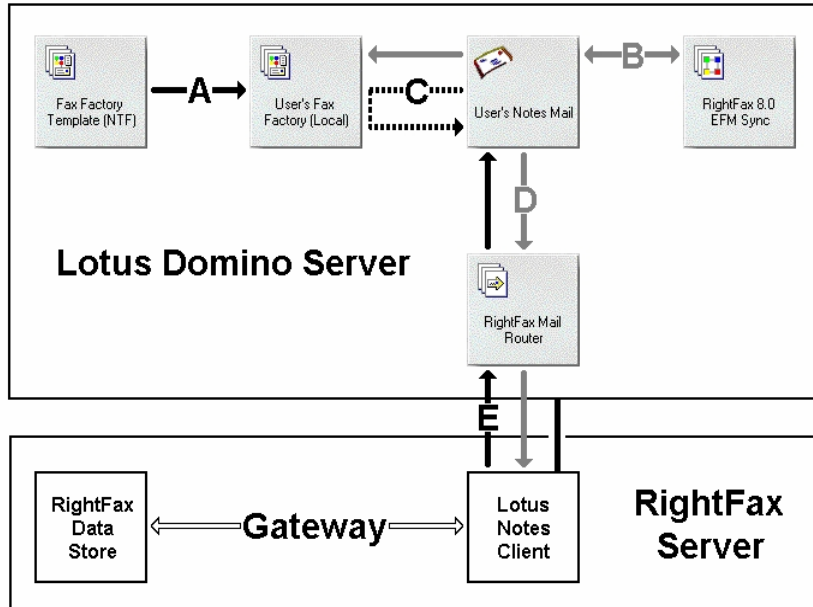
Fax Factory Data Flow The customized fax forms are stored in the "Fax Factory" template on the Domino server. No modifications are needed to the Notes mail template.

Following the Fax Factory data flow diagram in Figure 5:

- A. The user's local Fax Factory database is kept up-to-date by inheriting its design from the Fax Factory template, stored on the Domino server. This permits the fax administrator to centrally update the Fax Factory while also off-loading fax composition tasks from the Domino server.
- B. User-specific data and preferences are stored in the Fax User Options document in the EFM Sync Database. Whenever the user opens the mirrored Fax User Options document in their Notes mail database, the current data is pulled into the document from the EFM Sync Database. The document housed in the mail database has a stored form so that no modifications to the database's design are required. When the user saves changes, the data is updated in both the EFM Sync Database and the local Fax Factory database.

- C. Users compose a fax by activating an agent stored in their mail database. The agent redirects composition of the document to the local Fax Factory database. When saved or sent, the document is stored in the user's mail database. This functionality is invisible to the user, since the interface of the Fax Factory database is identical to the mail database. By off-loading fax functionality to the Fax Factory, robust features can be accomplished without the need for modifying the design of the mail database.
- D. Outbound fax documents are delivered via standard Domino mail mechanisms. Fax rendering as well as delivery out of the Domino environment are handled by the gateway service on the RightFax Server. This frees Domino server resources for Lotus Notes and Domino tasks.
- E. Inbound fax documents are processed by the RightFax Lotus Notes Module on the RightFax server. These are then passed to the Domino router task for standard Notes mail delivery. Because delivery is the only task handed to the Domino server, fax traffic only impacts the Domino mail router task.

Figure 5. Fax Factory Data Flow Diagram



RightFax Web Delivery Web delivery is an option for Notes administrators who prefer not to store fax images (many are extremely large document files) on the Domino mail server. With RightFax Web delivery, fax recipients receive only an email notification with a hyperlink to the actual fax document, which is stored on the RightFax Server. The RightFax Web Access Module is required for this feature.

SEAMLESS, INTUITIVE USER INTERFACE

RightFax provides a comprehensive feature set that lets users perform virtually every fax function from the familiar Notes mail interface. Since the gateway is installed on the Domino server, there is no need to install additional software on each desktop and no need for additional training.

Sending and Receiving Faxes in Lotus Notes RightFax makes sending and receiving fax documents as simple for users as using Notes mail. Faxes can be addressed to one or more destinations, including mixed fax and email addresses, using a simple dialog (see Figure 4). Advanced fax functionality is available to expand and simplify the process of sending faxes via Notes, all without modifications to the Notes mail template. Giving users tools to work within their familiar Notes environment reduces training time and streamlines communications processes.

When a user faxes a document from Notes, the RightFax Lotus Notes Module delivers the document to the RightFax Server. RightFax renders the document to fax format, adds a cover sheet or any specified library documents, and then, transmits the document over phone lines, an intranet or the Internet.

Once the fax is sent, it appears in the user's Sent folder. Fax documents are specially marked with user-defined icons to distinguish them from sent standard Notes mail messages. Fax documents delivered by the RightFax server into the Notes mail database also have user-defined icons to set them apart. Both inbound and outbound fax icons are configured in the Fax User Options Document.

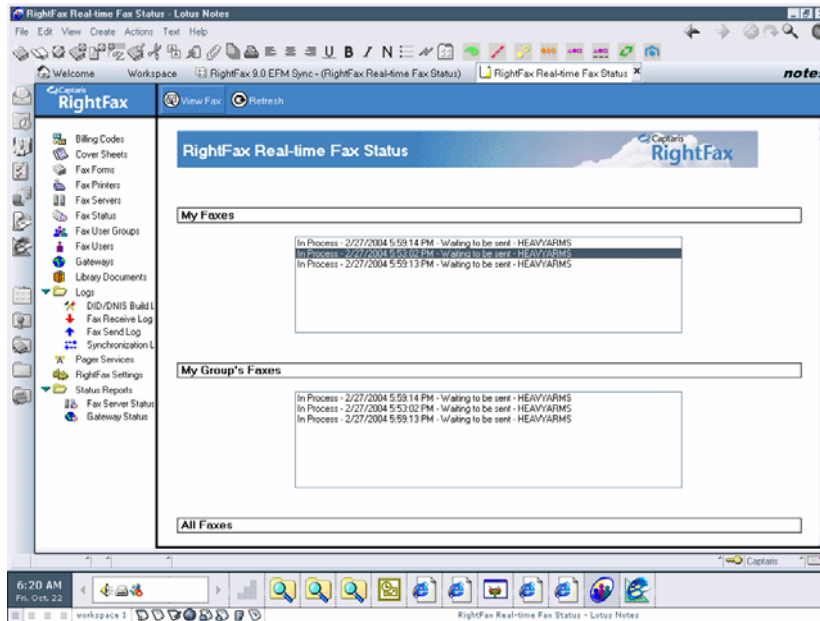
Users open fax documents just as they do Notes mail messages. Each fax document contains a special header that details receipt information. The fax pages are attached to the document as either a Tagged Image File (TIF) or Portable Document Format (PDF) image. The format is configured again from within the EFM Sync Database.

Users view the fax image just as they would any Notes attachment. Right-clicking on the image presents the attachment sub menu. The "Launch" option opens the fax in the associated image viewer.

RightFax offers a "Hold for Preview" option, as well, allowing users to check fax documents before they are sent.

Real-time Status and Notification A wide variety of notifications on both inbound and outbound faxes can be setup and routed as appropriate. RightFax allows users to modify and set individual preferences, including fax status and notification options. For administrators, separate RightFax event logs and status reports can also be generated and stored in the RightFax Sync Database.

Figure 6. Real-time fax status view, displaying documents in process, held documents and documents sent



Additional Features and Resources for RightFax and Notes Users RightFax continues to enhance features and functionality of the RightFax Lotus Notes Module so that it is more than just a conduit for delivering documents. Here are some additional features included:

- Full return of failed outbound faxes ensures that users receive, intact, any fax document that cannot be delivered out of the Domino server.
- The auto-forwarding feature allows users to not only automatically route fax documents as needed, but to route regular Notes mail as well.
- Notification messages provide essential feedback to users of the status of their fax traffic, conveniently from within their Notes mail database.

THE RIGHTFAX DISTINCTION

RightFax is at the forefront of today's document delivery market with the most complete, seamlessly integrated, scalable electronic fax and document delivery solution available. Continuing to deliver innovative solutions that drive the industry forward, RightFax brings significant advantages to companies wanting to leverage existing systems to streamline communications processes, speed information delivery and dramatically reduce the cost of doing business.

World-leading RightFax integrates with Lotus Notes and other business applications to provide easy-to-use, easy-to-manage enterprise fax and electronic document delivery capabilities. The RightFax Lotus Notes Module links Notes with RightFax advanced desktop faxing features, creating a unified fax and email solution from the familiar Notes mail interface.

RightFax has also been certified on Microsoft Windows 2003 Standard and Enterprise Servers. This certification shows a high level of commitment to reliability and providing enterprise-class solutions.

For companies that want a single, enterprise-wide fax solution, RightFax Servers and modules provide a full range of document delivery capabilities. Customers can start with one RightFax solution and add modules to fax-enable not only email applications, but CRM, ERP, mainframe and multifunction products as well. This modular approach leverages a company's investment in its fax server technology and simplifies installation and ongoing administration.

CAPTARIS AND IBM LOTUS TEAM UP AS SOLUTIONS PARTNERS

Captaris has built strategic alliances with leading technology vendors, including IBM Lotus, Canon, Hewlett-Packard, Microsoft, Xerox, Oracle, SAP, Sharp, Siebel and Xerox to enhance customer offerings. Captaris engineers and developers work closely with strategic partners to ensure tight integration and reliable operation.

FOR MORE INFORMATION

Captaris Business Information Delivery solutions help organizations automate the information and document flow throughout the information lifecycle (capture, process, manage, deliver). With a comprehensive suite of software and services, Captaris helps organizations to grow revenues and increase profits while meeting compliance goals. Through a global distribution network of leading enterprise technology partners, Captaris has installed more than 90,000 systems in 95 countries in companies of all sizes, including the entire Fortune 100. For more information, visit www.Captaris.com or call 1.800.443.0806.

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