Report of Public Comments

Title:	IDN TLD Program - Label Generation Ruleset (LGR) Tool Project (P1) - LGR Tool Set Specifications
Publication Date:	7 January 2014
Prepared By:	ICANN Staff

Comment Period:	
Comment Open Date:	3 December 2014
Comment Close Date:	23 January 2015

Important Information Links
Announcement
Public Comment Box
View Comments Submitted

Staff Contact:	Sarmad Hussain	**Email:**	sarmad.hussain@icann.org

Section I: General Overview and Next Steps

To support IDN variants in the Root Zone, the ICANN community, at the direction of the Board, undertook several projects to study and make recommendations on their viability, sustainability and delegation. Work during the development of the Integrated Issues Report made obvious the lack of a common IDN table and standard implementation, and the need of specifications and a tool to make them machine parseable.

ICANN, in collaboration with various script communities organized in Generation Panels and in accordance with the Procedure, is currently developing a Label Generation Ruleset (LGR) for the Root Zone, which will be used to validate top-level domain (TLD) labels and to determine their variants. To facilitate the creation, use and management of LGRs, a new machine-readable XML based format is presently being designed, with its current version available. ICANN intends to develop a tool to allow the Generation Panels and the community to develop and use Label Generation Ruleset (LGR) in this machine-readable format.

In the context of the LGR Tool development, ICANN has released for community feedback the set of requirements included in the LGR tool specifications document and describing the potential users and use cases for the LGR as well as the relevant requirements for the development of the LGR Tool.

The following step consists of seeking proposals from parties that can perform required functions through a public Request For Proposals (RFPs) for the development of the LGR Tool, in accordance with the community reviewed specifications document.

Section II: Contributors

At the time this report was prepared, a total of three (3) community submissions had been posted to the Forum. The contributors, both individuals and organizations/groups, are listed below in chronological order by posting date with initials noted. To the extent that quotations are used in the foregoing narrative (Section III), such citations will reference the contributor's initials.

Organizations and Groups:

Name	Submitted by	Initials
ARI Registry Services	Yasmin Omer	YO
Saudi Network Information Center (SaudiNIC)	Raed I. Al-Fayez	RAF
The Internet Infrastructure Foundation (.SE)	Patrik Hildingsson, Mats Dufberg	PH/MD

Section III: Summary of Comments

General Disclaimer: This section is intended to broadly and comprehensively summarize the comments submitted to this Forum, but not to address every specific position stated by each contributor. Staff recommends that readers interested in specific aspects of any of the summarized comments, or the full context of others, refer directly to the specific contributions at the link referenced above (View Comments Submitted).

(YO) This comment recommended that the development of the tool should not be limited to Python and that the eventual code should be released with open source license to enable all community members to make use of and contribute to it.

(RAF) This comment suggested that the user should be able to load any LGR to determine the validity of a label, as LGRs may differ at second level, even for the same script. It was further suggested to include support for the Whole Label Evaluation Rules in the first phase and to develop a fully internationalized tool that can be localized in any language.

(PH/MD) This comment suggested prioritizing the work in the following steps: 1) Create an engine that reads a LGR table and validates labels against the LGR table; 2) Create a report module that can present a LGR table in a human readable format; 3) Create an import module that can read an IDN table according to RFC 4290 or RFC 3743 and create a LGR table. 4) Create a web-based tool for creation and updating of LGR tables to the extent that is motivated. Complex tables must be updated by hand. It was further recommended not to implement complex requirements and also suggested that this tool be able to integrate into the registry and registrar systems.

Section IV: Analysis of Comments

General Disclaimer: This section is intended to provide an analysis and evaluation of the comments received along with explanations regarding the basis for any recommendations provided within the analysis.

Staff will study the alternate prioritization suggested by PH/MD. The web interface being developed in Phase 1 is the simplest of the three phases as it does not have complex logical operations and will be usable by Generation Panels, as well as registries, to develop and maintain their LGRs. Based on the feedback, ICANN will try to simplify this requirement even further, to focus on the second phase, which PH/MD suggest as the first priority. ICANN agrees that complex functions should not be taken up in the initial phases of the project and that the system should work with existing registry and registrar system. Thus, the system is being designed to be modular and to be released as open source for the community to use and contribute to, as also suggested by YO. With respect to choice of programming language, ICANN wishes to encourage an ecosystem of libraries that support LGRs written in multiple languages. The proposed selection is not intended to limit or prohibit alternatives, rather to develop a library that would best meet ICANN's immediate workflow requirements, and use a language widely understood by developers and thus easy to port to alternative languages.

The suggestion by RAF is already built into the requirements, where the tool will be configurable to load any LGR and validate labels against it. In regards to the support by Whole Label Evaluation rules, they will be evaluated during the validation of labels, to a limited extent. However, to make that possible, they would need to be manually crafted and entered into the LGR.