**Draft Outcome**

Topic A: 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]](#footnote-0)  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? |
| --- |

**A1 Draft Answer to Charter Question:**

The EPDP Team agreed that the RZ-LGR should be the sole source to calculate the variant labels and disposition values for existing delegated gTLD labels.

**A1 Draft Recommendations & Implementation Guidance:**

Recommendation 1.1: The RZ-LGR be the sole source to calculate the variant labels and disposition values for existing delegated gTLD labels.

**A1 Draft Rationale for Recommendations & Implementation Guidance:**

Rationale for Recommendation 1.1: To support its consideration of charter question A1, the EPDP Team relied on data collected and analyzed by ICANN org that calculated the variant labels of existing gTLDs by using the latest version of the RZ-LGR (i.e. RZ-LGR-4) and determined whether the variant labels match those that were identified by the applicants in the 2012 New gTLD Program.[[2]](#footnote-1) As the RZ-LGR did not exist in 2012, IDN gTLDs applicants were asked to self-identify any “variant” labels (based on their own calculations) corresponding to their applied-for label. The EPDP Team concluded that there is no significant difference between the variant labels calculated by the RZ-LGR and those self-identified by applicants in 2012. Only two self-identified “variants” did not conform to the RZ-LGR: one likely related to an alternative spelling; and the other was potentially a typo. As a result, the EPDP Team concluded that using the RZ-LGR as the sole source to calculate variant labels of existing gTLDs and their disposition values would not have a major impact on existing delegated gTLD operators.

| **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.”[[3]](#footnote-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. |
| --- |

**A2 Draft Answer to Charter Question:**

The EPDP Team agreed that no recommendation or implementation guidance is needed for the self-identified “variant” gTLD labels in the 2012 New gTLD Program, as they do not have legal standing and are for information purposes only. It does not matter whether any of the self-identified “variant” labels were used for any purpose in the 2012 round (if at all).

| **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.[[4]](#footnote-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.[[5]](#footnote-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?[[6]](#footnote-5) |
| --- |

**A3 Draft Answer to Charter Question:**

The EPDP Team agreed to the following:

* An applicant can challenge an evaluation determined by the DNS Stability Panel (DSP) that the applied-for TLD label, whose script is supported by the RZ-LGR, is “invalid”.
* Eligibility for filing such a challenge is limited to the applicant’s belief that the DSP has incorrectly assessed the label as “invalid”.
* 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.

**A3 Draft Recommendations & Implementation Guidance:**

Recommendation 1.2: SubPro’s limited challenge mechanism for DNS Stability Review applies in cases where the applicant believes that the label is valid as per the RZ-LGR and that the DNS Stability Panel has incorrectly assessed the label as "invalid", thus resulting in the application having been incorrectly disqualified.

Implementation Guidance 1.3: When the initial algorithmic check finds that the applied-for label does not conform to the RZ-LGR, the application submission system must issue a warning. However, the applicant should be allowed to submit the application if the label passes the mandatory string requirements and the IDNA 2008 requirements. This recognizes the unlikely, but possible situation, that the RZ-LGR was programmed or incorporated in the application submission system incorrectly.

**A3 Draft Rationale for Recommendations and Implementation Guidance:**

Rationale for Recommendation 1.2: The EPDP Team developed this recommendation based on assumptions including but not limited to the following:

1) there will be an initial algorithmic check, which incorporates RZ-LGR, in the application submission system to check the validity of all applied-for labels;

2) DSP will perform a manual review of all applied-for labels to ensure that the technical implementation of the RZ-LGR is done correctly in the initial algorithmic check; and

3) DSP’s manual review is authoritative and its evaluation decision of a label being "invalid" will result in disqualification of the application.[[7]](#footnote-6)

The EPDP Team agreed that the applicant should be allowed a limited challenge against the DSP’s evaluation decision, but only on the grounds that the applicant believes the DSP has incorrectly assessed the label as “invalid”, specifically due to its incorrect assessment of the technical implementation of RZ-LGR in the initial algorithmic check. Under such circumstances, SubPro’s recommendations and implementation guidance pertaining to the limited challenge mechanism for DNS Stability Review are fit for purpose.[[8]](#footnote-7)

The EPDP Team further agreed that if the applicant believes that the label not validated by the RZ-LGR should be valid, the applicant should be advised to submit a review request to the relevant script Generation Panel directly or through ICANN org, at any time, to review its proposal to update the RZ-LGR. This is an existing RZ-LGR review process independent from the new gTLD program.

Rationale for Implementation Guidance 1.3: The EPDP Team agreed that the RZ-LGR is the authoritative source for the validation of all gTLDs and the calculation of their variant labels and disposition values. However, the EPDP Team recognized that there may be human error in the technical implementation of RZ-LGR in the initial algorithmic check of the application submission system. Hence the applicant should still be allowed to submit the label, which is deemed “invalid” according to the initial algorithmic check but passes the mandatory string requirements and IDNA 2008 requirements.

**A3 Open Item:**

The EPDP Team discussed the scenario where an applicant attempts to apply for a label that is subject to an ongoing RZ-LGR review request. The EPDP Team agreed to the following so far:

* Any ongoing processes pursuant to a RZ-LGR review request should not hold up any other new gTLD applications in the program from the same application round.
* A new application for a label that had been subject to a RZ-LGR review request may be submitted only if and when such a label is validated by the updated version of the RZ-LGR.

The EPDP Team suggested that if an applicant applies for a label that is subject to an ongoing RZ-LGR review request, the applicant should be notified at an early stage of the application process and the application should be removed from the program. However, the EPDP Team recognized that this potential recommendation may be contingent on the output of charter question a4) deliberations, hence the discussion of this item remains open.

| **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.[[9]](#footnote-8) 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.[[10]](#footnote-9)  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? |
| --- |

**A4 Draft Answer to Charter Question:**

**The EPDP Team agreed that this charter question is moot as all scripts of all existing delegated gTLDs are already, or soon to be, integrated into the RZ-LGR. Hence no recommendation or implementation guidance is needed.**

| **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.”[[11]](#footnote-10) 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.[[12]](#footnote-11) Appendix C of the Staff Paper reviewed the factors causing numerous variant labels and suggested measures to address this issue.[[13]](#footnote-12)  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?[[14]](#footnote-13) |
| --- |

**A5 Draft Answer to Charter Question:**

The EPDP Team agreed to the following:

* Only a limited number of scripts are impacted by the potential overproduction of allocatable variant labels.
* There should not be ceiling values beyond the existing measures imposed by the RZ-LGR to reduce the number of allocatable top-level variant labels.
* However, there should be additional guidance to make variant domains manageable at the registry, registrar, and registrant levels, to ensure consistent user experience.

**A5 Draft Recommendations & Implementation Guidance:**

Recommendation 1.4: No ceiling value is necessary as existing measures in the RZ-LGR to reduce the number of allocatable top-level variant labels and market forces combined will keep the number of activated top-level variant labels conservative.

Recommendation 1.5: Best practice guidelines be developed for the management of a gTLD and its variant labels by registries and registrars with a view to ensuring a consistent user experience.

**A5 Draft Rationale for Recommendations and Implementation Guidance:**

Rationale for Recommendation 1.4: The EPDP Team had considerable discussion on this topic. This included engagement with members of the SSAC to better understand SSAC advice (SAC060) relevant to this topic, as well as consideration of an analysis prepared by ICANN Org of the treatment of variant labels in the RZ-LGR. This recommendation was subsequently developed based on the following understanding:

* Of the 25 scripts already integrated or expected to be integrated in the RZ-LGR, four scripts have no variant labels and 14 scripts have no allocatable variant labels. Only limited scripts have allocatable variant labels, and these are: Arabic, Bengali, Chinese, Greek, Latin, Myanmar, and Tamil. Except for Arabic, the language communities of all the other scripts already have put a ceiling (i.e., two to four labels) to limit the number of allocatable variants.[[15]](#footnote-14)
* Notwithstanding the prevailing measures contained in the RZ-LGR, existing registries and future gTLD applicants should not have arbitrary limits placed on the number of variant gTLD labels for which they wish to request and/or apply. The EPDP Team considered that there will be a number of factors that the existing registries and future applicants will take into consideration that would likely result in a conservative approach to requesting and/or applying for variant labels, such as cost and potential challenges associated with managing a gTLD and its variant labels at the registry, registrar and registrant levels.
* SAC060 recommends applying a conservative approach in order to avoid the potential permutation issues of variant labels both at the top-level and with combinations of the top-level and the second-level. However, SSAC members confirmed, during an engagement session with the EPDP Team, that the sheer volume of variant labels does not necessarily create security or stability risks as a gTLD and its variant labels appear as separate gTLDs in the root zone. The concern expressed by the SSAC members was associated with the lack of DNS protocol solution that enforces equivalence of variant labels and the challenges of creating a consistent experience for the end user of the gTLD and its variant labels.[[16]](#footnote-15)

Rationale for Recommendation 1.5: To address the concern raised by SSAC members that there is no common approach by registries and registrars in managing gTLDs and their variant labels, which may result in a less than optimal user experience, the EPDP Team agreed that it would be valuable to development of guidelines to make variant domains manageable at the registry, registrar, and registrant levels and provide consistent user experience.

| **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.[[17]](#footnote-16)  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.[[18]](#footnote-17) 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. |
| --- |

**A6 Draft Answer to Charter Question:**

The EPDP Team agreed to the following:

* Based on data presented by staff, all existing delegated gTLDs are valid according to the current version of RZ-LGR.[[19]](#footnote-18)
* It is extremely unlikely that a proposed RZ-LGR update would invalidate an existing gTLD and its delegated and allocated variant labels (if any), as all updates of the RZ-LGR are expected to retain full backward compatibility.[[20]](#footnote-19)
* In the unexpected event where a proposed RZ-LGR update is unable to retain full backward compatibility, the TSG recommendation proposed in the Charter question must be applied.
* All existing gTLDs and their delegated and allocated variant labels (if any) not validated by a proposed RZ-LGR update must be grandfathered.

**A6 Draft Recommendations & Implementation Guidance:**

Recommendation 1.6: Any existing gTLDs and their delegated and allocated variant labels (if any) not validated by a proposed RZ-LGR update must be grandfathered. In other words, the proposed update will apply to future new gTLDs and their variant labels and will not be retrospective; there will be no change to the contractual and delegation status of existing gTLDs and their delegated and allocated variant labels, which predate the proposed RZ-LGR update and are subject to the version of RZ-LGR when those labels were delegated or allocated.

Recommendation 1.7: For all future versions of the RZ-LGR, Generation Panels (GPs) and the Integration Panel must make best effort to retain full backward compatibility with existing gTLDs and their delegated and allocated variant labels (if any). The LGR Procedure must be updated to specify the exceptional circumstances that could result in a proposed update to the RZ-LGR not being able to retain full backward compatibility.

Recommendation 1.8: In the unexpected event where a proposed update of the RZ-LGR is unable to retain full backward compatibility for validating any existing gTLDs as well as their delegated and allocated variant labels (if any), the relevant GP must call out the exception during a public comment period and explain the reasons for such exception. The public comment period should also include the elements in the following Implementation Guidance.

Implementation Guidance 1.9: The GP analysis should identify security and stability risks (if any), as well as possible actions to mitigate the risks (if known and understood by the GP) associated with allowing an existing gTLD and their delegated and allocated variant labels to be grandfathered.

Implementation Guidance 1.10: ICANN org should facilitate a dialogue between the registry operator of the grandfathered gTLD, ICANN org, and the GP, to provide an assessment of the potential impact of grandfathering on the gTLD registry operator, their customers, and end users, as well as proposed measures to reduce the impact.

Notwithstanding the recommendation to grandfather affected gTLDs, in the event security and stability risks are identified, ICANN org and the affected registry operator should discuss possible measures to minimize the risks that would result in minimal disruption to the registry operator, their customers, and end users.

**A6 Draft Rationale for Recommendations and Implementation Guidance:**

Rationale for Recommendations 1.6-1.8: The EPDP Team developed these recommendations based on the understanding that the goal of all future updates of the RZ-LGR must be to retain full backward compatibility with existing gTLDs and their delegated and allocated variant labels (if any) to maintain the stability in the root zone. While the possibility does exist that future RZ-LGR updates may be unable to achieve full backward compatibility, the actual probability of this occurring is considered extremely low.[[21]](#footnote-20) Nevertheless, the EPDP Team seeks affirmation from the Generation Panels (GPs) and Integration Panel that they must make best effort to retain full backward compatibility for all future versions of the RZ-LGR.

The EPDP Team recognized that there may still be unexpected circumstances that render an existing gTLD and its delegated and allocated variant labels (if any) invalid by a proposed RZ-LGR update, making the full backward compatibility unretainable.[[22]](#footnote-21)

Given the potentially serious consequences for existing gTLD registry operators, their customers, and end-users of such an eventuality, the EPDP Team believes that there should be predictability associated with the circumstances that could eventuate in a RZ-LGR update not being able to retain full backward compatibility. For example, changes to the IDNA2008 or Unicode, which are outside the control of the LGR process, could be legitimate reasons for an RZ-LGR update being unable to retain backward compatibility.

In those unexpected cases, the EPDP Team agreed that the affected existing gTLDs and their delegated and allocated variant labels (if any) will be grandfathered. This is foreseen in the LGR Procedure, which states that “While existing labels will almost certainly have to be grandfathered if they are in conflict with the label generation rules established by this procedure, that precedent and conflict is not a reason to invalidate any aspect of the new rules or this procedure.”[[23]](#footnote-22)

The EPDP Team specified that grandfathered in this instance means that the proposed RZ-LGR update will apply to future new gTLDs and their variant labels and will not be retrospective. The existing registry operator will be able to continue to operate the affected TLD and its delegated and allocated variant labels (if any). There will be no change to the contractual and delegation status of existing gTLDs and their delegated and allocated variant labels, which predate the proposed RZ-LGR update and are subject to the version of RZ-LGR when those labels were delegated or allocated. This definition seeks to provide safeguards for the affected Internet stakeholders, such as registries, registrars, registrants, resellers, and end users.

The EPDP Team further agreed that the GP proposing such an update must call out the exception during a public comment period and explain the analysis and reasons for not supporting such gTLDs and their delegated and allocated variant labels (if any) in their script proposal.

Rationale for Implementation Guidance 1.9-1.10: As grandfathering will allow the gTLD to continue operating despite its incompatibility with the RZ-LGR, the EPDP Team recommends that the GP include, in the public comment, an opinion on any identified security and stability risks associated with not achieving full backward compatibility, as well as possible actions to mitigate the risks to the extent feasible, if known and understood by the GP.

To ensure balanced representation of the issues, the EPDP Team recommends that in the public comment, there should also be an assessment of the potential impact of grandfathering on the gTLD registry operator as well as the user experience of other affected Internet stakeholders. Such assessment should also include proposed measures to reduce the impact of grandfathering. In the event security and stability risks are identified, the assessment should include possible measures to minimize the risks that would result in minimal disruption to the registry operator, their customers, and end users.

With the understanding that this is beyond the scope of work done by the GP and Integration Panel, the EPDP Team believes that the ICANN org is in position to facilitate a dialogue between the affected gTLD registry operator, ICANN org, and the GP. ICANN org appears to be appropriately positioned to facilitate such an assessment, which should be included in the public comment. To the extent any proposed measures would require contractual amendments, they would need to be managed under the existing provisions of the relevant Registry Agreement.

The EPDP Team affirms that the public should have an opportunity to comment on all these elements in the public comment period. The Integration Panel must take such comments into account when reviewing and considering the proposal for integration into the next version of the RZ-LGR.

| **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.[[24]](#footnote-23)  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?[[25]](#footnote-24) |
| --- |

**A7 Draft Answer to Charter Question:**

**The EPDP Team agreed to the following:**

* **The EPDP Team affirms the SubPro’s recommendation that single character gTLDs may be allowed for ideographic script and language combinations.**
* **At the time of the EPDP Team’s discussion, the Han script is the only ideographic script included in the RZ-LGR, and Chinese, Japanese, and Korean are the only languages incorporating the Han script.[[26]](#footnote-25) Therefore, the Han script and the Chinese, Japanese, and Korean languages are appropriate for single-character gTLDs.**
* The Chinese, Japanese, and Korean Generation Panels are in position to develop the mechanism or criteria to identify a specific list of allowable characters appropriate for single-character gTLDs.

**A7 Draft Recommendations & Implementation Guidance:**

Recommendation 1.7: Single character gTLDs may be allowed for ideographic script and language combinations, which are the Han script and the Chinese, Japanese, and Korean languages at the time of the EPDP Team’s deliberation.

Recommendation 1.8: The Chinese, Japanese, and Korean Generation Panels should develop the mechanism or criteria to identify a specific list of allowable characters appropriate for single-character TLDs.

Implementation Guidance 1.9:

**A7 Draft Rationale for Recommendations and Implementation Guidance:**

Rationale for Recommendation 1.7: The EPDP Team affirmed Recommendation 25.4 in the SubPro PDP Final Report that single character TLDs may be allowed for ideographic script and language combinations. At the time of the EPDP Team’s discussion, the Han script is the only ideographic script included in the RZ-LGR, and Chinese, Japanese, and Korean are the only languages incorporating the Han script. Therefore, the EPDP Team recommends that the Han script and the Chinese, Japanese, and Korean languages are appropriate for single-character gTLDs.

Rationale for Recommendation 1.8:

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-newgtld-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> [↑](#footnote-ref-0)
2. See more details of the data collection exercise here: <https://community.icann.org/download/attachments/180028295/GNSO%20IDN%20EPDP%20Data-12nov21.xlsx?version=1&modificationDate=1637684496799&api=v2> [↑](#footnote-ref-1)
3. 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/agb/guidebook-full-04jun12-en.pdf> [↑](#footnote-ref-2)
4. 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> [↑](#footnote-ref-3)
5. 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> [↑](#footnote-ref-4)
6. 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 labels, as stated in the LGR Procedure. TSG suggests how to address such a challenge by remaining within the LGR Procedure. [↑](#footnote-ref-5)
7. In considering question a3), it was necessary for the EPDP Team to make assumptions about the possible process flow for a subsequent new gTLD application process. Many of these assumptions were based on the 2012 New gTLD Program Applicant Guidebook and process, notwithstanding that the RZ-LGR did not exist at that time. Recognizing that the Implementation Review Team is expected to develop the implementation details for the future round of the New gTLD Program, the EPDP Team agreed on the assumed process flow and used it as a tool to assist its development of the recommendation and implementation guidance pertaining to charter question a3). See details here: <https://community.icann.org/download/attachments/176622713/EPDP%20Team%20Meeting%20%2313%20Slides.pdf?version=1&modificationDate=1636142182000&api=v2> [↑](#footnote-ref-6)
8. See the SubPro Recommendations and Implementation Guidance under Topic 32 Limited Challenge / Appeal Mechanism (specifically, Recommendations 32.2 and 32.10 and Implementation Guidance 32.3/32.4/32.5/32.6/32.7/32.9/32.11/32.12/32.13), as well as the DNS Stability Process in Annex F. [↑](#footnote-ref-7)
9. 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> [↑](#footnote-ref-8)
10. 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> [↑](#footnote-ref-9)
11. See Recommendation 14, SAC060, p. 20: <https://www.icann.org/en/system/files/files/sac-060-en.pdf#page=20> [↑](#footnote-ref-10)
12. 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> [↑](#footnote-ref-11)
13. 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> [↑](#footnote-ref-12)
14. 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. [↑](#footnote-ref-13)
15. ICANN org staff checked all scripts in the RZ-LGR-4 and those that will be incorporated in the next version to see if there are mechanisms in place to reduce the number of allocatable variants. For the scripts with allocatable variant labels, ICANN org staff ran them through the RZ-LGR to see how many variants are created. The findings were presented during the EPDP Team meeting on 20 January 2022. See slides [here](https://community.icann.org/download/attachments/183992731/EPDP%20on%20IDNs%20-%20A5%20-%2020%20Jan%202022.pdf?version=1&modificationDate=1642693642936&api=v2). [↑](#footnote-ref-14)
16. On 13 January 2022, the IDNs EPDP Team engaged with SSAC members to discuss their early input to the IDNs EPDP as well as specific questions related to the charter questions. See details here:<https://community.icann.org/x/iYH3Cg>. See SAC060 here:<https://www.icann.org/en/system/files/files/sac-060-en.pdf> [↑](#footnote-ref-15)
17. 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> [↑](#footnote-ref-16)
18. 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> [↑](#footnote-ref-17)
19. This data was collected by GDS Staff to determine the complete set of variant labels of all gTLDs from the 2012 New gTLD Program. The data was presented by staff during the EPDP Team meeting on 18 November 2021: <https://community.icann.org/x/hwO7Cg> [↑](#footnote-ref-18)
20. There are stability clauses or mechanisms in the RZ-LGR, IDNA2008, and the Unicode base layer to ensure that existing gTLDs will be allowed to remain despite future changes.

    * Unicode has a comprehensive set of [stability policies](https://www.unicode.org/versions/Unicode14.0.0/ch03.pdf%20and%20https://www.unicode.org/policies). The key stability policies are that characters don't get moved/removed, and the stability of the Normalization Forms.
    * IDNA 2008 relies on its use of Unicode stable function like normalization to assure stability and use the General Category property (GC) to insure its own stability. [RFC 5892](https://datatracker.ietf.org/doc/html/rfc5892) contains stability considerations in its introduction. Because GC is not part of the immutable set in Unicode, there is a mechanism in IDNA 2008 to allow backward compatibility to maintain stability: “Changes in Unicode properties that do not affect the outcome of this process do not affect IDN. For example, a character can have its Unicode General\_Category value (see [[Unicode52](https://datatracker.ietf.org/doc/html/rfc5892#ref-Unicode52)]) change from So to Sm or from Lo to Ll, without affecting the algorithm results. Moreover, even if such changes were the result, the BackwardCompatible list ([Section 2.7](https://datatracker.ietf.org/doc/html/rfc5892#section-2.7)) can be adjusted to ensure the stability of the results.”
    * RZ-LGR relies on the Stability principle (pg. 12) of the [LGR Procedure](https://www.icann.org/en/system/files/files/lgr-procedure-20mar13-en.pdf): “Once a code point is permitted, it is almost impossible to stop permitting it: the act of permitting a code point cannot be undone. This is particularly true once a label containing this code point has been registered.” This is repertoire stability policy concerning the RZ-LGR. This does not guarantee 100% stability, to allow fixes in case of errors for example. Any change proposed by the Generation Panel must be reviewed and approved by the Integration Panel, which holds a conservative approach and only approves changes if they pass an extremely high bar.

    [↑](#footnote-ref-19)
21. See the previous footnote. [↑](#footnote-ref-20)
22. One possibility may be that a code point was mistakenly permitted in a prior version of the RZ-LGR and a corresponding TLD has been delegated in the root zone. The proposed RZ-LGR update is to remove that code point in order to fix the error, hence affecting the existing TLD. [↑](#footnote-ref-21)
23. See Section A.3.5 of the Root Zone IDNA Label LGR Development and Maintenance, p.10: <https://www.icann.org/en/system/files/files/draft-lgr-procedure-20mar13-en.pdf#page=10> [↑](#footnote-ref-22)
24. 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> [↑](#footnote-ref-23)
25. 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> [↑](#footnote-ref-24)
26. Concerning the term ideogram (and related ideograph), Unicode uses it to refer to the Chinese, Japanese and Korean (CJK) repertoire: <https://www.unicode.org/versions/Unicode14.0.0/ch18.pdf> (page 728): “The term ‘Han ideographic characters’ is used within the Unicode Standard as a common term traditionally used in Western texts, although ‘sinogram’ is preferred by professional linguists. Taken literally, the word ‘ideograph’ applies only to some of the ancient original character forms, which indeed arose as ideographic depictions. The vast majority of Han characters were developed later via composition, borrowing, and other non-ideographic principles, but the term ‘Han ideographs’ remains in English usage as a conventional cover term for the script as a whole.” Using this terminology, the Han script is the only ideographic script included in the RZ-LGR; see <https://www.icann.org/sites/default/files/lgr/lgr-4-overview-05nov20-en.pdf>, Section 7.2 (the table describes the repertoire per script). [↑](#footnote-ref-25)