

A promotional graphic for the ICANN 61 Community Forum in San Juan. The background is a scenic view of San Juan, Puerto Rico, featuring a mix of colorful residential buildings and historic stone structures, including a large stone wall and a dome, overlooking the ocean under a dramatic, orange-hued sky. The text is overlaid in white on a semi-transparent dark red background in the top right corner.

**ICANN**

**COMMUNITY FORUM**

**61**

**SAN JUAN**

10–15 March 2018

# IDN Implementation Guideline Working Group Update



Mats Dufberg  
Co-Chair IDN Implementation Guideline Working Group

ICANN 61  
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# Agenda

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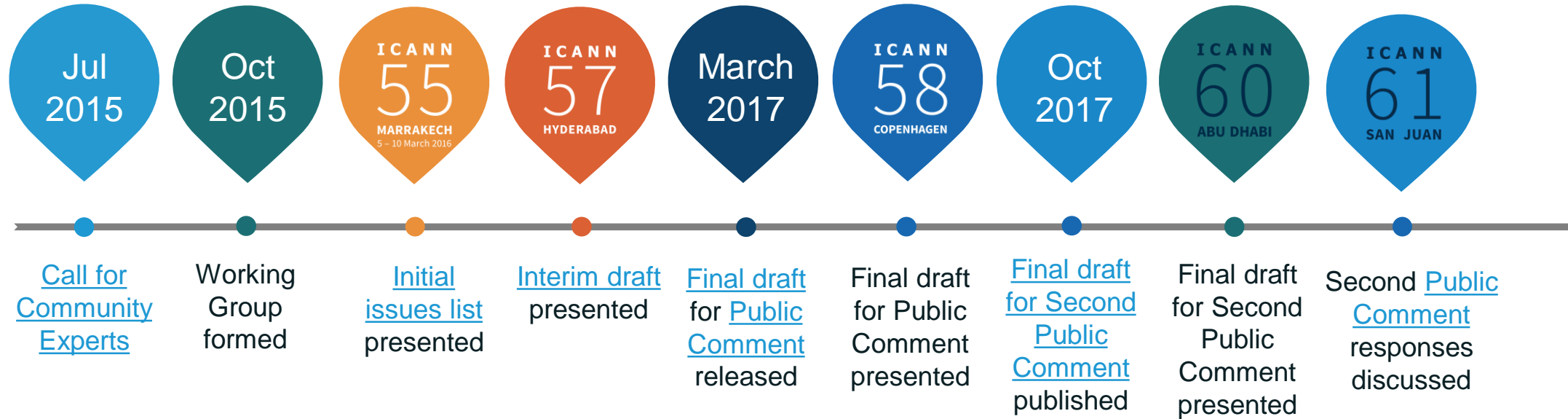
- ⦿ Purpose and Status
- ⦿ IDN Guidelines WG
- ⦿ Scope and Topics
- ⦿ Second Public Comment Responses
- ⦿ Next Steps
- ⦿ Q/A

# Purpose

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- Background
  - For second-level IDN registration policies and practices
  - To minimize the risk of cybersquatting and consumer confusion
- Relevance
  - gTLD – registries and registrars offering IDNs contractually bound
    - Required by most Registry Agreements  
For example, new gTLD Registry Agreement: Specification 6 Section 1.4
    - Required by many Registrar Agreements  
For example, 2013 Registrar Accreditation Agreement: Additional Registrar Operation Specification Clause 3
  - IDN ccTLDs – “expected” by the Fast Track Process

# Status





# IDN Guidelines WG (IDNGWG)

	Name	Organization	SO/AC
1	Satish Babu	ISOC-TRV	ALAC
2	Wael Nasr	TLDVILLA LLC	ALAC
3	Mats Dufberg	IIS	ccNSO
4	Pablo Rodríguez	Puerto Rico TLD	ccNSO
5	Edmon Chung	.asia	GNSO
6	Christian Dawson	i2Coalition	GNSO
7	Chris Dillon		GNSO
8	Kal Feher	Neustar	GNSO
9	Dennis Tan	Verisign	GNSO
10	Jian Zhang (until 7 April 2017)	KNET	GNSO
11	Patrik Fältström (will only review)		SSAC

# Scope and Topics

- Scope limited to only the owner-name of the DNS records added to the zone file by the registration system
  - Any glue records and right-hand or target names excluded from scope
- Total of 7 topics with nineteen guidelines and additional notes:

**Transition**  
(4)

**Format of IDN Tables**  
(2)

**Consistency of IDN Tables and Practices**  
(4)

**IDN Variant Labels**  
(3)

**Similarity and Confusability of Labels**  
(4)

**Publishing IDN Registration Policy and Rules**  
(1)

**Terminology**  
(1)

**Additional Notes**

# Second Public Comment Responses - Contributors

## Organization and Groups

Name	Submitted by	Initials
EURid	Giovanni Seppia	EURID
Japan Registry Services Co., Ltd.	Yoshitaka Okuno	JPRS
ICANN Business Constituency	Steve DelBianco	BC
Registries Stakeholder Group	Stéphane Van Gelder	RYSG
Non-Commercial Stakeholders Group	Rafik Dammak	NCSG

## Individuals

Name	Affiliation (if provided)	Initials
Dusan Stojicevic	Cyrillic Generation Panel	DS
John Gutierrez	-	JG
Anton Bershanskiy	University of Illinois at Urbana-Champaign	AB



# Second Public Comment Responses - EURID

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- ⦿ **EURID1.** EURID looks forward to engaging in a possible "consortium ... to address common current and emerging challenges in the development and use of IDNs".
- ⦿ **EURID2.** EURID suggests that any consortium/forum about IDNs be as inclusive of the various stakeholders in the domain chain, including registrars and registrants for a more sound perception of the challenges around IDNs.
- ⦿ **IDNGWG Response:**
  - WG welcomes EURID's intention in engaging
  - Guidelines suggest to the community to collaborate on need basis
  - WG will suggest ICANN org should stand ready to support such initiatives
  - WG supports the suggested diversity, when formed

# Second Public Comment Responses - JPRS

## Japan Registry Services Co., Ltd. (JPRS)

- ◎ **JPRS1.** Japanese characters are technically divided into three (3) scripts (Han, Hiragana and Katakana), the official language of Japan is only Japanese and these three scripts are not the exclusive of each, for example, "registration of .jp domain name" is written as "jpドメイン名の登録" using these scripts. Therefore, JPRS recommends that the Guidelines should clearly express that "the case of any exceptions made allowing mixing of scripts" means the case of commingling the scripts that are used exclusively.
  
- ◎ **IDNGWG Response:**
  - WG agrees that for certain languages, mixing scripts is the usual case
  - WG considers that the confusable characters across different scripts should be handled, even in cases where script mixing is commonplace
  - WG will update the relevant guidelines accordingly

# Second Public Comment Responses – BC (1/3)

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## ICANN Business Constituency (BC)

- ⦿ **BC1.** BC believes that all Registry operators offering IDN labels should incorporate the Guidelines.
- ⦿ **BC2.** The BC supports the Guidelines in Section 2.3, and in response to the call upon IDN registry operators to “collaborate on issues of shared interest ... to address common current and emerging challenges in the development and use of IDNs.”
- ⦿ **BC3.** BC supports the text in Section 2.3 that states that “registries seeking to implement IDN Tables ... that pose any security and/or stability issues must not be implemented.” BC suggests that “security and/or stability issues” in this context should include the risk of increased DNS abuse posed by malicious activities such as spam, malware, and phishing.
- ⦿ **IDNGWG Response:**
  - WG agrees with BC1 and BC2
  - Regards to BC3, handling spam and malware is out of the scope of the Guidelines

# Second Public Comment Responses – BC (2/3)

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- **BC4.** BC also supports Guideline 9 in Section 2.3, because it is important to ensure that all IDN labels in the same language or script are uniform across the DNS, to reduce the possibility of variations being used to cybersquat or conduct other abusive activities.
- **BC5.** BC agrees with the guideline in Section 2.4 that requires IDN Variant Labels to be allocable only to the same registrant as the primary IDN label.
- **BC6.** In reference to the Section 2.4, from a consumer protection standpoint, BC supports the principle of minimizing IDN variant label allocation in order to reduce the possible universe of abuse. BC recommends narrowing the potential exception to this principle where a language and/or script have “established conventions” with further detailed criteria for those conventions, because, BC states that “as currently stated, the exception seems overly broad and potentially threatens to swallow the rule limiting IDN Variant Label allocations.”
- **IDNGWG Response:**
  - WG agrees with BC4 and BC5
  - Regards to BC6, WG agrees and is intending to redraft the guideline

## Second Public Comment Responses – BC (3/3)

- **BC7.** BC supports Section 2.5.1 calling on registries to minimize IDN label confusion within the same script arising from the use of homoglyphic characters, to prevent bad actors to take advantage of homoglyphic character sets to mimic trademarks in order to conduct cybersquatting, infringement, phishing, and other malicious activities.
- **BC8.** BC agrees with the point in Section 2.5.2 which states: “In the case of any exceptions made allowing mixing of scripts, visually confusable characters from different scripts must not be allowed to co-exist in a single set of permissible code points unless a corresponding policy and IDN Table is clearly defined to minimize confusion between domain names.” BC adds that only limited exceptions should apply to mixed scripts, which, from a consumer protection standpoint, seem to lack any significant legitimate use. Or alternatively, variants using mixed scripts be cable only to the same registrant or be blocked.
- **BC9.** BC supports Section 2.5.3 to minimize Whole-Script Confusables as it mitigates the chance of nefarious activities.
- **IDNGWG Response:**
  - WG agrees with BC7 and BC9
  - Regards to BC8, WG agrees and is intending to remove the reference to “exceptions”

# Second Public Comment Responses – RySG (1/5)

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## Registries Stakeholder Group (RySG)

- **RySG1.** RySG states that Guideline 8 fails to define what constitutes a security and/or stability issue and who decides whether an IDN table does, in fact, pose any issues. The RySG reiterates its earlier comment on this issue: In the context of these IDN Guidelines, the RySG is of the opinion that “security and/or stability issues” is too broad and too open for interpretation. The relevant standards by which stability is assessed should only be Standards-Track or Best Current Practice RFCs sponsored by the IETF.
  
- **IDNGWG Response:**
  - WG does not intend to define the terms “security” and “stability”
  - The relevant applicable definitions will be inherited from existing arrangements, e.g. from the respective contracts for the gTLDs



# Second Public Comment Responses – RySG (2/5)

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- **RySG2.** RySG notes that Draft Guideline 11 still lacks a definition of “same registrant”, and recommends that Guideline 12 should include language stating that where a variant is active it should be delegated to the same name servers as the primary label.
  
- **RySG3.** RySG agrees with the IDN Implementation Guidelines Working Group on the clarified scope of the guidelines in Section 1.2, these Guidelines should only apply to domain names at the second, or lower levels, registered with the corresponding TLD registry.
  
- **IDNGWG Response:**
  - The “same registrant” of the variant label is the same who has registered the primary label
  - The implementation details should be left to the registries, therefore the requirements for same name servers is not added in the guidelines
  - Regards to RySG3, WG thanks RySG for their support

# Second Public Comment Responses – RySG (3/5)

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- **RySG4.** On the reasonable timeline to implement guideline 6(a) on the use of the LGR format for IDN tables, the RySG is of the opinion that, consistent with our comments on the March 2017 document, registries should not be required to implement RFC 7940 to publish IDN tables. Registries who desire to transition to the new format should do it at their discretion
  
- **IDNGWG Response:**
  - The WG considers that the LGR format in RFC 7940 contributes significantly to the interoperability of the IDN tables
  - The interoperability should be looked at in a broad sense beyond registries and registrars, e.g. also including application developers
  - IDNGWG had considered the RySG comment during the first public comment and added the X months to allow for the transition
  - IDNGWG agreed to the value of X to be 18 months as per the suggestion by RySG

# Second Public Comment Responses – RySG (4/5)

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- **RySG5.** RySG recommends providing registry operators with a transitional period, during which ICANN will not enforce these Guidelines and registries can assess, review and update their policies (internal and external) to conform to the new Guidelines, especially with respect to Guidelines 11, 12, 13, 18 and 19. Such transition period should not be less than 18 months from the adoption of these Guidelines.
  
- **IDNGWG Response:**
  - IDNGWG understands the concerns and recommends an 18-month transition period
  - Until that period Guidelines ver. 3.0 will remain applicable.

# Second Public Comment Responses – RySG (5/5)

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- ⦿ **RySG6.** The RySG proposes the following additions to the definitions in Appendix B:
  - Blocked (addition suggested to avoid confusion): ‘State of an IDN label after blocking. The resulting string is a valid label, generated based on a given LGR (or IDN Table and IDN registration rules), but should be blocked from registration. (...)’
  - Whole Label Evaluation Rules (missing words in the definition): ‘Context-based and whole label rules. The “rule” element also contain the character classes that they depend on, and (...)’
- ⦿ **IDNGWG Response:**
  - IDNGWG will review and either update the definitions or add additional explanatory text, as needed.

# Second Public Comment Responses – NCSG (1/2)

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## Non-Commercial Stakeholders Group (NCSG)

- ⦿ **NCSG1.** For the first comment regarding Section 1.2, NCSG notes that IDN WG says that it is beyond the scope of the guidelines and raises how ICANN organization is planning to address the case.
- ⦿ **NCSG2.** For Guidelines 6(a), NCSG suggests 4-6 months before implementation, to be augmented by technical processing delay required for implementation.
- ⦿ **IDN WG Response:**
  - NCSG1, The WG will refer this comment to the ICANN org
  - NCSG2, IDN WG is suggesting 18 months as a transition period, as suggested by RySG

# Second Public Comment Responses – NCSG (2/2)

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- **NCSG3.** NCSG recommends replacing current occurrences of "encourage" with "should" to urge related parties (registries and registrars) to take actions for registrants' benefits.
  
- **IDNGWG Response:**
  - IDNGWG has carefully considered the choice of these words balancing between the optional and mandatory requirements
  - The IDNGWG will proceed per its suggested language unless there is a good reason presented to change the wording for some specific guideline



# Second Public Comment Responses – Individuals (1/4)

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## Dusan Stojicevic (DS)

- ⦿ **DS1.** DS expects ICANN to help or have active role for Guidelines 2-9, and only notes basic level collaboration for ccTLDs at this time.
  
- ⦿ **IDNGWG Response:**
  - The guidelines are part of the contractual obligations for relevant gTLD registries and registrars
  - These are also recommended for the IDN ccTLDs to follow through the Fast Track process
  
- ⦿ **DS2.** For Guideline 10 and also more generally, DS suggest to explicitly define for the use of “must” in the guidelines who is checking such requirements and what are implications of not following them.
  
- ⦿ **IDNGWG Response:**
  - The WG had considered using of “must” based on RFC 2119
  - However, following the IAB and RySG feedback in the first public comment, WG has agreed to use these terms in the sense of their regular usage in the language

# Second Public Comment Responses - Individuals (2/4)

- ⦿ **DS3.** For Guideline 6b, instead of “encouraged to” make this a requirement with a “must” in the guideline.
- ⦿ **IDNGWG Response:**
  - LGR format is a requirement for new TLDs, new IDN tables or changes in the existing IDN tables, through 6(a). The guideline 6(b) provides an exception to the published IDN tables
  - The WG does not see any benefit of taking away this exception, while it would cause extra labour. Thus, it recommends keeping the existing terms for 6(b)
- ⦿ **DS4.** If six (6) months is suggested for Guideline 6a, who is going to check the implementation? How will it work for ccTLDs?
- ⦿ **IDNGWG Response:**
  - The input is noted, also see the discussion against RySG4
- ⦿ **John Gutierrez (JG).** JG suggests to reserve .hom and .home domains, not available for registration – JG explains that these are used by him in his home network.
- ⦿ **IDNGWG Response:**
  - The WG considers this not in its scope

# Second Public Comment Responses - Individuals (3/4)

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## Anton Bershanskiy (AB)

- ⦿ **AB1.** AB notes that IDN Tables are more numerous than necessary and are sometimes redundant. As an example, a Hebrew TLD has 97 IDN tables, including Ukrainian which is not very usable being a different script, and which is, in turn, entirely included in Cyrillic. So, it may be recommended to remove (retire) IDN tables that are proper subsets of other
  
- ⦿ **IDNGWG Response:**
  - IDNGWG thanks AB for a very interesting comment
  - Having many IDN tables provides option to the end-user, though many IDN tables may have management issues on the registry side, it does not impact the end user as much
  - The WG group agrees with other issues raised and has included guidelines for addressing each one, with guideline(s) for managing confusable whole-scripts and harmonizing variant labels across all IDN tables from the same script being offered. See Guidelines 13-17

# Second Public Comment Responses - Individuals (4/4)

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- ⦿ **AB2.** AB states that it could register whole-script Cyrillic homoglyph in a gTLD for usual ASCII domain label, get a valid TLS certificate for it and proxied all HTTP traffic to redirect to the homoglyph with HTTPS. This simple system allowed AB to visit "secure" HTTPS original site and then click an HTTP link to another page and be redirected to [HTTP://original](http://original) → my local server → HTTPS://homoglyph, resulting in visually undetectable man-in-the-middle attack.
- ⦿ **IDNGWG Response:**
  - IDNGWG thanks AB for the comment
  - This problem is covered by the proposed Guideline 17
  - The WG would also include the reference to Unicode TR#36 to make it more explicit

# Next Steps

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- ⦿ Finalize IDN Guidelines 4.0 after second public comment
- ⦿ Submit final IDN Guidelines 4.0 for consideration by ICANN Board
  
- ⦿ Final Draft of IDN Implementation Guidelines 4.0 available at <https://www.icann.org/en/system/files/files/draft-final-idn-guidelines-18oct17-en.pdf>
- ⦿ Visit IDN Guidelines wiki page for the list of WG members, email archive, call recordings and summaries: <https://community.icann.org/display/IDN/IDN+implementation+Guidelines>
- ⦿ For feedback, email at: [idngwg@icann.org](mailto:idngwg@icann.org) or [IDNProgram@icann.org](mailto:IDNProgram@icann.org)

# Engage with ICANN and IDN Program



## Thank You and Questions

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