Sub-group Findings introduction Variants IDNccTLDs

Version 8
21 March 2022

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Section 1. Introduction

From Version 3
8 December 2021

The Variant Management sub-group is expected to address the following gaps with respect to (IDN)ccTLDs:

- **How are Variants of the selected IDNccTLD string defined?**
- **How should variants of the selected IDNccTLD string be managed?**

With respect to the first question - the definition of TLD Variants - on 11 Apr. 2013, the ICANN Board resolved to implement the LGR Procedure. The sub-group supports the definition and it is included in Section 1 as item # 1.

With respect to the second question, the management of IDNccTLDvariant TLD management mechanism, the sub-working group based its work on the following documents and background material:
The ICANN Board of Directors resolutions:

- approved on 14 March 2019 IDN Variant TLD Recommendations and requested ccNSO and GNSO take into account the 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, and communicate for a consistent solution.
- approved on 26 January 2020 Recommendations for the Technical Utilization of the Root Zone Label Generation Rules and requested the ccNSO and GNSO Councils take into account the Recommendations while developing their respective policies to define and manage the IDN variant TLDs for current TLDs as well as for future TLD applications.

In addition, and to provide an overview to the working group and ensure the coordinated and consistent approach as requested, the sub-group first looked at the IDN Variant TLD Recommendations. Starting point are the recommendations

as adopted by the Board. In addition, the sub-group looked at the GNSO view on these recommendations. The recommendations of the sub-group and their findings per recommendations are included (Section 2).

For that same reason the sub-group looked the recommendations on the Technical Utilization of RZ-LGR. Again, first the recommendations as adopted by the Board. In addition, the sub-group looked at the GNSO view on these recommendations. The recommendations of the sub-group and their findings per recommendations are included Section 3.

Thirdly, and for the time being the sub-group identified 3 additional work areas:

- IDN Tables. Section 4 will include the findings and recommendations of the sub-group with respect to IDN Tables with respect to IDNccTLDs.
- Impact recommendations sub-group on the process proposals of the full WG. The sub-group reviewed and suggested changes to the IDNccTLD selection process proposals as under development by the full WG.

Issues that require further discussion with the full working group. In the course of its work the sub-group has identified issues that require further discussion with the full working group. These issues are listed in section 6. The main issue relates to the scope of a ccPDP and hence versus the requirement and need to ensure stability, security and interoperability of the DNS, both at the top and lower levels as a result of the introduction of variants.

Following the discussion of section 5. The questions around VM shape the policy and originate from a staff papers. Going forward, the group to consider what is relevant for the policy, and should be adopted therefore and what is relevant but is considered out of the policy scope and could be included as advise to cctld managers, with a link to background material regarding the topic. The proposal is to first decide whether a topic/issue is a policy matter or not, if not, whether the WG

should /could include a reference as responsibility for the cctld manager. The goal is to ensure that a ccTLD Manager involved in IDNs is aware of issues, risks and potential solutions to address the issues or mitigate the risks.

Section 2. Overview IDN Variant TLD Recommendations

Item 1. Defining IDN Variant TLDs

A. ccPDP4 VM Subgroup Recommendation.

Definition of Variants. Compliance with Root Zone Label Generation Rules (RZ-LGR, RZ-LGR-2, and any future RZ-LGR rules sets) MUST be required for the generation of IDNccTLDs and variants labels, including the determination of whether the label is blocked or allocatable. IDN TLDs must comply with IDNA2008 (RFCs 5890-5895) or its successor(s).

B. Sub-group Findings and Discussion.

Staff Question: what if, if relevant script (the script in which the Designated Language is expressed) is not (yet) integrated in RZ-LGR? (see also item 5 table 2). Looking at the SUBPro recommendation, distinction between blocked and allocatable
Clarify the difference? Discussed

Question check if understood correctly. If a IDNccTLD is requested i.e. meets criteria of meaningfulness and IDNA 2008, sufficient or also required that.
Blocked and allocatable. Difference: allocatable applied potential strings

RZ-LGR Designed tool string / label. Output set contain all variants. Blocked maximized, variants
Note discussion on requirements for IDN ccTLD string: Technical criteria in general apply.

IDN TLDs strings must comply with IDNA2008 (RFCs 5890-5895) or its successor(s).

Item 2. Allocation of TLD to the same entity

A. ccPDP4 VM Subgroup Recommendation.

IDN variant TLDs {T1, T1V1, ..,T1Vx} MUST be allocated to same entity. The set of allocatable variant strings that is generated from the selected IDNccTLD string by applying the RZ-LGR, MUST be allocated to one and the same entity, the requestor (the entity that submits the selected IDNccTLD string), delegated to one and the same entity, the IDN ccTLD Manager) or withheld for possible future delegation to the IDNccTLD Manager. In other words, for a selected top-level label T1, its allocatable variant label(s) T1V1,…, T1Vx shall only be allocated to the IDN ccTLD requestor, or - after the delegation process for the selected IDNccTLD string has been intitated - delegated to the same IDNccTLD Manager or withheld for possible delegation to that IDNccTLD Manager.

If a specific IDNccTLD is operated by a ”back-end” registry service provider under arrangement with the IDNccTLD Manager, or will be operated by a “back-end” registry service provider under arrangement with the IDNccTLD Manager, then that “back-end” service provider MUST operate all delegated variants of that specific IDNccTLD as well. See recommendation 7

Agreed text 27 July 2021

B. Sub-group Findings and Discussion.

Question: in description the word arise is used: Does this imply no need to request? The Variants are assigned automatically?
Not all variants are IDNs, some may be ASCII, if ASCII how does this relate general requirement (at least one non-ASCII character). Is there a potential hierarchy of requirements? uncover requirements Flag for full working group
If in principle all Variants of IDNccTLD are allowed to be delegated -> ASCII string. What if ASCII string already exists?

Note: related to discussion section 3 item 6. SSAC recommendation to minimize number of delegated strings. Potential unnecessary burden if to many variants are all delegated. Potential solution is to limit the number allowable (delgatable) IDNccTLDs strings to variant IDNccTLD strings that are meaningful.

What are characteristics of entity in context of IDNccTLDs? Once a selected string has been verified, it will be delegated as a ccTLD to the ccTLD Manager. Is this the idea?

Note that some ccTLD Managers have an arrangement with a back-end provider. Should a similar, mandatory arrangement be provided as a requirement for delegation of variants?

Should Back-end registry service provider be defined as term?

ccNSO Institutional Issue. Assuming variants will be delegated to the same ccTLD Manager, should the ccTLD Manager for each, and every variant of the selected IDNccTLD string be treated as an individual ccTLD Manager, and may therefore become member of the ccNSO for each, and every variant IDNccTLD?

Description staff recommendation, the word “arise” is used. If an organisational entity submits an IDN ccTLD string then RZ-LGR is applied, and variants occur. If they are allocatable, what happens? Bundled with the selected string?
Yes, that is accurate, but not use term bundled. Blocked variants: not allocatable to anybody. The allocatable variants will be put aside for the same applicant for potentially use.

Q: Does the entity need to request the delegation of the variant strings as well? Is that done automatically?
Response: “withheld” is the right term. Not use the term “reserved”, because those strings cannot go to any applicant. Being withheld is an automatic step. But the delegation is not an automatic step.

Note: In principle delegation follows the IANA delegation process and at the request of the future IDN ccTD manager.

Q: next step? Automatic delegation? Other criteria of string evaluation for IDN ccTLDs. One thing for the WG to consider is to create the strings automatically. May or not fulfill the evaluation criteria for the strings.
Q!: are the meaningfulness criteria still valid for variants?

Response: yes, but not only. Technical criteria too. Multiple factors.

Question: criteria as developed by the main group should apply to the variant as well?
Response: see original recommendations from the staff report. Recommendation 9: all existing processes should apply, unless there is an explicit exception. Same rigour. Original process applies to each variant, unless there are documented exceptions by the WG. Response : let’s discuss when we reach recommendation 9 from the staff paper.

Q: How was this viewed in the ccNSO SubPro discussions? What should be the same entity? Should this be the ccTLD manager, or someone else? Registry operators in the gTLD world. Entity that is the TLD manager

Q: regarding the backend providers, should we include anything here? Response: IDNccTLDs with high level of complexity. Limited practice in this area. Be conservative at the start. If same entities operate the variant TLDs, it is easier to manage the complexity. Response: supported by one of the principles of the full WG.
Mechanism where we strongly urge, support and almost enforce IDNccTLD managers to adhere to this basic recommendation. ccTLD-world does not have a registry Agreement. If we suggest to leave this up to implementation, there will be a lot of push-back.
Q: what is backend provider? The technical support provider (TSP)? R: yes. Example AUDA. clear line between the policy-setting and administrative organisation on the one hand, and the operational and technical organisation.
With respect to “back-end service providers” see also item 7 below
Q: Suppose the backend is still the same, how will this recommendation become invalid?
Response: If you have multiple variants under management, the entity could assign the various variants to backends among several parties. Situation you want to avoid. To ensure coherent management of variants.
Note: Our company is a TSP. We are not a TLD manager. Even though 2 backend operators want to implement the same policies, there are always minor differences. Should be avoided for TLDs that are variants of each other.

Question: Do you agree with the principle of unified management? To be revisited next time. A few green marks, no red marks. Principle confirmed at meeting 27 June 2021

Next meeting: come up with a mechanism that would ensure this, to the extent possible.
Q: once variants are delegated, will they be listed in the root zone DB as a separate entry?
Response: the variant is an annotation to the string. Entry in the root zone, similar record as any other entry. Some constraints.

Note: suggestion to go back to IANA, and ask them for input.
Response: Currently, IANA has NOT defined how it will handle variants. However please note the following in response:
If multiple variants are intrinsically linked as an inviolable set, then IANA procedures will need to support the notion of them as a bundle and all the associated business processes will have to adapt accordingly. This would imply for example for a transfer of one, the whole set should be transferred. If, on the other hand, they are unconstrained and each variant can be treated as if it weren't part of a set (i.e. as a wholly independent TLD) then procedures do not need to be adjusted and treat each variant as a TLD with no special consideration for them being variants.

IANA expressed hope that whatever parameters / constraints is arrived at by ccNSO policy is will be compatible with GNSO policy. IANA strives wherever possible to have common approaches across all TLDs, so if we can represent ccTLD variants and gTLD variants in the same manner in the root zone database that will certainly simplify things greatly.

Note the concern in second paragraph form IANA relates to item 8 and item 9.
Question: do variants follow the life-cycle of selected IDNccTLD string (of which they are derived)? Life-cycle: request for delegation, transfer (consented or after revocation), retirement. Should distinction be made between:

- What about blocked variants?
- What about allocatable but not delegated variants strings?
- What about delegated variant strings?

Note: 2 issues

- Membership ccNSO. Related to the iana root zone DB. if listed as a ccTLD manager, you are listed as such. Then you can apply for ccNSO membership. E.g. NIXI manages 22 ccTLDs including the IDN ccTLDs and .in. You can imagine that if there would be variants as well, the number of entries for NIXI in the root zone would increase. Requirements for ccNSO membership. The ccnso had to deal with this: one vote per country. Implications and impact on the membership of the ccNSO

Q: is this for this WG to discuss? Response: it is a consequence for introducing variants. May need to be flagged as something for the broad group to discuss (included in section 5)

ccPDP3 retirement Policy recommendations on retirement are in the decision-making phase. One of the subgroups of ccPDP4 deals with the de-selection of IDN ccTLD strings. (i.e. retirement) if the IDN string is de-selected, should the variants follow the rules and practices of the selected IDN ccTLD string or not?

Note: the next upcoming IDN GNSO PDP will weigh in on the implications of the same entity principle both on first and second level. One aspect is transfer (same entity to be preserved), if one variant label is intended to be moved, all other labels need to move to another entity. Operator and backend.

Response: consistency principle to apply on transfer, revocation etc as well. That is the implication. Consistent with how things happen now.
Note comment above, IANA remarks

Use term “ASSOCIATED” IDNccTLDs, to describe the set of selected IDNccTLD string (S1) and its variants (S1V1, …S1,Vx) ?
Preference is to use descriptive terms and use them consistently. Basic terms are: “set of allocatable variants”, “set of blocked variants”, “set of delegated variants”.

Staff Note: Note that according to the IDNccTLD process the selection process ends with publication of the validated string(s). After validation the IDNccTLD must be delegated in accordance with the ccTLD delegation process. Also note that the selected IDNccTLD string is requested by the reguestor (the entity that request the IDNccTDL string), this could be a different entity then the entity requesting the delegation of the IDNccTLD string (the latter is the IDNccTLD Manager). For example , a government agency or related entity , could request the IDnccTLD string, whilts the (ASCII) ccTLD Manager, could request the delegation of the IDNccTLD string (and [some of the] allocatable variant].

Item 3. Allocation of SLD to the same entity

A. **ccPDP4 VM Subgroup Recommendation.**

A Second Level string registered under a delegated variant IDNccTLD strings MUST be registered for the same entity under all other variant IDNccTLD strings. If (multiple) IDNccTLD variant strings have been delegated, then a second-level string that is registered under a (variant) IDNccTLD string MUST be registered for one and the same entity or withheld for possible future registration for that entity under all delegated IDNccTLD variant strings.

Transitional arrangement to be discussed at later stage: If a variant IDNccTLD string is delegated after the IDNccTLD has become operational this recommendation also applies: under the newly delegated variant IDNccTLD string an already registered second level string under anopther variant IDNccTLD variant string MUST be registered or withold for future regsitration for the same entity.

Note and comment. By definition (see recommendation 1 above) a domain and its variants are one and the same. For reasons of security, stability and interoperability of the DNS, one and the same domain can not be delegated or operated by two or more different entities.

B. **Sub-group Findings and Discussion.**

From 27 July discussion:
We are talking about 1 SLD under multiple variant TLDs. Text should be adjusted. Variants are with the IDN ccTLD, not with the SLD. one SLD or a SLD. different to gTLD environment.

Comment: Item 3 directly interferes with autonomy of ccTLDs to define policy for second level. Should be policy for TLD itself, and do not go further.

Response: Strange/grey area You play with the stability, security, interoperability.

Sub-group should note this is an issue and WG has an ability to alert and improve the situation. If sub-group leaves it out now, there is no opportunity to add it later. Negotiating with purselves. Anticiaption is that there will be lots of discussion around this recommendation. We open possibilities.

Temperature of the room.
You heard the argument. On the one hand , this could be over the line of the ccNSO policy remit as defined in Annex C. On the other hand, is the argument that variants are one and the same. Opening the possibility for diverging registrations would break that fundamental principle. Opportunity for the full group to chime in, and there will be a public comment too. You know there will be comments on this.
Temperature check Alternative wording: change Must to Should = recommendation.
Who would be in favor to change “must” to “should”? minority
Leave it as it is? Majority
Suggestion is to keep “must”.
Note we are talking about variants. Single second level strings. Variants under the IDN variant ccTLD. Line item 11. This part still talks about variants at the 2nd level. But in this recommendation we only talk about the top level.
Following adjustments of line 10, following needs to be adjusted too

Staff Note: Scope of ccNSO PDPs may be a limiting factor (Annex C ICANN Bylaws)
Use language Expected, but not mandatory? However, note that by definition (second level) domains and their variants are one and the same domain. This is derived from actual definition of variants.

To considered the same by TLDs If the same string then same registrant, otherwise may causes security and stability issues.

Question: what happens if two domain names which are deemed to be the same are delegated to two different entities?

Same policies/difference. Re-iterated variants are delegated to same entities, however in practice the IDN table used may be differ from IDN table used for registration of SLDs under the TLD: apply different tables. Policy principle is the same.

From the Fast Track application form:

By signing and submitting this request the Requestor commits to TLD operations that will secure and enhance the stability and interoperability of the Internet's Domain NameSystem (DNS) for the benefit of the local and global Internet community, and to working in good faith together with ICANN towards a stable and secure Internet DNS. The Requestor understands that ICANN reserves the right to take actions necessary to protect the security, stability and interoperability of the global DNS.

ICANN expects that IDN ccTLDs will be established and operated in the manner described below:

a. The IDN ccTLD manager shall establish, operate and maintain the authoritative name servers for the requested string in a stable and secure manner, adequate to resolve names within the requested string by users throughout the Internet and in compliance with Relevant Applicable Standards subject to and within the limits of relevant national law and national public policy. Relevant Applicable Standards are standards-track or best current practice RFCs sponsored by the Internet Engineering Task Force;
b. IDN domain names are to be registered in accordance with a publicly available registration policy that shall comply on an ongoing basis with relevant applicable standards to IDNs, such as the IDNA Protocol, and with the IDN guidelines as updated and published from time to time on the ICANN website, all subject to and within the limits of relevant applicable national law and public policy. This includes, but is not limited to, adherence to RFCs 3490, 3491, 3492, 3454 and their successors;
c. The IDN ccTLD manager should not use DNS redirection and synthesized DNSresponses within any level of the registry; and
d. The Requestor agrees that the IDN ccTLD manager will cooperatively engage with ICANN in the event of an activity or lack of activity that generates a serious concern regarding the stability, security or interoperability of the Internet's Domain NameSystem (DNS) from a global perspective. Briefly, the cooperative engagement process involves the designation of an official representative from ICANN and the IDN ccTLDmanager, who shall meet with each other telephonically and/or in person to address the concerns in good faith and attempt to reach a resolution.

Text first paragraph agreed 10 August 2021

Item 4. Registration of SLD variant labels under variant TLDs to the same entity

A. **ccPDP4 VM Subgroup Recommendation.**

All variants of a Second-Level string registered under all delegated variant IDNccTLD strings MUST be registered to the same entity under all IDNccTLD variant strings. IF IDNccTLD variant strings have been delegated, and for a second level string to be registered under an IDNccTLD string a set of allocatable variant second level strings can generated by applying the IDN Table for second level strings under the IDNccTLD string, THEN under all delegated IDNccTLD variant strings ~~all~~ the set of allocatable variant second level strings MUST be either registered for one and the same entity or withheld for possible future registration by that same entity

AN / Or

Transitional arrangement for discussion at later stage: If a variant IDNccTLD string is delegated after the IDNccTLD has become operational this recommendation also applies: under the newly delegated variant IDNccTLD string all allocatable variant second level strings of a registered second level string MUST be registered for one and the same entity or withheld for possible future registration for that entity.

B. **Sub-group Findings and Discussion.**

Second reading support 21 September 2021

Staff Note: Relevant sections in the ccPDP4 WG document, which includes refers to IDN Tables and the related policies and procedures.

Staff Note: Scope of ccNSO PDPs may be a limiting factor (Annex C ICANN Bylaws)

Staff Note: This recommendation is an extension of recommendation 3. Although the scope of the ccNSO PDP (Annex C of the bylaws) may be limiting factor, by definition (see recommendation 1 above) a domains and its variants are one and the same. For reasons of security, stability and intertoperability of the DNS, one and the same domain can not be delegated or operated by two or more different entities.

Strong objection to include that recommendation in the policy (variants on the 2nd level)

Arguments ITEM 3 are just as relevant for this recommendation: see below

Language around a strong advice. To be revisited next time.
Need to determine what is the scope of the policy, what is not
Annex C limits the scope of the policy. At the same time, it is all in line with the security, stability and interoperability of the DNS.

Applying the same principle at second level requires a holistic (systematic) analysis, single TLD, variant TLDs, IDN or ASCII
Single IDNccTLD: annex C applies. Starting point is variants at Top Level
Selected IDNccTLD with variant IDNccTLD strings: Recommendation 3 and 4 are proposed for IDNccTLD.
Single ASCII ccTLD: out of scope of policy ccPDP4.
ASCII ccTLD, with variants?: out of scope of this policy.

Comment: Item 3 directly interfers with autonomy of ccTLDs to define policy for second level. Should be policy for TLD itself, and do not go further.

Response: Strange/grey area You play with the stability, security, interoperability.
Sub-group should note this si an issue and WG has an ability to alert and improve the situation. If sub-group leaves it out now, there is no opportunity to add it later. Negotiating with purselves. Anticiaption is that there will be lots of discussion around this recommendation. We open possibilities.

Temperature of the room.
You heard the argument. On the one hand , this could be over the line of the ccNSO policy remit as defined in Annex C. On the other hand, is the argument that variants are one and the same. Opening the possibility for diverging registrations would break that fundamental principle. Opportunity for the full group to chime in, and there will be a public comment too. You know there will be comments on this.
Temperature check Alternative wording: change Must to Should = recommendation.
Who would be in favor to change “must” to “should”? minority
Leave it as it is? Majority
Suggestion is to keep “must”.
Note we are talking about variants. Single second level strings. Variants under the IDN variant ccTLD. Line item 11. This part still talks about variants at the 2nd level. But in this recommendation we only talk about the top level.
yes, following adjustments of line 10, following needs to be adjusted too

Staff Note: Scope of ccNSO PDPs may be a limiting factor (Annex C ICANN Bylaws)

Use language Expected, but not mandatory? However, note that by definition (second level) domains and their variants are one and the same domain. This is derived from actual definition of variants.

To considered the same by TLDs If the same string then same registrant, otherwise may causes security and stability issues.

“All allocatable variants” to become “any allocatable variants”
All of them must be either registered for 1 and the same entity, or withheld for possible registration by that entity.
 “any” is indeed better.
If they are not registered, they need to be withheld, correct? Yes

Item 4 A. Registration of SLD variant labels under IDNccTLD to the same entity

ccPDP4 VM Subgroup Recommendation

All variants of a Second-Level string to be registered under a delegated IDNccTLD string MUST be registered to the same entity. If for a second level string to be registered under a delegated IDNccTLD string a set of allocatable variant second level strings can generated by applying the IDN Table for second level strings under the IDNccTLD string, THEN the set of allocatable variant second level strings MUST be either registered for one and the same entity or withheld for possible future registration by that entity

WG Findings and Comments

Second reading support 21 September 2021

We are discussing item 3 and 4. Variant TLDs, and variants of the 2nd level, in variant TLDs. there will be cases where there are variant labels at the 2nd level, in TLDs that will not have variants. So, we need consistency for all.

Staff Note: Scope of ccNSO PDPs may be a limiting factor (Annex C ICANN Bylaws)
Use language Expected, but not mandatory? However, note that by definition (second level) domains and their variants are one and the same domain. This is derived from actual definition of variants.

To considered the same by TLDs If the same string then same registrant, otherwise may causes security and stability issues.

Question: what happens if two domain names which are deemed to be the same are delegated to two different entities?

Same policies/difference. Re-iterated variants are delegated to same entities, however in practice the IDN table used may be differ from IDN table used for registration of SLDs under the TLD: apply different tables. Policy principle is the same.

Item 5. Harmonization of SLD IDN Tables

A. **ccPDP4 VM Subgroup Recommendation.**

To be discussed as part of discussion Section 4.

B. **Sub-group Findings and Discussion.**

Additional item discussion in section 4 IDN Tables Item 6. Not all variants across Variant TLDs need to be operational

A. Staff recommendation.

IDN variant label allocatable or activated under IDN variant TLDs may not necessarily be the same.

The set of allocatable or activated second-level variant labels may not be identical across the activated IDN variant TLDs. For two variant labels s1 and s1v1 which are allocatable under the active IDN variant TLDs t1 and t1v1, the label s1.t1 may be allocated or activated but s1.t1v1 may not be allocated or activated. Similarly, if s1v1.t1 is allocated or activated, s1v1.t1v1 may not be allocated or activated.

B. **GNSO SubPro Recommendation.**

Recommendation 25.8: Second-level labels derived from Recommendation 25.6 or Recommendation 25.7 are not required to act, behave, or be perceived as identical.

C. **ccPDP4 VM Subgroup Recommendation.**

~~**The sub-set of registered and sub-set of withheld for possible future second level variant IDN strings may vary across the IDNccTLD variant strings.** IF IDNccTLD variant strings have been delegated, and for a second level string to be registered under an IDNccTLD string a set of allocatable variant second level strings can generated by applying the IDN Table for second level strings under the IDNccTLD string, THEN the sub-set of registered allocatable variant second level strings and sub-set of allocatable variant second level strings the withheld for possible future registration may vary across the delegated IDNccTLD variant strings.~~

D. **Sub-group Findings and Discussion.**

Staff Note: scope of ccNSO PDPs may be a limiting factor (Annex C ICANN Bylaws), to define this a policy requirement. At the same time, note that recommendations is cast in terms of advice or guidance, not as a requirement.
Explanation needed: is intention of the original staff recommendation that not all variants of one and the same Second level strings, which according to recommendation 4 have been registered for the same entity under each variant IDNcTLD need to be operational? In other words: not all variants of a second level have to be “in use”?
Behaviour. Blocked or allocatable
RZ-LGR to validate the TLD

Policies IDN Table -> ccTLD Manager define their own IDNccTLD tables
To be discussed in context of Section 4 (IDN Tables)

Item 7. Back-end registry service providers for variant TLDs

A. **ccPDP4 VM Subgroup Recommendation.**

All delegated variant IDNccTLD strings MUST be operated by the same entity. If a specific IDNccTLD is operated by the IDNccTLD Manager all variants MUST be operated by the IDNccTLD Manager (IDNccTLD Manager is the entity or organisation listed in the IANA rootzone database as the ccTLD Manager for a specific [IDN]ccTLD). If a specific IDNccTLD is operated by a ”back-end” registry service provider under arrangement with the IDNccTLD Manager, or will be operated by a “back-end” registry service provider under arrangement with the IDNccTLD Manager, that “back-end” service provider MUST operate all delegated variants of that specific IDNccTLD.

B. **Sub-group Findings and Discussion.** See discussion Item 2:

Question separate item 2 and 5? or combine under one item?
Include definition of back-end provider, if feasible
Adopted 27 July. 2021

Examples from IANA Root Zone Database to illustrate the defintion of ccTLD Manager:
Example 1 (ASCII ccTLD):
Delegation Record for .AC
(Country-code top-level domain)

ccTLD Manager
Internet Computer Bureau Limited
c/o Sure (Ascension Island)
Georgetown
ASCN 1ZZ
Ascension Island

Example 2 (IDNccTLD):
Delegation Record for .இலங்கை
(Country-code top-level domain designated for two-letter country code LK)
ccTLD Manager
LK Domain Registry
c/o Computer Science and Engineering Department, University of Moratuwa
Moratuwa 10400
Sri Lanka

What is a ccTLD manager? An IDN ccTLD manager? How is it defined?
The term “ccTLD manager”. See future ICANN bylaws. Also included in the IANA root zone. As a result of the delegation process. Same process for ASCII and IDN ccTLDs.
Captured in the examples included.
Sri Lanka ccTLD manager. Captured the point Sarmad made regarding the definition of (same) entity. We should be consistent in the use of the term ccTLD manager.

Page 23. Hope this clarifies the intention of the recommendation.
Same entity could be either :

- the IDN ccTLD manager (see root zone)
- Back-end operator, under agreement with the ccTLD manager

Item 8. Update of basic policies to take into account variant management recommendations

A. ccPDP4 VM Subgroup Recommendation.

Staff note: See section 5 below. It includes the notes with questions from the staff paper.

B. Sub-group Findings and Discussion.

IANA expressed hope that whatever parameters / constraints is arrived at by ccNSO policy is will be compatible with GNSO policy. IANA strives wherever possible to have common approaches across all TLDs, so if we can represent ccTLD variants and gTLD variants in the same manner in the root zone database that will certainly simplify things greatly.
Note the concern in second paragraph from IANA reply relates to item 8 and item 9.
Question: do variants follow the life-cycle of selected IDNccTLD string (of which they are derived)? Life-cycle: request for delegation, transfer (consented or after revocation), retirement. Should distinction be made between:

- What about blocked variants?
- What about allocatable but not delegated variants strings?
- What about delegated variant strings?

Meeting 27 July 2021
Is this what was intended by the staff recommendation?
Response: Series of analysis in the staff recommendation. ccTLDs or implications on application process
E.g. how would variants impact the string? How do we define the same entity? Discussion at top level and also 2nd level. Useful to look at the top level.
Implications on dispute, after delegation, because of variants.
Collate items to be inserted into section 5 and item 9.
Define as part of section 5 of the paper. We start from the notes identified in the staff paper.
Group agrees to discuss them specifically for the overall selection
One abstention. No red marks
Revisited next time

Item 9. All existing policies apply to IDN variants, unless specifically stated otherwise

A. **ccPDP4 VM Subgroup Recommendation.**

All ccTLD related policies MUST apply to variant IDNccTLDs as well. However, specific requirements under a policy may vary for the selected IDN ccTLD string and its allocatable variants.
If a selected IDNccTLD string is delegated under the existing relevant policy for delegation of ccTLD, the whole set of allocatable IDNccTLD variants SHALL be delegated, or withheld for future delegation to the same entity, on the basis of the request for delegation of the selected IDNccTLD string, unless otherwise foreseen under this policy.

If a selected IDNccTLD string is requested to be transferred in accordance with RFC1591 as interpreted by the FoI to another entity, the whole set of allocatable IDNccTLD strings SHALL be transferred or withheld for future delegation to the same other entity, on the basis of the request for transfer of the selected IDNccTLD string, unless otherwise foreseen under this policy.

If a selected IDNccTLD string or any of its variants is revocated in accordance with RFC1591 as interpreted by the FoI, all other allocated variant IDNccTLDs (delegated or withheld for future delegation) SHALL be revoked.

If the selected IDNccTLD string should be retired as foreseen under this policy, all variant IDNccTLD strings SHALL be retired, unless otherwise foreseen under this policy.

Implementation of this and other recommendations pertaining to variant IDNccTLD strings is considered a matter of implementation.

B. **Sub-group Findings and Discussion.**

Staff Note: scope of ccNSO PDPs may be a limiting factor (Annex C ICANN Bylaws. ccPDP4 is limited to the slection of IDN ccTLD strings. The basic premise is that delegation, transfer, revocation and retirement should be in accordance with existing policies. This is reflected in the ISSUE Report, and proposed policy proposals.

See discussion items 2 and 8 above.
Note: IANA expressed hope that whatever parameters / constraints is arrived at by ccNSO policy is will be compatible with GNSO policy. IANA strives wherever possible to have common approaches across all TLDs, so if we can represent ccTLD variants and gTLD variants in the same manner in the root zone database that will certainly simplify things greatly.

Comment on version 09: variant TLDs are considered as far as the actual ccTLD strings. That is implied with this recommendation
Question: why?
General recommendation. Any variant TLD string is as good as a regular TLD string. Same rules should apply.
May need to specify the exception. Worth further discussion. Please raise concerns explicitly
Action: ask IANA staff what they expect/experience. Ask if they want to have exceptions.

Text version 09

> **All ccTLD related policies pertaining to (IDN)ccTLDs MUST apply to variant IDNccTLDs, unless specifically identified otherwise under the INDccTLD string selection policy.**
> The set of allocatable variant strings that is generated from the selected IDNccTLD string by applying the RZ-LGR, MUST be delegated to the same IDNccTLD Manager or withheld for possible delegation to that IDNccTLD Manager. If a (selected?) IDNccTLD string is transferred, the full set of allocatable variant(s) of the IDNccTLD string, which is being transferred (whether delegated or withheld for future delegation) MUST be transferred to the same IDNccTLD Manager at the same time or withheld for future delegation to that IDNccTLD Manager, to which the IDNccTLD string is transferred. If a IDNccTLD string is revocated all allocated variant IDNccTLDs (delegated or withheld for future delegation) MUST be revocated at the same time. If an IDNccTLD string shall be retired, all allocatable variants (delegated or withheld for delegation) MUST be retired, at the same time.

Implementation of this and other recommendations pertaining to variant IDNccTLD strings is considered a matter of implementation.

First reading adopted

Section 3. Overview of Recommendations on the Technical Utilization of RZ-LGR

Item 1. All TLD strings/labels to be processed using RZ-LGR

A. TSG Recommendation

All TLD labels, IDN and ASCII labels, MUST be processed using the RZ-LGR.

Lowercase alphabetic ASCII labels are, as a practical matter, a subset of the Latin script labels defined by RZ-LGR; therefore, these ASCII Labels must be subject to RZ-LGR processing to determine their cross-script variant labels, e.g. with Armenian, Cyrillic, Greek, and other applicable scripts. Consequently, GNSO and ccNSO should incorporate the use of RZ-LGR into their TLD application processes accordingly and in a consistent manner.

GNSO SubPro Recommendation.

Recommendation 25.2: Compliance with Root Zone Label Generation Rules (RZ-LGR, RZ-LGR-2, and any future RZ-LGR rules sets) must be required for the generation of TLDs and variants labels, including the determination of whether the label is blocked or allocatable. IDN TLDs must comply with IDNA2008 (RFCs 5890-5895) or its successor(s). To the extent possible, and consistent with Implementation Guidance 26.10, algorithmic checking of TLDs should be utilized.

B. ccPDP4 VM Subgroup Recommendation.

~~**All TLD labels, IDN and ASCII labels, MUST be processed using the RZ-LGR.** Lowercase alphabetic ASCII labels are, as a practical matter, a subset of the Latin script labels defined by RZ-LGR; therefore, these ASCII Labels must be subject to~~

~~RZ-LGR processing to determine their cross-script variant labels, e.g. with Armenian, Cyrillic, Greek, and other applicable scripts. Consequently, the use of RZ-LGR should be incorporated into the (IDN)ccTLD application processes accordingly and in a consistent manner.~~

Elements VM Recommendation

- IDN TLDs must comply with IDNA2008 (RFCs 5890-5895) or its successor(s).
- All selected IDNccTLD strings MUST be processed using the RZ-LGR to determine:

  1. if they are valid and.
  2. Calculate Variants. Use RZ-LGR to assign status blocked or allocatable.

- Special use case: RZ-LGR in relation to ASCII ccTLDs: Should RZ-LGR be applied used to all combination of two ISO 646 Basic Version (ISO 646-BV) characters (2-letter [az] codes) to ascertain all potential variants? If so, what is consequence in case:
  - Variants in other scripts?
  - Variants in Latin?
- If RZ-LGR is applied to selected IDNccTLD string (for a script used to express the meaningful representation in the Designated Language), and this results in variant ASCII string (Any combination of two ISO 646 Basic Version (ISO 646-BV) characters (2-letter [az] codes), should these variants be:
  - Blocked
  - Result in not allowing the selected IDN ccTLD (to maintain the predictability of the current ccTLD delegation policy

C. **Sub-group Findings and Discussion.**

Staff Comments: As ASCII ccTLD application process is a matter out of scope of this ccPDP. It is a matter that is most likely first and foremost operational and a matter of the IFO and IANA Naming Function. Further impact and effort analyses would be required to understand the full breadth and consequences of a recommendation in this area.

Staff Comment: What if a script of writing system has not yet been integrated in RZ -LGR and a selected string is requested in such a writing system or script?

Possible scenario:

1. Not allowed i.e., not processed & await RZ-LGR for script or writing system

2. Only Selected string processed (as under Fast Track Process), no variant identified/generated

Discussion on TSG Recommendation

General introduction TSG Recommendation

Background is being developed and provides technical community perspective and proposed items to be considered as technical background parameters and not as policy.

The proposed string is processed: validate the label and identify the variants and assign as:

- Blocked,
- Allocatable

Reason to process ASCII. Variant in other scripts -> in case those are created variants will be identified be blocked.

Should be done generically? It is argued processing country codes (2-alpha codes effectively protects country codes (2-alpha codes). If all 2-alpha code would be processed all variants also in related scripts would be identified. If application would come in it would be clear if application would contain blocked character, and hence would not be permissible (Staff note: this assumes a view at individual characters and not at the level of string)

ccTLD -> two lower case as exception lower and upper case inherent in DNS protocol

Note making the distinction between Lower and Upper case From a DNS perspective confusing

Use of RZ-LGR = 1) Syntax validation and 2) calculation of variants

syntax validation = “letters” are valid for TLD string (e.g. no hyphen or digits), whole-label evaluations are applied as well (e.g. combining mark cannot start label, no mixing of scripts, etc.)

calculate of variant = these rules are applied by the algorithm defined by each script Generation Panel, and the integration of the merged RZ-LGR

SubPro recommendation is gTLD focused.
Applicability calculate the variants of existing, already delegated
Other than calculate the variants. WG should focus on IDN ccTLD; afraid
RZ-LGR

Any combination of two ISO 646 Basic Version (ISO 646-BV) characters (2-letter [az] codes),
Advises to RZ-lGR
Variants - > what will
ASCII Variants

RZ-LGR not modify
ASCII not prevent to protect them for
Two-letter Mechanism / policy method

Did discuss use cases RZ-lgr Input and output.
What is valid is protocol decision? What is blocked and what is allocatable policy decision?

Technical question: What is VALID?
Simple PP is not Cyrilic PP however applied located IDNccTLD. In future ASCII PP? Priority of ASCII code variants blocked

Discussion SUBPro Recommendation
3 parts compliance
Two uses:

1. Syntax validation of application (proposed selected string in terms of IDNccTLD)

2. Variant calculation: RZ-LGR disposition calculates value Blocked or allocatable
"Blocked" should not be delegated
"Allocatable" could find a path for delegation

Questions/ Comment
When applying RZ-LGR to ASCII: In future an application for country code TLD should prevail: standing policy, which is fundamental to distinguish between ccTLD and gTLDs, and their related processes, criteria, requirements and procedures
If cannot be applied because of RZ-LGR two-letter ccTLD; new territories. Impact beyond scope of IDNccPDP.
Question is possible two letter ASCII ccTLD priority new IDNccTLD? TWO-letter (ASCII) excluded from other processes, only available as (ASCII) ccTLD: ISO3166 is not static.

Item 2

A. TSG Recommendation

For the scripts and writing systems which have been integrated into the RZ-LGR, the RZ-LGR must be the only source for processing the following cases:

- Validate an applied-for TLD label and determine its variant labels with corresponding dispositions
- Calculate variant labels, and corresponding disposition values, for each one of the already allocated or delegated TLD labels
- Calculate variant labels, and corresponding disposition values, for each one of the reserved TLD labels

B. **GNSO SubPro Recommendation.**

Recommendation 25.2: Compliance with Root Zone Label Generation Rules (RZ-LGR, RZ-LGR-2, and any future RZ-LGR rules sets) must be required for the generation of TLDs and variants labels, including the determination of whether the label is blocked or allocatable. IDN TLDs must comply with IDNA2008 (RFCs 5890-5895) or its successor(s). To the extent possible, and consistent with Implementation Guidance 26.10, algorithmic checking of TLDs should be utilized.

C. **ccPDP4 VM Subgroup Recommendation.**

Suggested text: For the scripts and writing systems which have been integrated into the RZ-LGR, the RZ-LGR must be the only source for processing the following cases:

- Validate an applied-for TLD string and determine its variant string(s) with corresponding dispositions
- Calculate variant strings, and corresponding disposition values, for each one of the already ~~allocated and~~ delegated TLD Strings
- ~~Calculate variant labels, and corresponding disposition values, for each one of the reserved TLD labels~~

Conclusion
First step. Does the desired variant meet the RZ-LGR? If not, what happens next?
Question Do you want to create an exception, based on the past, where there were expectations. Should be independent, or linked? For the full WG to resolve. If it does meet the RZ-LGR, what do you do if it is blocked, or not blocked.
Do you agree that if Desired Variant does not meet the RZ-LGR the RZ-LGR remains paramount
Group agrees: RZ-LGR remains paramount.

D. **Sub-group Findings and Discussion.**

Staff Note: Currently IDNccTLD strings are only delegated. Desired IDNccTLD Variant Strings have been identified, and are considered "reserved". However their status needs to be defined. According to the ICANN website: "The desired variant string(s) are strings allocated to the requester. This does not mean that they will be delegated in the DNS root zone. They will be allocated to the requester in order to be reserved to the entitled manager for potential future delegation in the DNS root zone."
According the Fast Track Implementation Plan (section 3.4):

The number of strings that a country or territory can apply for is not limited to a specific number (in accordance with Guiding Principle G in the IDNC WG Final Report). However, the following maximum limitation applies:

• *One string per official language or script per country or territory.*

This limitation may cause issues for some countries and territories which have expressed the importance of having variant TLDs allocated and delegated in the DNS.

The topic of delegation of variant TLDs and management of variant TLDs has been discussed broadly in the community. ICANN staff has proposed a few models, none of which were agreeable across the policy and technical community reviewing the topic.

In order to stay within ICANN's mandate for ensuring a stable and secure operation of the Internet, the following will be the case for the Fast Track Process launch:

- Variant TLDs desired by the requester for delegation must be indicated by the requester
- Desired variant TLDs will be allocated to the requester (if successfully evaluated). This does not mean that the variant TLD will be delegated in the DNS root zone. It will be allocated to the requester in order to be reserved to the entitled manager for potential future delegation in the DNS root zone.
- A list of non-desired variants will be generated based on the received IDN Tables. Non-desired variants will be placed on a blocked list by ICANN.

Subsequent application or request for non-desired variants will be denied.

The community is expected to continue working on more clear definitions of variants, solutions or methods for delegation of variants, and any necessary dispute mechanisms related to disagreement regarding desired and non-desired variants. For the purpose of including new development in the Fast Track Process, it is scheduled for revision.(See Module 9 for more details)

Question 1: if “desired variant IDNccTLD strings are allocatable in accordance with the RZ-LGR, should special arrangement still be made?

Question 2: if “desired variant IDNccTLD strings are NOT allocatable in accordance with the RZ-LGR, should special arrangement still be made?

From 30 November 2021 meeting

What is meant by special arrangements?
Response: for instance, a rule, by you.

Note: allocatable and blocked variants.
When variants are not defined as symmetric. Concrete example: Arabic scripts. Allocatable variant: diacritice form to a simple form. The other way is a blocked variant. If the applicant applied with the diacritice form, they would be eligible for the simplified variant.

Question: do you foresee issues with RZ-LGR?
Iran, Macao, Pakistan, 3 Saudi Arabia, Syria, Taiwan: desired variants under the fast track process.
Comment: refers to example mentioned above. Even if this variant is allowed by a special arrangement, wouldn’t it be blocked afterwards, due to similarity checks?
Response: It will be allocated to the same entity. To avoid security issues. Variants allocated to the same TLD operator.

Comment: Note the limited number “desired variants” under Fast Track process of . If you look at the fast track, these are the corner cases.
Question: if this WG grants an exception, is exception needed for both cases? RZ-LGR says 2 strings are distinct, and applicant says they are variants
Question for clarification: if the RZ-LGR considers them blocked, they should not be used?
Response: no. 2 cases
Firstly, an application identified a variant which is not a variant in RZ-LGR. Case 1. Much larger exception. 2 unique strings.
Secondly, strings have been identified as variants, and are also variants through RZ-LGR. Carefully consider. Do not override the RZ-LGR calculation. But not so complicated to solve.

Question: What about desired variants under Fast Track Process
Response: Not sure which category they fall

Question: case that is not a variant according to RZ-LGR. Case 1. How do we override the RZ-LGR, even if we want to do so? How?
Question for clarification and initial response: why needed? How? The answer is “by policy”. However does the WG want to have an exception?

Comment: we are talking case 1. applied-for variant not calculated by RZ-LGR —> what is the outcome? policy could say: sorry, not valid per RZ-LGR as variant, but may be delegated if not already allocated to other operator.
The applicant calculated a variant label, but the RZ-LGR does not agree.
If the ccnso determines the RZ-LGR is the sole source to calculate the variants, that is the wall. But, if the label is valid in its own right, and not yet delegated, you can go through the standard route as a stand-alone label. How you intend to manage it is up to you.

Comment: second option is not even open. Limited set of desired variants, which have been requested originally.
See: https://www.icann.org/resources/pages/string-evaluation-completion-2014-02-19-en

Question: How would the applicant know this, though? It would require prior knowledge that the set of allocatable labels depends on the primary label. I think the applicant should be made be aware of this particularity.
GNSO IDN PDP is discussing an analogy. Applicants that wanted an IDN label, were asked to specify a variant label. Self-identified variants. There was a clarification that the applicant had no legal rights over that variant in future. GNSO IDN PDP is discussing what to do. Similar case of “desired variants”. But: no legal claims or rights. If in future, there is an appetite to apply for a variant label, they will have to look at the RZ-LGR calculation.

Additional: direction where EPDP is going. If we do allow variants for the current ccTLDs, what if another country - when it finds that the desired variants are allocated to the ccTLD - wouldn’t they try to apply also for desired variants? Would they be entitled?
Other cctlds in future could also apply for desired variants?

Response: depends on whether you allow to apply for desired variants. Would be internally inconsistent. If they do not meet the RZ-LGR, that’s it.

Question: In case an applicant applies for a desired variant, can the applicant go for an appeal? Should we modify the RZ-LGR to accommodate the desired variant?
Response: RZ-LGR has its own review process. Anybody at anytime can raise change or request a proposal to a certain community. Panel can review the request. Is it reasonable? Then they can update.

Comment: even if we allow those self-identified variants now, that would not mean we need to do so also in future. The situation is different now. There was no RZ-LGR then, there were no rules to adhere to back then

Additional comment: When we applied the IDN ccTLD under fast track process, we summit the IDN variant table, and the desired variant string come from the IDN variant table.

Concluding question: If you look at the self-identified variants, should they be checked by RZ-LGR, or proceed anyhow?
Group checked green marks (yes, should be checked)

Question: There are a few of these strings (desired variants), so could we know whether they are variants or not of the original label per the latest version of the RZ-LGR? perhaps we are discussing theoretical problem that may not exist
Response: In respond to question. The self-identified variant labels of existing ccTLDs not covered by the RZ-LGR calculation is Syria.

Comment: What to do if desired variant string in Arabic is not considered a variant of the selected idn ccTLD string.
We just discussed and agreed the RZ-LGR should be paramount. To continue as none-variant would i.e Desired variant with independent existence, would be inconsistent with the general principle the WG already agreed upon, only one IDN country code per Desired Language / Script combination
This is major distinction between the GNSO EPDP and the cc-PDP
Comment: if this exception is considered by the WG. not sure if it is an exception to the RZ-LGR. Exception to the rule. 2 independent strings to be delegated to same TLD operator, in same language, and in same script.

Conclusion
First step. Does the desired variant meet the RZ-LGR? If not, what happens next?
Question Do you want to create an exception, based on the past, where there were expectations. Should be independent, or linked? For the full WG to resolve. If it does meet the RZ-LGR, what do you do if it is blocked, or not blocked.
Bart: do you agree that if Desired Variant does not meet the RZ-LGR the RZ-LGR remains paramount
Group agrees: RZ-LGR remains paramount.

Conclusion was supported in second reading as well (14 December 2021)

Item 3. Need to address any existing possible deviations from the calculation of the RZ-LGR

A. TSG Recommendation

GNSO and ccNSO should work collaboratively and consider their respective policy, procedure and/or contract changes to address any existing possible deviations from the calculation of the RZ-LGR:

- Delegated TLDs.
- Self-identified “variant” TLDs.

3.1. Delegated TLDs: These are cases that have occurred under special circumstances in which labels generally deemed as the same (i.e. variant TLDs under RZ-LGR) were previously delegated as independent TLDs, albeit with special considerations (e.g. synchronized TLDs). Any such variations should be considered for alignment with RZ-LGR.

3.2. Self-identified “variant” TLDs: Historically IDN TLD applications, for gTLDs and ccTLDs, have asked the applicant to identify and list any variant labels (based on their own calculations) corresponding to the applied-for string. These self-identified “variant” labels may or may not conform to the RZ-LGR once implemented. The self-identified “variant” labels which are also variant labels based on RZ-LGR will need to be assigned a variant disposition based on RZLGR calculation. Further, self-identified “variant” labels that are not variant labels based on the RZ-LGR definition should not be considered as variant TLD labels and it needs to be determined on how to address such labels previously identified by the applicants.

GNSO and ccNSO must consider a resolution of such outstanding cases that conforms to the LGR Procedure and RZ-LGR calculations.

B. GNSO SubPro Recommendation

No corresponding SubPro recommendations

C. ccPDP4 VM Subgroup recommendation

D. Subgroup Findings and Discussion

Staff Note: Transitional Arrangement to be developed
The self-identified variants are included in the overview of IDNccTLD strings validated under the Fast Track Process, under heading "desired variant string(s)". See: https://www.icann.org/resources/pages/string-evaluation-completion-2014-02-19-en

Question: did these "desired variant strings" pass all criteria under the Fast Track process?

As a principle should the "desired variant strings" only be allocatable if they are generated through RZ-LGR?
See conclusion Item 2 above. Desired variant string only allocatable if generated through RZ-LGR

Other specific issue to be addressed: should simplified and traditional IDNccTLD strings be considered variants or not?
If not, grandfathered?

See Board resolution 2010: https://www.icann.org/resources/board-material/resolutions-2010-04-22-en#synchronized
and - related - the Board decision 12 March 2010 (Nairobi meeting)
https://www.icann.org/resources/board-material/resolutions-2010-03-12-en#13

Board resolution 22 April 2010.
Whereas, there is general and wide community support for the notion of simultaneously delegating this particular requested pair of IDN ccTLDs to meet the well understood needs of users of Chinese, namely that users accessing a domain expect that the traditional and simplified Chinese names have been assigned to the same registrant, and that such delegations would solve a significant problem for the user communities;

And the delegation of these IDN ccTLDs would be an extension to the current published IDN ccTLD Fast Track Process;

Public comment makes it clear that ***the methodology for operation and management of IDN ccTLDs based on such parallel strings can only be achieved today through operational and administrative procedures, as there are no DNS protocol mechanisms yet that provide the desired behavior, which procedures must be handled by the local IDN ccTLD manager****;*
(emphasis added, note this was situation in 2010, also note the recent comment from SSAC members below and in context of the IDN EPDP)

The ICANN Board on 12 March 2010 resolved on a set of "Principles for Handling Synchronized IDN ccTLDs for the specific requests related to the Fast Track Process";
This resolution (March 2010) includes description of synchronized IDNccTLD strings: requests are for multiple corresponding strings that are considered equivalent, so that users of the community accessing domains under all versions of the string expect that each of them will resolve to the same address (hereafter referred to as "Synchronized IDN ccTLDs").

The (Board) ES-WG recommends that requests for synchronized IDN ccTLD strings must be accompanied by adequate and verifiable procedures to enable convergence at every level of the domain named by the TLD following criteria established in the ES Implementation Plan, and to take immediate steps to remove any divergence should it occur; and

The (Board) ES-WG recommended that if an improved technical standard for the delegation and management of Synchronized IDN ccTLDs is arrived at, and is applicable for such delegations, IDN ccTLD managers should migrate to that standard in a safe, stable and timely manner.

From the Board resolution https://www.icann.org/resources/board-material/resolutions-2010-09-25-en#2.5 The recent delegation of Chinese-language ccTLDs does not yet provide a generally workable approach for gTLDs; there are serious limits to extending this approach at this time. ICANN will coordinate efforts to develop long-term policy and technical development work on these issues.

Note that SSAC recently (30 November) re-iterated and wished **"to emphasize that currently there is no DNS protocol solution that enforces equivalence (or the same behavior) of variants in the DNS. Policy makers need to understand this crucial limitation, so as not to design policies that attempt to force such equivalence. So in essence, although administratively these domains are considered a package, technically speaking, they are different domain names."**

Staff note: this remark was made in the context of Item 6 below

Comments on question: should simplified and traditional IDNccTLD strings be considered variants or not?
If not, grandfathered?

Item 4. RZ-LGR Validation

TSG Recommendation

For an applied-for TLD label whose script(s) are supported by the applicable version of the RZ-LGR, the RZ-LGR will calculate either of two values: “valid” or “invalid”. Consequently, an applied-for TLD that is determined “valid” may proceed with the subsequent evaluation process, whereas an applied-for TLD that is determined “invalid” must not proceed, because it did not pass the validation by RZ-LGR.

Recommendation 4 describes the cases in which **an applied-for label, whose script is supported by the RZ-LGR, is determined to be “invalid”**. The SG defers to the GNSO and ccNSO to **determine the process to deal with these cases** (e.g. suspend or reject the applied-for TLD) as this is considered a matter of policy or procedure. While there may be merits for either choice, the SG provides items 4.1 to 4.4 as technical input for community’s consideration, to help address SSAC’s SAC060 recommendation: "ICANN must maintain a secure, stable, and objective process to resolve cases in which some members of the community (e.g., an applicant for a TLD) do not agree with the result of the LGR calculations."

Consequently, an applied-for TLD that is determined “valid” may proceed with the subsequent evaluation process, whereas an applied-for TLD that is determined “invalid” must not proceed, because it did not pass the validation by RZ-LGR. While policy needs to determine how an “invalid” label should be dealt with (Recommendation 2 in SAC060), the following technical input should be considered by the relevant policy development process:

4.1 Conformance with IDNA2008. An applied-for label must be in Normalization Form C7 and must conform to IDNA2008.

4.2. Conformance with LGR Procedure. Policy or procedure must not override the results of the RZ-LGR. That is, policy or procedure alone cannot turn an “invalid” label into a “valid” label, or vice-versa. Doing so would invalidate the entire RZLGR. Any change to the RZ-LGR (e.g. repertoire, variant rules or WLEs) must be undertaken using the process stipulated in the LGR Procedure.

4.3. Script LGR can be updated, if justified, using the LGR Procedure. In general, GPs make design choices based on current knowledge and available information. These choices determine the code point repertoire and its context rules, the whole-label evaluation rules and variant sets. If and when there is new information available, the LGR Procedure defines the process to update the RZLGR9.

4.4. Re-validation of applied-for label is possible. The applied-for TLD label may be re-validated when a new RZ-LGR version becomes available.

GNSO SubPro Recommendation
[Regarding the remedy element]

Recommendation 32.1: The Working Group recommends that ICANN establish a mechanism that allows specific parties to challenge or appeal certain types of actions or inactions that appear to be inconsistent with the Applicant Guidebook.

The new substantive challenge/appeal mechanism is not a substitute or replacement for the accountability mechanisms in the ICANN Bylaws that may be invoked to determine whether ICANN staff or Board violated the Bylaws by making or not making a certain decision. Implementation of this mechanism must not conflict with, be inconsistent with, or impinge access to accountability mechanisms under the ICANN Bylaws.

The Working Group recommends that the limited challenge/appeal mechanism applies to the following types of evaluations and formal objections decisions:

(Specifically, likely the DNS Stability aspect of evaluation/challenge procedures)

ccPDP4 VM Subgroup recommendation

Subgroup Findings and Discussion

In the last call (16 November 20210) the subgroup members discussed whether or not a process needs to be in place to review the outcome of the RZ-LGR validation process of the selected IDNccTLD string, specifically if a requestor should be able to request a review if the outcome of the validation process considers that the selected IDN ccTLD string is invalid.

The Subgroup considered that the application process for an IDN ccTLD process is ongoing, hence there is no window of time during which the IDNccTLD has to be applied for. Hence if the selected string is considered "invalid" the request may be "cured"

Secondly, and related, the RZ-LGR is the result of extensive community consultation in which the users of the script in the relevant territory, could (and most likely) have participated. Hence the outcome should and could have anticipated and not come as a surprise.

Thirdly, during the internal phase of the string selection process, the RZ-LGR is available, and information will be provided when requested to alert the requesting parties of potential risks. Hence, selecting a potential "invalid" string should remain at the risk of the selecting parties.

Conclusion: the risk of selecting a potential " invalid" string should remain with the selecting parties and hence no review mechanism is necessary for this aspect of the process. Therefore, if **a selected IDN ccTLD string - of which the script is supported by the RZ-LGR - is determined to be "invalid" according to the RZ-LGR, it shall not pass the string evaluation phase.**

Additional Note based on the 14 December discussion: If the selected IDN ccTLD string is considered "invalid" according to the technical implementation of the RZ-LGR for the script in which the selected IDNccTLD string is expressed and used to verify the technical validity of the string, ICANN org and the requestor are strongly advised to jointly and cooperatively review the results, including the manner in which the relevant RZ-LGR has been implemented with the goal to clarify any issues. However, if after such a review the selected string remains to be determined "invalid" according to the implementation of the RZ-LGR used to validate the selected IDnccTLD string it shall not pass.

Second reading 14 December 2022

Whether or not to have a review mechanism in place

2 aspects: the RZ-LGR. There might be an issue with the way the RZ-LGR is implemented. Does the algorithm produce false results? What happens next? See discussion in the IDN EPDP. There are a few main differences between the overall policy for IDN ccTLDs and the EPDP. The overall policy is not limited to a timeslot. Update the application, as it is an ongoing process. Secondly, there is the extensive consultation of the local community. Thirdly, one has the possibility to check against the RZ-LGR and check with icann staff. Can be alerted early on in the application process whether or not there is an issue. Proposal is not to include a Review Mechanism for this technical validation process.

Comment: Possibly a problem. Currently the EPDP for IDN TLDs considers a review mechanism. Not for content, but for implementation, i.e mechanism for wrongful implementation.
Comment 2: Distinguish and note that there is a review process built into the RZ-LGR itself. Anyone can reach out to the panel and ask them to review the proposal. It is outside the policy but it can be referred to from this doc. To show there is a review mechanism that an applicant can use, outside this process.
Clarification: it is not about the RZ-LGR but about the implementation: is there doubt about the way ICANN has implemented the RZ-LGR. EPDP will go down the path of the RM. but for the reasons: there is no way back. It is more a question whether introducing a RM, what is the benefit for the overall policy? What is the effort needed? Edge cases which are costly?

Response: make a difference between gTLDs and ccTLDs. Previous gTLD rounds had initiation and end date. Limited time to apply. For ccTLDs applications are on an ongoing basis. No time limitations. We are envisaging a quick review cycle. Is it correct or not?
Response on question: because of the way it is implemented , there is a difference in evaluation. Way to deal with this technical issue?

Hadia: agrees with Dennis. Does not think that incorrect implementation is likely. But we need to add a paragraph with what Dennis said.

Question for support : red or green marks?
No red marks
If an IDN applicant continues, that is at their own risk, knowing of the potential issues.

Proposal was again supported on call 11 January 2022
Some additional questions/comments 11 January re implementation
Question: does Stability enter into dialogue with applicant re the implementation of the RZ-LGR? The stability panel is not implementing the algorithm, is icann implementation
Review to be done by ICANN?
The technical stability panel with respect to variants would check the status of the variant. If there is a discussion, about ICANN's technical implementation, it would not make sense to have an external panel, discussing the ICANN implementation, without involvement of icann org.
The implementation, before it is being used, is indeed tested by icann org.
Therefore if the WG wants icann org to do this, this can be done
Comment: if we make a variant invalid, can be due to an issue during the implementation process, or a stability issue. The reason why a variant is invalid… who will talk to the requestor about this? Suggestion by the subgroup is good
Comment: understood that the applicant will be assigned a contact point from icann org. If the applicant thinks the implementation of the RZ-LGR is not correct, will address concerns via the icann org contact point
Response: Will be a dialogue

Item 5. Should RZ-LGR for script be required?

TSG Recommendation

For an applied-for TLD label whose script is not yet supported by the applicable version of the RZ-LGR, the application should not proceed until the relevant script is integrated into the RZ-LGR. It is implied that the application should remain on-hold (or other appropriate status) until the relevant script is integrated into the RZ-LGR.

GNSO SubPro Recommendation

Implementation Guidance 25.3: If a script is not yet integrated into the RZ-LGR, applicants should be able to apply for a string in that script, and it should be processed up to but not including contracting. Applicants under such circumstances should be warned of the possibility that the applied-for string may never be delegated and they will be responsible for any additional evaluation costs

ccPDP4 VM Subgroup recommendation

Proposed text

At the time the selected IDNccTLD string is submitted for validation, the selected IDNccTLD string must be in compliance with the RZ-LGR i.e. the Label Generation Rules (LGR) for the script/writing system in which the Designated Language in which the selected IDNccTLD string is expressed MUST be integrated in the Label Generation Rules for the Root Zone.

If the LGR for the writing system or script in which the Designated Language is expressed has not been generated or is not yet integrated in the RZ-LGR, at the time the requested IDNccTLD string is submitted for validation ~~(the moment the selected IDNccTLD string and its variants are submitted for validation i.e the start of the second step of the process)~~, or the selected IDNccTLD string is not in compliance with the RZ-LGR, ICANN shall inform the requester ~~accordingly~~ and section 5.2.2 sub C. applies accordingly.

Note 1: By submission of the IDNcTLD string for validation, marks the transition from territory internal phase of the process, to the review of the string and documentation provided to validate that the policy requirements are met.

In the basic document (section 5) it is worded in the following manner:

> ***Section 5. Two-Step Process***
>
> *Under the overall policy a two-stage process is recommended for the selection of an IDN ccTLD string:*
> *Step 1: String selection stage in Territory*
> *Step 2: Validation of IDN ccTLD string*
>
> *The policy recommendations on process, procedures and required documentation, if any, will be described both at a general level and in a more detailed fashion for both stages.*

Note 2: according to section 5.2.2 sub C of the 28 September 2021 process doc if the string cannot be or is not validated the following would apply "*The requester should be allowed to provide additional information, correct the request, or withdraw the request (and potentially resubmit at a later time). If the requester does not take any action within 3 months after the notification by ICANN that the request is incomplete or contains errors, the request may be terminated by ICANN for administrative reasons and its variant was not at the time of requesting validation of the selected IDNccTLD string and its variant(s).*"

Subgroup Findings and Discussion

Added 24 January 2022

Introduction/Background
The full WG has agreed on the general two-step process:
The string selection stage is a local matter in Territory and should ideally involve all relevant local actors in Territory. The actors in Territory must:

1. Identify the script and language for the IDN Table and prepare this Table if necessary,
2. Select the IDN ccTLD string. The selected string must meet the meaningfulness and technical requirements and should not be confusingly similar.
3. Document endorsement /support of the relevant stakeholders in Territory for the selected string, and
4. Select the intended IDN ccTLD string requester before submitting an IDN ccTLD string for validation. In cases where the string requester is not yet selected, the relevant public authority of the Territory may act as nominee for the to be selected string requester.

Further, As part of the validation stage an IDN Table needs to be lodged with the IANA IDN Repository of IDN Practices, in accordance with the policy and procedures for the IANA IDN Practices Repository.

Discussion 11 January 2022. The GNSO EPDP looks into this issue. No conclusion or recommendation available yet. There is the SubPro recommendation, which sets the bar. Not yet adopted, still in ODP process. Part of the proposed policy
Comment: cc vs g-process is difficult to compare in some ways.
Firstly, GNSO considers application to go through, and then be put on hold. gTLD application window is limited, and ccTLDs can apply on a rolling basis
Secondly, the gTLD applicant may not come from the script community. The ccTLD manager has a clear mechanism or reach to the community that uses that language and script
Question: What happens if this is across various countries?
Response: easy. They can still form a panel. We will announce it through the ICANN panels. There is no blocking of the process.
Added reference: https://www.icann.org/en/announcements/details/fourth-version-of-root-zone-label-generation-rules-rz-lgr-4-published-6-11-2020-en and for creation of panel see for example: https://www.icann.org/en/system/files/files/setting-running-generation-panel-07nov13-en.pdf

Comment: This was an issue 12 years ago, before the process was well-defined
Anil: example from Brhmi script. Works fine, and has representation from various countries.

Question: do you agree a RZ-LGR should be in place, before the string can be delegated?
No red marks

Question: they cannot apply?
Comment : see next step.
Comment: the RZ process to be available in the evaluation phase, and not in application phase?
Comment: likes suggestion that IDN table needs to be presented, valid code points etc. that is equivalent to a proposal for the RZ-LGR. Parallels. Makes sense.

Question: If no evaluation will happen for a RZ-LGR exists, can the applicant apply for an IDN TLD? As there is no RZ-LGR with that script, it will be on hold, until it is developed.
Comment: Is in line with what was said before. Applicant should be able to apply. But the application will be on hold, until the rules are developed. It is good to know there is interest in a TLD.
Similar as now under Fast Track process, there needs to be an idn table at time of application.

Suggestion: that based on the 3 insights, we revisit this at the next meeting. There needs to be an RZ-LGR in place for processing. Whether it can be submitted for an information purpose, is something to address.
VM group supports to address at the next meeting.

From the 5 February 2022 Meeting
Item 5: should the RZ-LGR for script be required
Added a strike-through to part of the proposed text. Further down in the doc, reference to the basic document, section 5. Here we explain the 2-step process:

- Step 1: string selection in territory
- Step 2: submission of the IDN ccTLD string for validation

Comment: Step 2 is the initiation of the formal process by which they intend to apply. As far as implementation: the applicant will have all resources available. E.g. RZ-LGR, so they can do their own pre-validation.
Text is ok. But from an implementation standpoint, will there be tools to improve the success of the applicant?
Response: that applies also to the requirement that the string needs to comply with the RZ-LGR

1 That implies it is available. Otherwise how could they know they meet the criteria?

Item 6. Limiting number of delegated variants

TSG Recommendation
SSAC advises in SAC060 that too many variant labels should not be delegated. The SG considers that the matter on limiting the number of allocatable variant labels to be a policy matter.

GNSO SubPro Recommendation
No corresponding SubPro recommendations

ccPDP4 VM Subgroup recommendation
Only **Allocatable VARIANTS** of the selected IDNccTLD string that are according to section 1.1-1.8 and section 2.1 and 2.2 to be **Meaningful Representations** of the name of the **Territory** in the **[Designated[1]] Language** are eligible to be delegated.
This criteria shall be subject of the first review of the IDNccTLD string selection policy, as foreseen in Section 9.E Review of policy for the selection of IDN ccTLD strings.[2]

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[1] Taking on suggestion to put "designated" between brackets. For later discussion we need to seek input from the Arabic script/language community on what the impact of this limitation would be.

[2] **Section 9.E Review of policy for the selection of IDN ccTLD strings** It is recommended that the policy will be reviewed within five years after implementation or at such an earlier time warranted by extraordinary circumstances. It is also recommended that the the ccNSO Council initiates such a review by launching a review group who will be tasked to review the ascertain whether the policy needs to be updated and advise the ccNSO Council on the proposed method for such an update. The scope and working method of such a review must be determined by the ccNSO after consulting relevant stakeholders, and take into account the experience with the ccPDP4 process and relevant circumstances and developments with respect to IDN TLDs

In the event such a review results in a recommendation to amend the policy, the rules relating to the country code Policy Development Process as defined in the ICANN Bylaws should apply.

Note: This implies that both all criteria, the required documentation and support from the Significantly Interested Parties are potentially available for delegation. The proposal is attempting to strike a balance between the legitimate need for variants of an IDNccTLD to avoid user confusion and the need to limit proliferation of strings at the root level, the general responsibilities for the security and stability of the root.

Subgroup Discussion 22 February 2022
Are we heading in the right direction? Revisit this specific recommendation.
Security and stability versus usability: where to draw the line?
Sarmad made a strong point: depending on where you are, you should be able to use your keyboard to access variants
Looking at discussions in EPDP and SSAC060 : no-one wants to set an arbitrary number. This is interesting, because when looking at the basis document - as adopted in September 2021 - principle 5 states : **"criteria should determine the number of eligible IDN ccTLDs per territory". Discussions are aligned. Basic principle of IDN ccTLDs. That principle was already part of the Fast Track Process. (FTP)**

Proposal is to use the current criteria on meaningfulness. Concerns that this might be too limiting, in terms of visibility/usability. If you look at the basic document, there was an agreement by full WG the need to include the requirement of review. Using the review of the policy as a starting point, within 5 years of implementation. Could imagine that together with the need to start slowly, and the potential irreversibility of adding too many variants at the same time. Suggestion is a conservative approach, and then to evaluate that approach after 5 years, when the policy should be reviewed.

In terms of usability. Looking at the FTP, also in the latest version of the FTP implementation plan, there is language on usability. That language is still applicable. Nature of applications, and where we are at in terms of UA. Quote from FTP: caveat, when an applicant submits its request to icann for an idn ccTLD string. Still applicable, as Bart understood it. And the issues around visibility are still valid. Perhaps the issues even got worse.
In chat: *By submitting the request the requester must acknowledge that they understand that usability of IDNs may be limited in that some software applications may not be capable of working with IDNs. Further, some acceptability and usability issues may occur as the IDNA protocol standard is revised and the IDN protocol for email management is finalized in the IETF. Until standards are implemented and broadly adopted by relevant application software writers, users may experience different results in different applications and may experience no functionality at all.*

There are 2 conditions suggested:
- Meaningful representation in a language for country or territory
- Designated language

Regarding the latter: in many cases the variants are requested because an IDN ccTLD string is not easily accessible from outside the country. Therefore the representation might not be in the official language of that country. Language of another country. From a usability perspective: one of the reason variants are proposed, is the ccTLD being accessible globally. Nonetheless access is still restricted for those usable in that territory.

Comment: Basic difference between gTLDs and ccTLDs
See Dubai 2008 regional meeting. Similar discussion at the time.

Update on conversations in GNSO IDN EPDP. proposed recommendation for different groups to assess: proposed recommendation to limit numer of variants. Based on:

- RZ-LGR limits the number of allocatable variants
- There are market forces that try to limit the complexity of the variants, in terms of operations

RZ-LGR limits the other production of variants, and on the other hand you have rational actors. EPDP allows these 2 principles to play. There are going to be warnings to registry operators on the complexity. The 2 concepts determine the number of variants. The conservative approach is achieved by adding the RZ-LGR. For gTLDs there is no designated language requirement

Additional comment: Nor is there a meaningful representation requirement. Real distinguishing factor between ccTLDs and gTLDs. Factor that determines whether or not it is a ccTLD.

The applicant will have to convince the other side that it is indeed a meaningful representation. Given the usability aspect of the domain name

Meaningfulness criteria needs to be supported by the SIP, which includes the government. Needs to be documented. ICANN is not in the position to determine what is the name of a country, what is a country code.
Why allow it for variants but not regular idn cctlds?
Therefore proposes as follows: there is a usability issue indeed, and it needs to be reviewed at a regular interval (see overall policy: 5 year review), but it is easier to become more liberal in time, than to find the need to retire. Way to look at the balance.

Strawman text. Has to be the variant, and needs to be at a minimum a meaningful representation of the name of the territory, in a language (put “designated” between brackets).
Do you support?
No red marks.

Taking on suggestion to put “designated” between brackets. For later discussion we need to seek input from the Arabic script/language community on what the impact of this limitation would be.

Secondly we explicitly state that the limitation needs to be subject to the first review that has been agreed upon, whenever needed.
Question: Do you agree we consult the Arabic script community, whether this is too limiting?
No red marks

Explicitly link this limitation to the 1st review of the policy in 5 years. Do you agree?
No red marks

Reasonable way forward. We still need to assess the impact, and explicitly need to link it with the 1st review of the overall policy.

Subgroup Findings and Discussion
From 8 February 2022 meeting

Previous discussion on limitation of delegatable variants
Is there an update of the GNSO EPDP discussions?
Dennis: not yet arrived at a conclusion. The conversation is going towards a conservative principle. Not aiming for a number. Understanding the complexity of domain names that need to behave as if they are one. There is no technical protocol. It is an operational implementation at top level, second level, and hosting/website operations. Services such as website, email etc. there is no simple solution. Conservative could mean: add a ceiling number, or add an evaluation procedure. What are the complexities? The capabilities needed to enforce the policy? No conclusion yet, but the principle is to work to a coservative approach, without fixating to a number
Anil: agreed. Additions:

- Conservative approach is indeed approved. SSAC explained the challenges.
- Sarmad made a presentation. There are scripts which do not have variants. There are also scripts that are not allocatable. We talk about 7 scripts. Suggestion to draw additional guidelines, which are easily implementable.

Jaap: additional guidelines. You cannot make generic rules. It is a case by case situation. Depends on the TLD. harder to make a generic guideline, which should be required. It is a policy choice. The Policy might differ from ccTLD to ccTLD.
Bart: scope of this policy is at the top level. See how the conservative principle applies at the top level. Second level: park this for a moment.
Dennis: GNSO discussions. only top level. Not within scope.
Bart: ccNSO policy should include a reference to SSAC060 and the discussions on how to handle variant TLDs
Let’s focus on the top-level domains

a. Continue discussion implication Conservative principle as included in SSAC 060

See recommendation 8 in SSAC060

Question: should the string come from a single language? Other considerations? How do we evaluate this?
Comment: interpretation. Requirement 2 and 3 and subsumed by the requirement that the variant and string must be a meaningful representation. If a variant is a meaningful representation, it is there to avoid confusion
Comment: meaningful representation brings delimitation to the process. But, thinking of example where you have one script where you have many variants (e.g. Arabic. Middle East, North Africa), the variant needs to be typed in from various locations. The variant used in South Asia is not going to be in the designated language of the country. Probably a variant in another foreign language. How will that be addressed?
Comment: variant could not be allocatable.

Response: Oneneeds to realise that is application-dependent. Which keyboard you use, is a local problem. You will not change the variant of French. German or French keyboard.

Comment: country in North Africa, which uses the Arabic script. Only Arabic as designated language. Allocatable variants: one in Arabic, one in urdu. Urdu has no status in that country. Needed by the community, because if you need to type in the domain, you would type the Urdu in Pakistan, not the Arabic variant.
Comment: those outside the north African region would not be able to type? Because of the key board? There are virtual keyboards. I can type in other languages and scripts
Other example: 2 different unicodes. Same looking characters, but different underlying unicode. Not visible at first sight. Other example: take simplified and traditional chinese. Territory where only one of the versions is official, and the other one is not. Would that mean that e.g. simplified chinese is not allowed, since it is not a designated language?

Comment: Whether one version or another is an internal matter. Whether a language is designated or not, is not a matter for us to decide. When the fast track was developed, we discussed this too. IDN tables, and to what extent they should include or avoid confusion (Arabic script

- Farsi). Conclusion under the FTP: major difference between ccTLDs and gTLDs. Focus for ccTLDs is on in-territory. To what extent do you need to address issues, which are crossing over various continents?

Comment: We have actually developed a virtual Keyboard for our TLD .بازار, which supports different languages in the Arabic scripts http://s.corenic.org/s#

Question: is it your concern that the designated language is too restrictive
Response: yes. For variant TLDs, the designated language … from a security perspective, it would be better to block all variants. But: there is the usability perspective. Type it from anywhere in the world and use it. If you constrain the variants to the designated language, it would defeat the purpose of variants, and the usability use case

It would constrain the reason of allocatable domains

Question: your suggestion for delegatable?
Response: Find the right balance. SSAC060 vs usability argument. Any of the red items on the screen are strings you cannot type on a single keyboard. Mixed language situation. One way of looking at it: it should at least be a string that is valid in one language. Now we take it one step further, by saying it should be a designated language

Question: Should this be discussed with the full WG. hierarchy of requirements, they intersect with the designated language. If it is allocatable and for usability purposes, the issue should move forward.

Response: This is a core recommendation. We have variants, we defined them, now we need to limit them. Line between non-delegable and delegatable and active and non-active … it needs to be easy to understand. Not allow room for interpretation.
In the basic doc there is one principle: one idn cctld per designated language. Still needs to be a meaningful representation. Secondly, there is always the option to start in a conservative manner, and then expand. Review of the policy after a period of time.

Observation: We have not reached a conclusion. But will try to capture the basic principles and the potential way forward based on the notes from today's session.

Question : Couldyou please elaborate more on the usefulness of your keyboard

Response, It was designed to help potential Registrars of the .بازار TLD. You can enter each allowed character, it tells you the a-label and u-label representation and also lists all available variants that can be generated according to our IDN table

Comment: regarding usability, there are solutions developed in another way then through the DNS, by delegating variants. In the usability issue: please describe areas that cannot be resolved in any other way then through delegating variants?

Response: one can always find a way. But we are talking about seamless access to a domain by the population. Not by expert users. An online keyboard might already be challenging for some. We discussed this extensively. “The side of the bus”-problem. Multiple code points that represent the same shape. You might not realise there is another way of typing it. Problem for the population

Comment: depends on the community? All people using the Arabic script? Limited to north africa?
Comment: applicable to all who use arabic script.
Comment: I fully agree with Sarmad. When you look at a label at a bus, you don't see the Code Points as you would be able to see, when you're using, e .g., our virtual keyboard

Comment: also a matter of investment. What is the easiest way? Underlying premise is that the DNS cannot resolve every problem. Fine balance between usability and stability and security concerns.
Suggestion to continue this next week. Let’s list a few options:

- Restrictive approach
- Sarmad’s concerns.
- Other alternatives? Restrictive approach plus review in a year’s time? Learn from using variants.

b. First reading proposed text section 3 item 6

See notes under 4.a.

Additional Explanatory note:

SSAC member on the VM Subgroup indicated that SSAC wishes to emphasize that currently there is no DNS protocol solution that enforces equivalence (or the same behavior) of variants in the DNS. Policy makers need to understand this crucial limitation, so as not to design policies that attempt to force such equivalence. So in essence, although administratively these domains are considered a package, technically speaking, they are different domain names."

Does this imply that variants are not equivalents and should not be considered as such, nor can equivalence be forced technically?

Related, the policy applies to TLD selection, however the concerns raised by SSAC are not limited to the Top Level, but also apply to lower level (SLD and third level). Should the policy include a policy rule pertaining to lower levels or include a strong statement and reference to the issues identified?

Staff question: Should the number of variants be limited? Do the (de-)selection criteria also apply for the variants i.e feasibility of variants to be delegated? (For example: the selected IDNccTLD string MUST be a meaningful representation of the name of the Territory in a designated language of the Territory (as expressed in the related script). Does this criteria apply .

If the selected string is s1s2 and s1v1-5 are all variants of or include a variant of s1s2, should s1v1-5 meet all meaningfulness criteria to be eligible for delegation? What happens if only v1 and v2 meet meaningfulness criteria and the other don't?

7 January 2022 Staff Note
To understand the issues involved in delegating the full set of allocatable variants, the subgroup members are referred to:

SAC060 - SSAC Comment on Examining the User Experience Implications of Active Variant TLDs Report
(https://www.icann.org/en/system/files/files/sac-060-en.pdf)

Recommendation 5: Be very conservative on code points allowed in the root zone.

The SSAC agrees with the approach in the root LGR procedure document as well as the recommendations in the user experience report. The SSAC would like to reiterate that the inclusion-based approach is preferable over exclusion-based approach for the root zone:

- Inclusion-based approach (preferred): Start with the current restricted Letter, Digit, Hyphen (LDH) American Standard Code for Information Interchange (ASCII) characters (a-z, A-Z, 0-9, -) and then extend it to include relevant, non- problematic "international" characters.
- Exclusion-based approach: Start with the entire Unicode set, and eliminate only characters that can be explicitly demonstrated as being harmful.

The fundamental advantage of the "inclusion-based" model is that it is far easier to restrict something initially and then later relax the restriction than it is to permit something and then later attempt to remove it from use. With respect to the root zone, the inclusion approach should be preferred because it is very difficult to un-delegate a TLD once it is permitted.

In addition, the following guidance given by the user experience report must be provided to both the generation and integration panels:

- The code points allowed for the LGR must include only those minimally needed by a particular script community. For example, the repertoire should not include dead scripts and code points representing archaic characters that are rarely used by a script.
- If the community cannot agree on the need of a code point, the default decision must be to not include it in the repertoire until an agreement is reached.
- Any code point that is optionally written in a script (e.g., some combining marks) must not be included.
- There must be an explicit description and justification for inclusion of each code point that causes a variant, whether directly or in combination with other code point(s), by the community developing the LGR.

Finally, even though the code point variants may be identified at the language level, the root LGR should be the union of all the language level rules. The root LGR should apply at the script level despite the fact that this could generate extra variants in order to promote consistency of use across global end users.

Recommendation 8: A conservative process needs to be developed to activate variants from allocatable variants in LGR.

Based on the SSAC's understanding, given the following LGR calculation: LGR(string) -> string1{state1}, string2{state2}, ..., stringN{stateN}

Where state1, state2, ..., stateN is one of the two possible states: allocatable or blocked. A string that is allocatable does not imply automatic activation; rather that it can be allocated. If the string is allocated it is done so "in sync" with the base string that was the input to the LGR. As it is ICANN's role to stipulate this policy, a clear process needs to be developed to avoid ad hoc treatment of new gTLD applications.

The user experience report recommends that ICANN must implement a well-defined and conservative variant TLD allocation process. The SSAC agrees with the recommendations below:

- **The approval of a variant TLD must not be automatic** (emphasis added), but initiated upon the request of a TLD applicant, explicitly specifying

  (1) the variant label;

  (2) the status for which the variant should be evaluated (activated, allocated but not activated, etc.); and

  (3) the need for the variant (e.g., motivated by linguistic, security, usability and/or other considerations).

  Unless such an application is initiated, all variants generated against a primary TLD application by the root LGR should remain withheld (and un-allocated).

- TLD variant(s) must be applied for by and allocated to the same entity or registry that has applied for the corresponding primary TLD label.
- All requirements for a TLD application approval process also apply to the approval of a variant TLD. These include, for example, requirements for ICANN Governmental Advisory Committee (GAC) and public comments on the label, string similarity evaluation and dispute processes, DNS stability evaluation of the variant TLD label, etc. ICANN must document this process associated with all aspects of variants within the new gTLD ecosystem. The process is needed as the variant in a language may be interpreted as a unique and different label in another language for the same script.
- The registry delegation and re-delegation processes must be extended to include activated variants of a TLD. The registry contract must be updated accordingly.
- The registry fail-over plan should be extended to include activated variants of a TLD.

The relevant registry contract must be updated accordingly.

IDN Variant TLD Implementation: Appendices

Appendix C. Limiting the IDN Variant Domain Names with the Delegation of IDN Variant TLDs

https://www.icann.org/en/system/files/files/idn-variant-tld-appendices-25jan19-en.pdf

11 January 2022 discussion

Variant domain names can potentially cause an exponential growth of the number of TLD and SLDs that need to be managed as 1 single unit. That has a big impact technically, and on users as well. Therefore, limit the number of variants. Allocation is not automatic, but needs to be justified. The GNSO EPDP is still discussing the issue. They invited members from SSAC to go through the technical issues and have a conversation. What are the implications? How small should the number be? A rational actor (TLD manager) needs to be able to prepare. Manage the complexity. Friction between rational actors and security-stability concerns.
Comment: permutation issue. Stability issue larger than what we have at the top level
Comment: Jaap is member of SSAC. questions later for him.
What is included in doc to date is the comment from SSAC on the subPro recommendations. In bold on page 47.

Comment: An additional relevant matter here is a meaningfulness constraint for IDN ccTLD string (and variant?) which is not applicable for gTLDs.

Comment: As said, the IDN EPDP WG has a discussion with SSAC next week. I'd suggest that we also postpone the discussion here until after the SSAC discussion.

Comment: to date no discussion by SSAC recently. SSAC is less optimistic now versus to 2013, that things can be done without problems. No change in the DNS protocols at all. All variants are DNS delegations on itself. The protocol does not know anything about variants. .cat abandoned the idea of doing variants, since it is so hard.

Comment: .cat has variants. Not on top level. We run the technical backend for .cat through CORE. Variants is property of the original domain. You add a variant through the existing domain name
Comment: stern warning. You can do this, but there is no guarantee this will work not it is IDNA **application**

Comment: There are 1244 variant Domains in .cat, i.e. about 1%

Question: additional burden for managing variants, please explain?
Response: no issue for us. We meet the requirements. We assign signature for the same users. No proble for .TW
Additional question: Is it costly or difficult?

Response: no, easier. Additional comment: agrees. For dot china (traditional) it works well.

Introduction of https://www.icann.org/en/system/files/files/idn-variant-tld-appendices-25jan19-en.pdf
Table on IDNccTLD strings and variants with “Pakistan” as example.
Based on LR-LGR there were 1200 variants. 94 were blocked, and only 6 variants were potentially allocatable. But if you look at the meaningfulness requirement, the criteria would still apply here. But the number is clearly reduced, and deviates from principle of 1 tld per language-script combination. Just an example. Gives you a clearer understanding of the scope and issues we talk about here.
Sarmad: even thought the meaningful criteria is limited to the official language, a variant could be generated in a different language. The string is meaningful in “some” relevant language, even if it is not the official language.

VM agreed to discuss further at the next meeting

Item 7. Need to grandfather existing TLDs after revision of RZ-LGR

TSG Recommendation

It is expected that the RZ-LGR be revised throughout its lifecycle, either as a result of a new script LGR being integrated or a revision of an existing script LGR being adopted. There may be cases where a script LGR does not support an existing TLD. In such cases, it is possible that the existing TLD(s) may need to be grandfathered.

GNSO SubPro Recommendation

No corresponding SubPro recommendations

ccPDP4 VM Subgroup recommendation

It is expected that the RZ-LGR be revised throughout its lifecycle, either as a result of a new script LGR being integrated or a revision of an existing script LGR being adopted. There may be cases where a script LGR does not support an existing TLD. In such cases, the delegated IDNccTLD(s) must be grandfathered, unless grandfathering would demonstrably threaten the stability and security of the DNS and deselection of a delegated IDNccTLD string is demonstrably the only measure to mitigate the threat.

Subgroup Findings and Discussion

From 22 February discussion

Need to grandfather existing TLDs after revision RZ-LGR.
DES-subgroup did not make any suggestions in the change of the technical criteria (RZ-LGR and IDNA suite).

This recommendation was developed by the TSG more than a year ago, when RZ-LGR was still under way. Basically they suggested that in case the RZ-LGR is revised or updated, what is expected that existing TLDs are supported by newer versions of LGR as well. If a string is no longer supported by RZ-LGR, it should be grandfathered, to preserve the stability of the root zone, or the strings delegated in the root zone.

Most script panels have finalised their work. Existing TLD strings, incl ccTLDs are tested by the proposal. Either supported, or called out. All validated by RZ-LGR. Not an an issue that exists at this time. In future, there might be rare cases. There are stability clauses in the RZ-LGR and also in IDNA2008 and unicode that make such an extremely rare case, if at all.

We are talking about corner cases. There is a need to avoid issues when we reach the corner cases. There should be a recommendation in place. Does this include the variants?
Note there are no “variant” TLDs delegated in the root zone at this time. TSG was talking about the strings already in root zone
Question: would/should this apply to variants too?
Note that when we apply this to variants, we note that variants are defined by the RZ-LGR itself. A future version of the RZ-LGR could be no longer backward compatible. Stability requirements that backwards compatibility should be foreseen. Marginal case. There are stability clauses.
Echo of stability clauses. There are checks in place to make it indeed backward compatible. Changes to unicode or IDNA2008 are rare. But if they happen, what do we do? A plan needs to be in place. GNSO also looks at the case. We need to preserve the stability of the DNS, registry operators, and registrars and registrants. Any changes to RZ-LGR need to be backwards compatible. Assurances to registry operators that they can continue operations. They will be grandfathered when the RZ-LGR has a revision. In this rare case, activate a conversation between the RZ-LGR panel and operators on the implications. Understanding on what to do in rare case
Agree with TSG recommendation. Grandfather. The internet needs to be stable. RZ-LGR may have allowed changes over time, but stability remains paramount.
Note that : variant TLDs would be independent entries into the root zone, like any other TLD label

Question: Should the language stay? Should we include more certainty for the ccTLD managers and broader community? Should be grandfathered? Shall be grandfathered? Also allow for a dialogue?
Language needs to be stronger. To provide certainty to ccTLD manager
However note if it causes issues, there is a need to retire
Put in a condition. Must or should, unless there is demonstrable instability
Certainty is better

Question: what do you prefer? must be grandfathered? Or should be grandfather, unless a certain threshold is met?
Do you agree with the latter approach? (should be grandfathered, unless a dialogue is happening and high threshold is met)
Alternative: must be grandfathered? (in all conditions, no caveats)
Do you agree?
Comment: Unless there has a proof that it is to threaten the internet stability, it should be grandfathered

Confirmation: Never say never. Should probably not be “must”. Prefers the language used by Jiankang
include proposed language in the next version of the document. We will meet again after ICANN73.

Staff Note 7 January 2022
The subgroup members are referred to SAC060, Recommendation 6

Recommendation 6: Because the implications of removing delegations from the root zone can have significant non-local impact, new rules added to LGR must, as far as possible, be backward compatible so that new versions of the LGR do not produce incompatible results with historical (existent) activations.

It is expected that the LGR for the root zone will be subject to modification from time to time. However, the SSAC recommends that for stability considerations such changes must be based on a defined set of criteria and modifications must be undertaken with the utmost care as it is likely that TLD implementations based on a prior version of the LGR might otherwise become unstable.

At a high level, changes to the LGR can be in the following categories, ordered from least harmful to most harmful to security and stability.

Adding new code points to LGR:

1. Add a code point with [blocked] status which is not considered in an earlier version of LGR and which does not add any variants (e.g. due to its addition in Unicode standard);
2. Add a code point with [allocatable] status which is not considered in an earlier version of LGR and which does not add any variants (e.g. due to its addition in Unicode standard);
3. Add a code point with [blocked] status which is not considered in an earlier version of LGR and which is a variant of an existing code point;
4. Add a code point with [allocatable] status which is not considered in an earlier version of LGR and which is a variant of an existing code point (e.g. due to its addition in Unicode standard).

Changing status of existing code points, causing possible stability issues:

5. Change [blocked] status to [allocatable] status for a code point which is in an earlier version of LGR and which does not add any variants;
6. Change [blocked] status to [allocatable] status for a code point which is in an earlier version of LGR and which is a variant of an existing code point;
7. Move an [allocatable] code point which does not have [allocatable] variant code points to [blocked] status;
8. Move an [allocatable] code point that has [allocatable] variant code points to [blocked] status.

Changing status of existing code points, causing possible security and stability issues:

9. Make two [allocatable] code points variants of each other, where they were not variants earlier and had no variants;
10. Make two [allocatable] code points variants of each other, where they were not variants earlier and had other variants;
11. Change two [allocatable] variant code points to become [allocatable] code points which are not variants anymore and do not have other variants;
12. Change two [allocatable] variant code points to become [allocatable] code points which are not variants anymore and have other variants which will have to be re- grouped with these two (now) non-variant code points.

Because the LGR procedure adheres to the principles articulated in the Internet Architecture Board Document RFC6912, “Principles for Unicode Code Point Inclusion in Labels in the DNS”, the chances of cases 7-12 occuring should be limited. Nevertheless ICANN should consider implementing safeguards should these rare cases occur.

When making changes in the LGR, some types of changes (especially 7-12 outlined above) could *adversely impact already allocated and delegated variant labels at TLD and other levels*. Thus, new rules added to LGR should be

backward compatible so that new versions of the LGR do not produce incompatible results with historical (existent) activations. **The SSAC considers this issue of critical importance**.

Section 4. IDN Tables: use cases and requirements

A. Staff recommendation.

Second-level IDN tables offered under IDN variant TLDs MUST be harmonized.

Second-level IDN tables applicable for an IDN variant TLD set must be mutually coherent but not necessarily identical. For two second-level variant labels s1 and s1v1 under any TLD t1 generated using the applicable IDN table for t1, these must also be variant labels under TLD t1v1 if generated by the applicable IDN table for t1v1. This also implies that the complete set of second-level variant labels may not all be valid under all variant TLDs. For example, for the second level label s1v2, the domain name s1v2.t1 may be valid, but due to difference in IDN tables for variant TLDs, s1v2.t1v1 may not be valid.

B. Findings and Observations SubGroup

Reading deferred until section 3 is completed. Note: IDN Guidelines version 4.0 will need to be taken into consideration.
Background material for consideration by VM

- Recommendation 4 and 5 staff paper.
- Text and use cases defined in original Board Report. See section 5.1.2, Section 5.2.1 and 5.2.2 of ccPDP4-WG proposed sections 5-9

Additional background material:

- https://www.iana.org/domains/idn-tables
- https://www.iana.org/help/idn-repository-procedure
- https://www.icann.org/resources/pages/idn-guidelines-2011-09-02-en

IDN Tables submitted as part of Fast Track project. In some Fast Track process. Used by IDN ccTLD managers, earlier IDN used for variants for the ccTLD label, also how as defined. Different use cases. Fast Track for second level application

Update policies and procedures to require harmonized IDN tables across IDN variant TLDs to produce a consistent set of second-level variant labels. Also, require second level variant labels to be allocated to the same registrant under all variant TLDs.

Staff Note: This item will be addressed under section 4.

With respect to second point see Section 2 recommendations 3 and 4 & 4A

TWO TLDs variant harmonization , variants , creates variant in one, should be variants

Variant in Han traditional -and simplified

Ai-Chin: procedure IDN Tables harmonized tables, misunderstanding

RZ-LGR, only own IDNccTLD

Across IDNccTLD

Section 5. Review of IDNccTLD string selection process

The IDN string selection PROCESS as been reviewed and updated (Status July 2021) by the full WG, will need to be reviewed by the sub-working group to suggest changes to accommodate the recommendations of the sub-group under section 2, 3 and 4 above.

IDN and ASCII characters as variants of the selected IDNccTLD string. Not all variants are IDNs, some may be ASCII, if ASCII how does this relate general requirement (at least one non-ASCII character). Is there a potential hierarchy of requirements? uncover requirements Flag for full working group
If in principle all Variants of IDNccTLD are allowed to be delegated -> ASCII string. What if ASCII string already exists?

Note: related to discussion section 3 item 6. SSAC recommendation to minimize number of delegated strings. Potential unnecessary burden if to many variants are all delegated. Potential solution is to limit the number allowable (delgatable) IDNccTLDs strings to variant IDNccTLD strings that are meaningful.

Questions Issues Identified in Staff Paper
Indentified issues to date

The report on IDN Variant TLD Implementation: Recommendations and Analysis raises the following items for the consideration of ccNSO in Section 3 – Analysis of Recommendations:

(pg. 8)

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

   Sub group Findings and Comments

   Staff Note: under discussion. To be suggested by VM Subgroup.

Main group has not yet discussed variants. That is what this group is doing. This group needs to review the results by the full group, and come up with recommendations where that proposed policy needs to change.

Main tasks by sub-group:

- First come up with recommendations on VM itself
- Review the proposals by the full WG and where needed come up with recommendations

2 step-process. When we discussed this in the main group, to include RZ-LGR to validate the main string, it was suggested to take this up by VM-subgroup. But this group focuses mainly on other aspects. Should we say something about the original string also being validated through RZ-LGR

Note section 3 item 1 still needs to be discussed.

Suppose there is no support for a particular script

Rephrase section 1. Idn cctlds as a sub-question. Definition of idn ccTLDs depends exclusively on RZ-LGR.

Note that these questions were drawn in context from variant TLDs. Copied from staff paper. Limited in scope. To be included as item 1a. To be revisited. All IDN ccTLD strings should depend exclusively on RZ-LGR to be valid

Original policy. We parked the conversation. RZ-LGR is now the one and only IDN table to select the IDN ccTLD string. Validation, and then to calculate the variant labels of the applied for string. Needs to be included as one of the main questions, under section 4. Use case for IDN tables. Separate discussion item

2. *Update policies and procedures to incorporate the "same entity" rule for a given label beneath two variant TLDs.*

   Staff Note: See Section 2 Recommendation 3 and 4 above

   Agreed

3. *Update policies and procedures to set a functional definition for "same entity" [for the second level] in the absence of EPP contact objects or associated ROIDs. (The action might be that this is not a ccNSO responsibility, but one taken by each registry instead.)*
Staff Note: Generic Same entity definition is beyond scope, and very dependent on specific registration policies. Example: some (IDN) ccTLD will allow registration by non-national individuals or legal entities, whilst others only allow registration by legal entity, which was established under specific relevant laws for the Territory.

WG discussion and observations

First reading Agreed

Second reading:

Looking at the request to this WG to look at the policies and procedures to consider an update of the VM- TLDs. how to introduce a framework to manage VM-TLDs. Top level, with consequences for second level domains. To be listed: what are the policies we reviewed , and the rationale for updating - or not - the policies. E.g. change in hands of an operator. Transition from one operator to another. Gaining operator needs to have the infrastructure ready. What will happen with the 2nd level TLDs? How will they transition to the new operator? Domains that are somehow related to each other. Preserve that state.

Difference between number 2 and 3. 2 is for TLDs, number 3 is for second level domains. Group agrees that the variants should be managed by the same entities. Question now is: general agreement on what the same entity is for the 2nd level. Some mechanism to be developed. Agreed with Dennis. Motivation of having a definition is the interoperability option. We do see in the cc-space that the tech operators for ccTLDs do change, albeit less frequently. Some merit of considering the definition to be consistent from an interoperability perspective.

Question: Do ccTLD operators work with (accept registrations from) non-ICANN-accredited registrars? does someone know this?
Response: understanding ccTLD backend providers. Cctld managers could be any entity. The cctld manager will and shall define the policy for the ccTLD. (ASCII and IDN). not up to the ccnso or icann to decide. That policy is in general defined locally, to reflect the relevant laws of the related country, etc.
Clear that a same entity needs to run it. How it looks and how it is defined is purely a local matter.

Appreciate the point. Interoperability concerns with the backend providers. But also interoperability concerns when the ccTLDs are working with the registrars. How are variants handled by different registrars? It becomes difficult for registrars to support, for the same interoperability concerns.
Same observation. From the ccTLD world. If they work through registrars, they have their own mechanism to accredit registrars. Some cctld have a lot of registrars, an easy process. Others make it hard to become a registrar. As soon as you define this, you step over the remit of the policy scope. However, it is important to alert IDN and ASCII ccTLDs to this issue. They are advised to address this, for interoperability reasons.
Agree with proposed idea. But it is strange to add a recommendation regarding interoperability. Something good for registrars or backend service providers. But is it good for ccTLD managers too? They have their own policies. This group does not have to put this type of recommendation forward.

Note previous question whether ccTLDs have their own registrars. Accredited by the ccTLDs themselves. Each ccTLDs has its own process for accrediting registrars. Might be icann accredited registrars, but not necessarily. Might be useful to note this as an issue that ccTLD Managers should consider. Rephrase: Rather an advice, but not a policy recommendation

ccTLDs accredit their registrars themselves, with their own criteria and requirements. That needs to be made clear to the broader community
Supported in second reading

(pp. 11-12)

4. *Update Final Implementation Plan (FIP) of the Fast Track Process and subsequent IDN ccPDP, including update of Sections 3 and 4 of FIP (see discussion above); may include new draft letter between ccTLD managers and ICANN*

Staff Note: The ccNSO has requested standstill of evolution of the Fast-Track process. See letter ccNSO to the ICANN board of Directors https://ccnso.icann.org/sites/default/files/field-attached/sataki-to-chalaby-04sep19-en.pdf and response from the chair of the Board: https://www.icann.org/en/system/files/correspondence/chalaby-to-sataki-31oct19-en.pdf

Agreed approach: Evolution of the Fast-Track Process, if at all, should be limited to issues that cause a demonstrable threat to the security and stability of the DNS, can only be addressed though an amendment of the Fast-Track Process, and require resolution before completion and implementation of the envisioned ccPDP 4.

Question: Is suggested update an issue that causes demonstrable threat to the security and stability of the DNS, can only be addressed though an amendment of the Fast-Track Process? Also, in light that the draft letters or AFs as suggested in FIP have hardly been in use.

Second reading:
For final implementation plan. Extensively discussed 6 weeks and 2 weeks ago as well.
Staff questions were raised early 2019. Ccnso has requested to stop the evolution of the fast track process, pending a policy development process. Evolution of FTP should be limited to issues to demonstrate a threat to security and stability
Transitional arrangement.

5. *Update domain transfer and update process to reflect inter-TLD linkages due to variants and the need to enforce the "same entity" rule (e.g. that s1.t1 and s1.v1t1 may have the same contact ROID after a <domainUpdate>).*

Staff Note: Explanation needed

What is meant is an update to a 2nd level domain, gets transferred, etc.
Dennis: The original policy talks about the IDN table used to select a ccTLD IDN string … in this working group we are considering using the RZ-LGR as the one and only IDN Table used by every single applicant of an IDN ccTLD string. lifecycle of domain names to maintain the same entity principle?
Bart: if an IDN ccTLD manager agrees that the variant is delegated, all successive actions around that string should follow
Number 5 talks about 2nd level. Should be similar as for top level domains.
Suggests to include a staff note to reflect that understanding. Seems logical, if the sub group and full group agree with item 4 and 4.a.
However, note this is really looking at the policies of the ccTLD Managers. At a minimum suggest that it is advised.
To be agreed in second reading.
2nd level domains should be transferred as as package. Not move one of the variant TLDs separately from the rest.
What is included in the notes reflects that explanation. Result from the discussions at the previous meeting
Observation: this about the 2nd level.
Note that the response of the subgroup at the last meeting. If you agree with item 4 and 4a, it seems logical to do this. But, it goes into the policies of TLDs. if a ccTLD has to do this, it is advised to follow this recommendation as well.
Supported in second reading

6. *Update policies and procedures to allow the lists of reserved names and the strings for inappropriate delegation to reflect any variants.*

Staff Note: To date there is no list of reserved names and strings for inappropriate delegation under a ccTLD policy.

From previous meeting. Note that from the ccNSO perspective, there are no reserved names or strings, under any policy. This question is from that perspective not relevant. Any questions regarding the questions and observations? None.
Do you agree, that from a ccNSO policy perspective, this is not relevant?
No red marks.

Second reading 21 September 2021
Question: Is number 6 is now not relevant, but what about the future?
Response: if this would become relevant, it would need to be a policy. You cannot pre-empt on a policy that still needs to be developed. 2 ways of dealing with this:

- Group could include a point of reference, if it ever is discussed that the ccnso is advised to look at it from a variant perspective
- Leave it up to council and those who deal with variants, to further discuss this, if the ccnso would ever go down the path of reserved names

Either you suggest the action now, or you leave it up to the ccNSO to address this in future. Support for this particular section understood as follows: it will not be further included.
Suggestion to add alternative option. Add a note.
Observation: note included that in case a policy will be developed around reserved names for ccTLD, variant management observations need to be included. Does the group agree?
2nd reading needed to confirm note is included.

7. *Update ccTLD redelegation policy to reflect "same entity" constraint on variant TLDs.*

Staff Note: ccTLD transfer policy is based on RFC 1591 as interpreted by FoI. This particular point is addressed in Section 2 point 9.
Rationale again for inclusion: the Selected IDNccTLD string and its variants are one and the same.
Supported August 2021

(pg. 14)

8. *Update policies and procedures to incorporate variant label states and transitions between them.*

Staff note:
The label states that have been identified are:

- Delegated
- Withheld-same-entity: Withheld-same-entity: A Withheld label is set aside for possible allocation only to the same entity of the other labels in the variant set.
- Blocked
- Allocated
- Rejected: A Rejected string is set aside on administrative grounds outside the ordinary LGR procedures. Other terms used "Not Approved" and "Will Not Proceed". Strings that cannot be allocated on visual confusability grounds, based on the string similarity review step in the TLD application process, are also Rejected.

Question: are these the only relevant states with respect to variant IDNccTLD? Is selected IDNccTLD string relevant? How does selected IDNccTLD string relate to its variants? See also questions section 3.

Proposed to include various definitions of states in glossary: agreed in first reading.
Supported second reading 21 September 2021

(pg. 15)

9. *Update policies and procedures for filing IDN tables using the LGR format specified in RFC 7940 as per IDN Guidelines 4.0.*
   Staff Note: This item is addressed under section 4.
   Agreed

10. *Update policies and procedures to require harmonized IDN tables across IDN variant TLDs to produce a consistent set of second-level variant labels. Also, require second level variant labels to be allocated to the same registrant under all variant TLDs.*
    Staff Note: This item will be addressed under section 4.
    With respect to second point see Section 2 recommendations 3 and 4 & 4A
    Two TLDs variant harmonization , variants , creates variant in one, should be variants
    Variant in Han traditional -and simplified

Ai-Chin: procedure IDN Tables harmonized tables, misunderstanding
RZ-LGR, only own IDNccTLD
Across IDNccTLD
Agreed in 1st reading
Second reading 21 September 2021: Agreed to discuss further under Section 4 IDN Tables

11. *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 variants. Work with the technical community to make this enhancement.*

Staff Note: Should this be a recommendation from the WG to IDNcTLD Managers?

To be discussed whether the WG needs to go as far as number 11 suggests. This goes deep into the business of the IDN ccTLD manager. Recognising that it might be an issue, there could be an advise which is not a hard requirement, but use "may/should" type of language.

Agreed 1st reading

Second reading 21 September

EPP. observation that it is into the remit of the ccTLD manager. Suggestion to include it as an advise, not as a hard requirement.
Question: what do we try to solve? Then we can discuss how to solve it.
Response: reading original notes from the staff paper. This is communicating or allowing for communicating, if someone is registering a domain name, it allows to share additional domain names in the registration request. Names that are suggested as blocked or allocatable. Epp request needs to be enhanced, not just limited to the original string.
Observation: sitting on the seat of the IDN ccTLD manager
Response: some managers do not use EPP. internal implementation. In case they use EPP. was rather targeted at gTLDs.
Observation: looks that signalling the availability of domain names is a commercial problem. Not sure how we want to prescribe this from a policy standpoint.
Observation: This rfc is about variant EPP. https://www.rfc-editor.org/rfc/rfc9095 [rfc-editor.org]
third category. Available. Not available for 2 reasons: either already registered. Or not registered, because its variant is already registered.

This goes at the heart of the role of the cctld manager and the SIP.

Proposal following the discussion of section 5. The questions around VM shape the policy and originate from staff papers. Going forward, the group should consider what is relevant for the policy, and should be adopted therefore and what is relevant but is considered out of the policy scope and could be included as advise to cctld managers, with a link background material regarding the topic. The proposal is to first decide whether a topic/issue is a policy matter or not, if not, whether the WG should /could include a reference as responsibility for the cctld manager. The goal is to ensure that a ccTLD Manager, involved in IDNs, is aware of issues, risks and potential solutions to address the issues or mitigate the risks.

(pg. 21)

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

    Staff Note: Confusing Similarity of string is topic to be discussed and worked by 3rd sub-group

    Supported second reading

(pg. 23)

13. *Review string similarity procedure to address decorated two-character Latin labels.*

    Staff Note: Confusing Similarity of string is topic to be discussed and worked by 3rd sub-group

    Agreed 1st reading

    Supported second reading

Section 6. Issues for discussion with full working group

Note: 2 issues

- Membership ccNSO. Related to the iana root zone DB. if listed as a ccTLD manager, you are listed as such. Then you can apply for ccNSO membership. E.g. NIXI manages 22 ccTLDs including the IDN ccTLDs and .in. You can imagine that if there would be variants as well, the number of entries for NIXI in the root zone would increase. Requirements for ccNSO membership. The ccnso had to deal with this: one vote per country. Implications and impact on the membership of the ccNSO

Q: is this for this WG to discuss? Response: it is a consequence for introducing variants. May need to be flagged as something for the broad group to discuss

Scope of Variant Management recommendations:
Temperature of the room.
You heard the argument. On the one hand , this could be over the line of the ccNSO policy remit as defined in Annex C. On the other hand, is the argument that variants are one and the same. Opening the possibility for diverging registrations would break that fundamental principle. Opportunity for the full group to chime in, and there will be a public comment too. You know there will be comments on this.
Temperature check Alternative wording: change “Must” in section 2, item 3 and 4 to “Should” (strong advise, expected not mandatory recommendation).
Who would be in favour to change “must” to “should”? Minority
Leave it as it is? Majority
Suggestion is to keep “must”.
Note we are talking about variants. Single second level strings. Variants under the IDN variant ccTLD. Line item 11. This part still talks about variants at the 2nd level. But in this recommendation we only talk about the top level. However this is

top ensure the consistency across the delegated variants of a specific IDNccTLD, which is also required for a more seamless transfer, revocation and retirement of (IDN)ccTLDs.