



TECHNICAL ADVISORY GROUP ON MACHINE READABLE TRAVEL DOCUMENTS (TAG-MRTD)

NINETEENTH MEETING

Montréal, 7 to 9 December 2009

- Agenda Item 2: Activities of the NTWG**
Agenda Item 2.6: Transliteration Rules (Arabic)

TRANSLITERATION RULES (ARABIC)

(Presented by the New Technologies Working Group (NTWG))

1. INTRODUCTION

1.1 The purpose of this Working Paper is to update the TAG on progress towards adoption into Doc 9303 of a transliteration scheme for languages using the Arabic script.

1.2 At TAG-MRTD/18 held in Montréal from 5 to 8 May 2008, this project and its associated technical report was presented to the TAG in WP/2. The TAG noted the findings of the technical report and approved the continuation of the work with a view to eventual inclusion of Arabic transliteration rules in the Supplement to Doc 9303 and of an Arabic transliteration table in Doc 9303 as a Normative Appendix.

1.3 The TAG asked the NTWG to look into standardizing the transcription for the VIZ, and to examine any implementation problems associated with adopting the Arabic transliteration rules for the MRZ.

2. CURRENT POSITION

2.1 The technical work to finalise transliteration rules and a transliteration table for the Arabic script in the MRZ is largely complete. However, the implementation steps proposed at TAG-MRTD/18 are not being recommended at this time.

2.2 There are a large number of Arab and other States that use Arabic script to write their native language and regional variance in the Arabic language and variance in existing MRP transliteration practice complicates agreement on the adoption of a transliteration scheme. Since it is these States that have most at stake and most to gain through change to standardise transliteration of Arabic script, the proposed transliteration scheme has been the subject of considerable consultation in the region. With time it is possible a consensus for change will emerge amongst affected States and it is considered that this consensus that will give the transliteration scheme its best chance of widespread adoption.

2.3 The adoption of the proposed transliteration scheme will create a number of transition issues. These include:

- The complexity of managing less intuitive name data - e.g. airline staff will need to recognise and key names from the MRZ rather than the VIZ (an existing source of error and data discrepancies in PNR and API data where it is entered manually) and passport issuance staff, including in non-Arab countries, will need to be assisted to manage the OCR transliterations). Additionally, border control in receiving countries will need to be aware that the VIZ transcription and the MRZ transliteration are different forms of the same name.
- Legacy watchlist information and arrival and departure information will need to be managed in parallel for an extended implementation period until all passports in circulation follow the new transliteration rules.

2.4 Reference tables mapping common names to transliterated equivalents will assist in both these areas. As well, software could be provided to implement the generation of phonetic equivalent names from the MRZ, as well as implementing the display of the name in Arabic characters (useful to those countries using the Arabic font).

2.5 The standardization of the transcription in the VIZ has not proceeded as the Secretariat has been unable to obtain any current transcription schemes and rules from the relevant ICAO delegations. As well, there is an implementation issue with standardised transcriptions in the VIZ. Travellers who already have a preferred phonetic transcription of their Arabic character name into Latin characters may not accept a different standardised form.

3. **LESSONS LEARNED**

3.1 The work undertaken to date has highlighted important lessons applicable to the adoption of transliteration schemes for all languages that use non-latin scripts. Importantly, where a common script is used in more than one country, consultation to identify a preferred transliteration solution is essential.

3.2 Paragraphs 9.1.3, 9.3.4 and 9.4.1 of Doc 9303 properly distinguish between:

- the MRZ where the requirement for worldwide machine readability and the limitations of the OCR character set mean transliteration tables are required to achieve consistent name matching to accurately record arrivals and departures and effective warning list searches; and
- the VIZ, where additional latin script characters or non-latin script can be used to represent more accurately names as written locally in the script of the issuing State or organisation.

3.3 It is probably the case that the passport holders, border control staff and airline check-in staff who are the principal users of the passport data page would prefer the name as it appears in the MRZ to be recognisably similar to the name that appears in the VIZ. However, this desirable feature is not consistent with Doc 9303 and is at odds with what is arguably a more important requirement - that the transliteration scheme used in the MRZ should provide a unique, reliable representation of the name in

the limited OCR characters available that in addition allows the name in the native script to be regenerated solely from the name data recorded in the MRZ.

3.4 The approach that has been used to developing the OCR transliteration solution for Arabic is applicable to other non-latin script, alphabet based languages and if it is ultimately adopted could become a guide for States who wish to develop their own transliteration schemes.

4. **ACTION BY THE TAG/MRTD**

4.1 The NTWG invites the TAG/MRTD to:

- a) note that the technical work to finalise transliteration rules and a transliteration table for the Arabic script in the MRZ is largely complete; and
- b) note that a recommendation for adoption of the proposed scheme is being deferred pending further consultation and the emergence of consensus amongst Arab States who have most at stake in the change.

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