

Biometrics and Border Control: Beyond US-VISIT

BY C. MAXINE MOST

The US-VISIT program is the most significant endorsement of biometrics for any large-scale civilian program in the world. It will directly affect biometric deployment in over 27 countries. This program seems to place the United States firmly in the driver's seat when it comes to the integration of biometrics into border control processes and automated systems now being phased in worldwide. But does it?

With the US-VISIT (United States Visitor and Immigrant Status Indicator Technology) tender published in December 2003 and the subsequent contract award to Accenture in May 2004, the US has staked its claim in driving global adoption of biometrics for border control. When fully implemented, US-VISIT will be deployed at all ports of entry in the US – land, sea and air – to provide comprehensive information on foreign nationals entering and exiting the country and linking these individuals to the travel credentials (passports and visas) they carry. The program specifically calls for incorporating biometrics into required visitor visas and biometrically enabling passports for visitors from the 27 visa



waiver countries (most of Europe, Japan, New Zealand, Australia, and Singapore). US-VISIT is without a doubt the most significant endorsement of biometrics for any large-scale civilian identification program and has heralded the use of the technology for border control and immigration applications the world over.

The US-VISIT Project

Industry scuttlebutt has it that Accenture (or more accurately, the Accenture led consortium of IT companies and specialized technology providers) won the US-VISIT contract because they proposed a methodology rather than a technical solution. This certainly makes sense given that the requisite knowledge to construct an identification program of the magnitude of US-VISIT does not currently exist in the IT industry. It also implies that a significant amount of work must be completed prior to fully scoping-out US-VISIT program requirements let alone defining the technology solution.

The tender defining the US-VISIT program, on which vendors based their project proposals, was only a two hundred and fifty page document. Considering the extent of the program – deploying at all US ports of entry, creating a highly integrated identification system unlike any currently in use, applying technology unproven at this scale, and spending up to \$15 billion - the size of the tender indicates it is more of a conceptual overview than a fully formed program definition. It would seem that at this point, US-VISIT is really more vision than practical reality.

The Department of Homeland Security (DHS) has deployed an ad-hoc, stop-gap system currently operating at the 115 airports and 15 seaports that make up the bulk of visitor traffic while they ask commercial enterprises to sort out the details of the “real” program to be defined and developed over the next ten years. At least the DHS has the sense to realize that

EUROPE'S PROGRESS

Member states representing more than half of the EU's 450 million residents have publicly committed to biometrics for travel documents including Ireland, UK, Denmark, Bulgaria, Sweden, Switzerland, Slovenia, Netherlands, Italy, Germany, France and Poland. On June 8, 2004, the Ministers of Interior of all 25 member states agreed to incorporate biometrics in travel documents. This position was reaffirmed on July 7, 2004 when the Interior Ministers of the five largest EU states agreed on the need for more and better cooperation within Europe to confront the menace of cross border terrorism including harmonizing biometric travel documents and residence permits .

committing to anything more than a methodological approach would not be prudent at this time.

Approaching the Problem

Is this really the best approach to addressing biometrically enabled border control? Or, is it merely a way to appear to be making progress on homeland security? There is no doubt that post 9/11 battle cries for action spurred somewhat hasty decisions by the DHS in moving towards full-scale endorsement of biometrics for border control. However, it may well be this very focus and urgency that ultimately leads to the US forfeiting its leadership position in this arena.

While the focus of US-VISIT is clearly US homeland security, much of the technological development on which the program will depend will be based on decisions made overseas. In addition, the urgency with which US-VISIT has been pursued and the fact that program requirements do not directly impact America citizens, has postponed consideration of many overarching issues associated with any large-scale electronic identification system such as privacy concerns, civil liberties, and social acceptance.

As it turns out, some of our neighbors to the East, West and South, who must address biometrics in border control (often begrudgingly) because of the US-VISIT requirements, are making progress

on both technological and societal fronts. Some have begun to establish leadership positions in implementing technology solutions and others in developing associated legal and societal frameworks that promise to become defacto standards for the adoption of biometrics in democratic states. This offers a distinct contrast to the somewhat hasty “do something, anything, NOW” approach taken by the US.

Societal Factors Key in Europe

In Europe, progress is moving along a characteristically more measured and socially engaged path. Rather than setting out a broad vision and asking commercial enterprises to provide the methods and details, the EU and its Member States have begun by defining legal and societal frameworks for incorporating biometrics in a way that adheres to data protection laws and addresses citizen acceptability and societal impacts. There has been particular emphasis on ensuring the use of biometrics is “appropriate and proportional” and will in fact adequately and cost effectively meet the core identification-related security requirements.

While this approach tends to slow down the process initially, it addresses fundamental issues and avoids leaving crucial decisions in the hands of the commercial sector. Decisions that may become the subject of public scrutiny and potential legal battles. The US's hard-line approach

sidesteps these issues and forges ahead without significant debate or even a clear understanding of the societal parameters and impacts of the technology. The EU's approach is to create a framework for developing societal and technological standards prior to introducing biometric based systems. These standards will then be adopted by each Member State in a way that is consistent with their individual legal and legislative requirements as well as their citizens' civil liberty expectations. Ultimately, the US may find itself obliged to adhere to these standards and subsequently play catch-up.

Practical Reality - Australia and Chile

To the West and South, less esoteric but equally important practical steps are being taken. The Australians have been engaged in extensive testing of facial recognition for both automated border control and fraud detection at passport issuance. Positive, indeed groundbreaking, progress in the application of facial recognition technology has positioned the Australians as global leaders in this arena.

The Australian Customs Service's Smartgate automated border control pilot at Sydney airport has been extended after test results indicated high levels of accuracy. The kiosk based system not only met its objectives but, according to independent evaluation by two international biometric experts - Dr Jim Wayman, Director of the Biometric Identification Research Program of the San Jose State University Research Institute, and Dr Tony Mansfield, Principal Research Scientist, National Physical Laboratory, UK - the system is

running at higher than expected performance rates. More than 4,400 aircrew have been successfully using the kiosk as an automated passport control system on arrival from international flights.

Meanwhile, the Australian Department of Foreign Affairs & Trade's Passports Branch (Passports Australia) has been evaluating facial recognition to ensure the integrity of the country's passport application process (i.e. preventing duplicate entries and establishment of fraudulent identities.) Passports Australia has also taken the initial steps in the creation of an ePassport with the publication of a tender for the integration of smart chips into a passport document. This ePassport will incorporate International Civil Aviation Organization (ICAO) standards as well as comply with US visa waiver program smart-chip based passport requirements. The Australians are working closely with the US in hopes of developing the first widely distributed US visa waiver compliant biometrically enabled passport.

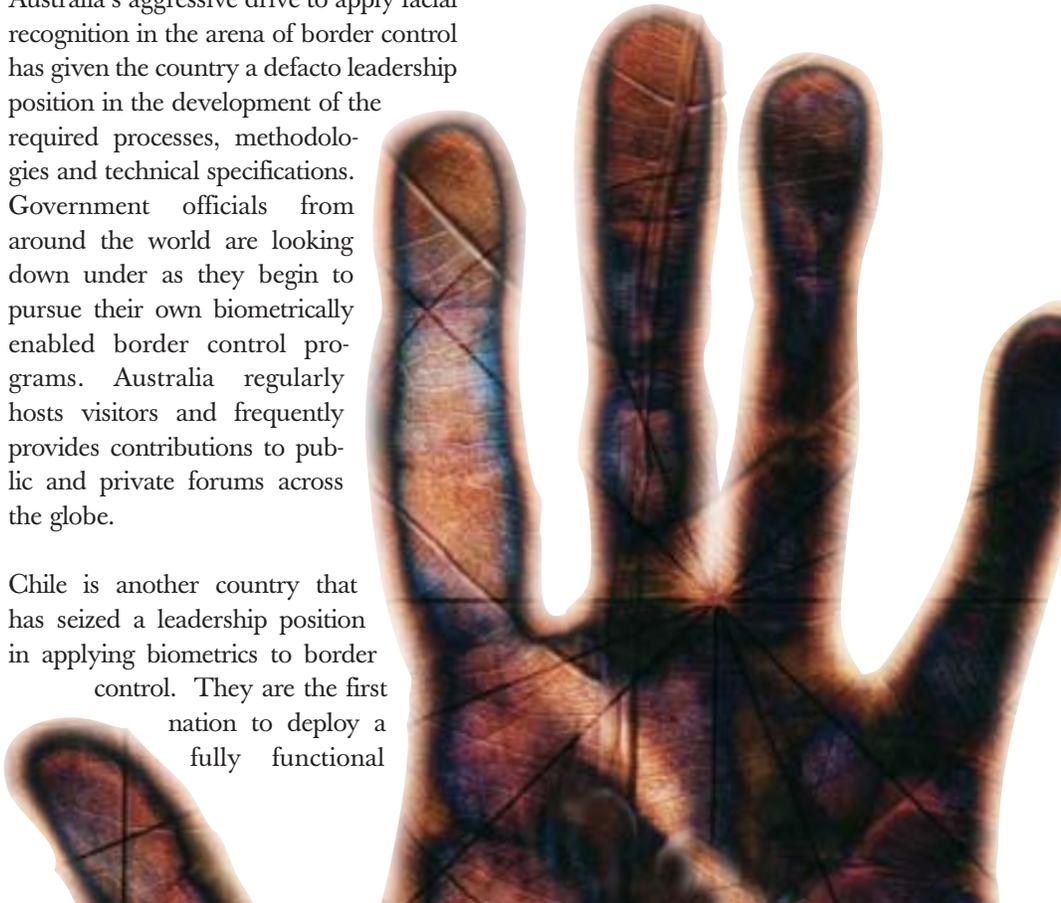
Australia's aggressive drive to apply facial recognition in the arena of border control has given the country a defacto leadership position in the development of the required processes, methodologies and technical specifications. Government officials from around the world are looking down under as they begin to pursue their own biometrically enabled border control programs. Australia regularly hosts visitors and frequently provides contributions to public and private forums across the globe.

Chile is another country that has seized a leadership position in applying biometrics to border control. They are the first nation to deploy a fully functional

border control kiosk incorporating facial recognition. If you fly into Santiago today, a customs official will place your passport on a scanning device embedded in one of sixty kiosks. These kiosk-based systems authenticate your passport against a variety of document security features and then compare your passport photo against a live image captured by a digital camera. Once your identity has been confirmed, your facial image will be checked against an Interpol facial database as well as a local Chilean watch list. This solution was developed for the Chilean Policia de Investigaciones who, much like the Australians, are frequent hosts to, and invited guests of, a variety of foreign representatives evaluating biometrics for their own border control programs.

Where This Leaves the US

So, while the US's post 9/11 determination to act became the driver for the adoption of biometrics for border control, much of the seminal development work is happening offshore. The DHS's Transportation Security Administration



KEY PROJECTS WORLDWIDE

Country	Application	Status
Australia	Automated Border Control	Smartgate — Extension of pilot Sydney Airport- face
	ePassport	RFP for chip integration
	Passport Issuance	Testing for duplicate application & watchlist - face
UK	eBorders	Pre procurement — infrastructure for all projects related to integrated border management
	ePassport	Pilots stage — currently evaluating enrollment for up to 10,000 participants — face, iris, finger
	Automated Border Control	Pilot Heathrow airport- iris
US	US-VISIT	Stop-gap deployment at 115 border points.. Accenture has contract for large scale redesign and deployment
	Registered Travelers- Domestic	Pilot launched at Minneapolis -St Paul airport. First of five US airport pilots
	ePassport	RFP released — July 2004 hosting international testing event
	Airport Access Control	Pilots at twenty US airports
Canada	ePassport	Announced
	Automated Border Control	CANSPASS Rolling out - iris
Chile	Border Control	Deployed Santiago Airport— Staffed kiosk. Authenticated passport security features, ID check & watchlist - face
Netherlands	Automated Border Control	Previum - Deployed Schiphol Airport- iris
	ePassport	Pilot project — face, finger
Italy	ePassport	Pilot 2003 — face, finger
Denmark	ePassport	Includes biometric — Contract awarded to Setec
Sweden	ePassport	RFI for integrating facial recognition automated passport applications
Switzerland	ePassport	Pre RFI investigations
Germany	Border Control	Pilot Frankfurt Airport - iris
	ePassport	Initial inquiries
Belgium	ePassport	Prototype developed

has made progress, and the Airport Access Control and Registered Traveler pilots are finally underway (nearly three years after 9/11 and two years after they were promised.) These programs offer an opportunity to validate technology and make recommendations for future programs. In addition, the DHS is coordinating testing of biometrically enabled passports by a number of visa waiver countries with the initial test session

held in July 2004 in Virginia. Clearly, the impact of US actions cannot be understated in regards to biometrically enabled border control. However, as our friends and neighbors to the East, West, and South develop sovereign programs, the US may well find itself adopting the very technological standards and legal frameworks that they develop as they struggle to comply with US-VISIT requirements. ■

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