

# DSS

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DOCUMENT SECURITY

## SECURITY ON TAP

*Print-on-demand delivers encrypted passports immediately*

by Rebecca Trela

The quest for document security bears a striking resemblance to the “escalation dominance” theory of the Cold War arms race: one side pulls ahead, then the other. Just as one party has the advantage with heavy, sophisticated equipment, the opposition does them one better, which raises the stakes even higher.

Document Security Systems (DSS), Rochester, N.Y., approaches increasing expense and elaboration of document security features with a new idea: back to basics, with a twist.

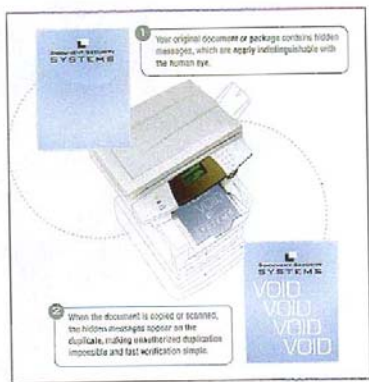
“Our technology revolves around ink-on-paper,” says David Wicker, vice president of operations and technology at DSS. The company

protects the “base layer” of documents for their clients, working with smarter, not more, security features. This approach helped solve a problem for the company’s client Indra, one of Spain’s largest IT firms, using a print-on-demand setup for securing documents anywhere in the world.

Indra secures passport certificates for mariners passing through the Panama Canal, an international hub of legal and illegal shipping activity just 50 miles long. No boat can pass through on its own—the Canal Authority tows each vessel with electric power and there is always a long wait, sometimes 24 hours. DSS’ solution had to provide security quickly and accurately.

“We were definitely looking for an on-demand solution,” says Carlos Fernández Allué, an international director at Indra. “Other manufacturers offered pre-printed security paper, but the logistics attached to delivering this paper in a secured manner all over the world, especially Panama, helped us make our decision.”

As computers and imaging devices become more sophisticated, DSS President Peter Ettinger says, it gets easier every year to counterfeit important documents. The industry, for the most part, has been layering features to make it simpler and more obvious for law enforcement profes-



sionals to determine which are fakes—using holograms, RFID and metallics. They're easy to identify, but aren't feasible options for remote locations or security on-a-budget projects.

"Our philosophy is, 'What happens when the lights go out?'" Ettinger says. "What if electronics aren't available to scan or verify documents? So we put effort into the whole range of solutions."

Several DSS principals worked for the Wicker Group, a now defunct print industry firm that also specialized in document security. The Wicker Group was awarded a number of patents for anti-counterfeiting technologies, some of which were nullified in the 1990s as the result of lawsuits brought against Standard Register and others. DSS is currently awaiting judgment on a patent infringement lawsuit with the European Central Bank, regarding the validity of a security feature on the Euro note.

"We absorbed the patents and intellectual property of the Wicker Group," Ettinger says. He has been with the company about two years. "But we are a new company with a set of new, innovative products, and hope that people in the industry find us moving forward with new technologies."

For Indra, he explains, DSS adapted its manufacturing process to work over the internet (see illustration). The Spanish IT company had implemented national ID cards, secure passports and visas in Spanish-speaking countries, but needed a unique solution for the Panama Canal situation. Indra is a technologically savvy company and expected a quick result. "Our development schedule is very aggressive," Allué says. "But DSS committed to our timetable and delivered a working solution."

The print-on-demand technology utilizes familiar security features: the VOID pantograph and DSS' AuthentiGuard Prism application, which reveals the "prism" image when the plastic authenticator hand piece is laid over the image. An employee at the Canal Authority examines a mariner's documents at the site, and types in the certificate information. The information is sent over the internet to DSS' servers, which encrypts the document and sends it back in three to 10 seconds. Sensitive information is coded in a special area of the paper, which affords about the same level of security as safety paper.

The Canal Authority can then print the certificate and hand it over immediately, confident in the authentic document. The solution requires no special equipment, ink or paper—just a laptop with an internet connection and any laser printer. Of course, DSS sets up the server solution only for screened and licensed clients.

"This saved a lot of time in developing and testing a solution, and it's increased our security with a state-of-the-art idea," Allué says, and it has addressed the problem of sold, stolen and duplicate certificates without waiting weeks to get a new secured document.

DSS also uses this technology to send one encrypted document to be printed at multiple locations, and to print secure bank notes and documents in third-world countries. The paper- and plastic-based technologies protect tickets, identifications, airline parts and other sensitive information, such as social security numbers, birthdays and even pictures. They can be printed in up to four colors on any material—labels, Tyvek, greeting cards—and can cover any size area.

"It's a fairly elegant form," Ettinger says. "There are certain areas in the document that you can't read without a piece of glass or plastic, but it's energy-free. You don't need a black light or special chemicals to look at it."

The technology is rapidly catching on in the world of finance, government and health care, Ettinger continues. "There are lots of cool things you can do on a computer, especially for places that need to manage everything on the internet and for whom security paper isn't a good option." Wicker also emphasizes that on-demand solutions mean different levels of security can be put on the same document at different locations or for different applications, based on the situation.

Of course, it's not a cheap solution, but security features are a necessary cost of doing business for many firms. "I wouldn't estimate this one check at a time," Ettinger says. "It's not that you stand to lose \$600 from a forged paycheck. What's the cost of a faked brand name on a part—a plane crash? A car damaged? A game piece that awards everyone? It's about the long-term litigious and social effects on your business."

"Improving passport technology yet disregarding the security of the actual document is a useless effort," Allué says, referencing current international debates about security passports with RFID and other technologies. "This is a successful solution, using technology, that's very simple." Indra will secure other documents in the international arena this way, the company says.

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*Rebecca Trela is assistant editor at Print Solutions magazine. Email comments to [rtrela@dmia.org](mailto:rtrela@dmia.org).*