





CONFERENCE on TECHNICAL COOPERATION
CAPACITY BUILDING for BORDER MANAGEMENT

angkok, 5 - 7 June 2012







































Foreword

The management of movements across international borders is an integral part of a comprehensive approach to the management of contemporary mobility. The challenge for governments everywhere is to reconcile two apparently contradictory objectives. The first is the facilitation of travel for social, economic or cultural purposes. The second is the prevention of unauthorized movement. And between the two there must be provision for those with a legitimate claim to international protection. Nowhere are these challenges felt more keenly than in the vast Asia-Pacific region.

The aim of the Second Conference on Technical Cooperation and Capacity Building for Border Management was to enable practitioners from across the region and from a variety of professional backgrounds—including policy makers, programme implementers, academics and technology suppliers—to review key policy issues in border management, to identify best practices, and to assess the value of state-of-the-art technologies.

The plenary sessions gave participants the opportunity to explore a number of current policy orientations including first and foremost risk-based as opposed to norm-based border management strategies. This implies flexibility and adaptability of responses, and a focus on targeted outcomes rather than on the application of set procedures. Such an approach requires the ability to monitor and analyze situations, to identify emerging risks and to develop appropriate solutions. One corollary to that is an increasing emphasis on pre-arrival as opposed to on-arrival processing of travelers so as both to speed clearance of bona fide travelers and enable identification of high-risk arrivals. Once the choice is made to go in this direction, it becomes essential for the border management community to focus on the need to harmonize data to minimize costs, and to improve the quality, flow and exchange of information. All the above tasks are complex and sensitive, and a strong view emerged that it is to the advantage of governments to develop long-term working partnerships with one another and with other stakeholders including technology suppliers.

As a complement to the plenaries four intensive workshops enabled participants to study new developments in visa production and processing, carrier-based data collection, operational applications and specific-purpose supporting tools.

All in all, this event provided multiple opportunities for keeping track and reviewing progress in the field and learning about emerging prospects. This conference series is surely on the way to becoming an established feature of the landscape for border management specialists.

William Lacy Swing

Director General International Organization for Migration

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Conference Background, Objectives and Sequence

From 5 - 7 June 2012, the International Organization for Migration (IOM) and Asia Pacific Smart Card Association (APSCA), with the support of the Department of Consular Affairs of the Ministry of Foreign Affairs, Thailand, hosted the 2nd Conference on Technical Cooperation and Capacity Building for Border Management—also known as the Border Management Conference (BMC)—in Bangkok. More than 300 participants from governments, international organizations and the private sector gathered to discuss the conference theme, "Facilitating Travel and Reducing Risks through Efficient Pre-Departure Data Management."

The conference followed the highly successful 1st BMC, held in Bangkok in January 2010, which aimed to foster information sharing with regard to international standards useful for strengthening national border management systems.

For the 2nd BMC, IOM and APSCA decided to explore pre-departure data management as one of the critical elements of an effective border management system. This topic is highly relevant today, given the recent explosion in the volume of international travelers due to improvements in infrastructure, an increase in competition in the travel industry and lower travel costs. This growth in travel benefits trade and tourism but also presents a numerous public safety and national security challenges, including those related to the rise in the issuance of travel documents and visas and the corresponding increase in the number of stolen or lost passports and identity cards, as well as congestion at airports and delays at border-crossing checkpoints. To address these challenges, governments need to put in place strategies that embrace innovation, efficiency and automation. The effective pre-departure collection of passenger and travel data is one means through which to tackle such challenges.

Immigration and border management agencies around the world are at the forefront of new developments in collecting and utilizing pre-departure data, not only to expedite processing time at borders, but also to reduce the risk of allowing illicit, irregular movement of people and goods across borders. Pre-departure data can be collected through various means, including visa applications, electronic travel authorizations, passenger name records, and advanced passenger information or processing. These mechanisms often enable passengers to use automated border crossing systems, which reduce waiting times and may also expedite the process of importing goods. In fact, efficient border management systems that make good use of pre-departure data take a holistic approach to such components and principles as IT infrastructure, detection equipment, information sharing, trend analysis, and capacity building of staff.

The main aim of the 2nd BMC, therefore, was to provide a platform for governments (in particular, immigration and border management agencies), international organizations, industry experts, academics, and private sector companies to discuss and exchange state-of-the-art solutions for the collection of pre-departure data.

Plenary sessions on Day 1 explored this theme from various angles via presentations from regional and international organizations, including ASEAN, UNCTED, INTERPOL, UNODC, WCO, ISO and IOM; government representatives of Australia, Japan, China and the United States; and Bangkok Airways, representing the airline industry.

Day 2 focused on an in-depth examination of four topics under the overall theme of predeparture data management. These topics were organized into four workshops:

- Workshop 1: Visas Matter
- Workshop 2: Data Collected by Carriers
- Workshop 3: Operational Applications
- Workshop 4: Supporting Tools

Workshops were co-chaired by representatives of governments, international organizations and industry experts. Speakers delivered presentations related to each topic, which were followed by discussions among participants. A series of concrete recommendations and next-steps surfaced during the workshops.

The morning plenary session on Day 3 was dedicated to presentations on new developments in border management by government representatives from the Netherlands and Mongolia, representatives of private companies and educational institutions, such as Gemalto, Morpho and ID.academy, and a representative from UNODC. During the afternoon plenary session, workshop co-chairs presented the recommendations, followed by in-depth discussions on the relevant topics. The final presentation summarized the outcome of a related event, the Expert Meeting held prior to the conference on 4 June 2012.

The overarching vision for the 2nd BMC was to contribute to the strengthening of border management systems in the Asia-Pacific region through fostering consultation and cooperation among national authorities responsible for border management and key international partner organizations. It was evident that this vision was achieved; the BMC series continues to provide an important forum for governments, international organizations, private sector agencies and academics to convene to exchange information on the latest ideas and technologies in immigration and border management. The existence of such a forum is important given that the challenges faced in immigration, border and identity management require the concerted and coordinated efforts of all relevant stakeholders. It is hoped the conference has helped spark an interest among the participants to consider concrete ways in which to establish means to collect and share data to inform future immigration, border and migration management policies.

Acknowledgements

The 2nd Border Management Conference (2nd BMC) was held in Bangkok from 5 - 7 June 2012 and brought together 315 participants representing 35 governments, 8 international organizations, 6 airlines, 4 educational institutions and representatives of various related industries. The conference was co-organized by the International Organization for Migration (IOM) and the Asia Pacific Smart Card Association (APSCA).

The 2nd BMC was a tremendous success. Both IOM and APSCA received overwhelmingly positive feedback from participants, both on the content and organization of the three-day event.

On behalf of APSCA and IOM, I would like to first express our appreciation to the Ministry of Foreign Affairs of Thailand for their generous support, which enabled us to hold the BMC series in the beautiful city of Bangkok, to the sponsors for their continued belief in the series and its value, to the speakers for their time and willingness to share their experiences with us, and to the conference chairperson and workshop co-chairs for their commitment to serve in their important role as facilitators during the sessions of the 2nd BMC. In addition, thanks are also due to the conference participants, whose attendance, input and enthusiasm for the event contributed greatly to helping the 2nd BMC reach its full potential: to serve as a forum for the border management community to come together, build networks, and discuss the latest developments, challenges, and state-of-the-art technologies in our dynamic, ever-changing field. We could not have done it without each and every participant. Thank you.

This report was put together by the Immigration and Border Management (IBM) Unit of the IOM Regional Office for Asia and the Pacific (ROAP) and attempts to summarize the proceedings during the three thought-provoking days at the 2nd BMC. It is organized in chronological order and consists of summaries of 42 speeches and presentations, and 10 workshop discussions. To ensure accuracy, we have requested all speakers to review the content of the summaries, which are designed to be read in conjunction with the speakers' presentations. Copies of the presentations are accessible at http://www.apsca.org/infodesk/presentations.php (select "APSCA Meeting 131: 2nd Border Management Conference," guest ID: guest 131, password: vb435nb6).

A list of the recommendations from the four workshops appears in the penultimate section, followed by a summary of the outcomes of the Expert Meeting, held on 4 June

which this report would not have been possible.

¹ Fumiko Nagano (IBM Unit, IOM Regional Office for Asia and the Pacific (ROAP)) prepared this report, based on the detailed notes taken by Alexandra Gasteen (IOM ROAP), Euan McDougall (IOM Thailand), Siripan Wandee (IOM ROAP), and Sachini Weerawardena (IOM ROAP) at the Conference. Nicole Hoagland (IOM Cambodia) and Euan McDougall reviewed the report and provided editing support. The IBM Unit is grateful for their invaluable assistance, without

2012. Annexes include a copy of IOM Director General William Lacy Swing's keynote speech and the conference agenda.

I hope the report is helpful in reminding you of the depth and breadth of the topics covered and gives you ideas on how to address challenges you face and whom to contact for assistance and guidance.

More importantly, I look forward to seeing you again, if not in the near future, then back at the 3rd BMC, scheduled for June 2014 in Bangkok.

Sincerely,

Sjef Broekhaar

Head, Immigration and Border Management Unit IOM Regional Office for Asia and the Pacific Bangkok
October 2012

Abbreviations and Acronyms

ABC Automated Border Control

ADIS Arrival Departure Information System (US)

API Advanced Passenger Information

APIS Advanced Passenger Information System

APP Advanced Passenger Processing

AQQ APIS Quick Query

APSCA Asia Pacific Smart Card Association
ASEAN Association of Southeast Asian Nations

AUD Australian Dollar
BAC Basic Access Control

BMC Border Management Conference (IOM/APSCA)

CAN Card Access Number
CRL Certificate Revocation List

CSCA Country Signing Certification Authority

DCS Departure Control System

DESC Document Examination Support Center (IOM)

DHS Department of Homeland Security (US)

DIAC Department of Immigration and Citizenship (Australia)

DOVID Diffractive Optical Variable Image Device

DS Document Signer

EAC Extended Access Control
EDI Electronic Data Interchange

EDIFACT EDI for Administration, Commerce and Transport

ETA Electronic Travel Authorization

EU European Union

FIND Fixed INTERPOL Network Database

FTA Failure to Accept
FTE Failure to Enroll

GASR General Authority for State Registration (Mongolia)

GDP Gross Domestic Product
GPS Global Positioning System

IATA International Air Transport Association
IBMS Integrated Border Management System
ICAO International Civil Aviation Organization

IDENT Automated Biometric Identification System (US)

IDP Internally Displaced Persons

INTERPOL International Criminal Police Organization
IOM International Organization for Migration
ISO International Organization for Standardization

IT Information Technology

IVSS Immigration and Visa Support Solutions

MIND Mobile INTERPOL Network Database

MFA Ministry of Foreign Affairs

ML Master List

MO Method of Operation

MRP Machine Readable Passport MRZ Machine Readable Zone

NADRA National Database and Registration Authority (Pakistan)

NID National ID (Mongolia)
NCB National Central Bureau
OBA Optical Brightening Agent
OVD Optically Variable Device

PISCES Personal Identification Secure Comparison and Evaluation System (US)

PKD Public Key Directory
PKI Public Key Infrastructure
PNR Passenger Name Records
PRC People's Republic of China

RILON Regional Immigration Liaison Officer Network (Bali Process)

RSO Regional Support Office (Bali Process)

RTP Registered Traveler Program
SAC Supplementary Access Control

SLTD Stolen and Lost Travel Document Database

SMS Short Message Service SMV Stolen Motor Vehicle UK United Kingdom

UNCTED United Nations Counter-Terrorism Committee Executive Directorate

UNHCR United Nations High Commissioner for Refugees

UNODC United Nations Office on Drugs and Crime

UNTOC United Nations Convention against Transnational Organized Crime

US United States

USD United States Dollar

US-VISIT U.S. Visitor and Immigrant Status Indicator Technology

UV Ultraviolet

VAC Visa Application Center

VRS-MSRC Voluntary Reporting System on Migrant Smuggling and Related Conduct

WCO World Customs Organization

Day 1: Official Opening and Plenary Sessions

The official opening and plenary sessions, held on 5 June 2012, consisted of speeches and presentations on the topic of pre-departure data collection by representatives of government, international organizations, and the private sector. Governments represented include those of Thailand, Australia, Japan, China, and the United States, while regional and international organizations included ASEAN, UNCTED, INTERPOL, UNODC, WCO, ISO and IOM. Bangkok Airways represented the private sector.

Conference Chairperson

Mr. Gervais Appave	Special Policy Advisor to the Director General,	
	IOM	

Speakers

Speukers -	
Mr. Niyom Watthammmawut	Deputy Director General, Department of Consular Affairs, Ministry of Foreign Affairs, Thailand
Ambassador William Lacy Swing	Director General, IOM
Ms. Khine Myat Chit	Senior Officer, Security Cooperation, ASEAN
Ms. Jackie Wilson	Deputy Secretary, Business Service Group, DIAC, Australia
Mr. Greg Pote	Chairman, APSCA
Mr. Hassan Baage	Sector Chief, UNCTED
Mr. Davuth Ly	Regional Specialized Officer, Liaison Office for Asia and South Pacific Region, INTERPOL
Mr. Sebastian Baumeister	Expert/Migrant Smuggling Analyst, UNODC
Mr. David Haigh	Customs Counsellor, WCO
Mr. Tom Kinneging	Convenor, ISO
Mr. Terry Wall	National Manager, Passenger Targeting Branch, Australian Customs and Border Protection Service
Mr. Yasuhiro Togo	Assistant to the Director, Data Processing System Development Office, Immigration Bureau, Ministry of Justice, Japan
Mr. Patrick Corcoran	Senior Specialist, Immigration and Visa Support Solutions, IOM
Mr. Jin Weicheng	Deputy Director, Division of Immigration Inspection, Ministry of Public Security, The People's Republic of China
Mr. Ping Na Thalang	Vice President, Information Systems Department, Bangkok Airways
Mr. Craig Kelly	Senior Advisor for Asia Pacific Affairs, US-VISIT, DHS, United States

Official Opening

Mr. Gervais Appave of IOM welcomed participants to the Conference, explaining that it was the second time IOM and APSCA had partnered to hold a conference of this scale in the area of immigration and border management. While initially scheduled for November 2011, the Conference was postponed due to the large-scale floods affecting Thailand in the second half of 2011. Mr. Appave stated that he looked forward to the dialogue, networking and information exchange to take place on the Conference theme. He pointed out that the Conference would provide opportunities to define roles and responsibilities between stakeholders in border management. It would also enable participants to identify technology-based solutions to common challenges.



The 2nd BMC opens on 5 June 2012, bringing together more than 300 participants.

Mr. Niyom Watthammawut welcomed guests to the Conference on behalf of the Ministry of Foreign Affairs of Thailand. He stated that the Conference provided an opportunity to keep abreast of key developments in border management among the countries in the region, and to develop strategies to minimize risks while facilitating movement of the ever increasing number of travelers. Mr. Watthammawut identified terrorism and drug trafficking as serious threats that continue to face border management officials and noted that pre-departure data analysis and informationsharing can serve to protect borders. Mr. Watthammawut discussed the need for a more systematic and coordinated approach among countries to address challenges and stated that governments, border management agencies and the private sector can come together to achieve common goals to systematize travel across the world. He noted that relevant issues and views would be discussed and shared at the Conference and emphasized Thailand's commitment to contributing to and learning from the event.

Ambassador William Lacy Swing of IOM gave the keynote speech. He emphasized that IOM considers this Conference important as it brings together key stakeholders to share information necessary for enhancing capacities and strengthening border management. Citing that the number of migrants is projected to double to 405 million by 2050, Mr. Swing drew attention to the social and political "drivers" underlying large-scale movements of people (Demography, Digital revolution, Disasters, climate Degradation, and Dreams of people). He explained that the objective for policy makers is to manage migration processes in a manner that is legal, regulated, responsible and humane in character, and in a manner that respects national sovereignty, advances economic and social aspirations of migrants, and upholds human rights. To do so, he urged participants to consider three points: 1) the need for a carefully planned approach to border management, within a comprehensive migration management strategy; 2) the need for strategic partnerships and the importance of frank dialogue to address the tasks confronting border management; and 3) the need to look at the challenge of identity protection and safeguarding personal information collected by new technologies. As large-scale migration is here to stay, it will require much more of an integrated and comprehensive approach with people and migrants in mind, with a focus on partnerships.



IOM Director General William Lacy Swing delivers the keynote speech.

Ms. Khine Myat Chit of ASEAN introduced the "Master Plan on ASEAN Connectivity" in her presentation. She first explained the rationale behind the establishment of the ASEAN Community by 2015: to bring people, goods, services and capital closer together. ASEAN - which is home to 600 million people with a combined GDP of USD 1.5 trillion - is in a strategic geopolitical location. Enhanced ASEAN connectivity will benefit all member states by strengthening interregional trade and investments, narrowing economic gaps, and building a stronger sense of shared cultural heritage.

Ms. Myat Chit explained that the main challenges facing ASEAN in border management include: safeguarding the borders, standardizing/establishing compatible border and data processes, and monitoring and sharing information on border management issues. She referred to the 2011 Indonesia study exploring the feasibility of establishing an ASEAN common visa, stating that with concerted effort this innovative idea will be attainable. In conclusion, Ms. Myat Chit stated while challenges exist, with resilience and strong commitment and cooperation between key stakeholders, states will be able to achieve the vision of establishing an integrated ASEAN community to enhance physical and institutional connectivity and address border management issues more effectively.

Ms. Jackie Wilson of DIAC spoke about "Building a Focus on Risk: Surfacing, Understanding and Treating Risk in Support of Departmental Operations." She first gave an overview of border-related challenges facing Australia, explaining that detaining and removing non-compliant travelers is costly (AUD 60,000/person); hence, it is necessary to identify such travelers as early as possible in the process. In order to manage travel into Australia more efficiently in an environment of decreasing resources, DIAC has established a process focused on risk identification and innovation.

Australia's "layered approach" to border management relies on a continuous flow of information, with intelligence gathered throughout five stages: pre-application; visaapplication process; check-in; after check-in; and on arrival. DIAC deploys four capabilities supported by analytics to manage risk, and risk scoring is conducted for all 15 million air arrivals. Ms. Wilson then described Risk Scoring Service, Risk Tiering, and Alert Dashboard in greater detail. In the Risk Scoring Service, a generic visa portal links to and checks profiles in the visa risk scoring service and alerts officers to risks involved with approval of visas. The aim of Risk Tiering is to identify the nature and likelihood of risks associated with a visa application and select optimal processing channels to mitigate identified risks. To put more resources towards high-risk cases, the officer responsible for making a decision on an application is given as much relevant information as possible. The Alert Dashboard shows historic trends, and manages and arranges data and key variables to enable policy and risk specialists to talk to each other. Also, a system is set up for automated alerts when forecasted and actual numbers do not match and tolerance ranges have been breached. Ms. Wilson explained the need to focus integrity resources from the perspective of traveler pathways from the beginning to end of the journey, and that it is much more efficient and effective to supplement a robust visa processing system.

Mr. Greg Pote of APSCA provided remarks prior to officially opening the Conference exhibition with IOM's Director General. Mr. Pote first described the work of APSCA, the regional industry organization for secure smart chip technology applications in Asia. He then provided a background to the BMC series, explaining that the series came about as a result of IOM's suggestion to expand the scope of the APSCA series of government conferences held since 2002. He then summarized the conference programme,

emphasizing that the key objective of the 2nd BMC was to inform governments in the region of key border management issues relating to facilitating travel and reducing risks, particularly in pre-departure stages. Mr. Pote stated that the theme reflects the interests of government agencies in the region and confirmed that the outcomes from the Conference will be identified in a series of recommendations and distributed to attendees.



IOM Director General William Lacy Swing and APSCA Chairman Greg Pote cut the ribbon to mark the official opening of the Conference exhibition.

Plenary Session

Mr. Hassan Baage of the United Nations Counter-Terrorism Committee Executive Directorate (UNCTED) started his presentation with an overview of the key provisions of the UN Security Council Resolution 1373 (2001), which requires UN members to criminalize terrorism and its financing and promotes cooperation among governments to prevent terrorism. In terms of border management, the Resolution calls for operational information exchange among states with respect to movements of terrorist persons or networks and the use of forged travel documents. Mr. Baage outlined the mandate and role of UNCTED, which monitors the implementation of the Resolution and provides technical assistance to states on counter-terrorism efforts. UNCTED has visited more than 65 countries in its effort to assess the progress on the implementation of the Resolution to date.

To protect borders from irregular or illegal entry by terrorists, states have implemented a variety of passenger-processing mechanisms, including screening systems and early visa-issuance practices, collection of advanced or pre-arrival travel data, national and

international watch lists, and inspection and verification processes to detect forged and stolen travel documents. Mr. Baage explained that these processes are designed to enable the frontline to identify known and suspected terrorists and other criminals and take appropriate action. However, a number of challenges exist, most notably: lack of a legislative basis to require pre-arrival information; general lack of technology; lack of capacity of frontline staff; lack of capacity to collect and make use of information, including for developing watch lists and risk indicators; and lack of legal or institutional capacity to share information with other states. Mr. Baage stated that, because criminals are nimble and adjust their techniques to changing circumstances, we need to be ahead of them to be successful.



The plenary session on Day 1 kicks off.

Mr. Davuth Ly of INTERPOL gave a presentation entitled "Reducing Risks through INTERPOL Database (MIND/FIND Solution)," in which he described INTERPOL's approach to achieving its vision of "connecting police for a safer world." Mr. Ly first described INTERPOL's global presence, outlining the roles and responsibility of various agencies, including its 190 National Central Bureaus (NCBs), as well as its governance structure and history. Mr. Ly then described INTERPOL's six priorities, including: maintaining a secure global communications network; identifying crimes and criminals; facilitating 24/7 operational support to policing and law enforcement; and capacity building, among others. A key tool to aid police in the fight against transnational crime is the I-24/7 system - a gateway to INTERPOL's databases accessible around the clock in real time - which provides a platform for sharing information among law enforcement entities and to which all member countries are connected.

Among INTERPOL's various databases, the more relevant to border management include: the nominal database (containing the names of suspects and missing persons); Stolen Motor Vehicle (SMV) databases; and the stolen and lost travel documents (SLTD) database (with 161 participating countries as of December 2011). INTERPOL also circulates notices as part of a warning system regarding wanted persons, known criminals, and warnings of threats, among others. Finally, Mr. Ly spoke about two databases, which ensure that frontline officers have direct, real-time access to INTERPOL's databases: the MIND (Mobile INTERPOL Network Database) and FIND (Fixed INTERPOL Network Database). The MIND provides an integration solution using the existing infrastructure and a backup mobile facility. The FIND provides links between national servers and host servers at the General Secretariat level and is used to connect offline when it is not possible to connect to MIND.

Mr. Sebastian Baumeister from UNODC spoke about the "Migrant Smuggling Challenges in South East and East Asia: Joining Forces to Fight a Deadly Business." He began by highlighting that smuggling, from the perspective of the smugglers, is a relatively low-risk, high-profit business. The fees for smuggling services are often cheaper than using regular migration channels, and corruption and the use of fraudulent methods in its operations are rampant. Smugglers are part of networks guided by flexible, decentralized and frequently changing arrangements coordinated by a chain of operators, which makes them difficult to intercept. Mr. Baumeister pointed out the notable lack of coordination and information sharing in addressing these crimes to date, and that the current focus on state-based border controls is not the solution. There is a need for consistent policies to coordinate responses to migrant smuggling, including better information exchange among countries of origin, transit and destination, and improved regional and international cooperation at political and operational levels. Currently, migrant smugglers face little risks for punishment, and this needs to be changed to bring perpetrators to justice and make migrant smuggling unprofitable. Finally, there is a need to improve evidence-based knowledge.

UNODC has a role to coordinate global adherence to the UN Convention against Transnational Organized Crime (UNTOC) and its supplementary protocols. In the region, UNODC assists states to build intelligence-led, proactive investigative capacities and facilitates the collection, sharing and analysis of data related to migrant smuggling. For example, to support the Bali Process, UNODC will develop data sharing mechanisms to better address migrant smuggling. Smuggling is a highly profitable, opportunistic crime, which needs to be countered with comprehensive policies focusing on investigating and prosecuting criminals and exchanging information.

Mr. David Haigh presented the World Customs Organization's perspectives on Advanced Passenger Information (API) and Passenger Name Records (PNR). To address significant air traffic, the WCO and International Air Transport Association (IATA) jointly developed guidelines on API in 1993. The API is passenger data collected at check-in that is transmitted to border authorities at the port of arrival, is generated for states' use,

and consists of information from travel documents and basic flight information. The PNR is an electronic record created by the airlines for their own commercial purposes and contains information - such as itinerary, contact details, seat number, baggage details and payment method - which enables international travel reservation, check-in and boarding processes. The benefit of API and PNR includes a pre-arrival risk assessment, which can allow for targeted interventions. In a world of shrinking financial resources, the better the data, the more targeted the intervention, which will ultimately facilitate more effective passenger travel. However, a number of issues facing the use of these systems remain, including privacy concerns regarding data collected for a commercial purpose and used for law enforcement purposes, lack of agreement on when the PNR data can be accessed, lack of industry standards for data collection and the resulting issues with data quality reducing the effectiveness of analytical tools.

Mr. Haigh noted the need for states and commercial providers to receive information in advance of passenger movements to help border agencies identify potentially high-risk passengers and facilitate the flow of low-risk passengers. Addressing the international move to receive information in advance requires the development and adoption of global standards at the national level to ensure a consistent approach. Mr. Haigh stated that API is not a silver bullet, but it is a useful weapon for border protection.



The Conference exhibition showcases an impressive array of state-of-the-art technology in border management. Here participants stand next to an autogate.

Mr. Tom Kinneging from **ISO** presented on the topic, "Sense and Non-Sense in e-Passport Inspection and the Public Key Directory." ISO works on the development of standards for travel documents. More than 400 million e-Passports have been issued since their introduction in 2005. The chip offers the possibility not only to use biometrics

data, but also to verify the authenticity and integrity of passports in the inspection process.

Electronic security features of the e-Passport include: privacy protection; anti-copying; and data authenticity and integrity (passive authentication). Mr. Kinneging spoke about the digital signature process, in which a private key is used for signing and public key for verification of the data. To enable inspecting authorities to obtain these public keys, the ICAO Public Key Infrastructure (PKI) has been designed in which document signer (DS) certificates, country signing certification authority (CSCA) certificates and master lists (ML) serve as distribution vehicles for public keys. Revocation information, in case of an unlikely but possible event of a compromised key, will be entered in a Certificate Revocation List (CRL), which is also distributed automatically to relying parties through this infrastructure.

Of the various mechanisms through which certificates, Master Lists and CRLs are distributed, the Public Key Directory (PKD) is a useful supporting tool that offers validation, as well as upload and download facilities of certificates and CRLs. It also provides a platform to discuss certificate issues among stakeholders. The PKD, however, does not replace border control systems and policies, nor does it take responsibility for certificates distributed through it. It is also not an inspection system.

Ultimately, an e-Passport requires proper inspection at border entry points and is reliant on national systems. Mr. Kinneging concluded by stating that the security offered by biometric travel documents is powerful, but only when inspected properly. Proper inspection involves, in the preparation stage, trusted CSCA certificates, trusted DS certificates, trusted CRLs, and in the execution stage, verification of the document security object and data groups. While the system will do most of the work, it has to be built and used in a proper way and according to standards. Technologies are only effective if procedures are followed by inspecting authorities, who need to have effective policies and systems in place to effectively utilize the international data available and synchronize it with national processes.

Mr. Terry Wall of Australian Customs and Border Protection Service gave a presentation entitled "Passenger Data Harmonization for Enhanced Border Management." He began by outlining the benefits of the API system to governments, airports and passengers, such as early identification of risk, prevention of travel where appropriate, and greater efficiency in resource allocation to borders, among others. Australia's layered approach consists of various stages and enables more effective assessment of risk, better targeted interventions, and automation of certain processes. Mr. Wall described Passenger Name Records (PNR), created by the airlines and containing data on all aspects of a journey. PNR is used to check high-risk passengers (estimated at 2% of passengers) and provide a richer picture of intent around travel. The Departure Control System (DCS) includes an additional process of matching information

with the reservation system, particularly against watch lists, but the effectiveness of such processes is reliant on the quality of data entered in the system.

Harmonization goals include minimizing cost to the airline industry, improving the quality of passenger data, enabling the identification of potentially high-risk passengers, and facilitating the clearance of low-risk travelers. Airlines and governments are collaborating in working groups and taskforces to develop and implement a standard message for the transmission of passenger data and to improve the quality of passenger data collected. To address data-quality issues, manual data collection is slowly being phased out and more emphasis is being placed on training airlines to ensure information entered is accurate and complete. Mr. Wall concluded by stating that the implementation of PNR will bring significant benefits for all stakeholders involved.

Mr. Yasuhiro Togo of the Immigration Bureau of the Ministry of Justice of Japan gave a presentation, "Outline of the Immigration Procedures in Japan, Utilizing Personal Identification Information (Biometrics Information)." The presentation described Japan's biometrics-based immigration system, introduced in November 2007 against the backdrop of an increasing volume of passenger arrivals. To promote tourism while protecting the country from terrorism, Japan maintains a watch list supported by high quality biometrics data. Japan's Immigration Bureau works closely with security agencies to facilitate access to information on travelers, including terrorists, criminals and past deportees, and to detect imposters. The use of biometrics has led to the denial of entry to Japan of more than 700 travelers in 2010 and 600 travelers in 2011.

In the past, Japan's immigration procedures consisted of the submission of passports and embarkation/disembarkation cards, followed by an interview. Today, travelers must submit these documents, plus fingerprints and a facial photo, prior to being interviewed. The provision of biometric data is required by all foreigners who wish to enter Japan, with the exception of certain categories of travelers. The system for capturing biometrics is user-friendly, consisting of a camera, fingerprint scanners, and a screen displaying simple, easy-to-follow instructions. Applicants refusing to provide their biometrics are automatically refused entry, though such instances are rare.

Prior to implementing this new system, the Government took a number of steps to inform the public and visitors of the new procedures. Airlines and embassies were also contacted to explain the changes and seek their cooperation. To protect the collected biometrics data from unauthorized access or information leak, Japan has a robust security policy using encryption and restriction of access. Two data centers exist in Western and Eastern Japan that are synchronized to prevent data loss due to natural disasters.

Mr. Patrick Corcoran of **IOM** spoke about the organization's Immigration and Visa Support Solutions (IVSS) programme, explaining that the programme offers 15 visarelated solutions. Defining IVSS as "tailored, cost effective immigration and visa-related

support solutions provided to governments and migrants, with a focus on integrity and service delivery excellence," Mr. Corcoran explained that IVSS benefits governments by supporting sound decision-making and easing the burden of time-consuming administrative work for immigration and visa officers at diplomatic missions. IVSS also benefits migrants by providing dignified, migrant-friendly services designed to empower legitimate visa applicants and recipients with accurate and timely information in a language appropriate to their needs. The programme offers a range of services, including logistical assistance to support visa processing, document integrity and verification, biometric enrolment, travel document handling, border management information systems, information services, and Visa Application Center (VAC) operations, to name a few.

In the operation of VACs, IOM acts as the public face of immigration and visa offices and assumes all administrative tasks of the visa application process. Key VAC services include: tailored IT solutions; biodata and biometrics capture and transfer; application completeness checking and risk-based sorting. VACs offer migrants easier access, longer service hours, shorter wait times, patient and personalized service, local currency payment and reduced time on visa decisions. VAC benefits to governments include a more secure and efficient frontline, pre-sorted applications based on risk, ability of visa officers to focus on visa decisions instead of administrative tasks and more time for data analysis and informed decision-making. IOM's IVSS programme enables governments to do more with less, further streamlining the visa application process while at the same time having a positive impact on migrants.



IOM's booth displays the organization's various services and products in immigration and border management.

Mr. Jin Weicheng of the Ministry of Public Security of the People's Republic of China outlined the country's experience with the API program. Mr. Jin explained that China has processed 410 million passengers in 2011, of which 73 million consisted of air travel via 60 airports servicing both international and regional flights. The introduction of API in 2004 brought challenges, such as delays in reporting, as well as low accuracy and low report rate, which stemmed from the lack of: legal basis for API processes; infrastructure; and training for airline and immigration staff. The new Chinese regulation on API has been carried out since 1 May 2008. The PRC immigration staff and airlines have collaborated as partners to implement the new regulation.

China's API data items are required to be inputted either through the SITA network or internet. There are two deadlines, prior to which airlines need to forward data. Those airlines that do not comply with the new regulation are fined. Difficulties encountered include: accurately identifying Chinese names due to multiple ways to spell them, and dealing with irregular flight numbers of chartered flights that are not identified by the Chinese API system.

Mr. Jin explained that since June 2008 the number of flights reported in advance has improved from 88% to 98%, and passenger information from 87% to 99%. China's key priorities with API are to evaluate and increase the accuracy of data accessed via the system, ensure that information is provided well in advance of travel, and efficiently target on high-risk passengers, among others. Mr. Jin concluded by expressing hope that China's experience would help other countries wishing to implement API.

Mr. Ping Na Thalang of **Bangkok Airways** gave a presentation on "Breaking the Air Travel Dilemma," which described the airline processes from the airline industry's perspective. As criminals recognize the potential of air travel, it is often manipulated as a criminal or terrorist tool; for example, as a form of transport, object of hijacking, bargaining chip, weapon or means to make a political or personal statement. As an aircraft is often the key focus of security threats, airlines need to put in place thorough, strict procedures to address these threats. The dilemma for the airlines in facilitating passenger air travel is that the priorities for the passengers (i.e. speed and convenience) are fundamentally at odds with those of the airlines.

Currently, security procedures at airports focus on the "what you have" model, which targets passenger belongings to identify passengers' intent. However, criminals can do harm without carrying weapons through security checkpoints. There needs to be a shift in focus from the "what you have" to the "who you are" model. Defining "safety" as "freedom from unintentional danger" and "security" as "freedom from intentional danger," Mr. Na Thalang explained that the air transport industry is primarily a safety-oriented industry (only one of ICAO standards targets security), whereas it should focus more on security. He introduced the 3-step human security process, consisting of: 1) identification (to determine who a person is); 2) authentication (to verify, based on a person's belongings and knowledge, that the person really is who s/he claims to be);

and 3) authorization (to assess whether the person is allowed do what s/he says). To implement this process, the airline industry requires cooperation from security-focused stakeholders. From the airline's perspective, the "border" is the boarding gate, regardless of whether the flight is domestic or international. Therefore, it is imperative that airlines have full cooperation from all agencies involved in order to protect the sovereign state (which is the aircraft) and its crew and passengers (including citizens on the ground of departing or arriving country) from potential harm.



The exhibition provides an opportunity for participants to learn about technology-based solutions and tools in border management.

Mr. Craig Kelly of the U.S. Visitor and Immigrant Status Indicator Technology (US-VISIT), Department of Homeland Security (DHS), gave a presentation entitled "Reducing Risks through Biometric Identification Services." Operational since 2004, and as the first large-scale integrated and automated biometrics system, US-VISIT aims to ensure the integrity of the U.S. immigration system while facilitating legitimate travel and protecting the privacy of its visitors. Its biometric and biographic data repositories are designed for use by communities, including defense, immigration and border management.

As part of the visa process, the U.S. utilizes biometrics to confidently identify individuals and *malafide* claims. Biometrics of passengers who are visa exempt are also collected at ports of entry to check against watch lists. Currently, DHS maintains two information repositories: the Automated Biometric Identification System (IDENT), and the Arrival Departure Information System (ADIS), each containing records of more than 140 million unique individuals. The Department of State enrolls and verifies over 30,000 visa applicants per day through US-VISIT at over 200 U.S. embassies and consulates around the world. US-VISIT provides 24/7 service to its users to verify fingerprints that either

match a US-VISIT biometric watch list record or that cannot be verified by US-VISIT's automated matching system.

In 2006, the U.S. Coast Guard began using US-VISIT's biometrically based services at sea to identify and apprehend irregular migrants and migrant smugglers. Since the implementation of this program the risks have been reduced and its success in identifying repeat offenders and smugglers has led to the program's expansion to other areas. The U.S. is also evaluating multimodal technologies; an operational test for iris scan and capture recently confirmed its viability. In concluding, Mr. Kelly stated that challenges related to the use of biometrics are common to many partners, and global collaboration is required in order to respond to increasing threats to identity protection.

Day 2: Workshops

Day 2 on 6 June 2012 was dedicated to an in-depth exploration of four topics centering on the theme of efficient pre-departure data management.

Workshop 1: Visas Matter

Workshop 1 explored the visa application and issuance processes and how countries and regions organize the infrastructure for the exchange of visa data between the issuing state and its foreign posts. The workshop also explained the reasons countries should adhere strictly to the visa specifications outlined in ICAO Doc 9303 Part 2 as well as the link among substrates, printing and personalization techniques, and automated reading of visas.

Workshop 1 Co-Chairs

Mr. Jaime Victor Ledda	Assistant Secretary, Chief of Mission II, Office
	of Consular Affairs, Department of Foreign
	Affairs, The Philippines
Mr. Ross Greenwood	Principal, Identity Matters Consulting

Speakers

Mr. Klaus Felsche	Director, Intent Management and Analytics, DIAC, Australia
Mr. Detlef Houdeau	Senior Director, Business Development Identification, Chip Card and Security ICs Business Group, Infineon Technologies AG
Ms. Anne Dumont	Sales Director for Security Paper, Arjowiggins Security
Mr. Sascha Fuls	General Manager, OVD Kinegram Asia Pacific
Mr. Pratak Sikkhamonton	Deputy Director, Division of Visas and Travel Documents, Department of Consular Affairs, Ministry of Foreign Affairs, Thailand



Workshops kick off on Day 2 in packed conference halls.

Mr. Klaus Felsche of DIAC gave a presentation entitled "Bringing Intelligence and Analytics Together to Manage Risk and Enhance Efficiency." For the Australian Government, there are two crucial aspects to managing the integrity of the Australian visa and traveller caseloads: identity and intent. In terms of identity management, DIAC first aims to establish who the person is (or claims to be). To do this, DIAC uses systems it has developed over the years to determine the identity of individuals and then shares that information for use by other Australian government agencies as well as some international partners. In this effort, biometrics has emerged as a powerful new tool. Intent management involves trying to understand what the person actually intends to do in a country. There is a need to look at information and evidence to see if the person is really visiting for the stated reasons.

New and sophisticated tools and skilled analysts (sometimes called data scientists or advanced data miners) are needed to make sense of the large volumes of data collected by DIAC. Mr. Felsche introduced the concept of analytics: "the application of mathematical, statistical and machine-intelligence techniques to extract knowledge from data to assist with sense making and decision making." DIAC's process focuses on the development and real-time deployment of predictive models, which use previous adverse outcome information and sophisticated analytics software to generate models and uncover patterns. Mr. Felsche demonstrated how risk scoring works using such models, stating that risk scoring is conducted for all 15 million air arrivals. DIAC also uses other tools, including flight analysis, network analytics, and abnormal trend alerts.

Models, once built, can be easily monitored in real time to determine if they are degrading in accuracy (criminals may be altering their method of operation (MOs), for example). Mr. Felsche cautioned participants about the limitations of analytics, which relies on the analysis of existing data to build models. Analytics is an emerging and

powerful tool but it cannot see what is happening right now. Analytics is only part of the solution; traditional intelligence sources are critically important for detecting emerging and potential threats or threats built on entirely new MOs.

Discussion

During the lively discussion, participants asked several questions, such as the success rate of the model and the cost of operating such a system. The presenter emphasized the point that the success of any software relies on the capacity of the people who operate it. In network analysis, such information as to whom the traveler is related, what organization s/he works for, and other links and connections are used to determine who the person is and what risks s/he may bring.

Dr. Detlef Houdeau of **Infineon Technologies AG** gave a presentation entitled "Electronic Visa: Nightmare or Future?" He first spoke about paper visas and their standards, then discussed in detail the evolution and features of e-Visas. Dr. Houdeau also explained the Registered Traveler Program (RTP) and that in registering a person, biometrics information of that person can also be captured. He then spoke about the eGate system in Hong Kong and China and its benefits. In concluding, Dr. Houdeau stated that there are currently more than 90 states that issue eMRPs, more than 40 states that use eGates and more than 35 states that have eRP programs, which means that the potential for e-Visas is enormous, with many possibilities. He noted that it is time for standardization and regulation of these processes.

Discussion

The discussion focused on topics ranging from the potential use of smart-phones to the benefit of categorizing travelers; for example, one-time versus frequent travelers, which can contribute to more efficient passenger clearance. The move away from the booklet as a travel document to cards was also discussed, and there was consensus that all of these aspects need to be explored in more depth. To address cases in which a good forger cracks the algorithm and manages to forge the chip, a verification system with an external certificate to provide assurance that the electronic item is valid becomes important. An electronic system allows for a quick verification of documents and is, at least for the time being, less accessible for the forgers.

Participants agreed on the importance of collecting, storing and retrieving data for managing travel entry and stay, while it may not be possible to share databases. Technology convergence was also discussed, as was the viability of smart-phones. Phone communication and GPS features create numerous possibilities for the verification of documents in the future and may ultimately replace documents entirely. Trusted travel programs are a way of making a commercial offer to travelers for more convenience and taking the burden out of processing. There was consensus that authorities around the world are recognizing the potential of moving to an e-system.

Ms. Anne Dumont of Arjowiggins Security and Mr. Sascha Fuls of OVD Kinegram next gave a joint presentation on the physical document security for visas. Ms. Dumont started the presentation by introducing Arjowiggins Security, which is one of the main suppliers for the production of Schengen visas and which offers sophisticated security features. She first described the 1st level security features available, including paper shade, paper overt features and optical variable device, as well as 2nd level security features, such as OBA free paper and UV elements. For example, planchettes with a personalized logo or flag of a country or administration could be a very easy feature for immigration or customs officers to recognize. She also explained Tag'Spheres taggants, which is only readable with specific equipment and is a feature that is highly counterfeit resistant.

Ms. Dumont also spoke about several anti-forgery features to protect against chemical forgery and protect inkjet and laser printing. Arjowiggins has developed high quality adhesive for visas with customized finishing that are almost impossible to take off and become tamper-evident if someone tries to attack the visa. In conclusion, Ms. Dumont stated that the evolution of all the security features in visas must be reviewed year after year; since forgers are cunning, we have to follow all the forgeries that we find on the market to be kept up-to-date on the latest forgery techniques.

Mr. Sascha Fuls of OVD Kinegram discussed optically variable devices (OVDs). Generally speaking, OVDs exhibit various optical effects such as movement or changes in contrast. The devices are produced by means of embossing and are then hot stamped on the substrate. The challenge is that the paper surface can be rough. From a security standpoint, there are four reasons why OVDs have become so widely used: 1) they are hard to reproduce; 2) their production process is complex and requires advanced equipment; 3) mass production of OVDs is possible; and 4) OVDs can be easily verified by the trained, naked eye, making discreet inspection possible. Mr. Fuls reiterated that document fraud is a reality. First making a distinction between imitation and falsification, he stated that there is a difference between counterfeit (which is about falsifying an entire document) and tampering (which involves falsifying some elements of a document). Diffractive Optical Variable Image Devices (DOVIDs) provide protection against falsification, and can be a solution in combination with other features.

As immigration officers do not have much time to check the authenticity of documents, key requirements for a security feature include: easy to communicate; easy to verify; and hard to copy or imitate. Mr. Fuls explained that typical 1st line features are several types of verifiable fine-line movements. Transparency and brightness are other desired features. Mr. Fuls then showed a cross-section diagram to show how the structure of hot-stamping foils works. There are several layers of foils, each with a specific function. Mr. Fuls then showed examples of the state-of-the-art KINEGRAM® ZERO.ZERO, applied on a banknote, passport's data page and the latest Schengen visa.



Mr. Sascha Fuls and Ms. Anne Dumont answer questions posed by the participants.

Discussion

Participants posed questions as to whether countries that do not yet have robust border management systems should be investing so much money on expensive, sophisticated visa labels. This question was responded to with a suggestion that document security should be considered from a holistic perspective. The investment in a secure visa will allow countries to avoid risks. Inter-agency communication/discussions are necessary for raising awareness about risks that can be avoided from effective document security.

Participants agreed that decisions should fit the needs and context of the country and be aligned with the country's long-term strategy for responding to threats and risks. Regardless, a visa's physical security remains important because biometric data is subject to statistical variance, and hence, has to be supplemented. The challenges faced by the industry were also discussed, particularly with respect to making physical features that are easy to communicate but difficult to imitate. Airlines are critical players in the entire process. In summary, participants agreed on the importance of physical security features of visas, as well as the need to ensure the integrity of the production system of breeder documents, on which the issuance of travel documents is based.

Mr. Pratak Sikkhamonton of the **Ministry of Foreign Affairs** of **Thailand** gave a presentation entitled "Re-enforcement of Visa Integrity," which was divided into four sections: objectives; methods; problems/weak points; and suggestions. Mr. Sikkhamonton first named the following objectives for the Thai Government: fostering cooperation among parties concerned with pre-departure security to combat crime; mitigating immigration threats and risks to stop irregular movements; developing

standards and mechanisms for security measures; strengthening capacity of visa issuance authority/officers; and facilitating bona fide travelers. In terms of methods, Mr. Sikkhamonton discussed the need to identify risks and threats, as well as motives behind them, and the need to develop prevention and deterrence measures, especially concerning cross-border threats and irregular movement.

Mr. Sikkhamonton stated that some of the problems and weak points include: lack of information/outdated information; relevant parties not having access to information to help with decision-making; lack of (or inefficient) tools and technology due to insufficient funding; immigration officers not receiving updates on emerging threats; and visa-on-arrival in certain countries being used for acquiring visas for high risk groups. To address these challenges, Mr. Sikkhamonton provided the following suggestions: create a network of information sharing among immigration and border management agencies and airlines, for comprehensive cooperation; explore existing tools and technology and make use of them; implement mechanisms and initiatives within regional and international structures (for example, the Document Examination Support Center (DESC), the Bali Process Regional Immigration Liaison Officer Network (RILON) and the Regional Support Office (RSO) secure portal); improve cooperation between relevant agencies especially with respect to IT connectivity; and train visa issuing officers and create a network among them and relevant parties.

Discussion

A lively discussion followed. Participants stated that a sophisticated system such as the one in Australia was built over 30 years, one brick at a time. While it is good to have a destination in mind, the challenge is to find the appropriate pathway to that destination, which may be different for every country. A suggestion emerging from the floor was the need for standardization. Guidelines for visas are necessary, as multiple formats currently exist. Information sharing, both internally and internationally, is important for extending a layer of the border. The absence of an entity similar to the WCO in the immigration world was also discussed.

Some participants questioned why a country should invest in physical documents and stickers, since they are expensive and easy to forge: when there is no sticker in the passport, it cannot be forged. Others argued that documents are important because biometrics is subject to statistical variance and error at the fundamental level. While the point is not to discredit the Australian system, it is important to acknowledge that this system is not necessarily adoptable by any country, at any stage. Many (or possibly all) of the elements discussed would need to be in place for the current system to be effective in other countries; however, it may be possible for some countries to skip some steps with the use of technology. For the time being, paper will play an important role. Data sharing is critical, but equally important is to determine the minimum requirements for data sharing and protection, taking into account security and privacy issues.

Workshop 2: Data Collected by Carriers

An increasing number of states are requiring that carriers, especially airlines, collect and share passenger and travel data with the state's border management agencies prior to passenger arrival. In pursuit of this objective, the following systems have been developed over the last few years: Passenger Name Record (PNR); Advanced Passenger Information (API); and Advanced Passenger Processing (APP). These systems have one thing in common: a focus on the collection of data in order for authorities to conduct responsible risk management and decision-making prior to passenger arrival in order to minimize waiting times at borders.

This workshop explored the general legal and administrative processes necessary for authorities and carriers to share data and the ways in which these processes can be organized, including infrastructure and equipment requirements. The question regarding how border management agencies receive data and how they respond when data is incomplete was also examined.

Workshop 2 Co-Chairs

Mr. Hassan Baage	Sector Chief, UNCTED
Mr. Davuth Ly	Regional Specialized Officer, Liaison Office for
	Asia and South Pacific Region, INTERPOL

Speakers

эрсикстэ	
Ms. Phakkhra Ruangsiradecho	Manager, Passenger Services System Support,
	Ground Services Business Unit, Thai Airways
Ms. Warattar Wongsupapat	Ground Services Specialist, Thai Airways
Mr. Michael Lim	Global Head of Business Development,
	Government Solution Line, SITA
Mr. Julian Ashbourn	Author and Technical Expert
Mr. Low Keng Wai	Director, Airline Programs, ARINC Asia Pacific
	Division

Ms. Phakkhra Ruangsiradecho and Ms. Warattar Wongsupapat of Thai Airways gave a presentation entitled, "Provision of Pre-Departure Data," which outlined Thai Airways' system, its format and workflow and the challenges faced during implementation. The presenters first gave a brief history of the requirements set by governments for airlines. Currently, Thai Airways uses in-house resources to develop the DCS to support APIS, APP and APIS Quick Query/Electronic System Travel Authority Secure Flight Passenger Data (AQQ/ESTA SFPD). APIS is required for 29 destination airports and APP for 7 destinations.

The presenters then described how Thai Airways handles APIS, APP and AQQ. In the case of APIS, passenger data is given as a batch transmission to send passenger manifest 30 minutes before departure. The system automatically sets up the APIS message through the system provider address of each government. Many countries use SITA as

the service provider, while Korea uses ARINC. In the system workflow for APP by interactive transmission, a message-based interface between DCS and communication gateway is used, and APP is provided for governments at check-in. The message is sent through a SITA communication gateway, which converts the message to a format recognized by the participating government, anticipates the response and transmits it back to the airlines. The U.S. developed the AQQ interface, which has a slight difference in that SITA converts to EDIFACT and then the U.S. responds back to the system.

Challenges faced in the provision of pre-departure data include: strict deadlines set by governments; development costs; handling procedures of interline through check (as API causes slow boarding processes); and system outage. Solutions suggested by Thai Airways included that governments should follow established IATA rules and offer new interactive functionalities, and airlines should be given one contact point for IT support as well as sufficient time to develop systems meeting new requirements.

Mr. Michael Lim of SITA spoke about the "Use of Advanced Passenger Data in the Adoption of Multi-Layered, Risk-Based Border Management System." Mr. Lim explained that advanced data extends beyond API, APP and AQQ and that it is more important to understand what provide an outer layer of security. The definition of advanced data can be governments want to do once they have acquired this data. He stated that border security has four dynamics: cost; security; privacy; and facilitation. Visa issuance is traditionally the first line of defense in border management; however, many countries do not have the ability to detect threats in time. APP can help to extended to include data on cargo and checked baggage.

The integration of passenger data into the airline process happens at three stages: at pre-departure; post-departure; and arrival. Passenger data in PNR can be less accurate. For example, in the case of the name of the Mr. Lim's son, four levels of security did not recognize a mistake in the spelling. Mr. Lim then showed a video about biometric data and how it can help in the identification of passengers. Passport and document checks alone are not enough; risk assessment and biometric checks can help. Biometric data can be captured and matched with previous visits, or between arrival and departure. Mr. Lim reiterated the far-reaching benefits of biometrics in border management, allowing immigration officers more time to devote to high-risk passengers.

Discussion

During the discussion, the workshop chairs first summarized the recommendations given by Thai Airways. The first was to follow the IATA standards on the transmission of information and to use a single harmonized approach in data collection and transmission. Another suggestion was to use PNR in accordance with IATA standards, which have also been endorsed by the WCO. Participants commented that it would be good to have standards on how the data is transmitted as well as the data format. Thai Airways representatives commented that they occasionally have to reject the method of transmission requested by governments.

Thai Airways' second recommendation was to develop a new interactive functionality. The airline added that based on the new trend in APP requirements, it is easier for airlines to deal with the case when responses are received quickly. Participants decided that the third and fourth recommendations — to inform airlines in advance of new requirements and have a focal point for IT — should be combined with the second recommendation. Participants commented that since airlines are under pressure and the recommendation is to develop standards for international airports, the use of equipment to facilitate a quick an easy data screening process for airlines should be explored. Thai Airways also suggested that an appropriate timeframe within which airlines can be expected to develop a system to meet the advanced data needs of governments should be no less than six months. Ideally, advanced notice of twelve months would be helpful.

There were no specific recommendations arising from the presentation by SITA, but the main point was that, in the future, advance data can go beyond the biographic data currently collected to include biometric data and data on cargo and baggage.

Mr. Julian Ashbourn, in his thought-provoking presentation entitled "Border Management Fundamentals," challenged participants to look at border management from the perspective of the traveler. A seamless and efficient system will focus on having welcoming borders that help the traveler, and not one that looks at every traveler as a potential criminal. To establish such a system, there is a need to first think about what information is actually required by border management officers to do their job effectively. Indeed, rather than reams of information, unique identifiers alone might provide us with the information we need for the majority of legitimate transactions. The importance of the registration process was stressed and it was noted that, if this process is not conducted properly, then inferences and assumptions made after that point will be compromised and subject to inaccuracy. Furthermore, if we have no equivalence of performance and process across nodes, then it makes a mockery of our reliance on biometrics and creates opportunities for criminals to exploit.

With respect to data protection acts, Mr. Ashbourn reminded participants that they are legal instruments and should be respected accordingly. The distinction between law enforcement and border management was also stressed, and it was suggested that roles and responsibilities need to be understood in this context. Mr. Ashbourn challenged the current thinking by posing questions, such as whether the assumption that we are making the world a safer and better place is actually true. Surveillance has increased, but serious crime has also increased, the UK being given as an example. Indeed, by criminalizing the innocent, we are in danger of creating a self-perpetuating effect, especially among the young or disenfranchised. He concluded by offering some next steps, including: developing an international framework of understanding; the development of a harmonized international strategy; acknowledging privacy and data

protection; clarifying the purpose and scope of technology; and understanding the importance of user psychology.

Mr. Low Keng Wai of ARINC gave a presentation on "Intelligence Led Border Control and Management." For many governments, the interest is in how to manage the flow of people in and out of their borders. An end-to-end intelligence process can facilitate these efforts through four stages: pre-arrival; entry control; stay management; and exit control. Airlines can receive a "go" or "no-go" message from a government much earlier. Currently, governments are mainly working on statistical information; for example, from passports and reservation/check-in systems; however, the question is how this information can help in further scrutinizing passengers.

Defining "intelligence led border control and management" as "a targeted approach to border management and control, focusing upon the identification, analysis and 'management' of persons of interest, threats or risks," Mr. Low explained that API is passive, making governments reactive rather than proactive in receiving and utilizing the information. Instead of waiting for the airlines to provide the information, governments can extend their borders beyond to the country of origin through interactive API, for example, via AQQ/APP. This system provides "go" or "no-go" instructions before boarding passes are issued, minimizing the impact on carriers.

Passenger name record is another source of information from which data can be collected. As the world evolves, more and more intelligence information is available from various sources. Open source intelligence is an underrated source of information; 80 per cent of information on passengers can be found through this medium. These sources of data can be fused together to create a "golden record" of passengers. A new strategy is to employ a modular approach to analyze information, starting with a simple API, and adding layers to build the entire system.

Discussion

A lively discussion ensued, and participants and presenters spoke about issues with respect to data fusion, the use of open source information and its relative accuracy. The presenter clarified that he does not promote relying on open source information, as it is mostly unqualified. A participant echoed the sentiment, adding that open source data should not be trusted, as people may easily fabricate their own information. Some suggested to take the concept of data fusion cautiously for similar reasons and noted that data privacy is an important concern among many. However, there may be positive aspects to data fusion if undertaken carefully, in providing an increased visibility of potential risk. Another topic concerned the standardization of information gathered from airlines, including PNR items. Variations in the data requested are creating problems for both governments and airlines. A recommendation was to form an international working group to set much-needed standards in this area.

A recommendation surfacing from the second set of presentations was to form an international working group, consisting of a small group of experts, perhaps chaired by IOM, but this needs to be discussed along with aspects of composition and coordination. It may also be a good idea to look at the national strategies that have been developed and identify common elements to form an international strategy, including the function of law enforcement in border management. One problem among many existing working groups is the lack of coordination and the inability to see the broader picture.



Workshops on Day 2 proved lively and highly interactive. Here a participant asks a question.

Workshop 3: Operational Applications

Workshop 3 aimed to explore some of the best practices in operational applications based on international standards. In particular, the workshop strove to provide concrete examples of operational applications currently run by border management agencies in the Asia-Pacific region. Special attention was paid to the implementation of predeparture information systems and their performance indicators, possible results and future development possibilities. Topics such as whether it is possible to use predeparture data in the Automated Border Control systems, the quality of the Machine Readable Zone of national passports and potential benefits of e-Passports were also discussed.

One of the objectives of Workshop 3 was to demonstrate to participants the main differences in the featured applications as well as the advantages and disadvantages of each.

Workshop 3 Co-Chairs

Mr. Ibrahim Ashraf	Assistant Controller, Department of
	Immigration and Emigration, Maldives
Ms. Livia Styp-Rekowska	Programme Officer, IOM-Iraq

Speakers

Mr. Tariq Malik	Deputy Chairman, National Database and Registration Authority (NADRA)
Mr. Clement Lee	Manager, Solutions Architect, Arjowiggins Security Limited
Mr. Shantha Kulasekara	Head, Migration Management Unit, IOM Colombo
Dr. Chathura Ranjan De Silva	Senior Lecturer, Immigration IT Consultant, University of Moratuwa
Mr. Sujan T.V. Parthasaradhi	Director of Biometric Application, Lumidigm, Inc.

Mr. Tariq Malik of the National Database and Registration Authority (NADRA), Pakistan, made a presentation on the "Integrated Border Management System." Established in 2001 in Pakistan, NADRA was initially a government-owned identity document issuing authority. Having issued 91.4 million computerized national identity cards using biometric technology to 96 per cent of the eligible population within a span of 10 years, it has become an organization rolling out eGovernment solutions to the citizens of Pakistan. The entity has become an international player, totally self-reliant, offering services in identity management in countries, including Kenya, Nigeria, Bangladesh and Sudan, and supporting the World Bank and other international agencies. It has a huge outreach within Pakistan with 452 static registration centers, 250 mobile vans (all with satellite equipment) and more than 70 man packs (skiers and motorcyclists).

In Pakistan, there are six different types of national identity documents, and the country has produced 16 million Machine Readable Passports (MRPs) using the new technology. NADRA also created a system using the same technology for UNHCR targeting refugees and Internally Displaced Persons (IDPs) with conditional cash grants, as well as in other countries dealing with internal conflict and natural disasters. Pakistan's smart identity cards are ICAO 9303 fully compliant documents, which help ensure financial inclusion, social protection, health and education services to Pakistani citizens. From 2006-2007, NADRA contributed to the establishment of the first biometric border control system at Chamman, between Pakistan and Afghanistan. Daily traffic volume consisted of 30,000 people, 3,000 motorcycles and 700 vehicles. Frequent traveler/mobility system was set up, as were autogates using biometric (fingerprint) control system. Unfortunately, within a few months, the system was stalled due to diplomatic issues between the two countries.

From 2010-2011, NADRA worked on the development of the Integrated Border Management System (IBMS) to replace the PISCES system, which did not support advanced features needed by Pakistan. The new system was deployed in late 2011. Mr. Malik explained the IBMS portal and its advanced features, and the future directions to be taken with the system, which has already processed 1.4 million passengers and is working very well.

Mr. Clement Lee of Arjowiggins gave a presentation entitled "Secure Environment for e-Passport Authentication." Arjowiggins is a leading company in the production of security papers and solutions in border management, with extensive experience implementing IT systems around the world. Arjowiggins offers Automated Border Control solutions. Mr. Lee explained that the continuous increase of passengers, high demand in clearance performance and limited immigration resources mean that border control security can be enhanced and automated through: electronic authentication of the document; passengers' identity verification with the protected biometric data (face, fingerprint or iris) on the chip; and an automated eGate system. Today, 100 countries are issuing e-Passports, and less then 20 countries are using an ABC system, in particular the eGate, though the trend is increasing.

Mr. Lee then described the e-Passport authentication process, explaining the BAC and EAC passports (with additional biometrics data), as well as the requirements for e-Passport authentication. In terms of the automated eGate system, he explained that the merits include shortened queuing time (10 seconds/passenger), prevention of illegal crossings and reduced need for manpower and space. Mr. Lee described in detail how the eGate works, including its typical set-up, passenger clearance flow and identity verification. He concluded by sharing Arjowiggins' four suggestions for ABC solutions: e-Passport authentication with adaptable and scalable key distribution system; biometrics solutions (face, fingerprint, and iris); eGate components; and system integration services.

Discussion

A number of participants congratulated NADRA for its sound system. NADRA's indigenous, home-grown application—allowing for a phonetic search of sound files in the database to locate a person's record by how the name sounds rather than its spelling —was discussed. Another participant asked whether countries where many citizens do not have birth certificates can use NADRA's system to establish the identity of an individual and what kind of documentation can be relied on for this purpose. The presenter stated that NADRA helped Pakistan's local authorities to automate birth certificates and family registration certificates which are regarded as breeder documents for ID cards. Almost 70 per cent of Pakistan's Union Councils (the smallest unit of local governments) are equipped with recording births, deaths and marriage records. Breeder documents could, however, be problematic if the remaining 30 per cent of union councils are not computerized. Many local governments have the right to

issue documents, but some recommendations on standards are needed at the federal level. For example, the issuing authority would need to establish minimum standards/features that birth certificates must uphold in order for the authority to issue passports based on information contained in these certificates. It was also discussed that determining whether a person is, in fact, who s/he claims to be can not solely depend on biometric information, which represents only part of the process.

Another participant asked about the remarkable increase in the number of registered women in Pakistan. In fact, 81 per cent of women are registered, up from 28 per cent in 2008. This was because women were initially discouraged to register as most NADRA offices were staffed by men. To counter this, women-specific centers were opened and women mobile registration vans also deployed. The overall strategy of the government was the use of the financial inclusion program—that any woman who qualifies for the program should register. This also increased the number of women coming to NADRA offices. Moreover, the elections have helped, as women who want to exercise their right to vote must get their ID cards in order to cast a ballot. NADRA welcomes the opportunity to share its experiences with countries, such as Iraq, which is currently using the PISCES system but could benefit from NADRA. Participants also spoke about the potential use of biometrics to register flood and natural disaster victims for a cash distribution system.

Mr. Shantha Kulasekara of IOM and Dr. Chathura Ranjan De Silva of the University of Moratuwa discussed the "Sri Lanka eTravel Authorization System (e-Visa)." Sri Lanka's priorities included ensuring smooth facilitation of people and addressing cross-border crimes impacting national security. By 2011, the country was processing 850,000 visitor arrivals, an enormous task given the weaknesses in the existing system, including: on-arrival visas were accepted only for 82 countries; an increased risk in border control existed due to lack of advance passenger data; and the system was not intelligence-driven but relied on subjective, decentralized vetting procedures. To address these shortcomings, the government introduced the Electronic Travel Authorization (ETA) system, a web-based system through which visitors could apply and obtain, prior to travel, in-principle approval for travel to Sri Lanka. The ETA system faced initial technical challenges, such as limited internet connectivity for eServices and difficulties in integrating it with the legacy system, but the online visa application process reduced the inconvenience for travelers and administration costs of the visa application process for the government.

The presenters then explained the e-Vetting process, when an application is collected at front-end. The applicant profile is built and a database of tools is established, with each applicant subjected to types of risk and each tool flagging the application either positive (green channel (favorable)) or negative (red channel (unfavorable/high risk)). Various levels of review exist depending on whether the application receives a red or green flag. A real-time system monitoring also occurs via a comprehensive dashboard. The workload for the visa officers is lightened, though ultimately they are responsible for the

final decision. Average processing time is 24 hours due to time difference and other issues. Thus far, the approval rate has been 97.63 per cent. The future directions of ETA include: frequent visitor card; improved border intelligence; e-Visa application processing system (including for long-term visa); SMS intranet,; and Smart Border System.

Mr. Sujan T.V. Parthasaradhi of Lumidigm, Inc. gave a presentation, entitled "Reliable Fingerprint Identity Solutions: Best Practices for Border Application." The goal of border control is to ensure secure, convenient movement of people. This year, there have been 1 billion border crossings, meaning a reliable fingerprint identity solution can support the broader goal of border control. Mr. Parthasaradhi began by describing the characteristics of border control emphasizing real-world challenges. A successful border application must be able to accommodate population differences and adverse conditions so that excellent security and high throughput can be maintained during unsupervised transactions. Normal skin conditions, such as wet or dry fingers, or fingerprints worn away by hard work, can make the reading of biometrics data difficult. In addition, conditions are not always ideal in border areas, including extreme wet or dry conditions; this requires that the choice of technology be different depending on the border environment. Multispectral imaging fingerprint biometrics has successfully overcome this and other challenges inherent to border crossing applications. This unique technology reads both surface and subsurface features of finger skin, which enables the system to work reliably by generating high quality images in real-world conditions—including on surfaces that are wet, dry, or rough, and even if dirt is present on the finger.

Mr. Parthasaradhi suggested that best practices for border applications include: understanding the impact of performance (like FTE, FTA) during design and implementation; maximizing image quality; incorporating liveness detection; understanding the total cost of ownership; and prioritizing security and convenience (and not compromising on this point). Mr. Parthasaradhi provided several examples of the use of the Lumidigm multispectral imaging system in Hong Kong, Macau, Bangladesh, the U.S. and Israel.

Discussion

Participants asked how the Sri Lanka ETA system ensures bona fide application online. Presenters explained that ETA does not guarantee the identity of the applicant, but that identity has to be established at the point of entry by the immigration officer via both document examination and personal examination. With respect to autogates, another participant asked whether these gates only process passengers at arrival or departure, and the presenter stated that both arrival and departures can be processed. The issue is not with arrivals or departures, but rather, with the type of border checkpoint—for instance, airports or land or seaports. While the conditions at airports are good for autogates, it is much more difficult at land or sea borders as conditions may be adverse. It is important to note that the chosen border gates must fit the context. A participant

asked about the capacity of the system to compare data captured at departure and arrival; the response was that this depends on the system application and usage, as data may be collected, but not shared.

Preliminary outcomes and recommendations that emerged from the workshop include: the need for countries capable of supporting others to do so - for example, in introducing the MRZ; the need for an entity similar to the WCO in the area of immigration and border control; and the need to raise awareness about the true potential of biometrics to support countries suffering from conflict and natural disasters, and to support women and children in particular.

Workshop 4: Supporting Tools

"Select before you collect," a data protection expert once said. Indeed, it would be prudent for states to first consider which data to gather and keep, and for how long, instead of collecting all available data in the name of data collection. Today, sophisticated software capable of assisting border management agencies to manage information exists. Unfortunately, questions remain regarding who should set the parameters as to which data helps to best identify patterns and trends in transnational organized crime and terrorism, as well as how to appropriately interpret and respond to data.

The workshop explored legislation, procedure, and data protection and privacy considerations needed to support a responsible exchange, management and analysis of pre-departure data.

Workshop 4 Co-Chairs

Mr. Pratit Santiprabhob	Associate Professor, Faculty of Science and
	Technology, Assumption University of Thailand
Ir. Prof. Raymond Wong	Adjunct Professor, Hong Kong Polytechnic
	University, Hong Kong

Speakers

- -	
Ms. Janki Miles	Regional Immigration Liaison Manager, UK Border Agency, British Embassy Bangkok
Mr. Ronald Saade	Chief Operating Officer, IRIS Cooperation Berhad
Ir. Prof. Raymond Wong	Adjunct Professor, Hong Kong Polytechnic University
Mr. Madhav Ragam	Director – Government, Education and Healthcare, Growth Markets Unit, IBM Corporation

Ms. Janki Miles of the **UK Border Agency** started the workshop with her presentation, "The Benefits of Biometrics in Visa Applications." Biometric capture in the visa application process is used to improve visa decision-making, prevent identity fraud, and assist asylum decision making. Ms. Miles explained that biometrics allow the UK to identify those with an adverse immigration history. The UK operates an eBorders programme as part of its border management activities. The UK also uses IRIS recognition and e-Passports automated gates on its border controls.

Mr. Ronald Saade of IRIS Cooperation gave a presentation, entitled "Beyond the Book: Portable, Mobile, Automated Border Control Management." Mr. Saade began by stating that IRIS had invented the e-Passport, the first of which was issued for Malaysia. In addition, the first autogates that read e-Passports were launched by IRIS in Kuala Lumpur. IRIS also made the first multi-purpose electronic ID card. In 2002, the world's first e-Passport with biometrics was made by IRIS, followed by the company's creation of the world's first e-Passport electronic kiosk. Mr. Saade next showed a video about IRIS. The presentation focused on the merits of the new range of IRIS mobile, hand-held readers for reading e-Passports and other electronic IDs.

Discussion

The question and answer session following the two presentations focused on topics, such as biometric collection for visa data, which types of biometric data are collected from non-visa nationals, visa-free biometrics collection process for the London Olympics, the need for harmonization of various devices and the status of the on-board immigration check, among others. Foreign officers working at airports in the host country have no legal powers and can only offer advice to airlines to prevent the travel of illegal migrants. A participant stated that Australian legislation does require airlines to collect information on passengers and share it with the Australian Government. Legally, however, this is a gray area. Another participants asked a general question to the group about how to deal with cases where a person is found to be on a watch list but is already on the aircraft, to which the response from one participant was that on-board immigration check is on a trial basis and there are issues that need to be tackled before the on-board immigration clearance can take place. Countries are watching the experience of Malaysia and Indonesia very closely in this area.

In conclusion, both presentations focused on the vision of extending a country's borders. A recommendation that surfaced from the sessions was the need for and internationally acceptable legal frameworks and standards for supporting tools in border management.

Ir. Professor Raymond Wong began his presentation, "Common Border for All under the Sky," by asking participants to name the reasons for checking and stamping travel documents at borders. Ir. Prof. Wong then outlined a few of the key features of modern day control and some of the challenges, noting the business need of taking an average of only 15-45 seconds to process a passenger at the border. According to Ir. Prof. Wong the three challenges in border management include identifying who a person is, what

decision is to be made, and doing so within a short period of time. He noted that there has been a lack of information and data sharing between countries and highlighted some of the key technologies being applied in border management. However, he commented that these are far from satisfactory when comparing with the advance of technologies in past decades. There is still a need for stamps and visa labels, and few countries can read the chip information from e-Passports. In addition, linking all information from different checkpoints together is still not common practice.

Ir. Prof. Wong stated that the solution is to have a virtual common border for all nations. To address the three challenges mentioned, he suggested the following specific actions: the use of biometrics and advanced technology to accurately identify passengers; build global intelligence; and real-time collection and sharing of data. Ir. Prof. Wong said that borders should be integrated technically, not politically as in the EU. Linking technically means linking through the 3Cs: Connection (not integration); Cooperation (not 100% sharing); and Common values (not loss of individuality or sovereignty).

Mr. Madhav Ragam of IBM Corporation began his presentation, "Smart Borders – the Power of Analytics," by introducing the findings from a study by Amadeus, "Reinventing the Airport Ecosystem - 2012." Mr. Ragam emphasized the role of social media in the future and that there has been a lack of international cooperation due to a number of factors. Mr. Ragam explained that in talking about e-borders, there are a number of different aspects to discuss - for example, trying to create alerts to stop criminals from entering. From a system perspective, there is a fairly complex relationship between the various actors and sources of information. It is also important to know who knows whom, and how they are connected. Mr. Ragam spoke about the benefits of IBM's analytic software and smart-phones to support these processes.

Discussion

The discussion following the presentations focused on such topics as the definition of integrated border management, as well as whether IBM has any software for profiling. A participant commented that there are four components to analytics: data and access to data; skilled analysts; people who understand the business processes; and the political will to conduct analytics. A participant noted his country rejects the concept of profiling and uses a layered approach to clearing passengers, with 20 to 25 systems scanning information as soon as a person has made a reservation. Therefore, the immigration officers have minimal work to do at the borders (i.e. in intercepting fraudulent documents), because the screening has already been done in advance. Participants also spoke about the need for governments to continuously create rules for profiling and then match the passengers against these rules. In the future, the whole area of profiling should become more dynamic and real-time.

The recommendations emerging from this workshop focused on the overarching need for increased connectivity, common standards and international cooperation. Participants agreed that this process could start at the regional level before being

expanded. There is a need to use the appropriate tools and technologies to extend borders and to use such tools and technologies in an integrated and connected manner, in order to help immigration officers perform their duties more effectively. From the airlines perspective, international standards are very important so that airlines do not have to comply with various systems and demands.

Day 3: Plenary Session, Workshop Recommendations, Expert Meeting Outcomes

The programme for the final day of the Conference on 7 June 2012 included the plenary session in the morning—entitled "New Developments in Border Management—which looked to the future of border management and consisted of presentations by key officials from the Netherlands and Mongolia and representatives of private sector companies and international organizations. During the afternoon session, the outcomes of the four workshops were presented and subsequently recorded into a set of recommendations. Immediately prior to the closing of the Conference, IOM gave a presentation on the outcomes of the Expert Meeting held on 4 June 2012.

Conference Chairperson

Mr. Gervais Appave	Special Policy Advisor to the Director General,	1
	IOM	

Speakers

Lieutenant-General Hans Leijtens	Commander, Royal Marechaussee, The Netherlands
Mr. Chin Boon Loo	Sales Director, Government Programs Division, Security Business Unit, Southeast Asia, Gemalto
Mr. Paul Hin	Senior Advisor, EAC-PKI-NL, Judicial Information Service, Ministry of Security and Justice, The Netherlands
Ms. Ichinkhorloo Uranchimeg	Officer, Department of Information and Technology, General Authority for State Registration, Mongolia
Mr. Fons Knopjes	Managing Director, ID.Academy
Ms. Gillian Ormiston	Global Market Manager, Border Solutions, Morpho
Mr. Sebastian Baumeister	Expert/Migrant Smuggling Analyst, UNODC

Plenary Session



Conference Chairperson Gervais Appave introduces the first speaker on Day 3.

Lieutenant-General Hans Leijtens of the Royal Netherlands Marechaussee began the Day 3 plenary session with a presentation entitled "Smarter Border Management: A Commander's Perspective." The Royal Marechaussee is a border police task force in the Netherlands with a focus on Amsterdam's Schiphol Airport. Its tasks have four pillars: border control; law enforcement; public order; and civil aviation security. The force employs 7,000 people, of whom 1,800 are stationed at Schiphol.

Current trends in border management include: worldwide increase in the number of flights, passengers and goods; complex and interconnected security threats; security checks for travelers and higher costs for authorities, all against decreasing budgets. With passenger processing volume numbering 50 million in 2011, Schiphol has had to become "smarter" in managing the volume of traffic given the human resouces available. One way to deal with this challenge was to apply the philosophy of the "nodal" perspective to border policing: in a society, not only people and goods move, but so do capital and information. These flows come together at certain points, or "nodes," where they intersect with a physical place, for example, an airport. A node can function as a point of focus for supervising flows and gathering information. A nodal perspective applied to border policing requires sound information gathering and sharing, both nationally and internationally.

Effective border control requires "smarter" border management, meaning doing more with less. This means cooperating with partners, optimizing the use of pre-passenger data, moving from a norm-based to risk-based approach and focusing on results rather

than procedures, among others. The Commander gave an example of "smart borders" through the use of an Automatic Border Control system and showed a film on risk assessment and on the potential of automated border crossings and close cooperation among various stakeholders in the Netherlands. In concluding, the Commander stated that public-private cooperation offers viable solutions, especially at airports where private and public entities come together and have shared interests.

Mr. Chin Boon Loo of Gemalto gave a presentation, "3rd Generation e-Passports with Supplemental Access Control." Mr. Loo first explained the evolution of the e-Passports. With Basic Access Control (BAC), the idea was to protect the data from unauthorized access. However, with BAC any border control officer having access to the e-Passport could read the included biometric data. With Extended Access Control (EAC), countries need to be granted access before reading biometric data contained in e-Passports from other countries.

Concerns over encrypted data being deciphered led ICAO to introduce a new mechanism called Supplementary Access Control (SAC). SAC aims to secure contactless communication by protecting against skimming and eavesdropping; it achieved the same protection as BAC, but at a higher security level. SAC does so by introducing asymmetric cryptography and using data encryption techniques based on one time keys generated by leveraging on asymmetric cryptography, while BAC only generates a key based on the MRZ (document number, date of expiry and date of birth). SAC also introduced a new input vector to perform mutual authentication and initiate secure messaging, called the Card Access Number (CAN), which makes life easier for border control officers without an MRZ reader.

Moore's Law explains the phenomenon that every time technology advances, it not only costs less to hack a system, but also becomes increasingly easier and less time-consuming to do so. The benefits of SAC are numerous, and Mr. Loo urged countries to consider the use of SAC for their e-Passports, which is recommended by ICAO by 2014. To implement SAC, only minor changes are needed in the issuance and verification process of the e-Passport, and in the e-Passport itself. With this upgrade, a country's citizens would be able to travel freely without worrying about having the data included in their e-Passports being eavesdropped upon or skimmed.

Mr. Paul Hin of the Ministry of Security and Justice, the Netherlands presented on "Linking a Person to Pre-Cleared Paperwork: The Importance of a Match in 90 Seconds." The chip in an e-Passport is a high-end security feature that can contribute to faster processes and mechanisms. In 2010, the EU was in search a European Security Model, naming PNR as an important early warning system to mitigate EU's security risks. Today, new technology—such as automated systems, advanced registration and frequent traveler schemes— helps ensure safe and secure passenger crossings and plays a key role in integrated border management. In fact, in the future, machines instead of border control officers will decide whether or not a passenger is admitted to a country. If a

passenger is not who s/he claims to be, then his/her identity can be verified during the on-arrival assessment (what Mr. Hin calls the "90 seconds of truth"). With a border control officer, a passenger currently spends 10-30 seconds at the counter, but ABC would cut that time to 15 seconds. The chip and the ABC system lead to efficiency.

Mr. Hin next showed a video of the launch of the eGates in the Netherlands. The system is designed for Schengen passengers. Since eGates cannot conduct a document or facial check, future improvements should focus on the features of e-documents which link the passenger to his/her passport, i.e. via the exchange of CSCA certificates to facilitate usage of the chip technology. Additionally, EU governments could grant one another permission to read fingerprint data in their respective passports. For this to happen, however, countries must first trust each other's systems. In fact, the technology already exists for this purpose, but the exchange of fingerprint data is a sensitive topic involving privacy. Therefore, while fingerprints have been contained in the Dutch passports for the last five years, they have not been used, and because they have not been used, there are political moves to remove them from the passports. Mr. Hin urged participants to use information stored in the travel document chip as it enhances security. Technology is available and governments need to use it to its full potential and share information.

Ms. Ichinkhorloo Uranchimeg of the General Authority for State Registration of Mongolia gave a presentation on the "Current Development of Smart National ID Cards in Mongolia." Ms. Uranchimeg began the presentation with an introduction about Mongolia, geography and its people. In 2008, the Government launched a project to establish an aggregate system of registration and information with a goal to improve the quality of and citizens' access to public services as well as to strengthen coordination among government entities. To ensure the proper legal environment was in place to establish such a system, a new law on state registration was enacted in 2009. The General Authority for State Registration (GASR) is the main body in Mongolia responsible for the registration of persons.

Ms. Uranchimeg explained how the new civil registration system works both online and offline, and described the smart national ID (NID) card, which contains a chip and adheres to international standards in terms of its size, features and data. As of June 2012, 98 per cent of Mongolia's population had been registered under the new civil registration system.

The project greatly contributed to the modernization of the Mongolian registration system via the upgrading of technology, equipment and software. The NID also has a major role in the development of the e-Government system as a main connector between public services and citizens as well as between the government and the private sector. The national smart ID card system is efficient, easy to implement and also has many linkages to broader systems of governance, including elections. Cooperation with

customs and immigration officers as well as international police has been strengthened due to the standards introduced by the NID.



Ms. Ichinkhorloo Uranchimeg speaks about Mongolia's smart national ID cards.

Mr. Fons Knopjes of ID.Academy next gave a presentation entitled "New Developments in Border Management and their Consequences for Training." Technology will play an increasingly important role in modern-day immigration processes, with the steady rise in the number of electronic documents issued and smart-gates installed. However, it must be understood that the use of new technologies does not automatically lead to "success," unless the users understand how such technologies work and how to use them. Otherwise, people will avoid using new technology; for example, when passengers choose manual passport control over smart-gates, or when officers are suspicious of new systems which they have not been trained to use and label them as unreliable. Likewise, the opposite may occur if immigration officers simply have blind faith in the reliability of technology, which may not be justified.

Mr. Knopjes explained that, since technology is here to stay, immigration departments around the world need to teach their staff about its efficient and effective use. The crucial first step is to carry out an impact analysis to ascertain that the technology functions and to evaluate the skill level required for officers to use the technology. Technology can support the implementation of a number of operations, but immigration officers still need to be prepared to intervene in certain instances such as when the comparison of a passenger's face with the photo image in the chip does not produce a match. So the questions remain: What will the front office look like in the future? Will the front and back offices be merged? Will criminals not cross borders when technology is better? Will they change their methods to cross, and if so, how? Such questions require answers.

Training is needed to ensure that officers can fully utilize available technology, particularly since the way in which borders will be managed in the future will continue to change. As such, the manner in which training is delivered—whether classroom-style, online, or a combination of the two—will also need to be considered. In closing, Mr. Knopjes emphasized the point that an investment in human resources is at least as important as - if not more than - investment in technology and administrative resources.

Ms. Gilliam Ormiston of **Morpho** presented a session on "SmartGate: Lessons on How to Make Automation Work for Border Security." Having first introduced Morpho, a company that deploys biometric solutions worldwide, Ms. Ormiston described the experience of Australia and the dilemma the authorities faced in the early 2000s: a forecasted 5 per cent annual growth in travelers and little capacity to expand airport infrastructure. Australia therefore decided to use the introduction of e-Passports to improve clearance processes for low-risk Australian and New Zealand passengers.

Smartgate, an automated border solution, was therefore launched to help with the processing of arriving passengers using facial recognition technology and eGates as well as integrating customs declarations. New Zealand followed in 2009 and deployed Smartgate for both arriving and departing passengers. Currently, the two countries are piloting a new workflow where the customs process is completed prior to boarding, as 65 per cent of passenger travel is between these two countries; this is the first type of shared automated processing in the world. New Zealand targets to process 3 million passengers through Smartgate per year by 2015.

Ms. Ormiston also highlighted some key lessons, including the importance of collaboration between passport issuing authorities and authorities utilizing information provided in the passport, as well as of the need for good quality images for automation to work. Soft issues matter and focus should not only be on technology or backend processing, but also on efforts to minimize human behavior and the placement of gates to help ensure a good throughput of passengers.

Due to the Smartgate experience, Morpho has developed 3D facial technology to address the issue of false rejects due to people's behavior to ensure that facial capture is possible even when the passenger may not be looking at the camera. In conclusion, Ms. Ormiston emphasized both the importance of a long-term partnership between border authorities and technology vendors and the need for an appropriate infrastructure to support automation.

Mr. Sebastian Baumeister of **UNODC** gave a presentation, "The Voluntary Reporting System on Migrant Smuggling and Related Conduct (VRS-MSRC) in Support of the Bali Process." The focus of the initiative is to build strategic, evidence-based knowledge on migrant smuggling as per the UN Convention against Transnational Organized Crime (UNTOC), which asks states to collect and exchange information on organized crime.

UNODC began working on this initiative following a recommendation during the March 2011 Bali Process meeting to establish a voluntary reporting system. One of the challenges is that while states collect data, not all states collect the same types of data, leading to the absence of meaningful comparable data. The data collection system was therefore developed to be flexible enough to cater to multiple states, be user-friendly and simple, and allow for comprehensive data analysis.

The voluntary reporting system is an internet-based system, which uses an online reporting template to collect feedback and exchange data on irregular migration. It is not a system to exchange nominal data, and its principles are on mutual information sharing: those who contribute data can access and use the data in the system. The types of data collected include: origin, transit, and destination countries; routes; methods of migrant smuggling by land, sea, and air; use of fraudulent documents; and transnational flows and trends. Mr. Baumeister also showed snapshots of how the VRS-MSRC is structured. He concluded by stating that the pilot phase of the initiative will target eight states (six states in the Asia-Pacific, one in Europe and one in North America), and the results of this phase will be discussed, with the system expected to be finalized by the end of 2012.

Workshop Recommendations

The feedback from the four workshops was presented by the co-chairs of the workshops followed by discussions on each topic. The outcomes of the workshops were subsequently recorded into the following set of recommendations.

Workshop Co-Chairs

WOIKSHOP CO	O.G.	
Workshop 1	Mr. Jaime Victor Ledda	Assistant Secretary, Chief of Mission II, Office of Consular Affairs, Department of Foreign Affairs, The Philippines
	Mr. Ross Greenwood	Principal, Identity Matters Consulting
Workshop 2	Mr. Hassan Baage	Sector Chief, UNCTED
	Mr. Davuth Ly	Regional Specialized Officer, Liaison Office for Asia and South Pacific Region, INTERPOL
Workshop 3	Mr. Ibrahim Ashraf	Assistant Controller, Department of Immigration and Emigration, Maldives
	Ms. Livia Styp-Rekowska	Programme Officer, IOM-Iraq
Workshop 4	Mr. Pratit Santiprabhob	Associate Professor, Faculty of Science and Technology, Assumption University of Thailand
	Ir. Prof. Raymond Wong	Adjunct Professor, Hong Kong Polytechnic University, Hong Kong

Recommendations

The workshop recommendations from the "2nd Conference on Technical Cooperation and Capacity Building for Border Management" reflect the views of the participants in the four workshops. Each workshop produced at least three recommendations which should be seen as a way forward for immigration and border management agencies to improve border management strategies and develop new ideas based on best practices.

The recommendations presented herein are not binding.



The Co-Chairs of Workshops 1 and 2 present the outcomes from their respective workshops.

Workshop 1: Visas Matter

- **A.** Standardization of visa data formats would facilitate sharing of information domestically and internationally.
- **B.** Standardized data formats should anticipate the future collection, storage, and sharing of biometric information.
- C. All data-sharing arrangements need to address data security and privacy issues.

Workshop 2: Data Collected by Carriers

D. Governments should harmonize data requirements and format for transmission along established norms.

- **E.** Governments should better support the interactive process with airlines.
- **F.** Set up an informal virtual working group to consider relevant border issues and report on findings, including an integrated international strategy.



The Co-Chairs of Workshops 3 and 4 and Mr. David Knight of IOM listen to the input from the audience.

Workshop 3: Operational Applications

- **G.** Encourage cooperation, assistance and the sharing of experience and lessons-learned between countries with more advanced border management systems and those seeking to improve and strengthen their existing systems.
- **H.** Minimize the gaps between the border management systems of different countries, aiming to achieve minimum common standards across the spectrum.
- **I.** Explore possibilities to create an organization responsible for establishing policy and implementation standards related to immigration and border management issues, in order to streamline and harmonize interoperability of systems and practices.
- J. Expand the use of biometrics in humanitarian operations, in order to guarantee timely, effective and targeted life-saving assistance to those in need, while reflecting special needs of particular groups or populations, such as female-headed households, unaccompanied minors, separated families, etc.

Workshop 4: Supporting Tools

- **K.** In pursuit of the goal to attain an electronically connected border for all nations, there is a need for:
 - Internationally acknowledged vision;
 - Agreed strategy; and
 - Action plan (regional trial then extended globally).

Feedback from the Expert Meeting (4 June 2012)

Speaker

Mr. David Knight	Head, Immigration and Border Management
	Division, IOM

Mr. David Knight of **IOM** gave a presentation entitled "Border Management Vision 2020," which summarized the outcomes of the Expert Meeting, held on 4 June 2012 prior to the 2nd BMC. The Expert Group was formed in 2010 and consists of experts from the government and industry who meet to analyze developments in border management and discuss ways forward. The group envisions the development of a white paper that will outline the future of border management.²

Looking ahead to the anticipated border management landscape in 2020 and key challenges to be faced over the next eight years, Mr. Knight described the four recommendations formulated during the Expert Meeting. First, there is a need for a broader plan with a strategy and standards for achieving greater harmony in border management processes. Specifically, it would be useful to develop an international framework of understanding, defining and articulating how data would be used in relation to border management at all levels. An international body or a think tank is needed to lead this process.

Secondly, with respect to the application of technology, there is a need for an understanding of the end-to-end process in designing and implementing systems reforms. The challenge of the digital divide should be considered, but opportunities for

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² The white paper, "Safe and Efficient Border Management in 2020," has since been published by ID.academy in August 2012.

developing countries abound to learn from the successes and mistakes of other countries to avoid costly setbacks.

Thirdly, it is important to look at the role of border management officials in an environment where border management processes are steadily moving towards the use of increasingly sophisticated technology, which requires a different skills-set from border management officials. Capacity to analyze data is also as important as software and technological solutions as in the need for trained officials who can take over in case of system failures.

Finally, identity management is becoming increasingly important as we move towards automated travel document processing. Along with this trend we are observing an evolution in the types of passport fraud being perpetrated by organized transnational criminal groups and from persons seeking to subvert border processes. There is also a need for a more robust use of biometrics in the issuance of national ID cards and birth certificates.

In conclusion, Mr. Knight cited a 2011 World Bank publication, *Border Management Modernization*, which states that the development community has paid little—if any—attention to non-customs border agencies such as immigration. He explained that this is why forums such as the Bangkok Border Management Conference series are important to shed light on this critical sector in support of facilitated migration management with appropriate controls.

Annex 1: Keynote Speech: IOM Director General William Lacy Swing

Mr. Deputy Director General,

Excellencies,

Honored Guests,

Ladies and Gentlemen,

It is a great honour and pleasure to be with you here in Bangkok for the 2nd Border Management Conference — a conference that brings together the key actors in this dynamic field — Governments, international organizations, industry leaders, public and private sectors. All have a stake in sharing information, enhancing capacities, and strengthening the border management network.

The success of our 1st Border Management Conference two years ago also here in Bangkok, is testimony to the value of this forum. In a time of fiscal austerity, it is vital to ensure that everything we do together provides value and impact. This is how we maintain the credibility of our constituencies and stay on top of our game.

I wish to thank our co-organizers and friends in the Department of Consular Affairs in the Foreign Affairs Ministry, Thailand. We also thank all of you, our partners, for contributing your time, resources, and ideas to this important forum.

Scene setter

To begin, let me first of all, try to set the scene, to describe the global migration context, in which our deliberations – and indeed your day-to-day work will take place.

The issues we will discuss over the next two days — immigration and visa support solutions; the collection, protection, and management of data — are issues that are critical to managing migration in a century that is already bearing witness to the greatest human mobility in recorded history.

Today, there are nearly 1 billion migrants in the world — one in every 6 or 7 people — 214 million are international migrants, and 740 million are internal migrants.

During the next three decades, we expect the number of international migrants virtually to double to 405 million by 2050. Large scale migration is therefore a reality that neither the current global economic downturn, nor increasingly restrictive security measures can halt, or even slow down.

The "drivers" of migration: demographic trends; labour market demands; and widening North-South disparities constitute push-pull factors that make mass migration inevitable.

To complicate matters, global phenomena such as climate change; drastically declining birth-rates in the industrialized world, and food, water and energy insecurity; and natural disasters – all are coming together; coalescing like never before to push and pull the world's population in new directions.

Instant information, the digital revolution, and cheap flights add to the acceleration of human movement within and across borders. To illustrate this point, there were 800 million airline passenger movements in 2009. That number is expected to reach 3.3 billion by 2014, representing phenomenal growth in human mobility.

The issue that stands before us then is how to manage the migration process in a legal, regulated, responsible an humane manner that accomplishes three objectives: (a) respects national sovereignty; (b) advances economic and social development; and (c) upholds migrants' legitimate aspirations, dignity and human rights.

For its part, IOM works with its partners, many represented here, to support countries to strike the tenuous balance between facilitating human mobility – often referred to as the third wave of globalization after the free movement of goods and capital; and helping countries exercise their sovereign right to know who is on their territory.

In 75 countries around the world, IOM implements 150 border management projects – projects that:

Build national capacities through training and mentoring border guards, customs officials, and immigration officers – including 2,000 immigration and border officers trained at our African Capacity Building Centre in Moshi, Tanzania since May 2009;

Introduce innovative visa service solutions, including in West Africa and Asia, to assist immigration decision-making, on which my colleague Patrick Corcoran will make a presentation on later today.

With this introduction, I have three main points that I would like to address in the remainder of my remarks.

I. PURSUING A COMPREHENSIVE, INTEGRATED APPROACH TO BORDER MANAGEMENT

First, it is important to position border management in a comprehensive migration management framework — a framework that looks further along the migration continuum at the phenomena that generates pressure on migration management systems.

The mismatch in global labour demand and supply

This starts with recognition of the fundamental mismatch between global labour supply and labour demand that is driving migration. I am talking here about the discrepancy between the demographics and labor requirements of ageing, declining industrialized States and the exponentially expanding, unemployed youth populations in the rest of the world.

The population of the world's industrialized countries – in which more people are dying than being born – is expected to decline 25 per cent further by 2050. Europe alone will find itself in need of 50 million workers by 2040 — workers it will not have without large-scale migration.

On the supply side, most of the world's expected population growth will be concentrated in today's poorest and youngest countries: this equates with growing numbers of young people entering the labor force seeking out the largely non-existent employment opportunities at home.

This mismatch is having at least two negative results:

it leads to irregular migration; and

it increases the propensity to make use of asylum procedures – not always because of a genuine need for protection, but to gain entry to countries and access to their labour markets.

In the absence of legally sanctioned means of access to labour markets, tightened visa regimes and closed borders, irregular migration channels are perceived as the primary -- or only -- mechanism enabling the entry and stay of foreigners. This will also push more people into the hands of traffickers.

We all must do more to better understand this fundamental dynamic and to assist countries to align genuine labour market needs with visa and entry polices.

Multiple complex humanitarian disasters

A second phenomenon is the increasing migration emergencies resulting from humaninduced humanitarian disasters along with slow- and rapid-onset natural disasters.

There is every indication that climate change and environmental degradation – whether slow-onset events such as de-forestation, soil and river erosion, or extreme environmental events such as tsunamis, earthquakes and other cataclysmic incidents – are growing in frequency and intensity and are expected to displace millions of people over the next forty years. Add to this trend, the increasingly frequent and severe

multiple global crises – relating to food, water, economic/financial issues, security, terrorism and persistent human rights abuses – and the result is mass population displacements. Those displaced are likely to include increasing numbers of neglected atrisk populations, that is, those not covered by any specific, dedicated international legal frameworks: climate and environmentally induced migrants; internally displaced persons; stranded migrants, including persons rescued at sea; and unaccompanied minors.

We can conclude from these global phenomena that (a) migration is assuming greater policy and strategic significance for States; (b) large-scale population movements are both inevitable and unavoidable in the current circumstances described above; and (c) migration will remain a "megatrend" of the twenty-first century.

II. BUILDING STRATEGIC PARTNERSHIPS

This brings me to my second point – the importance of our working together in strategic partnerships to address the formidable challenges confronting migration and border management; and to harness the many opportunities for development in countries or origin and destination.

Many of our partners are here today. I am thinking about the United Nations Office for Drugs and Crime — with whom I signed a cooperation agreement in April for closer cooperation to combat human trafficking, migrant smuggling and to improve border management — and the UN Counter Terrorism Directorate; Interpol; ICAO; Frontex; and the World Customs Organization.

I am also pleased to see a strong industry presence here – representatives who develop the technologies and tools that permit us to work in diverse environments. They will be exhibiting some of the latest advances in processing and verification technology during the week, much of it integral to the overall theme of this conference – namely, managing risk through pre-departure data management.

We will continue to look for new strategic partners – such as ASEAN with whom we are working on a number of border management reforms; these include the addition of specific watch listing technology at their member states' borders. And to use these various networks to establish regional cooperation frameworks. In this regard, I am very pleased that IOM, together with Bali Process member states and our long-standing partner UNHCR will soon open a Regional Support Office here in Bangkok to strengthen collaboration between states in the region.

Finally, I am also pleased that my presence here coincides with the launch of the IOM Document Examination Service Centre at our Bangkok Regional Office. The Centre is designed to assist states, and our partners in the Asia Pacific region, with the verification of suspected forged and counterfeit travel documents, filling a critical gap in our arsenal

of tools and services to tackle irregular migration. And this brings me to my third and final point: identity protection.

III. PROTECTING PERSONAL INFORMATION

Finally, we must do our utmost to protect personal information in all of our initiatives together.

In the United States alone, 15 million people, or 7% of the entire adult population, are victims of identity theft each year. It has been characterized as the world's fastest growing crime and costs Governments and Taxpayers millions of dollars each year.

Capturing and sharing data is essential for effective border management. Data collection allows us to (a) process quickly individuals passing through our borders in ever-increasing numbers; (b) reduce queuing at border choke points; and (c) facilitate the interdiction of those of interest. Striking the correct balance, however, is important and we must do all that we can together to ensure strict adherence to data management and data protection principles.

Conclusion

In closing, let me summarize my remarks.

One, migration is here to stay and requires an integrated, comprehensive approach. The question confronting us all is how to manage the migration process in a legal, regulated and responsible manner --- in the best interests of countries, communities and people, including migrants themselves.

Two, we must work together in partnership. I know for example, that despite being the only international organization whose mandate is exclusively migration – IOM cannot and should not try, to manage migration alone. One of my top priorities over the past three years has been to strengthen and increase our partnerships and promote a coordinated, regional approach to migration management.

Three, we must do our utmost to safeguard their personal information collected by new technologies.

A concluding footnote: This conference will explore the collection and use of Advanced Passenger Information (API) in detail. The value of API is uncontested, however, API is only truly effective when part and parcel of a range of Migration and Border Management measures; these include: a balanced visa regime; training and human resources; travel documents that meet ICAO standards; and verification measures.

I wish you all an enjoyable conference and look forward to our time together over the next two days.

William Lacy Swing

Director General International Organization for Migration

Delivered on Tuesday, 5 June 2012 2nd Conference on Technical Cooperation and Capacity Building for Border Management Dusit Thani Hotel, Bangkok, Thailand

Annex 2: Conference Programme



"Facilitating Travel and Reducing Risks through **Efficient Pre-Departure Data Management"**



Supported by: **Department of Consular Affairs Ministry of Foreign Affairs**

of Thailand





CONFERENCE PROGRAMME: DAY 1

Tuesday, 5 June 2012			
08.00	Welcome and Registration	BMC Secretariat, Main Foyer of	
33.33	Treferre una registration	the Dusit Thani Bangkok Hotel	
	Opening Ceremony and Introductory Remarks	Mr. Gervais Appave	
09.00	International Organization for Migration	Special Policy Advisor to	
05.00	(IOM)	the Director General	
		Conference Chairperson	
	Welcome Speech	Mr. Niyom Watthammawut	
09.10	Ministry of Foreign Affairs, Thailand	Deputy Director-General	
09.10		Department of Consular Affairs	
	Keynote Speech	Ambassador William Lacy Swing	
09.20	International Organization for Migration	Director General	
05.20	(IOM)	Director General	
	Introductory Speech	Ms. Khine Myat Chit	
09.40	Association of Southeast Asian Nations	Senior Officer, Security	
09.40	(ASEAN)	Cooperation	
	Building a Focus on Risk: surfacing,	Ms. Jackie Wilson	
	understanding and treating risk in support of	Deputy Secretary	
09.55	departmental operations	Business Service Group	
33.33	Department of Immigration and Citizenship		
	(DIAC) Australia		
10.15	Official Opening of Exhibition	Mr. Greg Pote	
10.15	Asia Pacific Smart Card Association (APSCA)	Chairman	
10.30	REFRESHMENT BREAK		
11.00	UNCTED's Approach to Conference Theme	Mr. Hassan Baage	

	LIN Countar Torrarism Evacutive Directorate	Saction Chief
	UN Counter-Terrorism Executive Directorate (UNCTED)	Section Chief
11.15	Reducing Risks Through INTERPOL Database (MIND/FIND Solution) International Criminal Police Organization	Mr. Davuth Ly Regional Specialized Officer, Liaison Office for Asia and South Pacific Region
11.30	Migrant Smuggling Challenges in South-East and East Asia-joining forces to fight a deadly business United Nations Office of Drugs and Crime	Mr. Sebastian Baumeister Expert (Migrant Smuggling Analyst) Regional Centre for East Asia and the Pacific
11.45	World Customs Organization Perspectives on API/PNR World Customs Organization	Mr. David Haigh Customs Counsellor – South East Asia New Zealand
12.05	Sense and Non-Sense in e-Passport Inspection and the Public Key Directory (PKD) International Organization for Standardization	Mr. Tom Kinneging Convenor ISO/IEC JTC1 SC17 WG3
12.30	LUNCH	
14.00	"Passenger Data Harmonization for Enhanced Border Management" This presentation will describe the work that governments and airlines have been carrying out with IATA to harmonize data requirements. "Outline of the Immigration Procedures in	Mr. Terry Wall National Manager of the Passenger Targeting Branch of Australian Customs Australia Mr. Yasuhiro Togo
14.25	Japan, Utilizing Personal Identification Information (Biometrics Information)" This presentation will describe Japan's biometrics system at the borders.	Assistant to the Director Data Processing System Development Office, General Affairs Division Immigration Bureau, Ministry of Justice Japan
14.50	An introduction to: Workshop 1: Visas Matter "Immigration and Visa Support Solutions: The Trend Towards Outsourcing" Whilst the visa decision-making process remains with governments, service providers, including IOM, are able to deliver a number of tailored, immigration and visa support solutions	Mr. Patrick Corcoran Senior Specialist, Immigration and Visa Support Solutions (IVSS), International Organization for Migration (IOM)

15.15	REFRESHMENT BREAK	
15.45	An introduction to: Workshop 3: Operational Applications "API Program in China"	Mr. Jin Weicheng Deputy Director Division of Immigration Inspection Bureau of Exit and Entry Administration Ministry of Public Security The People's Republic of China
16.10	An introduction to: Workshop 2: Data Collected by Carriers "Breaking the Air Travel Dilemma"	Mr. Ping Na Thalang Vice President Information Systems Department Bangkok Airways Co., Ltd.
16.35	An introduction to: Workshop 4: Supporting Tools "Reducing Risks Through Biometric Identification Services"	Mr. Craig Kelly Senior Advisor Asia Pacific and Canada Affairs Information Sharing and Technical Assistance, US-VISIT Department of Homeland Security United States of America
17.00	Closing Ceremony Day 1	Mr. Gervais Appave Conference Chairperson

CONFERENCE PROGRAMME: DAY 2 Wednesday, 6 June 2012 (Morning) **Dusit Thani Hall** Napalai Ballroom Morning: 09.15-12.30 hrs. Morning: 09.15-12.30 hrs. **Workshop 2: Data Collected by Carriers** Workshop 1: Visas Matter Chairs: Mr. Jaime Victor Ledda Chairs: Mr. Hassan Baage Mr. Ross Greenwood Mr. Davuth Ly "Bringing Intelligence and Analytics "THAI's Solutions towards Advance Passenger together to Manage Risk and Enhance Information Requirements"

by: Ms. Phakkhra Ruangsiradecho

Efficiency"

09.30

	by: Mr. Klaus Felsche	Airport Services Information System		
	Director, Intent Management &	Department Manager, and		
	Analytics	by: Ms. Warattar Wongsupapat		
	Department of Immigration and	Ground Services Specialist		
	Citizenship	Thai Airways		
	Australia			
	"Electronic Visa, Nightmare or Future?"	"Use of Advance Passenger Data in the Adoption of a Multi-Layered,		
09.50	by: Dr. Detlef Houdeau	Risk-Based Border Management System"		
05.50	Senior Director	Mak basea border Management System		
	Business Development Identification	by: Mr. Michael Lim		
	Chip Card & Security ICs Business Group	Global Head of Business Development		
	Infineon Technologies AG	Government Solution Line		
	minicon reciniologics //G	SITA		
10.10	Discussion	Discussion		
10.30	REFRES	HMENT BREAK		
11.00	"Physical Document Security for Visas"	"Border Management Fundamentals"		
11.00	by: Mr. Sascha Fuls	by: Mr. Julian Ashbourn		
	General Manager	Author and Technical Expert		
	OVD Kinegram (Asia Pacific) Pte. Ltd.			
	and			
	by: Ms. Anne Dumont			
	Sales Director for Security Paper			
	Arjowiggins Security			
	"Re-enforcement of Visa Integrity"	"Intelligence Led Border Control and Management"		
	by: Mr. Pratak Sikkhamonton			
	Deputy Director	by: Mr. Low Keng Wai		
11.20	Division of Visas and Travel Documents	Director		
	Department of Consular Affairs	Airline Programs		
	Ministry of Foreign Affairs, Thailand	ARINC Asia Pacific Division		
	, ,			
11.40	Discussion	Discussion		
12.10	Outcome and Recommendations	Outcome and Recommendations		
12.30	End Workshop 1	End Workshop 2		
		NCH		
	CONFERENCE PRO	OGRAMME: DAY 2		
	Wednesday, 6 Jun	Wednesday, 6 June 2012 (Afternoon)		

	Napalai Ballroom	Dusit Thani Hall
Afternoon: 14.00-17.30 hrs.		Afternoon: 14.00-17.30 hrs.
Workshop 3: Operational Applications		Workshop 4: Supporting Tools
Chairs: N	Иr. Ibrahim Ashraf	Chairs: Dr. Pratit Santiprabhob
N	Лs. Livia Styp-Rekowska	Ir. Prof. Raymond Wong
14.20	"Integrated Border Management System" By: Mr. Tariq Malik Deputy Chairman National Database Registration Authority (NADRA)	"Benefits of Using Biometrics in Visa Applications" by: Ms. Janki Miles Regional Immigration Liaison Manager UK Border Agency British Embassy Bangkok
14.40	"Secure Environment for e-Passport Authentication" by: Mr. Clement Lee Manager Solutions Architect Arjowiggins Security Limited	"Beyond The Book: Portable, Mobile, Automated Border Control Management" by: Mr. Ronald Saade Chief Operating Officer IRIS Corporation Berhad
15.00	Discussion	Discussion
15.30		SHMENT BREAK
16.00	"Sri Lanka Electronic Travel Authority System (e-Visa)" by: Mr. Shantha Kulasekara Head, Migration Management Unit IOM Colombo and	"Common Border for All Under the Sky" by: Ir. Prof. Raymond Wong Adjunct Professor
	by: Dr. Chathura Ranjan De Silva Senior Lecturer Immigration IT Consultant University of Moratuwa	Hong Kong Polytechnic University Hong Kong
	"Reliable Fingerprint Identity Solutions: Best Practices for Border Applications"	"Smart Borders – the Power of Analytics"
16.20		by: Mr. Madhav Ragam

	by: Mr. Sujan T.V. Parthasaradhi Director of Biometric Applications Lumidigm, Inc.	Director-Government, Education and Healthcare Growth Markets Unit IBM Corporation
16.40	Discussion	Discussion
17.10	Outcome and Recommendations	Outcome and Recommendations
17.30	End Workshop 3	End Workshop 4

CONFERENCE PROGRAMME: DAY 3 Thursday, 7 June 2012			
09.15	Opening: 3 rd Day of Conference "New Developments in Border Management"	Mr. Gervais Appave Conference Chairperson	
09.25	"Smarter Border Management: Experiences and Ambitions" How do we get smarter in Border Management?	Lieutenant General Hans Leijtens Commander Royal Marechaussee, The Netherlands	
09.45	"3 rd Generation e-Passports with Supplemental Access Control" The drivers of the 3 rd generation of e-Passports	Mr. Chin Boon Loo Sales Director Government Programs Division Security Business Unit, Southeast Asia Gemalto	
10.05	"Linking a Person to Pre-Cleared Paperwork" It requires a reliable inspection infrastructure for CSCA and EAC certificate verification.	Mr. Paul Hin Senior Advisor, EAC-PKI-NL Judicial Information Service, Ministry of Security and Justice, The Netherlands	
10.30	REFRESHMENT	BREAK	
11.00	"Current Development of Smart National ID Cards in Mongolia"	Mrs. Ichinkhorloo Uranchimeg Officer Department of Information and Technology General Authority for State	

		Registration Mongolia
11.20	"New Developments in Border Management and Their Consequences for Training" Is your staff prepared for a new phase in border management developments and did they acquire the right knowledge and skills?	Mr. Fons Knopjes Managing Director ID.Academy
11.40	"SmartGate: Lessons on How to Make Automation Work for Border Security"	Ms. Gillian Ormiston Global Market Manager Border Solutions, Morpho
12.00	"The Voluntary Reporting System on Migrant Smuggling and Related Conduct in Support of the Bali Process"	Mr. Sebastian Baumeister Expert (Migrant Smuggling Analyst) UNODC
12.20	LUNCH	
13.45	Report by Chairperson Workshop 1: Visas Matter Discussion	Mr. Jaime Victor Ledda Mr. Ross Greenwood
14.00	Report by Chairpersons Workshop 2: Data Collected by Carriers Discussion	Mr. Hassan Baage Mr. Davuth Ly
14.15	Report by Chairperson Workshop 3: Operational Applications Discussion	Mr. Ibrahim Ashraf Ms. Livia Styp-Rekowska
14.30	Report by Chairpersons Workshop 4: Supporting Tools Discussion	Dr. Pratit Santiprabhob Ir. Prof. Raymond Wong
14.45	Feedback from Expert Meeting 4 June 2012 Finalization of Recommendations	Mr. David Knight Head, Immigration and Border Management Division, IOM

15.00	Closing Ceremony Conference	Mr. Gervais Appave
15.30	End of 2 nd BMC Conference	Conference Chairperson
		Final