

Summary Report of Public Comment Preceding

Draft Project Plan for Proposed Name Collision Analysis Project (NCAP)			
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Section I: General Overview and Next Steps			
General Overview			
<p>On 2 March 2018, SSAC posted the Draft Project Plan for the Proposed Name Collision Analysis Project (NCAP) for public comment. The deadline to receive public comments was 18 April 2018.</p> <p>The proposed Name Collision Analysis Project (NCAP) project plan [PDF, 241 KB] has been drafted by the ICANN Security and Stability Advisory Committee (SSAC). It details their proposed approach for studying risks posed to users related to name collisions if .CORP, .HOME, .MAIL strings were to be delegated in the root in response to the ICANN Board's request in resolutions 2017.11.02.29 - 2017.11.02.31. The proposed SSAC study is intended to facilitate the development of policy on Collision Strings to mitigate potential harm to the stability and security of the DNS posed by delegation of these strings. The SSAC seeks community input on the project plan before it is finalized and SSAC consensus is reached for submission to the Board for approval and project kick-off.</p> <p>At the time this report was drafted, nine comments were submitted to the forum.</p>			
Next steps			
<p>SSAC has formed an NCAP Work Party that will finalize the project plan and submit it to the full SSAC to obtain consensus, and subsequently, submit a consensus plan to the ICANN Board.</p>			

Section II: Contributors

At the time this report was prepared, a total of nine (9) community submissions had been posted to the forum. The contributors, both individuals and organizations/groups, are listed below in chronological order by posting date with initials noted. To the extent that quotations are used in the foregoing narrative (Section III), such citations will reference the contributor's initials.

Organizations and Groups:

Name	Submitted by	Initials
At-Large Advisory Committee	ICANN At-Large Staff	ALAC
Neustar	Donna Austin	NSR
Registry Stakeholder Group	Paul Diaz	RySG
Business Constituency	Steve DeIBianco	BC
Lewis Roca Rothgerber Christie LLP	Anne Aikman-Scalese	LRRC
United States Postal Service	Anne Aikman-Scalese	USPS
Intellectual Property Constituency	Brian Scarpelli	IPC
Registrar Stakeholder Group	Zoe Bonython	RrSG
Non-Commercial Stakeholder Group	Rafik Dammak	NCSG

Individuals:

Name	Affiliation (if provided)	Initials

Section III: Summary of Comments

General Disclaimer: This section intends to summarize broadly and comprehensively the comments submitted to this public comment proceeding but does not address every specific position stated by each contributor. The preparer recommends that readers interested in specific aspects of any of the summarized comments, or the full context of others, refer directly to the specific contributions at the link referenced above (View Comments Submitted).

ICANN has received nine (9) comments from the community on the proposed [Name Collision Analysis Project \(NCAP\) project plan](#). For ease of reference, comments submitted are organized by commenter.

1. Comments from At-Large Advisory Committee (ALAC):

- 1.1. As the principle voice of end users within the ICANN community, the At-large Advisory Committee (ALAC) supports the Security and Stability Advisory Committee (SSAC) in its efforts to address the issue of Name Collisions as it remains an area of some uncertainty. The ALAC urges the SSAC to proceed with the Name Collision Analysis Project (NCAP) Work Party's project plan and allocate enough time to do it right. We believe it is important to minimize the unintended consequences for end users. Name Collision occurs when a user, attempting to reach a private domain name, unintentionally reaches a public domain name and, as such, cut to the core of end user trust of the internet and could pose potential security issues.
- 1.2. The NCAP Work Party's project plan, as it currently stands, seems adequate without being excessive. We urge the SSAC to stay the course and not expedite the process

for the benefit of any subsequent procedures. There is great anticipation, from parts of the community, for new applications but not only is a specific delay unlikely, given other factors, we believe it would be prudent for the SSAC to execute the project plan as submitted to provide the ICANN community with a holistic assessment of the risks.

- 1.3. The ALAC seeks clarity on the SSAC's bidding process for work contemplated under this Draft Project Plan, as touched upon in sections 3.1 and 3.2. First, we appreciate the SSAC's candor in disclosing that it will consider NCAP Work Party members' bids (and that of their affiliates), but it remains unclear as to their overall status as compared to invited guests of the SSAC.
- 1.4. We see a potential issue with having only a select group of the SSAC community choosing with whom they will contract. The ALAC recommends that any decision with respect to contracting with either NCAP Work Party members and their affiliates or independent third-party contracting agents be taken by the whole SSAC (and excluding invited guests), and for SSAC to provide the ICANN community with adequate amount of notice with respect to any party with whom they wish to contract. We believe that this recommendation will ameliorate concerns related to potential conflicts of interest that may arise.

2. Comments from Neustar (NSR):

- 2.1. Neustar welcomes the opportunity to comment on the draft project plan for the Proposed Name Collision Analysis Project (NCAP). Supporting innovation while ensuring a pragmatic and well-balanced approach to the security and integrity of the DNS are necessary for a healthy and growing Internet.
- 2.2. Existing Name Collision Management Framework: In preparation for any review of potential future risks of name collisions, it is imperative to review past efforts. As part of the groundwork for the last round of new TLD launches, multiple research projects were undertaken to identify the risk, and develop mitigations, for name collisions in the DNS. These efforts resulted in the development of the Name Collision Occurrence Management Framework, which can be found at the following link: <https://www.icann.org/en/system/files/files/name-collision-framework-30jul14-en.pdf>. This framework comprised multiple measures that addressed the risk of name collisions in the previous new TLD round, including:
 - 2.3. An obligation for all Registry Operators to act on requests from ICANN within two hours in the case of name collision reports, in conjunction with Section 6.3 of Specification 6 of the new gTLD Registry Agreement. This included the removal of domain names from a TLD zone for a period of up to two years in the event of collisions. "New gTLD Registry Agreement, Specification 6 6.3 Name Collision Report Handling 6.3.1 During the first two years after delegation of the TLD, Registry Operator's emergency operations department shall be available to receive reports, relayed by ICANN, alleging demonstrably severe harm from collisions with overlapping use of the names outside of the authoritative DNS. 6.3.2 Registry Operator shall develop an internal process for handling in an expedited manner reports received pursuant to subsection 6.3.1 under which Registry Operator may, to the extent necessary and appropriate, remove a recently activated name from the TLD zone for a period of up to two years in order to allow the affected party to make changes to its systems."
 - 2.4. A 90 day continuous controlled interruption period, where wildcard records were used to resolve queries for any domain name within a TLD in a predefined manner. This approach allowed detection of name collisions with any domain name within a TLD as part of the TLD launch process. For TLDs that were already active, a controlled interruption period of 90 days for block list domains enabled detection of name collisions.

- 2.5. An agreement that ICANN may designate an interim back-end Registry Operator in the event a Registry Operator is unable to implement the measures to address name collisions in a timely manner.
- 2.6. An option to reverse the delegation of a TLD during the controlled interruption period, in the unlikely case of a clear and present danger to human life as a result of collision due to the use of a dotless name.
- 2.7. These measures, developed after considerable research and consultation with the community, supported the successful launch of more than 1200 new gTLDs. Based on the experience from the 2012 new gTLD round, these measures have been shown to provide effective mitigation of the risks of name collisions. To date, no major name collision event has occurred where a risk to human life has been observed.
- 2.8. The effectiveness of these measures was corroborated by a report by JAS Global Advisors, titled 'Mitigating the Risk of DNS Namespace Collisions - A Study on Namespace Collisions in the Global Internet DNS Namespace and a Framework for Risk Mitigation', published by ICANN in 2015.
- 2.9. Potential impact on new gTLDs: While Neustar support research and analysis projects such as the NCAP, we note that the project plan has three phases and currently has a suggested completion date of July 2020 with an assumption that if any policy work is required, it would be performed upon completion. Based on existing evidence such as the JAS report noted above we do not believe that the NCAP process should have any adverse impact on the current timeline for the introduction of the next wave of new gTLDs, which is anticipated in early 2020. However, in order to mitigate the potential for any adverse impact, we recommend that the SSAC reconsider the NCAP project plan and timeline to take account of other community processes, such as the New gTLD Subsequent Procedures Policy Development Process, to ensure a timely completion date.

3. Comments from the Registry Stakeholder Group (RySG):

- 3.1. The Registries Stakeholder Group (RySG) welcomes the opportunity to comment on the draft project plan for the Proposed Name Collision Analysis Project (NCAP). The security and integrity of the DNS are of high importance and the work of the SSAC is highly valued by the RySG.
- 3.2. On the overall plan and timing of NCAP: While the RySG acknowledges both the ICANN Board for taking this initiative and the SSAC for developing the draft project plan, there are concerns within the RySG regarding the overall purpose and timing of the project that we wish to bring to their attention.
 - 3.2.1. Purpose of the study. The purpose of the NCAP as per the Board's request is to conduct studies to better understand the issue of name collision, including the risks associated with delegating Collision Strings and how to determine which undelegated strings could be considered Collision Strings. The RySG requests that the project proposal be drafted in a neutral manner so as to not pre-suppose the outcomes of the research and not to prematurely draw conclusions about risks associated with delegating future new gTLD strings. Further, we would like to see the ICANN Board recognize that these studies are being performed to identify substantial risks, and not because all new gTLDs inherently pose a risk of name collision.
 - 3.2.2. Independence of new Round. The aim of this project should be to develop a framework for assessing which potential new gTLD strings could present undue risk if delegated. While it is important to get this work done properly in order to give future applicants and businesses sufficient confidence in the predictability

of the ICANN process, we request that the SSAC make it clear in the chartering documents of this working group that they are not explicitly taking a position on the timing of the introduction of the next round of new gTLDs. In other words, third parties should not be able to infer from the SSAC undertaking this study that the SSAC or the ICANN community is taking a position one way or the other on whether, when and how new TLDs should be introduced in the future. The SSAC should make it clear with the introduction of further new gTLDs, they are working towards a mechanism to (1) predict (to the extent possible) which strings present a significant collision risk, and therefore may need to not be available for future new gTLD application rounds, (2) the testing / evaluation mechanisms that need to be put in place when new gTLDs are applied for (if any), and (3) mitigation measures that may be employed which allow for the delegation of strings presenting a risk of name collisions, but for which such risk is not significant enough to prevent their delegation. We suggest the NCAP proposal take into consideration which tasks must be completed prior to launching a new round and prior to delegating the first new strings that result from that round, and prioritize the work accordingly. In addition, this working group should maintain good contact with the GNSO in order to ensure awareness of the GNSO work on future rounds of new TLDs and also so that all proposed timelines for the introduction of new gTLDs are well understood by this working group.

3.3. The RySG wishes to make the following comments on the proposal for the Name Collision Analysis Project to the SSAC NCAP Work Party.

- 3.3.1. JAS Report and Lessons learned. In October 2015 ICANN published the final report 'Mitigating the Risk of DNS Namespace Collisions - A Study on Namespace Collisions in the Global Internet DNS Namespace and a Framework for Risk Mitigation by JAS Global Advisors. We note that the first three tasks of Study One, described in Section 3.3.1 of the proposed project plan, start with a thorough examination of earlier research and studies in this area, particularly peer reviewed research as well as ICANN sponsored research, work previously undertaken by the SSAC, and other community efforts. We ask that the NCAP plan include a gap analysis of this work against the current state of affairs and an analysis of the outcome of the JAS study, including an examination of why the JAS report concluded that certain name collision mitigation methods were dismissed as unviable. Undertaking this gap analysis would serve the purpose of explaining where NCAP fits into the larger body of work undertaken on name collision and pointing out where further research is needed. We ask the SSAC to include in its Study One findings any reports ICANN received on issues related to name collision, along with any legal and/or privacy concerns that led ICANN to pursue Controlled Interruption, to allow for the community to assess the pervasiveness of name collisions issues to date and the effectiveness of Controlled Interruption and the Alternative Path to Delegation.
- 3.3.2. Research questions. The RySG supports the Proposed Plan's acknowledgement that the very first task of the group should be to define what is meant by a name collision. It should be clear, as it was in the Final JAS report, that Name Collisions can occur at the top, second or any level. There is a long period of one up to two years between the data collection and final report; some new developments may occur during this time that are relevant for the decision-making process. We are concerned that the current proposal does not sufficiently address the potential for such new developments.

independently rather than through existing ICANN resources, as these functions are not sufficiently specialized that they require external sourcing.

- 3.6. The NCAP Project should have an Early Termination option after 6 months. The RySG would like to see the SSAC consider implementing regular review points, starting at around 6 months, and if at that time it turns out that any expected data is unavailable, or that no additional name collision risks above those already identified through previous studies have been identified, then nothing significant has been identified, there should be a mechanism for the ICANN Community to recommend termination of the project. The proposed US\$3+ million budget and extended (2+) year timeline for this study are significant, especially given the fact that a substantial amount of money and time have already been committed to studying name collisions. These studies should not be used as a fishing expedition to find problems or to identify solutions to problems that may not exist. An early termination option will serve as an incentive for the NCAP Work Party to work aggressively to ensure this does not become a solution in search of a problem.
- 3.7. Multidisciplinary approach. The RySG appreciates the extra efforts being proposed by the SSAC to open up much of the work of the NCAP to persons other than SSAC members that have the appropriate technical expertise to understand the project, the concept of name collision and the potential ramifications of any actual harms that could be caused by legitimate collisions. More specifically, we agree that all mailing lists remain open for community members to serve as observers and that there are several opportunities for the community to provide input into the project.
- 3.8. In addition, while we agree that technical experts should be fully utilized by this group, there should also be a place for those that have operational, policy and business knowledge about how top-level domains operate. Their insight might be instrumental to assist in assessing the potential impact of conclusions and recommendations on the industry. Having this mixed team will also assist the Working Group in making any resulting report.

4. Comments from the Registrar Stakeholder Group (RrSG):

- 4.1. The Registrar Stakeholder Group (RrSG) appreciates the work SSAC has put into preparing the proposal for the Name Collision Analysis Project and welcomes the opportunity to provide a response to 2 of the requested areas of feedback.
- 4.2. The Registrars welcome the SSACs proposal for increased transparency and openness of the NCAP Work Party. The RrSG appreciates the extra efforts being proposed by the SSAC to open up much of the work of the NCAP to persons other than SSAC members that have the appropriate technical expertise to understand the project, the concept of name collision and the potential ramifications of any actual harms that could be caused by legitimate collisions. More specifically, we agree that all mailing lists remain open for community members to serve as observers and that there are several opportunities for the community to provide input into the project. The proposed approach for consultation and inclusion of views and considerations from beyond the NCAP Work Party should also include mandatory consultation with the GNSO regarding subsequent procedures for the introduction of new gTLDs. As stated above, the RrSG views consultation with the GNSO as extremely important. In order to avoid unnecessary delays to the introduction of subsequent procedures for new gTLDs, the NCAP Work Party should coordinate closely with the GNSO so that everyone is aligned on when the next round is expected to commence. To the greatest extent possible, the NCAP should prioritize those studies which may have a direct impact on the introduction of new gTLDs through any subsequent procedures. This doesn't imply that NCAP should rush through those studies, but rather NCAP should set appropriate

expectations with the community on which studies (if any) may be required as pre-requisites to launching subsequent procedures.

- 4.3. Expected Deliverables of the NCAP Work Priority. The RrSG believes that amongst the goals of the NCAP project, the Work Party should aim to:
 1. Identify strings (if any) that pose substantial name collision risks and should not be available for application in the next round of new gTLDs. In other words, NCAP Work Party should identify and publish any TLDs that would, or could, be future high risk collision TLD strings with perceived risks similar to .CORP, .HOME and .MAIL,
 2. For strings not identified prior to a subsequent procedure, a process should be developed to evaluate the name collision risk during the application evaluation process. Risk mitigation measures should be implemented by ICANN and/or the registry operator prior to or after delegation of such strings. If it is determined that the application cannot proceed as a result of this evaluation, the RrSG believes that a full refund should be issued to the applicant.
 3. Identify mitigation measures (if any) ICANN and/or new gTLD registry operators must implement post contract award and/or post delegation for TLD strings that pose a substantial name collision risk. The RrSG believes that the collision framework introduced for the 2012 Round of New gTLDs (namely, controlled interruption) was an effective tool in mitigating any existing name collisions. This was further corroborated by the Final Report issues by JAS Advisors in 2015. To the extent another framework is deemed necessary to be implemented by the NCAP Work Party, the NCAP Work Party should clearly establish why JAS Advisors were incorrect and how the benefits of introducing any new mitigation framework substantially outweigh any additional costs or work imposed on Registry Operators, Registrars, or the Internet Community.
- 4.4. Any additional risks that should be considered, along with any risk mitigation Strategies.
 - 4.4.1. The RrSG has a general concern around the perceived level of risk and the usefulness of repeated studies. The extent of the damage caused by names collisions is not actually known as it has not been studied. However, it would appear there is an assumption that the risks posed for the next round are significant, in spite of the fact that a comprehensive study has already been conducted by JAS Advisors and more is now known about how to prevent name collisions.
 - 4.4.2. The RrSG believes that the original name collision studies performed in 2012-2013 were undoubtedly necessary, but we must ensure that this study is not simply a repeat of its predecessor. The key risks may actually already be known, but even if this study reveals new risks, it should be possible to be suitably prepared in advance of future rounds. The RrSG would question the need to conduct a study with every round of new gTLDs.
 - 4.4.3. It should be acknowledged by SSAC that these studies are not being performed because risks have been identified in introducing additional new gTLDs, but rather they are being performed to identify any substantial risks.
 - 4.4.4. The RrSG would like SSAC to include a statement in the Preface along the lines that the study is not in itself proof that there is, or is not, inherently a collision risk in the next round and that therefore it should not be linked to when the next round will be launched. This is in order to prevent the study from being used as a reason to delay the next round.
- 4.5. The NCAP Project should have an Early Termination option after 6 months. Finally, the RrSG would like to see constraint around how much is spent. As stated above, this study should not be a repeat of the first and there should be a mechanism to stop the study if it looks unlikely to reveal anything of use. SSAC should consider implementing

regular review points, starting at around 6 months. If, at that time, it turns out expected data is unavailable, or no additional name collision risks have been identified, then there should be a mechanism for the ICANN Community to terminate the project. The proposed \$US 3 million budget and 2+ year timeline for this study are significant, especially given the fact that a substantial amount of money and time have already been committed to studying name collisions. These studies should not be used as a fishing expedition to find problems or to identify solutions to problems that may not exist. An early termination option will serve as an incentive for the NCAP Work Party to work aggressively to ensure this does not become a solution in search of a problem. If there is any opportunity to keep the study as lightweight and inexpensive as possible, it should be taken. If no substantial harm is found within a reasonable amount of time (from 6 months), the study should be stopped rather than enforcing the need to see it all the way through to the end for the sake of it.

5. **Comments from the Intellectual Property Constituency (IPC):**

- 5.1. The Intellectual Property Constituency (IPC) of the Generic Names Supporting Organization (GNSO) appreciates the opportunity to comment on the Name Collision Analysis Project (“NCAP”) Proposal published on behalf of the SSAC. We understand that the NCAP will be run as Security and Stability Advisory Committee study according to its established procedures. The Security and Stability of the DNS is of utmost concern to the IPC and its members welcome the opportunity to assist the SSAC wherever possible.
- 5.2. The IPC appreciates the SSAC’s opening of the Name Collision study to technology experts within the entire ICANN community and the proposed transparency of this process. IPC believes the proposal and expanded conflict of interest measures strike the right balance, ensuring multi-stakeholder participation in the process and ensuring the appropriate amount of technical expertise needed to understand and address name collision issues in the DNS.
- 5.3. The IPC notes, however, that studies contracted for using ICANN funds should be performed by independent technical experts who are free of conflicts of interest to the greatest extent possible. This addition to the NCAP Proposal would not prevent any party from submitting data or results from their own studies, but would ensure that additional unbiased expertise is obtained in the process. In addition, the IPC believes that in cases where data or studies are submitted with a request for confidential treatment as provided in the study submission form, members of the Working Group who will be looked upon to determine level of consensus on recommendations should be able to “know the source” of the data/studies on which they are relying and should be under a written obligation to keep those studies confidential.
- 5.4. Three areas of concern for IPC members relating to the Name Collision Framework adopted in the 2012 round are highlighted below:
 - 5.4.1. Trademarks Contained in Risky Strings at the Second Level. In connection with the 2012 Name Collision Framework, registries identified name collision risk at the second level on their own and many of those Alternate Path to Delegation (“apd”) names consisted of registered trademarks which were not available to trademark holders in the initial Sunrise period. We understand that the “apd” metric will not be used going forward to the next round so that this situation of concern to our members will not occur, but would like to underline its importance.
 - 5.4.2. High Risk Strings at the Top Level - Early Disclosure. Regarding the NCAP, however, the IPC believes it is imperative that if there is a recommendation that certain strings represent a substantial collision risk such that they need to be

unavailable during the next and/or any subsequent round of applications, this must be disclosed prior to opening of the applicable round. Some IPC members worked with applicants for .corp, .home and .mail and know firsthand the costs incurred by the applicants for these strings as a result of the delays and ultimate decision to not move forward with the delegation of these strings. The IPC is in no way blaming the SSAC for the delays, but to the extent that such costs can be avoided, we merely wish to underline the importance of this principle to our members.

5.4.3. The GNSO Policy Process in Relation to Name Collision Framework. The Name Collision Framework that applied to the 2012 round was not developed through the typical GNSO bottom up policy-making process. As the SSAC knows, there is currently a Subsequent Procedures policy development process within the GNSO that includes, among a number of other elements, a review of the Name Collision issues in the 2012 round as well as the mitigation measures employed during that round. This process has been underway for nearly two years. IPC believes that in conducting the NCAP studies, the NCAP Working Group should coordinate with the GNSO community. To the extent that there is a belief that the projected timelines for completion of the NCAP may have an impact on the next round(s) of new gTLDs, the IPC recommends the following:

5.4.3.1. The SSAC should prioritize developing a testing mechanism to be deployed during the evaluation of applications for new gTLDs (if one is to be developed) for determining whether such newly proposed strings present a material name collision risk

5.4.3.2. The SSAC should advise the ICANN Board that applicants should receive notice in the next version of the Applicant Guide Book that, if and when these studies are complete, changes to name collision mitigation measures may need to be made by ICANN in consultation with the community. Such changes may impact the delegation, operations and/or administration of the TLD Registry even after the execution of a contract or delegation of the TLD.

5.4.3.3. Until the results of the NCAP are released and proposed implementation mechanisms developed by the community (if any are needed), Top Level strings which do not present a substantial name collision risk should be allowed to move forward so that timely opening of the next round of gTLD applications is not impeded.

6. **Comments from the Business Constituency (BC):**

6.1. The BC welcomes the opportunity to comment on the Security and Stability Advisory Committee (SSAC) Proposal for the Name Collision Analysis Project (NCAP). We generally support the proposed plan and, in particular, the attention given to transparency and community consultation.

6.2. The proposed research is a large and important undertaking, which requires significant investment by the technical experts who will comprise the NCAP Working Party and community attention to ensure that the project remains on track and aligned with ICANN and the community's objectives. To these ends, we put forth the following high-level considerations as the SSAC works toward finalizing the NCAP proposal and initiating work.

6.3. Ensure that outputs serve the needs of ICANN as an organization and community. While the NCAP Proposal is directly responsive to ICANN Board Resolutions 2017.11.02.29 - 2017.11.02.31, there remains a lack of clarity about how the outputs will be applied to the handling of the .home, .corp, and .mail strings, specifically, or

name collisions, generally. To the surprise of many, shortly following the passing of these resolutions, the Board separately passed a resolution indicating that the .home, .corp, and .mail TLDs--which at the time were indefinitely reserved--would not proceed to delegation despite that the NCAP had not been conducted or even scoped. Similarly, while the proposed scope of the NCAP extends beyond these strings to the impact of name collisions overall and potential mitigations, it is unclear whether the Board or the community intend for the findings to form the basis for a future Policy Development Process or other work. These discrepancies are not the responsibility of the SSAC alone, whose proposal responds aptly to the request set forth in the Board resolution. However, given the high costs, the impact on volunteer time, and the significant risks outlined in the NCAP, the intended applications of the research should be articulated so that the community and research team can meaningfully consider whether the proposal is appropriately scoped and whether the objectives warrant the costs.

- 6.4. Established shared expectations for how risks will be assessed and managed. We appreciate the comprehensive outline of risks set forth in the NCAP and believe that understanding potential obstacles is critical to successful planning. However, we note the large number of “high risk” elements described in the proposal, in particular the availability relevant data, which could jeopardize the ability to successfully carry out the proposed study or compromise the meaningfulness of its findings. We recommend that a framework be pre-established for how these risks will be managed if realized. Impact will inevitably be contextual as some risks may jeopardize the overall project, while others require minor readjustment. Still, it would be prudent to describe how these risks will be handled at a procedural level and how the community will be engaged. A potential approach would be to establish a checkpoint to review the NCAP proposal following the data collection phase to assess whether there is sufficient information to proceed with the full study as designed or whether adjustments must be made.
- 6.5. Ensure that work is carried out in a cost-conscious manner considering the overall budget. The proposed three million dollar cost for the study is significant, particularly given ICANN’s current budget environment and the NCAP’s acknowledgement that actual costs could exceed projections. Given the scope of work, and costs associated with third party research, these costs may be necessary. Notwithstanding, the NCAP Working Party should be sensitive to budget considerations and cost-saving opportunities as it plans its work. For example, while independent research and other specialized needs will require external sourcing, it is possible that administrative and project management functions could be furnished from ICANN’s existing staff pool; similarly, while expertise is of the upmost[sic] importance, cost should remain an important consideration when weighing potential providers for the phases of independent study.
- 6.6. The BC applauds the thorough work that has gone into planning to date and encourages the SSAC and working party to weigh these considerations regarding objectives, risks, and costs as it moves forward with the final NCAP Proposal.

7. Comments from Lewis Roca Rothgerber Christie LLP (LRRC)

- 7.1. Lewis Roca Rothgerber Christie LLP appreciates the opportunity to comment on the Security and Stability Advisory Committee’s Name Collision Analysis Project (“NCAP”) Proposal. Our firm has a large intellectual property practice with offices in five Southwestern states, serving IP clients across a range of industries. In connection with the 2012 new gTLD round, we encountered various issues on behalf of our clients related to name collisions. The ICANN Board action requesting a thorough study of name collision issues is welcomed by our firm. Our review of the NCAP Proposal

indicates that it is both comprehensive and systematic.

- 7.2. We are particularly in favor of the more detailed Statements of Interest that will be required by the SSAC in connection with the NCAP and support the questions listed in the proposal for these more detailed SOIs.
- 7.3. As a firm which represents clients, both large and small, who are concerned with protecting consumers from fraudulent activity online, we are concerned about the risks associated with name collisions in the DNS. It has become apparent that these risks include various abuses as more fully described in the attached study of name collision occurrences conducted at the University of Michigan in the fall of 2017. Our clients constantly wrestle with the problem of third party sites where bad actors take advantage of the DNS to pose as providers of genuine goods and services. The abuses encountered include those listed in the attached study which highlights the risk of Man in the Middle (MitM) "interception". User entries for certain addresses are "intercepted" and then end up resolving outside the user's server to an abusive website. Accordingly, we are concerned that name collisions which would occur in connection with the possible delegation of high risk strings such as .HOME, .CORP, and .MAIL would increase the frequency of these abuse cases, thereby threatening the security and stability of the internet and destroying public confidence. The SSAC's focus on these high risk strings in Section 3.3.1 and Section 3.3.2 of the NCAP Proposal is therefore welcome.
- 7.4. With respect to Section 3.3.3, we note that in the 2012 round, name collision risk was assessed on a string-by-string basis, including at the second level using Day in the Life ("DITL") statistics. One issue encountered in that round was the holding back of domain names from the initial Sunrise period which were exact matches to registered trademarks of our clients. These trademark names appeared on the Alternate Path to Delegation ("apd") lists. Hopefully this practice will be studied in Phase I of the NCAP. Accordingly, we look forward to examination by the NCAP Working Group of uniform methods for testing name collision risk at the second level once the Top Level strings from the next round are clearly identified.
- 7.5. Finally, given that our firm represents numerous brands which may be considering new gTLD applications in the next round, if the SSAC were able to establish a testing method that would allow those brands that did not involve high name collision risk to proceed to delegation, that would be greatly appreciated.

8. Comments from the United States Postal Service (USPS)

- 8.1. The United States Postal Service ("USPS") appreciates the opportunity to comment on the Security and Stability Advisory Committee's Name Collision Analysis Project Proposal ("NCAP"). USPS is an independent establishment of the United States Government and does not receive any taxpayer dollars to conduct its delivery operations.
- 8.2. The Postal Service applauds the ICANN Board for requesting a detailed technical analysis of name collision issues from the Security and Stability Advisory Committee with full participation from the ICANN community. The SSAC has taken a very thorough approach to the structure of the project. Accordingly, USPS will limit its comments to certain procedural matters.
- 8.3. The format for more detailed Statements of Interest for members of the Working Party and the Discussion Group is laudable. USPS urges the SSAC not to make too many revisions to the questions asked as may be urged by some in the ICANN community. In this scenario, the more information available regarding the special interests of participants, the better. Accordingly, as a preface to its comments, the USPS wishes to

- underline that it filed formal Objections to the applications for .MAIL in the 2012 round.
- 8.4. The Postal Service is concerned that the risks associated with name collisions have not been fully appreciated to date within the ICANN community. It has become apparent that these risks may include the very real possibility that confidential data will be intercepted by a third party with malicious intent and that viruses may be injected by a third party inserting code into the user's system from a third party server as a result of name collision occurrences.
 - 8.5. Historically, USPS must maintain constant vigilance to monitor third parties masquerading as providers of "mail" services. For example, third parties exploit consumers in the online space by purporting to be an "official" Change of Address website and charging consumers up to \$39.95 for a service USPS (the true "official" Change of Address provider) provides for free at the USPS website and for only \$1.05 in its facilities. These sites and others posing as USPS also present consumer privacy and identity theft risks as they collect personally identifying information from consumers under the guise of being the "official" Change of Address provider – i.e., USPS or USPS's agent, when that is not the case. In some cases, such activity has led to criminal enforcement by state Attorneys General. But the practice continues and has expanded into the area of Hold Mail services, with third parties collecting personal information, charging large sums, and purporting to be the "official Hold Mail" site, when that claim is false. Domains comprised of USPS trademarks such as CERTIFIED MAIL, REGISTERED MAIL, PRIORITY MAIL, and EXPRESS MAIL have been used for phishing activity, attempts to obtain consumer personal information, and malware. The Postal Service is concerned that the increased frequency of name collisions which would occur in connection with the possible delegation of a .MAIL Top Level Domain would dramatically increase these cases of consumer abuse.
 - 8.6. Given the high risk of name collisions identified in the proposed .MAIL string from the 2012 round, USPS is grateful for the SSAC's focus on this string in Section 3.3.1 and Section 3.3.2 of the Proposed NCAP. With respect to Section 3.3.3, it is noted that mitigation strategies will likely be dependent to some degree on the exact string involved as well as prevailing conditions in the DNS at the time of delegation (as was seen in the 2012 round.). In this regard, since precise strings are unknown at this time, USPS encourages the SSAC to address the possible need for adjustments to its NCAP advice to the ICANN Board at a point in time occurring after the opening of the next round of gTLD applications.
 - 8.7. Finally, USPS further notes that with respect to studies commissioned by the SSAC using ICANN funds, including but not limited to studies dealing with mitigation of name collision risk, such studies should be performed by independent technical experts and not by entities which have a financial interest in new gTLD applications moving forward to delegation.
 - 8.8. Thank you for the opportunity to comment. The Postal Service looks forward to monitoring the SSAC's work on the NCAP as the Project progresses.

9. Comments from the Non-Commercial Stakeholders Group (NCSG)

- 9.1. The Non-Commercial Stakeholders Group (NCSG) welcomes the opportunity to comment on the proposed project plan by the SSAC Name Collision Analysis Project (NCAP). The NCSG represents the interests of non-commercial domain name registrants and end-users in the formulation of Domain Name System policy within the Generic Names Supporting Organisation. We are proud to have individual and organisational members in over 160 countries, and as a network of academics, Internet end-users, and civil society actors, we represent a broad cross-section of the global Internet community. Since our predecessor's inception in 1999 we have facilitated

global academic and civil society engagement in support of ICANN's mission, stimulating an informed citizenry and building their understanding of relevant DNS policy issues

- 9.2. The Noncommercial Stakeholders Group thanks the Security and Stability Advisory Committee (SSAC) for preparing the proposed Name Collision Analysis Project project plan. We have reviewed this plan, and wish to express our support to the SSAC in undertaking these activities while we have concerns regarding the excessive cost of the project. It is our position that name collisions are to be avoided, and we believe this project would go far in mitigating the potential harm to the stability and security of the Domain Name System posed by such strings. Thank you again for your efforts in addressing this important matter.

Section IV: Analysis of Comments

General Disclaimer: This section intends to provide an analysis and evaluation of the comments submitted along with explanations regarding the basis for any recommendations provided within the analysis.

The SSAC NCAP WP appreciates all comments and suggestions added to the public forum for the proposed Name Collision Analysis Project.

To aid in the analysis, the ICANN Board resolution the provided the scope for the NCAP is included here:

Project Scope: On 2 November 2017, the ICANN Board passed resolution (2017.11.02.29 - 2017.11.02.31)¹ on the consideration of .CORP, .HOME, and .MAIL (C/H/M) and other Collision Strings. The Board requests the SSAC to *conduct studies to present data, analysis and points of view, and provide advice to the Board:*

1. Regarding the risks posed to users and end systems if .CORP, .HOME, .MAIL strings were to be delegated in the root, as well as possible courses of action that might mitigate the identified risks.
2. On a range of questions that include, but are not limited to, the following:
 - 2.1. a proper definition for name collision and the underlying reasons why strings that manifest name collisions are so heavily used;
 - 2.2. the role that negative answers currently returned from queries to the root for these strings play in the experience of the end user, including in the operation of existing end systems;
 - 2.3. a. the harm to existing users that may occur if Collision Strings were to be delegated, including harm due to end systems no longer receiving a negative response and b. additional potential harm if the delegated registry accidentally or purposely exploited subsequent queries from these end systems, and c. any other types of harm;
 - 2.4. possible courses of action that might mitigate harm;
 - 2.5. factors that affect potential success of the courses of actions to mitigate harm;
 - 2.6. potential residual risks of delegating Collision Strings even after taking actions to mitigate harm;
 - 2.7. suggested criteria for determining whether an undelegated string should be considered a string that manifest name collisions, (i.e.) placed in the category of a Collision String;
 - 2.8. suggested criteria for determining whether a Collision String should not be delegated,

¹ See <https://www.icann.org/resources/board-material/resolutions-2017-11-02-en#2.a>.

- and suggested criteria for determining how remove an undelegated string from the list of Collision Strings; and
- 2.9. measures to protect against intentional or unintentional creation of situations, such as queries for undelegated strings, which might cause such strings to be placed in a Collision String category, and b. research into risk of possible negative effects, if any, of creation of such a collision string list.

Comments can be broadly categorised as follows:

1. Comments in support of the importance of the topic and the project
2. Comments on the project timeline
3. Comments on study contracting
4. Comments offering information on Name Collision
5. Comments on the project scope and deliverables
6. Comments on project risk
7. Comments on project budget - Comments on Project Budget
8. Comments on NCAP's approach to transparency and inclusiveness

As a single comment or even single paragraph of a comment can cover multiple categories the following analysis of comments is organised by comment.

1. Comments from At-Large Advisory Committee (ALAC):

- 1.1. As the principle voice of end users within the ICANN community, the At-large Advisory Committee (ALAC) supports the Security and Stability Advisory Committee (SSAC) in its efforts to address the issue of Name Collisions as it remains an area of some uncertainty. The ALAC urges the SSAC to proceed with the Name Collision Analysis Project (NCAP) Work Party's project plan and allocate enough time to do it right. We believe it is important to minimize the unintended consequences for end users. Name Collision occurs when a user, attempting to reach a private domain name, unintentionally reaches a public domain name and, as such, cut to the core of end user trust of the internet and could pose potential security issues.
- 1.2. The NCAP Work Party's project plan, as it currently stands, seems adequate without being excessive. We urge the SSAC to stay the course and not expedite the process for the benefit of any subsequent procedures. There is great anticipation, from parts of the community, for new applications but not only is a specific delay unlikely, given other factors, we believe it would be prudent for the SSAC to execute the project plan as submitted to provide the ICANN community with a holistic assessment of the risks.

Response 1: The SSAC has produced a project plan that it believes is the minimum necessary to deliver the project to the scope provided by the ICANN Board. Wherever possible, work that can be carried out in parallel or without dependencies has been identified and the project structured accordingly. It is therefore not possible at this stage to expedite or shorten the project. Should that position change during the course of the project then the project plan will be adjusted to reflect that.

- 1.3. The ALAC seeks clarity on the SSAC's bidding process for work contemplated under this Draft Project Plan, as touched upon in sections 3.1 and 3.2. First, we appreciate the SSAC's candor in disclosing that it will consider NCAP Work Party members' bids (and that of their affiliates), but it remains unclear as to their overall status as compared to invited guests of the SSAC.
- 1.4. We see a potential issue with having only a select group of the SSAC community choosing with whom they will contract. The ALAC recommends that any decision with respect to contracting with either NCAP Work Party members and their affiliates or

independent third-party contracting agents be taken by the whole SSAC (and excluding invited guests), and for SSAC to provide the ICANN community with adequate amount of notice with respect to any party with whom they wish to contract. We believe that this recommendation will ameliorate concerns related to potential conflicts of interest that may arise.

Response 2: The processes that will be put into place to prevent any actual or perceived conflict of interest and to maintain the integrity of the ICANN procurement process are as follows. These are intended to keep the WP one step removed from any procurement:

- a) The WP expects ICANN, most likely through the Office of the Chief Technology Officer, to provide the services of a Program Manager.
- b) The WP will produce Statements of Work (SoW) required at each stage of the project.
- c) The Program Manager, working with the ICANN procurement team, will carry out the appropriate procurement process as dictated by ICANN procurement policy, to contract third parties to deliver the SoWs.
- d) The Program Manager will manage the day to day delivery of the contractor and all commercial aspects such as payment and contract breaches.

2. Comments from Neustar (NSR):

- 2.1. Neustar welcomes the opportunity to comment on the draft project plan for the Proposed Name Collision Analysis Project (NCAP). Supporting innovation while ensuring a pragmatic and well-balanced approach to the security and integrity of the DNS are necessary for a healthy and growing Internet.
- 2.2. Existing Name Collision Management Framework: In preparation for any review of potential future risks of name collisions, it is imperative to review past efforts. As part of the groundwork for the last round of new TLD launches, multiple research projects were undertaken to identify the risk, and develop mitigations, for name collisions in the DNS. These efforts resulted in the development of the Name Collision Occurrence Management Framework, which can be found at the following link:
<https://www.icann.org/en/system/files/files/name-collision-framework-30jul14-en.pdf>. This framework comprised multiple measures that addressed the risk of name collisions in the previous new TLD round, including:
- 2.3. An obligation for all Registry Operators to act on requests from ICANN within two hours in the case of name collision reports, in conjunction with Section 6.3 of Specification 6 of the new gTLD Registry Agreement. This included the removal of domain names from a TLD zone for a period of up to two years in the event of collisions. “New gTLD Registry Agreement, Specification 6 6.3 Name Collision Report Handling 6.3.1 During the first two years after delegation of the TLD, Registry Operator’s emergency operations department shall be available to receive reports, relayed by ICANN, alleging demonstrably severe harm from collisions with overlapping use of the names outside of the authoritative DNS. 6.3.2 Registry Operator shall develop an internal process for handling in an expedited manner reports received pursuant to subsection 6.3.1 under which Registry Operator may, to the extent necessary and appropriate, remove a recently activated name from the TLD zone for a period of up to two years in order to allow the affected party to make changes to its systems.”
- 2.4. A 90 day continuous controlled interruption period, where wildcard records were used to resolve queries for any domain name within a TLD in a predefined manner. This approach allowed detection of name collisions with any domain name within a TLD as part of the TLD launch process. For TLDs that were already active, a controlled interruption period of 90 days for block list domains enabled detection of name collisions.

- 2.5. An agreement that ICANN may designate an interim back-end Registry Operator in the event a Registry Operator is unable to implement the measures to address name collisions in a timely manner.
- 2.6. An option to reverse the delegation of a TLD during the controlled interruption period, in the unlikely case of a clear and present danger to human life as a result of collision due to the use of a dotless name.
- 2.7. These measures, developed after considerable research and consultation with the community, supported the successful launch of more than 1200 new gTLDs. Based on the experience from the 2012 new gTLD round, these measures have been shown to provide effective mitigation of the risks of name collisions. To date, no major name collision event has occurred where a risk to human life has been observed.
- 2.8. The effectiveness of these measures was corroborated by a report by JAS Global Advisors, titled 'Mitigating the Risk of DNS Namespace Collisions - A Study on Namespace Collisions in the Global Internet DNS Namespace and a Framework for Risk Mitigation', published by ICANN in 2015.

Response 3: Study 1, as set out in the project plan, is to review all previous work on the subject of Name Collision. The information in the comment above will be provided to the contractor that is engaged to deliver Study 1 and at the conclusion of Study 1 a report will be published that should enable third parties to check that all existing work has been adequately reviewed.

- 2.9. Potential impact on new gTLDs: While Neustar support research and analysis projects such as the NCAP, we note that the project plan has three phases and currently has a suggested completion date of July 2020 with an assumption that if any policy work is required, it would be performed upon completion. Based on existing evidence such as the JAS report noted above we do not believe that the NCAP process should have any adverse impact on the current timeline for the introduction of the next wave of new gTLDs, which is anticipated in early 2020. However, in order to mitigate the potential for any adverse impact, we recommend that the SSAC reconsider the NCAP project plan and timeline to take account of other community processes, such as the New gTLD Subsequent Procedures Policy Development Process, to ensure a timely completion date.

Response 4: The SSAC does not believe it is the role of this WP to determine the dependency between NCAP and the next round of new gTLD applications. That decision rests with the ICANN Community and ICANN Board. SSAC provides the following advice to those deciding on the dependency:

- a) If delegation takes place before the risks are understood (i.e. Study 2 is complete) then it is highly likely there will be significant problem in some unspecified TLDs
- b) If application begins before the risks are understood then when the names are known it is possible that the data collection will be compromised through such mechanisms or gaming or preparatory use, and the NCAP will be unable to produce a result

3. Comments from the Registry Stakeholder Group (RySG):

- 3.1. The Registries Stakeholder Group (RySG) welcomes the opportunity to comment on the draft project plan for the Proposed Name Collision Analysis Project (NCAP). The security and integrity of the DNS are of high importance and the work of the SSAC is highly valued by the RySG.
- 3.2. On the overall plan and timing of NCAP: While the RySG acknowledges both the ICANN Board for taking this initiative and the SSAC for developing the draft project

plan, there are concerns within the RySG regarding the overall purpose and timing of the project that we wish to bring to their attention.

- 3.2.1. Purpose of the study. The purpose of the NCAP as per the Board's request is to conduct studies to better understand the issue of name collision, including the risks associated with delegating Collision Strings and how to determine which undelegated strings could be considered Collision Strings. The RySG requests that the project proposal be drafted in a neutral manner so as to not pre-suppose the outcomes of the research and not to prematurely draw conclusions about risks associated with delegating future new gTLD strings. Further, we would like to see the ICANN Board recognize that these studies are being performed to identify substantial risks, and not because all new gTLDs inherently pose a risk of name collision.

Response 5: The scope of the NCAP, as included in **Project Scope** above, is not to “determine which undelegated strings could be considered Collision Strings”. SSAC would advise against any such endeavour as releasing that list of strings would create numerous security issues. Rather, the scope is to identify suggested criteria for determining whether a specific undelegated string should be considered a string that manifests name collisions, (i.e.) placed in the category of a Collision String. The distinction is important to establish clear expectations of the output of the project.

Response 6: It is SSAC's view that the prior work on Name Collision has identified a potentially serious threat exists in the delegation of a Collision String. This is also inherent in the wording of the Project Scope. The project plan has been developed accordingly.

Response 7: The SSAC is unable to respond on behalf of the ICANN Board.

- 3.2.2. Independence of new Round. The aim of this project should be to develop a framework for assessing which potential new gTLD strings could present undue risk if delegated. While it is important to get this work done properly in order to give future applicants and businesses sufficient confidence in the predictability of the ICANN process, we request that the SSAC make it clear in the chartering documents of this working group that they are not explicitly taking a position on the timing of the introduction of the next round of new gTLDs. In other words, third parties should not be able to infer from the SSAC undertaking this study that the SSAC or the ICANN community is taking a position one way or the other on whether, when and how new TLDs should be introduced in the future.

Please see **Response 4** above.

The SSAC should make it clear with the introduction of further new gTLDs, they are working towards a mechanism to (1) predict (to the extent possible) which strings present a significant collision risk, and therefore may need to not be available for future new gTLD application rounds,

Please see **Response 5** above.

(2) the testing / evaluation mechanisms that need to be put in place when new gTLDs are applied for (if any), and (3) mitigation measures that may be employed which allow for the delegation of strings presenting a risk of name collisions, but for which such risk is not significant enough to prevent their delegation.

Please see the **Project Scope** above.

We suggest the NCAP proposal take into consideration which tasks must be completed prior to launching a new round and prior to delegating the first new strings that result from that round, and prioritize the work accordingly. In addition, this working group should maintain good contact with the GNSO in order to ensure awareness of the GNSO work on future rounds of new TLDs and also so that all proposed timelines for the introduction of new gTLDs are well understood by this working group.

Please see **Response 4** above.

Response 8: The WP will not be liaising directly with any particular stakeholder group but rather provide communications and engagement to keep the whole ICANN community equally informed.

3.3. The RySG wishes to make the following comments on the proposal for the Name Collision Analysis Project to the SSAC NCAP Work Party.

3.3.1. JAS Report and Lessons learned. In October 2015 ICANN published the final report 'Mitigating the Risk of DNS Namespace Collisions - A Study on Namespace Collisions in the Global Internet DNS Namespace and a Framework for Risk Mitigation by JAS Global Advisors. We note that the first three tasks of Study One, described in Section 3.3.1 of the proposed project plan, start with a thorough examination of earlier research and studies in this area, particularly peer reviewed research as well as ICANN sponsored research, work previously undertaken by the SSAC, and other community efforts. We ask that the NCAP plan include a gap analysis of this work against the current state of affairs and an analysis of the outcome of the JAS study, including an examination of why the JAS report concluded that certain name collision mitigation methods were dismissed as unviable. Undertaking this gap analysis would serve the purpose of explaining where NCAP fits into the larger body of work undertaken on name collision and pointing out where further research is needed.

Response 9: In order to provide the gap analysis requested it is necessary to complete both Study 2 and Study 3 as those are needed to accurately identify the current state of affairs. It would therefore not be possible to produce this gap analysis at the end of Study 1.

We ask the SSAC to include in its Study One findings any reports ICANN received on issues related to name collision, along with any legal and/or privacy concerns that led ICANN to pursue Controlled Interruption, to allow for the community to assess the pervasiveness of name collisions issues to date and the effectiveness of Controlled Interruption and the Alternative Path to Delegation.

Response 10: The NCAP is a technical project with a clearly defined scope and as such the legal and/or privacy concerns that led to Controlled Interruption are out of scope.

3.3.2. Research questions. The RySG supports the Proposed Plan' acknowledgement that the very first task of the group should be to define what is meant by a name collision. It should be clear, as it was in the Final JAS report, that Name

Collisions can occur at the top, second or any level.

Response 11: The Project Scope does not explicitly mention second level collisions and so clarification has been sought from the ICANN Board on this point.

There is a long period of one up to two years between the data collection and final report; some new developments may occur during this time that are relevant for the decision-making process. We are concerned that the current proposal does not sufficiently address the potential for such new developments.

Response 12: There is always the potential for new data to become available that is relevant to the NCAP and the WP will remain open to that possibility. Given the complexity of the analysis and testing required the SSAC believes the project plan strikes an appropriate balance between waiting for new data and working to a definitive result.

3.3.3. Data gathering. It is likely that the NCAP researchers will come across parties that will not be willing to share their data. If it turns out that data is not available to perform the desired studies, there should be a mechanism to terminate those studies without incurring additional expense. This is another reason why the scope of the NCAP should be as narrow and tightly defined as feasible.

Response 13: The SSAC notes that the WP has a lot of work to do on anonymisation standards, which may allay some concerns of data providers. If insufficient data is made available for the NCAP to perform the planned work then the NCAP may be able to proceed solely through the development of a simulation system, but if not then the ICANN Board will be notified that the project scope as currently defined cannot be delivered.

If ICANN data is used by the NCAP, there must be a mechanism for independent verification and validation of the data and results. It is general good scientific practice that independent researchers (accredited for the purpose) have the opportunity to analyse the set of data to challenge the methodology and outcome of the research. The NCAP plan should include mechanisms to allow for qualified and vetted independent researchers to verify/validate the data and/or challenge the findings. Such mechanisms may include the execution of a non-disclosure agreement of certain aspects of the data, but not preventing the disclosure of overall findings or recommendations of the report.

Response 14: The WP will aim for independent reproducibility for method and results. Independent researchers who wish to do that will need to be vetted, will operate within restricted terms and will have to sign an individual standard contract with each data provider. The terms under which data will be shared with independent researchers will be agreed before any data is submitted (unless a data submitter is clear they don't mind).

3.4. Expected Deliverables of the NCAP Work Priority. The RySG believes that amongst the goals of the NCAP project, the Work Party should aim to:

3.4.1. Identify any strings (if any) that pose substantial name collision risks such that they should be unavailable for application in the next round of new gTLDs. In other words, the NCAP Work Party should aim to identify and publish any TLDs that would, or could, be future high risk collision TLD strings that risk causing the same perceived issues as .CORP, .HOME and .MAIL, so that registries know in advance not to apply for those strings.

Please see **Response 5** above.

- 3.4.2. To the extent that all such strings cannot be identified prior to actually seeing the list of applied for strings, a process should be developed to evaluate the name collision risk during the application evaluation process, and whether such risks are capable of being mitigated by appropriate mitigation measures implemented by ICANN and/or the registry operator prior to or after delegation of such strings.

Response 15: This is included in the project scope.

- 3.4.3. Identify which mitigation measures (if any) must be implemented by ICANN and/or new gTLD registry operators post contract award and/or post delegation of any TLD strings that pose a substantial name collision risk. The RySG recognizes that the collision framework introduced for the 2012 Round of New gTLDs (namely, controlled interruption) was an effective tool in mitigating some instances of name collisions, but may not have properly mitigated all instances. To the extent another framework is deemed necessary to be implemented by the NCAP Work Party, the NCAP Work Party should clearly state the rationale behind that framework, and how the benefits of introducing any new mitigation framework substantially outweigh any additional costs or work imposed on Registry Operators, Registrars or the Internet Community.

Response 16: The NCAP is a technical project and the costs or work that may be imposed are out of scope for the NCAP.

- 3.5. Budget. It is of concern that the NCAP plan lacks a budget and that where one would expect a clear estimate of costs - on page 13, section 3.5 Project costs - the document only contains a warning that 'project costs could exceed US\$ 3 million over 3 years'. A detailed budget is indispensable. This budget should present a detailed breakdown of the estimated \$3M cost, and should specify what external factors may cause those costs to increase or decrease. The budget will allow the community to assist the project's working group in assessing the need and importance of proposed actions.

Response 17: A detailed budget has been prepared but only the headline figure presented to prevent providing information to potential contractors that would favour them in pricing and price negotiations.

At the current stage, we have strong reservations about the need for workshops and face-to-face meetings other than during ICANN meetings and the costs related to their advertisement. We would expect that experts involved in such a study are savvy enough to use conference calls, e-mail, and other online cooperation tools.

Response 18: The timing and location of these workshops is being reconsidered, with a view to making them contiguous with ICANN meetings.

Additionally, it is unclear why administrative and project management staff must be provided independently rather than through existing ICANN resources, as these functions are not sufficiently specialized that they require external sourcing.

Response 19: The budget that accompanies the project plan includes all resource and the cost of

those resources so that the true cost of the project can be known. ICANN org will decide how to provide those resources, whether internally or externally.

- 3.6. The NCAP Project should have an Early Termination option after 6 months. The RySG would like to see the SSAC consider implementing regular review points, starting at around 6 months, and if at that time it turns out that any expected data is unavailable, or that no additional name collision risks above those already identified through previous studies have been identified, then nothing significant has been identified, there should be a mechanism for the ICANN Community to recommend termination of the project.

Response 20: All potential review points in the project plan that might need to termination need to be timed to match expected outcomes or prerequisites which are then the input to that review. Arbitrarily timed review points inevitably lead to arbitrary decisions. There are implicit review points after each study and if the data is unavailable as explained in **Response 13**. Other implicit review points include after each RFP as it will not be possible to continue the NCAP without contractors, but it is not practical to list all such implicit review points.

The proposed US\$3+ million budget and extended (2+) year timeline for this study are significant, especially given the fact that a substantial amount of money and time have already been committed to studying name collisions. These studies should not be used as a fishing expedition to find problems or to identify solutions to problems that may not exist.

Response 21: The nature of the NCAP may indeed be described as a “fishing expedition” as it will involve analysing data to see what, if any, problems exist.

An early termination option will serve as an incentive for the NCAP Work Party to work aggressively to ensure this does not become a solution in search of a problem.

Please see **Response 20** above.

- 3.7. Multidisciplinary approach. The RySG appreciates the extra efforts being proposed by the SSAC to open up much of the work of the NCAP to persons other than SSAC members that have the appropriate technical expertise to understand the project, the concept of name collision and the potential ramifications of any actual harms that could be caused by legitimate collisions. More specifically, we agree that all mailing lists remain open for community members to serve as observers and that there are several opportunities for the community to provide input into the project. In addition, while we agree that technical experts should be fully utilized by this group, there should also be a place for those that have operational, policy and business knowledge about how top-level domains operate. Their insight might be instrumental to assist in assessing the potential impact of conclusions and recommendations on the industry. Having this mixed team will also assist the Working Group in making any resulting report.

Response 22: In addition to the multiple SSAC members with extensive operational, policy and business experience about how top-level domains operate, there will be an open call to all members of the ICANN community to participate in the NCAP. The criteria for joining the WP will be based on understanding of the issues and the level of contribution.

4. Comments from the Registrar Stakeholder Group (RrSG):

- 4.1. The Registrar Stakeholder Group (RrSG) appreciates the work SSAC has put into preparing the proposal for the Name Collision Analysis Project and welcomes the opportunity to provide a response to 2 of the requested areas of feedback.
- 4.2. The Registrars welcome the SSACs proposal for increased transparency and openness of the NCAP Work Party. The RrSG appreciates the extra efforts being proposed by the SSAC to open up much of the work of the NCAP to persons other than SSAC members that have the appropriate technical expertise to understand the project, the concept of name collision and the potential ramifications of any actual harms that could be caused by legitimate collisions. More specifically, we agree that all mailing lists remain open for community members to serve as observers and that there are several opportunities for the community to provide input into the project. The proposed approach for consultation and inclusion of views and considerations from beyond the NCAP Work Party should also include mandatory consultation with the GNSO regarding subsequent procedures for the introduction of new gTLDs. As stated above, the RrSG views consultation with the GNSO as extremely important. In order to avoid unnecessary delays to the introduction of subsequent procedures for new gTLDs, the NCAP Work Party should coordinate closely with the GNSO so that everyone is aligned on when the next round is expected to commence.

Please see **Response 8** above and **Response 4** above.

To the greatest extent possible, the NCAP should prioritize those studies which may have a direct impact on the introduction of new gTLDs through any subsequent procedures. This doesn't imply that NCAP should rush through those studies, but rather NCAP should set appropriate expectations with the community on which studies (if any) may be required as pre-requisites to launching subsequent procedures.

Response 23: The Project Scope is explicit about the need to investigate CORP/HOME/MAIL as well as more general Collision Strings. All of the studies may have a direct impact on the delegation of new TLDs. Please see **Response 4** above for a specific response to the comment on expectations.

- 4.3. Expected Deliverables of the NCAP Work Priority. The RrSG believes that amongst the goals of the NCAP project, the Work Party should aim to:
 1. Identify strings (if any) that pose substantial name collision risks and should not be available for application in the next round of new gTLDs. In other words, NCAP Work Party should identify and publish any TLDs that would, or could, be future high risk collision TLD strings with perceived risks similar to .CORP, .HOME and .MAIL,

Please see **Response 5** above.

2. For strings not identified prior to a subsequent procedure, a process should be developed to evaluate the name collision risk during the application evaluation process. Risk mitigation measures should be implemented by ICANN and/or the registry operator prior to or after delegation of such strings. If it is determined that the application cannot proceed as a result of this evaluation, the RrSG believes that a full refund should be issued to the applicant.

Response 24: Any decision or advice regarding refunds is out of scope for this WP.

3. Identify mitigation measures (if any) ICANN and/or new gTLD registry operators

must implement post contract award and/or post delegation for TLD strings that pose a substantial name collision risk. The RrSG believes that the collision framework introduced for the 2012 Round of New gTLDs (namely, controlled interruption) was an effective tool in mitigating any existing name collisions. This was further corroborated by the Final Report issues by JAS Advisors in 2015. To the extent another framework is deemed necessary to be implemented by the NCAP Work Party, the NCAP Work Party should clearly establish why JAS Advisors were incorrect and how the benefits of introducing any new mitigation framework substantially outweigh any additional costs or work imposed on Registry Operators, Registrars, or the Internet Community.

Response 25: Study 3 will consider all potential mitigations that can be identified.

- 4.4. Any additional risks that should be considered, along with any risk mitigation Strategies.
 - 4.4.1. The RrSG has a general concern around the perceived level of risk and the usefulness of repeated studies. The extent of the damage caused by names collisions is not actually known as it has not been studied. However, it would appear there is an assumption that the risks posed for the next round are significant, in spite of the fact that a comprehensive study has already been conducted by JAS Advisors and more is now known about how to prevent name collisions.
 - 4.4.2. The RrSG believes that the original name collision studies performed in 2012-2013 were undoubtedly necessary, but we must ensure that this study is not simply a repeat of its predecessor. The key risks may actually already be known, but even if this study reveals new risks, it should be possible to be suitably prepared in advance of future rounds. The RrSG would question the need to conduct a study with every round of new gTLDs.
 - 4.4.3. It should be acknowledged by SSAC that these studies are not being performed because risks have been identified in introducing additional new gTLDs, but rather they are being performed to identify any substantial risks.

Response 26: The scope of the NCAP has been provided to SSAC by the ICANN Board as set out in **Project Scope** above.

- 4.4.4. The RrSG would like SSAC to include a statement in the Preface along the lines that the study is not in itself proof that there is, or is not, inherently a collision risk in the next round and that therefore it should not be linked to when the next round will be launched. This is in order to prevent the study from being used as a reason to delay the next round.

Please see **Response 4** above.

- 4.5. The NCAP Project should have an Early Termination option after 6 months. Finally, the RrSG would like to see constraint around how much is spent. As stated above, this study should not be a repeat of the first and there should be a mechanism to stop the study if it looks unlikely to reveal anything of use. SSAC should consider implementing regular review points, starting at around 6 months. If, at that time, it turns out expected data is unavailable, or no additional name collision risks have been identified, then there should be a mechanism for the ICANN Community to terminate the project. The proposed \$US 3 million budget and 2+ year timeline for this study are significant, especially given the fact that a substantial amount money and time have already been

committed to studying name collisions.

Please see **Response 20** above.

These studies should not be used as a fishing expedition to find problems or to identify solutions to problems that may not exist.

Please see **Response 21** above.

An early termination option will serve as an incentive for the NCAP Work Party to work aggressively to ensure this does not become a solution in search of a problem. If there is any opportunity to keep the study as lightweight and inexpensive as possible, it should be taken. If no substantial harm is found within a reasonable amount time (from 6 months), the study should be stopped rather than enforcing the need to see it all the way through to the end for the sake of it.

Please see **Response 20** above.

5. **Comments from the Intellectual Property Constituency (IPC):**

- 5.1. The Intellectual Property Constituency (IPC) of the Generic Names Supporting Organization (GNSO) appreciates the opportunity to comment on the Name Collision Analysis Project (“NCAP”) Proposal published on behalf of the SSAC. We understand that the NCAP will be run as Security and Stability Advisory Committee study according to its established procedures. The Security and Stability of the DNS is of utmost concern to the IPC and its members welcome the opportunity to assist the SSAC wherever possible.
- 5.2. The IPC appreciates the SSAC’s opening of the Name Collision study to technology experts within the entire ICANN community and the proposed transparency of this process. IPC believes the proposal and expanded conflict of interest measures strike the right balance, ensuring multi-stakeholder participation in the process and ensuring the appropriate amount of technical expertise needed to understand and address name collision issues in the DNS.
- 5.3. The IPC notes, however, that studies contracted for using ICANN funds should be performed by independent technical experts who are free of conflicts of interest to the greatest extent possible. This addition to the NCAP Proposal would not prevent any party from submitting data or results from their own studies, but would ensure that additional unbiased expertise is obtained in the process. In addition, the IPC believes that in cases where data or studies are submitted with a request for confidential treatment as provided in the study submission form, members of the Working Group who will be looked upon to determine level of consensus on recommendations should be able to “know the source” of the data/studies on which they are relying and should be under a written obligation to keep those studies confidential.

Response 27: SSAC recognizes the concern that the data provided and the results derived from their analysis may be deliberately or inadvertently biased, not just by the submitter. Unfortunately given the interconnected nature of our industry the SSAC does not believe it is possible to find sufficient independent technical experts or data from independent sources to allow this project to go ahead. On that basis the WP will actively work to eliminate any bias introduced by experts or the data.

- 5.4. Three areas of concern for IPC members relating to the Name Collision Framework adopted in the 2012 round are highlighted below:

- 5.4.1. Trademarks Contained in Risky Strings at the Second Level. In connection with the 2012 Name Collision Framework, registries identified name collision risk at the second level on their own and many of those Alternate Path to Delegation (“apd”) names consisted of registered trademarks which were not available to trademark holders in the initial Sunrise period. We understand that the “apd” metric will not be used going forward to the next round so that this situation of concern to our members will not occur, but would like to underline its importance.

Response 28: Issues relating to trademarks are not within the **Project Scope**

- 5.4.2. High Risk Strings at the Top Level - Early Disclosure. Regarding the NCAP, however, the IPC believes it is imperative that if there is a recommendation that certain strings represent a substantial collision risk such that they need to be unavailable during the next and/or any subsequent round of applications, this must be disclosed prior to opening of the applicable round. Some IPC members worked with applicants for .corp, .home and .mail and know firsthand the costs incurred by the applicants for these strings as a result of the delays and ultimate decision to not move forward with the delegation of these strings. The IPC is in no way blaming the SSAC for the delays, but to the extent that such costs can be avoided, we merely wish to underline the importance of this principle to our members.

Please see **Response 5** above.

- 5.4.3. The GNSO Policy Process in Relation to Name Collision Framework. The Name Collision Framework that applied to the 2012 round was not developed through the typical GNSO bottom up policy-making process. As the SSAC knows, there is currently a Subsequent Procedures policy development process within the GNSO that includes, among a number of other elements, a review of the Name Collision issues in the 2012 round as well as the mitigation measures employed during that round. This process has been underway for nearly two years. IPC believes that in conducting the NCAP studies, the NCAP Working Group should coordinate with the GNSO community.

Please see **Response 8** above.

To the extent that there is a belief that the projected timelines for completion of the NCAP may have an impact on the next round(s) of new gTLDs, the IPC recommends the following:

- 5.4.3.1. The SSAC should prioritize developing a testing mechanism to be deployed during the evaluation of applications for new gTLDs (if one is to be developed) for determining whether such newly proposed strings present a material name collision risk

Response 29: This is exactly what the NCAP is aiming to do.

- 5.4.3.2. The SSAC should advise the ICANN Board that applicants should receive notice in the next version of the Applicant Guide Book that, if and when these studies are complete, changes to name collision mitigation measures may need to be made by ICANN in consultation with the community. Such changes may impact the delegation, operations and/or administration of the TLD Registry even after the execution of a contract or delegation of the TLD.

Please see **Response 4** above.

- 5.4.3.3. Until the results of the NCAP are released and proposed implementation mechanisms developed by the community (if any are needed), Top Level strings which do not present a substantial name collision risk should be allowed to move forward so that timely opening of the next round of gTLD applications is not impeded.

Please see **Response 4** above.

6. Comments from the Business Constituency (BC):

- 6.1. The BC welcomes the opportunity to comment on the Security and Stability Advisory Committee (SSAC) Proposal for the Name Collision Analysis Project (NCAP). We generally support the proposed plan and, in particular, the attention given to transparency and community consultation.
- 6.2. The proposed research is a large and important undertaking, which requires significant investment by the technical experts who will comprise the NCAP Working Party and community attention to ensure that the project remains on track and aligned with ICANN and the community's objectives. To these ends, we put forth the following high-level considerations as the SSAC works toward finalizing the NCAP proposal and initiating work.
- 6.3. Ensure that outputs serve the needs of ICANN as an organization and community. While the NCAP Proposal is directly responsive to ICANN Board Resolutions 2017.11.02.29 - 2017.11.02.31, there remains a lack of clarity about how the outputs will be applied to the handling of the .home, .corp, and .mail strings, specifically, or name collisions, generally. To the surprise of many, shortly following the passing of these resolutions, the Board separately passed a resolution indicating that the .home, .corp, and .mail TLDs--which at the time were indefinitely reserved--would not proceed to delegation despite that the NCAP had not been conducted or even scoped. Similarly, while the proposed scope of the NCAP extends beyond these strings to the impact of name collisions overall and potential mitigations, it is unclear whether the Board or the community intend for the findings to form the basis for a future Policy Development Process or other work. These discrepancies are not the responsibility of the SSAC alone, whose proposal responds aptly to the request set forth in the Board resolution. However, given the high costs, the impact on volunteer time, and the significant risks outlined in the NCAP, the intended applications of the research should be articulated so that the community and research team can meaningfully consider whether the proposal is appropriately scoped and whether the objectives warrant the costs.

Please see **Response 4** above.

- 6.4. Established shared expectations for how risks will be assessed and managed. We appreciate the comprehensive outline of risks set forth in the NCAP and believe that understanding potential obstacles is critical to successful planning. However, we note the large number of "high risk" elements described in the proposal, in particular the availability relevant data, which could jeopardize the ability to successfully carry out the proposed study or compromise the meaningfulness of its findings. We recommend that a framework be pre-established for how these risks will be managed if realized. Impact will inevitably be contextual as some risks may jeopardize the overall project, while others require minor readjustment. Still, it would be prudent to describe how these risks will be handled at a procedural level and how the community will be engaged.

Response 30: The SSAC will consider the establishment of a framework for managing all risks in further, more detailed work on the project plan.

A potential approach would be to establish a checkpoint to review the NCAP proposal following the data collection phase to assess whether there is sufficient information to proceed with the full study as designed or whether adjustments must be made.

Please see **Response 13** above.

- 6.5. Ensure that work is carried out in a cost-conscious manner considering the overall budget. The proposed three million dollar cost for the study is significant, particularly given ICANN's current budget environment and the NCAP's acknowledgement that actual costs could exceed projections. Given the scope of work, and costs associated with third party research, these costs may be necessary. Notwithstanding, the NCAP Working Party should be sensitive to budget considerations and cost-saving opportunities as it plans its work. For example, while independent research and other specialized needs will require external sourcing, it is possible that administrative and project management functions could be furnished from ICANN's existing staff pool; similarly, while expertise is of the upmost[sic] importance, cost should remain an important consideration when weighing potential providers for the phases of independent study.
- 6.6. The BC applauds the thorough work that has gone into planning to date and encourages the SSAC and working party to weigh these considerations regarding objectives, risks, and costs as it moves forward with the final NCAP Proposal.

Please see **Response 19** above.

7. Comments from the United States Postal Service (USPS)

- 7.1. The United States Postal Service ("USPS") appreciates the opportunity to comment on the Security and Stability Advisory Committee's Name Collision Analysis Project Proposal ("NCAP"). USPS is an independent establishment of the United States Government and does not receive any taxpayer dollars to conduct its delivery operations.
- 7.2. The Postal Service applauds the ICANN Board for requesting a detailed technical analysis of name collision issues from the Security and Stability Advisory Committee with full participation from the ICANN community. The SSAC has taken a very thorough approach to the structure of the project. Accordingly, USPS will limit its comments to certain procedural matters.
- 7.3. The format for more detailed Statements of Interest for members of the Working Party and the Discussion Group is laudable. USPS urges the SSAC not to make too many revisions to the questions asked as may be urged by some in the ICANN community. In this scenario, the more information available regarding the special interests of participants, the better. Accordingly, as a preface to its comments, the USPS wishes to underline that it filed formal Objections to the applications for .MAIL in the 2012 round.
- 7.4. The Postal Service is concerned that the risks associated with name collisions have not been fully appreciated to date within the ICANN community. It has become apparent that these risks may include the very real possibility that confidential data will be intercepted by a third party with malicious intent and that viruses may be injected by a third party inserting code into the user's system from a third party server as a result of name collision occurrences.

Response 31: The SSAC understands these potential risks of name collision. The Project Scope includes understanding and reporting on the potential harm of name collisions.

- 7.5. Historically, USPS must maintain constant vigilance to monitor third parties masquerading as providers of “mail” services. For example, third parties exploit consumers in the online space by purporting to be an “official” Change of Address website and charging consumers up to \$39.95 for a service USPS (the true “official” Change of Address provider) provides for free at the USPS website and for only \$1.05 in its facilities. These sites and others posing as USPS also present consumer privacy and identity theft risks as they collect personally identifying information from consumers under the guise of being the “official” Change of Address provider – i.e., USPS or USPS’s agent, when that is not the case. In some cases, such activity has led to criminal enforcement by state Attorneys General. But the practice continues and has expanded into the area of Hold Mail services, with third parties collecting personal information, charging large sums, and purporting to be the “official Hold Mail” site, when that claim is false. Domains comprised of USPS trademarks such as CERTIFIED MAIL, REGISTERED MAIL, PRIORITY MAIL, and EXPRESS MAIL have been used for phishing activity, attempts to obtain consumer personal information, and malware. The Postal Service is concerned that the increased frequency of name collisions which would occur in connection with the possible delegation of a .MAIL Top Level Domain would dramatically increase these cases of consumer abuse.
- 7.6. Given the high risk of name collisions identified in the proposed .MAIL string from the 2012 round, USPS is grateful for the SSAC’s focus on this string in Section 3.3.1 and Section 3.3.2 of the Proposed NCAP. With respect to Section 3.3.3, it is noted that mitigation strategies will likely be dependent to some degree on the exact string involved as well as prevailing conditions in the DNS at the time of delegation (as was seen in the 2012 round.). In this regard, since precise strings are unknown at this time, USPS encourages the SSAC to address the possible need for adjustments to its NCAP advice to the ICANN Board at a point in time occurring after the opening of the next round of gTLD applications.

Please see **Response 5** above.

- 7.7. Finally, USPS further notes that with respect to studies commissioned by the SSAC using ICANN funds, including but not limited to studies dealing with mitigation of name collision risk, such studies should be performed by independent technical experts and not by entities which have a financial interest in new gTLD applications moving forward to delegation.
- 7.8. Thank you for the opportunity to comment. The Postal Service looks forward to monitoring the SSAC’s work on the NCAP as the Project progresses.

Response 32: Please see Response 27 above. It is likely that a direct financial interest will disqualify anyone from bidding to be a contractor on the NCAP, but that is a decision for ICANN procurement.

8. Comments from the Non-Commercial Stakeholders Group (NCSG)

- 8.1. The Non-Commercial Stakeholders Group (NCSG) welcomes the opportunity to comment on the proposed project plan by the SSAC Name Collision Analysis Project (NCAP). The NCSG represents the interests of non-commercial domain name registrants and end-users in the formulation of Domain Name System policy within the Generic Names Supporting Organisation. We are proud to have individual and

organisational members in over 160 countries, and as a network of academics, Internet end-users, and civil society actors, we represent a broad cross-section of the global Internet community. Since our predecessor's inception in 1999 we have facilitated global academic and civil society engagement in support of ICANN's mission, stimulating an informed citizenry and building their understanding of relevant DNS policy issues

- 8.2. The Noncommercial Stakeholders Group thanks the Security and Stability Advisory Committee (SSAC) for preparing the proposed Name Collision Analysis Project project plan. We have reviewed this plan, and wish to express our support to the SSAC in undertaking these activities while we have concerns regarding the excessive cost of the project. It is our position that name collisions are to be avoided, and we believe this project would go far in mitigating the potential harm to the stability and security of the Domain Name System posed by such strings. Thank you again for your efforts in addressing this important matter.

No further responses.

End of report