

Advanced Fax Routing

Innovation Report: Biscom

October 2022

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Introduction

Inbound capture and fax routing technology has been around since the beginning of the computer-based fax revolution of the 1980s. Routing faxes based on information about the sending device or telephone line configurations was common then, and still is today. These days, however, inbound capture automation methods have improved beyond just the telephony component and there are now smarter ways to route documents directly into sophisticated workflows that are heavily fax-dependent. Without inbound capture automation, companies must do a lot of busy work sorting and sifting through faxes from a network drop folder, reading and saving them from their email, or printing them from a multi-function device or even a fax machine. Information contained in a fax is often unstructured, meaning someone must read the fax to determine its content, lookup contact information, rename the file, and then determine where it needs to go.

Biscom's answer to the multitude of manual processing problems is their Advanced Fax Routing (AFR) utility, which employs a rules-based method to capture faxes safely and securely, forward, and then store them automatically. This report will shine a spotlight on the features and capabilities AFR has to offer and included are customer statements based on interviews conducted by the author.

Overview

A profound driver for the future growth of the fax market is in the business of automation, especially the capture and routing of inbound faxes.¹

Companies need logical and structured policies to intake and forward documents anywhere and everywhere in their organization. By having this, they'll bolster productivity, promote faster business cycles, ensure compliancy, and interoperate with other systems.

Distribute critical information faster. Manual fax handling slows a business down. Critical time is wasted by the reading, sorting, looking up of contact information, and forwarding of faxes. Handling this process



"The more people that handle a fax, even electronically, the less secure it becomes."

¹ The "Fax2020 Market Analysis and Strategic Report" and Fax Vendor Survey, Malone, 2020-2021

manually also means that errors are likely to be made, often with serious consequences such as faxes being routed to wrong locations, sensitive data being exposed, or pages being misplaced. Moreover, companies often receive faxes in bulk, meaning that more than one transaction is received in a single payload and someone must sort through them and split them apart into separate documents, which is a painstaking process to say the least.

Inbound capture automation eliminates these choke points and improves information throughput, which means faster business cycles and safer handling of Protected Health Information (PHI), Personally Identifiable Information (PII), government, and financial data.

Comply with HIPAA. Digital faxing systems include dozens of features that promote secure processing practices. However, careless handling could compromise compliance if sensitive data is put at risk. Faxing patient information to the wrong number, leaving printed faxes lying around, following poor retention methods, or not using encryption when needed, are just a few examples of risk that can challenge compliancy. And at the end of the day, the more people that handle a fax, even electronically, the less secure it becomes.

Interoperability. In the healthcare industry there are now a bevy of federal rules and regulations that call for seamless interoperability among health information systems, via any number of health information exchanges (HIE).² Both patient and provider require access to electronic protected health information (ePHI), which must be made readily available no matter what system is used to store the data. A fax generated in an electronic medical records (EMR) system, for example, then securely sent to a receiving company that employs smart routing to a dedicated and secure folder, is a good case of “fax-to-fax” interoperability – and there is no need for application programming on either end of the line.

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Innovation Profile: Biscom’s Advanced Fax Routing

In their own words. *“The FAXCOM Advanced Fax Routing (AFR) utility takes the process of receiving incoming faxes to a whole new level. It enables a fax service administrator to scan for content and specific conditions and execute routing actions based on those criteria.”*

² HIE is an organization that enables the sharing of electronic protected health information (ePHI) among more than two unaffiliated entities such as health care providers, health plans, and business associates, for treatment, payment, or health care operations (TPO) purposes. Source: U.S. Department of Health and Human Services, Office for Civil Rights.

AFR is an add-on module to the FAXCOM Suite and Biscom supports it in both on-premise and hosted/cloud environments. It can be thought of as a pre-processing, rules-based policy generator that boasts an impressive list of over 25 procedures to route faxes based on data extraction, lookups, and transformation rules. Properly implemented, AFR keeps faxes from becoming a bottleneck in any company that is strongly fax-reliant, and many of Biscom’s customers use it to receive and process hundreds of thousands of pages per day.

Features and Capabilities

The AFR utility can define group policies for managing faxes unattended and there are conditions and actions for:

- Extracting information from the fax image to control the final route of the fax
- Extracting information from a network resource
- Modifying existing fax data
- Controlling how and where a fax is delivered
- Discontinuing rule evaluation

Another way to think of AFR is as a workflow process, step-by-step:

Actions	Types
Gather	Telephony methods like DID, DNIS, CSID
Extract	Content via OCR, Barcodes TSI (caller ID) Date and time
Lookup	LDAP, ODBC/SQL Database, text
Transform	Converted TIF, PDF, or searchable PDF Split faxes, rename faxes Add notes, add metadata
Deliver	Route to Network folders/UNC, EMR Systems, MFPs, Email, schedule delivery, send to workflow, Sharepoint, FTP/SFTP, Biscom Secure File Transfer

AFR and FAXCOM Queues. One of Biscom’s features is Queue technology – essentially providing virtual fax servers with their own configurations, users, and protected data that can be assigned to departments or groups. AFR rules are configured in the FAXCOM queues, so each of a company’s business units can have its own rules for its own queue. AFR is not dependent on the queues, but each queue can be configured with its own rules. Routing policies can also be enforced on either all faxes

received, or on only those that meet certain defined conditions. Among the many benefits this brings is that incoming faxes from different sources do not have to intermingle during their lifecycle, which is a great way to keep information secure and private. For certain industries, such as healthcare, financial services, and government agencies, this separation and protection of data is mandatory for compliance.

Scenarios: Conditions and Actions

Here are several sample scenarios that illustrate how AFR can transform business workflows:

- **Document type.** A doctor’s office sends a fax to an insurance company for a prescription approval of a controlled medication. Based on the caller ID, the payer’s AFR recognizes the doctor’s office and employs an optical character recognition (OCR) rule to identify a special form used for controlled substance prescriptions. The fax gets renamed and forwarded to the correct destination for approval.
- **Time of day.** Throughout the workday, a loan processing center has shifts of users receiving and processing forwarded faxes. After 6pm, the faxes are automatically redirected to alternate emails.
- **Claims.** An insurance company receives a claim-related document by fax. The claim number, claim date, and policy holder information are extracted from the document and placed into an accompanied text file or inserted into a database, then the payload is routed to a network folder as a searchable PDF.
- **Document ID.** Expense reimbursement requests are faxed to the HR department using a custom cover page containing a bar code. AFR performs a database lookup to obtain the employee’s email address, then the fax is routed to FTP for further processing; email confirmations are sent.

Proof Points: Customer Profiles

The heart of this report is feedback from the customers themselves. Interviews with these three Biscom customers speak volumes about the value of AFR.

Profile 1: Healthcare Payer

Region: Western U.S.	Fax Volume: Approx. 150,000 pages/month
Employees: 2,500+	Fax System Profile: Virtualized System with SIP Trunks, 48 lines and
Ownership: Private, Non-Profit	1700 end-user logins

This company is a regional healthcare insurance payer in the Western United States. They offer health insurance and related services to almost 2 million customers across three main offices throughout their region. They have been a Biscom customer for over 12 years and their FAXCOM system migrated from a traditional analog telephony-based, on-premise solution to a digital and virtualized system.

They send and receive approximately 150,000 pages per month. Some lines are reserved for expedited faxing, primarily from doctors that require fast turn arounds. Most of their fax documents are from their

providers, including hospitals, doctors’ offices, and pharmacies. Document types range from claim requests, records requests, long-term care facilities, pharmacies, to enrollments.

“AFR gives them one less thing to worry about... it’s risk resilient and efficient.”

They currently utilize a FAXCOM virtual stack that manages various faxing functions, taking advantage of the Biscom server and queue structure architecture. A total of six virtual fax servers distribute the fax services: two FAXCOM servers for faxing and two for routing and queue services and web portals. They also employ two additional servers that log fax transactions.

This company makes use of Biscom’s Advanced Fax Routing (AFR) solutions, realizing the benefits of the capture and intelligent routing it offers – critical for their day-to-day business. Having approximately 10 fax numbers capturing inbound faxes, they utilize OCR to split multi-patient faxes into separate documents. Many providers will purposely bundle their faxes to save time (something they’re not supposed to do) and the OCR software can split out the faxes into single patient documents so there is no intermingling of PHI, which aids with HIPAA compliance.

Their AFR rules allow them to modify names on the faxes and create a corresponding text file with metadata. The entire AFR solution, in their own words, gives them *“one less thing to worry about”* when it comes to HIPAA compliance – it’s risk resilient and efficient.

Profile 2: Health Plan Provider

Region: Western U.S.	Fax Volume: 300,000 pages/month
Employees: 1300; Over 150 caregivers and hospitals	Fax System Profile: 130+ fax numbers; Biscom Hosted Fax Server
Ownership: Private, Non-Profit	

This company is one of the largest health plan providers in the Western United States They have approximately 1,300 employees, but that figure climbs to 1,600 during the open enrollment period, a time when they experience peak fax traffic. They have a hybrid cloud fax solution using FAXCOM Anywhere Enterprise Suite installed on-premise and Biscom’s cloud fax service to handle the inbound and outbound faxing. Having no fax boards and no dedicated telephony allows them simpler pricing based only on their consumption, instead of exorbitant telephony costs and burdens they would pay regardless of usage.

The types of faxes that move around their organization include pharmacy orders, appeals (which can be 300-400 pages long!), preauthorization documents, claims, and applications, to name a few.

Biscom’s Advanced Fax Routing is a vital part of this company’s faxing network and helps them manage large faxes, which often come from senders transmitting too many pages in a single fax call, creating the potential to overwhelm their email system, and put their business at risk. The customizable power of AFR allows them to split large faxes into smaller faxes, which otherwise the email system could reject with an undiscovered error message being sent to the server, not to a person. This could have dire effects on their business whether it’s compliancy, SLA violations or worse, negative effects on patient care directly. In one example, AFR is putting a stop to the back and forth between their employees and the hospitals, thus preventing lost time. Now, patients can get preauthorization for medical services in a timely manner.

Profile 3: Regional Community Health Center

Region: Northeastern U.S.	Profile: Provides services for over 30,000 patients per year
Employees: 180+	Fax Volume: Approx. 30,0000 pages/month
Ownership: Non-Profit	Fax System Profile: FAXCOM Server, 8 channels, virtual

This organization is a Federally Qualified Health Center (FQHC) that serves its local community with primary care, dental, and mental health services, especially those with limited health care options and regardless of their ability to pay. They operate five health care centers, plus a multitude of school-based sites.

The majority of their 30,000 pages per month are inbound faxes, estimated to be about 85% of their entire traffic. When asked about AFR, their response was a classic, *“We love it!”* and it’s because of the problems it solves for them. Prior to AFR, faxes were dumped into a single network folder, unsorted and unorganized. Staff handling the faxes cost the company a great deal of man-hours and created more chances for human error - a logjam disrupting the ebb and flow of information passing through the organization. The automation provided by AFR allows them to make better use of their manpower and the use of FTEs can be greatly reduced.

They maintain four specific fax numbers that they’ve dedicated for their business partners: a testing laboratory, State, and County Departments of Health, and a referral organization. Now, based on the caller IDs, faxes are distributed directly into dedicated folders for faster and more efficient processing of

PHI and other critical information. Once fully deployed, they expect to save almost 20 man-hours per week of manually sorting faxes and they are also planning on using AFR with optical character recognition to identify and process patient faxes in a future implementation.

Summary

For companies that are heavily fax-dependent, a lack of inbound fax automation is risky and has dire consequences on many fronts: compliancy, SLAs, lost data, detrimental effects on productivity, and even the quality of patient care. Staff burnout is another concern as the monotonous and mundane tasks of paper sorting, printing, faxing, and scanning are certainly not a morale booster, especially when time and attention can be focused on areas of more critical need.

An answer to these challenges comes from Biscom, who first innovated inbound routing rules back in the late 1980s, using caller ID to route faxes to individual PCs. Today, the Advanced Fax Routing utility is Biscom's exceptional solution for improving business efficiency in any organization that runs their business on the timeliness, accuracy, and security of fax.

Combined with the FAXCOM queue architecture, AFR's conditions, rules, and actions make for an airtight capture automation solution not offered by other vendors – a true differentiator like no other. To quote an AFR customer, *"there's nothing out there that's anything like it."*

About

Mark D Malone

Mark has been a long-time participant and contributor in the Fax industry as a software product manager, marketer, and industry analyst. 33+ years in technology, he began his fax journey in the year 2000. In 2013, he created Fax Over Cloud™, a fax industry news site and repository for his various papers, articles, and fax product spotlights. In 2018 to 2021, Mark created and published the first comprehensive market report of its kind, the "Fax2020 Market Analysis & Strategic Report."

Biscom

Founded in 1986, Biscom pioneered the enterprise fax server and secure fax marketplaces with FAXCOM® and its award-winning fax management solutions. In addition to cloud and on-prem, and hybrid fax solutions, Biscom has expanded its secure document delivery platform with cloud secure file transfer for large files, real time synchronization, file translation, and mobile access.