

Working Document

Consistent definition and technical utilization of RZ-LGR

CHARTER QUESTIONS

a1) Evaluating all TLDs using RZ-LGR as the one and only authoritative source allows for a consistent approach for reviewing current and future TLDs. The SubPro PDP, the Staff Paper, and the Study Group on Technical Use of RZ-LGR (“TSG”) recommend that compliance with RZ-LGR (RZ-LGR-4, and any future RZ-LGR versions) must be required for the validation of all future gTLDs (including IDN and ASCII labels) and the calculation of their variant labels as a matter of policy, including the determination of whether the disposition of the label should be blocked or allocatable.¹

For existing delegated gTLD labels, does the WG recommend using the RZ-LGR as the sole source to calculate the variant labels and disposition values?

Early written input from SSAC: In SAC60, the SSAC recommends that: “The root zone must use one and only one set of rules for the Root LGR procedure.” (SAC060 Recommendation 1) The recommendation applies to all future TLDs (gTLDs and ccTLDs) as well as for existing delegated TLD labels.

Early written input from ccPDP4 variant management SubGroup: 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).

High-level Notes:

- The EPDP Team agreed to return to this charter question after the relevant data and metrics are available to support further deliberations.
- The RySG has no concerns in using the RZ-LGR as the authoritative source to calculate variants of existing gTLDs.
- Update on data collection -- this exercise is to use the latest version of the RZ-LGR to determine the variant labels of delegated and to-be delegated gTLDs in the 2012 New gTLD Round and determine whether the list of calculated variants match those that were identified by the applicant.

¹ See Recommendation 25.2 and Implementation Guidance 26.10 in the SubPro Final Report, pp.115, 119: <https://gnso.icann.org/sites/default/files/file/field-file-attach/final-report-newgld-subsequent-procedures-pdp-02feb21-en.pdf#page=115>; Recommendation 1 in the Staff Paper, p.3: <https://www.icann.org/en/system/files/files/idn-variant-tld-recommendations-analysis-25jan19-en.pdf#page=3>; Recommendation 1 in the TSG report, p.5: <https://www.icann.org/en/system/files/files/rz-lgr-technical-utilization-recs-07oct19-en.pdf#page=5>

- There is no significant difference between the variants calculated by the RZ-LGR and those self-identified variants from the 2012 round.
- There are two cases where there is a difference -- one likely related to an alternative spelling and the other potentially a typo.
- The EPDP Team discussed a scenario where an applicant applied for an ASCII gTLD and would like to apply for a self-identified “variant” (e.g., .Quebec and .Québec). This might be an opportunity for .Quebec to submit a public comment on the Initial Report if they want that specific use case to be taken into account, but the EPDP Team agreed that RZ-LGR should be the only authoritative source for defining variants, and alternative spellings should therefore not be considered variants.
- Based on the data collected, the EPDP Team agreed that if the RZ-LGR is decided to be the sole source for calculating variant labels and disposition values for existing gTLDs, it would not have a major impact on existing gTLD operators.
- If the RZ-LGR is used to calculate variants for existing gTLDs going forward, some of the self-identified variants, which conform to RZ-LGR, would be blocked. But this would not impact the EPDP Team’s agreement above.

a2) Before the proposed RZ-LGR mechanism, applications for IDN gTLDs have asked the applicant to identify and list any variant labels (based on their own calculations) corresponding to the applied-for string. The self-identified “variant” labels do not have legal standing, as “[d]eclaring variant strings is informative only and will not imply any right or claim to the declared variant strings.”² The TSG recommends that the self-identified “variant” labels which are also variant labels calculated by RZ-LGR will need to be assigned a variant disposition based on RZ-LGR calculation, as discussed in **a1**).

If some self-identified “variant” TLD labels by the former gTLD applicants are not found consistent with the calculation of the RZ-LGR, but have been used to certain extent (e.g., used to determine string contention sets), how should such labels be addressed in order to conform to the LGR Procedure and RZ-LGR calculations? Consider this question by taking into account the data to be collected in the “Data and Metric Requirements” section of this charter.

Early written input from SSAC: An analysis of the delegated variant labels in ccTLDs against the most current version of LGR would answer whether this is a hypothetical question or not. If such a case did happen, the policy would need to balance (1) the user experience of existing users with variant domains, (2) the stability of rules applying to the root zone. It would seem the likely course of action is for applicants to make an appeal to the generation or integration panel with all the evidence.

High-level Notes:

² For more details see *gTLD Applicant Guidebook*, version 2012-06-04, section 1.3.3 IDN Variant TLDs, p.1-35: <https://newgtlds.icann.org/en/applicants/aqb/guidebook-full-04jun12-en.pdf>

- The EPDP Team agreed to return to this charter question after the relevant data and metrics are available to support further deliberations.
- WG members from the RySG and ccNSO will check with their groups to see if there are any concerns about using the RZ-LGR for existing gTLDs.
- The data collection exercise found that there are two cases where the self-identified “variants” did not conform to RZ-LGR -- one likely related to an alternative spelling and the other potentially a typo. It doesn’t seem that they have been used to any extent.
- Former applicants were informed that the self-identified “variants” would not have legal standing so the applicants would not have claims to them. Those labels were for information purposes.
- To the extent that new rules are put in place in the New gTLD Program, those rules apply to the specific round and are not retroactively applied.
- The EPDP Team agreed no further considerations are needed for this charter question, and nothing needs to be done for the self-identified variants.

a3) SubPro PDP 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.³ SubPro PDP recommends that such a limited challenge/appeal mechanism applies to several types of evaluations and formal objections decisions, including the DNS Stability aspect of evaluation/challenge procedures. Previously, both the SSAC and TSG also recommended a challenge process for resolving disagreement with the RZ-LGR calculation on certain strings.⁴

If an applied-for TLD label, whose script is supported by the RZ-LGR, is determined to be “invalid”, is there a reason NOT to use the evaluation challenge processes recommended by SubPro? If so, rationale must be clearly stated. If SubPro’s recommendation on the evaluation challenge process should be used, what are the criteria for filing such a challenge? Should any additional specific implementation guidance be provided, especially pertaining to the challenge to the LGR calculation as it can have a profound, decimating impact on the use of RZ-LGR?⁵

³ See Recommendation 32.1 in the SubPro Final Report, pp.154-155: <https://gnso.icann.org/sites/default/files/file/field-file-attach/final-report-newgtld-subsequent-procedures-pdp-02feb21-en.pdf#page=154>

⁴ Disagreement with the LGR calculator may arise due to circumstances including but not limited to: an invalid label due to choice of “letter” not included in the repertoire, albeit being IDNA2008 protocol-valid; an invalid label due to a contextual or whole label evaluation rule imposed by either integration or generation panels’ variant; labels differ because of different assumptions. SAC060 proposed a straw man process to resolve disputes to the RZ-LGR results. The TSG recommended several technical inputs be considered when developing the resolution mechanism. See Recommendation 2, SAC060, p.9: <https://www.icann.org/en/system/files/files/sac-060-en.pdf#page=9>; see Recommendation 4 in the TSG Report, pp.6-7: <https://www.icann.org/en/system/files/files/rz-lgr-technical-utilization-recs-07oct19-en.pdf#page=6>

⁵ Any changes in RZ-LGR brought about by a process outside the LGR Procedure would invalidate the RZ-LGR and thus the definition of the variant TLD, as stated in the LGR Procedure. TSG suggests how to address such a challenge by remaining within the LGR Procedure.

High-level Notes:

- From one perspective, at a high level, applicants should have an opportunity to challenge all types of evaluation decisions in the New gTLD Program, and this evaluation element should not be an exception.
 - It was noted that a tool will be available to potential applicants in future rounds that will allow them to test the validity of a string prior to applying. This should reduce the number of strings that will be found to be invalid in the course of the evaluation process.
 - One member suggested that at a certain point before a round, the version of the RZ-LGR that applies to that round should be fixed, so that everyone is using the same version when testing strings and preparing for the round.
- The EPDP Team considered several [potential scenarios](#) for a challenge: 1. Applied-for gTLD is found to be invalid 2. Applied-for variant TLD is found to not be an allocatable variant. 3. A string is found to not be a blocked variant.
 - Regarding scenario 1, an EPDP Team member noted that the online tool is an implementation of the RZ-LGR that creates a user-friendly way to use the RZ-LGR. There could be human error in coding the implementation of the RZ-LGR. This may be a distinct use case for a challenge that would be different from challenging the content of the RZ-LGR itself.
 - It was noted that if the outcome of challenges require an update to RZ-LGR, the update process is already defined by the RZ-LGR process. Creating a process outside of this could be detrimental to the RZ-LGR itself. Therefore, if the EPDP Team recommends that challenges are possible as part of the New gTLD Program, and such a challenge is triggered by an applicant, it may still need to go through the RZ-LGR update process.
 - The EPDP Team considered that the challenge involving the content of the RZ-LGR itself may need to be resolved through existing processes for updating the RZ-LGR, but it is possible that ICANN org could serve as a “frontline” for these types of challenges, as well.
 - One EPDP Team member suggested that for cases where an applicant is seeking an update to the RZ-LGR itself, the terminology should be different, for example such cases could be called “change requests.”
 - It was noted that the GP would handle such requests (as opposed to the DNS Stability Panel conducting the original evaluation).
 - One EPDP Team member suggested that all challenges that would require a RZ-LGR update should be handled together at a specific point in time to avoid one-off changes that could potentially impact the work of other script GPs. From another perspective, the RZ-LGR process should not be

dependent on the New gTLD process, because both ccTLDs and gTLDs rely on the RZ-LGR.

If the WG decides to recommend that a challenge process should be put in place, input on specific considerations regarding the concerned applications/applicants:

- If the RZ-LGR process is triggered, should it still be possible to proceed with the application in the same round?
 - Yes: There may be a significant period of time between rounds. If the RZ-LGR process concludes and the applied-for string is ultimately eligible to proceed, it should be able to do so as part of the same round without paying a new fee. If there is an error in the RZ-LGR, this is not the applicant's fault, and the applicant should not be required to go through the whole application process again. As contention is not likely, waiting will not hold up other applications in many cases. If the string in question IS in a contention set, it is unfair to make the applicant lose their place in the contention set for that round, as another applicant in the contention set will proceed, making it impossible for the applicant in question to apply for their desired string in the next round.
 - No: The RZ-LGR process might take time. If the application is considered "on hold" during that period, it will also hold up any other applications in contention with it for an indefinite period of time. It is expected that rounds will occur at regular, frequent intervals, so it should be possible for the applicant to quickly apply again.
- From one perspective, if the string was found to be invalid due to an error in the application (for example a typo), the applicant should be able to correct the error and proceed in the same round. From another perspective, it is unlikely that an applicant would mistype the applied for string in the application. It is more likely that they apply for a string that is simply invalid. If the EPDP Team wants to permit applicants to change the applied for string, it will be necessary to put specific limitations around the types of changes that can be accepted.

Feedback on the draft RZ-LGR Application and process flow:

- Regarding assumption 5: From one perspective, it may not be necessary for the applicant to understand the background and utility of the RZ-LGR, but they should understand that it needs to conform.
- It is important to provide guidance on system requirements that would correspond to the flow chart, for example that the application system must still allow applications to proceed in cases where the string is found to be invalid according to RZ-LGR by the initial algorithmic check.
- Regarding the process flow, it is important to distinguish between the different layers of the check. If the string is found not to comply with the IDNA2008 standard it should not proceed and cannot be challenged within the ICANN context, because this is an IETF

standard. If it conforms to IDNA but does not qualify through the RZ-LGR, that is the layer that it can potentially be challenged through this process.

The EPDP Team reviewed the updated [process flow](#). Based on the flow, if an applicant believes DNS Stability Panel's assessment of the RZ-LGR application is incorrect, a challenge process may be initiated to request the DNS Stability Panel to recheck the validity of the label against the RZ-LGR. After the recheck, initial assessment could be wrong and the string could be valid (application reinstated) OR initial assessment could be confirmed (application still rejected). In the latter case, if the applicant believes the RZ-LGR calculation is wrong or incomplete, the applicant needs to submit a change request to the Generation Panel.

There is some agreement in the EPDP Team for the following:

- It is expected that the DNS Stability Panel should have the responsibility to perform a manual review of the label validity, even after an algorithmic review initially, to ensure that the algorithm is applied correctly to the applicant's label.
- The challenge process may deal with technical mistakes of the RZ-LGR implementation, but not the RZ-LGR rule itself.
- The challenges to the RZ-LGR rule itself should be external to the new gTLD program and be handled via the change request process of the Generation Panel/Integration Panel.
- If a label is going through the RZ-LGR change request process, the application associated with the label, if it exists, should be removed from the program, and the applicant should be notified at the early stage of the application process. If the change request process is invoked, the relevant label should not hold up any other application.

Q1: [Assuming that the applied-for label has passed the mandatory string requirements and IDNA 2008 requirements] Should the applicant be allowed to submit an application for a gTLD label, knowing the label is invalid according to the RZ-LGR?

- The EPDP Team agrees the applicant should be allowed, however the question is not precise. The question should be reworded as "...knowing the label is invalid according to the RZ-LGR algorithmic check in the application submission system".

Q2: Does the DNS Stability Panel have a role in assessing whether the RZ-LGR has been applied correctly?

- The EPDP Team agrees that the DNS Stability Panel should have such a role. Such a role would be consistent with the 2012 implementation of the new gTLD program, although some EPDP members thought the manual review for all labels is an overkill/unnecessary.

Q3: Is a change request made to the Generation Panel to update the RZ-LGR outside the challenge process for the new gTLD program? Change request to update the RZ-LGR can be made at any time, not limited to the application period.

- The EPDP Team agrees that there is no reason that the change request process for the RZ-LGR should be part of the new gTLD program.

Q4: [Assuming that the application system has correctly incorporated the algorithmic check] Upon receiving rejection from the DNS Stability Panel, should the applicant be allowed to amend the applied-for label in order to conform with the application system?

- Staff clarifies that “amend” means simple syntax changes to the label rather than material changes to the application. Some EPDP Team members thought that as labels can be checked before an application is submitted based on the potential design of the program, it seems that such changes should not be allowed.

The EPDP Team supported the following high-level points, although some additional detail is needed about the role of the DNS Stability Panel:

1. An applicant can challenge an evaluation determined by the DNS Stability Panel that the applied-for TLD label, whose script is supported by the RZ-LGR, is “invalid”
2. Eligibility for filing such a challenge is limited to the applicant’s belief that the DNS Stability Panel has incorrectly assessed the label as “invalid”.
3. The evaluation challenge processes and criteria applicable to the DNS Stability Review recommended in the SubPro Final Report should be used for such a challenge.

The EPDP Team agreed that all of SubPro’s recommendations and implementation guidance for evaluation challenge processes and criteria are fit for purpose. These recommendations and implementation guidance are under Topic 32 (with the exception of Implementation Guidance 32.6, which only applies to appeals and not applicable to the scenarios being discussed in this EPDP).

Some members noted that in the EPDP Recommendation or response to this charter, it should be explained that the DNS Stability Panel is expected to conduct a manual check of the algorithm’s output to confirm the validity of applied-for labels in all cases.

a4) For future gTLD applications, the SubPro PDP proposes an implementation guidance that 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.⁶ 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. The burden in this case is on the applicant, who may have to wait for an indeterminate amount of time but is not aware of any other serious concerns. The SubPro PDP developed this implementation guidance by taking into consideration the TSG recommendation that the application should remain on-hold (or other appropriate status) until the relevant script is integrated into the RZ-LGR.⁷

The WG and the SubPro IRT to coordinate and consider the following questions in order to develop a consistent solution: should the SubPro recommendation be extended to existing TLDs that apply for a variant TLD label whose script is not yet supported by the applicable version of the RZ-LGR? Consider this question in tandem with **b4)** and by taking into account the data to be collected in the “Data and Metric Requirements” section of this charter. If not, what should be the process for an existing TLD registry who wishes to apply for a variant TLD label whose script is not yet supported by the applicable version of the RZ-LGR?

Early written input from SSAC: To support the deployment of IDNs, as long as the codepoints are allowed by IDNA, there is no reason to prohibit the application. However, any variant would not be allowed until the script is integrated into LGR.

Early written input from ccPDP4 variant management SubGroup: This topic will be discussed shortly by the VM SubGroup.

High-Level Notes:

- From one perspective, all existing gTLDs are using scripts that are already in the RZ-LGR or will soon be integrated, so it may not be necessary to respond to this specific charter question. This perspective was elaborated in the staff presentation here: <https://community.icann.org/download/attachments/180029369/EPDP%20Team%20Meeting%20%2314%20Slides.pdf?version=2&modificationDate=1638481302000&api=v2>
- From another perspective, it is important to first answer the fundamental question of whether an application by an existing RO for a variant gTLD label should be treated as a new gTLD application. If the answer is yes, the charter question becomes moot.

⁶ See Implementation Guidance 25.3 in the SubPro Final Report, p.115: <https://gnso.icann.org/sites/default/files/file/field-file-attach/final-report-newgTld-subsequent-procedures-pdp-02feb21-en.pdf#page=115>

⁷ It is important to recognize that the RZ-LGR can be updated to include additional scripts as long as it is done in compliance with the LGR Procedure. The practical limitation, however, is that the time to create an LGR script proposal varies greatly (i.e. months or years). See Recommendation 5 in the TSG report, p.7: <https://www.icann.org/en/system/files/files/rz-lgr-technical-utilization-recs-07oct19-en.pdf#page=7>; for additional context and rationale, see Appendix A of the Recommendations for Technical Utilization of RZ-LGR, pp.11-12: <https://www.icann.org/en/system/files/files/rz-lgr-technical-utilization-recs-07oct19-en.pdf#page=11>

Commented [1]: I see a potential conflict with SSAC's opinion on question a1. It seems to me that they are suggesting that as long as the IDN label is compliant with IDNA2008 (larger repertoire than RZ-LGR) then it should be allowed to be processed, SO LONG the label is applied for as a stand alone TLD. Variants of that label (it presumes self-identified variants) would not be allowed.

This presents a problem because now we would be in a situation where an applicant who is seeking to apply for a label (whose script is supported) that is deemed invalid per the RZ-LGR but valid by raw IDNA standards, could press the DNS stability panel to approve it.

- Answering this fundamental question will help answer other related charter questions. b4 may be the appropriate place to discuss it.
- It is important to look at the history: There is an assumption that variants are essentially the same TLD, but because of the technical implementation we are unable to map the two TLDs together. In terms of applications, it should be one and the same.
- Upon further discussion, the working group agreed that this question may be moot based on the available data. The working group will not make any conclusions on this charter question and then return to this question to close it after addressing the fundamental question in b4.

a5) SAC060 notes that variant code points in LGR may introduce a “permutation issue”, possibly creating a large number of variant domain names, which “presents challenges for the management of variant domains at the registry, the registrar and registrant levels.”⁸ SAC060 advises that “ICANN should ensure that the number of strings that are activated is as small as possible.” The TSG agreed with this SSAC advice.⁹ Appendix C of the Staff Paper reviewed the factors causing numerous variant labels and suggested measures to address this issue.¹⁰

Should there be a ceiling value or other mechanism to ensure that the number of delegated top-level variant labels remains small, understanding that variant labels in the second level may compound the situation? Should additional security and stability guidelines be developed to make variant domains manageable at the registry, registrar, and registrant levels?¹¹

Early written input from SSAC: Yes, there should be a mechanism to ensure that the number of delegated top-level variant labels remains small. Unless there is demonstrated widespread usage of the variant label, the variant label should not be activated.

Early written input from ccPDP4 variant management SubGroup: The issues under a5) will be discussed shortly by the VM SubGroup.

High-Level Notes:

- Staff presentation provided an overview of the background/origin of the charter question, including SAC060, TSG Recommendation 14, and Appendix C of Staff Paper: <https://community.icann.org/download/attachments/180029369/EPDP%20Team%20Meeting%20%2314%20Slides.pdf?version=2&modificationDate=1638481302000&api=v2>. SSAC is the main entity that advised limiting allocatable variants for delegation

⁸ See Recommendation 14, SAC060, p. 20: <https://www.icann.org/en/system/files/files/sac-060-en.pdf#page=20>

⁹ See Recommendation 6 in the TSG report, p.7: <https://www.icann.org/en/system/files/files/rz-lgr-technical-utilization-recs-07oct19-en.pdf#page=7>

¹⁰ See Appendix C of the IDN Variant TLD Implementation: Appendices, pp. 12-29: <https://www.icann.org/en/system/files/files/idn-variant-tld-appendices-25jan19-en.pdf#page=12>

¹¹ One of the security and stability concerns is that some scripts can generate large numbers of variants based on the way the LGR works. The RZ-LGR Procedure manages such numbers by minimizing allocatable variant labels and maximizing blocked variant labels. However, though this approach is optimal in most cases, the outcome may be worse for a specific label in some cases.

- Some members believed that ICANN should not develop a policy to limit variant labels for delegation. Policy is developed based on actors acting rationally. Registries have an incentive to create their own rules to make this manageable, and it may not be in the public interest to limit variants.
- This question is also related to the broader question of whether the application for a variant TLD is regarded as a regular TLD application with the same costs as a standalone application (related questions are in charter section D)? If so, the issue of limiting variants for delegation might be resolved by the market. The only restriction we should have is the one imposed by the RZ-LGR.
- Suggestion: The policy could be that although there is no limit of the number of allocatable variants for delegation, registries must take action to ensure that the variant labels are manageable for registrars and registrants.
- Some members supported the approach to look at the probability and consequences of variant overproduction issues analyzed in the Staff Paper Appendix C, and if appropriate, identify potential mitigation measures.
- The charter question can be strictly interpreted, as in a specific ceiling value number for variants for delegation, or more broadly as a question of whether there should be limitation in terms of delegation. Some script communities already proposed ceiling values regarding variants for delegation, such as Chinese.
- Members want to see more data that can help inform whether there should be a ceiling value or other limit to be proposed.

a6) Since RZ-LGR can be updated over time, the WG needs to consider the implications for existing TLD labels and their variant labels (if any), including any potential changing of status or disposition value.¹²

The TSG further recommends that the Generation Panel (GP) must call out the exception where an existing TLD is not validated by their proposed solution during the public comment period and explain the analysis and reasons for not supporting the existing TLD in their script LGR proposal.¹³ This will allow the community and the GP to review such a case to confirm that an exception is indeed warranted.

Does the WG agree with TSG's suggested approach? If so, to what extent should the TLD policies and procedures be updated to allow an existing TLD and its variants (if any), which are not validated by a script LGR, to be grandfathered? If not, what is the recommended approach to address changes to the current version of the RZ-LGR that assign different disposition values to existing TLDs? Consider this question by taking into account the data to be collected in the "Data and Metric Requirements" section of this charter.

Early written input from SSAC: Data is needed here. Also see answers to question a2 above.

¹² See Recommendation 7 in the TSG report, p.8: <https://www.icann.org/en/system/files/files/rz-lgr-technical-utilization-recs-07oct19-en.pdf#page=8>

¹³ See Recommendation 12 in the TSG report, p.9: <https://www.icann.org/en/system/files/files/rz-lgr-technical-utilization-recs-07oct19-en.pdf#page=9>

Early written input from ccPDP4 variant management SubGroup: This issue under a6) will be discussed shortly by the VM SubGroup.

High-Level Notes:

- Staff presentation provided an overview of the background and preliminary analysis of the charter question:
<https://community.icann.org/download/attachments/180029374/EPDP%20Team%20Meeting%20%2315%20Slides.pdf?version=1&modificationDate=1638995159000&api=v2>
- Context for the TSG recommendation: RZ-LGR is not intended to be static and new rules could be put into place. There is a possibility that a new version of RZ-LGR may invalidate an existing TLD label, but the probability is low because of the measures that are in place.
- This charter question focuses on future update of the RZ-LGR and its implication on existing gTLDs in the future. Based on data collected, all current existing TLDs are valid. Trigger events for RZ-LGR updates mostly involve adding materials as opposed to subtracting materials from the RZ-LGR. Invalidating an existing gTLD and its variant labels (if any) by the proposed RZ-LGR update is extremely unlikely, as it will cause instability in the root-zone. TSG recommendation 12 provides a recommendation to address cases where backwards compatibility cannot be achieved.
- The EPDP team discussed two theoretical cases: 1) a new version of RZ-LGR no longer validates an existing TLD and 2) a new version of RZ-LGR determines that an existing variant of an existing TLD is not an allocatable variant anymore. In these cases, the existing TLDs should remain as they are in “frozen” state. They will not be able to get further variants if not valid with the new RZ-LGR but existing TLDs and relationships should be kept.
- Some members questioned whether a recommendation of maintaining full backward compatibility that becomes policy can be enforceable over the Generation Panels and Integration Panel. Others commented that changes to the RZ-LGR dictated by a Generation Panel are outside the scope of allowable changes under the Registry Agreement. A change to the RZ-LGR could be motivated by one or more of the multiple layers, including the IDNA2008 layer and Unicode layer at the base, which has a high bar to pass.
- The EPDP Team agreed that in the event that backward compatibility cannot be achieved, the GP must call out such an exception during the public comment period and explain the analysis and reasons for not supporting the existing TLD in their script LGR proposal as well as the potential impact on the TLD.
- The EPDP Team supported grandfathering existing TLDs and potentially their variants with an emphasis on the importance of backward compatibility.
- The EPDP Team supported the following approach: Combination of grandfathering and assurances from ICANN/IP that retaining 100% backward compatibility is a hard requirement, anything contrary to 100% backward compatibility needs to have a very high bar to pass.

a7) The SubPro PDP recommends that single character gTLDs may be allowed for limited script/language combinations where a character is an ideograph (or ideogram) and do not introduce confusion risks that rise above commonplace similarities, consistent with SAC052 and Joint ccNSO-GNSO IDN Workgroup (JIG) report.¹⁴

What mechanism or criteria should be used to identify the scripts/languages appropriate for single-character TLDs? Once those scripts/languages are identified, what mechanism or criteria should be used to identify a specific list of allowable characters which can be used as a single-character TLD within such scripts/languages? Should any specific implementation guidance be provided? Furthermore, should the relevant GP tag these code points in the RZ-LGR for a consistent analysis and to ease their identification and algorithmic calculation?¹⁵

Early written input from SSAC: SAC052 Recommendation 1 is still valid.

High-Level Notes:

- Staff presentation provided an overview of the background/origin of the charter question, including SubPro recommendation 25.4, TSG Report Appendix B, SAC052 findings and recommendations, and JIG Final Report on Single Character IDN TLDs : <https://community.icann.org/download/attachments/180029374/EPDP%20Team%20Meeting%20%2315%20Slides.pdf?version=1&modificationDate=1638995159000&api=v2>
- The EPDP Team discussed the original thinking about this issue -- it was to avoid situations where a single stroke of the keyboard would enter a TLD – typos could result in security issues. Usually with ideographs, it takes more than a single keyboard stroke to type the TLD. If in the future, there would be voice input, a single word would suffice to enter a TLD.
- The EPDP Team recognized that Han script may be the only ideographic script that is being used in the root zone. If the EPDP Team are looking only at ideographic scripts, it might still be useful to go back to the relevant GPs to see if they have identified characters that might be appropriate for single character TLDs. The key issue for consideration regarding ideographs – for Han characters (Chinese, Japanese, Korean) -- is that one ideograph could represent a whole concept/word.
- Suggestion: Use the existing GPs and IP or formulate a new mechanism or committee that is able to identify if the script can be used for characters and then which characters can be used.

¹⁴ See Recommendation 25.4 in the SubPro PDP Final Report, p.115: <https://gnso.icann.org/sites/default/files/file/field-file-attach/final-report-newgtld-subsequent-procedures-pdp-02feb21-en.pdf#page=115>; Recommendation 1 in SAC052, p.8: <https://www.icann.org/en/system/files/files/sac-052-en.pdf#page=8>; the SubPro PDP does not believe it has the relevant expertise to make this determination and would welcome the identification of the limited set of scripts and languages and potentially a specific list of allowable single-characters (e.g., during implementation), which will substantially increase the predictability of what will likely still remain a case-by-case, manual process. See Rationale for Recommendation 25.4 in the SubPro PDP Final Report, pp.116-117: <https://gnso.icann.org/sites/default/files/file/field-file-attach/final-report-newgtld-subsequent-procedures-pdp-02feb21-en.pdf#page=116>

¹⁵ See Annex B of the Recommendations for the Technical Utilization of the RZ-LGR, p.13: <https://www.icann.org/en/system/files/files/rz-lgr-technical-utilization-recs-07oct19-en.pdf#page=13>

a8) What additional aspects of gTLD policies and procedures, which are not considered in the above charter questions, need to be updated to ensure that the validation of existing TLD labels and calculation of variant labels depend exclusively on the RZ-LGR in a consistent manner?

Parking lot for future discussion:

- The EPDP Team plans to discuss whether contextual information should be provided as it regards IDL statuses. By way of example, a user seeing a TLD that has the status of withheld-same-entity, may benefit from knowing the primary string that generated the variant TLD.

a9) A given label in an Internationalized Domain Label (IDL) set may be in one of the following non-exhaustive status: delegated, withheld-same-entity, blocked, allocated, rejected. The WG and the SubPro IRT to coordinate and develop a consistent definition of variant label status in the IDL set.

Early written input from ccPDP4 variant management SubGroup: The VM SubGroup has identified the need for a consistent definition of the status variant labels as well. To date the terms have been defined loosely, but where possible the VM SubGroup proposes to coordinate the definition of the status of labels/strings

High-Level Notes:

- As a9 and a10 are interrelated, the discussion for these two charter questions was combined.
- Staff presentation provided an overview of why variant label statuses are needed, background/past work on determining the label status definitions, understanding what the statuses mean, and how a variant label can transition from one state to another: <https://community.icann.org/download/attachments/180029377/EPDP%20Team%20Meeting%20%2316%20Slides.pdf?version=2&modificationDate=1639801011000&api=v2>
- It was noted that the variant label statuses as proposed in the Integrated Issues Report and subsequently the staff paper were intended to be relevant to both gTLDs and ccTLDs. The ccPDP4 has not yet considered this topic, but consistency between gTLDs and ccTLDs should be considered. However, the gTLD and ccTLD processes are quite different, so it may not be possible.
- While the group recognized and understand the reasons for the possible label transitions as described on slide 7, another scenario was considered: if a gTLD and its variants change ownership and the new operator does not want to maintain one of the allocated variants, the variant label could go from Delegated back to Allocated or Withheld-Same-Entity. This is understood to be a rare occurrence (e.g., retired ccTLDs).

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- There was a suggestion to consider the five states in buckets as a means to simplify things, with Blocked, Allocatable (which would include withheld-same-entity, allocated, rejected), and Delegated.

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a10) Individual labels in an IDL set may go through the following possible status transformations:

- **from “withheld-same-entity” to “allocated”**: Allocation only to the same entity as another label in the IDL set. This change happens if a variant was not initially requested for allocation and later is. Allocating withheld labels would be the application process for a variant TLD.
- **from “blocked” to “withheld-same-entity”**: A later LGR may broaden the available labels in the IDL set. Such possible labels automatically become withheld-same-entity.
- **from “allocated” to “delegated”**: Happens when name servers are added. (Not new.)
- **from “delegated” to “allocated”**: If a domain is removed from the DNS, the allocation can remain in place anyway. Rare in the root zone, but not new.
- **from “rejected” to “withheld-same-entity”**: Every Rejected label is automatically Withheld-same-entity as well. If the Rejected status comes off, the label can be handled as any other Withheld-same-entity label.

Note that an allocated or withheld-same-entity label cannot become blocked unless a new version of the LGR makes this possible.

The WG and the SubPro IRT to coordinate and consider the following questions in order to develop a consistent solution: what is the procedure to change the label status for individual variant labels?

Early written input from SSAC: As noted in SAC062, “ICANN should ensure that the number of strings that are activated is as small as possible.”

- As a9 and a10 are interrelated, the discussion for these two charter questions was combined, with the deliberations captured under a9 above.

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