Sub-group Findings introduction Variants IDNccTLDs

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3 Version 2
4 29 November 2021
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Section 1. Introduction

- 2 Version 1
- 3 12 November 2021

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- 5 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?
- 8 With respect to the first question the definition of TLD Variants on 11 Apr. 2013, the ICANN Board resolved to
- 9 implement the LGR Procedure. The sub-group supports the definition and it is included in Section 1 as item # 1.

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- 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:
- 13 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.

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Section 2. Overview IDN Variant TLD Recommendations

- 2 Item 1. Defining IDN Variant TLDs
- 3 A. ccPDP4 VM Subgroup Recommendation.
- 4 **Definition of Variants.** Compliance with Root Zone Label Generation Rules (RZ-LGR, RZ-LGR-2, and any future RZ-LGR rules
- 5 sets) MUST be required for the generation of IDNccTLDs and variants labels, including the determination of whether the
- 6 label is blocked or allocatable. IDN TLDs must comply with IDNA2008 (RFCs 5890-5895) or its successor(s).
- 8 B. Sub-group Findings and Discussion.
- 9 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
- 10 2). Looking at the SUBPro recommendation, distinction between blocked and allocatable
- 11 Clarify the difference? Discussed
- 12

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- 13 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
- 14 15
- 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.
- 17 18 19
- 19 IDN TLDs strings must comply with IDNA2008 (RFCs 5890-5895) or its successor(s). 20
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Item 2. Allocation of TLD to the same entity

- 2 A. ccPDP4 VM Subgroup Recommendation.
- 3 **IDN variant TLDs {T1, T1V1, ..,T1Vx} MUST be allocated to same entity.** The set of allocatable variant strings that is
- 4 generated from the selected IDNccTLD string by applying the RZ-LGR, MUST be allocated to one and the same entity, the
- 5 requestor (the entity that submits the selected IDNccTLD string), delegated to one and the same entity, the IDN ccTLD
- 6 Manager) or withheld for possible future delegation to the IDNccTLD Manager. In other words, for a selected top-level
- 7 label T1, its allocatable variant label(s) T1V1,..., T1Vx shall only be allocated to the IDN ccTLD requestor, or after the
- 8 delegation process for the selected IDNccTLD string has been intitated delegated to the same IDNccTLD Manager or
- 9 withheld for possible delegation to that IDNccTLD Manager.

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- If a specific IDNccTLD is operated by a "back-end" registry service provider under arrangement with the IDNccTLD
- 12 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
- 14 recommendation 7
- 15 Agreed text **27** July **2021**
- 16 B. Sub-group Findings and Discussion.
- 17 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
- 19 hierarchy of requirements? uncover requirements Flag for full working group
- 20 If in principle all Variants of IDNccTLD are allowed to be delegated -> ASCII string. What if ASCII string already exists?

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- 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
- 24 meaningful.

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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 2 this the idea? 3 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? 6 Should Back-end registry service provider be defined as term? 8 9 ccNSO Institutional Issue. Assuming variants will be delegated to the same ccTLD Manager, should the ccTLD Manager for each, and every variant of the 10 selected IDNccTLD string be treated as an individual ccTLD Manager, and may therefore become member of the ccNSO for each, and every variant 11 IDNccTLD? 12 13 Description staff recommendation, the word "arise" is used. If an organisational entity submits an IDN ccTLD string then RZ-LGR is applied, and variants 14 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 15 16 applicant for potentially use. 17 18 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. 19 20 But the delegation is not an automatic step. 21 22 Note: In principle delegation follows the IANA delegation process and at the request of the future IDN ccTD manager. 23 24 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 25 automatically. May or not fulfill the evaluation criteria for the strings. 26 Q!: are the meaningfulness criteria still valid for variants? 27 28 Response: yes, but not only. Technical criteria too. Multiple factors. 29 30 Question: criteria as developed by the main group should apply to the variant as well? 31 Response: see original recommendations from the staff report. Recommendation 9: all existing processes should apply, unless there is an explicit exception. 32 Same rigour. Original process applies to each variant, unless there are documented exceptions by the WG. Response: let's discuss when we reach 33 recommendation 9 from the staff paper.

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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

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- 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
- 13 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 implen
 - 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.

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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

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- 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.

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- 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.

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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].

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Item 3. Allocation of SLD to the same entity

- 2 A. ccPDP4 VM Subgroup Recommendation.
- 3 A Second Level string registered under a delegated variant IDNccTLD strings MUST be registered for the same entity
- 4 under all other variant IDNccTLD strings. If (multiple) IDNccTLD variant strings have been delegated, then a second-level
- 5 string that is registered under a (variant) IDNccTLD string MUST be registered for one and the same entity or withheld for
- 6 possible future registration for that entity under all delegated IDNccTLD variant strings.

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- 8 Transitional arrangement to be discussed at later stage: If a variant IDNccTLD string is delegated after the IDNccTLD has
- 9 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.

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- 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
- 15 by two or more different entities.

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- B. Sub-group Findings and Discussion.
- 18 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.

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22 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.

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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. 3 4 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 5 6 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 9 10 Leave it as it is? Majority Suggestion is to keep "must". 11 12 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 13 2nd level. But in this recommendation we only talk about the top level. 14 Following adjustments of line 10, following needs to be adjusted too 15 16 17 Staff Note: Scope of ccNSO PDPs may be a limiting factor (Annex C ICANN Bylaws) 18 Use language Expected, but not mandatory? However, note that by definition (second level) domains and their variants are one and the same domain. This 19 is derived from actual definition of variants.

20 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:

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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 DNS responses 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. 2 All variants of a Second-Level string registered under all delegated variant IDNccTLD strings MUST be registered to the 3 same entity under all IDNccTLD variant strings. IF IDNccTLD variant strings have been delegated, and for a second level 4 string to be registered under an IDNccTLD string a set of allocatable variant second level strings can generated by applying 5 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 8 AN / Or 9 Transitional arrangement for discussion at later stage: If a variant IDNccTLD string is delegated after the IDNccTLD has 10 become operational this recommendation also applies: under the newly delegated variant IDNccTLD string all allocatable 11 variant second level strings of a registered second level string MUST be registered for one and the same entity or withheld 12 13 for possible future registration for that entity. 14 B. Sub-group Findings and Discussion. 15 Second reading support 21 September 2021 16 Staff Note: Relevant sections in the ccPDP4 WG document, which includes refers to IDN Tables and the related policies and procedures. 17 18 Staff Note: Scope of ccNSO PDPs may be a limiting factor (Annex C ICANN Bylaws) 19 20 Staff Note: This recommendation is an extension of recommendation 3. Although the scope of the ccNSO PDP (Annex C of the bylaws) may be 21 limiting factor, by definition (see recommendation 1 above) a domains and its variants are one and the same. For reasons of security, stability 22 and intertoperability of the DNS, one and the same domain can not be delegated or operated by two or more different entities. 23 24 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 2 3 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. 5 6 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. 9 Single ASCII ccTLD: out of scope of policy ccPDP4. 10 11 ASCII ccTLD, with variants?: out of scope of this policy. 12 13 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. 14 15 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 16 17 add it later. Negotiating with purselves. Anticiaption is that there will be lots of discussion around this recommendation. We open possibilities. 18 19 Temperature of the room. 20 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 21 that variants are one and the same. Opening the possibility for diverging registrations would break that fundamental principle. Opportunity for the full 22 group to chime in, and there will be a public comment too. You know there will be comments on this. 23 Temperature check Alternative wording: change Must to Should = recommendation. 24 Who would be in favor to change "must" to "should"? minority 25 Leave it as it is? Majority 26 Suggestion is to keep "must". 27 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 28 2nd level. But in this recommendation we only talk about the top level. 29 yes, following adjustments of line 10, following needs to be adjusted too 30

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

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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

- 2 ccPDP4 VM Subgroup Recommendation
- 3 All variants of a Second-Level string to be registered under a delegated IDNccTLD string MUST be registered to the same
- 4 entity. If for a second level string to be registered under a delegated IDNccTLD string a set of allocatable variant second
- 5 level strings can generated by applying the IDN Table for second level strings under the IDNccTLD string, THEN the set of
- 6 allocatable variant second level strings MUST be either registered for one and the same entity or withheld for possible
- 7 future registration by that entity

8 WG Findings and Comments

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- 9 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.
- 14 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

- 2 A. ccPDP4 VM Subgroup Recommendation.
- 3 To be discussed as part of discussion Section 4.
- 4 B. Sub-group Findings and Discussion.
- 5 Additional item discussion in section 4 IDN Tables Item 6. Not all variants across Variant TLDs need to be operational
- 6 A. Staff recommendation.

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- 7 IDN variant label allocatable or activated under IDN variant TLDs may not necessarily be the same.
- 9 The set of allocatable or activated second-level variant labels may not be identical across the activated IDN variant TLDs.
- 10 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,
- 12 s1v1.t1v1 may not be allocated or activated.
 - B. GNSO SubPro Recommendation.
- 15 **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. 1 The sub-set of registered and sub-set of withheld for possible future second level variant IDN strings may vary across 2 the IDNccTLD variant strings. IF IDNccTLD variant strings have been delegated, and for a second level string to be 3 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. 8 D. Sub-group Findings and Discussion. 9 Staff Note: scope of ccNSO PDPs may be a limiting factor (Annex C ICANN Bylaws), to define this a policy requirement. 10 At the same time, note that recommendations is cast in terms of advice or guidance, not as a requirement. 11 Explanation needed: is intention of the original staff recommendation that not all variants of one and the same Second 12 level strings, which according to recommendation 4 have been registered for the same entity under each variant IDNcTLD 13 need to be operational? In other words: not all variants of a second level have to be "in use"? 14 Behaviour, Blocked or allocatable 15 RZ-LGR to validate the TLD 16 17 Policies IDN Table -> ccTLD Manager define their own IDNccTLD tables 18 To be discussed in context of Section 4 (IDN Tables) 19 20 21 22

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

- 2 A. ccPDP4 VM Subgroup Recommendation.
- 3 All delegated variant IDNccTLD strings MUST be operated by the same entity. If a specific IDNccTLD is operated by the
- 4 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
- 6 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
- 8 MUST operate all delegated variants of that specific IDNccTLD.
- 9 B. **Sub-group Findings and Discussion.** See discussion Item 2:
- 10 Question separate item 2 and 5? or combine under one item?
- 11 Include definition of back-end provider, if feasible
- 12 Adopted 27 July. 2021

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

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- 19 ccTLD Manager
- 20 Internet Computer Bureau Limited
- c/o Sure (Ascension Island)
- 22 Georgetown
- 23 ASCN 1ZZ
- 24 Ascension Island

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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 8 Sri Lanka 9 10 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 11 12 for ASCII and IDN ccTLDs. 13 Captured in the examples included. 14 Sri Lanka ccTLD manager. Captured the point Sarmad made regarding the definition of (same) entity. We should be consistent in the use of the 15 term ccTLD manager. 16 Page 23. Hope this clarifies the intention of the recommendation. 17

Same entity could be either:

the IDN ccTLD manager (see root zone)

Back-end operator, under agreement with the ccTLD manager

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

- 2 A. ccPDP4 VM Subgroup Recommendation.
- 3 Staff note: See section 5 below. It includes the notes with questions from the staff paper.

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- B. Sub-group Findings and Discussion.
- 6 IANA expressed hope that whatever parameters / constraints is arrived at by ccNSO policy is will be compatible with GNSO policy. IANA strives wherever
- 7 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
- 8 database that will certainly simplify things greatly.
- 9 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?

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- 16 Meeting 27 July 2021
- 17 Is this what was intended by the staff recommendation?
- Response: Series of analysis in the staff recommendation. ccTLDs or implications on application process
- 19 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.
- 20 Implications on dispute, after delegation, because of variants.
- 21 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

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

2 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.

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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.

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- Comment on version 09: variant TLDs are considered as far as the actual ccTLD strings. That is implied with this recommendation
- 13 Question: why?
- General recommendation. Any variant TLD string is as good as a regular TLD string. Same rules should apply.
- 15 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.

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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 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.

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

First reading adopted

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Section 3. Overview of Recommendations on the Technical Utilization

of RZ-LGR

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- Item 1. All TLD strings/labels to be processed using RZ-LGR
- 5 A. TSG Recommendation
- 6 All TLD labels, IDN and ASCII labels, MUST be processed using the RZ-LGR.

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- 8 Lowercase alphabetic ASCII labels are, as a practical matter, a subset of the Latin script labels defined by RZ-LGR;
- 9 therefore, these ASCII Labels must be subject to RZ-LGR processing to determine their cross-script variant labels, e.g. with
- 10 Armenian, Cyrillic, Greek, and other applicable scripts. Consequently, GNSO and ccNSO should incorporate the use of RZ-
- 11 LGR into their TLD application processes accordingly and in a consistent manner.
- 12 GNSO SubPro Recommendation.
- 13 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.
- 17 B. ccPDP4 VM Subgroup Recommendation.
- 18 All TLD labels, IDN and ASCII labels, MUST be processed using the RZ-LGR. Lowercase alphabetic ASCII labels are, as a
- 19 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.
- 4 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:
- 7 1. if they are valid and.

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- 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:
 - o Variants in other scripts?
 - o Variants in Latin?
- If RZ-LGR is applied to selected IDNccTLD string (for 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 and predictability of the current ccTLD delegation policy

21 C. Sub-group Findings and Discussion.

1 2	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
3	understand the full breadth and consequences of a recommendation in this area.
4 5	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?
6	Possible scenario:
7	1. Not allowed i.e., not processed & await RZ-LGR for script or writing system
8	2. Only Selected string processed (as under Fast Track Process), no variant identified/generated
9	Discussion on TSG Recommendation
0	General introduction TSG Recommendation
1	Background is being developed and provides technical community perspective and proposed items to be considered as technical background
2	parameters and not as policy.
3	
4	The proposed string is processed: validate the label and identify the variants and assign as:
5	Blocked,
6	 Allocatable
7	
8	Reason to process ASCII. Variant in other scripts -> in case those are created variants will be identified be blocked.
9	Should be done generically? It is argued processing country codes (2-alpha codes effectively protects country codes (2-alpha codes). If all 2-
20	alpha code would be processed all variants also in related scripts would be identified. If application would come in it would be clear if
21	application would contain blocked character, and hence would not be permissible (Staff note: this assumes a view at individual characters and
22	not at the level of string)
23	
24	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 2 3 Use of RZ-LGR = 1) Syntax validation and 2) calculation of variants 5 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.) 6 calculate of variant = these rules are applied by the algorithm defined by each script Generation Panel, and the integration of the merged RZ-9 **LGR** 10 11 SubPro recommendation is gTLD focused. 12 Applicability calculate the variants of existing, already delegated 13 Other than calculate the variants. WG should focus on IDN ccTLD; afraid 14 **RZ-LGR** 15 Any combination of two ISO 646 Basic Version (ISO 646-BV) characters (2-letter [az] codes), 16 Advises to RZ-IGR 17 Variants - > what will 18 **ASCII Variants** 19 20 **RZ-LGR** not modify 21 22 ASCII not prevent to protect them for 23 Two-letter Mechanism / policy method 24 Did discuss use cases RZ-lgr Input and output. 25 26 What is valid is protocol decision? What is blocked and what is allocatable policy decision? 27 Technical question: What is VALID? 28 Simple PP is not Cyrilic PP however applied located IDNccTLD. In future ASCII PP? Priority of ASCII code variants blocked 29 30

Discussion SUBPro Recommendation

- 2 3 parts compliance
- 3 Two uses:
 - 1. Syntax validation of application (proposed selected string in terms of IDNccTLD)

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2. Variant calculation: RZ-LGR disposition calculates value Blocked or allocatable

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"Blocked" should not be delegated

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"Allocatable" could find a path for delegation

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- 10 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
- 13 If cannot be applied because of RZ-LGR two-letter ccTLD; new territories. Impact beyond scope of IDNccPDP.
- 14 Question is possible two letter ASCII ccTLD priority new IDNccTLD? TWO-letter (ASCII) excluded from other processes, only available as (ASCII)
- 15 ccTLD: ISO3166 is not static.

Item 2

A. TSG Recommendation

- 18 For the scripts and writing systems which have been integrated into the RZ-LGR, the RZ-LGR must be the only source for
- 19 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
- 22 labels
- Calculate variant labels, and corresponding disposition values, for each one of the reserved TLD labels

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B. GNSO SubPro Recommendation.

- 2 **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
- 4 label is blocked or allocatable. IDN TLDs must comply with IDNA2008 (RFCs 5890-5895) or its successor(s). To the extent
- 5 possible, and consistent with Implementation Guidance 26.10, algorithmic checking of TLDs should be utilized.

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C. ccPDP4 VM Subgroup Recommendation.

- 8 Suggested text: For the scripts and writing systems which have been integrated into the RZ-LGR, the RZ-LGR must be the
- 9 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
- 12 Strings
- Calculate variant labels, and corresponding disposition values, for each one of the reserved TLD labels

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D. Sub-group Findings and Discussion.

- Staff Note: Currently IDNccTLD strings are only delegated. Desired IDNccTLD Variant Strings have been identified, and are
- 17 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."
- 20 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
- 2 Report). However, the following maximum limitation applies:
- One string per official language or script per country or territory.
- 4 This limitation may cause issues for some countries and territories which have expressed the importance of having variant TLDs allocated and delegated in the
- 5 DNS.

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- 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,
- 7 none of which were agreeable across the policy and technical community reviewing the topic.
- 8 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)
- 17 Question 1: if "desired variant IDNccTLD strings are allocatable in accordance with the RZ-LGR, should special
- 18 arrangement still be made?
- 19 Question 2: if "desired variant IDNccTLD strings are NOT allocatable in accordance with the RZ-LGR, should special

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20 arrangement still be made?

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

2 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.

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- 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
- 10 considerations (e.g. synchronized TLDs). Any such variations should be considered for alignment with RZ-LGR.

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- 12 **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.
- 16 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.

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

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B. GNSO SubPro Recommendation

No corresponding SubPro recommendations 2 C. ccPDP4 VM Subgroup recommendation 3 4 5 D. Subgroup Findings and Discussion Staff Note: Transitional Arrangement to be developed The self-identified variants are included in the overview of IDNcTLD strings validated under the Fast Track Process, under 7 heading "desired variant string(s)". See: https://www.icann.org/resources/pages/string-evaluation-completion-2014-02-8 9 19-en 10 Question: did these "desired variant strings" pass all criteria under the Fast Track process? 11 12 As a principle should the "desired variant strings" only be allocatable if they are generated through RZ-LGR? 13 14 Item 4. RZ-LGR Validation 15

TSG Recommendation

- 17 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
- 19 proceed with the subsequent evaluation process, whereas an applied-for TLD that is determined "invalid" must not
- 20 proceed, because it did not pass the validation by RZ-LGR.

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1 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

- 3 (e.g. suspend or reject the applied-for TLD) as this is considered a matter of policy or procedure. While there may be
- 4 merits for either choice, the SG provides items 4.1 to 4.4 as technical input for community's consideration, to help address
- 5 SSAC's SAC060 recommendation: "ICANN must maintain a secure, stable, and objective process to resolve cases in which
- 6 some members of the community (e.g., an applicant for a TLD) do not agree with the result of the LGR calculations."

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- Consequently, an applied-for TLD that is determined "valid" may proceed with the subsequent evaluation process,
- 9 whereas an applied-for TLD that is determined "invalid" must not proceed, because it did not pass the validation by RZ-
- 10 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:

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

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- 15 **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
- 17 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.

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- 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.

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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. 2 **GNSO SubPro Recommendation** 3 [Regarding the remedy element] 4 5 **Recommendation 32.1**: The Working Group recommends that ICANN establish a mechanism that allows specific parties to 6 challenge or appeal certain types of actions or inactions that appear to be inconsistent with the Applicant Guidebook. 7 8 9 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 10 making a certain decision. Implementation of this mechanism must not conflict with, be inconsistent with, or impinge 11 access to accountability mechanisms under the ICANN Bylaws. 12 13 The Working Group recommends that the limited challenge/appeal mechanism applies to the following types of 14 evaluations and formal objections decisions: 15 16 (Specifically, likely the DNS Stability aspect of evaluation/challenge procedures) 17 18 ccPDP4 VM Subgroup recommendation 19 20 **Subgroup Findings and Discussion** 21 In the last call the subgroup members discussed whether or not a process needs to be in place to review the outcome of 22 the RZ-LGR validation process of the selected IDNccTLD string, specifically if a requestor should be able to request a 23 review if the outcome of the validation process considers that the selected IDN ccTLD string is invalid. 24

- 1 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
- 3 be "cured"
- 4 Secondly, and related, the RZ-LGR is the result of extensive community consultation, in which the users of the script in the
- 5 relevant territory, could (and most likely) have participated. Hence the outcome should and could have anticipated and
- 6 not come as a surprise.
- 7 Thirdly, during the internal phase of the string selection process, the RZ-LGR is available, and information will be provided
- 8 when requested to alert the requesting parties of potential risks. Hence, selecting a potential "invalid" string should
- 9 remain at the risk of the selecting parties.

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

11 TSG Recommendation

- 12 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.

16 GNSO SubPro Recommendation

- 17 **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
- 20 additional evaluation costs

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ccPDP4 VM Subgroup recommendation

2324

Subgroup Findings and Discussion

- 1 See question on Recommendation 1 staff paper. Under Fast Track process an application for a string could be submitted
- 2 and ultimately be delegated without requirement that relevant script is integrated into the RZ-LGR. Note that the issue of
- 3 variants or variant management was not addressed for the Fast Track.

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Item 6. Limiting number of delegated variants

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

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- **GNSO SubPro Recommendation**
- 11 No corresponding SubPro recommendations

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ccPDP4 VM Subgroup recommendation

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- 15 Subgroup Findings and Discussion
- 16 Additional Explanatory note:
- 17 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
- 19 this crucial limitation, so as not to design policies that attempt to force such equivalence. So in essence, although
- 20 administratively these domains are considered a package, technically speaking, they are different domain names."

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- 22 Does this imply that variants are not equivalents and should not be considered as such, nor can equivalence be forced
- 23 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?

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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.

8 9

- 10 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
- 12 the other don't?

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

15 TSG Recommendation

- 16 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
- 18 TLD. In such cases, it is possible that the existing TLD(s) may need to be grandfathered.

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GNSO SubPro Recommendation

21 No corresponding SubPro recommendations

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ccPDP4 VM Subgroup recommendation

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Subgroup Findings and Discussion

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Section 4. IDN Tables: use cases and requirements

- 2 A. Staff recommendation.
- 3 Second-level IDN tables offered under IDN variant TLDs MUST be harmonized.

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

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- **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.
- 13 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
- 16 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

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- 21 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

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2	
3	Update policies and procedures to require harmonized IDN tables across IDN variant TLDs to produce a consistent set of second-level variant
4	labels. Also, require second level variant labels to be allocated to the same registrant under all variant TLDs.
5	Staff Note: This item will be addressed under section 4.
6	With respect to second point see Section 2 recommendations 3 and 4 & 4A
7	TWO TLDs variant harmonization, variants, creates variant in one, should be variants
8	Variant in Han traditional -and simplified
9	Ai-Chin: procedure IDN Tables harmonized tables, misunderstanding
.0	RZ-LGR, only own IDNccTLD
.1	Across IDNccTLD

Section 5. Review of IDNccTLD string selection process

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

5

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

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- 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)
- 13 IDNccTLDs strings to variant IDNccTLD strings that are meaningful.

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Questions Issues Identified in Staff Paper

Indentified issues to date

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

2021

- 22 (pg. 8)
- 23 1. Update policies and procedures to ensure that the definition of variant TLDs depends exclusively on the RZ-LGR.
- Sub group Findings and Comments
- 25 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. 2 4 Main tasks by sub-group: • First come up with recommendations on VM itself 5 • Review the proposals by the full WG and where needed come up with recommendations 6 7 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 8 being validated through RZ-LGR 9 Note section 3 item 1 still needs to be discussed. 10 Suppose there is no support for a particular script 11 12 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 13 14 item 1a. To be revisited. All IDN ccTLD strings should depend exclusively on RZ-LGR to be valid 15 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 16 4. Use case for IDN tables. Separate discussion item 17 18 19 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 20 21 Agreed 22

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.

1 2

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 2 working with the registrars. How are variants handled by different registrars? It becomes difficult for registrars to support, for the same 3 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 5 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 9 10 type of recommendation forward. 11 12 Note previous question whether ccTLDs have their own registrars. Accredited by the ccTLDs themselves. Each ccTLDs has its own 13 process for accrediting registrars. Might be icann accredited registrars, but not necessarily. Might be useful to note this as an issue that 14 ccTLD Managers should consider. Rephrase: Rather an advice, but not a policy recommendation 15 16 ccTLDs accredit their registrars themselves, with their own criteria and requirements. That needs to be made clear to the broader 17 community Supported in second reading 18 19 20 (pp. 11-12) 21 4. Update Final Implementation Plan (FIP) of the Fast Track Process and subsequent IDN ccPDP, including update of Sections 3 and 4 of FIP 22 (see discussion above); may include new draft letter between ccTLD managers and ICANN 23 Staff Note: The ccNSO has requested standstill of evolution of the Fast-Track process. See letter ccNSO to the ICANN board of Directors 24 https://ccnso.icann.org/sites/default/files/field-attached/sataki-to-chalaby-04sep19-en.pdf and response from the chair of the Board: 25 https://www.icann.org/en/system/files/correspondence/chalaby-to-sataki-31oct19-en.pdf

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completion and implementation of the envisioned ccPDP 4.

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

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Question: Is suggested update an issue that causes demonstrable threat to the security and stability of the DNS, can only be addressed 2 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. 5 Staff questions were raised early 2019. Ccnso has requested to stop the evolution of the fast track process, pending a policy 6 development process. Evolution of FTP should be limited to issues to demonstrate a threat to security and stability Transitional arrangement. 9 10 11 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>). 12 13 Staff Note: Explanation needed 14 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 15 considering using the RZ-LGR as the one and only IDN Table used by every single applicant of an IDN ccTLD string. lifecycle of 16 domain names to maintain the same entity principle? 17 Bart: if an IDN ccTLD manager agrees that the variant is delegated, all successive actions around that string should follow 18 Number 5 talks about 2nd level. Should be similar as for top level domains. 19 Suggests to include a staff note to reflect that understanding. Seems logical, if the sub group and full group agree with item 4 and 20 21 4.a. 22 However, note this is really looking at the policies of the ccTLD Managers. At a minimum suggest that it is advised. 23 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. 24 25 What is included in the notes reflects that explanation. Result from the discussions at the previous meeting Observation: this about the 2nd level. 26 27 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 28 into the policies of TLDs. if a ccTLD has to do this, it is advised to follow this recommendation as well. 29 Supported in second reading

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1 2 6. Update policies and procedures to allow the lists of reserved names and the strings for inappropriate delegation to reflect any variants. 3 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. 5 Do you agree, that from a ccNSO policy perspective, this is not relevant? 6 No red marks. Second reading 21 September 2021 9 Question: Is number 6 is now not relevant, but what about the future? 10 11 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 12 developed. 2 ways of dealing with this: 13 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 14 15 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 16 understood as follows: it will not be further included. 17 18 Suggestion to add alternative option. Add a note. 19 Observation: note included that in case a policy will be developed around reserved names for ccTLD, variant management observations 20 need to be included. Does the group agree? 21 2nd reading needed to confirm note is included. 22 23 24 7. Update ccTLD redelegation policy to reflect "same entity" constraint on variant TLDs. 25 Staff Note: ccTLD transfer policy is based on RFC 1591 as interpreted by FoI. This particular point is addressed in Section 2 point 9. 26 Rationale again for inclusion: the Selected IDNccTLD string and its variants are one and the same. 27 Supported August 2021 28 29 (pg. 14)

8. Update policies and procedures to incorporate variant label states and transitions between them. 1 2 Staff note: 3 The label states that have been identified are: 4 Delegated • Withheld-same-entity: Withheld-same-entity: A Withheld label is set aside for possible allocation only to the same entity of the 5 other labels in the variant set. 6 Blocked Allocated • Rejected: A Rejected string is set aside on administrative grounds outside the ordinary LGR procedures. Other terms used "Not 10 Approved" and "Will Not Proceed". Strings that cannot be allocated on visual confusability grounds, based on the string 11 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 12 13 IDNccTLD string relate to its variants? See also questions section 3. 14 15 Proposed to include various definitions of states in glossary: agreed in first reading. Supported second reading 21 September 2021 16 17 18 (pg. 15) 19 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. 20 21 Agreed 22 23 10. Update policies and procedures to require harmonized IDN tables across IDN variant TLDs to produce a consistent set of second-level 24 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. 25 26 With respect to second point see Section 2 recommendations 3 and 4 & 4A 27 Two TLDs variant harmonization, variants, creates variant in one, should be variants

1	Variant in Han traditional -and simplified
2	Ai-Chin: procedure IDN Tables harmonized tables, misunderstanding
3	RZ-LGR, only own IDNccTLD
4	Across IDNccTLD
5	Agreed in 1st reading
6	Second reading 21 September 2021: Agreed to discuss further under Section 4 IDN Tables
7	
8	11. Those TLDs using EPP may need to create an enhancement (either a protocol modification, a standard message, or a standard
9	extension) that permits expressing response messages for unavailability of an unallocated label due to variants. Work with the
0	technical community to make this enhancement.
.1	Staff Note: Should this be a recommendation from the WG to IDNcTLD Managers?
2	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
.3	manager. Recognising that it might be an issue, there could be an advise which is not a hard requirement, but use "may/should" type
4	of language.
.5	Agreed 1 st reading
.6	
.7	Second reading 21 September
.8	EPP. observation that it is into the remit of the ccTLD manager. Suggestion to include it as an advise, not as a hard requirement.
.9	Question: what do we try to solve? Then we can discuss how to solve it.
20	Response: reading original notes from the staff paper. This is communicating or allowing for communicating, if someone is registering a
21	domain name, it allows to share additional domain names in the registration request. Names that are suggested as blocked or
22	allocatable. Epp request needs to be enhanced, not just limited to the original string.
23	Observation: sitting on the seat of the IDN ccTLD manager
24	Response: some managers do not use EPP. internal implementation. In case they use EPP. was rather targeted at gTLDs.
25	Observation: looks that signalling the availability of domain names is a commercial problem. Not sure how we want to prescribe this
26	from a policy standpoint.
27	Observation: This rfc is about variant EPP. https://www.rfc-editor.org/rfc/rfc9095 [rfc-editor.org]
28	third category. Available. Not available for 2 reasons: either already registered. Or not registered, because its variant is already
29	registered.

1 2 This goes at the heart of the role of the cctld manager and the SIP. 3 Proposal following the discussion of section 5. The questions around VM shape the policy and originate from 4 staff papers. Going forward, the group should consider what is relevant for the policy, and should be adopted 5 therefore and what is relevant but is considered out of the policy scope and could be included as advise to cctld 6 managers, with a link background material regarding the topic. The proposal is to first decide whether a 7 topic/issue is a policy matter or not, if not, whether the WG should /could include a reference as responsibility 8 for the cctld manager. The goal is to ensure that a ccTLD Manager, involved in IDNs, is aware of issues, risks and 9 potential solutions to address the issues or mitigate the risks. 10 11 12 13 14 (pg. 21) 15 12. Update the string similarity guidelines for TLDs and their variant labels. 16 Staff Note: Confusing Similarity of string is topic to be discussed and worked by 3rd sub-group 17 Supported second reading 18 19 20 (pg. 23) 21 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 22 23 24 Agreed 1st reading 25 Supported second reading 26

Section 6. Issues for discussion with full working group

- 2 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
- 10

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- 11 Scope of Variant Management recommendations:
- 12 Temperature of the room.
- 13 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
- 16 too. You know there will be comments on this.
- 17 Temperature check Alternative wording: change "Must" in section 2, item 3 and 4 to "Should" (strong advise, expected
- 18 not mandatory recommendation).
- 19 Who would be in favour to change "must" to "should"? Minority
- 20 Leave it as it is? Majority
- 21 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
- 2 seamless transfer, revocation and retirement of (IDN)ccTLDs.