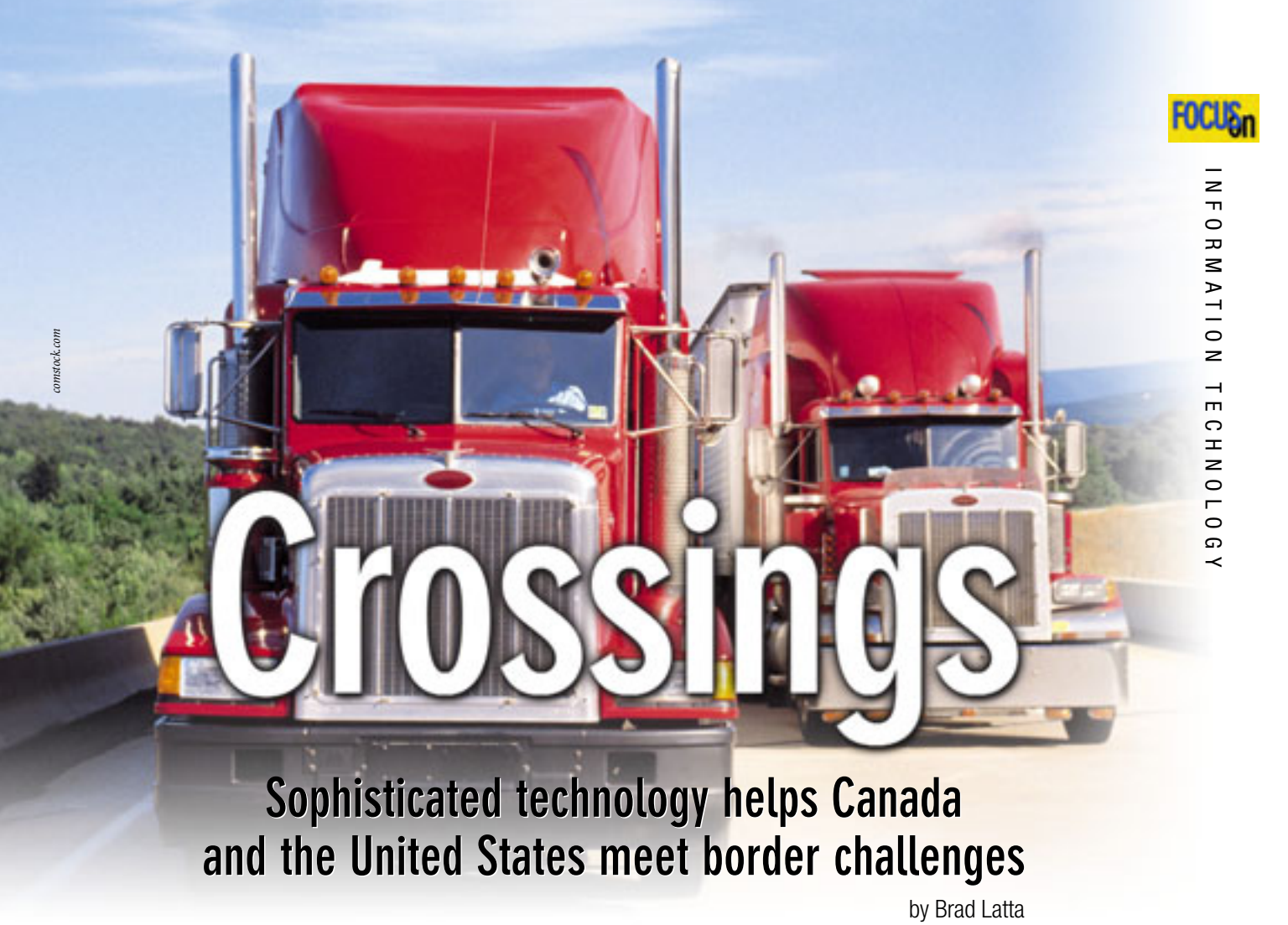

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# Crossings

## Sophisticated technology helps Canada and the United States meet border challenges

by Brad Latta

Security technology is a growth industry. With war in the desert halfway around the world, and September 2001's shattering terrorist attack in the heart of New York, there's little doubt that the purchase of high-tech security devices will continue to be a top priority for the government of Canada.

Today, Canada and the United States are working together in unprecedented co-operation to keep people and goods not just moving between the two countries, but moving safely. At the heart of this mutual effort lies new technology that makes it much tougher for dangerous people and goods to enter the two countries – from giant X-ray machines that "see through" cargo containers to biometric scanning devices that verify travellers' identities.

### Container Security Initiative

In December 2001, the Smart Border Declaration signed by Canada and the US targeted, among other things, possible threats to security posed by the contents of ocean-going cargo containers. And well it should. Cargo containers, millions of them, travel the world over containing just about every type of material imaginable. And more than 500,000 of them, ultimately destined for the US, are unloaded in Canada every year.

But now, under the Container Security Initiative, both the US and Canada are working to identify high-risk goods, including weapons of mass destruction, before they reach their intended destinations. In the short term, this means clearing them at the first North American point of entry. Long term, the US plans to pre-screen all US-bound containers at mega-ports around the world before they are ever loaded onto vessels.

The initiative calls for unprecedented cooperation. Today, US customs inspectors in Halifax, Montreal and Vancouver analyze detailed shipping data in order to select suspicious US-bound shipping containers for search by Canadian authorities. In Seattle and Newark, Canadian customs officers do the same for containers bound for Canada. To determine which containers to target, authorities consider where the container originated, where it has been, who the shipper is and who has handled it.

The program's success counts on reliable intelligence, good cooperation between countries and state-of-the-art technology. That technology includes the use of mobile X-ray scanners that allow customs officers to examine the contents of sea containers without tearing them apart. In the end, not only do these efforts increase security for both countries, but, by making the ports more secure, they make them more attractive to international shipping companies.

### People on the Move

As well as making the movement of goods more secure, authorities have also been working hard to address the border crossings of hundreds of thousands of people who travel to and from Canada each

day. It's an interesting challenge according to Mark Cluthe, director of Travellers Programs, Design and Development, with Canada Customs and Revenue Agency (CCRA).

"We have two agendas – the security agenda and the need to keep traffic flowing," says Cluthe. "Two new programs, CANPASS-Air and NEXUS Highway, enable us to meet these agendas, by allowing us to focus attention on unknown-risk and high-risk travellers and by speeding movement for low-risk travellers. The result is a win-win situation, for us and for them."

## CANPASS-Air

CANPASS-Air is a joint initiative between CCRA and Citizenship and Immigration Canada (CIC) that allows pre-approved, low-risk travellers at Canadian airports to confirm their identities and clear customs quickly by looking into a camera that photographs the iris of the eye.

Scheduled to be introduced at Vancouver International Airport in April 2003, the program will be implemented over the following 12 months in Toronto, Calgary, Edmonton, Halifax, Montreal, Ottawa and Winnipeg.

Participation is open to citizens or permanent residents of either the US or Canada who pay an annual processing fee of $50 and successfully pass a security check. Applicants may be rejected if found to have been convicted of a criminal offence; charged with a customs or immigration offence; previously declared inadmissible to Canada; or if they have provided false or incomplete information in their applications.

Once approved, participants receive an encoded identification card. Upon landing at a participating airport, they proceed to a dedicated customs lane, enter their card into a reader kiosk and look into a video camera. In just a few seconds, the system records the iris patterns, encodes the image into a 512-byte record and verifies the person's identity.

Besides being very fast, iris recognition is safe, virtually foolproof and non-intrusive (unlike retinal scanning, it does not reveal medical conditions). In independent testing, it has produced no false matches in over two million samples. By comparison, fingerprint-based systems have a false-accept rate of approximately one in 100,000.

And it has other advantages: neither glasses nor contact lenses effect its accuracy; and unlike fingerprints, the physical characteristics of the iris don't usually change with age, exposure to chemicals, disease or injury.

The technology behind the system used by CCRA was developed by Iridian Technologies, Inc. and is sold under licence in Canada by RYCOM. IBM delivers the CANPASS-Air kiosks to CCRA. While CCRA is not yet in a position to announce how much this new technology will cost, it hopes that the $50 annual fee charged to participants will help offset both the start-up and operating costs.

"We have done as careful a job as we can to estimate costs but only time will tell how accurate we have been," says Cluthe.

## NEXUS Highway program

The NEXUS Highway program is a joint initiative between the CCRA, CIC, the United States Customs Service and the US Immigration and Naturalization Service (USINS). This program focusses on select border crossing points. As with the airport program, sophisticated technology plays a crucial role.

And it has other advantages: "NEXUS fosters closer relationships with our partners and enables us to apply the same program on both sides of the border," says Molly Hay, manager of the program for CCRA.

Following background security checks conducted by all four partner agencies, applicants are invited to attend a jointly operated NEXUS enrolment centre. At the centre, they will be interviewed and asked to submit to biometric fingerprinting. These fingerprints are then run against a US INS database. Upon approval for participation in the program, applicants are issued a photo-identification proximity card.

When crossing the border, a NEXUS participant proceeds to a dedicated lane where he or she (along with any other program participants in the vehicle) waves the card in front of a reader. The reader then displays the card's information, including the participant's photo, on a terminal in an inspection booth for a customs inspector's review.

Hay has been pleased by the public's interest in joining the program. "We have received over 40,000 applications since NEXUS was announced," she says.

Like CANPASS-Air, NEXUS is operated on a partial cost-recovery basis. While the fee has been set – at $80 Canadian, or $50 US, for a five-year period – the contract with private sector suppliers has not yet been settled.

CCRA and the other partners will be watching expenditures and revenues very closely, according to Cluthe. "In the case of each program, NEXUS and CANPASS-Air, we have teams in place across the country to monitor how they are doing in every respect. As costs and participation rates become more apparent, adjustments may need to be made," he says.

As of early March 2003, NEXUS was operating four joint enrolment centres – in Blaine, Washington; Port Huron and Detroit, Michigan; and Buffalo, New York. NEXUS crossings were operational at three sites between British Columbia and Washington; at Sarnia, Ontario; the Ambassador Bridge in Windsor; and at the Peace Bridge in Fort Erie. Expansion plans include the International Tunnel joining Windsor and Detroit (later in March); the three bridges in Niagara Falls (in June); and, following that, at two sites south of Montreal and another in Alberta.

Security is a deadly game of attack and defence and everyone pays the price. In this climate of heightened security, the federal government is looking at a couple of projects that are certain to raise the ire of civil libertarians. The possibility of a National ID Card is being explored once again, while the Canadian Passport Office is supporting a proposal to employ facial recognition technology to improve security for the Canadian Passport system.

*Brad Latta is a freelance writer based in Ottawa.*