The Facts Are That Fax Is Far From Dead

Emerging FoIP technology will drive future sales of software for large install base of potential distributed capture devices.

Over the past few years, we've witnessed an explosion in sales of workgroup (sub-$2,000) scanners. We've also seen rapidly increasing adoption of scanning on digital copiers. However, even when you put these two types of devices together in a market called "distributed capture hardware", the install base pales in comparison to that of fax machines estimated to be over 50 million worldwide.

"The need for distributed scanning solutions is on the rise, and fax remains the easiest, most cost effective, and most ubiquitous technology for scanning a document and sending it to someone else," attests Dan Lucarini, senior director of marketing for fax server software vendor **Captaris**. Everyone has access to a fax machine or multifunction all-in-one device, and everyone knows how to use a keypad and press send.

But aren't faxes part of the paper problem that document imaging is designed to eliminate? Well, not necessarily. Captaris, for instance, offers direct connection from its *RightFax* software to ECM solutions from leading vendors like **Hyland**, **FileNet**, and **EMC Documentum**. Captaris also has its own workflow and document management software, picked up through acquisitions in the recent future. These solutions enable incoming faxes to be saved, managed, and archived as digital images without ever being printed.

With our fax server software, users can also capture a very basic, yet important piece of metadata the sender s fax number, said Lucarini. This information can be exported in an XML format and easily referenced against a customer database to identify the sender. It doesn't require any OCR, ICR,or complex capture techniques.

Not requiring character recognition can be an important ingredient to a successful fax application, as the image quality of faxes is often sub-par when compared to those produced by quality document scanners.

However, in recent years, we've seen increasing use of advanced image processing and data matching to improve recognition rates from faxed documents. For example, at **Top Image Systems** recent conference in Berlin, we saw a presentation from the German operations of **Office Depot**, which discussed how it improved recognition rates from faxed order forms from 45% to 90%.

The flipside of fax

So, why isn't everybody using fax machines for capture, instead of investing thousands of dollars in new scanners? Well, the aforementioned image quality problems are one reason. Office Depot, for example, cites the following issues with faxes:

- poor image quality (200x100 dpi)
- unreadable orders, even by the human eye
- substantial noise problems
- some images skewed more than 6%

Office Depot, which uses *RightFax*, overcame these challenges by utilizing several recognition engines, along with TIS Virtual engine algorithm. It also applied approximate search technology for database matching. While this worked out, if Office Depot was in a situation in which it had control over the hardware devices used to capture orders, it probably would have been cheaper just to install document scanners.

Related to quality, there is also the issue of color, which common fax protocols do not support. As color printing continues to gain traction (with a big push from MFP hardware vendors who love color consumables), there will no doubt be an increase in a demand for color document images. Today, black-and-white remains good enough in most North American business applications. However, a telling sign for the

future may be the fact that in developing markets like China, color scanners represent the overwhelming majority of the install base. In our view, the reason for this is there are no legacy business processes that rely on black-and-white images. Because color images are a more accurate representation and contain more information, it doesn't make sense to start with black-and-white anymore.

The final element working against fax machines is that in most cases, they rely on analog phone lines, which, when you start dealing with any real volume, are more expensive to use than the Internet networks that e-mails travel across. We have seen many case studies in which reducing costs related to analog faxes was the cost justification for a distributed scanning application.

Security, accessibility keep fax in play

Okay, now that we've ripped apart fax solutions, you might be leaning the other way, and saying, "why would anyone want to use fax?" Well, let's address the quality and issues first. In situations like Office Depot's, in which a business is receiving documents from an at-large customer base, over which it has little control, the humongous install base of fax machines is going to have some sway image quality be damned. So, if Office Depot wants orders, it had better learn to deal effectively with poor quality black-and-white images.

Another advantage that fax has over e-mail involves security. "The fact that e-mail is transmitted over the Internet can create potential interception problems," Peter Davidson, a fax industry analyst, explained. "Internet networks are susceptible to hackers. The only way to touch a traditional fax transmission is by tapping a phone line, which is not very common."

Davidson admitted that there are encryption techniques available to create more secure e-mail transmissions, but added, "who uses all that stuff?" Along these lines, most fax implementations also include automated receipt capabilities, letting a sender know their fax has gone through. While email systems have these capabilities as well, they are typically less reliable than fax receipts and sometimes not used at all.

Related to security, we will also note that we now receive a lot fewer junk faxes than we do e-mails. This means there is less chance of an important fax being mistakenly deleted as junk mail. "It's harder to track an e-mail spammer than a fax spammer," noted Lucarini. "In addition, a few years ago, laws were passed that include extremely onerous penalties for abuse of fax lines."

Lucarini added that fax is also still the most popular way for transmitting a signed document between parties. Similar to e-mail encryption, there are plenty of digital signature options available, but they have yet to achieve widespread adoption.

FoIP: Key to the future

Yes, a lot of these reasons for choosing faxing over scanning could become obsolete as technology like encryption and digital signature matures and gains mainstream adoption. However, the large install base of fax machines, and the inertia that typically holds back technological adoption until years after an invention is introduced, will keep faxing alive well into the future. In regards to the cost savings associated with scanning over faxing, a current transition toward fax-over-IP solutions could eliminate that difference.

FoIP is essentially a parallel technology to more popular voice over Internet protocol (VoIP), which leverages the Internet to eliminate analog phone services. "Buying network bandwidth tends to be cheaper than paying for use of analog lines," said Eric Bean, senior director of product management for Captaris. "As a result, we're seeing a big movement toward VoIP. FoIP is the natural next step for users that want to consolidate all their telecommunication on the same network."

Davidson, called 2006 a year for tire-kicking in the FoIP space. "Fax server software sales were essentially flat in 2006, but I don't think that is a longterm trend," he noted. "In fact, I've projected a CAGR of 8.2% over the next five years, driven mainly by adoption of FoIP. By 2009, I expect sales of FoIP software to gain primacy over traditional fax server software, which relies on analog transmissions."

Davidson noted that people are worried about the reliability of FoIP. "They're used to 98-99% reliability from their fax technology," he said. "They are afraid with FoIP that could go down."

Overcoming barriers to FoIP adoption

One of the potential problems with FoIP has to do with dropped information packets, which are fairly common in VoIP communication. "Unlike voice traffic, which has a fairly straightforward method of transmission and can afford a little latency or dropoff while the packets are being sent, a drop-off or other problem during a fax might mean the entire message is scrapped," said Steve Adams, VP of marketing for FoIP specialist **MyFax**.

Adams compares accounting for potential problems in FoIP exchanges to the children's game of Mousetrap. "IT managers are finding they have to create complex, time-consuming workarounds to do what they used to do by plugging a fax machine (or fax server) into a phone port," he said. "What's frustrating is that spending all that time working to send faxes over an IP network is really a case of the tail wagging the dog."

While faxes are still very important to many industries real estate, insurance, financial, legal, healthcare, and manufacturing come to mind the ratio of faxes to voice traffic heavily favors voice. Yet, if the business goal is to eliminate phone lines and the subsequent costs that go with them, then faxes must also be accommodated.

To solve this dilemma, Adams recommends the use of a hosted FoIP service, which handles the infrastructure for the end user. "With an Internet fax service, all the real heavy lifting of establishing the call, negotiating the handshake between faxing devices, encoding the message for transmission, message correction and synchronization, terminating the call, etc. is handled off-site," he commented.

Conclusion

Fax remains the proverbial ignored elephant in the room when people discuss document imaging. Yes, a lot of distributed scanning applications are replacing fax machines. But, there still remains an incredibly large number in use, and they must be accounted for. Ignoring faxes would be making the same mistake e-commerce experts made a few years back, when they touted the overnight disappearance of paper. Now that people have realized the paperless office isn't on the way anytime soon, they've begun accounting for it with widespread document imaging adoption. Similarly, as people realize faxes are not going to go away, we agree with Davidson's projections that there will be an upsurge in fax-related software sales.

(For complete articles from Lucarini and Adams);

http://www.davidsonconsulting.biz.