Revised: 23 June

Guidelines for the Extended Process Similarity Review Panel (EPSRP) for the IDN ccTLD Fast Track Process

The following provides guidelines to implement the EPSRP Framework described in section 4.3.1 and other relevant sections of the Final Implementation Plan for IDN ccTLD Fast Track Process (as revised on 5 November 2013)(the "Implementation Plan").

Introduction

One of the functions of the DNS Stability Evaluation in the IDN ccTLD Fast Track process[1], as described in the Implementation Plan, is to provide external and independent advice to evaluate whether a selected string is confusingly similar to other existing or applied-for TLDs. If the results of the DNS Stability Evaluation are that the selected string is considered confusingly similar to another string, the request for the IDN ccTLD selected string is not eligible to proceed further under the Fast Track Process.

To evaluate potential similarity, the DNS Stability Evaluation includes the following evaluation Panels:

- An external and independent DNS Stability Panel that conducts the initial DNS Stability Evaluation, which includes a string similarity review of the requested IDN ccTLD string.

- In the event that a finding of string confusion and contention (under Implementation Plan 5.5) has been made by the DNS Stability Panel, an external and independent Extended Process Similarity Review Panel ("EPSRP"), only upon the request of the applicant, conducts a review of the requested IDN ccTLD string, using the same criteria for string confusion and contention, and a different methodology from the DNS Stability Panel.

The EPSRP shall review the requested string(s) on the basis of the framework described below, with a clear focus on the overarching principle of preserving and ensuring the security, stability and interoperability of the DNS.

Criteria

A selected IDN ccTLD string should not be confusingly similar (as defined in

[1] Internationalized country-code Top Level Domain Fast Track process: http://www.icann.org/en/resources/idn/fast-track

paragraph 5.5 of the Implementation Plan) with:

- Any combination of two ISO 646 Basic Version (ISO 646-BV) characters[2] (letter [a- z] codes), nor
- Existing TLDs, applied for TLDs, or reserved names.

Guidance for interpretation of the criteria for confusing similarity

The overarching principle is to preserve and ensure the security, stability and interoperability of the DNS (Framework, para 4.3).

The EPSRP's role is to seek to prevent systemic user confusion arising from the applied for string.

In applying the criteria for confusing similarity (para 5.5 of the Implementation Plan), the EPSRP shall:

1. Take into account that, when comparing the string with entries in the two ISO 646 Basic Version (ISO 646-BV) characters, in the ccTLD environment, two letter country codes which are similar to one another already co-exist without apparently causing user confusion (eg .It and .it; .lv and .lu);
2. From a visual similarity point of view, upper and lower case versions of the applied for strings may be distinct entities in some scripts. From a technical perspective, the lower case version is authoritative when resolving a domain name, and any upper case characters are first converted into lower case prior to technical resolution. From a general user's perspective, the lower case is much more frequently used to display and type domain names. For this reason, the EPRSP shall give greater weighting to the visual appearance of the selected string, in lower case, rather than upper case. In the event that there are different outcomes from the upper and lower case evaluations, the evaluation of the lower case shall prevail. The EPSRP may note that there is potential for confusing similarity (upper case), and let the application go forward, perhaps with conditions.
3. Consider the visual appearance of the string in common fonts in small sizes at typical screen resolutions;
4. Consider confusing similarity from the perspective of a reasonable Internet user who is familiar with the scripts to be assessed (the likely intended audience of the IDN TLD string).

Methodology

In order to determine whether this is the case – in particular for the two-letter codes under the Fast Track Process – the EPSRP will establish whether a

[2] International Organization for Standardization, "Information Technology – ISO 7-bit coded character set for information interchange," ISO Standard 646, 1991

requested IDN ccTLD string is too similar to another based on a behavioral metric that objectively measures the visual similarity of a candidate string to other letter strings. The behavioral metric provides quantitative and statistical evidence about the likelihood of confusing two possible strings and its methods are open and repeatable to enable replication by third parties.[3] If the string is deemed too similar through this review, the EPSRP will not recommend acceptance of the string.

An external and independent research team (Research Team) will provide the behavioral metrics to the EPSRP. These behavioral metrics are related to the selected IDN ccTLD string under evaluation by the EPSRP, and are derived from three different measuring methods (tests) to assess similarity. These tests are designed in such a manner that the tasks in the tests are performed by several hundred participants/volunteers to allow for repetition (both by the same participant and across different participants) and performance of the tasks requires prior knowledge of the related scripts. The participants/volunteers are independent of the Research Team and the EPSRP, and must represent a reasonable diverse sample in terms of age, gender, language, geography and other relevant demographics (economic factors, level of education, and occupation).

The tests are:

- Subjective Rating Task: Participants judge on a multi-point scale the visual similarity of two-letter strings. Although this is necessarily a subjective measure, the outcomes from such ratings can be very reliable within and between raters, and this can easily be translated to a numerical scale.
- Delayed Match to Sample: Participants in the test are shown a stimulus, which later must be selected from a set of options. In this case, when only two options are given, this is sometimes referred to as a two-alternative forced choice (2- AFC) task.
- Visual Search Task: Participants search for and identify a stimulus either by matching a target or mismatching the rest of the stimuli in a field of text strings.

Extended Process Similarity Review Panel Procedure

An IDN ccTLD Fast Track applicant may ask for the EPSRP to conduct a second and final confusing similarity assessment of the requested IDN ccTLD

[3] This takes into account the latest results of the academic research in the study of letter recognition, neuropsychology and cognition, for example: **A letter visual-similarity matrix for Latin-based alphabets,** Simpson, Ian; Mousikou, Petroula; Montoya, Juan; Defior, Sylvia, Behavior Research Methods; June 2013, Vol. 45 Issue 2, p431

Alphabetic letter identification: Effects of perceivability, similarity, and bias. Shane Mueller, Cristoph Weidemann, **Acta Psychologica** 139, (2012

string if:

1) The DNS Stability Panel, in performing its string similarity review, deems the string to be invalid;

2) The EPSRP assessment is requested within 90 days of ICANN's notification to the applicant of the DNS Stability Panel evaluation results.

Transitional arrangement: If an IDN ccTLD string request submitted under the Fast Track Process is still in process or has been terminated due to non-validation of the string per confusing similarity criteria, the requester has the option to request a second and final validation review by the EPSRP. This option is available to the requester within 90 days of the date when the EPSRP is appointed and ICANN provides the eligible requesters notice of the appointment.

To initiate the second and final EPSRP, the requester of the selected string should respond to the notification received from ICANN through the Fast Track Ticketing System. The requester may provide additional documentation and clarification related to aspects in the report of the DNS Stability Panel, and the requester considers relevant for the EPSRP to take into account. Providing additional documentation is optional. The additional materials, if any, should be sent to the Fast Track Ticketing System: mailto:idnft@icann.org, while ensuring that the subject line of the email stays intact per previous exchanges so that the system can capture the reply. The requester may submit the additional material up to 30 days after requesting the Extended Process Similarity Review Procedure.

If the requester has not notified ICANN within 90 days after the date of notification by ICANN of DNS Stability Panel findings, or, in the event the transitional arrangement is applicable, 90 days of the date the EPRSP is appointed, the Fast Track Termination Process will be initiated (See section 5.4. of the Implementation Plan).

After receiving the notification and additional material (if any) from the requester, ICANN shall forward the issue to the EPSRP, within seven days after receiving the material or, in the event the requester indicates no additional material will be provided, within seven days after receiving the requester's confirmation of no additional materials. In all events, the issue is expected to be forwarded to the EPSRP within seven days of the end of the 30-day period for submission of documentation as stated above.

After receiving the notification from ICANN staff, the EPSRP will define the parameters for the measuring methods/tests based on the rule for confusing similarity as described above, taking into account the relevant documentation provided by the requester, if any, and request the external Research Team to measure the similarity and confusability of the selected

IDN ccTLD string(s) to similar and dissimilar comparison strings. The request to the Research Team will include, at a minimum, the strings considered to be confusingly similar as well as font and font size conditions to be used.

Once the EPSRP has received the report from the Research Team, the EPSRP evaluates the findings of the Research team, taking into account, but not limited to:

- All the related documentation, if any, from the requester,
- The findings of the DNS Stability Panel.

During the evaluation process, the EPSRP may seek further clarification from the requester through ICANN staff, if the EPSRP deems this necessary. The EPSRP is not required to seek any further clarification.

As soon as possible, the findings of the EPSRP shall be reported to ICANN and will be publicly announced on the ICANN website. This Report shall document the findings of the EPSRP, and shall include:

- The final decision,
- The rationale for the final decision.
- Report of the external Research Team.

In the event that the string is deemed to be invalid, the EPSRP Report shall also include:

- A reference to the strings that are considered confusingly similar,
- Examples where confusing similarity was noted.

The Report of the EPSRP is expected to be queued for public posting within one (1) week of ICANN's receipt of the Report. ICANN is also expected to inform the requester of the findings of the EPSRP prior to posting.

If, as a result of the EPSRP Report the requested string(s) is/are valid, and all other portions of the Fast Track process are also successfully completed by the requester, the requested string(s) will be queued for public posting, in accordance with section 5.6.4 of the Final Implementation Plan for IDN ccTLD Fast Track Process.

If the requested string is not considered valid as a result of the EPSRP Report, the Fast Track Termination Process will be initiated (See section 5.4. of the Implementation Plan).

Extended Process Similarity Review Panel:

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Dr. Jonathan Grainger, Directeur de recherches au CNRS Aix-Marseille

Université France

Dr. Kevin Larson United States

Research Institute:

Department of Cognitive and Learning Sciences, Michigan Technological University United States

Leader of the research team: Professor Dr. Shane T. Mueller