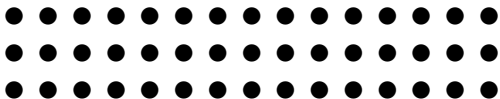


Production Fax white paper

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Electronic Solutions for Streamlining Business-to-Business Communications

*Meeting the Document Delivery Challenge in
Today's Business Climate*



RightFAX[™]

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Executive Summary

Companies today are under increasing pressure to streamline business processes, expedite the communication to suppliers and customers, and reduce costs. Intense competition makes high levels of efficiency essential to success. Shareholder expectations for growth and increased profitability keep the pressure on. Many companies are expanding their reach to global markets in an effort to maintain growth levels. What's more, the emergence of e-mail, the Internet, e-commerce and other new technologies has raised expectations for speed in information delivery.

Adapting to these new dynamics presents a significant challenge. Purchasing, inventory, order entry and financial applications, as well as enterprise resource planning (ERP) systems, generate huge volumes of business-to-business communications. These enterprise applications, however, do not address document delivery. Most companies still rely on the postal service or general-purpose facsimile technologies to deliver documents. Neither of these methods adequately addresses the speed or volume required for delivering business-critical documents produced by enterprise applications.

This paper examines the document delivery challenge and presents production fax as a powerful solution for speeding business-to-business communication while reducing costs. In addition, it describes the requirements for an effective production fax solution. It also presents the innovative line of scalable RightFAX® fax servers and modules, which provides simultaneous high-volume fax services to mainframe, midrange and local area network (LAN) applications, electronic data interchange (EDI) translators and e-mail.

The Document Delivery Challenge

Most business-critical applications reside on legacy host computers, such as IBM® mainframes and AS/400 systems. Purchasing, inventory, order entry, financial and other enterprise applications generate huge volumes of business-to-business communications—purchase orders, acknowledgments, invoices, pick lists, shipping reports, bills of lading, loan documents and other critical business documents. In addition, a growing number of companies are implementing ERP systems such as those from SAP, Oracle, PeopleSoft and Baan. These solutions deliver significant savings and greater efficiency by automating the flow of information within the organization. They also generate a large volume of business-to-business communications.

The problem is that enterprise applications, including ERP systems, don't address document delivery. Most companies must rely on the postal service or general-purpose facsimile to deliver documents. Traditionally this is a labor-intensive, manual process that involves:

- Printing, bursting, folding, stuffing envelopes and mailing documents
- Or printing documents, taking them to the fax machine, waiting in line and often waiting to confirm that they are faxed to the recipients.

These manual processes are costly. In large organizations, the volume is huge—thousands to hundreds of thousands of documents per month. Mailing costs \$1.00 or more per document, while faxing costs \$0.10 per document.

With the growing emphasis on speed, mail delivery is often too slow. The postal service typically takes several days to deliver documents domestically and significantly longer for international deliveries. The result is longer lead times for purchasing, which may necessitate maintaining higher inventories to compensate for delays in receiving shipments. Delivery of invoices also takes several days, increasing days sales outstanding (DSO), the number of days' worth of sales in accounts receivable (or average collection period for accounts receivable). Furthermore, documents sent by mail are subject to loss, so critical orders may not be filled on time or payment of invoices may be delayed. Confirmations that purchase orders were received may also be delayed, and much time may elapse before a company realizes that a critical document wasn't delivered.

While manual fax delivery is significantly faster than mail delivery, it doesn't adequately handle the high volumes. It is time consuming and prone to error. For example, faxes may inadvertently be sent to the wrong recipient. Some companies use general-purpose LAN fax servers to handle production fax. These servers, however, are targeted toward managing faxes from desktops and integrating fax capabilities with e-mail systems. They are not designed to handle the high volume found in production fax environments. Nor are they designed to integrate easily with host applications. As a result, much manual intervention is still required. Some companies use EDI to provide an electronic means of instant document delivery. EDI, however, is not a universal solution. Many industries do

not use it at all. Even in industries where EDI is common, it isn't possible to reach every supplier or customer using EDI.

Companies need a high-volume, real-time document delivery and receipt solution that reduces costs and improves efficiency.

The Production Fax Solution

Production fax is emerging as a key enabling technology for next-generation document delivery strategies. It provides high-volume, low-cost, real-time electronic document delivery directly from existing mainframe and midrange applications to fax machines. It turns any standard fax machine in the world into a remote printer for the host system, linked directly with legacy applications.

Several attributes make production fax an ideal solution to the document delivery and receipt problem that organizations face.

1. Production fax solutions leverage fax, the dominant means of business-to-business communications. Despite the attention given to the Internet and e-mail, fax remains the cornerstone of communication between businesses. According to International Data Corporation (IDC), more than 500 billion fax pages were sent in 1998. Furthermore, IDC expects the volume to grow 22 percent a year through 2001. The largest growth area in the fax market is in fax server ports, where IDC projects the compounded annual growth rate in the U.S. to be 42.2 percent. Because of the ubiquitous nature of fax, companies can reach virtually any customer or supplier using fax technology.

2. Production fax dramatically reduces costs by eliminating labor-intensive, manual processes. As Figure 1 shows, a production fax solution, such as a RightFAX production system, powered by CommercePath® technology, can save \$1.00 or more per document over mailing. It increases profitability by cutting costs and reducing DSO.

3. Production fax ensures immediate document delivery to both domestic and international recipients. It also provides immediate confirmation of receipt. As a result, it eliminates delays associated with mailing and manual fax.

Number of Pages Faxed	100	200	300	500	1000
Mail cost per page	\$1.03	\$1.03	\$1.03	\$1.03	\$1.03
Cost if mailed	\$103	\$206	\$309	\$515	\$1030
Production fax cost per page	\$.10	\$.10	\$.10	\$.10	\$.10
Cost if faxed	\$10	\$20	\$30	\$50	\$100
Monthly savings	\$1,860	\$3,720	\$5,580	\$9,300	\$18,600

Figure 1. Typical monthly cost savings achieved with a RightFAX production fax solution

How Production Fax Works

In a production fax environment, data from host applications is automatically directed to a production fax server. The server reformats the data as unique documents, overlays the information onto electronic forms and dispatches the finished documents by fax. In a purchasing application, for example, items to be ordered are sent in large batches from the purchasing system on the host to the production fax server. The data and buyer's signature are merged onto a unique purchase order form for each supplier. The purchase orders are faxed automatically within minutes—without any manual intervention. Figure 2 illustrates this process.

Production fax solutions are geared toward back-office, batch-oriented, repetitive, mission-critical processes such as invoicing, purchasing and loan origination. Volumes are typically very high. Figure 3 provides examples of industries and functional areas where production fax can increase efficiency and reduce the cost of document delivery.

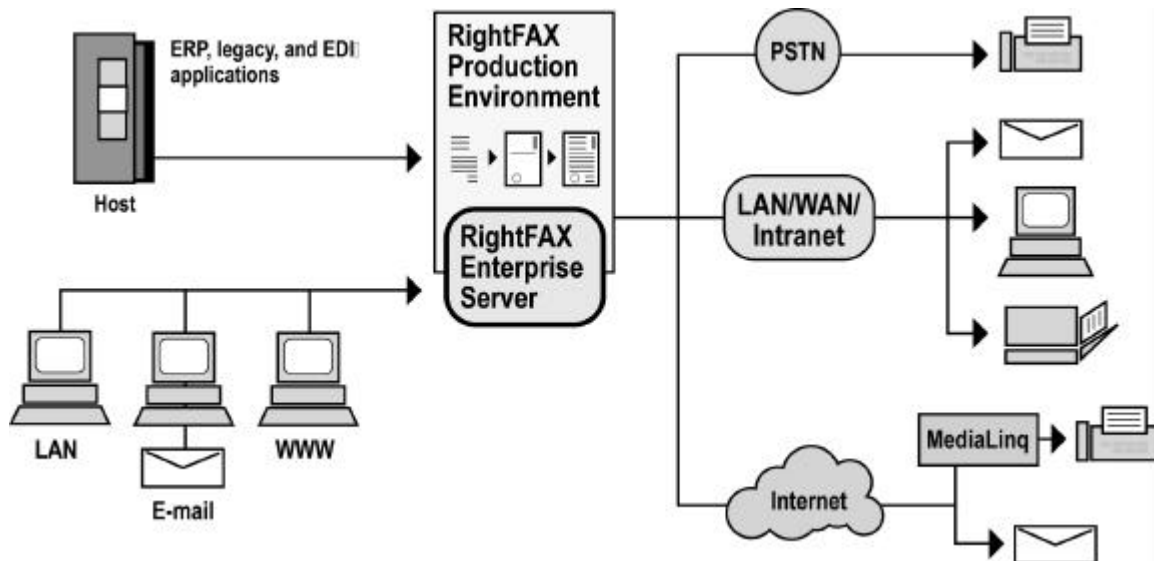


Figure 2.

Industry/Functional Area	Uses for Production Fax
Manufacturing	Large manufacturing plants, particularly those with drawn-out supply chains, can automate the thousands of invoices and purchase orders they now send to trading partners by mail or fax.
Distribution	Production fax helps circumvent the costly, time-consuming manual faxing or e-mailing of bills of lading, shipping reports and other documents that must be transferred in large volumes to customers or suppliers.
Financial Services and Banking	Lending institutions can facilitate the loan process by using a production fax solution to deliver loan origination documents to branches quickly and economically. Additional applications include wire transfers, rate/fee compliance and regulation compliance.
Travel and Entertainment	Production fax offers a compelling way for hospitality businesses to deliver messages quickly and efficiently, letting travel agents know about last-minute deals on a vacation package, confirming reservations and bookings and delivering itineraries to customers.

Figure 3. Industries and functional areas where production fax can help

Requirements for an Effective Production Fax Solution

Production fax environments have unique requirements for high capacity, speed and integration with host applications. Companies need to distinguish clearly between general-purpose fax server solutions that are geared toward managing faxes and the high-volume and host integration requirements of the production fax environment. This section describes the major criteria companies should consider when evaluating production fax systems.

Proven Product and Proven Vendor

Because production fax involves integration with mission-critical systems, proven success and proven reliability are essential. Companies should look for a solution that has been designed specifically to support the high volumes and host integration required for production fax environments.

The vendor should be able to demonstrate broad experience and expertise in implementing effective solutions for major enterprises. The vendor should have a professional services organization that works closely with customers to manage deployment and integration of the solution to ensure success. A highly trained technical support staff is also important because exceptional technical support is critical to success when integrating production fax capabilities with legacy and ERP systems. In addition, the vendor should have long-

standing strategic alliances with other market leaders to ensure easy integration with complementary technologies.

Tight Integration with Back-office Applications

A production fax solution must enable tight integration with back-office applications to ensure easy incorporation into critical business systems. This speeds and simplifies implementation for faster return on investment. Certification by major enterprise application vendors provides proof of a solution's ability to integrate easily with host applications. Companies should look for certification of reliable operation with such important applications as those from Microsoft, SAP, Oracle, PeopleSoft and Baan.

Companies should also evaluate the solution's ability to fax-enable legacy applications without requiring modification of the applications themselves. This minimizes risk by ensuring that there is no need to edit critical application code.

Integration with E-mail and EDI Systems

In dealing with trading partners, companies must accommodate diverse connection requirements and capabilities. As a result, a production fax solution should be flexible enough to support document delivery in a variety of forms. For example, it should allow documents created by host applications to be converted into e-mail documents so they can be delivered using the Internet. This bypasses all or part of the public telephone network, resulting in substantial savings on long-distance charges. It should also provide an EDI-to-fax conversion capability that integrates production fax with EDI solutions. This capability maps EDI data for fax delivery and sends it as standard fax output, extending EDI reach to customers and suppliers who are not EDI capable.

Scalability and Performance Maximization

For most companies, the volume of faxes will continue to grow for years to come. This means a production fax solution should be open and scalable with the ability to support growth efficiently and economically. Companies should be able to start small and add multiple inbound/outbound channels. A product should support clustering of servers to maximize hardware and provide the assurance that the production fax system can expand to accommodate growth over the long term. Load balancing capabilities help maximize performance by preventing bottlenecks and delays in processing high volumes. Capabilities such as least-cost routing minimize telephone charges, letting a company see even faster return on investment.

Expandability

To help companies leverage their investment in fax systems, the production fax solution should support optional modules that expand capabilities to address additional fax needs, such as faxing from e-mail or EDI applications, the desktop, and broadcast fax. This modular, expandable design means the company can install a single fax solution to handle a variety of fax needs. Installation and ongoing maintenance are simpler and more economical. In addition, the company enjoys the benefits of a single source for technical support.

Tracking and Management

Because production fax focuses on high-volume delivery of mission-critical documents, it is essential that the production fax solution provide a comprehensive notification system to alert users of delivery status. Companies should look for a vendor that can provide advanced notification options including e-mail and host notification. In addition the solution should be easy for administrators and end users alike to implement, use and manage on an ongoing basis. The system should be intuitive and provide all the features necessary to send, receive and manage fax documents.

RightFAX, the Premier Production Fax Solution

The RightFAX production system, powered by industry leading CommercePath® production fax technology, is a comprehensive solution that provides innovative, scalable electronic document delivery services to mainframe, midrange and LAN applications and offers a range of electronic document delivery choices that include fax, EDI-to-fax, e-mail and Internet delivery.

The RightFAX family of products includes a scalable line of electronic document delivery software, plus add-on modules and connectors. Given these product choices, an organization can select electronic delivery solutions to meet its exact needs.

RightFAX Production Fax Software

RightFAX Production Environment™—integrates with host, legacy and ERP applications to provide high-volume document delivery of mission critical documents.

RightFAX Production Fax Add-Ons

- *RightFAX Filter for Oracle®*—lets users electronically deliver high-volume, production-oriented documents directly from Oracle applications. It provides the interface between Oracle applications and the RightFAX Production Environment™.
- *RightFAX Connector for SAP® R/3™*—lets users electronically deliver high-volume, production-oriented documents directly from SAP applications. It provides the interface between the SAP R/3 system and the RightFAX Production Environment.

Fax Server Platforms

- *RightFAX Business Server™ v7.0*—for departments, workgroups or medium-size corporations
- *RightFAX Enterprise™ v7.0*—for large national or global organizations that want to combine multiple fax servers on a LAN, WAN, the Internet or an intranet
- *RightFAX Enterprise Suite™ v7.0*—bundles RightFAX Enterprise v7.0 with eight add-on modules for large corporate enterprises that need the increased functionality of add-on modules and connectors at an affordable price
- *RightFAX Satellite™ Server v7.0*—for satellite sites or workgroups of large organizations that have an Enterprise server installed

RightFAX Modules and Connectors

- *RightFAX Gateway for Microsoft® Exchange*—allows advanced fax and e-mail integration with Microsoft Exchange
- *RightFAX Gateway for Lotus Notes®*—allows advanced fax and e-mail integration with Lotus Notes
- *RightFAX PDF Module*—outputs PDF and PostScript® documents in fax format
- *RightFAX Web Client™ Module*—lets users manage their fax mailboxes through a Web browser
- *RightFAX OCR Router™*—scans cover pages for key words to establish a routing destination and provides automated inbound routing directly to users' mailboxes
- *RightFAX OCR Converter™*—scans fax images and converts them into dynamic text so that users can import them into any application for revising or annotating
- *RightFAX TeleConnect™ Module*—lets users manage fax mailboxes through any touch-tone phone
- *RightFAX Docs-on-Demand™ Module*—a Web- or phone-based fax on demand retrieval system
- *RightFAX SMNP Alerting™ Module*—alerts system administrators to any system events via existing network management tools
- *RightFAX Document Management Connector™*—enables faxing from PC DOCS® DOCS Open™

RightFAX Internet Delivery Options

- *RightFAX IP Plus Connector™*—the gateway to Internet faxing using the MediaLinq® advanced IP-based fax network. Provides capacity-on-demand for unique fax broadcasts or unpredicted traffic, as well as disaster protection against fax board or telephone line failure.
- *RightFAX InternetLink™ Module*—lets users send host documents via the Internet as PDF, TIFF (Group 3 or 4), GIF or PCX attachments in e-mail.

RightFAX Meets the Demands of Production Fax Environments

RightFAX provides a variety of powerful features that meet the requirements for high-volume production faxing. It integrates easily with existing legacy applications and ERP applications, bringing comprehensive document delivery and receipt capabilities to these critical business systems.

Tight Integration with ERP and other leading applications

RightFAX products are tightly integrated with industry-leading ERP applications as well as other products that enhance customer value. RightFAX Connector for SAP™ R/3®, for example, provides a single centralized point of access for RightFAX, using SAP-certified SAPconnect (BC-CON) interface. RightFAX Filter for Oracle® fax-enables any Oracle application or database using Oracle's predefined digital forms overlay. Additional partnerships with leading technology vendors allow for integration with many other

popular applications and databases, enabling it to work as an integrated delivery option from within such applications as those from Baan, GEAC (formerly Dun & Bradstreet Software), and JetForm. Our consulting staff works with customers to integrate RightFAX with their business systems.

RightFAX is the only product that offers a highly flexible Facsimile Command Language (FCL) to make fax-enabling legacy, host and ERP applications fast, simple and straightforward, and without modifications to the application code. FCL commands are usually embedded into the print application of the host, and the RightFAX Production Environment reads the codes to format, build, and deliver documents. RightFAX provides more than 80 FCL commands for organizations to customize RightFAX to meet their unique requirements; this translates into the most dynamic production fax system available today.

Expandable, Flexible Choices for the Entire Enterprise

For companies that want a single, enterprise-wide fax solution, RightFAX modules provide a full range of document delivery capabilities. Customers can start with one RightFAX solution and add modules to fax-enable not only mainframe applications, but mid-range, LAN, EDI and e-mail applications as well. This modular approach leverages a company's investment in its fax server and simplifies installation and ongoing administration.

Scalable, Open Solution based on Windows NT

RightFAX is highly scalable to meet expanding needs. Customers can start with a single server and as few as two fax channels, then expand to 1,024 channels. The product is based on open, non-proprietary Windows NT® architecture to provide easy system integration, superior user interfaces, management capabilities, and increased scalability. RightFAX also provides several connectivity options to meet the needs of various host environments. These options include Line Printer Remote (LPR) connection, 3270 socket connect, File Transfer Protocol (FTP) connection and 5250 connection.

RightFAX maximizes system performance by providing the ability to distribute essential fax processes for redundancy and load balancing purposes as well as the ability to maximize hardware in clustered server configurations. This feature lets organizations derive the most value from their hardware investment and guarantees that no single server is overworked.

To ensure that electronic documents are sent by the best route to save money and time, RightFAX can route faxes to alternate servers via WAN or the Internet. RightFAX Intelligent Least-Cost Routing™ (LCR) features several components including dialing plans, load balancing, testing tools and management utilities that ensure ultimate reliability and flexibility.

Ease of Use and Management

RightFAX features an intuitive graphical user interface (GUI) for production environment management, which lets administrators manage RightFAX servers easily, whether local or remote. Faxes can be accessed at any time through the RightFAX user interface or an optional Web client that utilizes the user's Web browser.

RightFAX also has comprehensive notification features so users can monitor their document delivery status. RightFAX can send notifications to the fax originator whether that is a host system, e-mail address or other application. RightFAX provides numerous host notification options and notifications can be customized to include a variety of fax information.

From the Industry Leader

RightFAX production fax products, powered by CommercePath technology, are the industry leading production fax solutions on the market. CommercePath technology has been used as an enabling technology since 1990 to support business-critical applications such as invoicing, purchasing, loan processing and order confirmation. Customers include major worldwide enterprises, such as Bank of America, Carnival Cruise Lines, Federal Express, Ford, Harley-Davidson, PepsiCo, Reynolds Metals, SAP, Toro and others.

RightFAX is a product line from the AVT Corporation. AVT is an experienced leader in enterprise managed communications. AVT solves enterprise communications problems by providing a broad line of open systems-based advanced managed communications products, specializing in fax and call processing, enterprise messaging, document management and customer service applications.

AVT has built strategic alliances with leading technology vendors, including SAP, Oracle, Baan and Cardiff, to enhance customer offerings. AVT engineers work closely with strategic partners to ensure tight integration and reliable operation.

Conclusion

Production fax is proving to be an ideal solution for addressing the document delivery challenges that today's businesses face. It provides high-volume, low-cost, real-time electronic document delivery directly from existing mainframe and midrange applications to fax recipients. Production fax leverages the ubiquitous fax technology that is the cornerstone of business-to-business communication. It reduces costs by eliminating labor-intensive, manual processes, and it ensures immediate document delivery to both domestic and international destinations.

RightFAX holds 22.4% of the fax server market share (IDC, 1999), far outdistancing its nearest competitor. In addition, 80% of the Fortune 100 companies use RightFAX solutions. As the premier fax server solution on the market today, RightFAX has garnered over 30 prestigious fax industry awards and is proving its value in major enterprises worldwide.

By incorporating RightFAX into their document delivery strategies, companies can enjoy the advantages of high-volume, low-cost electronic document delivery directly from their mainframe and midrange applications. As a result, they can streamline business processes, speed information delivery and dramatically reduce costs. This positions companies for the increasing demands for speed and efficiency in the new millennium.

AVT Corporation is a world leader in Managed Communications™ solutions that help organizations control and meet the high demands of their communication workflow. The company specializes in developing and marketing its CallXpress® unified messaging solution, RightFAX and CommercePath fax and communications servers, and MediaLinq electronic document delivery services. More than 50,000 AVT systems are installed worldwide, with more than 80 percent of the Fortune 100 already using the company's award-winning products and services.

Headquartered in Kirkland, Washington, AVT maintains offices in Tucson, AZ, Portland, OR, and San Francisco, CA. In addition, AVT has sales and support offices in the United Kingdom, Germany, Hong Kong, Dubai, and Tokyo. Founded in 1982, AVT is publicly traded under the symbol "AVTC" on the NASDAQ National Market. AVT maintains a site on the World Wide Web at www.avtc.com.

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