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**Question(s):** 7/16

Geneva, 19 - 30 July 2010

**LIAISON STATEMENT****Source:** ITU-T SG 16**Title:** LS to IETF, IAB, ICANN, W3C, ISO TC 2, Unicode Consortium on IDN related standardization

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**LIAISON STATEMENT****For action to:** IETF, IAB, ICANN, W3C, ISO TC 2, Unicode Consortium**For comment to:** -**For information to:** -**Approval:** ITU-T SG 16 meeting (Geneva, 19-30 July 2010)**Deadline:** 1 Mar 2011

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**Contact:** Ibaa Oueichek  
Syrian Telecom Est.  
Syria  
Tel: +963944436505  
Fax: +9636121331  
Email: [oueichek@tarassul.sy](mailto:oueichek@tarassul.sy)

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**Contact:** Hervé Taddei  
Huawei Technologies  
China  
Tel: +49 89 15 8834 4096  
Email: [herve.taddei@huawei.com](mailto:herve.taddei@huawei.com)

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ITU-T Study Group 16 Question 7/16 is considering the possibility of working on Internationalized Domain Names (IDN) as a response to contributions received, but is keen to ensure that the work being considered is complementary to the activities in other SDOs.

The current issue which has been presented at Q7/16 is related to visual confusion in domain names. The current standardization work being conducted at other SDOs is to the best of our knowledge not considering a solution to this problem and leaves it to the implementations. For example, no recommendations are provided within the current IETF standard drafts (<http://datatracker.ietf.org/doc/draft-ietf-idnabis-defs/>), except that implementations should provide visual indications where a domain name contains multiple scripts, and that DNS zone administrators may impose restrictions that try to minimize characters that have similar appearance or similar interpretations.

The visual confusion problem does not only appear when cross-script code points are used, but also within the same script. The following is an example of two strings from the same script (Arabic) which are visually identical:

U+0645 U+0643 U+064A U+0629

U+0645 U+06A9 U+06CC U+0629

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Several examples for such strings can be obtained through the use of the following online tool:

- [http://arabic-domains.org/adn\\_tools/mk/index.php](http://arabic-domains.org/adn_tools/mk/index.php)

The opening of new IDN gTLDs, expected to go live by end 2011 according to ICANN new gTLD process, and the current ccTLD IDN fast track process are expected to result in massive registration for IDN domain names which could face the problem of visual confusion, especially with the lack of any clear guidelines or standards to address this problem.

One area where Q7/16 is considering launching an action is at developing an algorithm for the identification and processing of visually similar domain names. The algorithm, which would work for any script, could be based on a master key concept, where a set of code points visually similar, either alone or when combined with other code points, shall be represented by one code point known as master key. Towards this end, the following steps would be taken:

1. Validate the concept of master key for scripts, in consultation with experts from other script/language communities;
2. Develop a unified algorithm which could be used to generate domain names visually similar to those which are being registered, and help the registry enforce the declared registration policy;

This algorithm could also be used by developers of software that uses IDN in general (registration software, browsers, email clients, etc).

Given the foregoing, Q7/16 would be interested to know whether this work is complementary to other standardization activities conducted or planned to start within your organization before deciding whether this work should commence in Q7/16. Q7/16 also welcomes any comment you may have on the problem of visual confusion.

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