FROM PASSPORT ON-LINE TO NATIONAL ROUTING SYSTEM

A Journey in Building a System for Identity Management

Presented to the RED GEAL -- OAS

March 07, 2006
Outline

• Passport Canada Overview
• Passport On-line
• Identity Management Context
• Project Vision and Benefits
• Description of the System and how it works
• Status of the project and Lessons Learned
Passport Canada Snapshot

• 1,800 employees
• 33 offices across Canada
• 93 Receiving Agents across Canada
• 3 million passports issued per year
• $ 200 million in revenue
• An Agency in transition
Where Are We?

- 33 Passport Canada offices
- 2 print centres
- 2 call centres
- 58 Canada Post outlets
- 35 Service Canada Centres
- Passport On-Line

Passport Canada Offices

Receiving Agent
Our Clients & What We Know

• 39% of all Canadians currently hold a valid passport

• 3 million passports issued per year in Canada, 120,000 abroad.

• All stateless and refugees accepted to reside in Canada
Passport Volumes

Actual and Forecast Passport Issues


Issues
Forecast (Jan 2006)
% of Canadians holding valid passports

- 2000-2001: 27.60%
- 2001-2002: 29.46%
- 2002-2003: 31.44%
- 2003-2004: 33.98%
- 2004-2005: 36.20%
- 2005-2006: 39.14%
- 2006-2007: 42.14%
- 2007-2008: 45.10%
- 2008-2009: 47.96%
• The concept -- PoL
  – Characteristics
  – One key-element (enabler):
    • electronic validation of identity (including citizenship)
  – Build a pilot
• 9/11
  – Temporarily suspend activities on PoL to take stock
  – Electronic validation of identity for ALL applicants retained as a measure for integrity enhancement
  – Resume “PoL Pilot” with emphasis on the electronic validation functionnality
Identity Management in Canada

Context

• Key Drivers for Action
  – Heightened threats to national and personal security (aftermath of terrorist events of 9/11)
  – Identity theft and resultant fraud
    • Counterfeit birth or citizenship certificates
    • Day of the Jackal identity theft – “tombstoning” Using a deceased persons identity
  – Entitlement fraud and commercial fraud
  – Border concerns, international pressures

• What underpins effective identity management in Canada is the efficient sharing and use of vital events information
Background - Who holds this vital events information?

- Vital Statistics is a provincial/territorial responsibility. Vital Statistics Organizations (VSOs) record/register all of the vital events from “cradle to grave”

- For persons not born in Canada, Citizenship and Immigration Canada (CIC) possess the initial information, i.e. immigration and citizenship information
The Use of Vital Events Information by the NRS Partners

- NRS Partners needs to be able to authenticate/verify vital events information and be notified when an event takes place.
- This defines two functionalities:
  - Query functionality
  - Notification functionality
- The key is to “route” this vital events information, whether it is in the form of a query/response or a notice, by increasing inter-operability amongst vital events information holders and users.
Project Vision

• Enable 100% real-time verification of birth certificates and citizenship documents used by applicant to confirm Canadian citizenship

• Real-time exchange of data among all partners

• All provinces / territories and CIC
  – No weak “links” as any weaknesses will most certainly be exploited by criminal/terrorist elements

• Secondary Objective/Benefit
  – Leverage the service by making it available to other partners
Key Benefits

• An automated system and processes for verifying the validity of Canadian birth certificates and citizenship documents submitted with passport applications

• A secure electronic connection to each Province/Territory enabling real-time queries

• Enables timely death notification between provincial/territorial vital stats organizations significantly reducing risk of “tombstoning”
Ancillary Benefits

- Potential savings if entitlement programs have access to timely death notification
- Enables electronic transmittal of vital events information to Statistics Canada
- Other partners can be easily added
- Shared service/ownership among jurisdictions
- No databases created, no major privacy issues
What is the National Routing “System”?

• The NRS is made up of several inter-depant components that are required for the “system” to operate effectively.
NATIONAL ROUTING SYSTEM

The National Routing System and its Components

- Source Information Extraction System (VSOS, CIC)
- Information Transfer System (SMRS, Internet)
- Information Integration System (Back end Systems)
- Security
- Project Management, Governance and Sustainment
- Legislation, policy and agreements
- Standards and Business Rules
- Funding, Authorities and Approvals
The Database
The NRS’s Technical Solution

• A B2B, real-time, secure, reliable electronic mechanism for exchange of sensitive data

• Current NRS technical components:
  – Secure Channel (Secure Message Routing Service (R1));
  – Communication link between trading partners;
  – Authentication and authorization functions;
  – Digital Certificates (Digital Signature and Encryption);
The NRS’s Technical Solution

- Current NRS technical components (continued):
  - Trading Partner Specific Business Rules
    - Mutually agreed-to-rules are implemented at either end
  - Change Management Process
  - Help Desk Infrastructure
  - Electronic Technical/Business Library
What is the NRS Messaging Technology:

- ebXML (*electronic business using eXtensible Markup Language*);
- Provides reliable and secure messaging between two or more business entities (trading partners);
- Based on an Open Standard (non-proprietary);
- Platform independent;
- Offered by a number of Product Vendors;
- Scalable (can quickly add additional Trading Partners)
What is the NRS Messaging Technology (continued):

- Adds reliability (guaranteed delivery of messages);
- Add Security (message level encryption, in addition to transport level encryption);
- Supported by independent 3rd party product interoperability cross certifications (e.g. Drummond Group); and
- ebXML provides a low barrier to entry for any organization.
NRS Conceptual View

Secure Routing Environment

Prov/Terr VSO

VSO Data Base

Passport Database

PPTC Examiner

OGD Partner

Other VSO
# Processing of Query Results

## Requests for Feb 28 2006

<table>
<thead>
<tr>
<th>ID</th>
<th>Request Date</th>
<th>Request Time</th>
<th>Birth Reg #</th>
<th>Surname</th>
<th>Given Names</th>
<th>Province</th>
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<tbody>
<tr>
<td>100</td>
<td>Feb 28, 2006</td>
<td>08:50:00</td>
<td>1970-59-000001</td>
<td>Smith</td>
<td>Joe Douglas</td>
<td>British Columbia</td>
</tr>
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<td>100</td>
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<td>1970-59-000002</td>
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<td>Jane Davis</td>
<td>British Columbia</td>
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<tr>
<td>200</td>
<td>Feb 28, 2006</td>
<td>08:58:00</td>
<td>1970-59-000003</td>
<td>Jones</td>
<td>Joe Peter</td>
<td>British Columbia</td>
</tr>
<tr>
<td>400</td>
<td>Feb 28, 2006</td>
<td>08:59:00</td>
<td>1970-59-000004</td>
<td>Jones</td>
<td>Jane Sally</td>
<td>British Columbia</td>
</tr>
<tr>
<td>200</td>
<td>Feb 28, 2006</td>
<td>09:00:00</td>
<td>1970-59-000005</td>
<td>Wang</td>
<td>Ahmed Barry</td>
<td>British Columbia</td>
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## Red

<table>
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<tr>
<th>Birth Reg Number</th>
<th>Final Response Date</th>
<th>Final Response Time</th>
<th>Interim Response Date</th>
<th>Interim Response Time</th>
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<td>13:50:00</td>
<td></td>
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<tr>
<td>12345678</td>
<td>Yes</td>
<td></td>
<td>Yes</td>
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</tr>
</tbody>
</table>

## Birth Cert Details
- Birth Cert Number: 12345678
- Birth Cert Date: Jul 21, 2005
- Name: webstir
- Gender: M
- Date Of Birth: Jun 15, 1988
- Birth Place City: Surrey
- Event Status Valid: Yes
- Certificate Status Valid: Yes
- Death Indicator: Yes (Died in Province)
- Legal Change Of Name Indicator: Yes
Current Status and Next Steps

• Successful pilot between five partners is being conducted
• Plans have been developed to engage other partners including all thirteen provinces and territories
• Authority and funding to implement will be sought by late fall 2006
• The NRS will subsequently be rolled out on a national basis with the solution in place by summer 2008
Long Term Vision

Project elements as developed in support of NRS/NRS Pilot:
- Policy (ID Policy Framework)
- Requirements
- Business Rules
- Data Standards
- Security
- Technical Documentation

Through NRS, VSOs notify each other

Legend
- Notification Only
- Query
- Both
- ... To Be Determined
Conclusions and Lessons Learned

- NRS contributes to a number of national and international initiatives related to identity management.
- The technology exists to support a secure system for the exchanging of vital events information.
- Concerns for the safeguarding of personal information must be addressed.
- Standards (technology, data) are an important interoperability issue.
- Keep it simple – limit your scope and roll out in manageable chunks.
**Passport on-line**

Passport Canada has launched an initiative called [passport on-line](http://www.passport.gc.ca). This initiative allows Canadians 16 years of age and older living in Canada to fill in the adult passport application electronically.

**Do I now need a passport to travel to the United States?**

Though passports are the document of choice for travel.