INTERNATIONAL CIVIL AVIATION ORGANIZATION

TECHNICAL ADVISORY GROUP

ON MACHINE READABLE TRAVEL DOCUMENTS

SIXTEENTH MEETING

(Montreal, 26 to 28 September 2005)

INTRODUCTION

0.1 **General.** The Sixteenth Meeting of the Technical Advisory Group on Machine Readable Travel Documents (TAG/MRTD) was held at ICAO Headquarters, Montreal, Canada, from 26 to 28 September 2005. Mr. H. A. Wilson, Vice-Chairman of the Air Transport Committee, opened the plenary meeting and welcomed the participants. Recognizing the value of the expertise of the TAG/MRTD to ICAO, Mr. Wilson expressed great satisfaction with its work.

0.2 **Attendance**. In attendance were 11 members and 2 alternate members of the TAG with their advisers, as well as observers from 26 Contracting States and 6 international organizations. The attendance list is set out in **Appendix A**.

0.3 **Officers and Secretariat**. Ms. Annette Offenberger (New Zealand) was elected Chairman of the Meeting. Ms. Mary K. McMunn, Chief, Facilitation Section, was the Secretary of the Meeting. She was assisted by Mr. Jitu Thaker, Facilitation Officer, Mr. Mauricio Siciliano, Consultant, both of the Facilitation Section.

0.4 **Agenda (WP/1)**. The Agenda for the Meeting was as shown in **Appendix B**.

0.5 **Documentation**. Twenty-six (26) working papers were submitted for consideration by the meeting, as listed in **Appendix C**.

0.6 **Working arrangements and procedures**. The meeting was conducted in English, French, Russian and Spanish. This report was written after the meeting and presents a summary of the proceedings and conclusions.

1.   **AGENDA ITEM 1**

          Development of specifications for MRTDs

1.1   *Doc 9303, Part 1 – Publication and ISO endorsement*

1.1.1   WP/2, presented by the leader of ISO/WG3 Task Force 2, described the development of the Sixth Edition of Doc 9303, Part 1, in two Volumes. **Volume 1** will contain the specifications for the basic MRP, to which *all* MRPs, whether electronically enabled or not, would have to conform. **Volume 2** will contain the additional specifications extracted and edited from the technical reports for enhancing the MRP with biometric identification using a contactless integrated circuit (IC), the result of which has become known as the "e-Passport".

1.1.2   Development of the Sixth edition involved editing the content of the Fifth edition with the intention of removing any material which was no longer relevant and updating the technical content where appropriate. In fact, Section III has been changed completely, covering security matters with appendices on document security, machine assisted document verification, and security of document issuance. All the specifications that relate to a basic MRP now appear in Section IV, including an upgrade of the specifications for portraits to improve their quality, in turn, to allow for building a database of portraits for use for face recognition.

1.1.3   The use of one- and two-dimensional bar codes for additional data storage is not excluded, but it is emphasized that these technologies are for the use of the issuing State only or under bilateral agreements because they are not globally interoperable. Therefore, no specifications related to bar codes are included in the Sixth edition.

1.1.4   The TAG unanimously agreed to the Sixth Edition of Doc 9303, Part 1, in its new two-volume format. The Secretariat noted the suggestion to make available an electronic (PDF) English version of this publication for purchase and this version should be marked as "ISO pending" until the endorsement is received.

1.2   *The production of the Third edition of Doc 9303, Part 3*

1.2.1   WP/3 presented a proposal for updating Doc 9303, Part 3. Based on the successful results coming from updating Doc 9303, Part 1, the Secretariat is engaged in updating Doc 9303, Part 3 to reflect the same changes included in Part 1 and to be issued in two volumes. The Third edition of Part 3 is projected to be ready for publication by the end of 2006.

1.2.2   A recommendation by New Zealand, that consideration be given to making the holder's signature optional, was noted.

1.2.3   The TAG approved the continuation of the work as proposed.

1.3   *Transliteration rules for countries with Non-Latin National Script*

1.3.1   WP/4 contained a proposal to make public an updated report (WP/4 Appendix) containing general rules for transliteration of characters belonging to national scripts outside the Latin and Cyrillic families. The TAG approved the publication of the Appendix on the ICAO MRTD website as a downloadable file, and recommended the use of rules as set down in the Appendix for the implementation of country-specific transliteration schemes.

1.4 *Alternative documents (Fantasy and Camouflage Passports)*

1.4.1   A presentation on alternative documents was made in WP/5 by the chairperson of the DCFWG. The TAG recommended that ICAO consider including a provision in Annex 9 requiring States to seize fantasy or camouflage documents, or marking them as invalid travel documents, to draw the attention of border control officers that these documents are not valid for travel. However, the TAG expressed the caution that legitimate documents (e.g. those issued to "investor citizens") should not be placed on the list of such documents.

1.4.2   The DCFWG will compile a list of Alternative documents that will then be made publicly available.

1.5 *Procedural improvements to Annex 9 — Facilitation concerning inadmissible persons and deportees*

1.5.1   WP/6 contained a proposal for developing a set of best practices for implementing Standard 3.46 of Annex 9 — *Facilitation*. It was mentioned that the G8 is also working on a paper on how to handle people with lost and stolen documents. IATA updated the group on the work of the IATA/Control Authorities Working Group (IATA/CAWG) in this area.

1.5.2   The TAG recommended that the DCFWG put proposals together for the next TAG meeting, taking into account the work of G8 and IATA/CAWG.

1.6 *Travel document quality assurance and testing*

1.6.1   WP/7 proposed establishing a list of test institutes that can evaluate performance of e-Passport tests as specified by ISO WG3 TF4, and exercise quality assurance to verify e-Passports and maximize the confidence States will have in the appearance, consistency and integrity of documents. In this regard, there will be a consultation done by ISO at their meeting to be held in South Africa, and they will give their feedback to the Secretariat.

1.6.2   The TAG also recommended the publication on the ICAO MRTD website of the full version of the paper, "Guidelines for Dealing With External Passport and Other Travel/Identity Document Fraud – Recommended Standard Practices For the World's Government", a summary of which is to be included in the Doc 9303, Part 1, Volume 1.

1.7 *Interoperability of Steganography and Digital Watermarking*

1.7.1   WP/8 confirmed that digital watermarks definitely add to the security of the document to avoid manipulation of the visual data contained in the visual data page and in the chip. However, a specification for an interoperable technique is not viable today since all the decoding software packages are proprietary systems.

1.7.2   At this stage, it was reported that two major market leaders have recently announced a cooperative effort to produce and make available by the end of this year a single reading platform that can read watermarks from both companies. It has also been indicated that this platform could be expanded to include other digital watermark variations from other companies.

1.7.3   The TAG supported the proposal to continue studying the market and to work towards a proposal for a recommendation to be included in Doc 9303, if interoperability can be technically guaranteed.

1.8   *Report of the Document Content and Format Working Group*

1.8.1   In WP/9, the TAG took note of the report on the meetings held by the DCFWG during the last 18 months, and approved the future work plan to be implemented in close cooperation with NTWG and EPWG.

  a) Revision of Doc 9303, Part 3, in two volumes;

  b) Work on an alternative document data base;

  c) Set up list of test institutes for e-Passports;

  d) Follow up developments on steganography; and

  e) Deal with current issues coming up with e-Passport introduction.

2.   **AGENDA ITEM 2**

       Implementation of e-Passports

2.1   *The Strategic focus for Future Work of the NTWG*

2.1.1   On the basis of WP/13, the TAG approved the future direction and activities of the NTWG, which are:

2.1.1.1   **Short-term Objects**

  a) Contribute to the creation of a communications plan (in partnership with other Working Group) to ensure an effective means of disseminating appropriate information to both member States and the vendor community on new technology developments;

  b) Provide expertise in the development of an e-MRTD testing facility;

  c) Finalize the technical report on e-Visas;

  d) Complete the research on an MRZ identifier for e-Passports;

  e) Finalize the technical report on hybrid travel documents;

  f) The development of e-Passports has obviously included the development of RF writer/reader technology. While it would appear that the key technology issues have substantively been addressed, the actual use of these devices in conjunction with border control activities has not. The NTWG is proposing to research this issue with emphasis on ergonomics and the mitigation of risks such as eavesdropping. It is expected that the outcome of this research will include a high level functional specification for border based multifunctional travel document readers; and

  g) Provide guidance material on data sharing between States to support a number of international initiatives in relation to lost and stolen travel documents.

2.1.1.2   **Ongoing Programme Oversight,** which consists of providing effective support and oversight of the development, implementation and management of the ICAO PKD.

2.1.1.3   **Ongoing Maintenance Activity**, which refers to work items that reoccur over time. It is proposed to undertake the following key activities:

a)   Review of new technology applications in relation to travel documents through the triennial RFI process;

b)   Review of the format and content of the Machine Readable Zone (MRZ) while ensuring backward compatibility;

c)   Ongoing updates to the technical reports arising from the initial deployment of the e-Passport;

d)   Support to the DCFWG in the refinement and harmonization of existing Doc 9303 standards;

e)   Support to the EPWG through the provision of relevant technical expertise and the preparation of papers for publication;

f)   Continued liaison and joint activity with ISO/SC17/WG3;

g)   Continued liaison with other ISO working groups (e.g. the development of application profiles/user specifications by SC37); and

h)   Ongoing review of the participation and membership of the NTWG to ensure that the group's structure best meets the needs of member States.

2.1.1.4   **Longer-term goals**.   As the international travel and security environment evolves, the NTWG will continue to identify issues to address through the development of standards and guidance material. The following areas of activity are envisioned or in fact underway:

a)   Develop guidance material and standards that will potentially enable States to leverage the storage capacity of RF Chips. Current versions of technical reports relating to e-Passports support the implementation of a "write once read many" deployment, however, over time issuing authorities may wish to broaden the functionality to enable additional information to be written to this chip post issue. This may be as simple as updating the holder's portrait or as complex as allowing third parties to write data (e.g. visas);

b)   Develop guidance material and standards in relation to real time data sharing between States through the positive validation of travel documents at check in or border control. This would require States to allow other States to have access to their databases via the internet or third party communication broker;

c)   Develop guidance material and standards in relation to the receipt and processing of Internet based travel document applications including the collection of biometrics;

d)   Develop guidance material and standards in relation to the use of biometrics in travel document issuance processes including identity verification and fraud detection; and

e)   Develop guidance material and standards in relation to automated border clearance of travellers presenting e-Passports.

2.1.2   Finally, the group noted that there is a shift from working on standards to work towards applications in border control procedures and encouraged members to get immigration and customs authorities involved.

2.2   *2004/05 NTWG Request for Information (RFI)*

2.2.1   WP/12 provided the final report on the 2004/05 NTWG Request for Information (RFI) initiative, which presented the key findings from the RFI presentations made by vendors of MRTD-related technologies.

2.2.2   The TAG/MRTD noted the findings and conclusions of the RFI report and approved the continuation of the RFI programme, which should occur in 2007/08. The group suggested to hold the meeting and exhibition of the next RFI at ICAO Headquarters during the next TAG meeting, to increase the number of proposals and exhibitors.

2.3   *Technical report on interoperability implementation*

2.3.1   It was suggested to change the name of WP/12 to *Technical Report on Interrelationship Implementation,* as it is more representative of the content. This report will be delivered during TAG 17 and will be posted in the website as soon as it is available.

2.3.2   The TAG approved the table of contents for the *Technical Report on Interrelationship Implementation* included in the appendix, and suggested to leave the current technical reports on the website until this publication is ready.

2.4   *Report on test methodologies being developed for MRTDs and e-MRTDs*

2.4.1   WP/14 presented a summary of the work on test methodologies for electronic machine readable travel documents (e-MRTDs). The Group noted the work done and endorsed the continuing work plan on this topic.

2.5   *Technical report on e-Visas*

2.5.1   WP/16 presented a technical report summarizing the types of electronic visas under consideration and the related issues as they are further explored and understood. Among other conclusions of the report, it was mentioned that the collision of signals from two or more chips may not be as significant as originally thought. As an alternative to placing a chip under a visa label, some authorities may be interested in placing visa information on the passport chip.

2.5.2   The TAG approved the continuation of the on-going development of the e-visas technical report. The NTWG expects to have made progress by the next TAG meeting.

2.6   *Technical Report on Use of Smart Cards with Machine Readable Passport (1st Edition)*

2.6.1   WP/15 described the NTWG work on developing a technical report on hybrid card/book options for biometric-enabled passports. It was stated that there is a great deal of interest among member States to make this technology work. ACI stated that the development of this technology is of great interest to airport operators since some of its members are running programmes that may be compatible with it

2.6.2   The TAG recommended this report be made available and open for comments in an appropriate manner through the ICAO website, with a request that any comments be sent to the Secretariat.

2.7   *Impact of Patents on the e-Passport Programme*

2.7.1   The NTWG presented in WP/22, a summary of issues and concepts related to patents, and recommended Contracting States, issuing authorities and control authorities to relate these to the various patents that have been grated to them or that have been filed by them.

2.7.2   The TAG noted the work on the subject and instructed the NTWG to continue monitoring this subject, and bring to the attention of the TAG/MRTD any issues that could negatively impact on the successful implementation of ICAO-compliant e-Passports.

2.8   *Update on the development of a technical report on Information Sharing between Contracting States in Relation to Lost, Stolen and Revoked Travel Documents*

2.8.1   WP/17 provided a progress report on the development of a technical report on information sharing between contracting states in relation to lost, stolen and revoked Travel Documents through a system set up by INTERPOL. It was reported that Belgium and Switzerland are testing the system, and that Spain, Poland, Lithuania and Croatia are prepared to sign on.

2.8.2   It was agreed that the Report will not be updated until there is a feedback of the use of the system in an operations environment.

2.8.3   The TAG noted the content of the draft technical report and approved the continuation of the on going research and development work to further update the technical report as the system design evolves.

2.9   *Proposal for a Technical Report on Automated Border Control Systems*

2.9.1   The NTWG considered in WP/11, a proposal for writing a technical report on automated border control systems. The TAG suggested that this report will be better identified as a "guideline" or a "blueprint", and that it should broaden the scope to include systems based on e-Passport functionality and not just on enrolment. The group also suggested such guidelines be eventually included in Chapter 6 of Annex 9.

2.9.2   The TAG considered this proposal and endorsed assigning this task to NTWG.

2.10   *Proposed Development of a Technical Report "PKI for Machine Readable Travel Documents" ─ Version 2*

2.10.1   WP/10 proposed the continuation of the on going development of guidelines and standards by the NTWG in the area of securing electronic data in MRTDs and MRTD-related systems, and the issuance of version 2.0 of the PKI Technical Report, which will be subject to subsequent consideration and adoption by the TAG/MRTD. A draft table of contents was proposed.

2.10.2   The TAG approved the continuation of the development as presented.

2.11   *Second edition of Technical Report on Development of a Logical Data Structure (LDS for Optional Capacity Expansion Technologies on MRTDs*

2.11.1   In view of the importance of maintaining a Logical Data Structure that meets the needs of Contracting States and international organizations, WP/21 proposed to continue the efforts for the development of Version 2.0 of the Logical Data Structure.

2.11.2   It was highlighted that, as the PKI technical report evolves, so will the LDS technical report, and that these issues are at the heart of the NTWG work on e-Passports.

2.11.3　　　　The Group approved the ongoing efforts and a draft of a table of contents for this report was endorsed.

3.　　　　**AGENDA ITEM 3**

Universal Implementation of Machine Readable Travel Documents

3.1　　　　**Educational Activities**

3.1.1　　　　In WP/18, the Education and Promotion Working Group (EPWG) reported on the participation of its members over the past year in different activities such as workshops, reviews and seminars in the following locations: Bangladesh, Nassau, Trinidad, Vancouver, London and Niger. The majority of those events were done in collaboration with the International Organization for Migration (IOM).

3.1.2　　　　The Group reported other opportunities where the profile of Doc 9303 was raised; such as the meeting of the G8 Lyon-Roma group in London held in April 2005. In this case, an agreement was reached on a best practice identity paper that will be forwarded shortly to ICAO with the recommendation that it become an informative annex to Doc 9303.

3.2　　　　*Report of the Education and Promotion Working Group*

3.2.1　　　　WP/19 contained a report on the main activities undertaken by EPWG during 2004/05. The activities listed were the following:

3.2.1.1　　　　**Contribution to journals**. EPWG reported having been involved in promoting the aims of the ICAO MRTD Programme through the provision of appropriate articles for publication in Keesing's Journal of Documents & Identity

3.2.1.2　　　　**Library of presentations**. Work has taken place on the collection of suitable (PowerPoint) presentations that may be used in outreach activities.

3.2.1.3　　　　**Outreach activities**. EPWG members have taken part in events organized by international organizations such as IOM and OSCE. The Group also indicated that it will be supporting, where possible, the Regional Seminars on the Universal Implementation of Machine Readable Travel Documents organized by the Secretariat.

3.2.1.4　　　　**MRTD website.** The Group acknowledged the work and improvement that has been undertaken on the website to enhance it and provide easier access to it. The Group believed that the website is a valuable source of information and needs to be promoted as fully as possible. In this regard, the Group encouraged partner organizations, such as ISO, and working groups, to implement links to this website wherever possible, like the one established by Keesing's in their website.

3.2.2　　*Future Work Programme*

3.2.2.1　　　　The EPWG presented a work programme to achieve the following aims:

　　　　a)　meeting the 2010 deadline for MRTDs

　　　　b)　providing expert assistance to groups such as IOM and OSCE;

　　　　c)　increased use of the MRTD website;

d) expansion of publicity, for example, through the publication of articles;

e) closer cooperation between Working Groups; and

f) promotion of ICAO best practice on passport issuance/handling to the wider community.

3.2.2.2   The TAG noted the programme of activities of the group since TAG/15, endorsed the work programme outlined in the appendix and recognized former Chairman, Susan Jessop, for the contribution she had made to the work of EPWG.

4.   **AGENDA ITEM 4**

Implementation of the Public Key Directory

4.1   The Secretariat introduced the Agenda Item by updating the TAG on the implementation process of the Public Key Directory project to date.

4.2   *Adoption of Draft Regulations Version 1.4 for the ICAO Public Key Directory (PKD)*

4.2.1   In WP/24, the Secretariat presented a set of regulations for the operation of the PKD. These regulations clearly set out what the PKD is intended to do, how it will operate in terms of update frequency, response time to action requests, limitations of liability regarding the various entities involved with the PKD, fees and participation payment requirements, and other aspects of the PKD operation.

4.2.2   The Secretariat stated that the adoption of the current draft of the PKD Regulations is of fundamental importance to the implementation and operation of the PKD, together with the PKD memorandum of understanding to be signed between ICAO and the participating States. Participation in the PKD is considered essential for the distribution of the public keys of a State that issues e-Passports

4.2.3   The TAG, based on a request from the Secretariat, decided to form a PKD Advisory Group, composed of a member from each participating State for the purpose of governance.

4.2.4   The TAG recommended the adoption of the Draft PKD Regulations Version 1.4 and agreed to have the draft circulated to all interested States for review and suggestions.

4.3   *Fees and Cash Flow Requirements for the ICAO Public Key Directory (PKD)*

4.3.1   In WP/25 the Secretariat presented a fee structure and schedule estimated for the PKD system, based on actual contractor and ICAO supervisory and operational costs. It was also noted that the expenses incurred by ICAO to date, and for its first year of operation, must be covered by participating States.

4.3.2   Some TAG participants requested a more detailed explanation of the calculation of the estimated fees, including a breakdown of the expenses incurred to date by ICAO and the estimated budget expenses for both ICAO and the contractor. For this purpose, a special meeting was held where these matters were explained to the satisfaction of those attending. Consequently, the TAG noted and approved the estimated fees as presented in the working paper.

4.4   *PKD Memorandum of Understanding to be signed between ICAO and Participating*
       States

4.4.1   The Secretariat presented in WP/26 a draft of the MoU template which will legally support arrangements between ICAO and the PKD Participating States. This draft template will be presented to the ICAO Council for approval.

4.4.2   The TAG was requested to circulate this draft in their respective governments and to make any pertinent comments and suggestions for inclusion in the final draft of the MoU to be presented to the Council. Comments and suggestions were to be received before 28 October 2005. (This timeframe was amended after the meeting).

5.   **AGENDA ITEM 5**

      Country reports

5.1   Mr. Luc Corbeels and Mr. Alain Boucar, the Observers from Belgium, made a presentation on the Belgian e-Passport project. Belgium has been issuing e-passports since 15 November 2004.

5.2   Mr. Gary McDonald, the Member from Canada, gave an update on the Canadian passport project.

5.3   Mr. Radha R. Dash, the Member from India, made a presentation on the status of the Indian machine readable passport project, the machine readable visa, and ICAO-compliant ID card.

5.4   Mr. Tor Saralamba and Mr. Parkpoom Srithimakul, the Observers from Thailand, made a presentation on the Thai e-passport project. Thailand has been issuing e-passports since 1 August 2005.

5.5   Mr. Robin Chalmers, the Member from the United Kingdom, presented an update of the U.K. passport and national ID cards projects.

5.6   Mr. Tankok Guan, an Observer from Singapore, presented an update on the Singapore e-Passport project.

6.   **AGENDA ITEM 6**

      Other business

6.1   There being no other business, the meeting was adjourned.

7.   **WORKING GROUPS' PARTICIPANTS**

a)   *Document Content and Format Working Group*

Ms. Claudia Hager (Chairman)	Dr. Parkpoom Srithimakul	Mr. Tor Saralamba
Mr. Kum Sang Kun	Mr. Luc Corbeels	Mr. Alain Boucar
Mr. Raul Eks	Mr. Leslie Crone	Mr. Malcolm Cuthbertson
Ms. Raimonda Admine	Mr. Manabu Yamakoshi	Mr. Mohau Mpoti
Mr. Jung Young Kee	Mr. Christian Guichard	Mr. Stephen Grant
Mr. Sello Mokethi	Mr. Gary Christelis	Mr. Staffan Tilling
Mr. Charles Chatwin	Mr. Pierre-Louis Garcia	Ms. Muriel Sylvan
Mr. Robert Moyes	Mr. Dwight MacManus	Mr. Martin Tremblay
Mr. Lee Hon Kuan	Mr. Ho-joon Moon	Mr. Milos Vacek
Mr. Goh Jwee Sheng	Mr. Ofer Ishai	Mr. Heinrich Pawlicek

b)   *New Technologies Working Group*

Mr. Gary McDonald (Chairman)	Ms. Leslie Crone	Ms. Lesley Soper
Mr. David Philp	Mr. Tan Kok Guan	Ms. Shirley Chow
Mr. Adrian Ong	Mr. Brad Wing	Mr. Rich Martin
Mr. Michael Holly	Mr. John Osborne	Mr. Paulo Pires
Mr. Bob Davidson	Mr. Uwe Seidel	Mr. Denis Kugler
Mr. Katsuake Ito	Mr. Robin Chalmers	Mr. Charlie Stevens
Mr. Charles Chatwin	Mr. Rob Blalderston	Mr. Joel Shaw
Mr. Ronald Belser	Mr. Sjef Broekhaar	Ms. Raimonda Admine
Ms. Sylvia Kolligs	Mr. Ofer Ishai	Mr. Tommi Rakshit
Mr. Roman Vanek	Mr. Joe Nugent	Mr. James O'Connell

c)   *Education and Promotion Working Group*

Mr. Robin Chalmers (Chairman)	Mr. Malcom Cuthbertson	Mr. Andrews Hill
Ms. Claudia Hager	Mr. Raul Eks	Mr. John Mercer
Mr. Mohau Mpoti	Mr. Sello Mokhethi	Mr. Charles Stevens
Mr. Staffan Tilling	Mr. Steven Grant	Mr. Fons Knopjes

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