

GNSO Council IDN Scoping Team Final Report

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1. Status at the Initiation of This Scoping Team

On 25 September 2010, the ICANN Board [resolved](#) that "no variants of gTLDs will be delegated through the New gTLD Program until appropriate variant management solutions are developed." ICANN org undertook the IDN Variant Issues Project which resulted in the [Integrated Issues Report](#) (IIR) in 2012 and identified two challenges:

1. "in the DNS environment today, there is no accepted definition for what may constitute a variant relationship between top-level labels
2. ***"nor is there a 'variant management' mechanism for the top level, although such has often been proposed as a way to facilitate solutions to a particular problem."***

For Challenge 1 above, a group of [contributors](#) -- including ICANN volunteers, staff, and consultants -- developed the [Procedure to Develop and Maintain the Label Generation Rules for the Root Zone in Respect of IDNA Labels](#) (RZ-LGR Procedure), which has resulted in the creation of the Root Zone Label Generation Rules (RZ-LGR). Upon adding additional scripts, the community has now produced its third version of the ruleset, called RZ-LGR-3¹. The LGRs represent the rules for validating TLD labels and calculating its IDN variants that could potentially be delegated.

For Challenge 2 above, the intention is to develop policies, processes, and procedures that govern the allocation of the IDN variant TLD labels derived from the RZ-LGR. ICANN org developed a [set of documents](#) that recommended how to allocate IDN variant TLD labels, which was published for public comment and subsequently [adopted](#) by the ICANN Board on 14 March 2019.

The recommendations contained in the report were written with a conservative approach in mind, with the understanding that IDN variant TLDs will be delegated into the Root Zone. There are nine recommendations and they fall into three categories:

1. Core recommendations about the Root Zone
2. Recommendations to reduce end-user confusion, and to manage IDN variant labels in a stable and secure manner at the second-level
3. Procedural recommendations about policy development

2. Ask from the Board

The ICANN Board resolved:

¹ See details of the Root Zone Label Generation Rules here: <https://www.icann.org/resources/pages/root-zone-lgr-2015-06-21-en>

Resolved (2019.03.14.08), the Board approves the Variant TLD Recommendations and requests that the **ccNSO and GNSO take into account the Variant TLD Recommendations while developing their respective policies to define and manage the IDN variant TLDs for the current TLDs as well as for future TLD applications.**

Resolved (2019.03.14.09), the Board requests that the **ccNSO and GNSO keep each other informed of the progress in developing the relevant details of their policies and procedures to ensure a consistent solution**, based on the Variant TLD Recommendations, is developed for IDN variant ccTLDs and IDN variant gTLDs.

Resolved (2019.03.14.10), the Board also recognizes the significant community effort and contribution, since the start of the IDN Variant Issues Project in 2011, which has led to the development of the Variant TLD Recommendations.

Therefore, the GNSO has three primary directives stemming from the ICANN Board resolution.

1. Develop policy to define² IDN variant gTLDs for current gTLDs as well as for future gTLD applications;
2. Taking into account the Variant TLD Recommendations, develop policies to manage IDN variant gTLDs for current and future gTLDs; and,
3. Coordinate with the ccNSO to ensure a consistent solution, based on the Variant TLD Recommendations, is developed for IDN variant ccTLDs and IDN variant gTLDs.

These three elements will collectively be called *define, manage, and coordinate* through the remainder of this document.

3. Other Considerations

IDN Implementation Guidelines

The IDN Implementation Guidelines are mainly directed at gTLD registries that offer IDN registrations, though there are contractual requirements for both registries (see Specification 6, 1.4 here <https://www.icann.org/resources/pages/registries/registries-agreements-en>) and registrars (see Additional Registrar Operation Specification, section 3 here: <https://www.icann.org/resources/pages/approved-with-specs-2013-09-17-en>). The contractual provisions in both agreements note that the Guidelines, “may be amended, modified, or superseded from time to time.”

² See the Study on Technical Use of Root Zone Label Generation Rules public comment here: <https://www.icann.org/public-comments/technical-rz-lgr-2019-05-15-en>

The guidelines were originally developed by ICANN and leading IDN registries in June of 2003. The IDN Implementation Guidelines were specifically included as Recommendation 18 in the [Introduction of New Generic Top-Level Domains Final Report](#). Since then, expert working groups have been formed and drafts developed which have resulted in a number of different [versions](#) (e.g., v. 2.0 in November 2005, v. 2.1 February 2006, v. 2.2 in April 2007, v. 3.0 in September 2011).

To develop v. 4.0, a similar procedure was followed, with a call for Community Experts published in July of 2015. The group, comprised of members from the ALAC, ccNSO, GNSO, and SSAC, produced two draft versions for public comment and developed a [Final Proposed Draft v. 4.0](#) in May of 2018³. The ICANN Board anticipated adopting the IDN Guidelines v. 4.0 as part of its consent agenda for the 3 May 2019 meeting, but the GNSO Council [requested](#) that the vote be deferred, due in part to concerns around the process, as well as specific requirements within the guidelines (e.g., "same entity" requirement on second level registrations, which are in both the guidelines and the Variant TLD Recommendations⁴). The ICANN Board [agreed](#) to the deferral, allowing the GNSO Council additional time to consider the matter.

There is concern within the GNSO, amongst some at least, that while the contracted parties are contractually bound to adhere to the IDN Implementation Guidelines, the process to update the guidelines did not follow a policy development process. What should be the proper vehicle to modify contract obligations related to IDN guidelines?

GNSO's Registries Stakeholder Group (RySG)'s [statement](#) on IDN Variant TLD Management Framework Recommendations, which was submitted to the GNSO Council on 29 April 2019, provide more details regarding these concerns. ICANN org [responded](#) to the RySG on 24 May 2019, sharing additional information based on the list of issues that the RySG provided.

Therefore, in considering the directives from the Board, is the scope appropriate, or should a more holistic review of IDNs be considered?

What is the level of effort for the GNSO?

There is existing research, analysis, deliberation, and public input involved for the existing work, both on the IDN Implementation Guidelines and the Variant TLD Recommendations. Gaining an understanding of how much of that work is fit for purpose and how much additional work is necessary may have an impact on what the GNSO selects as the mechanism to develop the relevant policy. For instance, if the underlying work AND conclusions are agreeable, minimal

³ See the Wiki for a record of meetings, mailing list archive, membership, etc. here: <https://community.icann.org/display/IDN/IDN+Implementation+Guidelines>

⁴ This is a common requirement in both work-products, albeit differences in detail. The Guidelines (section 2.4) does not dictate how to achieve the "same registrant" rule, where as the Variant TLD Framework puts strong preference to the ROID solution (an analysis of this solution is available in Appendix B). While there are merits in using the Contact ROID as a "glue" among variant labels, it faces practical problems (also discussed in Appendix B).

work is needed. However, if just the conclusions are unsupported, that would represent a higher level of effort. If the underlying work AND conclusions are unsupported, this would then represent the highest level of effort.

Consideration should be given to how the GNSO can acquire this understanding. The GNSO may benefit from some foundational work, perhaps in coordination with the ccNSO (see below), before it determines which approach makes the most sense.

How does the ccNSO envision moving forward?

In May of 2019, the ccNSO initiated preparatory work to better understand the scope of work in response to the Board Resolution (see Section 2 above) and determine how best to tackle it. The ccNSO already adopted a [Terms of Reference](#) on 19 April 2019, intended to identify issues and advise Council on the following areas, in brief:

1. Recommend whether additional work is needed for the proposed Bylaw changes to allow for the inclusion of IDN ccTLD managers in the ccNSO
2. Propose a mechanism to review the [2013 IDN ccNSO Policy Recommendations](#) (which were not approved by the ICANN Board), as well as taking into account the evolution of the Fast track process, variant TLD management, and retirement of IDN ccTLDs.
3. Propose mechanisms to coordinate efforts to harmonize processes for the selection of IDN ccTLD strings.
4. Recommend a mechanism for addressing the scope of work determined by the group.

This work was undertaken by the IDN Preliminary Review Team (IDN PRT), which had its [call for volunteers](#) distributed on 29 April 2019. The IDN PRT's scope was limited and intended to perform foundational work that helped inform the ccNSO in its selection of a mechanism and approach to address IDN ccTLDs. The IDN PRT completed its work and prepared a Final Report on 29 July 2019. The group recommended that the ccNSO launch a new ccNSO PDP in accordance with Annex B of the ICANN Bylaws to address the limited set of issues identified by the PRT, which includes examining the confusing similarity review, variant management, and proposing to the ICANN Board of Directors to amend Article 10 of the ICANN Bylaws to enable the inclusion of IDN ccTLDs in the ccNSO.

The ccNSO Council adopted the Final Report on 22 August 2019 and agreed to initiate PDP4. However, before beginning work on PDP4, the ccNSO will ask the ICANN Board to officially terminate PDP2. On 31 October 2019, the ICANN Board [responded](#), where it agreed to refrain from taking any further steps with respect recommended policy proposals from PDP2.

Subsequently, the ccNSO Council resolved to initiate its fourth PDP on the selection and deselection of IDN ccTLD strings. As an initial step, the ccNSO Council requested an issue report, expected to be delivered by the end of February 2020. A call for volunteers for the ccPDP4 will open soon afterward.

Notably, the work that the ccNSO will undertake will have a much broader scope of work than is likely envisioned for the GNSO. Nevertheless, there is likely benefit to coordinate the efforts between the ccNSO and GNSO where the scope is related, both to share information and to reach consistent outcomes, to the extent possible.

4. Options with Pros/Cons

As part of its deliberation, the IDN Scoping Team considered the following options as the potential mechanism for the GNSO to conduct future policy work related to the IDN variant TLDs.

Option A

Direct all elements of *define, manage, and coordinate* to the New gTLD Subsequent Procedures PDP primarily.

Assumptions: This would more than likely require an amendment to the PDP Charter.

Pros	Cons
Leverages existing policy work	May overburden the PDP, depending on the <i>level of effort</i> discussed above (though the PDP has already given some consideration to the topic).
Creates a single policy development process	The PDP is intended to focus on future new gTLDs, so there may be an issue with scope/remit, that cannot easily be solved with a charter revision.
	The PDP may not have the requisite specific knowledge
	Since RPMs are included, may need to consider RPM PDP as well

Option B

Direct all elements of *define, manage, and coordinate*, only as it relates to new gTLDs, to the New gTLD Subsequent Procedures PDP. Separately, direct all elements of *define, manage, and coordinate* for existing gTLDs to a different body (e.g., separate PDP/EPDP).

Assumptions: This would more than likely still require an amendment to the PDP Charter and would require the chartering of a separate effort.

Pros	Cons
Partially leverages an existing policy development process and its dedicated resources	May still overburden and delay the SubPro PDP, depending on the <i>level of effort</i> discussed above (though the PDP has already given some consideration to the topic).
Parses out new gTLDs and existing gTLDs	Separate threads of work are established, potentially creating additional work for the community, including the coordination with the ccNSO
	Creates a higher likelihood for duplicative work and/or inconsistent outcomes
	The community may not be able to sustain a new, dedicated effort, especially one that requires specific knowledge

Option C

Direct all elements of *define, manage, and coordinate* to a new PDP/EPDP, with perhaps an alternative membership structure

Assumptions: This would of course require the chartering of the PDP/EPDP.

Pros	Cons
Unifies the work and reduces the likelihood for duplicative work and/or inconsistent outcomes	The community may not be able to sustain a new, dedicated effort, especially one that requires specific knowledge
	Extended timelines could result in IDN variants being unavailable at the beginning of the next round of new gTLDs

Option D

Direct all elements of *define, manage, and coordinate* to an Expert Working Group (EWG)

Pros	Cons
Better ensures that the WG is populated by members with specific knowledge	Expert Working Groups generally not charged with developing policy, could extend

	deadlines.
	Some preliminary work has already been conducted, may end up with duplicative work.

5. Problem Definition Outline

IDN Guidelines

- Process - the way in which the IDN Guidelines are updated (group assessment: **policy track 2**)
- Substance:
 - 2nd-level same entity requirements - The IDN Guidelines do not indicate how to implement this requirement (e.g., define the same entity or how to resolve potential conflicts between such potential entities) whereas the IDN variants framework does provide specifics (i.e., Registry Operator ID). (group assessment: **policy track 2**)
 - Applicability, or lack thereof, to extend the top-level RZ-LGR to the 2nd-level (and beyond) (group assessment: **operational track 1**)
 - Potential differences between the requirements in the IDN Guidelines and the Registry Agreement (e.g., Exhibit A, Specification 6, sections 1.1 and 1.4) (group assessment: **operational track 1**)
 - IDN tables (tentative group assessment: **operational track 1**)
 - Concerns about the transparency in getting reference tables updated and the ICANN process of disseminating “technical advice” that impacts the registry service testing
 - Concerns about the evolving state of approved reference IDN tables. Previously approved reference IDN tables are still in use but may not be approved under new requirements. Consistency seems logical, especially in light of the justification of security and stability.

IDN Variant TLD Management

- The IDN Scoping Team finds the recommendations in the staff paper to generally be sensible, but recognizes that a decision on the recommendations is not needed at this stage.
- However, the team did identify some elements that it wished to challenge, including:
 - The assertion that IDN tables could be more easily managed if IDN tables are represented in machine readable format, especially the specific reference to RFC7940 (LGR in XML format). The team believes it is unreasonable to require registries to retrofit existing and working implementations to comply with this standard.

- Concerns around the viability of implementing the “same entity” requirement at the second level. The recommendation does not seem to address other operations, like transfer and update operations, availability, and RDDS queries.
- Concerns about the practicality of the staff preferred option of using the Registry Operator ID as the “glue” for binding IDN variant groups together, considering that registrars do not always use this record for more than one domain name.
- The team agrees with the staff paper suggestion that other policies, procedures, and agreements may be impacted by IDN variant TLDs, including those listed below. This potential impact should be considered within scope and therefore included in the charter of any subsequent policy development activities (group assessment: **policy track 2**):
 - “Same entity” requirements
 - Changes to string requirements
 - Changes to string similarity reviews
 - Changes to objection processes
 - Termination or transfer of a TLD and its related IDN variant TLDs
 - Consideration of whether reserved names and strings ineligible for registration need to include possible variants.
 - Changes to the Registry and Registrar Agreements
 - Changes to EBERO
- For IDN variants at the second-level, the team agrees with the staff paper suggestion that other policies, procedures, and agreements may be impacted. This potential impact should be considered within scope and therefore included in the charter of any subsequent policy development activities (group assessment: **policy track 2**):
 - “Same entity” requirements
 - Registration policies for IDN variant domains, including harmonization of IDN tables (e.g., the same standards and technical advice should be incorporated into existing reference IDN tables to mitigate the potential security concerns, but there is no existing policy and/or procedure to manage this)
 - Handling of string availability searches when IDN variants are involved (i.e. EPP Check)
 - Depending upon the agreed upon registration policies (e.g., “same entity”), how the UDRP/URS/TMCH will handle IDN variant domains

6. Overall Conclusions

The team recommends two separate but interconnected work tracks to carry out the GNSO policy work related to IDN variants and IDN Implementation Guidelines.

Note that there is a minority view that the IDN Implementation Guidelines is not already GNSO policy and therefore any discussion on implementation -- Operational Track 1 -- should only be pursued after the Policy Track 2 has completed.

Operational Track 1

A Contracted Party working/negotiation/implementation team that would be focused on IDN Implementation Guidelines 4.0 operational issues (which includes the above issues and may require a reconciliation with the RA/RRA to ensure consistency), to identify and resolve legal and operational concerns:

- If found that the legal and operational concerns are resolvable, proceed with the IDN Implementation Guidelines 4.0 (e.g., recommend ICANN Board adoption, with revisions as applicable);
- If unresolvable, the work will inform Policy Track 2 and work done to date will serve as the study on the impacts from the IDN Implementation Guidelines upon the existing RA/RAA.

Policy Track 2

A PDP/EPDP that would have a scope including both the IDN Variant TLD define, manage, and coordinate issues (see page 2 of the Options Paper) as well as the related issue of how the IDN Implementation Guidelines, which Contracted Parties are required to comply with, should be revised in the future.

- Regarding the coordinate element, the team recommends that the GNSO Council send at least one liaison (which does not need to be a Councilor) with optionally one or more alternates to follow/monitor the ccNSO PDP4, once it has commenced.
- If and when the chartering process begins, the documents in Annex A and Annex B should be taken into account.

Additional Notes/Rationale

- Most of the team believes that the issues within Operational Track 1 likely do not require policy development, but allows for the possibility that policy development may be needed.
- The team recognizes that even if the recommendations are supported as drafted in the staff reports, policy development is needed to validate and convert into policy recommendations and subsequently, Consensus Policy. This recognition serves as the basis for the need for Policy Track 2.
- The IDN Scoping Team has undertaken an exercise to consider whether existing work within the New gTLD Subsequent Procedures PDP and more significantly, staff papers and community documentation, constitute extensive, pertinent background information on the issue of IDN variants. The team confirmed that this is the case and the exercise is documented in Annex A.
- The exercise captured in Annex A serves as the basis for most of the team agreeing to recommend an EPDP, in respect of Policy Track 2. Nevertheless, there is a minority view that Policy Track 2 should not utilize an EPDP and the preparation for an Issue Report is still necessary in order to capture/study all the issues in a comprehensive

manner (e.g., especially pertaining to IDN variants' impact on RPM-related issues). An additional minority view is that starting the implementation (Operational Track 1) prior to the policy work (Policy Track 2) is not desired.

- The IDN Program has prepared a set of documents to support IDN variant related work. This list of documents is intended to be exhaustive, though not in the sense that it should limit a future EPDP from seeking additional documentation for review. This list of documents can be found in Annex B.

Annex A: Draft IDN Variants Issue Scoping - Policy Track 2

1. Background

Preliminarily, most of the IDN Variants Scoping Team has come to the conclusion that an Issue Report is not needed in order to initiate any subsequent policy development work. Most of the Team has come to this preliminary conclusion based on its consideration of ongoing work within the New gTLD Subsequent Procedures PDP and particularly, staff papers, and community developed documents related to IDN variants. The majority of the members believe that the staff papers along with other community developed documents constitute extensive, pertinent background information on the issue of IDN Variants and is now seeking to identify the specific areas within those papers that can serve as a proxy for what would normally be contained in a GNSO Final Issues Report.

Nevertheless, there is a minority view that the subsequent policy development work should not utilize an EPDP and the preparation for an Issue Report is still necessary in order to capture/study all the issues in a comprehensive manner (e.g., especially pertaining to IDN variants' impact on RPM-related issues).

2. Overview of Issues

IDN variant TLD Management Framework

As a result of a Board resolution in 2010, it was determined that IDN variant TLDs would not be delegated until relevant work is completed. Accordingly, the Board directed ICANN org to develop a report identifying what needs to be done with the evaluation, possible delegation, allocation and operation of variant Top Level Domains (TLDs).

Principally, there were two challenges to be solved (to be called Challenge 1 and Challenge 2 throughout the remainder of this paper):

1. that there is no definition of IDN variant TLDs, and
2. that there is no IDN variant TLD management mechanism.

For the first challenge, the community developed the *Procedure to Develop and Maintain the Label Generation Rules for the Root Zone in Respect of IDNA Labels*⁵ (RZ-LGR Procedure).

⁵ See: <https://www.icann.org/en/system/files/files/lgr-procedure-20mar13-en.pdf>

For the second challenge, ICANN org has developed the Recommendations for Managing IDN Variant TLDs⁶ (the Variant TLD Recommendations).

ICANN IDN Implementation Guidelines for the Second Level

There is concern within the GNSO, amongst some at least, that while the contracted parties are contractually bound to adhere to the IDN Implementation Guidelines, the process to update the guidelines did not follow a policy development process. The GNSO believes that the *process* by which these guidelines are revised, should be evaluated.

Accordingly, the GNSO has three major objectives to address (to be called Objective 1, Objective 2, and Objective 3 throughout the remainder of this paper):

1. Develop policy to define⁷ IDN variant gTLDs for current gTLDs as well as for future gTLD applications;
2. Taking into account the Variant TLD Recommendations, develop policies to manage IDN variant gTLDs for current and future gTLDs; and
3. Review and determine the process by which the IDN Guidelines may be revised.

To the extent possible, the GNSO should also coordinate with the ccNSO to pursue a consistent solution, based on the Variant TLD Recommendations, for IDN variant ccTLDs and gTLDs, as well as the respective second levels and beyond.

3. Relevant Documentation and Reports

1. The [Integrated Issues Report](#) (IIR) was published in 2012 and in part, surfaced the two challenges referenced above (i.e., 1) definition to determine IDN variants and 2) the management framework).
2. For Challenge 1, the community developed the [Procedure to Develop and Maintain the Label Generation Rules for the Root Zone in Respect of IDNA Labels](#) (RZ-LGR Procedure), which has resulted in the creation of the Root Zone Label Generation Rules (RZ-LGR). Upon adding additional scripts, the community has now produced its third version of the ruleset, called RZ-LGR-3. The LGRs represent the rules for validating TLD labels and calculating its IDN variant TLDs that could potentially be delegated.
3. Further, the [Recommendations for the Technical Utilization of the Root Zone Label Generation Rules Published](#), serve as recommendations to technically apply RZ-LGR.
4. For Challenge 2 above, the intention is to develop policies, processes, and procedures that govern the allocation of the IDN variant TLD labels derived from the RZ-LGR. ICANN org developed a set of documents called [Recommendations for Managing IDN](#)

⁶ See: <https://www.icann.org/public-comments/managing-idn-variant-tlds-2018-07-25-en>

⁷ See the Study on Technical Use of Root Zone Label Generation Rules public comment here: <https://www.icann.org/public-comments/technical-rz-lgr-2019-05-15-en>

[Variant TLDs](#) that recommended how to allocate IDN variant TLD labels, which was published for public comment and subsequently [adopted](#) by the ICANN Board on 14 March 2019.

5. Incoming recommendations from the New gTLD Subsequent Procedures PDP on IDN Variants.
6. While not primarily focused on IDN variant TLDs, there are indeed touchpoints related to IDN variants at the second-level (e.g., IDN tables, allocation of IDN variant labels) incorporated into the [Final Proposed Draft v. 4.0 of the IDN Guidelines](#).
7. Two related SSAC reports are also identified: SSAC Advisory on Single-Character Internationalized Domain Name Top-Level Domains ([SAC052](#)); and, SSAC Comment on Examining the User Experience Implications of Active Variant TLDs Report ([SAC060](#)).

The documents above represent the primary documents and reports that a possible EPDP would likely need to consider. However, the IDN Variant TLD Program team has compiled a comprehensive list of relevant IDN variant materials, which in addition to the materials above, includes ICANN Board resolutions, references to relevant sections of the Applicant Guidebook, documents for the RZ-LGR Project, relevant standards, reports from other bodies and organizations, and links to process documents that may be impacted by IDN Variant TLDs. This comprehensive list is available in the Annex B of this document.

4. Potential issues to be considered in an EPDP on IDN Variants

Objective 1

For objective 1, the Team did not identify any specific issues related to developing the RZ-LGR nor to the technical utilization of published RZ-LGRs. However, a possible EPDP may want to consider the following questions:

- *Update policies and procedures to ensure that the definition of IDN variant TLDs depends exclusively on the RZ-LGR.*

Objective 2

For Objective 2, the Team will consider at a minimum the recommendations from document 4 listed above, reproduced below⁸:

- Root Zone
 - Administrative
 - **IDN variant TLDs {t1, t1v1, ...} allocated to the same entity**
 - **Same registry service provider for IDN variant TLDs**
 - Policy

⁸ See Document C: Recommendations and Analysis here for further context and detail:
<https://www.icann.org/en/system/files/files/idn-variant-tld-recommendations-analysis-25jan19-en.pdf>

- **Root Zone Label Generation Rules (RZ-LGR) the only source for valid TLDs and their variant labels⁹**
- **Consider policy implications identified in the RZ-LGR utilization recommendations**
- Technical Implementation
 - **None**
- Second Level
 - Administrative
 - **Same second-level label under IDN variant TLDs $s1.\{t1, t1v1, \dots\}$ registered to the same entity**
 - **Second-level IDN variant labels under IDN variant TLDs $\{s1, s1v1, \dots\}.\{t1, t1v1, \dots\}$ registered to the same entity**
 - Policy
 - **Second-level IDN tables offered under IDN variant TLDs harmonized**
 - **Second-level IDN variant label allocatable or activated under IDN variant TLDs not necessarily same**
 - Technical Implementation
 - **None**
 - Additional Root Zone and Second Level
 - **Administrative, Policy and Technical Implementation**
 - **Update existing policies and associated procedures to accommodate the recommendations for IDN variant TLDs**
 - **All other existing TLD policies and procedures apply to IDN variant TLDs, unless otherwise identified**

In relation to these recommendations, a possible EPDP may want to consider the following questions:

What does “same entity” mean? (see section 3.2 of document 4):

- *Update policies and procedures to incorporate the “same entity” rule for a given label beneath IDN variant TLDs.*
- *Update policies and procedures to **use ROID** for the definition of “same entity”. In case ROID is not the only option finalized, then also define an alternate functional definition for “same entity”.*

Enabling IDN Variant TLD Delegations (see section 3.3 of document 4):

- *Update policies and procedures for **string review** to ensure that all IDN Variant strings are considered.*
- *Update policies and procedures for **objection processes** to ensure that all IDN Variant strings are considered.*

⁹ For completeness, this recommendation is listed here, but is more applicable to challenge 1

- Update **domain transfer** and update process to reflect inter-TLD linkages due to IDN variants and the need to enforce the “same entity” rule (e.g. that s1.t1 and s1.v1t1 must have the same contact ROID after a <domainUpdate>).
- Update policies and procedures to allow the lists of **reserved names** and the strings for inappropriate delegation to reflect any IDN variants.

TLD Label States (see section 3.4 of document 4):

- Update policies and procedures to incorporate IDN variant label states and transitions between them

Registry Services Impacts (see section 3.5 of document 4):

- Update policies and procedures for **filing IDN tables** using the LGR format specified in RFC 7940.
- Update policies and procedures to require **harmonized IDN tables across IDN variant TLDs** to produce a consistent set of second-level IDN variant labels. Also, require **second-level IDN variant labels to be allocated to the same registrant under all IDN variant TLDs**.
- Those **TLDs using EPP may need to create an enhancement** (either a protocol modification, a standard message, or a standard extension) that permits expressing response messages for unavailability of an unallocated label due to IDN variants. Work with the technical community to make this enhancement.

Adjustments in Registry Agreement (see section 3.6 of document 4):

- If applicable, for the registry agreement **propose changes for Registry Transition Process or Change of Control ensuring “same entity” rule is maintained**.
- Update **EBERO provisions** to ensure **all names in an IDL set remain under unified control during EBERO**.
- Update **registry agreement documents** to ensure the label under variants TLDs (e.g. s1.t1, s1.t1v1, s1v1.t1 and s1v1.t1v1) **follow the “same entity” rule**.

Adjustments in Registration Dispute Resolution Procedures and Trademark Protection Mechanisms (see section 3.7 of document 4):

- **Update URS and UDRP application in the face of “same entity” restrictions.** (See discussion.)
- Possibly recommend **updates to TMCH mechanism to include second level labels and their IDN variants s1, s1v1 under TLD labels and their IDN variants t1, t1v1 and broader calculation of IDN variant labels**.

Adjustments in String Similarity Processes (see section 3.8 of document 4):

- Update the **string similarity guidelines** for TLDs and their variant labels.

Policies and procedures that were assumed in the staff paper to be unaffected based on the formulation of the recommendations above (see section 3.9 of document 4), but may nevertheless require evaluation by a possible EPDP:

- *No metadata sync requirement*
- *Data escrow*
- *RZ-LGR Procedure*
- *Domain name life cycles*
- *“Two-character” rule*
- *Objections to gTLD applications*
- *Other Security and Stability guidelines*

Objective 3

For Objective 3, the Team will consider: the manner in which the IDN Implementation Guidelines are updated, as well as whether and which parts of the guidelines should or should not remain within a unified document between the GNSO and the ccNSO.

5. Objectives of a Possible EPDP

Principally, the goals are to define and manage IDN variant TLDs, and their respective second-level zones, including the IDN Implementation Guidelines, for both current TLDs, as well as for future TLD applications.

Annex B: List of Documents for IDN Variant TLD Work - Policy Track 2

The IDN Program has prepared a set of documents below to support IDN variant related work. This list of documents is intended to be exhaustive, though not in the sense that it should limit a future EPDP from seeking additional documentation for review.

1. ICANN organization has developed a set of recommendations and supporting documentation on a mechanism for implementing IDN variant TLDs. These documents were released for [public comment](#) and have been finalized based on the feedback received from the community.
 - a. [IDN Variant TLD Implementation – Executive Summary](#)
 - b. [IDN Variant TLD Implementation – Motivation, Premises, and Framework](#)
 - c. [IDN Variant TLD Implementation – Recommendations and Analysis](#)
 - d. [IDN Variant TLD Implementation – Rationale for RZ-LGR](#)
 - e. [IDN Variant TLD Implementation – Risks and their Mitigation](#)
 - f. [IDN Variant TLD Implementation – Appendices \(A: Definitions, B: Use of ROID, C: Limiting Allocated Variant TLDs\)](#)

2. Relevant Board Resolutions:
 - a. Recommendations for Managing the IDN variant TLDs
<https://www.icann.org/resources/board-material/resolutions-2019-03-14-en#2.a>
 - b. IDN Variant TLD Root LGR Procedure and User Experience Study Recommendations
<https://www.icann.org/resources/board-material/resolutions-2013-04-11-en#2.a>
 - c. Variant Management
<https://www.icann.org/resources/board-material/resolutions-2010-09-25-en#2.5>
 - d. IDN Variants
<https://www.icann.org/resources/board-material/resolutions-2010-03-12-en#10>

3. Applicant Guidebook's relevant section(s) on variant TLDs and its policy
 - a. <https://newgtlds.icann.org/en/applicants/agb>
 - i. Section 1.3.2 IDN Table,
 - ii. Section 1.3.3 IDN Variant TLDs,
 - iii. Section 2.2.1 String Review (include string similarity and declaring variant)

4. Reports from Variant Issue Project
 - a. [A Study of Issues Related to the Management of IDN Variant TLDs \(Integrated Issues Report\)](#)
 - b. Individual script-based case studies from variant issues project; [Arabic](#), [Chinese](#), [Cyrillic](#), [Devanagari](#), [Greek](#), [Latin](#)

- c. [User Experience Study](#)
5. Document from RZ-LGR Project
- a. How to develop an LGR
 - i. [LGR procedure](#)
 - ii. [Guidelines for Developing Script-Specific LGR](#)
 - iii. [Guidance on Designing Label Generation Rulesets \(LGRs\) Supporting Variant Labels](#)
 - b. How to utilize the RZ-LGR
 - i. [Recommendations for the Technical Utilization of the Root Zone Label Generation Rules \(RZ-LGR\)](#)
 - c. Script proposals for the RZ-LGR already submitted (18):
 - i. Integrated scripts (16): [Arabic](#), [Devanagari](#), [Ethiopic](#), [Georgian](#), [Gujarati](#), [Gurumukhi](#), [Hebrew](#), [Kannada](#), [Khmer](#), [Lao](#), [Malayalam](#), [Oriya](#), [Sinhala](#), [Tamil](#), [Telugu](#), [Thai](#)
 - ii. Scripts waiting for integration(2): [Cyrillic](#), [Armenian](#)
6. Relevant standards
- a. IDNA2008:
 - i. Standards Track
 - (1) [RFC 5890](#) Internationalized Domain Names for Applications (IDNA): Definitions and Document Framework
 - (2) [RFC 5891](#) Internationalized Domain Names in Applications (IDNA): Protocol
 - (3) [RFC 5892](#) The Unicode Code Points and Internationalized Domain Names for Applications (IDNA)
 - (4) [RFC 5893](#) Right-to-Left Scripts for Internationalized Domain Names for Applications (IDNA)
 - ii. Informational
 - (1) [RFC 5894](#) Internationalized Domain Names for Applications (IDNA): Background, Explanation, and Rationale
 - (2) [RFC 5895](#) Mapping Characters for Internationalized Domain Names in Applications (IDNA) 2008
 - b. Additional Relevant RFCs:
 - i. [RFC 8228](#) Guidance on Designing Label Generation Rulesets (LGRs) Supporting Variant Labels
 - ii. [RFC 7940](#) Representing Label Generation Rulesets Using XML
 - iii. [RFC 6927](#) Variants in Second-Level Names Registered in Top-Level Domains
 - iv. [RFC 6912](#) Principles for Unicode Code Point Inclusion in Labels in the DNS
 - v. [RFC 5730](#) Extensible Provisioning Protocol (EPP) (See section 2.8 for ROID)
This is one of the 'same entity' mechanisms
7. Report from other bodies, organization

- a. SSAC
 - i. [SAC060](#) SSAC Comment on Examining the User Experience Implications of Active Variant TLDs Report
 - ii. [SAC052](#) SSAC Advisory on Delegation of Single-Character Internationalized Domain Name Top-Level Domains
 - b. UNICODE
 - i. [TR36](#) UNICODE Security Considerations.
This document describes some of the security considerations that programmers, system analysts, standards developers, and users should take into account, and provides specific recommendations to reduce the risk of problems.
 - ii. [TR39](#) UNICODE Security Mechanism.
This document provides mechanisms that can be used to detect possible security problems
 - iii. [TR46](#) UNICODE IDNA COMPATIBILITY PROCESSING.
Client software, such as browsers and emailers, faces a difficult transition from the version of international domain names approved in 2003 (IDNA2003), to the revision approved in 2010 (IDNA2008). The specification in this document provides a mechanism that minimizes the impact of this transition for client software, allowing client software to access domains that are valid under either system.
8. Relevant Processes Document. To implement variant TLDs, some operations might need to be adjusted. The following documents are references to design the process adjustment.
- a. [Registry Transition Processes](#)
 - b. [Change of Control of Registry Operator or Material Subcontracting Arrangement](#)
 - c. [Emergency Back-end Registry Operator \(EBERO\)](#)
 - d. [Domain Name Dispute Resolution Policies \(UDRP\)](#)
 - e. [Uniform Rapid Suspension](#)
 - f. [Trademark Post-Delegation Dispute Resolution Procedure \(PDDRP\)](#)