Proposal to Transition the Stewardship of the

Internet Assigned Numbers Authority (IANA) Functions

from the U.S. Commerce Department's National Telecommunications and Information Administration (NTIA) to the Global Multistakeholder Community

IANA Stewardship Transition Coordination Group (ICG)

STATUS OF PROPOSAL

The Names portion of this proposal is conditioned on ICANN-level accountability mechanisms currently under development in the Cross Community Working Group on Enhancing ICANN Accountability (CCWG).

The Numbers and Protocol Parameters portions of the proposal are complete, ready for implementation, and have no dependencies on the work of the CCWG or other remaining processes.

Before sending this proposal to the NTIA via the ICANN Board, the ICG will secure confirmation from the Cross Community Working Group to Develop an IANA Stewardship Transition Proposal on Naming Related Functions (CWG) that its accountability requirements have been met. Text highlighted in yellow that notes the dependency will be edited or deleted.

October 2015

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Executive Summary

X001 On March 14, 2014, the U.S. Commerce Department's National Telecommunications and Information Administration (NTIA) announced its intent to transition the stewardship of key Internet functions to the global multistakeholder community.[1] NTIA asked the Internet Corporation for Assigned Names and Numbers (ICANN) to convene global stakeholders to develop a proposal to replace NTIA's current stewardship role over the Internet Assigned Numbers Authority (IANA) functions. A brief history of IANA is provided in Part 0, Section II below.

X002 As a result of community discussions, the IANA Stewardship Transition Coordination Group (ICG)[2] was formed in July 2014 to coordinate the transition planning process. The ICG is composed of 30 individuals representing 13 communities, and includes direct and indirect stakeholders. These representatives were selected by their respective communities.[3]

X003 The ICG took note of guidance from the Internet Architecture Board (IAB)[4] pointing out the existing division of IANA functions and customer communities into three categories related to domain names, number resources, and protocol parameters. The ICG therefore chose to ground the proposal development process in those communities given their direct operational or service relationships with the IANA Functions Operator (IFO). This also reflects the fact that the policy and oversight responsibilities for the three functions resides in these three separate communities (and have for decades). The three "operational communities" (OCs) are: the Domain Names community (organized around ICANN's supporting organizations and advisory committees); the Number Resources community (organized around the Regional Internet Registries, or RIRs); and the Protocol Parameters community (organized around the Internet Engineering Task Force, or IETF).

X004 The ICG was tasked to confirm that the proposals met the articulated NTIA requirements and were supported by broad community consensus. The ICG developed a request for proposals (RFP)[5] that was provided to each of the communities, setting forth these conditions and the need to have open, inclusive processes. Each of the communities then used its own processes to develop a response to the RFP for transitioning its respective part of the IANA functions, and submitted its response to the ICG. This document contains the RFP responses from each of the three operational communities.

X005 The ICG sought public comment on the combined proposal and the final version presented here reflects comments received. The ICG received 157 comments on the combined proposal from a wide variety of stakeholders, including individuals, operational communities, supporting organizations and advisory committees within the ICANN community, businesses and trade associations, civil society groups, governments, and others from all regions of the world.

[1] http://www.ntia.doc.gov/press-release/2014/ntia-announces-intent-transition-key-internet-domain-name-functions
[2] http://www.ianacg.org/
[3] https://www.ianacg.org/coordination-group/icg-members/
[4] https://www.iab.org/wp-content/IAB-uploads/2014/04/iab-response-to-20140408-20140428a.pdf
[5] https://www.icann.org/en/system/files/files/rfp-iana-stewardship-08sep14-en.pdf

Proposal Summary

X006 The Names proposal was developed in the Cross Community Working Group to Develop an IANA Stewardship Transition Proposal on Naming Related Functions (CWG). The Names community proposed to:

- Form a new, separate legal entity, Post-Transition IANA (PTI), as an affiliate (subsidiary) of ICANN that would become the IANA Functions Operator for names, in contract with ICANN. The legal jurisdiction in which ICANN resides is to remain unchanged.

- Create a Customer Standing Committee (CSC) responsible for monitoring the operator's performance according to the contractual requirements and service level expectations.

- Establish a multistakeholder IANA Function Review process (IFR) to conduct reviews of the performance of the naming functions.

X007 The Numbers community proposed that:

- ICANN continue to serve as the IANA Functions Operator for number resources and perform those services under a contract with the five Regional Internet Registries (RIRs).

- A contractual Service Level Agreement (SLA) be established between the Regional Internet Registries and the IANA Numbering Services Operator.

- A Review Committee (RC) be established comprising community representatives from each region to advise the RIRs on the IANA Functions Operator's performance and adherence to identified service levels.

X008 For the protocol parameters, ICANN currently serves as the IANA registries operator. The IETF community expressed satisfaction with the current arrangements and proposed:

- That the IANA protocol parameters registry updates continue to function day-to-day, as they have been doing for the last decade or more.

- To continue to rely on the system of agreements, policies, and oversight mechanisms created by the IETF, ICANN, and IAB for the provision of the protocols parameters-related IANA functions.

X009 The Numbers and Protocol Parameters communities have confirmed that they have no objection to ICANN subcontracting their parts of the IANA functions to PTI. Accordingly, under the combined proposal, PTI would perform all of the IANA functions currently covered by the NTIA contract, with the necessary staffing and resources to do so. ICANN would contract with the PTI for the performance of the naming functions. The IETF would maintain its existing Memorandum of Understanding with ICANN for the performance of the protocol parameters functions. The RIRs would establish a Service Level Agreement with ICANN for the performance of the numbering functions. ICANN would sub-contract the performance of the protocol parameters and numbering functions to PTI. Each of the three operational communities would maintain independent authority over its own processes for performance

review and for considering a change of IANA Functions Operator for the functions within their purview. All three communities have explicitly committed to coordinate with each other and ICANN to ensure the stability and smooth operation of the IANA functions in the event of such a change.

X010 The ICG assessed the proposals individually and collectively to determine whether:

- the community processes used to develop the proposals were open and inclusive, and whether they achieved consensus;
- the proposals are complete and clear;
- the three proposals together are compatible and interoperable, provide appropriate and properly supported accountability mechanisms, and are workable; and
- the proposals together meet the NTIA criteria.

Community Processes

X011 The ICG has concluded that each of the individual proposals was developed in an open and inclusive manner and that each proposal achieved consensus as defined by each community.

Completeness and Clarity

X012 The ICG discussed the content of each proposal in depth and has published a matrix of topics discussed.[6] With the one exception below, the ICG is satisfied that the proposals are complete and clear.

X013 The ICG has noted that the Names proposal is conditioned on ICANN-level accountability mechanisms currently under development in the Cross Community Working Group on Enhancing ICANN Accountability (CCWG). Before sending this proposal to the NTIA via the ICANN Board, the ICG will secure confirmation from the CWG that its requirements have been met.

X014 The Numbers and Protocol Parameters portions of the proposal are complete and have no dependencies on the work of the CCWG or other remaining processes. Indeed, implementation of the Numbers and Protocol Parameters proposals is underway and can continue without waiting for the CCWG to complete its work.

Compatibility and Interoperability

X015 The ICG believes the proposals are compatible and interoperable. In early 2015 the ICG identified a potential compatibility issue regarding the IANA trademarks and the iana.org domain name. The Numbers proposal requires that the IANA intellectual property and domain names be transferred to an entity independent of the IANA Functions Operator, while the other two proposals are effectively silent on this issue. The ICG has confirmed that the other two communities have no objection to this requirement from the Numbers community.

[6] http://www.ianacg.org/icg-files/documents/questions-and-answers-matrix_v4.xlsx

X016 Coordination across the operational communities is clearly an essential component of the Internet's successful development to date and collaboration is an integral part of the communities' operational and policy development processes. In the specific case of the IANA functions, each community has clearly confirmed to the ICG its ongoing commitment to cooperation.[7].

Accountability

X017 The three proposals together include appropriate and properly supported independent accountability mechanisms for running the IANA functions, relying mostly on the right of each operational community to change operators for the performance of the IANA functions within their purview.

X018 Many commenters in the public comment period noted the CWG dependency on ICANN-level accountability mechanisms currently under development in the CCWG and the associated difficulty in judging the overall accountability provided by the Names proposal. Before sending this proposal to NTIA via the ICANN Board, the ICG will secure confirmation from the CWG that its requirements have been met.

Workability

X019 Having been developed by the three operational communities, the three proposals are naturally different in many respects, reflecting different subject matter, priorities, challenges and processes involved in their production. However, the ICG regards the three proposals as individually and collectively workable.

X020 Verisign currently serves as the Root Zone Maintainer and performs the Root Zone Management functions pursuant to a cooperative agreement with NTIA. Since there is currently no agreement between the Root Zone Maintainer and the IANA Functions Operator for the Root Zone Management process, some form of agreement between these organizations will be essential when NTIA withdraws from the Root Zone Management process.

[7] See CWG response to ICG < http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/attachments/20151007/6b83630d/attachment.doc>, IETF response to ICG http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/2015-October/001812.html>, IAB response to ICG < http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/2015-October/001825.html>, CRISP response to ICG <http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/2015-October/001810.html>, joint statement provided at ICANN54 Public Forum <https://meetings.icann.org/en/dublin54/schedule/thu-public-forum>.

NTIA Criteria

1. Broad community support

X021 The ICG has concluded that each of the individual proposals has broad community support. Each community ran an open and inclusive process in which any interested individual was able to participate. Each community produced a consensus proposal.

X022 A significant majority of those who submitted comments during the ICG public comment period supported the combined proposal. These commenters included individuals, operational communities, supporting organizations and advisory committees within the ICANN community, businesses and trade associations, civil society organizations, governments, and others from across all regions of the world. Thus community support for the combined proposal is broad both in diversity of interests and geography of origin. Furthermore, the consensus of the ICG in support of the proposal provides a powerful demonstration of the breadth of community support.

2. Support and enhance the multistakeholder model

X023 The ICG has concluded that the combined proposal supports and enhances the multistakeholder model because it leverages existing multistakeholder arrangements, processes, and paradigms in defining the post-transition IANA oversight and accountability mechanisms. Each component of the proposal has this feature.

3. Maintain the security, stability, and resiliency of the Internet DNS

X024 Neither the Numbers proposal nor the Protocol Parameters proposal suggest changes that could affect the security, stability, or resiliency of the DNS.

X025 While the Names proposal calls for the IANA Functions Operator to be transferred to the PTI, the PTI will be an affiliate (subsidiary) of ICANN and ICANN will be responsible for the stewardship of the PTI. Hence operational roles are maintained. The proposal envisages the names aspect of the current NTIA oversight and contracting authority is transferred to ICANN. The separation of PTI as a subsidiary will ensure the independence of that oversight role from the contractor providing the service.

X026 This arrangement introduces minimum change and keeps the current IANA functions operation team intact and carrying out the same role as it has today.

X027 The ICG notes that, under the current IANA Functions Contract, the DNS Root Zone Management process currently has three functional roles: the IANA Functions Operator (IFO), the Root Zone Maintainer (RZM), and the Root Zone Administrator (RZA). A complete and finalized transition requires revising the relationship between the current IANA Functions Operator (ICANN), the current RZM (Verisign) and the current Root Zone Administrator (NTIA). While the Names proposal contemplates an arrangement between the IFO and the RZM, the CWG has confirmed to the ICG that such an arrangement has not been specified in the Names proposal or elsewhere. ICANN and NTIA have made it known[8] that prior to the expiry of the NTIA contract those relationships will be specified in a written agreement between ICANN and Verisign. The ICG reiterates that a written agreement

[8] See the transcript of the ICANN 54 Public Forum, October 23, 2015: https://meetings.icann.org/en/dublin54/schedule/thu-public-forum.

between the IFO and RZM establishing each party's role needs to be in place by the time of the expiry of the NTIA contract. For transparency reasons, that agreement should be made available for public review prior to execution. In order to be consistent with the Names proposal, any post-transition structural changes to that agreement, including any structural change to the roles of the parties, should be subject to community review, input and consensus-based approval.

4. Meet the needs and expectations of the global customers and partners of the IANA services

X028 All three communities determined that the global customers and partners of the IANA services and their communities of stakeholders are presently satisfied with the performance of the IANA functions by the IANA department of ICANN. The combined proposal is not expected to impact that.

5. Maintain the openness of the Internet

X029 The combined proposal requires that the IANA services, associated policy development processes, and IANA registries remain fully open and accessible just as they are today.

6. Does not replace NTIA role with a government or inter-governmental organization

X030 The combined proposal does not replace NTIA's role with a government or inter-governmental organization.

ICG Recommendation

X031 The ICG unanimously supports this proposal and recommends that all affected parties implement it.

X032 The ICG will transmit this proposal to NTIA via the ICANN Board as soon as the CWG has confirmed that its requirements regarding ICANN-level accountability mechanisms have been met.

Part 0. Report from the IANA Stewardship Transition Coordination Group

I. Introduction

01 On March 14, 2014, the U.S. Commerce Department's National Telecommunications and Information Administration (NTIA) announced its intent to transfer the stewardship of key Internet functions to the global multistakeholder community.[9] NTIA asked the Internet Corporation for Assigned Names and Numbers (ICANN) to convene global stakeholders to develop a proposal to replace NTIA's current stewardship role over the Internet Assigned Numbers Authority (IANA) functions. This document is the mentioned proposal.

II. History of IANA

02 The Internet's growth has been due in large part to its shared global ownership, use of open standards, and freely accessible processes for technology and policy development. The smooth operation of the Internet depends upon a global, collaborative and community-driven approach to managing key registries of globally unique identifiers.

03 Some of the most important registries are Internet Protocol addresses, Domain Names/Domain Name System (DNS) Root Zone Management, and Protocol Parameters. The IANA Functions Operator (IFO) performs a set of administrative coordinating functions for these registries and others. Each registry is operated under a policy defined by a specific community, including the communities described below as "operational communities" (OCs). These functions are referred to as the IANA functions.

04 IANA started as a service to the community provided by one individual, Dr. Jonathan B. Postel, although at that time (1972) it was not yet called IANA. Later, the service was housed at the University of Southern California Information Sciences Institute (ISI) where Dr. Postel started working in 1977. In 1995, the IANA functions were included as part of a research contract between the US Government and ISI. In 1996, a process was started via a number of proposals, including various proposals from the global community and the US Government's so-called green[10] and white[11] papers, which eventually resulted in the research contract being replaced in 2000 by an explicit agreement between NTIA and ICANN. NTIA's current stewardship responsibilities under a successor contract are the subject of this transition. Today, in addition to the NTIA contract, IANA functions are performed under a number of independent operational agreements between the communities and ICANN as the current IANA Functions Operator.

05 Policy development and many of the oversight responsibilities related to the IANA functions lie within the communities and not the IANA Functions Operator. Global policy development and oversight processes defined by and specific to each community exist in the communities as part of their responsibilities for ensuring the continued smooth operation of

[9] http://www.ntia.doc.gov/press-release/2014/ntia-announces-intent-transition-key-internet-domain-name-functions
[10] http://www.ntia.doc.gov/files/ntia/publications/dnsdrft.txt
[11] http://www.ntia.doc.gov/files/ntia/publications/6_5_98dns.pdf

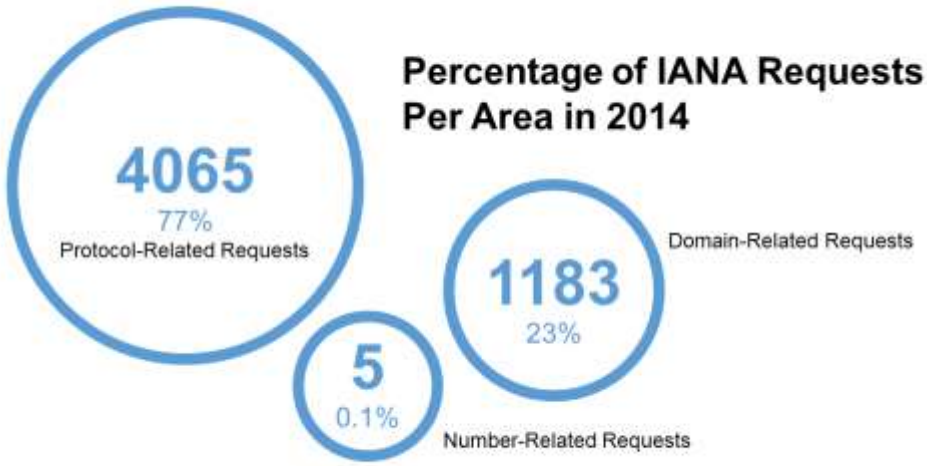
the global Internet. Cooperative relationships and ad-hoc coordination have evolved between these communities to facilitate coordination on IANA function matters when needed.

06 It is on this history and operating reality that the proposal documented here has been built.

III. Process Summary

07 As a result of community discussions, the IANA Stewardship Transition Coordination Group (ICG)[12] was formed in July 2014 to coordinate the transition planning process. The ICG is composed of 30 individuals representing 13 communities, and includes direct and indirect stakeholders. These representatives were selected by their respective communities.[13]

08 The ICG took note of guidance from the Internet Architecture Board (IAB)[14] pointing out the existing division of IANA functions and customer communities into three categories related to domain names, number resources, and protocol parameters. The ICG therefore chose to ground the proposal development process in those communities given their direct operational or service relationships with the IANA Functions Operator. This also reflects the fact that the policy and oversight responsibilities for the three functions reside in the three separate communities (and have for decades). The three "operational communities" (OCs) are: the Domain Names community (organized around ICANN's supporting organizations and advisory committees); the Number Resources community (organized around the Regional Internet Registries, or RIRs); and the Protocol Parameters community (organized around the Internet Engineering Task Force, or IETF). The percentage of IANA requests attributable to each of the three communities is pictured in Figure 1 below.



[12] http://www.ianacg.org/
[13] https://www.ianacg.org/coordination-group/icg-members/
[14] https://www.iab.org/wp-content/IAB-uploads/2014/04/iab-response-to-20140408-20140428a.pdf

09 **Figure 1. Percentage of the total number of IANA requests attributable to each category of IANA functions in 2014.**

10 On September 8, 2014, the ICG issued a Request for Proposals (RFP)[15] which provided a template to be used by each community. Each of the communities then used its own processes to develop a response to the RFP for transitioning its respective part of the IANA functions, and submitted its response to the ICG. The ICG then assessed the proposals, individually and collectively, against a number of criteria,[16] including those that NTIA established for the transition. The ICG assembled the proposals into one document containing the RFP responses from each of the three operational communities. Part 1 is the proposal for domain names, Part 2 is the proposal for numbers, and Part 3 is the proposal for protocol parameters.

11 More information about the community processes is available in Section VI of each Part.

12 On July 31, 2015, the ICG issued a call for public comments on the combined transition proposal.[17] The call for public comments concluded on September 8, 2015. The ICG then reviewed and discussed the comments received and sent questions for clarification to the operational communities. The final text in this document contains updated text in Part 0 resulting from the public comment analysis and responses received to the ICG's questions, as well as textual edits to Part 1 that have been agreed by the Names community.

IV. Proposal Summary

13 This document includes the three final community proposals received by the ICG. These proposals are provided verbatim, without changes by the ICG (aside from formatting changes and textual changes agreed by the Names community after the ICG's public comment analysis). The three proposals are summarized in this section. However, the proposals themselves are authoritative and should be referenced for further details.

A. Operational Community Proposals

14 Part 1 contains the Domain Names proposal. The Names proposal was developed in the Cross Community Working Group to Develop an IANA Stewardship Transition Proposal on Naming Related Functions (CWG). The Names community proposed to form a new, separate legal entity, Post-Transition IANA (PTI), as an affiliate (subsidiary) of ICANN. They proposed that the existing IANA functions administrative staff and related resources, processes, data, and know-how be legally transferred to PTI and that ICANN enter into a contract with PTI to serve as the IANA Functions Operator (IFO) for the naming functions, including service level agreements for those functions. The legal jurisdiction in which ICANN resides is to remain unchanged. The proposal includes the creation of a Customer Standing Committee (CSC) responsible for monitoring IFO performance according to the contractual requirements and service level expectations. The proposal establishes a multistakeholder IANA Function Review process (IFR) to conduct periodic and special reviews of PTI. The IFR would have the ability to recommend a separation process that could result in

[15] https://www.icann.org/en/system/files/files/rfp-iana-stewardship-08sep14-en.pdf
[16] https://www.icann.org/en/system/files/files/iana-transition-assembly-finalization-24dec14-en.pdf
[17] https://www.ianacg.org/calls-for-input/combined-proposal-public-comment-period/

termination or non-renewal of ICANN's contract with PTI, among other actions. The CSC and IFR apply to the names functions only.

15 The Names community proposed to discontinue the authorization of root zone changes that is currently performed by NTIA. They also proposed to give to the ICANN Board the authority to approve any major architectural and operational changes in the management of the root zone. This approval is to be based on the recommendations of a standing committee of stakeholders and experts (which is different from the CSC).

16 The Names proposal is conditioned on ICANN-level accountability mechanisms currently under development in the Cross Community Working Group on Enhancing ICANN Accountability (CCWG). Before sending this proposal to NTIA via the ICANN Board, the ICG will secure confirmation from the CWG that its requirements have been met.

17 Part 2 contains the Number resources proposal. The Numbers community proposed that ICANN continue to serve as the IANA Functions Operator for numbering functions and perform those services under a contract with the five Regional Internet Registries (RIRs).

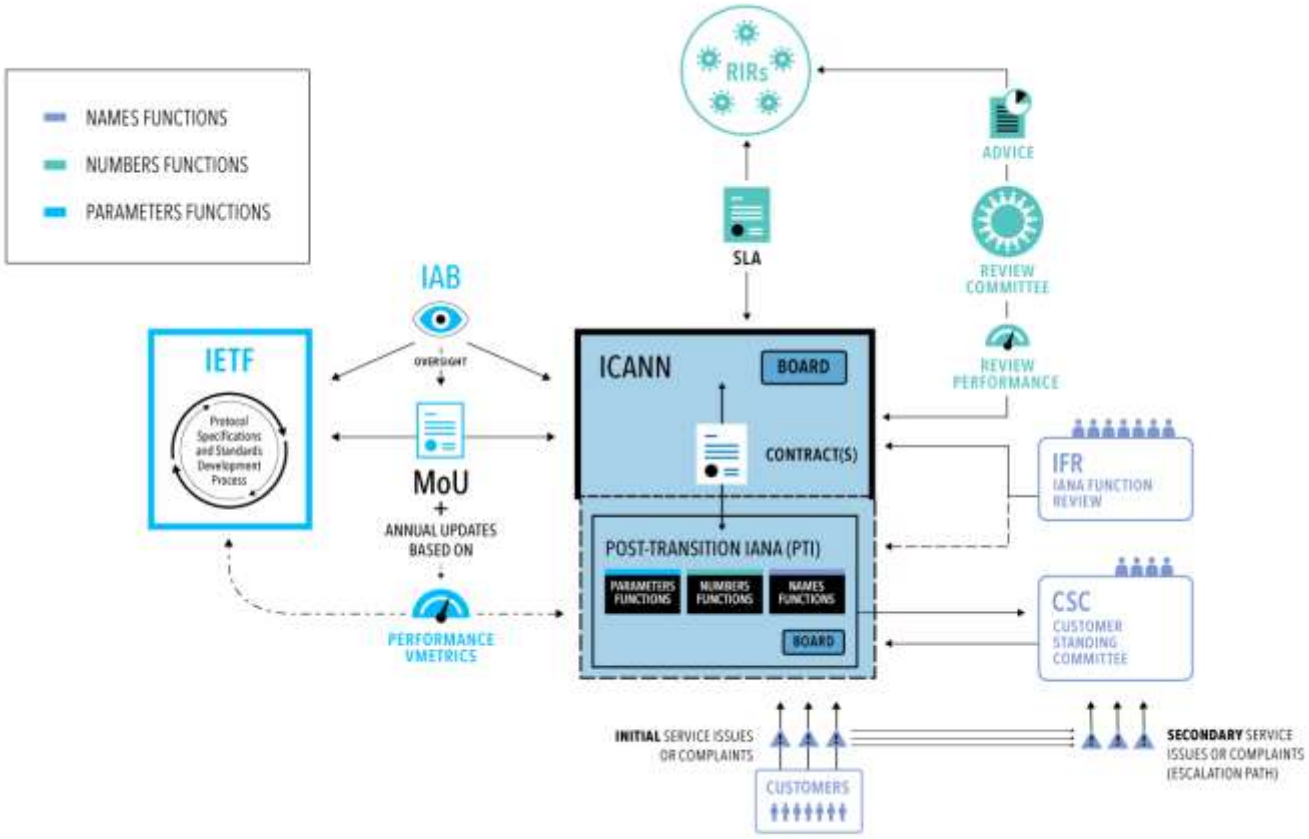
18 The Numbers community proposed a contractual Service Level Agreement (SLA) between the Regional Internet Registries and the IANA Numbering Services Operator and a Review Committee (RC) comprising community representatives from each region to advise the RIRs on the IANA Functions Operator's performance and adherence to agreed service levels. The implementation of these components of the proposal has commenced, with the draft SLA[18] and RC Charter[19] being under continuing development within the RIR communities.

19 The Numbers community further proposed that the trademarks and domain names associated with the provision of the IANA services be held by an entity that is not the provider of the IANA numbering services.

20 Part 3 contains the Protocol Parameters proposal. ICANN currently serves as the IANA protocol parameters registries operator. The IETF community expressed satisfaction with the current arrangements and proposed that the IANA protocol parameters registry updates continue to function day-to-day, as they have been doing for the last decade or more. The Protocol Parameters community proposed to continue to rely on the system of agreements, policies, and oversight mechanisms created by the IETF, ICANN, and IAB for the provision of the protocols parameters-related IANA functions; specifically, RFC 2860,[20] RFC 6220,[21] and an annually updated service level agreement.[22] The IETF asked for three acknowledgements to be made as part of the transition: 1) That the protocol parameters registries are in the public domain; 2) That ICANN carries out the obligations established under C.7.3 and I.61 of the ICANN-NTIA IANA Functions Contract[23] and 3) that ICANN, the IETF, and subsequent IANA Functions Operator(s) work together to minimize disruption in the use of the protocol parameters registries or other resources currently located at iana.org.

[18] https://www.nro.net/nro-and-internet-governance/iana-oversight/sla-developments
[19] https://www.nro.net/news/call-for-comments-for-a-draft-internet-number-community-review-committee-charter
[20] https://tools.ietf.org/html/rfc2860
[21] https://tools.ietf.org/html/rfc6220
[22] http://iaoc.ietf.org/contracts.html
[23] http://www.ntia.doc.gov/files/ntia/publications/sf_26_pg_1-2-final_award_and_sacs.pdf

21 A visual summary of the oversight components of the combined proposal appears below. The operational interactions between the communities and the IANA Functions Operator are not pictured.



22 **Figure 2. Visual summary of the combined proposal.**

B. Post-Transition IANA

23 There are a number of notable features of the combined proposal that are worth highlighting given that the PTI is a construct that was proposed by the Names community after the Numbers and Protocol Parameters communities completed their proposals.

24 The Numbers and Protocol Parameters communities have confirmed that they have no objection to ICANN subcontracting their parts of the IANA functions to PTI. Accordingly, under the combined proposal, PTI would perform all of the IANA functions currently covered by the NTIA contract, with the necessary staffing and resources to do so. ICANN would contract with the PTI for the performance of the naming functions. The IETF would maintain its existing Memorandum of Understanding with ICANN for the performance of the protocol parameters functions. The RIRs would establish a Service Level Agreement with ICANN for the performance of the numbering functions. ICANN would subcontract the performance of

the protocol parameters and numbering functions to PTI. The existing MoU between the IETF and ICANN is silent about sub-contracting, and therefore implicitly allows it. The RIRs intend to allow sub-contracting with permission.[24]

25 Each community would maintain independent authority over its own processes for performance review. The Names community would use the CSC and IFR to review the performance of the naming functions and handle complaints. Neither the Numbers community nor the Protocol Parameters community sees a need to participate in these performance review processes for the naming functions.[25] The Numbers community would use its Review Committee to review the performance of the numbering functions. The Protocol Parameters community would continue to review the performance of the protocol parameters functions via existing mechanisms established by the IETF and IAB.

26 The combined proposal provides for each community to follow its own processes for considering a change of IANA Functions Operator for the functions within their purview. For the Names community this process can be triggered by the IFR, which would have the ability to recommend a separation process that could result in termination or non-renewal of ICANN's contract with PTI. The Numbers community proposal includes SLA principles allowing for the termination of the SLA between the RIRs and ICANN and resolution of disputes between the parties via arbitration. For the Protocol Parameters, the existing IETF/ICANN MoU specifies that either party may cancel the MoU with six months' notice.

27 Critically, while each community would maintain its independence of process for considering or enacting a change of IFO, all three communities have explicitly committed to coordinate with each other and ICANN to ensure the stability and smooth operation of the IANA functions in the event of such a change.[26]

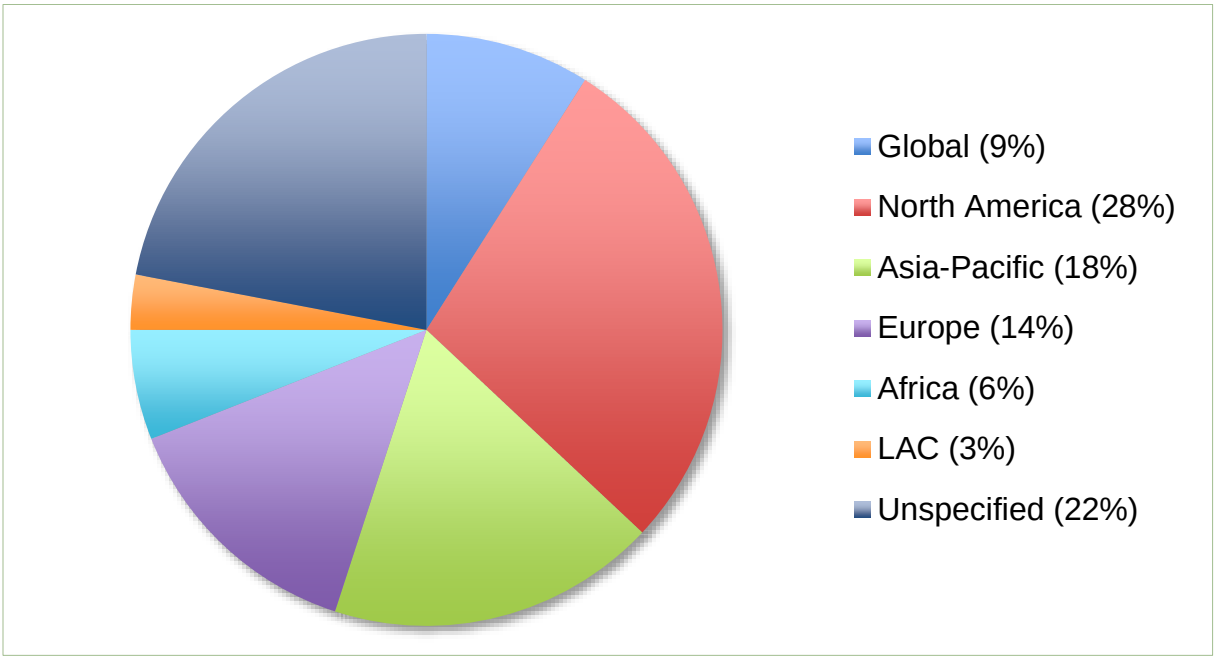
[24] https://www.nro.net/wp-content/uploads/Numbers-SLA-2.0.pdf

[25] See Consolidated RIR IANA Stewardship Proposal (CRISP) response to ICG <http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/2015-October/001810.html>, IAB comments to the ICG https://comments.ianacg.org/pdf/submission/submission72.pdf.

[26] See P2.III.A, P3.III, CWG response to ICG < http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/attachments/20151007/6b83630d/attachment.doc>, IETF response to ICG http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/2015-October/001812.html>, IAB response to ICG < http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/2015-October/001825.html>, CRISP response to ICG <http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/2015-October/001810.html>., joint statement provided at ICANN54 Public Forum <https://meetings.icann.org/en/dublin54/schedule/thu-public-forum>.

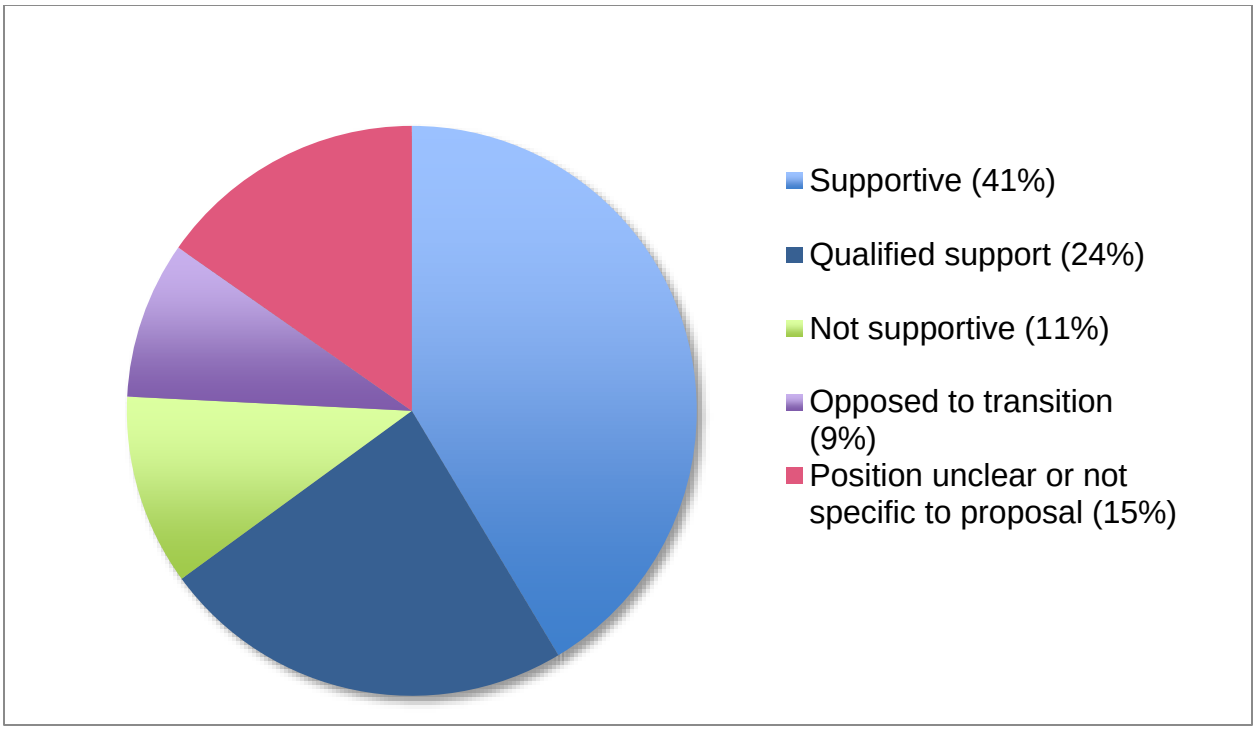
V. Summary of Public Comments

28 During its public comment period the ICG received 157 comments on the combined proposal from a wide variety of stakeholders, including individuals, operational communities, supporting organizations and advisory committees within the ICANN community, businesses and trade associations, civil society groups, governments, and others. The ICG received comments in Chinese, Spanish, and French as well as English. Comments came from national, regional, and global stakeholders as well as stakeholders who did not identify a location of origin, as shown in Figure 3.



29 **Figure 3. Geographic distribution of commenters in the public comment period.**

30 A significant majority of the comments (65%) were generally supportive of the proposal or expressed qualified support accompanied by questions, requests for clarification, or criticism. Small minorities of comments opposed the proposal (11%) or the IANA stewardship transition overall (9%). The remainder made no clear indication of either support or opposition or made comments that were not specific to the proposal (15%). This breakdown is shown in Figure 4 below.



31 **Figure 4. Summary of support for the transition proposal as reflected in public comments received by the ICG.**

VI. ICG Assessment

32 The ICG has assessed the proposals individually and collectively to determine whether:

- the community processes used to develop the proposals were open and inclusive, and whether they achieved consensus;
- the proposals are complete and clear;
- the three proposals together are compatible and interoperable, provide appropriate and properly supported accountability mechanisms, and are workable; and
- the proposals together meet the NTIA criteria.

A. Community Processes: Openness, Inclusiveness, and Consensus

33 The ICG has concluded that each of the individual proposals was developed in an open and inclusive manner and that each proposal achieved consensus as defined by each community. When the ICG received comments indicating process concerns via the ICG forum,[27] those comments were shared with the relevant operational communities and considered by the communities in depth.

[27] http://mm.ianacg.org/pipermail/icg-forum_ianacg.org/

34 While the majority of the public comments affirmed that the openness and inclusiveness of the processes were demonstrated and continue to exist, some broader concerns related to inclusion, relative roles and definition of “multistakeholder” were also raised by commenters.

35 One concern was that the NTIA’s transition requirements[28] (see sub-section D below) used a narrower definition of “multistakeholder” than the definition in the Tunis Agenda. A couple of comments raised the concern of formal inclusion in community processes. These concerns were previously raised with the communities and the processes were found to be sufficiently open to those who wanted to participate. Likewise there were concerns raised in a few comments that the existing operational communities and those that were directly involved in the IANA functions had too much relative power. These commenters stated a preference for membership or multistakeholder participation in the direct governance of the IANA functions. Some of these issues such as the definition of “multistakeholder” that was used by NTIA are not within the scope of the ICG’s inquiry. Other issues such as the use of the PTI as opposed to a direct governance structure were the subject of long and detailed discussions in the Names community. They were not adopted by the Names community in the final consensus. A couple of comments raised issues of concern related to global participation based on issues of culture, linguistics and travel costs. The ICG has noted those concerns but refers to its prior conclusion that the community processes were broadly accepted as having been sufficiently open and inclusive.

1. Names

36 The Names proposal was developed in the Cross Community Working Group to Develop an IANA Stewardship Transition Proposal on Naming Related Functions (CWG). The CWG had participation from 152 members and participants from across geographies and stakeholder groups. The CWG was open to participation from any interested person and conducted its work – over 100 calls and meetings and over 4,000 mailing list messages – in an open manner. The Names proposal included attention to the input of 115 comments received through two public comment proceedings. The proposal received the consensus support of the CWG, with no objections or minority statements recorded. All five CWG chartering organizations – the At-Large Advisory Committee (ALAC), the Country Codes Names Supporting Organization (ccNSO), the Governmental Advisory Committee (GAC), the Generic Names Supporting Organization (GNSO), and the Security and Stability Advisory Committee (SSAC) – approved the proposal at ICANN 53 in June 2015.

37 The CWG considered a wide variety of accountability models before settling on its final proposal. Those are summarized here to illustrate why the PTI-based model was chosen over the other models and to demonstrate the rigor of the CWG’s process in identifying a model that obtained consensus.

38 The CWG’s first draft proposal that was published for public comment was designed around the idea of an independent and separate contracting entity (“Contract Co.”) to replace NTIA’s stewardship role and contract with the IANA Functions Operator. Responses to the consultation showed that there were significant parts of this model that would not command community consensus.

[28] http://www.ntia.doc.gov/press-release/2014/ntia-announces-intent-transition-key-internet-domain-name-functions

39 Subsequently the CWG identified seven potential models for the IANA stewardship transition. These models were discussed at a face-to-face meeting of the working group with supporting advice from legal counsel.

40 The move from seven potential models down to two variants of an internal accountability/hybrid model was iterative over a series of sessions. In one session, after explanation of legal counsel's findings, two models – the internal trust and the external trust – were deemed unsuitable to meet the CWG's requirements because the structures were not necessarily recognized legally outside of the U.S. Upon conclusion of these sessions, the CWG also agreed to defer further consideration of the "Contract Co." model (in part, because it did not receive sufficient support after the first public comment period), until the viability of the remaining models could be further considered. In addition, the CWG agreed to defer further consideration of the fully internal model and the standalone IANA hybrid model. The CWG agreed that the remaining models – two variants of an internal accountability/hybrid model (the legal separation model and the functional separation model) – required further research on the part of legal counsel before the CWG could make a determination.

41 Following the face-to-face meetings, the CWG, in consultation with its independent legal counsel, held extensive discussions to determine which of the two variants of the internal accountability/hybrid model would be recommended. The CWG determined that the legal separation model was preferred because it would establish PTI as a separate legal entity at the outset, allowing for possible separation from ICANN in the future, if necessary. In addition, the legal separation model allowed for a contract between ICANN and PTI. With that decision reached, the CWG turned its focus to developing an accountability framework to support this model, while legal counsel assisted in addressing governance issues related to the model.

2. Numbers

42 The Numbers proposal was prepared by the Consolidated RIR IANA Stewardship Proposal (CRISP) Team,[29] which was established by the Numbers community through the Regional Internet Registries (RIRs) specifically for the purpose of producing the proposal. A running checklist concerning the Numbers community process is being maintained by the Number Resource Organisation (NRO).[30]

43 Between August and November 2014, initial discussions were conducted on a regional basis during the regular open meetings of each of the RIRs. During these discussions proposal elements were developed and agreed, often building on prior discussions of other RIR communities. After the fifth of this cycle of RIR meetings (AFRINIC-21[31]), the CRISP team consolidated the results of the discussions in a single global proposal on behalf of the Numbers community. The first draft[32] of the proposal was released for public comment on

[29] https://www.nro.net/nro-and-internet-governance/iana-oversight/consolidated-rir-iana-stewardship-proposal-team-crisp-team
[30] https://www.nro.net/nro-and-internet-governance/iana-oversight/checklist
[31] https://meeting.afrinic.net/
[32] https://www.nro.net/news/first-draft-proposal-of-the-internet-number-community-for-the-iana-stewardship-coordination-group

December 19, 2014, and a second draft[33] on January 8, 2015, before a final Proposal[34] was published and submitted to the ICG on January 15, 2015.

44 The CRISP team conducted its work on an open mailing list[35] with over a hundred subscribers and in open conference calls[36] which allowed the participation of any interested parties and were publicly minuted. The first CRISP teleconference call was held on December 9, 2014.

45 The CRISP team working methods are defined in its charter, and further as a result of agreements among the team. In particular, during these meetings and in online discussions, consensus was determined when, following discussions within the CRISP team, no further comments, concerns, or objections were observed.

3. Protocol Parameters

46 The Protocol Parameters proposal was developed in the IANAPLAN working group at the Internet Engineering Task Force (IETF). Anyone was welcome to join the discussion on the open mailing list and participate in the development of this response.

47 The discussion converged early on a model based on further evolution of the current arrangements, given that it is working well and there already were agreements, role definitions, and processes in place between the IETF and ICANN. Further discussion concentrated mainly on which specific further enhancements would be necessary before or as part of the transition.

48 Normal IETF procedures were used to determine rough consensus of the IETF community. The chairs of the working group reviewed open issues and, after an internal working group last call, determined that all had been satisfactorily addressed, and subsequently the Internet Engineering Steering Group (IESG) did a formal IETF-wide Last Call followed by a formal review and determined that the document had rough consensus.

B. Completeness and Clarity

49 The ICG discussed the content of each proposal in depth and has published a matrix of topics discussed.[37] With the one exception below, the ICG is satisfied that the proposals are complete and clear.

50 The ICG has noted that the Names proposal is conditioned on ICANN-level accountability mechanisms currently under development by the CCWG. The dependencies are described in detail in P1.III.A.i and are listed here in abbreviated fashion:

1. ICANN Budget and IANA Budget. The ability for the community to approve or veto the ICANN budget after it has been approved by the ICANN Board but before it comes into effect.

[33] https://www.nro.net/news/internet-number-community-iana-stewardship-proposal-final-call-for-comments
[34] https://www.nro.net/wp-content/uploads/ICG-RFP-Number-Resource-Proposal.pdf
[35] https://www.nro.net/pipermail/crisp/
[36] https://www.nro.net/nro-and-internet-governance/iana-oversight/crisp-team-process-and-archive
[37] http://www.ianacg.org/icg-files/documents/questions-and-answers-matrix_v4.xlsx

2. Community Empowerment Mechanisms. The empowerment of the multistakeholder community to have the following rights with respect to the ICANN Board:

    a. The ability to appoint and remove members of the ICANN Board and to recall the entire ICANN Board;

    b. The ability to exercise oversight with respect to key ICANN Board decisions (including with respect to the ICANN Board's oversight of the IANA functions) by reviewing and approving (i) ICANN Board decisions with respect to recommendations resulting from an IFR or Special IFR and (ii) the ICANN budget; and

    c. The ability to approve amendments to ICANN's "fundamental bylaws," as described below.

3. IANA Functions Review. The creation of an IFR which is empowered to conduct periodic and special reviews of the IANA functions relating to names. IFRs and Special IFRs will be incorporated into the Affirmation of Commitments mandated reviews set forth in the ICANN Bylaws.

4. Customer Standing Committee. The creation of a CSC which is empowered to monitor the performance of the IANA functions relating to names and escalate non-remediated issues to the ccNSO and GNSO.

5. Separation Process. The empowerment of the Special IFR to determine that a separation process is necessary and, if so, to recommend that a Separation Cross-Community Working Group (SCWG) be established to review the identified issues and make recommendations.

6. Appeal mechanism. An appeal mechanism, for example in the form of an Independent Review Panel, for issues relating to the IANA functions relating to names.

7. Fundamental bylaws. All of the foregoing mechanisms are to be provided for in the ICANN bylaws as "fundamental bylaws". A "fundamental bylaw" may only be amended with the prior approval of the community and may require a higher approval threshold than typical bylaw amendments (for example, a supermajority vote).

51 Before sending this proposal to NTIA via the ICANN Board, the ICG will secure confirmation from the CWG that its requirements have been met.

52 The Numbers and Protocol Parameters portions of the proposal are complete and have no dependencies on the work of the CCWG or other remaining processes. Indeed, implementation of the Numbers and Protocol Parameters proposals is underway and can continue without waiting for the CCWG to complete its work.

C. Combined Proposal Assessment

53 In conducting its assessment of the combined proposal,[38] the ICG considered the following questions:

1. Compatibility and interoperability: Do the proposals work together in a single proposal? Do they suggest any incompatible arrangements where compatibility appears to be required? Is the handling of any conflicting overlaps between the functions resolved in a workable manner?

2. Accountability: Do the proposals together include appropriate and properly supported independent accountability mechanisms for running the IANA function? Are there any gaps in overall accountability under the single proposal?

3. Workability: Do the results of any tests or evaluations of workability that were included in the component proposals conflict with each other or raise possible concerns when considered in combination?

1. Compatibility and Interoperability

54 The ICG believes the proposals are compatible and interoperable.

55 In early 2015 the ICG identified a potential compatibility issue regarding the IANA trademarks and the iana.org domain name. The Numbers community expects that both are associated with the IANA functions and not with a particular IANA Functions Operator. The Numbers community prefers that they be transferred to an entity independent of the IANA Functions Operator in order to ensure that these assets are used in a non-discriminatory manner for the benefit of the entire community.

56 Although the Protocol Parameters proposal did not speak to this issue, in response to an ICG inquiry the Protocol Parameters community indicated that it had no objection and was willing to help contribute to that arrangement.[39]

57 The Names proposal contains text that refers to the trademark in Annex S. In response to an ICG inquiry about the text, the CWG indicated that the text is clearly defined as placeholder text (in square brackets) within an initial draft proposed term sheet that does not have the consensus support of the CWG.[40] In effect, the Names proposal did not make a specific proposal with regard to the IANA trademarks (and it is completely silent as regards the domain name). Since then, the CWG has confirmed that its position is consistent with that of the other two communities in that it has no objection to the IANA trademarks and the IANA domain names being transferred to an entity independent of the IANA Functions Operator.[41] These community positions are also consistent with the ICANN statement on the same topic.[42]

58 As a result, the ICG considers the three proposals to be compatible. While the requirements in the transition plan are therefore clear, work remains to actually implement the

[38] https://www.icann.org/en/system/files/files/iana-transition-assembly-finalization-24dec14-en.pdf
[39] http://mm.icann.org/pipermail/internal-cg/2015-February/003103.html
[40] http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/2015-July/000829.html
[41] http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/2015-September/001500.html
[42] https://www.icann.org/news/announcement-2015-08-15-en

requirements. Detailed implementation requirements for the entity holding the IPR will be agreed and specified and an appropriate entity will then be created or selected such that it can meet the detailed requirements. The ICG notes that the operational communities are coordinating these details, and the ICG expects this coordination to continue during the implementation phase to ensure that the requirements are met. Some of the questions that the ICG received during the public comment period relate to the implementation details. These details will become clear as the communities proceed to plan the implementation.

59 Some of the public comments reflected a more general concern about whether the three operational communities would continue to coordinate and collaborate going forward, given the interdependencies between the communities as reflected in the proposal. Coordination across the operational communities is clearly an essential component of the Internet's successful development and collaboration is an integral part of the communities' operational and policy development processes. In the specific case of the IANA functions, each community has clearly confirmed to the ICG its ongoing commitment to cooperation.[43] That commitment to cooperate has led to the situation we have today, where registries from the three communities are administered by the IANA Functions Operator (at ICANN) even though the operational and policy decisions for where these registries will be located, and how they will be run, are decentralized.

60 Cooperation between the communities has always existed. Prior to ICANN's formation, IANA supported multiple policy development processes and each operational community decided on registry policy and place of implementation for each of the registries it was responsible for defining.

61 A web of relationships exists between the operational communities allowing the relationships and collaboration mechanisms to evolve as needed. The most obvious mechanism is that participants in each community also participate in the activities of others, with the degree of formality decided by the communities involved. Examples include RIR participants who participate in IETF working groups; IETF participants who participate in activities related to top-level domains at ICANN; IETF appointees to the ICANN Technical Liaison Group (TLG) as well as a liaison to the ICANN Board; and ICANN staff and participants who participate in IETF working groups.

62 The IP address registries provide another good example of how collaboration and coordination works today. The IETF sets the overall policy for IP addresses, while the RIRs set the detailed policy for subsets of the addresses. Some blocks are to be used for routing on the Internet, and IANA registers this over-arching allocation. When RIRs later request addresses from IANA, IN-ADDR.ARPA and IP6.ARPA zones (and whois) are updated accordingly, through IANA, although the ARPA TLD is managed by IAB. [44] In brief, the IETF sets the over-arching policy, RIRs set the detailed policy, and IANA registers and coordinates those allocations. The individual operational community proposals go into detail

[43] See CWG response to ICG < http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/attachments/20151007/6b83630d/attachment.doc>, IETF response to ICG http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/2015-October/001812.html>, IAB response to ICG < http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/2015-October/001825.html>, CRISP response to ICG <http://mm.ianacg.org/pipermail/internal-cg_ianacg.org/2015-October/001810.html>.

[44] See https://tools.ietf.org/html/rfc3172 and https://www.iab.org/documents/correspondence-reports-documents/docs2000/iab-statement-on-infrastructure-domain-and-subdomains-may-2000/ for more information about .ARPA.

about the overlaps between the registries (see paragraphs 2016-2019, 3027, and P1.Annex A).

2. Accountability

63 The three proposals together include appropriate and properly supported independent accountability mechanisms for running the IANA functions, relying mostly on the right of each operational community to change operators for the performance of the IANA functions within their purview.

64 The Numbers and Protocol Parameters proposals both build on accountability functions that have long been in place and operate under mostly existing and independent mechanisms which are well documented and operationally effective.

65 The Names proposal is conditioned on ICANN-level accountability mechanisms currently under development in the CCWG. Many commenters in the public comment period noted this dependency and the associated difficulty in judging the overall accountability provided by the Names proposal until CCWG Work Stream 1 completes. Before sending this proposal to NTIA via the ICANN Board, the ICG will secure confirmation from the CWG that its requirements have been met.

66 A number of comments highlighted the issue of jurisdiction as important. A minority of commenters objected to any transition at all because they perceived that the US was relinquishing jurisdiction. Another minority point of view raised concerns that the jurisdiction was not international or outside of the US. A number of comments also suggested that CCWG Work Stream 2 might be a place to address some of the continued concerns about jurisdiction. The majority of comments did not find jurisdiction to be a factor limiting their support for the proposal.

67 The ICG recognizes that there is no clear consensus in the comments for opposition to the proposal on the grounds of jurisdiction. Input reflected the discussion in the CWG, which identified that significant and detailed analysis would be needed to assess objectively the implications and benefits of a transfer of jurisdiction. The ICG also notes that a change in jurisdiction at the time of transition of stewardship – given the implications on ICANN and PTI accountability – would increase the complexity of the proposal and increase the level of risk in the transition.

68 The ICG recognizes that jurisdiction remains an important issue that needs to be addressed based on a clear assessment of the implications of different options. The ICG agrees that the approach identified by CCWG to address jurisdiction in Work Stream 2 seems to be an appropriate way of continuing this work.

3. Workability

69 The ICG regards the three proposals as individually and collectively workable.

70 Dependency on the successful establishment of the PTI and the implementation of the CWG accountability requirements exist. The proposals have indicated future ability to change the

IANA Functions Operator, but have established requirements to help ensure that any such future changes will not result in operational disruptions.

71 Verisign currently serves as the Root Zone Maintainer and performs the Root Zone Management functions pursuant to a cooperative agreement with NTIA. Since there is currently no written agreement between the Root Zone Maintainer and the IANA Functions Operator for the Root Zone Management process, some form of agreement between these organizations will be essential when NTIA withdraws from the Root Zone Management process.

72 More generally, having been developed by the three operational communities, the three proposals are naturally different in many respects, reflecting different subject matter, priorities, challenges and processes involved in their production. Some comments received during the public comment period suggested that the ICG proposal is unexpectedly or overly complex, and in some cases implied that this perceived complexity represents a threat to the workability of the proposal. It is true that the ICG proposal is a lengthy document. It contains three substantial components which are very detailed and also different in content, making it difficult for any one observer to fully absorb. However this structure is a direct result of the ICG's chosen approach to the transition planning process, namely to recognize that the IANA serves three distinct operational communities and to allow them to devise their respective plans independently, according to their own needs, priorities, and processes.

73 The ICG's chosen approach could be regarded as an application of the subsidiarity principle, whereby the solution to any given problem should be located as close as possible to those who are affected by it. In a bottom-up process this inevitably results in a variety of independent outcomes which are naturally diverse. The ICG believes that this variety of approaches, which is clearly apparent in the transition proposal, does not in itself represent complexity. Rather it represents a large body of work, but a body which is cleanly divided amongst the separate proposals, and which features, as expected, few interactions or dependencies among those three components.

74 At the outset of its work the ICG considered a different process with an aim to produce a more uniform singular solution. However, the ICG felt that such an approach would have been extremely challenging, and less likely to produce a single plan with the full support of the entire community. It is possible in fact that such a singular solution would turn out to be more complex than the plan which has been produced.

75 One further consideration, related again to the volume of work rather than to complexity, is that the implementation of each of the three proposals will impose substantial workload on the IANA. This needs to be managed carefully during the implementation period, in consultation with the communities regarding respective requirements and priorities, in order to ensure that the transition takes place within the required timeframe.

D. NTIA Criteria

76 When NTIA announced its intent to transition its stewardship, NTIA established that the transition proposal must have broad community support and address the following four principles:

- Support and enhance the multistakeholder model;

- Maintain the security, stability, and resiliency of the Internet DNS;
- Meet the needs and expectations of the global customers and partners of the IANA services; and,
- Maintain the openness of the Internet.

77 NTIA also explained that it would not accept a proposal that replaces the NTIA role with a government-led or an inter-governmental organization solution.

78 As explained in detail in the sub-sections below, the ICG has concluded that the combined proposal meets all of NTIA's criteria. The record as reflected by public comments received supports this finding. At the overall level a significant majority of the comments supported the finding that the proposal meets the transition requirements.

79 Furthermore, the ICG agrees with commenters who noted that vesting the IANA stewardship responsibility in the operational communities and using existing multistakeholder structures both help to ensure that the NTIA criteria will continue to be met over time. The communities have been working in support of the multistakeholder model, Internet openness, and DNS security, stability, and resiliency for years if not decades. Their structures provide the appropriate checks and balances to ensure that the stewardship of IANA will continue in this vein and will be protected against capture by any single interest.

1. Broad community support

80 The ICG has concluded that the community support for the proposal has breadth along many dimensions.

81 When considering each of the three proposal components separately, each of the individual proposals has broad community support. As explained in sub-section V.A above, each community ran an open and inclusive process in which any interested individual was able to participate. These proposals were made available for public comment multiple times and received wide community review. Each community produced a consensus proposal and no community felt the need to invoke voting procedures because each arrived at consensus without them. All of the chartering organizations of the CWG approved the Names proposal. Together, the openness and inclusiveness of the processes and the consensus results indicate broad community support.

82 When considering the combined proposal as a whole, community support has been demonstrated in a number of different ways. As discussed in Section V above, a significant majority of commenters who submitted comments during the public comment period support the proposal. These commenters included individuals, operational communities, supporting organizations and advisory committees within the ICANN community, businesses and trade associations, civil society organizations, governments, and others from across all regions of the world. Thus community support for the combined proposal is broad both in diversity of interests and geography of origin.

83 Furthermore, the consensus of the ICG in support of the proposal provides a powerful demonstration of the breadth of community support. ICG members serve on behalf of 13 constituencies that are all intimately concerned with the outcome of the IANA stewardship transition and that each encompass a wide swath of the community. That ICG members

have full consensus in support of the proposal is a testament to the support in each constituency.

2. Support and enhance the multistakeholder model

84 The ICG has concluded that the combined proposal supports and enhances the multistakeholder model because it leverages existing multistakeholder arrangements, processes, and paradigms in defining the post-transition IANA oversight and accountability mechanisms. Each component of the proposal has this feature.

85 The Names proposal maintains the existing framework of ICANN for continued multistakeholder oversight of the IANA functions operation. The proposal reinforces the multistakeholder model by retaining the functional separation between policy development processes and IANA. The ICANN policy development process remains bottom-up, transparent, and inclusive of all stakeholders. IANA remains focused on the needs of the operational communities, with transparent oversight by the CSC and IFR, both of which include non-ICANN participants and the latter of which is explicitly constituted as a multistakeholder entity.

86 The Numbers proposal is based in the existing, long-established RIR structure.[45] The RIRs are widely regarded as healthy examples of Internet technical organizations operating within the multistakeholder model of Internet governance. Structurally they are open, transparent and accountable not-for-profit organizations, with well-established governance mechanisms[46] and open participatory processes for policy development in their respective regions.[47] In addition, they and their communities are active participants in and supporters of multistakeholder processes of ICANN, IGF, and others. Accordingly, the Numbers proposal supports the existing multistakeholder mechanisms of the RIR system, and enhances them (and hence the overall multistakeholder model) by introducing improvements in transparency and accountability related to the performance of the IANA numbering functions.

87 The Protocol Parameters proposal is based in the IETF structure. Participation in the IETF is open to all individuals regardless of which stakeholder group or sector they may be from. The proposal supports and enhances the multistakeholder model by relying on IETF processes and voluntary agreements between the IETF and ICANN for the performance of the IANA functions related to protocol parameters. IETF processes could be used to amend governance of the protocol parameters function in the future. Anyone may propose amendments to those processes, and anyone may take part in the decision processes.

3. Maintain the security, stability, and resiliency of the Internet DNS

88 Neither the Numbers proposal nor the Protocol Parameters proposal suggest changes that could affect the security, stability, or resiliency of the DNS.

89 While the Names proposal calls for the IANA Functions Operator to be transferred to the PTI, the PTI will be an affiliate (subsidiary) of ICANN and ICANN will be responsible for the

[45] https://www.nro.net/about-the-nro/regional-internet-registries
[46] https://www.nro.net/about-the-nro/rir-governance-matrix
[47] https://www.nro.net/policies

stewardship of the PTI. Hence operational roles are maintained. The proposal envisages the names aspect of the current NTIA oversight and contracting authority is transferred to ICANN. The separation of PTI as a subsidiary will ensure the independence of that oversight role from the contractor providing the service.

90 This arrangement introduces minimum change and keeps the current IANA functions operation team intact and carrying out the same role as it has today. Only an organizational change is proposed to ensure that the independence of oversight is maintained.

91 Much of this approach is based on the principle of addressing and responding to issues affecting the provision of the IANA functions operation. The ICG believes that this – a shared commitment to remedy shortfalls in performance – is inherently supportive of the security, stability and resilience of the provision of the IANA functions operation.

92 The ICG notes that there is ongoing work on developing Service Level Expectations for Names, and that current and proposed expectations already exist for Numbers and Protocol Parameters. The ongoing work must be completed. Obviously, a failure to develop the expectations or inability to meet them could be a threat to the security, stability and resilience of the operation of the DNS. However, we expect the ongoing work to lead to clear recommendations regarding the names functions. Clear expectations are also fundamental to ensuring the healthy operation of the DNS.

93 The ICG notes that, under the current IANA Functions Contract, the DNS Root Zone Management process currently has three functional roles: the IANA Functions Operator (IFO), the Root Zone Maintainer (RZM), and the Root Zone Administrator (RZA). A complete and finalized transition requires revising the relationship between the current IANA Functions Operator (ICANN), the current RZM (Verisign) and the current Root Zone Administrator (NTIA). Insofar as those revisions require amendments to (or elimination of) the cooperative agreement between the NTIA and Verisign, the process will be controlled by the NTIA, not the ICG. This "related and parallel transition," as the NTIA described it as part of its March 2014 transition announcement,[48] involves interactions between NTIA, ICANN and Verisign that are outside of the ICG process. Nevertheless, the NTIA itself has recognized that "aspects of the IANA Functions Contract are inextricably intertwined with the Verisign cooperative agreement,"[49] and thus the results of that process must be consistent with the ICG proposal's approach to the IANA functions.

94 The Names proposal (paragraph 1150) states: "Post-transition, no authorization for Root Zone change requests will be needed." Thus, the RZA role need not be continued. However, since the RZA (NTIA) has served as the linkage between the IFO and the RZM and there is currently no direct agreement between the RZM and the IFO for the Root Zone Management process, the ICG notes that some form of written agreement between the IANA Functions Operator and RZM that clearly defines the roles and responsibilities of both parties is essential for the secure, stable and resilient operation of the Root Zone of the DNS when the NTIA withdraws from the Root Zone Management process.

95 So far NTIA's process for transition of the Root Zone Management functions seems to have built upon the output of the Names proposal. The CWG proposed elimination of the NTIA's

[48] http://www.ntia.doc.gov/other-publication/2014/iana-functions-and-related-root-zone-management-transition-questions-and-answ

[49] http://www.ntia.doc.gov/other-publication/2014/iana-functions-and-related-root-zone-management-transition-questions-and-answ

root zone change authorization function and described a set of guidelines and principles regarding post-transition root zone administration. To the ICG, the post-transition RZM architecture proposed in an NTIA-solicited document by ICANN and Verisign[50] seems to be consistent with those guidelines and principles.

96 In the public comment period, however, a wide range of stakeholders expressed concern about the transparency of the parallel process and the uncertainty created by its status as a private negotiation among NTIA, Verisign and ICANN. Commenters seemed especially concerned about whether the global multistakeholder community would be consulted about the new arrangements before they are finalized, and whether the changes might permit significant changes in roles, such as ICANN taking over the RZM function. While the CWG proposal contemplates an arrangement between the IFO and the RZM, the CWG has confirmed to the ICG that such an arrangement has not been specified in the Names proposal or elsewhere. ICANN and NTIA have made it known[51] that prior to the expiry of the NTIA contract those relationships will be specified in a written agreement between ICANN and Verisign. The ICG reiterates that a written agreement between the IFO and RZM establishing each party's role needs to be in place by the time of the expiry of the NTIA contract. For transparency reasons, that agreement should be made available for public review prior to execution. In order to be consistent with the Names proposal, any post-transition structural changes to that agreement, including any structural change to the roles of the parties, should be subject to community review, input and consensus-based approval.

97 A few public comments raised questions on other topics that might impact the stability and security of the Internet. A couple of commenters hypothesized that dissatisfaction with certain elements of the proposal, jurisdiction among them, might lead to the creation of a parallel DNS that could lead to fragmentation. This was not a shared concern across the vast majority of commenters. Some concerns were predicated on the ability to achieve some of the proposal elements in contracts and to appropriately enforce them. This is a matter that the communities are addressing in their implementation work. A concern that was raised, again as a potential problem across a few comments, was the impact that separation from PTI or multiple IANA Functions Operators might have on the security and stability of the Internet. We have noted the operational community responses to this concern in sub-section VI.C.1 above and believe these concerns have been adequately addressed. Finally, a number of commenters suggested that security and stability might be impacted, but provided little to no context to further evaluate their concerns. We note that in their workability reviews included in the proposals the operational communities addressed many of these general parameters.

4. Meet the needs and expectations of the global customers and partners of the IANA services

98 All three communities determined that the global customers and partners of the IANA services, including the gTLD and ccTLD registries and their communities of stakeholders; the RIRs; and the IETF are presently satisfied with the performance of the IANA functions by the IANA department of ICANN. The combined proposal is structured such that the PTI will

[50] http://www.ntia.doc.gov/files/ntia/publications/root_zone_administrator_proposal-relatedtoiana_functionsste-final.pdf

[51] See the transcript of the ICANN 54 Public Forum, October 23, 2015: https://meetings.icann.org/en/dublin54/schedule/thu-public-forum.

continue to provide the IANA functions to its global customers and partners post-transition in essentially the same manner as ICANN's IANA department does today. In the Names community, IANA customers expressed support for a clearer separation between ICANN as policy developer and IANA as implementer, and the PTI separation accomplishes this. Also, the proposal makes it possible for each operational community to choose a different IFO should the need arise, a capability which does not currently exist for numbers and names. Thus the needs and expectations of the global customers and partners should continue to be satisfied after the transition just as they are currently.

5. Maintain the openness of the Internet

99 The combined proposal requires that the IANA services, associated policy development processes, and IANA registries remain fully open and accessible just as they are today.

6. Does not replace NTIA role with a government or inter-governmental organization

100 The combined proposal does not replace NTIA's role with a government or inter-governmental organization.

101 The Names proposal replaces NTIA's various roles as they relate to the naming functions with the combination of ICANN, the CSC, and the IFR, none of which are governments or inter-governmental organizations. Establishing the PTI as an affiliate of ICANN allows the community to rely on ICANN's accountability mechanisms and safeguards to prevent capture, including by governments.

102 Although a government that operates a ccTLD may become a member of the CSC, governments are expected to comprise at most a minority of the CSC. The IFR is a multistakeholder entity with limited membership seats for governmental entities.

103 The Numbers proposal essentially places the RIRs in the role currently occupied by the NTIA. The RIRs are independent, non-governmental, self-funded not-for-profit organizations, accountable to their regional memberships and communities through well-developed mechanisms.[52] On behalf of their communities they will contract with ICANN, through the proposed SLA, to provide the required number resource services.

104 The Protocol Parameters proposal relies on voluntary agreements between the IETF, ICANN, implementers and their users for the stewardship of the protocol parameters function. ICANN's structural safeguards are noted above; the IETF likewise has significant structural safeguards in place that prevent it from capture or take-over by a government or inter-governmental entity. Every decision made in the IETF is done in full public view. Appointments to the IETF's leadership committees are time-limited and are made by a randomly selected group of volunteers. Any decision can be appealed by any IETF participant, and anyone in a leadership position can be recalled for their actions. All decisions are made by the consensus of the participants – there is no voting or campaigning. Collectively, these measures defend the IETF and the protocol parameters registries from capture by any particular entity, governmental or otherwise.

[52] https://www.nro.net/about-the-nro/regional-internet-registries

105 The overwhelming majority of comments received in the public comment period agreed that the proposal does not replace NTIA stewardship with a government-led or intergovernmental solution. Some commenters felt that governmental roles would be too constrained; others felt that the role of the US government was still too strong due to the retention of US jurisdiction. A few other commenters expressed concerns about the role of government-controlled ccTLDs in the CSC. The ICG notes the concerns raised, but believes that the proposal has relied on the community processes to find the right balance across the stakeholder equities and operational requirements, and thus sees no further action as needed.

106 A small number of comments expressed concern about a strengthening of the GAC in the new accountability arrangements. These comments are best addressed by the CCWG.

VII. Implementation Items to be Completed

107 The operational communities have indicated that a number of items will need to be implemented prior to the expiry of the NTIA contract. A current non-exhaustive list of such items appear below.[53] Items that may arise from the proposals that do not need to be completed prior to the expiry of the contract (establishment of the IFR, for example) are not listed. The operational communities, ICANN, and other stakeholders that have been involved in the transition process have responsibility for ensuring that implementation is completed in accordance with the proposal.

108 Items required by the combination of the three proposals:

- Identification of an entity to hold the IANA-related intellectual property and domain names.
- Transfer of the IANA-related intellectual property and domain names to the entity.
- Execution of necessary agreements between the holder of the IANA intellectual property, the operational communities, and the IFO, as determined by those parties.

109 Items required by the Names proposal:

- Establishment of the PTI
- Appointment of PTI Board of Directors
- Development and execution of ICANN-PTI contract
- Staffing of PTI
- Transfer of resources to PTI
- Development and approval of PTI operating plan and budget

[53] An implementation action item inventory is available at https://www.ianacg.org/icg-files/documents/implementation-action-item-inventory.pdf. It was developed through submissions from the three operational communities and was used in the ICG's assessment of achievability and completeness for the transition proposal. It represents a snapshot in time and will not be further updated.

- Development of a work plan for testing and implementing SLEs
- Finalization and implementation of SLEs
- Establishment of mechanisms to resolve complaints and problems related to actions pertaining to the operation of the naming functions
- Determination if any statutory waivers are needed from the US Government (if so, obtain them)
- Establishment of the architectural standing committee
- Establishment of the CSC
- Development and approval of all necessary changes to ICANN by-laws
- Update to Root Zone Maintainer relationship to remove NTIA role
- Execution of agreement between the IFO and the RZM
- Implementation of any ICANN accountability mechanisms identified by the CWG as required to be in place before the expiry of the NTIA contract

110 Items required by the Numbers proposal:

- Execution of SLA between the RIRs and ICANN
- Finalization of charter and membership of Review Committee for IANA numbering functions (committee must be active no later than 6 months after the transition)

111 Items desired (although not strictly required) by the Protocol Parameters proposal:

- Acknowledgment from ICANN that it will carry out the obligations established under C.7.3 and I.61 of the current IANA Functions Contract between ICANN and the NTIA to achieve a smooth transition to subsequent operator(s).
- Acknowledgment from all relevant parties that the protocol parameters are in the public domain.

VIII. ICG Recommendation

112 The ICG unanimously supports this proposal and recommends that all affected parties implement it.

113 The ICG will transmit this proposal to NTIA via the ICANN Board as soon as the CWG has confirmed that its requirements regarding ICANN-level accountability mechanisms have been met.

Part 1. Response from the Domain Names Community

Response to the IANA Stewardship Transition Coordination Group Request for Proposals on the IANA Stewardship Transition from the Cross Community Working Group on Naming Related Functions (CWG-Stewardship)

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P1. GLOSSARY

Below are acronyms used throughout the document. Additional useful acronyms have been provided as they may be referenced in related CWG-Stewardship documents.

- **AC**: Advisory Committee
- **ALAC:** At-Large Advisory Committee
- **AOC**: Affirmation of Commitments
- **ASO**: Address Supporting Organization
- **ccNSO**: Country Code Names Supporting Organization
- **ccTLD**: Country Code Top-Level Domain
- **CCWG-Accountability**: Cross Community Working Group on Enhancing ICANN Accountability
- **CO**: Contracting Officer
- **COR**: Contracting Officer's Representative
- **CRISP Team**: Consolidated RIR IANA Stewardship Transition Proposal Team
- **CSC**: Customer Standing Committee
- **CSCRP**: Customer Service Complaint Resolution Process
- **CWG-Stewardship**: Cross Community Working Group to Develop an IANA Stewardship Transition Proposal on Naming Related Functions
- **DNS**: Domain Name System
- **DNSSEC**: Domain Name System Security Extensions
- **DRDWG**: Delegation and Re-delegation Working Group
- **DT**: Design Team
- **FOIWG**: Framework of Interpretation Working Group
- **GAC**: Governmental Advisory Committee
- **GNSO**: Generic Names Supporting Organization
- **gTLD**: Generic Top-Level Domain
- **IANA**: Internet Assigned Numbers Authority
- **ICANN**: Internet Corporation for Assigned Names and Numbers
- **ICC**: International Chamber of Commerce
- **ICG**: IANA Stewardship Transition Coordination Group
- **ICP**: Internet Coordination Policy
- **IDN**: Internationalized Domain Name
- **IETF**: Internet Engineering Task Force
- **IFO**: IANA Functions Operator
- **IFR**: IANA Function Review

- **IFRT**: IANA Function Review Team
- **NIST**: National Institute of Standards and Technologies
- **NTIA**: National Telecommunications and Information Administration (U.S. Department of Commerce)
- **OFAC**: U.S. Department of the Treasury's Office of Foreign Assets Control
- **PDP**: Policy Development Process
- **PTI**: Post-Transition IANA
- **RFC**: Request for Comments
- **RFP**: Request for Proposals
- **RrSG**: Registrar Stakeholder Group
- **RIR**: Regional Internet Registry
- **RSSAC**: Root Server System Advisory Committee
- **RySG**: Registry Stakeholder Group
- **SCWG**: Separation Cross-Community Working Group
- **SLA/SLEs:** Service Level Agreement/Service Level Expectations
- **SO**: Supporting Organization
- **SOW**: Statement of Work
- **SSAC**: Security and Stability Advisory Committee
- **TLD**: Top-Level Domain

Response to the IANA Stewardship Transition Coordination Group Request for Proposals on the IANA Stewardship Transition from the Cross Community Working Group on Naming Related Functions (CWG-Stewardship)

1001 ### P1. Abstract

1002 This document is a response from the Internet Names Community to the IANA Stewardship Transition Coordination Group (ICG) Request for Proposals (RFP) made on September 8, 2014.

1003 Please note that annexes are included at the end of this document.

1004 ### P1. Proposal type

1005 Identify which category of the IANA Functions this submission proposes to address:

[X] Names [ ] Numbers [ ] Protocol Parameters

P1.I The Community's Use of the IANA

1006 *This section should list the specific, distinct IANA services or activities your community relies on. For each IANA service or activity on which your community relies, please provide the following:*

- *A description of the service or activity.*
- *A description of the customer of the service or activity.*
- *What registries are involved in providing the service or activity.*
- *A description of any overlaps or interdependencies between your IANA requirements and the functions required by other customer communities*

1007 ### P1.I.A. The service or activity

1008 The IANA activities, as described in the current IANA Functions Contract, relevant to the Internet Naming Community are:

1) Root Zone Change Request Management – not including delegation and redelegation (NTIA IANA Functions Contract: C.2.9.2.a).

2) Root Zone "WHOIS" Change Request and Database Management (NTIA IANA Functions Contract: C.2.9.2.b).

3) Delegation and Redelegation of a Country Code Top-Level Domain (ccTLD) (NTIA IANA Functions Contract: C.2.9.2.c).

4) Delegation and Redelegation of a Generic Top-Level Domain (gTLD) (NTIA IANA Functions Contract: C.2.9.2.d).

5) Redelegation and Operation of the .INT Top-Level Domain (NTIA IANA Functions Contract: C.2.9.4).

6) Root Domain Name System Security Extensions (DNSSEC) Key Management (NTIA IANA Functions Contract: C.2.9.2.f).

7) Root Zone Automation (NTIA IANA Functions Contract: C.2.9.2.e).

8) Customer Service Complaint Resolution Process (CSCRP) (NTIA IANA Functions Contract: C.2.9.2.g).

1009 Services provided by ICANN's IANA department that are not part of the contractually defined IANA Functions, but which are relevant to the Internet Naming Community are:

9) Management of the Repository of IDN Practices (IANA service or activity beyond the scope of the IANA Functions Contract).

10) Retirement of the Delegation of TLDs (IANA service or activity beyond the scope of the IANA functions contract).

11) For further details concerning each of these IANA activities, please see Annex A.

1010 P1.I.B. The customer of the service or activity

1011 The primary customers of these IANA activities are TLD registry managers, .INT registrants, Domain Name System (DNS) validating resolver operators. For further details on the customer(s) for each activity, please see Annex A.

1012 P1.I.C. Registries involved in providing the service or activity

1013 TLD registries (including ccTLD and gTLD) are involved in providing the service. For further details on which TLD registry (ccTLD or gTLD) is involved in each activity, please see Annex A.

1014 P1.I.D. Overlap or interdependencies between your IANA requirements and the functions required by other customer communities

1015 The IETF, through its responsibilities for developing the underlying DNS protocol and its extensions, could designate parts of the domain name space for particular protocol-related purposes that may overlap with usages assigned through ICANN policies. It may also designate portions of the namespace as invalid, illegal, or reserved based on the evolution of the underlying DNS protocol and its extensions. It may also expand the scope of namespace to be managed through such changes. Additional overlap and/or interdependencies have been identified for each activity in Annex A.

P1.II Existing Pre-Transition Arrangements

1016 *This section should describe how existing IANA-related arrangements work, prior to the transition.*

1017 P1.II.A Policy Sources

1018 *This section should identify the specific source(s) of policy that must be followed by the IANA functions operator in its conduct of the services or activities described above. If there are distinct sources of policy or policy development for different IANA activities, then please describe these separately. For each source of policy or policy development, please provide the following:*

- *Which IANA service or activity (identified in Section I) is affected.*
- *A description of how policy is developed and established and who is involved in policy development and establishment.*
- *A description of how disputes about policy are resolved.*
- *References to documentation of policy development and dispute resolution processes.*

1019 P1.II.A.i. Affected IANA Service (ccTLDs[54])

1020 All functions that apply to Country Code Top-Level Domains (ccTLDs) and modify the Root Zone database or its WHOIS database are affected.

1021 How policy is developed and established by whom (ccTLDs)

1022 RFC1591 was written in 1994 as a Request For Comments (RFC) by the original IANA Functions Operator, Jon Postel. It is a short document intended to outline how the Domain Name System (DNS) was structured at that time and what rules were in place to decide on its expansion. The longest part of it outlines selection criteria for the manager of a new Top Level Domain (TLD) and what was expected of such a manager.

1023 Like all RFCs, this is a static document (RFCs are updated by the issuance of a new RFC).There have been two significant attempts to revise it so it can be more easily applied to the current context:

- **Internet Coordination Policy 1 (ICP-1).**

1024 This document from the Internet Coordination Policy group of ICANN was one of three such documents created by ICANN staff shortly after its creation. It attempted to update operational details over how the DNS was structured and should be run.

1025 The ICP-1 document was a source of significant friction between ICANN and the ccTLD community and the Country Code Names Supporting Organization (ccNSO) formally rejected the ICP-1 document (final report of the ccNSO's Delegation and Redelegation Working Group or DRDWG) arguing that it modified policy but did not meet the

[54] According to the Fast Track Methodology the rules for delegation and redelegation for ccTLD apply to delegation and redelegation of IDN ccTLD.

requirements for doing so at the time of its introduction in 1999.

- **Framework of Interpretation Working Group (FOIWG) Recommendations.**

1026 A follow-on to the ccNSO's DRDWG, the FOIWG was a joint effort between the ccNSO and the Governmental Advisory Committee (GAC) that also involved representatives from a number of ICANN communities to interpret RFC1591 in light of the Internet of today. In its final report it made a number of recommendations that clarify the application of RFC1591 within the current context.

1027 The ccNSO formally endorsed the FOIWG's Final Report in February 2015 and transmitted it to the ICANN Board of Directors. The ICANN Board adopted the FOIWG recommendations in June 2015

- **GAC Principles and Guidelines for the Delegation and Administration of Country Code Top Level Domains 2005.**

1028 This document, also known as the 2005 GAC Principles, which the GAC regards as formal "Advice" to the ICANN Board, and as such is subject to the Bylaws provisions regarding such Advice at the time of submission[55]. This Advice was developed by the GAC and the first version of these principles was published in 2000 and later revised to produce the 2005 version.

1029 Section 1.2 of this document highlights one of the key principles for governments with respect to the management of the ccTLDs associated with their country or territory code:

> *1.2. The main principle is the principle of subsidiarity. ccTLD policy should be set locally, unless it can be shown that the issue has global impact and needs to be resolved in an international framework. Most of the ccTLD policy issues are local in nature and should therefore be addressed by the local Internet Community, according to national law.*

1030 Also section 7.1 of this document can be directly relevant to delegation and redelegation of a ccTLD:

> *7.1. Principle*
> *Delegation and redelegation is a national issue and should be resolved nationally and in accordance with national laws, taking into account the views of all local stakeholders and the rights of the existing ccTLD Registry. Once a final formal decision has been reached, ICANN should act promptly to initiate the process of delegation or redelegation in line with authoritative instructions showing the basis for the decision.*

- **Local laws applicable to ccTLDs, or Internationalized Domain Names (IDNs) ccTLDs, associated with a specific country or territory are developed by the governments of those countries or territories.**

[55] Details at https://www.icann.org/resources/pages/bylaws-2012-02-25-en#XI

How disputes about policy are resolved (ccTLDs)

Section 3.4 of RFC1591 provided for a dispute resolution mechanism. However, the body listed in the document does not currently exist. Most ccTLDs do not have any contracts that specify a dispute resolution mechanism with ICANN.

For those ccTLDs that do not have a contract with ICANN that specifies dispute resolution mechanisms, the ICANN-provided escalation paths available to them are the ICANN Ombudsman and the ICANN Bylaws relating to the Independent Review of ICANN Board Actions (which would only apply to the relevant Board action (i.e., delegations and redelegations in this case). Given that these mechanisms are non-binding on the Board or ICANN, they are perceived by many ccTLDs as being of limited value.

There are additional sources of accountability for the limited number of ccTLDs that have formal Sponsorship Agreements or Frameworks of Accountability with ICANN. These types of agreements have dispute resolution clauses to settle disagreements between the parties that are relevant to all actions and activities by the Operator for ccTLDs. These typically use the International Chamber of Commerce (ICC).

It is also important to note that local laws applicable to ccTLDs, or IDN ccTLDs, associated with a specific country or territory are developed by the governments of those countries or territories and that disputes with respect to such laws can be handled in courts of competent jurisdiction.

References to documentation of policy development and dispute resolution processes (ccTLDs)[56]

- RFC1591: https://www.ietf.org/rfc/rfc1591.txt.
- FOIWG Final Report: http://ccnso.icann.org/workinggroups/foi-final-resolutions-11feb15-en.pdf.
- Independent Review Panel (IRP): https://www.icann.org/resources/pages/irp-2012-02-25-en.
- ICANN Ombudsman: https://www.icann.org/resources/pages/governance/bylaws-en#AnnexB.
- GAC Principles 2005: https://gacweb.icann.org/download/attachments/28278844/ccTLD_Principles_0.pdf?version=1&modificationDate=1312385141000&api=v2.

[56] ICANN staff drafted two documents entitled "ICP-1" (May 1999) and "CCTLD News Memo #1" (23 October 1997) which were the source of significant friction between ICANN and the ccTLD community and the Country Code Names Supporting Organization (ccNSO). The ccNSO formally rejected the ICP-1 document (final report of the ccNSO's Delegation and Redelegation Working Group or DRDWG) arguing that it modified policy but did not meet the requirements for doing so at the time of its introduction in 1999. ICANN has accepted that ICP-1 and CCTLD News Memo #1 were not fit for purpose and have archived the documents.

P1.II.A.ii. Affected IANA Service (gTLDs)

Delegation and redelegation of Generic Top-Level Domains (gTLDs).

How policy is developed and established by whom (gTLDs)

The Generic Names Supporting Organization GNSO) is responsible for developing and recommending to the ICANN Board substantive policies relating to gTLDs. The GNSO policy development process is a complex and well-described process that would dwarf this document and as such will not be included. Details can be found at: https://www.icann.org/resources/pages/governance/bylaws-en#AnnexA.

How disputes about policy are resolved (gTLDs)

This is a complex and well-described process that would dwarf this document and as such will not be included. Further details can be found at: http://newgtlds.icann.org/EN/APPLICANTS/AGB, which outlines the procedures that were designed with an eye toward timely and efficient dispute resolution. As part of the New gTLD Program, these Procedures apply to all proceedings administered by each of the Dispute Resolution Service Providers (DRSP). Each of the DRSPs has a specific set of rules that will also apply to such proceedings. Furthermore, other ICANN-provided escalation paths such as the ICANN Ombudsman and the ICANN Bylaws relating to the Independent Review of ICANN Board Actions (which would only apply to the relevant Board action) are available.

References to documentation of policy development and dispute resolution processes (gTLDs)

- GNSO PDP: https://www.icann.org/resources/pages/governance/bylaws-en#AnnexA.
- New gTLD Applicant Guidebook: http://newgtlds.icann.org/EN/APPLICANTS/AGB.
- Independent Review Panel (IRP): https://www.icann.org/resources/pages/irp-2012-02-25-en.
- ICANN Ombudsman: https://www.icann.org/resources/pages/governance/bylaws-en#AnnexB.

P1.II.B. Oversight and Accountability

This section should describe all the ways in which oversight is conducted over IANA's provision of the services and activities listed in Section I and all the ways in which IANA is currently held accountable for the provision of those services. For each oversight or accountability mechanism, please provide as many of the following as are applicable:

- *Which IANA service or activity (identified in Section I) is affected.*
- *If the policy sources identified in Section II.A are affected, identify which ones are affected and explain in what way.*
- *A description of the entity or entities that provide oversight or perform accountability functions, including how individuals are selected or removed from participation in those entities.*
- *A description of the mechanism (e.g., contract, reporting scheme, auditing scheme, etc.). This should include a description of the consequences of the IANA functions operator not meeting the standards established by the mechanism, the extent to which the output of the mechanism is transparent and the terms under which the mechanism may change.*
- *Jurisdiction(s) in which the mechanism applies and the legal basis on which the mechanism rests.*

P1.II.B.i Which IANA service or activity is affected (NTIA IANA Functions Contract)

For the purposes of this section, oversight and accountability of the IANA Functions Operator (IFO) refers to independent oversight and accountability. Specifically, oversight and accountability are defined as:

- Oversight (of the IFO performing Root Zone-related actions and activities): Oversight is performed by an entity that is independent of the Operator (as defined in the NTIA IANA Functions Contract) and has access to all relevant information to monitor or approve the actions and activities that are being overseen.
- Accountability: Accountability provides the ability for an independent entity to impose binding consequences to ensure the IFO meets its formally documented and accepted agreements, standards, and expectations.

All IANA Functions described in Section I of this document are affected. Annex B provides an overview of oversight mechanisms that are found in the NTIA IANA Functions Contract.

If the policy sources identified in Section II.A are affected, identify which ones are affected and explain in what way (NTIA IANA Functions Contract)

These oversight and accountability mechanisms in the NTIA IANA Functions Contract do not affect the policies listed in Section II.A.

The entity or entities that provide oversight or perform accountability functions (NTIA IANA Functions Contract)

The NTIA is currently responsible for providing this oversight. There is no description regarding how the individuals who perform these functions are selected, removed, or replaced.

A description of the mechanism (NTIA IANA Functions Contract)

One of the official accountability mechanisms included in the NTIA IANA Functions Contract is the ability to cancel or not renew the contract. In addition, there is also a customer complaint mechanism built into the contract.

Jurisdiction and legal basis of the mechanism NTIA IANA Functions Contract

The jurisdiction of the mechanism is the United States of America.

Which IANA service or activity is affected (NTIA acting as Root Zone Management Process Administrator)

NTIA exercises oversight by reviewing all requests and documentation provided by the IANA Contractor for changes to the Root Zone or its WHOIS database to validate that IANA has met its obligations in recommending a change. NTIA can refuse to authorize the request. It affects all IANA Functions that modify the Root Zone and database or its WHOIS database.

If the policy sources identified in Section II.A are affected, identify which ones are affected and explain in what way (NTIA acting as Root Zone Management Process Administrator)

This does not affect the policies listed in Section II.A.

The entity or entities that provide oversight or perform accountability functions (NTIA acting as Root Zone Management Process Administrator)

The NTIA is currently responsible for providing this oversight. There is no description regarding how the individuals who perform these functions are selected, removed, or replaced.

A description of the mechanism (NTIA acting as Root Zone Management Process Administrator)

The accountability is exercised by the NTIA by not approving a change request by IANA for the Root Zone or its WHOIS database.

Jurisdiction and legal basis of the mechanism (NTIA acting as Root Zone Management Process Administrator)

The jurisdiction of the mechanism is the United States of America.

Which IANA service or activity is affected (binding arbitration included in TLD contracts)

Most gTLD registries as well as a few ccTLD registries have contracts (for ccTLDs also called Sponsorship Agreements or Frameworks of Accountability) with ICANN. All of these contracts provide for binding arbitration of disputes. (The standard gTLD contract language begins with: "*Disputes arising under or in connection with this Agreement that are not resolved pursuant to Section 5.1, including requests for specific performance, will be resolved through binding arbitration conducted pursuant to the rules of the International Court of Arbitration of the International Chamber of Commerce*.") All IANA Functions which modify the Root Zone file or database are affected.

If the policy sources identified in Section II.A are affected, identify which ones are affected and explain in what way (binding arbitration included in TLD contracts)

This does not affect the policies listed in Section II.A.

The entity or entities that provide oversight or perform accountability functions (binding arbitration included in TLD contracts)

For most gTLDs the language is:

Disputes arising under or in connection with this Agreement that are not resolved pursuant to Section 5.1, including requests for specific performance, will be resolved through binding arbitration conducted pursuant to the rules of the International Court of Arbitration of the International Chamber of Commerce. Any arbitration will be in front of a single arbitrator, unless (i) ICANN is seeking punitive or exemplary damages, or operational sanctions, (ii) the parties agree in writing to a greater number of arbitrators, or (iii) the dispute arises under Section 7.6 or 7.7. In the case of clauses (i), (ii) or (iii) in the preceding sentence, the arbitration will be in front of three arbitrators with each party selecting one arbitrator and the two selected arbitrators selecting the third arbitrator.

For the few ccTLDs with a contract, the language relating to this is usually a version of the following:

Each party shall nominate one arbitrator, and the two arbitrators so nominated shall, within 30 days of the confirmation of their appointment, nominate the third arbitrator, who will act as Chairman of the Arbitral Tribunal.

A description of the mechanism (binding arbitration included in TLD contracts)

The results of the arbitration are binding on both parties.

Jurisdiction and legal basis of the mechanism (binding arbitration included in TLD contracts)

For gTLDs the arbitration will be conducted in the English language and will occur in Los Angeles County, California, USA.

For ccTLDs that have dispute resolution clauses with ICANN, the place of arbitration needs to be agreed to by both parties. Typically there is language inserted that identifies the law that will be relevant in evaluating each party's actions, such as the law of the country in which the ccTLD is operated for ccTLDs, and the laws of California for ICANN's actions.

Which IANA service or activity is affected (applicability of local law for the administration by the IANA Functions Operator of ccTLDs associated with a specific country or territory (ccTLDs))

The NTIA IANA Functions Contract clearly establishes the importance of the GAC Principles 2005 in the delegation and redelegation of ccTLDs.

As such, Section 1.7 of the GAC Principles 2005 clearly sets the stage for such oversight by governments:

> 1.7. It is recalled that the WSIS Plan of action of December 2003 invites "Governments to manage or supervise, as appropriate, their respective country code top-level domain name." Any such involvement should be based on appropriate national laws and policies. It is recommended that governments should work with their local Internet community in deciding on how to work with the ccTLD Registry.

Within the context provided by Section 1.2 of the same document:

> 1.2. The main principle is the principle of subsidiarity. ccTLD policy should be set locally, unless it can be shown that the issue has global impact and needs to be resolved in an international framework. Most of the ccTLD policy issues are local in nature and should therefore be addressed by the local Internet Community, according to national law.

The IFO currently seeks government approval for all ccTLD delegations and redelegations.

ccTLD delegations and redelegations are affected.

If the policy sources identified in Section II.A are affected, identify which ones are affected and explain in what way (applicability of local law for the administration by the IANA Functions Operator of ccTLDs associated with a specific country or territory (ccTLDs)

This does not affect the policies listed in Section II.A.

The entity or entities that provide oversight or perform accountability functions (applicability of local law for the administration by the IANA Functions Operator of ccTLDs associated with a specific country or territory (ccTLDs))

Local law should prevail unless the decision has a global impact.

A description of the mechanism (applicability of local law for the administration by the IANA Functions Operator of ccTLDs associated with a specific country or territory (ccTLDs)

Variable depending on the specific government.

Jurisdiction and legal basis of the mechanism (applicability of local law for the administration by the IANA Functions Operator of ccTLDs associated with a specific country or territory (ccTLDs)

Jurisdiction lies in that of the country or territory concerned.

P1.III Proposed Post-Transition Oversight and Accountability

This section should describe what changes your community is proposing to the arrangements listed in Section II.B in light of the transition. If your community is proposing to replace one or more existing arrangements with new arrangements that replacement should be explained and all of the elements listed in Section II.B should be described for the new arrangements. Your community should provide its rationale and justification for the new arrangements. If your community's proposal carries any implications for existing policy arrangements described in Section II.A, those implications should be described here. If your community is not proposing changes to arrangements listed in Section II.B, the rationale and justification for that choice should be provided here.

P1.III.A The Elements of This Proposal

The sections below describe how the transition will affect each of the naming functions identified and what changes, if any, the CWG-Stewardship recommends addressing these effects. In summary, the CWG-Stewardship recommends:

- A new, separate legal entity, Post-Transition IANA (PTI), will be formed as an affiliate of ICANN. The existing IANA functions, administrative staff, and related resources, processes, data, and know-how will be legally transferred to PTI.
- ICANN will enter into a contract with PTI, granting PTI the rights and obligations to serve as the IANA Functions Operator (IFO) for the naming functions, and setting forth the rights and obligations of ICANN and PTI. This contract will also include service level agreements for the naming functions.
- Changes proposed to Root Zone environment and relationship with Root Zone Maintainer.

In developing this response, the CWG-Stewardship has been mindful of the “Principles and Criteria that Should Underpin Decisions on the Transition of NTIA Stewardship for Naming Related Functions” as developed and agreed to by the CWG-Stewardship and included in Annex C.

Note: this Section III provides the high-level recommendations that should be read in conjunction with the relevant annexes, which provide additional details.

P1.III.A.i. Proposed Post-Transition Structure

The objective of Section III is to present the changes required to replace the oversight and accountability performed by the NTIA via the NTIA IANA Functions Contract and NTIA’s role as Root Zone Management Process Administrator for the naming functions.

Specifically, the oversight and accountability roles of the NTIA include the following:

- In relation to the IANA Functions Contract:
    - Contract process including selection of operator and cancellation of the contract (accountability).
    - Formal definition of the requirements and expectations of IANA by the NTIA –

statement of work (oversight).

- Establishment and external monitoring of quality control and performance evaluation mechanisms (oversight and transparency).
- Issue resolution (accountability).

- In relation to NTIA's role as Root Zone Management Process Administrator:
  - Approval of all changes to the content of the Root Zone (oversight and accountability).
  - Approval of all changes to the Root Zone environment, such as the implementation of DNSSEC (oversight and accountability).
  - Approval of all external communications and reporting by IANA to external parties (oversight and accountability).

1103 The public consultation on the CWG-Stewardship's initial transition proposal of 1 December 2014 confirmed that the respondents were satisfied with the current performance of ICANN as the IFO. Therefore, any new arrangements should maintain ICANN as the IFO at the time of transition and seek to implement mechanisms designed to provide similarly effective oversight and accountability (as those currently in place), minimize complexity and costs and maintain the security, stability, and resiliency of the DNS and the Internet. The public consultation on the CWG-Stewardship's second draft proposal in April-May 2015 confirmed broad support for PTI and related structures, such as the IANA Function Review (IFR) and Customer Standing Committee (CSC). The CWG-Stewardship reviewed all input received and has updated the proposal accordingly.[57]

1104 In order to meet community expectations for the stewardship of the IANA Functions related to naming, the CWG-Stewardship, working on the premise that there is current satisfaction with ICANN's IANA department performance and that ICANN should remain the IANA Functions Operator, agreed that a satisfactory transition proposal for the names community requires the following elements:

- A contract similar to the current NTIA IANA Functions Contract to perform the IANA names functions post-transition;
- The ability for the multistakeholder community to ensure that ICANN acts according to community requests with respect to IANA names operations;
- Additional insulation, as needed, between operational and policymaking responsibilities and protections for the IFO;
- A mechanism to approve changes to the Root Zone environment (with NTIA no longer providing an approval process);
- The ability to ensure that the IANA Functions are adequately funded by ICANN;
- The ability for the multistakeholder community to require, and if necessary after substantial opportunities for remediation, the selection of a new operator for the IANA Functions as they relate to names.

[57] See public comment review tool (https://community.icann.org/x/x5o0Aw), which categorizes all the input received according the sections of the proposal and responses to each of these comments from the CWG-Stewardship.

1105 While this proposal originates from within the names community, it anticipates that, for reasons of coherence of the IANA function and overall operational logistics, all of the IANA functions will be transferred to PTI. However, it is not clear at the time of writing whether the other operational communities will undertake to contract directly with PTI (similar to the manner in which this response envisages ICANN will do), or whether those communities will have a contract with ICANN. If the other operational communities contract directly with PTI, then those communities will need to determine the terms of their contract with PTI for the support of their respective functions. On the other hand, if the other operational communities enter into a contract with ICANN, then ICANN will need to subcontract the performance of the functions to PTI. Which of these approaches is followed by the other operational communities is not relevant for the purposes of the present proposal, so long as those details are not inconsistent with this proposal. In any case, the arrangements for the non-names IANA functions are out of scope for this document except to the extent they impinge directly on the names functions. The CWG-Stewardship has also agreed that approval of all changes to the content of the Root Zone will no longer need authorization (as is currently the case) and that external communications and reporting will no longer need external approval post-transition. This final proposal attempts to meet all of the above requirements by:

- Creating PTI, a separate legal entity that will be an affiliate[58] controlled by ICANN[59]. The creation of PTI ensures both functional and legal separation within the ICANN organization.
- Establishing a contract between PTI and ICANN that will grant PTI the rights to act as the IFO, and set out the rights and obligations of PTI and ICANN.
- Establishing the CSC that is responsible for monitoring IFO performance according to contractual requirements and service level expectations, resolving issues directly with the IFO or escalating them if they cannot be resolved.[60]
- Establishing a series of issue resolution mechanisms to ensure that problems are resolved effectively.
- Ensuring ICANN accepts input from the multistakeholder community with respect to the annual IANA operations budget.
- Establishing a framework to approve changes to the Root Zone environment (with NTIA no longer providing oversight).
- Establishing a multistakeholder IANA Function Review (IFR) to conduct periodic and special reviews of PTI.[61] The results of the IFR will not be prescribed or restricted and could include recommendations to initiate a separation process (as described below), which could result in termination or non-renewal of the ICANN-PTI IANA functions contract among other actions.

[58] An affiliate of an entity means another entity that directly or indirectly controls, is controlled by, or is under common control with the first entity. For example, a parent and its subsidiaries are affiliates because the parent controls the subsidiaries; and two subsidiaries with a common parent are affiliates because the two subsidiaries are under common control by the parent.

[59] Based on independent legal advice received, the CWG-Stewardship proposes that PTI will be an affiliate in the form of a California public benefit corporation with a single member and that member will be ICANN, with a Board comprising a majority of PTI Board members appointed by ICANN.

[60] The CSC is not a separate legal entity. The CSC would be authorized by the ICANN governance documents (including the ICANN Bylaws) and the ICANN-PTI Contract.

[61] The IANA Function Review (IFR) would be convened periodically (first review two years after the transition is complete, and thereafter at intervals of no more than five years). It could also be convened for a special review under certain circumstances further described in the escalation mechanisms section below. The review would be authorized by ICANN's governance documents (including the ICANN Bylaws) and referenced in the ICANN-PTI Contract.

1106 The CWG-Stewardship proposal is significantly dependent and expressly conditioned on the implementation of ICANN-level accountability mechanisms by the Cross Community Working Group on Enhancing ICANN Accountability (CCWG-Accountability) as described below. The co-chairs of the CWG-Stewardship and the CCWG-Accountability have coordinated their efforts and the CWG-Stewardship is confident that the CCWG-Accountability recommendations, if implemented as envisaged, will meet the requirements that the CWG-Stewardship has previously communicated to the CCWG. If any element of these ICANN level accountability mechanisms is not implemented as contemplated by the CWG-Stewardship proposal, this CWG-Stewardship proposal will require revision. Specifically, the proposed legal structure and overall CWG-Stewardship proposal requires ICANN accountability in the following respects:

1. **ICANN Budget and IANA Budget.** The ability for the community to approve or veto the ICANN budget after it has been approved by the ICANN Board but before it comes into effect. The community may reject the ICANN Budget based on perceived inconsistency with the purpose, mission and role set forth in ICANN's Articles and Bylaws, the global public interest, the needs of ICANN stakeholders, financial stability or other matters of concern to the community. The CWG-Stewardship recommends that the IFO's comprehensive costs should be transparent and ICANN's operating plans and budget should include itemization of all IANA operations costs to the project level and below as needed. An itemization of IANA costs would include "Direct Costs for the IANA department", "Direct Costs for Shared resources" and "Support functions allocation". Furthermore, these costs should be itemized into more specific costs related to each specific function to the project level and below as needed. PTI should also have a yearly budget that is reviewed and approved by the ICANN community on an annual basis. PTI should submit a budget to ICANN at least nine months in advance of the fiscal year to ensure the stability of the IANA services. It is the view of the CWG-Stewardship that the IANA budget should be approved by the ICANN Board in a much earlier timeframe than the overall ICANN budget. The CWG (or a successor implementation group) will need to develop a proposed process for the IANA-specific budget review, which may become a component of the overall budget review.

2. **Community Empowerment Mechanisms.** The empowerment of the multistakeholder community to have the following rights with respect to the ICANN Board, the exercise of which should be ensured by the related creation of a stakeholder community / member group:

   (a) The ability to appoint and remove members of the ICANN Board and to recall the entire ICANN Board;

   (b) The ability to exercise oversight with respect to key ICANN Board decisions (including with respect to the ICANN Board's oversight of the IANA functions) by reviewing and approving (i) ICANN Board decisions with respect to recommendations resulting from an IFR or Special IFR and (ii) the ICANN budget; and

   (c) The ability to approve amendments to ICANN's "fundamental bylaws," as described below.

3. **IFR**. The creation of an IFR which is empowered to conduct periodic and special reviews of the IANA functions (see Annex F). IFRs and Special IFRs will be

incorporated into the Affirmation of Commitments mandated reviews set forth in the ICANN Bylaws.

4. **CSC**. The creation of a CSC which is empowered to monitor the performance of the IANA functions and escalate non-remediated issues to the ccNSO and GNSO. The ccNSO and GNSO should be empowered to address matters escalated by the CSC.

5. **Separation Process**. The empowerment of the Special IFR to determine that a separation process is necessary and, if so, to recommend that a Separation Cross-Community Working Group (SCWG) be established to review the identified issues and make recommendations. See Annex L for more detailed information as to approval requirements with respect to the formation of a SCWG and approval of SCWG recommendations.

6. **Appeal mechanism**. An appeal mechanism, for example in the form of an Independent Review Panel, for issues relating to the IANA functions. For example, direct customers with non-remediated issues or matters referred by ccNSO or GNSO after escalation by the CSC will have access to an Independent Review Panel. The appeal mechanism will not cover issues relating to ccTLD delegation and re-delegation, which mechanism is to be developed by the ccTLD community post-transition.

7. **Fundamental bylaws**. All of the foregoing mechanisms are to be provided for in the ICANN bylaws as "fundamental bylaws." A "fundamental bylaw" may only be amended with the prior approval of the community and may require a higher approval threshold than typical bylaw amendments (for example, a supermajority vote).

Post-Transition IANA (PTI)

In order to identify and isolate the IANA naming functions, both functionally and legally, from the ICANN entity, the CWG-Stewardship recommends the creation of a Post-Transition IANA (PTI). PTI will be a new legal entity in the form of a non-profit corporation (i.e., a California public benefit corporation). The existing IANA functions department, administrative staff, and related resources, processes, data, and know-how will be legally transferred to PTI.[62] No further transfer of assets from PTI to another entity will be allowed unless specifically approved by ICANN.

At the outset, PTI will have ICANN as its sole member and PTI will therefore be a controlled affiliate of ICANN. ICANN will provide funding and administrative resources to PTI through an agreed-upon budget.

A contract will be entered into between PTI and ICANN, which will grant PTI the rights to act as the IFO and set out rights and obligations of PTI and ICANN. The contract will provide for automatic renewal, subject to potential non-renewal by ICANN if recommended by the IANA Function Review (see further details below).

[62] In the case of any existing ICANN contracts, MoUs or other arrangements that relate to the IANA functions, these could be assigned to and assumed by PTI, replaced by new arrangements at the PTI level or remain at ICANN with a subcontract to PTI.

PTI Board

As a separate legal entity, PTI will have a board of directors who have the minimum statutorily required responsibilities and powers. The construct of the PTI Board will be a range of 3-5 people to be appointed by ICANN as the sole member of PTI. The PTI Board could be comprised of three directors who are employed by ICANN or PTI (for example, the ICANN Executive responsible for PTI, the ICANN CTO and the IANA Managing Director), and two additional independent directors. The two additional directors must be nominated using an appropriately rigorous nomination mechanism (e.g. through the use of the ICANN Nominating Committee). The CWG-Stewardship expects that this will avoid the need to replicate the complexity of the multistakeholder ICANN Board at the PTI level and maintain primary accountability at the ICANN level. Any issues that arise concerning the PTI and the PTI Board will therefore be able to be ultimately addressed through the overarching ICANN accountability mechanisms.[63]

The function of the PTI Board is to provide oversight of the operations of PTI in order to to ensure that PTI meets, at a minimum, applicable statutory requirements under California public benefit corporation laws and, importantly, fulfills its responsibilities under the IANA functions contract with ICANN. If the PTI Board does not fulfill its oversight responsibilities with respect to the operations of PTI, the ICANN Board will hold the PTI Board accountable by exercising the rights ICANN has as the member of PTI and as the counterparty to the IANA functions contract with PTI.

The CWG-Stewardship recommends that the PTI Board skill set be evaluated as a whole and not on a per member basis, while also ensuring that each individual member is suitable and appropriately qualified to serve as a director of PTI in his or her own right. Accordingly, the PTI Board's complete skill set should be balanced and cover an appropriate and complete composite of executive management, operational, technical, financial and corporate governance experience.

IANA Contract and Statement of Work

The issues currently addressed in the NTIA ICANN Functions Contract and related documents will be addressed in the ICANN-PTI IANA functions contract. Furthermore, the CWG-Stewardship expects that a number of existing provisions of the NTIA IANA Functions Contract will be carried over to the PTI Contract in the form of a Statement of Work (SOW), taking into account updates that will need to be made as a result of the changing relationship between IANA and ICANN as well as other recommendations outlined in Section III. In order for the community to have confidence in the robust and complete nature of the ICANN-PTI IANA Functions Contract, it is recommended that PTI have independent legal counsel to advise on the contract. The ICANN bylaws will reference the need for periodic and special review of the IANA Statement of Work through the IFR. An overview of provisions expected to be carried over into the ICANN-PTI IANA functions contract can be found in Annex E as well as Annex S which includes a draft proposed term sheet.

IANA Function Review

The CWG-Stewardship recommends an IANA Function Review (IFR), which will review PTI's performance against the ICANN-PTI Contract and the SOW. The IFR will be obliged to take into account multiple input sources including community comments, CSC evaluations,

[63] CCWG-Accountability Dependency – see https://community.icann.org/x/TSYnAw

reports submitted by PTI, and recommendations for technical or process improvements (see Customer Standing Committee section below). The outcomes of reports submitted to the CSC, and reviews and comments received on these reports during the relevant time period will be included as input to the IFR. The IFR will also review the SOW to determine if any amendments should be recommended. The IFR mandate is strictly limited to evaluation of PTI performance against the SOW and does not include any evaluation relating to policy or contracting issues that are not part of the ICANN-PTI IANA functions contract or the SOW. In particular it does not include issues related to policy development and adoption processes, or contract enforcement measures between contracted registries and ICANN.

1119 The first IFR is recommended to take place no more than two years after the transition is complete. After the initial review, the periodic IFR should occur at intervals of no more than five years. The IFR should be set out in the ICANN Bylaws and included as a "fundamental bylaw" resulting from the work of the CCWG-Accountability and will operate in a manner analogous to an Affirmation of Commitments (AoC) review. The "fundamental bylaws" will be ICANN bylaws that will require the prior approval of the multistakeholder community to adopt or amend. The approval of an ICANN fundamental bylaw could also require a higher threshold than typical bylaw amendments, for example, a supermajority. The members of the IANA Function Review Team (IFRT) will be selected by the Supporting Organizations and Advisory Committees and will include several liaisons from other communities. While the IFRT is intended to be a smaller group, it will be open to non-member "participants" in much the same way as the CWG-Stewardship is.

1120 While the IFR will normally be scheduled based on a regular cycle of no more than five years[64] in line with other ICANN reviews, a Special IANA Function Review (Special IFR) may also be initiated under certain circumstances, as discussed in the following section.

1121 For further details, please see Annex F.

1122 Special IANA Function Review

1123 As mentioned above, IFRs will occur periodically or, in special circumstances, may be initiated outside of the normal periodic schedule. A non-periodic or "Special" IANA Function Review (Special IFR) could only be initiated when the following escalation mechanisms and methods have been exhausted:

- CSC Remedial Action Procedures are followed and fail to correct the identified deficiency (see Annex G); and
- The IANA Problem Resolution Process is followed and fails to correct the identified deficiency (see Annex J).

1124 For further details, please see Annex F.

1125 Following the exhaustion of the above escalation mechanisms, the ccNSO and GNSO will be responsible for checking and reviewing the outcome of the CSC process (as defined in Annex G), and the IANA Problem Resolution Process (as defined in Annex J) and for determining whether or not a Special IFR is necessary. After consideration, which may include a public comment period and must include meaningful consultation with other SO/ACs, the Special IFR could be triggered. In order to trigger a Special IFR, it would

[64] If a Special IFR is initiated, some flexibility with regard to the pragmatic use of community resources should be allowed with regards to the timing of the next IFR.

require a vote of both of the ccNSO and GNSO Councils (each by a supermajority vote according to their normal procedures for determining supermajority). The Special IFR will follow the same multistakeholder cross community composition and process structure as the periodic IANA Function Review.The scope of the Special IFR will be narrower than a periodic IFR, focused primarily on the identified deficiency or problem, its implications for overall IANA performance, and how that issue is best resolved. As with the periodic IFR, the Special IFR is limited to a review of the performance of the IANA Functions operation, including the CSC, but should not consider policy development and adoption processes or the relationship between ICANN and its contracted TLDs.

1126 There is no prescribed outcome for an IFR, whether special or periodic. Recommendations could span from “no action required” to the introduction of operational remediation requirements, to the initiation of a separation process, described below. In the case of a Special IFR, it is expected that the recommendations of the IFRT will describe how the proposed remedial procedures are expected to address the identified deficiency.

1127 As described in Annex L, an IFR may determine that a separation process is necessary. In making this determination, the IFR is not responsible for recommending a type of separation. If the IFR determines that a separation process is necessary, it will recommend the creation of the Separation Cross-Community Working Group (SCWG). This recommendation will need to be approved by both of the ccNSO and GNSO Councils (each by a supermajority vote,according to their normal procedures for determining supermajority), and will need to be approved by the ICANN Board after a public comment period, as well as a community mechanism derived from the CCWG-Accountability process.[65] A determination by the ICANN Board to not approve an SCWG that had been supported by a supermajority of the ccNSO and GNSO Councils will need to follow the same supermajority thresholds and consultation procedures as ICANN Board rejection (by a supermajority vote) of a PDP recommendation that is supported by a GNSO supermajority.

1128 ### P1.III.A.ii. Proposed Oversight & Accountability Replacement

1129 ### Customer Standing Committee (CSC) - Overseeing performance of IANA Functions as they relate to naming services

1130 The CWG-Stewardship recommends the creation of a CSC to monitor the performance of PTI with the following mission:

> “The Customer Standing Committee (CSC) has been established to perform the operational oversight previously performed by the U.S. Department of Commerce’s National Telecommunications and Information Administration as it relates to the monitoring of performance of the IANA naming function. This transfer of responsibilities took effect on [date].
>
> The mission of the CSC is to ensure continued satisfactory performance of the IANA function for the direct customers of the naming services. The primary customers of the naming services are TLD registry operators, but also include root server operators and other non-root zone functions.
>
> The mission will be achieved through regular monitoring by the CSC of the performance of the IANA naming function against agreed service level targets and through

[65] This community mechanism could include ICANN membership, if ICANN were to become a membership organization per the CCWG-Accountability work efforts.

mechanisms to engage with the IANA Functions Operator to remedy identified areas of concern."

1131 The CSC is not mandated to initiate a change in the IANA Functions Operator via a Special IANA Function Review, but could escalate to the ccNSO and GNSO Councils or either body in the specific case where the issue in question applies only to ccTLDs or gTLDs respectively, which might then decide to take further action using agreed consultation and escalation processes (see Annex J).

1132 The complete proposed charter of the CSC can be found in Annex G.

1133 Service Level Expectations (SLEs)

1134 The CWG-Stewardship reviewed the performance standards established under the IANA contract between NTIA and ICANN and considered these inadequate for a registry service of such global importance. In light of the cessation of NTIA's independent stewardship and authorization role, it is an appropriate time for customers to re-evaluate the current minimum acceptable service levels, reporting requirements and breach levels.

1135 The CWG-Stewardship is not proposing any changes to the current work flow process.

1136 The CWG-Stewardship is suggesting that there is a requirement placed on IANA staff, (as part of the implementation phase) to measure, record and report additional details of transaction times for each Root Zone Management process. Such transparency will provide factual information to assist the CSC, IFRT and the Community to determine and confirm that IANA Functions Operator is continuing to provide non-discriminatory service to the naming community.

1137 The CWG-Stewardship also proposes a set of guiding principles that will help define the expectation for the monitoring and reporting environment, and guide the definition of the individual criteria used for reporting and assessment of the naming-related portions of the IANA Functions. Work to define the final SLEs will be on-going in order to be included with the proposal submitted to the NTIA and will be run in parallel with the ICG process to review the CWG-Stewardship proposal. The objective is to ensure that the naming proposal is not delayed by work to define the SLEs and so to optimize use of the time prior to the final submission of a proposal to the NTIA.

1138 For further details, please see Annex H.

1139 Escalation Mechanisms

1140 The CWG-Stewardship recommends requiring the continuation, with minor modifications, of a progressive set of escalation steps that can be performed for emergency situations as well as customer service complaints and a new problem resolution process, as applicable, for individual TLD registry operators, or others with relevant IANA Functions operational issues. Three processes are recommended:[66]

[66] Note, nothing in these processes prevents a TLD operator to pursue other applicable legal recourses that may be available.

1) **Customer Service Complaint Resolution Process**
   This process is for anyone who has a complaint about IANA services.[67] The CWG-Stewardship has modified the current process used by ICANN by adding some steps at the end. For further details, please see Annex I.

2) **IANA Problem Resolution Process (for IANA naming services only)**
   This is a new process created for persistent performance issues or systemic problems associated with the provision of IANA naming services.[68] For further details, please see Annex J.

3) **Root Zone Emergency Process**
   This process is for TLD managers in cases where expedited handling is required and is the same as the process currently used by ICANN, but reflects the post-transition environment.

1141 The details of these processes, including proposed modifications to the existing processes to reflect the transition, can be found in Annexes I (IANA Customer Service Complaint Resolution Process), J (Problem Resolution Process (for IANA naming services only)) and K (Root Zone Emergency Process). Furthermore a flow chart outlining the different steps and relationship between the Customer Service Complaint Resolution Process and the IANA Problem Resolution Process can be found in Annex J-1.

1142 Separation Process

The CWG-Stewardship recommends that an ICANN fundamental bylaw be created to define a separation process that can be triggered by a Special IFR if needed. The Special IFR will only occur if other escalation mechanisms and methods have been exhausted. If the Special IFR recommends a separation process, a Separation Cross Community Working Group (SCWG) which will be formed to review the issues and make recommendations. The recommendations of a Special IFR will need to be approved by a supermajority vote of each of the ccNSO and GNSO Councils, the ICANN Board, and a community mechanism derived from the CCWG-Accountability process before they can be moved to implementation.[69] Any new IFO (or other separation process) will be subject to the approval of the ICANN Board, and a community mechanism derived from the CCWG-Accountability process.[70]

There will be no prescribed result arising from the separation process. The SCWG will be empowered to make a recommendation ranging from “no action required” to the initiation of an RFP and the recommendation for a new IFO, or the divestiture or reorganization of PTI. In the case of a recommendation for any action, ICANN is expected to cover all costs i.e. costs related to the then transition, costs related to the possible selection of a new IFO and the ongoing operating costs of the successor operator. Moreover, in bearing such costs, it is to be required of ICANN that it does not raise fees from TLD operators (registries, registrars and, indirectly, for registrants) in order to do so.

1143 For further details please see Annex L.

[67] This process exists today for all IANA services, but the CWG-Stewardship changes intend to apply only to the IANA naming services.

[68] It is beyond the scope of the CWG-Stewardship to propose processes that affect other IANA services customers (protocol parameters and numbers). However, should there be an interest in expanding this process to include those customers, those discussions could be held at a later date.

[69] This community mechanism could include ICANN membership, if ICANN were to become a membership organization per the CCWG-Accountability work efforts.

[70] This community mechanism could include ICANN membership, if ICANN were to become a membership organization per the CCWG-Accountability work efforts.

Framework for Transition to Successor IANA Functions Operator

The CWG-Stewardship recommends the continuation of the current transition framework for the IANA Functions, with relevant modifications, should it be, for whatever reason, necessary for the IANA Functions to be transitioned from the incumbent IFO to a successor IFO. This framework will be set forth in the ICANN-PTI Contract and will be based upon the current NTIA-ICANN contract clause C.7.3, "Plan for Transition to Successor Contractor." The transition framework should be part of the operations and management of the IANA Functions going forward and be considered part of the operator's business contingency and continuity of operations planning.[71] This is a framework only and it is expected – as per the following recommendations – that a full plan will be developed post-IANA Stewardship Transition. The principles and recommendations for the future evolution of the Framework for Transition to Successor IANA Functions Operator include:

1) The integrity, stability, and availability of the IANA Functions must be the core concern during any transition of the IANA Functions.

2) The transition framework must be further developed and maintained by PTI, with ICANN input, into a detailed, fully functional, transition plan within 18 months from the completion of the IANA Stewardship Transition.

3) The budget for IANA operations should be augmented with specific funding for the detailed transition plan development referred to in 2 (above).

4) The process established for the potential transitioning of the IANA Functions to an operator other than the incumbent should specifically recognize that the detailed transition plan referred to in 2 (above) must be in place before the commencement of the transitioning process.

5) Both the incumbent and the successor IANA Functions Operators will be required to fully engage in the transition plan and to provide appropriate transition staff and expertise to facilitate a stable transition of the IANA Functions.

6) Once developed, the full Transition to Successor IANA Functions Operator Plan should be reviewed every year by IANA staff, in conjunction with the CSC/Community as necessary, to ensure that it remains up to date, and reviewed every five years to ensure that it remains fit for purpose.

For further information, see Annex M.

P1.III.A.iii Proposed changes to Root Zone environment and relationship with Root Zone Maintainer

In relation to the Root Zone Management Process Administrator role that is currently performed by NTIA, the CWG-Stewardship recommends that this role be discontinued post-transition. As a result of this discontinuation the CWG-Stewardship recommends:

[71] The CWG-Stewardship notes that the ICANN Contingency and Continuity of Operations Plan (CCOP) was not able to be released as requested through the DIDP process due to security and stability related concerns.

Recommendations related to the elimination of NTIA Authorization of changes to the Root Zone content and the associated WHOIS database

Currently, changes to the Root Zone File, as well as changes to the Root Zone WHOIS Database, are transmitted to the NTIA for authorization. Such changes cannot be enacted without explicit positive authorization from the NTIA. Post-transition, no authorization for Root Zone change requests will be needed.

1) Changes will be required to the IFO and Root Zone Maintainer software to remove this requirement. In the very short term, if making the software changes cannot be completed before the transition and/or to avoid multiple coincident changes, the existing software could be used and IANA staff could authorize the changes (effectively fulfilling the current role of the NTIA at this point in the process).

2) Currently there is a Cooperative Agreement between the NTIA and the Root Zone Maintainer. The NTIA has said that there will be a parallel but separate transition to disengage the NTIA from the Root Zone Maintainer. The exact form of this transition is not currently known, nor what, if anything, will replace the current Cooperative Agreement and the parties involved in providing the services currently covered under the Cooperative Agreement.

a) If that transition is not completed prior to the IANA Stewardship Transition, the Cooperative Agreement will likely have to be amended by the NTIA to allow Verisign, acting as the Root Zone Maintainer, to implement changes to the Root Zone requested by the IFO without requiring approval from NTIA.

b) If the Root Zone Maintainer transition is completed prior to, or in conjunction with, the IANA Stewardship Transition, the new arrangements must provide a clear and effective mechanism to ensure that PTI can have its change requests for the Root Zone implemented in a timely manner by the Root Zone Maintainer (possibly via an agreement between the Root Zone Maintainer and the IFO).

3) It should be determined whether or not additional checks/balances/verifications are required post transition. The CWG-Stewardship recommends that a formal study be undertaken post transition to investigate whether there is a need to increase (and if so, how) the robustness of the operational arrangements for making changes to the Root Zone content to reduce or eliminate single points of failure.[72] This study should include a risk analysis and cost/benefit analysis factoring in the history and possibility of such problems. Any new procedures/processes should be designed to minimize:

a) The potential for accidental or malicious changes or omissions by the IFO or Root Zone Maintainer.

b) The potential for out-of-policy changes by the IFO. The term “policy” is used in its most general sense, representing formal Policy adopted by ICANN as well as established standards, practices, and processes.

c) The potential for accidental or malicious errors in the communications path from the IFO to the Root Zone Maintainer.

[72] If this recommendation is approved, the estimated costs for the study should be added to the PTI budget for the period(s) in which it will be performed.

d) The potential for accidental outages or malicious actions related to the telecommunications infrastructure serving the IFO and the Root Zone Maintainer. Such outages or actions could be related to the infrastructure shared with ICANN.

1151 Any changes to procedures or processes should be based on a cost/benefit and risk analysis factoring in the history and possibility of such problems. The review should involve all parties that may be affected or impacted by any changes to be implemented.

1152 Changes to the Root Zone Management Architecture and Operation

1153 Per the NTIA IANA Functions Contract, NTIA approval was required for the implementation of all changes to the Root Zone environment such as DNSSEC as well as many classes of changes to IANA Functions Operator processes (including what may be published). The NTIA has contributed and opened avenues to resources (such as those from NIST – the National Institute of Standards and Technologies, a part of the U.S. Department of Commerce in efforts surrounding DNSSEC). Moreover as the Root Zone Administrator, they have been the entity to ultimately approve the changes going forward.

1154 Post-Transition

1155 The CWG-Stewardship recommends that a replacement of this approval function be put in place for significant architectural and operational changes. Although it is clear that the DNS-related technical and operational communities have both the technology skills and appropriate incentives to make prudent and cautious changes, the critical nature of the Root Zone makes it necessary to formalize approval of major architectural and operational changes.

1) Formal approval to proceed with a change shall be granted by the ICANN Board.

2) The Board shall grant approval on the recommendation of a standing committee with a proposed membership of: an ICANN Board member (possibly as Chair), a senior IANA Functions Operator administrator or delegate, and Chairs or delegates of the SSAC, RSSAC, ASO and IETF,[73] a representative of the GNSO RySG, a representative of the ccNSO and a representative of the Root Zone Maintainer. The standing committee will select its chair. The RySG and ccNSO representatives will ensure appropriate communications with the CSC.

3) The standing committee will not necessarily be the group that considers the details of the issue under consideration, but it will be responsible for ensuring that those involved in the decision include all relevant bodies and have access to necessary expertise.

4) Issues may be brought to the standing committee's attention by any of its members, by PTI staff, or by the CSC.

5) For architectural changes that impose potential risk to the security, stability, or resiliency of the Root system (as identified by at least one standing committee member and agreed by a simple majority of members), there should be public consultation through the standard ICANN public comment process.

[73] The CWG-Stewardship has not consulted with the IETF and other named parties as to whether or not they would be willing to serve on such a committee, but sought to provide that option should these parties be interested and available.

6) To the extent allowed based on the need for security and contractually required confidentiality, the proceedings of the standing committee should be open and transparent.

7) Since it is not possible to formally define "significant", all parties should err on the side of prudence and raise issues for the consideration of the standing committee when there is any question of it being required. The standing committee may decide that it does not need to consider the issue.

8) The standing committee should coordinate with the NTIA at the time of transition to transfer relevant information about any ongoing major architectural and operational changes so that any such ongoing activities are not delayed or lost due to the transition.

1156 The CWG-Stewardship further recommends that for changes internal to the IANA Functions Operator and for those related to reports and communications, no external approval shall be needed. Such decision should be made, where appropriate, in consultation with the community, or the standing committee.

1157 The CWG-Stewardship recommends that post-transition IFO budgets must support the operator's capability to investigate, develop and deploy Root Zone enhancements required to keep the Root Zone and its management evolving.

1158 ## Principles

1) Transparency: To the extent allowed by external agreements and as necessitated by security and privacy issues, the IFO should operate in a transparent manner. Reports on the IFO operations should not be withheld unless there are explicit and defendable needs for confidentiality.

2) Control of Root Zone Management**:** Currently, updating the Root Zone requires the active participation of three parties: the IFO, the Root Zone Maintainer and the NTIA. The IFO receives change requests from various sources, validates them, and sends them to the Root Zone Maintainer who, once they are authorized by the NTIA, updates the Root Zone File, DNSSEC signs it and distributes it to the Root operators.

Post transition there will only be the IFO and the Root Zone Maintainer. The CWG-Stewardship is not recommending any change in the functions performed by these two roles at this time. The CWG-Stewardship is recommending that should there be proposals to make changes in the roles associated with Root Zone modification, that such proposals should be subject to wide community consultation.

3) Future changes to the Root Zone Management process must be made with due consideration to the IANA Functions Operator's and Root Zone Maintainer's abilities to process change requests expeditiously.

P1.III.A.iv. Other

ccTLD Delegation Appeals

The CWG-Stewardship recommends not including any appeal mechanism that would apply to ccTLD delegations and redelegations in the IANA Stewardship Transition proposal. For further information, see Annex O.

IANA Budget[74]

In order for the multistakeholder community to steward the IANA Functions, the CWG-Stewardship recommends that:[75]

1) The IFO's comprehensive costs should be transparent for any future state of the IANA Function.

2) Future Fiscal Year (FY) ICANN Operating Plans & Budgets, and if possible even the FY16 ICANN Operating Plan & Budget, include at a minimum itemization of all IANA operations costs in the FY ICANN Operating Plan & Budget to the project level and below as needed.

Further details on the expected detail, based on the information provided in relation to the FY15 budget, can be found in Annex P. Furthermore, the CWG-Stewardship has identified a number of items for future work that can be found in Annex Q. In relation to PTI, the CWG-Stewardship recommends that PTI should develop and annually update a four-year strategic plan, which should outline strategic priorities, while PTI should also have a yearly budget that is reviewed by the ICANN community. A fully approved budget should be developed on an annual basis. PTI should submit a budget[76] to ICANN at least nine months in advance of the fiscal year to ensure the stability of the IANA services. It is the view of the CWG-Stewardship that the IANA budget should be approved by the ICANN Board in a much earlier timeframe than the overall ICANN Budget. PTI's actual financial performance should be measured monthly against the PTI budget, and should be reported to the PTI Board. In addition to any statutory requirements, it is the view of the CWG that an independent financial audit of PTI's financial statements must also be required.

Regulatory and Legal Obligations

The handling of requests for statutory waivers or licenses relating to its IFO's legal obligations in its legal domicile (e.g., from the U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC)) is a generally-applicable legal obligation regardless of who is serving as the IANA Functions Operator. ICANN already has a process in place for seeking any necessary licenses, and will continue to work with contacts at relevant authorities to identify ways to streamline those requests. A statutory waiver of OFAC requirements may be possible if a new statute authorizes the transition. Such a statutory waiver could provide that the President of the United States may not use trade sanctions

[74] CCWG-Accountability Dependency – see http://forum.icann.org/lists/comments-ccwg-accountability-draft-proposal-04may15/msg00033.html

[75] The names registries have long requested budget transparency and detail. See for example the work of the ccNSO Statement of Policy.

[76] In developing its budget, the CWG-Stewardship recommends that PTI review best practices of other similar organizations.

with respect to the IANA Functions Operator. For licenses or waivers that relate to the IANA Function, ICANN must commit that any licenses or waivers it seeks will also be sought for the IANA Functions Operator and for the Root Zone Maintainer as well, so that a single request for any applicable entity is required.

P1.III.B. Implications for the interface between the IANA Functions and existing policy arrangements

For the IANA naming services, the proposal seeks to retain the functional separation between the policy development processes and the IANA Functions.

P1.IV Transition Implications

This section should describe what your community views as the implications of the changes it proposed in Section III. These implications may include some or all of the following, or other implications specific to your community:

- *Description of operational requirements to achieve continuity of service and possible new service integration throughout the transition.*
- *Risks to operational continuity and how they will be addressed.*
- *Description of any legal framework requirements in the absence of the NTIA contract.*
- *Description of how you have tested or evaluated the workability of any new technical or operational methods proposed in this document and how they compare to established arrangements.*
- *Description of how long the proposals in Section III are expected to take to complete, and any intermediate milestones that may occur before they are completed.*

P1.IV.A. Operational requirements to achieve continuity of service and possible new service integration throughout the transition

This section should describe what your community views as the implications of the changes it proposed in Section III.

- *Description of operational requirements to achieve continuity of service and possible new service integration throughout the transition.*
- *Risks to operational continuity and how they will be addressed.*

Continuity of service issues associated with the transition should be minimized given that the CWG Stewardship transition proposal recommends the continuation of using ICANN as the IFO.

Although the CWG-Stewardship proposes a structural change with the legal separation of the IFO from ICANN (with the IANA functions to be transferred to PTI, an ICANN affiliate), for practical and administrative reasons it is expected that this change will have little or no impact on any of the IFO customer operations throughout the transition, given that the IFO systems, processes, procedures and personnel for these activities will remain exactly the same.

1173 For the naming community the services it requires from the IFO are:

- Operating the public interface to the top level WHOIS database.
- Operating the .INT TLD.[77]
- Implementing, or participating in, the implementation of changes to the Root Zone environment.
- Validation processes for adding, modifying or removing TLDs to the Root Zone and the associated WHOIS database (and associated systems for supporting this).
- Requesting changes to the Root Zone upon validation of a request by the IFO (and associated systems for supporting this).

1174 **Operating the TLD WHOIS and the .INT TLD** - The CWG-Stewardship does not propose any material changes with respect to the IFO operating the top level WHOIS database.

1175 **Implementing changes to the Root Zone environment -** The implementation of changes to the process to approve changes to the Root Zone environment are required with the NTIA removing itself from the final approval of all such changes. The CWG-Stewardship transition proposal recommends that the ICANN Board take over the responsibility of approving all substantive (architectural) changes to the Root Zone environment (such changes being rare events). In line with the NTIA process, the ICANN Board would only approve any such changes if these maintained the security, stability, and resiliency of the Internet (ICANN's first core value as per its Bylaws) and would be supported by a majority of the concerned and affected parties. ICANN will coordinate with the NTIA for any ongoing approval processes for significant changes to the Root Zone environment to ensure continuity of these. As such it is expected that the transition should not generate any issues with continuity of service associated with this for the IFO naming customers.

1176 **Validation processes of customer requests for changes to the Root Zone** – The CWG-Stewardship recommends removing the authorization requirement currently performed by the NTIA for all change requests to the Root Zone or its associated WHOIS database because it does not contribute in a significant fashion to the security, stability, and resiliency of the Internet DNS. This approval function is currently underpinned by a secure computer based system between IFO, NTIA, and Verisign acting as the Root Zone Maintainer. Until such time as this system can be modified IANA has confirmed it could simply act as NTIA in this system allowing it to approve its own requests for changes to the Root Zone, thus removing the requirement for NTIA authorization. As such it is expected that this element of the transition should not generate any issues with continuity of service for the IFO naming customers.

1177 **Requesting changes to the Root Zone -** Requesting changes to the Root Zone and its associated WHOIS database upon validation of a request. The Root Zone maintainer is responsible for implementing change requests from the IFO. Given the NTIA has stated that the transition of the Root Zone Maintainer function will be a separate process (which is not the responsibility of the CWG-Stewardship and has yet to be initiated),[78] this element is beyond the scope of the CWG-Stewardship. The CWG-Stewardship assumes that the NTIA

[77] The CWG-Stewardship has considered the .INT domain, and concluded that provided there is no policy change under .INT done by ICANN/IANA the CWG-Stewardship does not see any need for changes in the management of the .INT domain in conjunction with the transition. Future administration of the .INT domain should be subject to review post transition.

[78] The NTIA addressed this in its "IANA Functions and Related Root Zone Management Transition Questions and Answers" on 18 March 2014. See http://www.ntia.doc.gov/other-publication/2014/iana-functions-and-related-root-zone-management-transition-questions-and-answ for further details.

will ensure that there is a suitable Root Zone Maintainer service available to the IFO that can function using current systems.

1178 As described above, continuity of service is assured: there are no material changes to the operation of the WHOIS database or the .INT TLD; and changes have been accounted for in the Root Zone environment, to the extent of the CWG-Stewardship's scope of work. The CWG-Stewardship further ensures continuity of oversight of service by establishing the CSC. The CSC would oversee operations for IANA naming services, replacing NTIA oversight. The CSC is envisioned as customer-based, and inclusive of other operational communities – should these communities wish to liaise expertise regarding naming services operations. In the CSC, the CWG-Stewardship strengthens a customer-based stewardship of the IANA functions.

1179 P1.IV.B. Description of any legal framework requirements in the absence of the NTIA contract

1180 *This section should describe what your community views as the implications of the changes it proposed in Section III.*

- *Description of any legal framework requirements in the absence of the NTIA contract.*

1181 To provide IANA services to the naming community, the CWG-Stewardship recommends that a new separate legal entity, PTI, be formed as an affiliate of ICANN. In this structure, the existing IANA functions, administrative staff, and related resources, processes, data, and know-how will be legally transferred into PTI. There will be a new ICANN-PTI contract established as a replacement to the current NTIA IANA Functions Contract. The terms of the ICANN-PTI contract will reflect the CWG-Stewardship proposed structure, including escalation and review mechanisms.[79] The CWG-Stewardship views the ICANN-PTI contract as a legal framework requirement in the absence of the NTIA IANA Functions Contract: however, given the implications of the proposed PTI structure are more importantly anchored in its associated accountability mechanisms, this section will focus on PTI rather than the contract to which it will be party.

1182 As stated above, the CWG-Stewardship proposal foresees moving all IANA functions to PTI. If they decide to do so, the number and protocol communities can continue their agreements with ICANN, which the CWG envisages will then subcontract all the IANA Functions related work to PTI.

1183 The CWG-Stewardship proposal surrounds PTI with an accountability framework that strengthens the fulfillment of the NTIA requirements (see Section V). This framework includes the CSC, the IFR, the Special IFR, and the enhanced customer complaint and escalation mechanisms.

1184 The establishment of the CSC and the IFR (periodic and special) should be ensured by ICANN Bylaw changes. Since the CSC and IFRs are not separate legal entities, they can be created within the ICANN community structure, similar to working groups, and formalized through the related enhancements proposed in the CCWG-Accountability Work Stream 1 Proposal.

1185 The escalation mechanisms and customer service complaint procedures are described in Annexes I and J; a flowchart of the escalation processes is provided in Annex J-1. These

[79] A draft proposed term sheet for the ICANN-PTI Contract is available in Annex S.

mechanisms are not by default legal recourse and therefore do not imply changes to be further developed in this section. These mechanisms and procedures, however, are part of the accountability framework that will replace NTIA's oversight and contract.

1186 In the proposed accountability structure, the CWG-Stewardship has focused exclusively on the needs of the naming community. However, the CWG-Stewardship acknowledges that there are elements of the proposed accountability structure that may be of interest to the other operational communities, including, but not limited to, options for existing or new arrangements in contracting services to IFO.

1187 ## P1.IV.C. Workability of any new technical or operational methods

1188 *This section should describe what your community views as the implications of the changes it proposed in Section III.*

- *Description of how you have tested or evaluated the workability of any new technical or operational methods proposed in this document and how they compare to established arrangements.*

1189 No new technical or operational methods are being proposed beyond those necessary for replacing the NTIA acting as the IANA Functions Contract Administrator and the Root Zone Management Process Administrator. The necessary changes include the accountability mechanisms associated with the creation of PTI as an affiliate of ICANN and the Root Zone environment. Implications of the changes to the Root Zone environment are described in Section IV. A, and implications of the proposed accountability framework, including the PTI, the ICANN-PTI Contract, the IFR, the CSC, and the customer complaint and escalation procedures are described in Section IV. B.

1190 The CWG-Stewardship has evaluated these elements and determined that all are workable. A summary of the evaluations is provided below. The scores reflect a qualitative assessment by the CWG-Stewardship of whether the specific element was workable on a scale of 0-3, with 0 indicating a significant requirement or negative impact and 3 indicating no requirement or impact. For details of the methodology, please refer to Annex R.

Element Being Analyzed	Score	Evaluation
PTI as an affiliate of ICANN	score = 8/15 = 53%	workable
Contract between ICANN and PTI	score = 12/15 = 80%	workable
IFR	score = 9/15 = 60%	workable
CSC	score = 11/15 = 73%	workable
Customer complaint and escalation procedures	score = 11/15 = 73%	workable
Approving changes to the Root Zone environment	score = 8/15 = 53%	workable
Replacing NTIA as the Root Zone Management Process administrator	score = 13/15 = 87%	workable

1191 In addition to the CWG-Stewardship evaluation, the CCWG-Accountability Work Stream 1 Proposal further addresses "Stress Tests" that test the proposed structure against various scenarios. Since the CCWG-Accountability document is currently in draft form, this section

only refers to the relevant Stress Tests, and directs the reader directly to the CCWG-Accountability document for further detail. Relevant CCWG-Accountability Stress Tests:[80]

- Failure to Meet Operational Expectations
  - Stress Test #1: Change authority for the Root Zone ceases to function, in part or in whole.[81]
  - Stress Test #2: Authority for delegations from the Root Zone ceases to function, in part or in whole.[82]
  - Stress Test #11: Compromise of credentials.[83]
  - Stress Test #17: ICANN attempts to add a new TLD in spite of security and stability concerns expressed by technical community or other stakeholder groups.[84]
  - Stress Test #21: A government official demands ICANN rescind responsibility for management of a ccTLD from an incumbent ccTLD Manager.[85]
- Legal/Legislative Action
  - Stress Test #19: ICANN attempts to redelegate a gTLD because the registry operator is determined to be in breach of its contract, but the registry operator challenges the action and obtains an injunction from a national court.[86]
  - Stress Test #20: A court order is issued to block ICANN's delegation of a new TLD because of a complaint by an existing TLD operator or other aggrieved parties.[87]
- Failure of Accountability to External Stakeholders
  - Stress Test #25: ICANN delegates or subcontracts its obligations under a future IFO agreement to a third party. Would also include ICANN merging with or allowing itself to be acquired by another organization.[88]

P1.IV.D. Length the proposals in Section III are expected to take to complete, and any intermediate milestones that may occur before they are completed

This section should describe what your community views as the implications of the changes it proposed in Section III.

- *Description of how long the proposals in Section III are expected to take to complete, and any intermediate milestones that may occur before they are completed.*

The CWG-Stewardship's proposed changes are to be implemented after NTIA approval of the IANA Stewardship Transition plan. Some changes are ready to be implemented, and

[80] To access the CCWG-Accountability Work Stream 1 Proposal, please see: https://www.icann.org/en/system/files/files/cwg-accountability-draft-proposal-without-annexes-04may15-en.pdf.
[81] See page 71 of CCWG-Accountability Proposal for further detail.
[82] See page 71 of CCWG-Accountability Proposal for further detail.
[83] See page 72 of CCWG-Accountability Proposal for further detail.
[84] See page 73 of CCWG-Accountability Proposal for further detail.
[85] See page 74 of CCWG-Accountability Proposal for further detail.
[86] See page 77 of CCWG-Accountability Proposal for further detail.
[87] See page 78 of CCWG-Accountability Proposal for further detail.
[88] See page 88 of CCWG-Accountability Proposal for further detail.

others may require further assessment by the ICG as they may affect and be of interest to other communities involved in the IANA Stewardship Transition. For all changes, including changes that do not require further assessment by the ICG, the community will work with ICANN in implementation. The CWG-Stewardship expects that the following implementation items could be completed in approximately three to four months, in accordance with the advice of independent legal counsel: (1) identifying the ICANN assets that relate to the IANA functions to be assigned to PTI and assigning those assets to PTI pursuant to an assignment agreement to be entered into between ICANN and PTI, (2) incorporating PTI and drafting the PTI governance documents (i.e., articles of incorporation and bylaws) and (3) drafting, negotiating and finalizing the ICANN-PTI Contract.[89] The CWG-Stewardship has attempted an initial list of elements for implementation as follows:

- **Service Levels**: A set of guiding principles for the review of the current SLEs used by the IFO have been produced and accepted by the IFO. The sub-group of the CWG-Stewardship responsible for this work (DT-A) will continue its work, using these principles, after the CWG has transmitted its proposal to the ICG, and prior to the ICG submitting its proposal to the NTIA. The objective of this work is to produce a complete and detailed set of recommendations in conjunction with the IFO for the updating of SLEs used by the IFO (this pre-transition work requires approval by the NTIA before the IFO can proceed). These recommendations would be provided to the CSC, post-transition, for its consideration, approval and implementation according to a schedule developed jointly with the IFO.
- **IANA Budget**: The CWG-Stewardship worked closely with ICANN Finance in developing recommendations for transparent budget processes and itemizations regarding IANA operations costs. Recommendations on ICANN's budgeting process can be implemented as further details of the CWG Accountability proposal are defined and approved.[90] Developing a PTI budget is part of, and dependent on, the establishment of PTI. There are other recommendations (in particular, the ability of the community to approve/veto the ICANN budget) that have been requested of the CCWG-Accountability as part of a key dependency with the CCWG-Accountability as soon as their work is finalized.
- **PTI**: The CWG-Stewardship worked closely with legal counsel in the reasoning and development of the PTI concept. Much research and many memoranda were provided to the CWG-Stewardship that may be useful for consideration in implementation.[91] At this stage, considering possible interest and modifications pending from the other operational communities, the ICG may propose modifications to PTI.
- **ICANN-PTI Contract**: The CWG-Stewardship, with assistance from its legal counsel, developed a draft proposed term sheet, which can be used as a basis to develop the ICANN-PTI term sheet and ultimately the future contract with ICANN. PTI will need to be established, and have the benefit of advice from independent legal counsel, before it can enter into this contract.
- **CSC**: The CWG-Stewardship has developed a charter for the CSC, which is usually the first step in chartering a working group with ICANN. In this sense, the CSC is ready for implementation. However, the CSC construct will need to be incorporated into the ICANN Bylaws as a fundamental bylaw as part of a key dependency with the CCWG-

[89] ICANN has not yet assessed the CWG-Stewardship's proposal for an implementation timeline, and there are other factors to consider, such as maintaining ICANN's tax-exempt status, for which the CWG-Stewardship's independent legal counsel could not estimate.
[90] Documentations and details related to the IANA operations budget are available in Annex P, Q and T
[91] All documents from legal counsel are available on the CWG-Stewardship Wiki at https://community.icann.org/display/gnsocwgdtstwrdshp/Client+Committee.

Accountability as soon as their work is finalized. A few elements to consider upon implementation of the CSC, once established:

- What form of consultation is envisioned to take place between ccNSO and GNSO Councils in relation to approving the membership of the CSC?
- Are candidates who have been proposed to act as temporary replacements to the CSC required to provide an Expression of Interest?
- Determine how CSC will decide on who will be liaison to the SCWG.
- What process should the CSC follow in the event it identifies a persistent performance issue or systemic problem that is not serious? Is it still required to follow a Remedial Action?
- The CWG-Stewardship recommends that a series of best practice governance guidelines be established as part of the implementation process for the purpose of ensuring that the CSC manages issues such as potential or perceived conflicts of interest.

- **IFR (Periodic and Special)**: Although the first periodic IFR will not commence until two years after the IANA Stewardship Transition, it is possible that a Special IFR could be triggered prior to that time. As with the CSC, the IFR will need to be incorporated into the ICANN Bylaws as a fundamental bylaw as part of a key dependency with the CCWG-Accountability as soon as their work is finalized.
- **Changes to customer complaints and escalation mechanisms**: The CWG-Stewardship consulted ICANN's IANA department in developing these mechanisms, and believes that these modifications are ready for implementation.
- **Implementing changes to the Root Zone environment:** The CWG-Stewardship transition proposal recommends that the ICANN Board take over the responsibility of approving all substantive (architectural) changes to the Root Zone environment (such changes being rare events). ICANN will coordinate with the NTIA for any ongoing approval processes for significant changes to the Root Zone environment to ensure continuity of these. Note that changes to the Root Zone environment may be contingent on what happens with the parallel Root Zone Maintainer Cooperative Agreement, which is not in the scope of the CWG-Stewardship's work.
- **Community empowerment mechanisms**: These have been requested of the CCWG-Accountability as part of a key dependency with the CCWG-Accountability as soon as their work is finalized. [92]
- **Appeal mechanism**: This have been requested of the CCWG-Accountability as part of a key dependency with the CCWG-Accountability as soon as their work is finalized.

[92] In particular, mechanisms such as: the ability to recall the ICANN Board, the ability to exercise oversight with respect to key ICANN Board decisions including decisions relating to periodic or special reviews of the IANA functions undertaken through the IFR and approval of the ICANN budget, the ability to approve changes to ICANN's fundamental bylaws as well as the related creation of a stakeholder community / member group in order ensure the ability to exercise these kinds of rights.

P1.V NTIA Requirements

1195 *Additionally, NTIA has established that the transition proposal must meet the following five requirements:*

- *Support and enhance the multistakeholder model;*
- *Maintain the security, stability, and resiliency of the Internet DNS;*
- *Meet the needs and expectation of the global customers and partners of the IANA services;*
- *Maintain the openness of the Internet.*
- *The proposal must not replace the NTIA role with a government-led or an inter-governmental organization solution.*

1196 *This section should explain how your community's proposal meets these requirements and how it responds to the global interest in the IANA functions.*

1197 This proposal addresses each of the NTIA's requirements as follows:

1198 P1.V.A. Support and enhance the multistakeholder model

1199 The naming community depends upon ICANN's multistakeholder policymaking structure to develop its processes and policies. While the direct policymaking groups are the GNSO and the ccNSO, the Advisory Committees – ALAC, GAC, RSSAC, and SSAC – are essential parts of the multistakeholder model. Processes in the ICANN multistakeholder model are bottom-up, transparent, and inclusive of all stakeholders. The CWG-Stewardship reinforces and enhances the multistakeholder model by keeping policy development separate from the IANA operations and focusing on the needs of the operational community by establishing transparent and direct control over PTI, specifically by:

- Replacing NTIA oversight of IANA with ICANN oversight of PTI ensured by the CSC and IFR Team, the latter being a multistakeholder entity. Both include non-ICANN participants, thus maintaining and enhancing the multistakeholder model.
- CSC and IFR Team escalation mechanisms (developed in CWG-Stewardship and CCWG-Accountability proposals) are based on open and transparent processes, and multistakeholder decisions (which include non-ICANN naming related participants), thus enhancing multistakeholder implication.

1200 P1.V.B. Maintain the security, stability, and resiliency of the Internet DNS

1201 The security, stability and resiliency of the Internet DNS are core values for ICANN as attested by the first item of Section 2 of the ICANN Bylaws which states:

1202 'In performing its mission, the following core values should guide the decisions and actions of ICANN:

> 1. Preserving and enhancing the operational stability, reliability, security, and global interoperability of the Internet.'

1203 This core value has been part of the ICANN Bylaws for well over a decade and there are no plans to modify it.

1204 Additionally, the security, stability, and resiliency of the Internet DNS was also assured by the NTIA's oversight of the IANA function which was carried out by the mechanisms documented in Section II of this proposal. The CWG-Stewardship transition seeks to maintain or improve on all of these as follows:

- Root Zone Management Process Administrator for changes to the Root Zone: The CWG-Stewardship has recommended that the approval function of the NTIA for changes to the Root Zone and its WHOIS database should not be replaced post-transition because it does not contribute in a significant fashion to the security, stability, and resiliency of the Internet DNS.
- Root Zone Management Process Administrator for changes to the Root Zone environment (such as the introduction of DNSSEC): This CWG-Stewardship recommends that this approval function be maintained via a standing committee (see Section III.A.iii) because it is critical to maintaining the security, stability and resiliency of the Internet DNS.
- IANA Functions Contract Administrator: The IANA Functions Contract and its oversight by the NTIA are considered key elements for the security, stability, and resiliency of the Internet DNS. As such, the CWG-Stewardship recommends the creation of the PTI as an affiliate of ICANN and as the counterparty to a contract with ICANN, thus benefiting from the existing and strengthened accountability mechanisms and protections against capture.
- Contract Oversight: As to the oversight of the contract, the NTIA's role will be replaced and augmented by the CSC and the IFR oversight mechanisms thus improving the security, stability, and resiliency of the Internet DNS.

1205 ### P1.V.C. Meet the needs and expectation of the global customers and partners of the IANA services

1206 The CWG-Stewardship's 1 December public comment on its first transition proposal confirmed the overwhelming satisfaction of the global customers and partners of ICANN's IANA department.

1207 As such, the CWG-Stewardship's proposal ensures that PTI will continue to provide the IANA Function to its global customers and partners post-transition in essentially the same manner as ICANN's IANA department does today.

1208 The CWG-Stewardship proposal is the result of extensive community dialogue and input. Additionally, the CWG-Stewardship's transition proposal has been approved by the multi-stakeholder community, which participated in its development as well as by the CWG-Stewardship's designated chartering organizations.

P1.V.D. Maintain the openness of the Internet

The CWG-Stewardship's transition proposal does not contemplate any changes which would in any way affect the openness of the Internet. This includes continued support for IANA customers on the Office of Foreign Assets Control (OFAC) list of the U.S. Government.

P1.V.E. The proposal must not replace the NTIA role with a government-led or an intergovernmental organization solution

NTIA's oversight of the IANA function is documented in Section II of this proposal and includes the following roles:

- **Establishment of PTI**: Post-transition establishment of PTI as an affiliate of ICANN, thus benefiting from the existing accountability mechanisms and prevention of capture, including by governments.
- **Root Zone Management Process Administrator for changes to the Root Zone**: The CWG-Stewardship recommends that the approval function of the NTIA for changes to the Root Zone and its WHOIS database should not be replaced post-transition.
- **Root Zone Management Process Administrator for changes to the Root Zone environment (such as the introduction of DNSSEC)**: The CWG-Stewardship recommends that this approval function be maintained via a multi-stakeholder process, which will not be government-led or an inter-governmental organization solution.
    - **IANA Functions Contract Administrator**: This was the NTIA's oversight of the IANA Functions Contract, which will be replaced and augmented by the CSC and the IFR, which will not be government-led or an inter-governmental organization solution.

P1.VI Community Process

1212 *This section should describe the process your community used for developing this proposal, including:*

- *The steps that were taken to develop the proposal and to determine consensus.*
- *Links to announcements, agendas, mailing lists, consultations and meeting proceedings.*
- *An assessment of the level of consensus behind your community's proposal, including a description of areas of contention or disagreement.*

1213 **P1.VI.A. Steps taken to develop the proposal and to determine consensus.**

1214 ## Establishing the CWG-Stewardship

1215 In March 2014 the National Telecommunications and Information Administration (NTIA) has requested that ICANN "convene a multi-stakeholder process to develop a plan to transition the U.S. government stewardship role" with regard to the IANA Functions and related root zone management. In making its announcement[93], the NTIA specified that the transition proposal must have broad community support and meet the following principles:

- Support and enhance the multi-stakeholder model
- Maintain the security, stability, and resiliency of the Internet DNS
- Meet the needs and expectation of the global customers and partners of the IANA services
- Maintain the openness of the Internet.

1216 NTIA also specified that it would not accept a proposal that replaces the NTIA role with a government-led or an intergovernmental organization solution.

1217 On June 6, 2014 ICANN proposed the creation of an IANA Stewardship Transition Coordination Group (ICG) "responsible for preparing a transition proposal reflecting the differing needs of the various affected parties of the IANA functions." In July 2014 the ICG was established, comprising of 30 members representing 13 communities.

1218 According to this charter,[94] the ICG has one deliverable: a proposal to the NTIA regarding the transition of NTIA's stewardship of the IANA functions to the global multi-stakeholder community. For that matter the ICG's mission is to coordinate the development of a proposal among the communities affected by the IANA Functions, which are divided into three main categories: domain names, number resources, and other protocol parameters. The ICG noted that the domain name category divides further into the country code and generic domain sub-categories. In the ICG charter, it also noted that "while there is some overlap among all categories, each poses distinct organizational, operational and technical issues, and each tends to have distinct communities of interest and expertise."

[93] http://www.ntia.doc.gov/press-release/2014/ntia-announces-intent-transition-key-internet-domain-name-functions
[94] https://www.icann.org/en/system/files/files/charter-icg-27aug14-en.pdf

1219 To achieve its deliverable the ICG identified four main tasks, which include among others, the task to solicit proposals from the three operational communities, and solicit the input of the broad group of communities affected by the IANA functions. In order to address this task, the ICG seeks complete formal responses to its Request For Proposal (RFP)[95], through processes that are convened by each of the "operational communities" of IANA (i.e. those with direct operational or service relationships with the IANA functions operator, in connection with names, numbers or protocol parameters).

1220 In anticipation of the charter of the ICG, the operational community in connection with the IANA names function, the ccNSO and GNSO, took the initiative to create a cross-community working group to develop a proposal for the transition of NTIA's stewardship in relation to the naming related functions. At the ICANN 50 meeting in London, June 2014, the GNSO, ccNSO, ALAC and the SSAC established a drafting team to prepare a charter for such a Cross Community Working Group, which was finalized by mid August 2014. The charter was approved by the GNSO, ccNSO, ALAC and SSAC, each according to their own rules and procedures. The charter of the CWG-Stewardship as approved is available at https://community.icann.org/display/gnsocwgdtstwrdshp/Charter.

1221 ## Members and participants

1222 Page referenced: https://community.icann.org/pages/viewpage.action?pageId=49351381

1223 Following the approval of the CWG-Stewardship charter, the chartering organizations, selected members for the CWG-Stewardship, again in accordance with their own rules of procedure. Besides actively participating in the work of the CWG-Stewardship, members of the CWG-Stewardship are expected to solicit, and communicate the views and concerns of individuals in the organization that appoints them. The list of the 19 members, their affiliation, originating organizations and geographic regions is included on the page referenced above.

1224 Separately, and in accordance with the charter of the CWG-Stewardship, a call for participants was sent out to invite all those who are interested in the work of the CWG-Stewardship. The list of names of participants from the community, their affiliation, if any, and originating Geographic Region can also be found on the relevant Wiki page. Further, and in accordance with the charter, the CWG-Stewardship members and participants have submitted Statements of Interest(s).[96]

1225 ## Working methods of the CWG-Stewardship

1226 Initial working method: developing the first CWG-Stewardship proposal (October 2014 through February 2015): Sub-teams addressing ICG Request for Proposal

1227 At its start the CWG-Stewardship agreed to divide its work into the following items, which are derived from and in accordance with the RFP from the ICG:

3) Description of Community's Use of IANA Functions (RFP 1)

4) Existing, Pre-Transition Arrangements

[95] https://www.icann.org/en/system/files/files/rfp-iana-stewardship-08sep14-en.pdf
[96] https://community.icann.org/display/gnsocwgdtstwrdshp/SOIs+Created+for+CWG

a) Policy Sources

b) Oversight and Accountability

5) Proposed Post-Transition Oversight and Accountability Arrangements

6) Transition Implications

7) NTIA Requirements (RFP 5)

8) Community Process (RFP 6)

1228 In addition the CWG-Stewardship agreed to work on two additional items:

- Existing, Pre-Transition Arrangements, NTIA IANA Functions Contract Triage: The goal is to inform the CWG-Stewardship itself in its work and create a better understanding of the elements in the IANA Functions Contract for the work of the CWG-Stewardship.
- Principles: For internal purposes the CWG-Stewardship agreed to develop a set of principles and criteria on which the CWG-Stewardship itself could base its (draft) proposals and against which these could be tested.

1229 For each of the work items identified above sub-groups were formed, with volunteer rapporteurs and internal coordinators, with the exception for Section VI. These sub-groups were created to focus the work of the group on the requirements of the ICG and develop initial drafts. The sub-groups reported back to the full CWG-Stewardship, both online and during the CWG-Stewardship meetings, and their output was discussed, edited and ultimately accepted by the CWG-Stewardship as a whole, in accordance with the decision-making rules defined in the charter of the CWG-Stewardship.[97]

1230 The progress and intermediate results from the sub-teams can be viewed at: https://community.icann.org/display/gnsocwgdtstwrdshp/%5BArchive%5D+Work+Item+Sub+Groups

1231 On 1 December 2014, the CWG-Stewardship published its first draft proposal for public comment. This first draft had been designed around the idea of an independent and separate contracting entity, known as “Contract Co.”, to replace NTIA’s stewardship role and contract with the IANA Functions Operator. The comments at the conclusion of the first public comment outlined three key takeaways:

- Customers are currently satisfied with ICANN’s IANA department.
- There was concern over what was viewed as an overly complex structure that lacked details and assurances on accountability.
- Professional and independent legal advice was required to make a determination on post-transition structure

1232 The CWG-Stewardship further discussed the different aspects, taking into the community input. In part, this involved considering many more structural models (in addition to “Contract Co.”). By February 2015, prior to the ICANN 52 meeting in Singapore this resulted in an additional set of questions for the community, to inform the discussions of the CWG-Stewardship.

[97] CWG Charter, Section V: Rules of Engagement (https://community.icann.org/display/gnsocwgdtstwrdshp/Charter)

1233 Going into ICANN 52, the CWG-Stewardship presented the community with an overview of four structural models: two were "internal" and two were "external" (including "Contract Co."). This discussion document is available here: https://www.icann.org/news/announcement-2015-02-06-en.99. During ICANN52, three additional models were presented; each was a variation of a "hybrid" model. The discussion document for these three models is available here: https://community.icann.org/download/attachments/49351404/IntegratedIANA1.2.pdf?version=1&modificationDate=1427102306000&api=v2. With the addition of these three models, the CWG-Stewardship effectively left the ICANN 52 meeting with seven potential models to evaluate and consider.

1234 Method used to develop second and final proposal (February 2015 through June 2015): Design Teams

1235 In February 2015, after the Singapore face-to-face meetings, the CWG-Stewardship discussed and agreed in March 2015 on an alternative, focused, and agile method which was to work on the remaining open issues through a so called Design Team method. Each Design Team was established to focus on a specific, pre-defined work item and delivers its output in a short timeframe.

1236 The list of work items was approved by the CWG-Stewardship and maintained by the CWG-Stewardship. Results of each Design Team were discussed and approved by the full CWG-Stewardship prior to integration into the evolving CWG-Stewardship Proposal. The results of the prioritized Design Teams were discussed by the CWG-Stewardship at its face-to-face meetings that occurred in March 2015 in Istanbul, Turkey. At those meetings the initial list of work items was reviewed and work items were re-prioritized.

1237 The Co-Chairs managed creation of the Design Teams, prioritization of work items, and progress of the teams, with input from the CWG-Stewardship. Members and participants from the CWG-Stewardship composed the Design Teams, and in some cases external observers with specific expertise were included.

1238 The register/list of work items, their priority, membership of Design Teams, meetings, agendas, and mail archives are publicly available at: https://community.icann.org/display/gnsocwgdtstwrdshp/Design+Teams+List

1239 The CWG-Stewardship entered its Istanbul meetings with seven potential models for the IANA Stewardship transition. These models had been studied and researched by newly engaged independent legal counsel, Sidley Austin LLP. After a thorough discussion of these potential models with legal counsel and in a spirit of compromise, the CWG-Stewardship narrowed down its list of structural models to two variants of an internal accountability/hybrid model: the legal separation mode and the functional separation model.

1240 The move from seven potential models to two variants of an internal accountability/hybrid model was iterative over a series of sessions. In one session, after explanation of legal counsel's findings, two models: the internal trust and the external trust, were deemed unsuitable to meet the CWG-Stewardship's requirements because the structures were not necessarily recognized legally outside of the U.S. Upon conclusion of these sessions, the CWG-Stewardship also agreed to defer further consideration of the "Contract Co." model (in part, because it did not receive sufficient support after the first public comment period), until

[98] At this point, the CWG-Stewardship had still not secured professional legal advice.
[99] At this point, the CWG-Stewardship had still not secured professional legal advice.

the viability of the remaining models could be further considered. In addition, the CWG-Stewardship agreed to defer further consideration of the fully internal model or the standalone IANA hybrid model. The CWG-Stewardship agreed that the remaining models: two variants of an internal accountability/hybrid model (the legal separation model and the functional separate model) required further research on the part of legal counsel before the CWG-Stewardship could make a determination.

1241 Following the meetings in Istanbul, the CWG-Stewardship, in consultation with its independent legal counsel, held various meetings and reviewed various memos from its legal counsel to determine which of the two variants of an internal accountability/hybrid model – the legal separation model and the functional separation model – would be recommended. The CWG-Stewardship determined that the legal separation model was preferred because it would establish PTI as a separate legal entity at the outset, allowing for possible separation from ICANN in the future, if necessary. In addition, the legal separation model allowed for a contract between ICANN and PTI. With that decision reached, the CWG-Stewardship turned its focus to developing an accountability framework to support this model, while legal counsel assisted in addressing governance issues related to the model.

The consideration for the CWG-Stewardship, with consultation from its independent legal counsel, became whether to support a functionally separate model or a legally separate model. The group eventually chose the legally separate model because it would establish the separate PTI entity at the outset, allowing for possible separation from ICANN in the future, if necessary. With that compromise in place, the CWG-Stewardship turned its focus to developing an accountability framework to support this model, while legal counsel assisted in addressing governance issues.

1242 ### Client committee/independent, external legal services

1243 In March 2015, after an extensive request for proposal process, the CWG-Stewardship obtained the services of an external law firm, Sidley Austin LLP, to provide relevant and independent legal advice. The CWG-Stewardship agreed to channel their communication with the law firm through a Client Committee,[100] with the understanding that all communication (emails and conference calls, between the Client Committee and the law firm) would be publicly available as well as all deliverables prepared by the law firm.

1244 At the invitation of the Client Committee, Sidley Austin LLP attended full CWG-Stewardship meetings to respond to questions and provide additional clarifications.

1245 Membership of the Client Committee, a list of the Sidley Austin team, meeting recordings, agendas, research and memoranda, etc. are publicly available at: https://community.icann.org/display/gnsocwgdtstwrdshp/Client+Committee

1246 Through the Design Team method and taking into account external, independent legal advice, the CWG-Stewardship developed its second draft proposal, which was published for public comment from 22 April 2015 until 20 May 2015. During this public consultation period the aspects of the second proposal were further refined and discussed, using the same method for developing the second proposal.

1247 After closure of the public comment period (20 May 2015), the CWG-Stewardship reviewed all comments received, and, where appropriate, the Design Teams prepared responses to the comments received and refined their output.

[100] The Client Committee was composed of the two co-chairs and two CWG-Stewardship members.

1248 Based on the second proposal and further discussion by the full CWG-Stewardship and Design Teams, taking into account the public comment analysis, the Final Proposal was developed.

1249 Determining consensus

1250 The proposal was developed in a bottom-up, multistakeholder manner, which included multiple readings of the drafts. The drafts were posted publicly and open to comment by CWG-Stewardship members and participants with respect to each of the draft proposal iterations. The first draft of the Final Proposal was circulated for review and comment by the CWG-Stewardship, on 1 June 2015, with a dedicated first reading during the 2 June 2015 plenary meeting. The second draft was delivered on 3 June 2015, with a dedicated second reading during the 4 June 2015 call. A third and final reading took place on 9 June.

1251 Following the Final reading, the Final Proposal was sent to the CWG-Stewardship for a 24-hour period during which any errors, comments, or statements could be noted for the record. At the end of this 24-hour period (ending at 23:59 UTC on 10 June), the CWG-Stewardship co-Chairs added a note to Section VI.C., below, and sent the Final Proposal to the SO/AC Chartering Organizations for their approval. Chartering Organizations' approval is requested by 25 June so as to deliver to the ICG.

1252 P1.VI.B. Links to announcements, agendas, mailing lists, consultations, and meeting proceedings

1253 Meetings

- Full CWG–Stewardship (meeting dates, agendas, participants and meeting notes): https://community.icann.org/display/gnsocwgdtstwrdshp/Meetings
- CWG-Stewardship Sub-Teams: https://community.icann.org/display/gnsocwgdtstwrdshp/%5BArchive%5D+Work+Item+Sub+Groups
- Design Teams: https://community.icann.org/display/gnsocwgdtstwrdshp/Design+Teams
- Client Committee: https://community.icann.org/display/gnsocwgdtstwrdshp/Client+Committee

1254 Public consultations

- 1 December public consultation on first CWG-Stewardship draft transition proposal: https://www.icann.org/public-comments/cwg-naming-transition-2014-12-01-en
  - Responses to the December 2014 public comment: https://www.icann.org/public-comments/cwg-naming-transition-2014-12-01-en#summary
- February 2015 Discussion document for ICANN52 meeting: https://community.icann.org/pages/viewpage.action?pageId=52889457
- May 2015 public comment on second CWG-Stewardship draft transition proposal: https://www.icann.org/public-comments/cwg-stewardship-draft-proposal-2015-04-22-en

Webinars and other public presentations

- Webinar 3-4 December 2014: https://community.icann.org/pages/viewpage.action?pageId=50823496
- Webinar 3 February 2015: https://community.icann.org/pages/viewpage.action?pageId=52232656
- Presentations at ICANN 52 Singapore: http://singapore52.icann.org/en/schedule/thu-cwg-stewardship
- Webinars 24 April 2015: https://community.icann.org/pages/viewpage.action?pageId=52897455
- Webinars 6-7 May 2015: https://community.icann.org/pages/viewpage.action?pageId=53772631.
- Webinars 11 June: https://community.icann.org/pages/viewpage.action?pageId=53778352.

Mailing list archives

- https://community.icann.org/display/gnsocwgdtstwrdshp/Mailing+List+Archives

Correspondence

- https://community.icann.org/pages/viewpage.action?pageId=49355992

Outreach

- https://community.icann.org/display/gnsocwgdtstwrdshp/Outreach+Tracking+CWG-Stewardship

P1.VI.C. Assessment of the level of consensus behind your community's proposal, including a description of areas of contention or disagreement

The Cross Community Working Group on Naming Related Functions (CWG-Stewardship) is pleased to provide its Chartering Organizations with its proposed response to the IANA Stewardship Transition Coordination Group (ICG) Request for Proposals on the IANA Stewardship Transition for your consideration and approval as per its Charter.

The response is the result of extensive work by the CWG's 19 members, 133 participants and a team of highly qualified legal advisors over the past year, which included over 100 calls or meetings, 2 public consultations and more than 4,000 email messages. It represents a carefully crafted balance between key requirements, specific legal advice, and significant compromises by all who participated and includes diligent attention to the input received through the Public Comment proceedings. The final proposal has received the consensus support of the CWG-Stewardship with no objections or minority statements recorded for Chartering Organization consideration.

As noted in the CWG-Stewardship proposal itself, the proposal is significantly dependent and expressly conditioned on the implementation of ICANN-level accountability mechanisms proposed by the Cross Community Working Group on Enhancing ICANN Accountability

(CCWG-Accountability). The co-chairs of the CWG-Stewardship and the CCWG-Accountability have coordinated their efforts and the CWG-Stewardship is confident that the CCWG-Accountability recommendations, if implemented as expected, will meet the requirements that the CWG-Stewardship has previously communicated to the CCWG. If any element of these ICANN level accountability mechanisms is not implemented as contemplated by the CWG-Stewardship proposal, this proposal will require revision.

P1. Annex A: The Community's Use of the IANA Functions – Additional Information

1) **Root Zone Change Request Management (NTIA IANA Functions Contract: C.2.9.2.a)**

   a) **Description of the function:** Receive and process Root Zone change requests for TLDs. These change requests include addition of new or updates to existing TLD name servers (NS) and delegation signer (DS) resource record (RR) information, along with associated "glue'" (A and AAAA RRs). A change request may also include new TLD entries to the Root Zone.

   b) **Customers of the function:** TLD registries.

   c) **What registries are involved in providing the function:** Root Zone database.

   d) **Overlaps or interdependencies:** Policy for entries in the Root Zone are determined by the ICANN policy-setting mechanisms (e.g., for ccTLDs and gTLDs). The IETF standardization process can create reservations from the global namespace so that certain names that otherwise would be valid in the DNS root are disallowed.

2) **Root Zone WHOIS Change Request and Database Management (NTIA IANA Functions Contract: C.2.9.2.b)**

   a) **Description of the function:** The IFO maintains, updates, and makes publicly accessible a Root Zone WHOIS database with current and verified contact information for all TLD registry operators. The Root Zone WHOIS database, at a minimum, shall consist of the TLD name; the IP address of the TLD's nameservers; the corresponding names of such nameservers; the creation date of the TLD; the name, postal address, email address, and telephone and fax numbers of the TLD registry operator; the name, postal address, email address, and telephone and fax numbers of the technical contact for the TLD registry operator; the name, postal address, email address, and telephone and fax numbers of the administrative contact for the TLD registry operator; reports; date the WHOIS record was last updated; and any other information relevant to the TLD requested by the TLD registry operator. IANA shall receive and process Root Zone WHOIS change requests for TLDs.

   b) **Customers of the function:** TLD registries.

   c) **What registries are involved in providing the function:** Root Zone WHOIS database.

   d) **Overlaps or interdependencies:** None.

3) **Delegation and Redelegation of a ccTLD (NTIA IANA Functions Contract: C.2.9.2.c)**

   a) **Description of the function:** Assigning or re-assigning a manager (sponsoring organization) for a ccTLD registry (including IDN ccTLDs). The IFO applies existing policy frameworks in processing requests related to the delegation and redelegation

of a ccTLD, such as RFC 1591 Domain Name System Structure and Delegation, the GAC Principles And Guidelines For The Delegation And Administration Of Country Code Top Level Domains, and any further clarification of these policies by interested and affected parties. If a policy framework does not exist to cover a specific instance, ICANN will consult with the interested and affected parties, relevant public authorities, and governments on any recommendation that is not within or consistent with an existing policy framework. In making its recommendations, ICANN shall also take into account the relevant national frameworks and applicable laws of the jurisdiction that the TLD registry serves.

b) Customers of the function: ccTLD registries.

c) What registries are involved in providing the function: Root Zone, Root Zone WHOIS database.

d) Overlaps or interdependencies: Policy for entries in the Root Zone are determined both by the ICANN policy setting mechanisms (e.g. for ccTLDs and gTLDs), and by the IETF standardization process (e.g. for specially reserved names)

4) Delegation and Redelegation of a gTLD (NTIA IANA Functions Contract: C.2.9.2.d)

a) Description of the function: Assigning or re-assigning a Sponsoring Organization for a gTLD registry. ICANN verifies that all requests related to the delegation and redelegation of gTLDs are consistent with the procedures developed by ICANN. In making a delegation or redelegation recommendation ICANN must provide documentation in the form of a Delegation and Redelegation Report verifying that ICANN followed its own policy framework including specific documentation demonstrating how the process provided the opportunity for input from relevant stakeholders and was supportive of the global public interest.

b) Customers of the function: gTLD registries.

c) What registries are involved in providing the function: Root Zone, Root Zone WHOIS database.

d) Overlaps or interdependencies: Policy for entries in the Root Zone are determined both by the ICANN policy-setting mechanisms (e.g. for ccTLDs and gTLDs), and by the IETF standardization process (e.g. for specially reserved names).

5) Redelegation and Operation of the .INT TLD (NTIA IANA Functions Contract: C.2.9.4)[101]

a) Description of the function: Historically, the policy for .INT is described in IETF RFC 1591. The policy allowed registration for both international organizations and for use for international databases for infrastructure use. The policy for .INT related to international databases for infrastructure use was determined by the IETF. RFC 3172 recommended that such uses move under.ARPA, and the only then-extant use of .INT for such infrastructure (the IPv6 reverse mapping tree) was in fact moved under .ARPA; all subsequent infrastructure uses have been under .ARPA. Since this

[101] The CWG-Stewardship has considered the .INT domain, and concluded that provided there is no policy change under .INT done by ICANN/IANA the CWG-Stewardship does not see any need for changes in the management of the .INT domain in conjunction with the transition. Future administration of the .INT domain should be subject to review post transition.

change, it is only possible for an international treaty organizations to register domain names under .INT for use for the organization itself.

b) **Customers of the function**: Eligible registrants for registration in .INT (http://www.iana.org/domains/int/policy).

c) **What registries are involved in providing the function:** Root Zone database, Root Zone WHOIS, .INT Zone database, .INT WHOIS database.

d) **Overlaps or interdependencies**: Historically policy has partially been determined by IETF, however per RFC 3172, .INT is no longer used for international databases for infrastructure use; .ARPA TLD is used instead.

6) **Root DNSSEC Key Management (NTIA IANA Functions Contract: C.2.9.2.f)**

a) **Description of the function:** The IANA Functions Operator is responsible for generating the Key Signing Key (KSK) and publishing its public portion. The KSK used to digitally sign the Root Zone Signing Key (ZSK) that is used by the Root Zone Maintainer to DNSSEC-sign the Root Zone.

b) **Customers of the function:** Root Zone Maintainer, DNS validating resolver operators.

c) **What registries are involved in providing the function:** The Root Zone Trust Anchor.

d) **Overlaps or interdependencies:** IETF's creation of algorithm numbers for key types.

7) **Root Zone Automation (NTIA IANA Functions Contract: C.2.9.2.e)**

a) **Description of the function:** A fully automated system that includes a secure (encrypted) system for customer communications; an automated provisioning protocol allowing customers to manage their interactions with the Root Zone management system; an online database of change requests and subsequent actions whereby each customer can see a record of their historic requests and maintain visibility into the progress of their current requests; a test system, which customers can use to test the technical requirements for a change request; and an internal interface for secure communications between the IFO; the Administrator, and the Root Zone Maintainer.

b) **Customers of the function:** TLD registries.

c) **What registries are involved in providing the function:** Root Zone database, Root Zone WHOIS.

d) **Overlaps or interdependencies:** N/A.

8) **Customer Service Complaint Resolution Process (CSCRP) (NTIA IANA Functions Contract: C.2.9.2.g)**

a) **Description of the function:** A process for IANA Functions customers to submit complaints for timely resolution that follows industry best practice and includes a reasonable timeframe for resolution.

b) **Customers of the function:** TLD registries.

c) **What registries are involved in providing the function:** N/A.

d) **Overlaps or interdependencies:** All IANA Functions that are customer facing for the names registries.

9) **Management of the Repository of IDN Practices (IANA service or activity beyond the scope of the IANA functions contract)**

a) **Description of the function:** The IANA Repository of TLD IDN Practices, also known as the “IDN Language Table Registry,” was created to support the development of the IDN technology as described in the “Guidelines for the Implementation of Internationalized Domain Names (IDNs)”. In addition to making the IDN Tables publicly available on TLD registry websites, the TLD registries may register IDN Tables with the IANA Functions Operator, which in turn will display them online for public access.

b) **Customers of the function:** TLD registries.

c) **What registries are involved in providing the function:** IDN Language Table Registry.

d) **Overlaps or interdependencies:** IDNs are based on standards developed and maintained by the IETF.

10) **Retirement of the Delegation of TLDs (IANA service or activity beyond the scope of the IANA functions contract)**

a) **Description of the function:** Retire TLDs from active use.

b) **Customers of the function:** TLD registries

c) **What registries are involved in providing the function:** Root Zone database, Root Zone WHOIS database.

d) **Overlaps or interdependencies:** N/A.

P1. Annex B: Oversight Mechanisms in the NTIA IANA Functions Contract

1263 The following is a list of oversight mechanisms found in the NTIA IANA Functions Contract:

Ongoing Obligations

- C.2.12.a Program Manager --The contractor shall provide trained, knowledgeable technical personnel according to the requirements of this contract. All contractor personnel who interface with the CO and COR must have excellent oral and written communication skills. "Excellent oral and written communication skills" is defined as the capability to converse fluently, communicate effectively, and write intelligibly in the English language. The IANA Functions Program Manager organizes, plans, directs, staffs, and coordinates the overall program effort; manages contract and subcontract activities as the authorized interface with the CO and COR and ensures compliance with Federal rules and regulations and responsible for the following:
- C.4.1 Meetings -- Program reviews and site visits shall occur annually.
- C.4.2 Monthly Performance Progress Report -- The Contractor shall prepare and submit to the COR a performance progress report every month (no later than 15 calendar days following the end of each month) that contains statistical and narrative information on the performance of the IANA functions (i.e., assignment of technical protocol parameters; administrative functions associated with root zone management; and allocation of Internet numbering resources) during the previous calendar month. The report shall include a narrative summary of the work performed for each of the functions with appropriate details and particularity. The report shall also describe major events, problems encountered, and any projected significant changes, if any, related to the performance of requirements set forth in C.2.9 to C.2.9.4.
- C.4.3 Root Zone Management Dashboard -- The Contractor shall work collaboratively with NTIA and the Root Zone Maintainer, and all interested and affected parties as enumerated in Section C.1.3, to develop and make publicly available via a website, a dashboard to track the process flow for root zone management within nine (9) months after date of contract award.
- C.4.4 Performance Standards Reports -- The Contractor shall develop and publish reports for each discrete IANA function consistent with Section C.2.8. The Performance Standards Metric Reports will be published via a website every month (no later than 15 calendar days following the end of each month) starting no later than six (6) months after date of contract award.
- C.4.5 Customer Service Survey (CSS) --The Contractor shall collaborate with NTIA to develop and conduct an annual customer service survey consistent with the performance standards for each of the discrete IANA functions. The survey shall include a feedback section for each discrete IANA function. No later than 30 days after conducting the survey, the Contractor shall submit the CSS Report to the COR.
- C.5.1 Audit Data -- The Contractor shall generate and retain security process audit record data for one year and provide an annual audit report to the CO and the COR. All root zone management operations shall be included in the audit, and

records on change requests to the root zone file. The Contractor shall retain these records in accordance with the clause at 52.215-2. The Contractor shall provide specific audit record data to the CO and COR upon request.

- C.5.2 Root Zone Management Audit Data -- The Contractor shall generate and publish via a website a monthly audit report based on information in the performance of Provision C.9.2 (a-g) Perform Administrative Functions Associated With Root Zone Management. The audit report shall identify each root zone file and root zone “WHOIS” database change request and the relevant policy under which the change was made as well as identify change rejections and the relevant policy under which the change request was rejected. The Report shall start no later than nine (9) months after date of contract award and thereafter is due to the COR no later than 15 calendar days following the end of each month.
- C.5.3 External Auditor -- The Contractor shall have an external, independent, specialized compliance audit which shall be conducted annually and it shall be an audit of all the IANA functions security provisions against existing best practices and Section C.3 of this contract.

P1. Annex C: Principles and Criteria that Should Underpin Decisions on the Transition of NTIA Stewardship for Names Functions

Final

1264 These principles and criteria are meant to be the basis upon which the decisions on the transition of NTIA stewardship are formed. This means that the proposals can be tested against the principles and criteria before they are sent to the ICG.

1) **Security, stability and resiliency**: Changes must not undermine the operation of the IANA Functions and should assure accountability and objectivity in the stewardship of the service.

2) Transition should be subject to adequate stress testing.

3) Any new IANA governance mechanisms should not be excessively burdensome and should be fit for purpose.

4) **Support the open Internet**: The transition proposal should contribute to an open and interoperable Internet.

5) **Accountability and transparency**: The service should be accountable and transparent.

   i) **Transparency**: Transparency is a prerequisite of accountability. While there might be confidentiality concerns or concerns over operational continuity during the process of delegation or redelegation of a TLD, the final decision and the rationale for that decision should be made public or at least be subject to an independent scrutiny as part of an *ex-post* assessment of service performance. Unless prevented or precluded by confidentiality, any and all audit reports and other review materials should be published for inspection by the larger community.

   ii) **Independence of accountability**: Accountability processes should be independent of the IANA Functions Operator[102] and should assure the accountability of the IANA Functions Operator to the inclusive global multistakeholder community.

   iii) **Independence of policy from IANA**: The policy processes should be independent of the IANA Functions Operator. The IANA Functions Operator's role is to implement changes in accordance with policy agreed through the relevant bottom-up policy process.

   iv) **Protection against Capture**[103]**:** Safeguards need to be in place to prevent capture of the service or of any IANA oversight or stewardship function.

[102] The term IANA Functions Operator means the unit that provides the service.

[103] A group can be considered captured when one or more members are able to effectively control outcomes despite a lack of agreement from other stakeholders whose agreement or non-objection would be required to achieve consensus. Conditions for consensus will need to be agreed appropriate for the group.

v) **Performance standards**: The IANA Functions Operator needs to meet agreed service levels and its decisions should be in line with agreed policy. Processes need to be in place to monitor performance and mechanisms should be in place to remedy failures. A fallback provision also needs to be in place in case of service failure.

vi) **Appeals and redress**: Any appeals process should be independent, robust, affordable, timely, provide binding redress open to affected parties and be open to public scrutiny. Appeals should be limited to challenging the implementation of policy or process followed, not the policy itself.

6) **Service levels**: The performance of the IANA Functions must be carried out in a reliable, timely and efficient manner. It is a vital service and any proposal should ensure continuity of service over the transition and beyond, meeting a recognized and agreed quality of service that is in line with service-level commitments.

i) Service level commitments should be adaptable to the developing needs of the customers of the IANA Functions and subject to continued improvement.

ii) Service quality should be independently audited (*ex-post* review) against agreed commitments.

7) **Policy based**: The decisions and actions of the IANA Functions Operator should be made objectively based on policy agreed to through the recognized bottom-up multistakeholder processes. As such, decisions and actions of the IANA Functions Operator should:

i) Be predictable (i.e, decisions are clearly rooted in agreed and applicable policy as set by the relevant policy body).

ii) Adhere to laws/processes (i.e., for ccTLDs: Respect national laws and processes, as well as any applicable consensus ICANN policies and IETF technical standards). Post-transition of the IANA Functions, the IANA Functions Operator will continue to provide service to existing registries in conformance with prevailing technical norms, conforming with the policy decisions of registries and the security and stability of the Root Zone itself.

iii) Be non-discriminatory.

iv) Be auditable (*ex-post* review).

v) Be appealable by significantly interested parties.

8) **Diversity of the customers of the IANA Functions**:

i) The IANA Functions operator needs to take account of the variety of forms of relationship with TLD operators. The proposal will need to reflect the diversity of arrangements in accountability to the direct users of the IANA Functions.

ii) For ccTLDs, the IANA Functions Operator should provide a service without requiring a contract and should respect the diversity of agreements and arrangements in place for ccTLDs. In particular, the IANA Functions Operator should not impose any additional requirements on the registry unless they are directly and demonstrably linked to the global security, stability, and resilience of

the DNS.

iii) For gTLDs, the IANA Functions Operator should continue to provide service notwithstanding any on-going or anticipated contractual disputes between ICANN and the gTLD operator. No additional requirements for prompt delivery of IANA services should be imposed unless they are directly and demonstrably linked to the global security, stability and resilience of the DNS.

9) Separability: Any proposal must ensure the ability to:

i) Separate the IANA Functions from the current operator (i.e. ICANN) if warranted and in line with agreed processes.

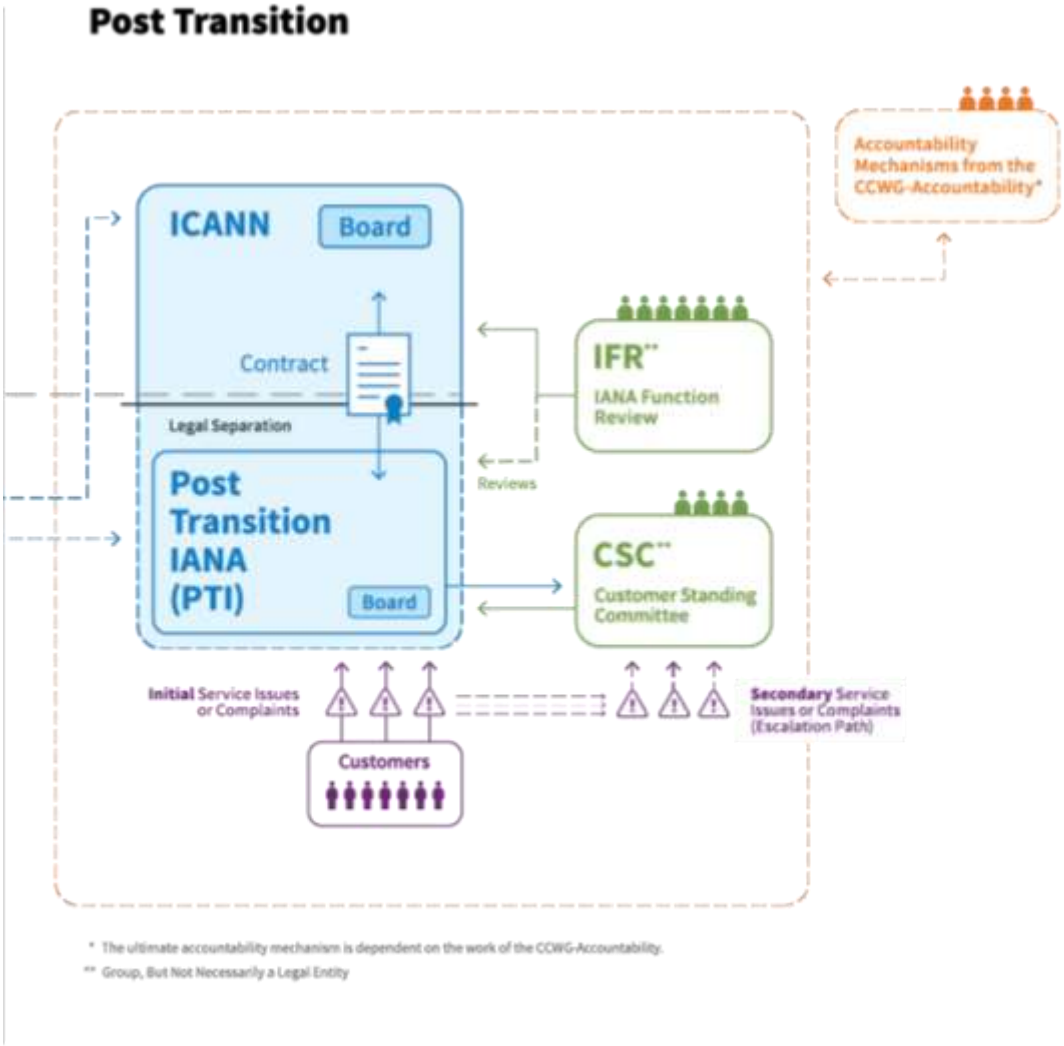
ii) Convene a process for selecting a new IANA Functions Operator.

iii) Consider separability in any future transfer of the IANA Functions.

10) Multistakeholderism: Any proposal must foster multistakeholder participation in the future oversight of the IANA Functions.

P1. Annex D: Diagram

This diagram is excerpted from a set of overview slides used for CWG-Stewardship briefing webinars. To view the full set of slides, see https://community.icann.org/x/sJc0Aw.



P1. Annex E: IANA Contract Provisions to be Carried Over Post-Transition (Statement of Work)

The following provisions of the IANA Functions Contract are expected to be carried over to the IANA Statement of Work (and included in the ICANN-PTI Contract) noting that updates will need to be made to reflect the changing relationship with NTIA post-transition, and ensure consistency in terminology as well as updates as the result of other recommendations in the transition proposal:

- *C.1.3. – Working relationship with all affected parties*
- *C.2.6 - Transparency and Accountability*
- *C.2.7. Responsibility and respect for stakeholders*
- *C.2.8 - Performance Standards*
- *C.2.9.2.a - Root Zone File Change Request Management*
- *C.2.9.2.b - Root Zone WHOIS Change Request and Database Management*
- *C.2.9.2.c - Delegation and Redelegation of a Country Code Top Level Domain (a similar provision should be created concerning retirement of a Country Code Top Level Domain)*
- *C.2.9.2.d - Delegation And Redelegation of a Generic Top Level Domain (gTLD)*
- *C.2.9.2.e – Root zone Automation*
- *C.2.9.2.f - Root Domain Name System Security Extensions (DNSSEC) Key Management*
- *C.2.12.a – Qualified Program Manager*
- *C.3.1 – Secure Systems*
- *C.3.2. – Secure System Notification*
- *C.3.3. – Secure Data*
- *C.3.4. – Security Plan*
- *C.3.5. – Director of Security*
- *C.4.2. – Monthly Performance Progress Report*
- *C.4.3 – Root Zone Management Dashboard*
- *C.4.4 – Performance Standards Reports*
- *C.4.5. – Customer Service Survey*
- *C.5.1. – Audit Data*
- *C.5.2 – Root Zone Management Audit Data*
- *C.5.3 – External Auditor*
- *C.6.1. – Conflict of interest*
- *C.6.2. – Conflict of Interest Officer*
- *Sub-sections of C.6.2 (C.6.2.1-5) - additional conflict of interest requirements.*
- *C.7.1. – Redundancy*

- *C.7.2. – Contingency plan*
- *C.7.3. – Transition to a Successor Contractor*
- *C.12.b – Key personnel*
- *Baseline requirements for DNSSEC in the authoritative root zone*

P1. Annex F: IANA Function Reviews - Statement of Work Duration and Review Periodicity

1266 ### What period (duration) should be covered by the first statement of work post-transition?

1267 It is critical that any proposal provide opportunities to improve the performance of the IANA Functions Operator as it relates to naming as well as to review the proposed oversight structure against the needs of its customers and the ICANN community. This is especially important in the initial period following the transition of the NTIA's stewardship over the IANA Functions, in order to account for lessons learned as a result of the IANA Stewardship Transition, to review the effectiveness of new structures created pursuant to the IANA Stewardship Transition, and to address any implications for the IANA Functions Operator's performance. As a result, the CWG-Stewardship recommends that the review of PTI's performance against the ICANN-PTI Contract and the IANA Statement of Work (IANA SOW) for the naming functions occur no more than **two years** from the date of the IANA Stewardship Transition. This review will be led by a multistakeholder body drawn from the ICANN community.

1268 Following the initial review period of two years from the date of the IANA Stewardship Transition, a longer period in between reviews will be advisable to avoid the constant flow of reviews, while still accounting for the emerging or evolving needs of IANA customers and the ICANN community. We recommend that subsequent reviews be initiated on a calendar basis with a recommended standard period of no more than five-year intervals**.**

1269 While the IANA Function Review will normally be scheduled based on a regular rotation of no more than five years in line with other ICANN reviews, a Special IANA Function Review may also be initiated by community action.

1270 Periodic IANA Function Reviews will be focused on the performance of PTI against the IANA SOW, as well as reviewing the IANA SOW to determine if any amendments should be recommended. The outcomes of an IANA Function Review are not limited and could include a variety of recommendations.

1271 ### What should be the process for reviewing or amending IANA SOWs (including approval by the community and acceptance by ICANN)?

1272 The review could identify recommended amendments to the IANA SOW to address any performance deficiencies, or to the CSC charter to address any issues or deficiencies. The process of developing and approving amendments will take place through a defined process that includes, at minimum, the following steps, in advance of an amendment to either document being proposed:

- Consultation with the IANA Functions Operator;
- Consultation with the CSC;
- Public input session for ccTLD and gTLD operators; and
- Public comment period.

1273 Drafted amendments will be subject to at least the following processes before they came into effect:

- Public comment period;
- Ratification by the ccNSO and the GNSO Councils by a supermajority threshold; and
- Approval by the ICANN Board.

1274 The timeline for implementing any amendments to the IANA SOW will be agreed to between the IANA Function Review Team and the IANA Functions Operator.

1275 ## Scope of IANA Function Reviews

1276 At minimum, the IANA Function Review will consider the following:

- The performance of the IANA Functions Operator against the requirements set forth in the IANA SOW;
- Any necessary additions to the IANA SOW to account for the needs of consumers of the IANA naming functions or the ICANN community at large;[104]
- Openness/transparency procedures for the IANA Functions Operator and any oversight structures, including reporting requirements and budget transparency;
- The effectiveness of new structures created to carry out IANA oversight in monitoring performance and handling issues with the IANA Functions Operator;
- The relative performance of the IANA Functions pre- and post-transition according to established service levels; and
- Discussion of process or other improvements (where relevant to the mandate of the IANA Function Review) suggested by the CSC or community.

1277 At minimum, the following inputs will be considered as a part of the review:

- The current IANA SOW.
- Regular reports provided by the IANA Functions Operator during the defined review period, including:
  - Monthly performance reports;
  - Delegation/redelegation reports;
  - Annual IANA audits;
  - Security Process Reports;
  - RZM Data Audits;
  - Response to IANA Customer Satisfaction Surveys; and[105]

[104] Note: this does not include any review of policy developed or adopted through agreed processes or on ICANN's relationship with contracted TLDs.

[105] It is expected that these reports be retained for the duration of the reporting period, and be made available to members of the IANA Function Review Team (to the extent that they are not published publically).

- Conflict of Interest Enforcement and Compliance Report.

- Inputs by the CSC, including:
  - Issues flagged in reviewing above reports;
  - Public transcripts and meeting minutes;
  - Inputs related to the effectiveness of any remediation efforts with the IANA Functions Operator, and
  - Annual evaluation of IANA Functions Operator performance.
- Community inputs through Public Consultation Procedures defined by the IANA Function Review Team, potentially including:
  - Public comment periods.
  - Input at in-person sessions during ICANN meetings.
  - Responses to public surveys related to IANA Functions Operator performance; and
  - Public inputs during meetings of the IANA Function Review Team.

What are the goals of the reviews?

In reviewing the above data points the goal of the IANA Function Review Team will be to:

- Evaluate the performance of the IANA Functions Operator and any related oversight bodies vis-à-vis the needs of its direct customers and the expectations of the broader ICANN community;
- Evaluate the performance of any IANA oversight bodies with respect to the responsibilities set forth in their charters;
- Consider and assess any changes put in place since the last IANA Function Review and their implications for the performance of the IANA Naming Functions;
- Determine if any amendments to the SOW should be recommended; and
- Identify areas for improvement in the performance of the IANA Functions and associated oversight mechanisms.

Any recommendations will be expected to identify improvements in these areas that were supported by data and associated analysis about existing deficiencies and how they could be addressed.

Composition of IANA Function Review Teams

Who are the relevant stakeholders?

All stakeholder groups represented at ICANN will be relevant for the reviews done by the IANA Function Review Team. Additionally, the Number and Protocol operational communities will each be offered the opportunity to name a liaison to the review group. The IANA Function Review Team will be composed as follows:

4. Group	5. IFRT Members
6. ccNSO	7. 2
8. ccTLDs (non-ccNSO)	9. 1
10. Registry Stakeholder Group (RySG)	11. 2
12. Registrar Stakeholder Group (RsSG)	13. 1
14. Commercial Stakeholder Group (CSG)	15. 1
16. Non-Commercial Stakeholder Group (NCSG)	17. 1
18. Government Advisory Committee (GAC)	19. 1
20. Security and Stability Advisory Committee (SSAC)	21. 1
22. Root Server Operators Advisory Committee (RSSAC)	23. 1
24. At-Large Advisory Committee (ALAC)	25. 1
26. CSC Liaison	27. 1

1284 In any case where a recommendation focuses on a service specific to gTLDs or to ccTLDs, or where the processes are different between the two, the final recommendation should not be decided in the face of opposition from that community's members. Solely gTLD issues must not be decided in opposition to GNSO members and solely ccTLD issues (or issues which are handled differently for ccTLDs) must not be decided in opposition to ccTLD members of the IANA Function Review Team.

1285 Additionally, an IANA Functions Operator staff member will be appointed as a point of contact for the IANA Function Review Team.

1286 **What body should coordinate reviews?**

1287 The ICANN Board, or an appropriate sub-committee of the Board, must ensure that an IANA Function Review Team is convened at no more than five-year intervals (or convened to enable the first periodic IANA Function Review to be completed) for the purpose of leading a review of the IANA SOW and the additional performance parameters defined above. The IANA Function Review Team will not be a standing body and will be reconstituted for every IANA Function Review.

1288 Individuals interested in participating in the IANA Function Review Team would submit an Expression of Interest that includes a response addressing the following matters:

- Why they are interested in becoming involved in the IANA Function Review Team;
- What particular skills they would bring to the IANA Function Review Team;

- Their knowledge of the IANA Functions;
- Their understanding of the purpose of the IANA Function Review Team; and
- That they understand the time necessary required to participate in the review process and can commit to this role.

1289 Supporting Organizations or Advisory Committees, in accordance with their respective internally defined processes, will appoint individuals who have submitted Expressions of Interest. In the case of the non-ccNSO ccTLD representative, the ccNSO will be the appointing body; in appointing the non-ccNSO representative it is strongly recommended that the ccNSO also consult with the Regional ccTLD Organizations, namely AfTLD, APTLD, LACTLD, and CENTR.

1290 **What is the scope of its responsibility for leading the review?**

1291 The IANA Function Review Team defined above will have the primary responsibility for carrying out the IANA performance review, including:

- Review and evaluation of the review inputs defined above;
- Initiation of public comment periods and other processes for wider community input;
- Considering inputs received during public comment periods and other procedures for community input; and
- Development of recommendations on changes to the IANA SOW, and to IANA Functions Operator performance.

1292 The IANA Function Review will be a high-intensity project and all members selected are expected to participate actively in the work of the IANA Function Review Team.

1293 The IANA Function Review Team will be an internal-to-ICANN body defined within the ICANN bylaws as a fundamental bylaw. ICANN will provide secretariat and other support for the IANA Function Review Team.

1294 **What sort of process structure is warranted?**

1295 The CWG-Stewardship recommends that the IANA Function Review be organized along the same ICANN Cross Community Working Group guidelines that have developed over the past years and which have been used successfully in the process of developing the IANA Stewardship Transition recommendations. As with the CWG-Stewardship, this review group will be co-chaired by someone designated by the GNSO and someone designated by the ccNSO. The groups will work on a consensus basis. In the event that consensus could not be reached, the IANA Function Review Team could decide by a majority vote of the group members.

1296 The CWG-Stewardship expects that each IANA Function Review should take nine months from the appointment of members to the IANA Function Review Team to the publication of a final report, including conducting two 40-day public comment periods.

1297 **How is the wider community involved in such a review?**

1298 As with other Cross Community Working Groups, the CWG-Stewardship recommends that all mailing lists and meetings will be open to interested participants and transparent, with recordings and transcripts made available to the public. At several stages in the process, community comment will be requested:

- Near the beginning of the process, the community will be asked to consider issues relevant to the review; and
- Midway through the process, a draft report will be provided for community review.

1299 Once the final report is prepared, it will be provided to the community.

1300 **What should trigger reviews?**

1301 Similar to the Affirmation of Commitment (AoC) Reviews, the IANA Function Review will be triggered on a calendar basis, with the first call for Expressions of Interest being scheduled to kick off one year from the date of the IANA Stewardship Transition to allow sufficient time to convene the IANA Function Review Team and complete the IANA Function Review within two years of the date of the IANA Stewardship Transition. Subsequent reviews will be scheduled to occur at no more than five-year intervals from the date of the initial IANA Function Review.

1302 A non-periodic or "Special" IANA Function Review (Special IFR) can only be initiated when the following escalation mechanisms have been exhausted:

- CSC remedial action procedures are followed and fail to address the identified deficiency (see Annex G); and
- The IANA Problem Resolution Process is followed and fails to correct the deficiency (See Annex J).

1303 Following exhaustion of the foregoing escalation mechanisms, the ccNSO and GNSO will be responsible for checking and reviewing the outcome of the CSC process (as defined in Annex G), and the IANA Problem Resolution Process (as defined in Annex J) and for determining whether or not a Special IFR is necessary. After consideration, which may include a Public Comment period and must include meaningful consulatation with other SO/ACs. In order to trigger a Special IFR, it would require a vote of both of the ccNSO and GNSO Councils (each by a supermajority vote according to their normal procedures for determining supermajority). The Special IFR will follow the same multistakeholder cross community composition and process structure as the periodic IANA Function Review.The scope of the Special IFR will be narrower than a periodic IFR, focused primarily on the identified deficiency or problem, its implications for overall IANA performance, and how that issue is best resolved. As with the periodic IFR, the Special IFR is limited to a review of the performance of the IANA Functions operation and should not consider policy development and adoption processes or the relationship between ICANN and its contracted TLDs.

1304 The requirement to conduct and facilitate the periodic and special IANA Function Reviews would be articulated in the ICANN Bylaws and included as an ICANN fundamental bylaw under consideration by CCWG-Accountability. In addition, the IFR and Special IFR mechanisms could be set forth in the contract between ICANN and Post-Transition IANA or PTI.

1305 **CCWG Accountability Dependencies**

1306 Enumeration of the relevant accountability mechanisms relating to the IFR and Special IFR:

- Creation of an ICANN fundamental bylaw to describe the IFR and Special IFR mechanisms, including the above voting thresholds for triggering a Special IFR (i.e.,

after specified escalation methods have been exhausted and then upon a supermajority vote of each of the ccNSO and GNSO Councils) and approval of the outcomes of an IFR and Special IFR (which may include a separation process, as described in Annex L).

1307 **Table of Reviews**

28. Review Type	29. Frequency	30. Responsible
31. IANA Function Review (IFR) including: 32. Statement Of Work (SOW)	33. Initially, two years, then moving to no more than five years 34. 35. 36. Special IFR can also be triggered by the ICANN community	37. IANA Function Review Team 38.
39. Review monthly performance report	40. Monthly	41. CSC
42. Site visit	43. On-demand	44. IANA Function Review Team
45. Review CSC report on IANA Functions Operator performance SOW report	46. Annual	47. AC/SO/ICANN 48. Comment period 49. ICANN Board
50. Review performance metrics	51. Quarterly	52. CSC
53. Review customer survey report	54. Yearly	55. CSC
56. Review security audit process report	57. Annual	58. CSC
59. Review RZM audit report	60. Quarterly	61. CSC 62. Root Zone Operators
63. Review annual audit	64. Annually	65. CSC with

report		community input (i.e., open ICANN comments) 66.
67. Review Conflict of Interest Enforcement Compliance audit report	68. Annually	69. Community review (AC/SO/Board) with comments to IFO

P1. Annex G: Proposed Charter of the Customer Standing Committee (CSC)

Mission

The Customer Standing Committee (CSC) has been established to perform the operational oversight previously performed by the U.S. Department of Commerce's National Telecommunications and Information Administration (NTIA) as it relates to the monitoring of performance of the IANA naming function. This transfer of responsibilities took effect on [date].

The mission of the CSC is to ensure continued satisfactory performance of the IANA function for the direct customers of the naming services. The primary customers of the naming services are top-level domain registry operators, but also include root server operators and other non-root zone functions.

The mission will be achieved through regular monitoring by the CSC of the performance of the IANA naming function against agreed service level targets and through mechanisms to engage with the IANA Functions Operator to remedy identified areas of concern.

The CSC is not mandated to initiate a change in the IANA Functions Operator via a Special IANA Function Review, but could escalate a failure to correct an identified deficiency to the ccNSO and GNSO, which might then decide to take further action using agreed consultation and escalation processes, which may include a Special IANA Function Review.

Scope of Responsibilities

The CSC is authorized to monitor the performance of the IANA naming function against agreed service level targets on a regular basis.

The CSC will analyse reports provided by the IANA Functions Operator on a monthly basis and publish their findings.

The CSC is authorized to undertake remedial action to address poor performance in accordance with the Remedial Action Procedures (see illustrative procedures at the end of this Annex). The Remedial Action Procedures are to be developed and agreed to by the CSC and the IANA Functions Operator post-transition, once the CSC is formed.

In the event performance issues are not remedied to the satisfaction of the CSC, despite good-faith attempts to do so, the CSC is authorized to escalate the performance issues to the ccNSO and GNSO for consideration.

The CSC may receive complaints from individual registry operators regarding the performance of the IANA Naming Function; however, the CSC will not become involved in a direct dispute between any registry operator and IANA.

The CSC will review individual complaints with a view to identifying any patterns of poor performance by the IANA Functions Operator in responding to complaints of a similar nature. In relation to problem resolution, if CSC determines that remedial action has been

exhausted and has not led to necessary improvements, the CSC is authorized to escalate to the PTI Board and further if necessary.

1320 The CSC will, on an annual basis or as needs demand, conduct a consultation with the IANA Functions Operator, the primary customers of the naming services, and the ICANN community about the performance of the IANA Functions Operator.

1321 The CSC, in consultation with registry operators, is authorized to discuss with the IANA Functions Operator ways to enhance the provision of IANA's operational services to meet changing technological environments; as a means to address performance issues; or other unforeseen circumstances. In the event it is agreed that a material change in IANA naming services or operations would be beneficial, the CSC reserves the right to call for a community consultation and independent validation, to be convened by the IANA Functions Operator, on the proposed change. Any recommended change must be approved by the ccNSO and RySG.

1322 The IANA Functions Operator would be responsible for implementing any recommended changes and must ensure that sufficient testing is undertaken to ensure smooth transition and no disruption to service levels.

1323 The CSC will provide a liaison to the IANA Function Review Team and a liaison to any Separation Cross Community Working Group.

1324 **Conflict of Interest**

1325 The ICANN Bylaws make clear that it must apply policies consistently, neutrally, objectively and fairly, without singling any party out for discriminatory treatment; which would require transparent fairness in its dispute resolution processes. Members of the CSC should accordingly disclose any conflicts of interest with a specific complaint or issue under review. The CSC may exclude from the discussion of a specific complaint or issue any member deemed by the majority of CSC members and liaisons to have a conflict of interest.

1326 ## Membership Composition

1327 The CSC should be kept small and comprise representatives with direct experience and knowledge of IANA naming functions. At a minimum the CSC will comprise:

- Two gTLD Registry Operators.
- Two ccTLD Registry Operators.
- One additional TLD representative not considered a ccTLD or gTLD registry operator such as the IAB for .ARPA could also be included in the minimum requirements but is not mandatory.
- One liaison from the IANA Functions Operator (PTI).

1328 Liaisons can also be appointed from the following organisations; however, providing a Liaison is not mandatory for any group:

- One liaison each from other ICANN SOs and ACs:

- GNSO (non-registry)
- ALAC
- NRO (or ASO)
- GAC
- RSSAC
- SSAC

1329 Liaisons shall not be members of or entitled to vote on the CSC, but otherwise liaisons shall be entitled to participate on equal footing with members of the CSC.

1330 The Chair of the CSC will be elected on an annual basis by the CSC. Ideally the Chair will be a direct customer of the IANA naming function, and cannot be the IANA Functions Operator Liaison.

1331 The CSC and the IANA Functions Operator will nominate primary and secondary points of contact to facilitate formal lines of communication.

1332 The CSC as a whole will decide who will serve as the Liaison to the IANA Function Review Team. Preference should be given to the Liaison being a registry representative given that technical expertise is anticipated to be valuable in the role.

1333 Membership Selection Process

1334 Members and Liaisons to the CSC will be appointed by their respective communities in accordance with internal processes. However, all candidates will be required to submit an Expression of Interest that includes a response addressing the following matters:

- Why they are interested in becoming involved in the CSC.
- What particular skills they would bring to the CSC.
- Their knowledge of the IANA Functions.
- Their understanding of the purpose of the CSC.
- That they understand the time necessary required to participate in the CSC and can commit to this role.

1335 Interested candidates should also include a resume or curriculum vitae or biography in support of their Expression of Interest.

1336 While the ccTLD and gTLD members will be appointed by the ccNSO and RySG respectively and liaisons by their applicable groups, ccTLD or gTLD registry operators that are not members of these groups will be eligible to participate in the CSC as members or liaisons. The ccNSO and RySG should consult prior to finalizing their selections with a view to providing a slate of members and liaisons that has, to the extent possible, diversity in terms of geography and skill set.

A representative for a TLD registry operator not associated with a ccTLD or gTLD registry, will be required to submit an Expression of Interest to either the ccNSO and GNSO Council. The Expression of Interest must include a letter of support from the registry operator. This provision is intended to ensure orderly formal arrangements, and is not intended to imply those other registries are subordinate to either the ccNSO or the GNSO.

1337 The full membership of the CSC must be approved by the ccNSO and the GNSO. While it will not be the role of the ccNSO and GNSO to question the validity of any recommended appointments to the CSC they will take into account the overall composition of the proposed CSC in terms of geographic diversity and skill sets.

1338 Terms

1339 CSC appointments, regardless of whether members or liaisons, will be for a two-year period with the option to renew for up to two additional two-year terms. The intention is to stagger appointments to provide for continuity and knowledge retention.

1340 To facilitate this, at least half of the inaugural CSC appointees will be appointed for an initial term of three years. Subsequent terms will be for two years.

1341 CSC appointees must attend a minimum of nine meetings in a one-year period, and must not be absent for more than two consecutive meetings. Failure to meet this requirement may result in the Chair of the CSC requesting a replacement from the respective organisation.

1342 Recall of members

1343 Any CSC appointee can be recalled at the discretion of their appointing community.

1344 In the event that a ccTLD or gTLD registry representative is recalled, a temporary replacement may be appointed by the designating group while attempts are made to fill the vacancy. As the CSC meets on a monthly basis best efforts should be made to fill a vacancy within one month of the recall date.

1345 The CSC may also request the recall of a member of the CSC in the event they have not met the minimum attendance requirements. The appointing community will be responsible for finding a suitable replacement.

1346 Meetings

1347 The CSC shall meet at least once every month via teleconference at a time and date agreed upon members of the CSC.

1348 The CSC will provide regular updates, no less than three per year, to the direct customers of the IANA naming function. These updates may be provided to the RySG and the ccNSO during ICANN meetings.

1349 The CSC will also consider requests from other groups to provide updates regarding the IANA Functions Operator's performance.

Record of Proceedings

Minutes of all CSC teleconferences will be made public within five business days of the meeting.

Any remedial action will also be reported by the CSC.

Information sessions conducted during ICANN meetings will be open and posting of transcripts and presentations will be done in accordance with ICANN's meeting requirements.

Secretariat

The IANA Functions Operator will provide secretariat support for the CSC. The IANA Functions Operator will also be expected to provide and facilitate remote participation in all meetings of the CSC.

Review

The Charter will initially be reviewed by a committee of representatives from the ccNSO and the RySG one year after the first meeting of the CSC. The review is to include the opportunity for input from other ICANN stakeholders, via a Public Comment process. Any recommended changes are to be ratified by the ccNSO and the GNSO.

Thereafter, the Charter will be reviewed at the request of the CSC, ccNSO or GNSO and may also be reviewed in connection with the IANA Function Review.

The effectiveness of the CSC will initially be reviewed two years after the first meeting of the CSC; and then every three years thereafter. The method of review will be determined by the ccNSO and GNSO.

The CSC or the IANA Functions Operator can request a review or change to service level targets. Any proposed changes to service level targets as a result of the review must be agreed to by the ccNSO and GNSO**.**

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Proposed Remedial Action Procedures

This proposal is illustrative of what could be included in the Remedial Action Procedures. It is anticipated that the procedures would be agreed between the CSC and the IANA Functions Operator prior to implementation.

	Notification	1st Escalation	2nd Escalation	3rd Escalation
Occurs	• Process control limit exceeded • IANA customer presents evidence that IANA did not meet SLE	• Corrective action plan late • Corrective action plan milestones missed • Two or more additional	• Corrective action plan late • Corrective action plan milestones missed • Two or more additional "notification"	• Corrective action plan from 2nd escalation not delivered or executed timely. • Additional similar violations occur when corrective action from 2nd

	• IANA periodic report indicates SLE not met	"notification" violations occur while corrective action plan is open	violations occur while corrective action plan is supposed to be in place	escalation is supposed to be in place
Addressee	IANA Manager	PTI Board	Global Domains Division President	ICANN Board, CEO
Message Content	• Identify SLE breach and evidence • Conference call request to discuss issues raised by CSC message. • Corrective action requirement • Time frame • Identify party requiring response	• Identify SLE breach and evidence • Conference call request to discuss issues raised by CSC message. • Corrective action requirement • Time frame	• Same as previous	• Same as previous
Response Requested	• Agreement that SLE violation occurred (or evidence to contrary) • Cause • Correction made on individual case • Corrective action plan to: • remedy current situation • prevent future occurrence • Corrective action plan required in 14-days	• Reissue corrective action plan to: • Remediate earlier failed plan • Include new violations • Corrective action plan milestones missed • Two or more additional "notification" violations occur while corrective action plan is open	• Same as previous plus • Organizational, operational changes to correct lack of corrective action	• Same as previous plus • Remediation through the ICANN-PTI Contract and/or Special IFR

P1. Annex H: Service Level Expectations

The CWG-Stewardship is not proposing any changes to the current work flow process. The CWG-Stewardship is suggesting that there is a requirement placed on IANA staff, (as part of the implementation phase) to measure, record and report additional details of transaction times for each Root Zone Management process.
Such transparency will provide factual information to assist the CSC, IFRT and the Community to determine and confirm that the IANA Functions Operator is continuing to provide non-discriminatory service to the naming community. Further by having clarity as to process, it can be confirmed that IANA staff may not be the cause of the delay in the execution of the change request. On other occasions due to the wide time window for current SLEs, there is an opportunity for — or the perception for — certain TLD Managers to have preferential treatment and change requests completed in a matter of days, whilst other requests take much longer and yet still be in the approved time.

Principles
These are a set of guiding principles that will help define the expectation for the monitoring and reporting environment, and guide the definition of the individual criteria used for reporting and assessment of the naming-related portions of the IANA Functions:

1. ***Attributable measures.*** *Unless clearly impractical, individual metrics should be reported attributing time taken to the party responsible. For example, time spent by IANA staff processing a change request should be accounted for distinctly from time spent waiting for customer action during a change request.*
2. ***Overall metrics.*** *In addition to the previous principle, overall metrics should be reported to identify general trends associated with end-to-end processing times and processing volumes.*
3. ***Relevance.*** *All metrics to be collected should be relevant to the validation of customer service. In addition some are the critical metrics that are considered important to set specific thresholds for judging breaches in the IANA Functions Operator's ability to provide an appropriate level of service.*
4. ***Clear definition.*** *Each metric should be sufficiently defined such that there is a commonly held understanding on what is being measured, and how an automated approach would be implemented to measure against the standard.*
5. ***Definition of thresholds.*** *The definition of specific thresholds for performance criteria should be set based on analysis of actual data. This may require first the definition of a metric, a period of data collection, and later analysis by IANA customers before defining the threshold.*
6. ***Review process.*** *The service level expectations should be reviewed periodically, and adapted based on the revised expectations of IANA's customers and relevant updates to the environment. They should be mutually agreed between the community and the IANA Functions Operator.*
7. ***Regular reporting.*** *To the extent practical, metrics should be regularly reported in a near real-time fashion.*

Capturing the current status-quo for IANA Root Zone Management

Introduction

Service Level Expectations (SLEs) for a domain name registry are typically based on measuring specific transactions sent by a client to the registry. The metric for a transaction is generally of the form of “Transaction A must complete within X period Y percent of the time measured over Z”, for example, “a root zone update must complete within 72 hours 95% of the time measured on a monthly basis”. The Root Zone Management process currently presents unique challenges in that IANA is not responsible for all phases of processing, therefore the SLEs must be written to accommodate the phases of the process, and to be mindful of the different attribution for these phases.

These SLE metrics are based on the following current assumptions:

A. For the purposes of the SLE discussion, the current process is simplified to five key stages for all change requests (notification is implicit in each stage):

1. Confirm the details of the change.

2. Verify the change complies with documented technical standards and policies and all applicable checks pass.

3. Obtain authorization/consent to proceed with the change.

4. Implement the change.

5. Notify the change requester of completion of the change.

B. Root Zone Management processes for routine change requests are largely automated. This automation includes:

1. A web-based interface for submitting change requests to the IANA Functions Operator. The web-based interface authenticates the credentials presented by the change requester and facilitates the creation of root zone file and root zone database change requests.

2. Near-real time confirmation email to the initiator of the change request of its safe receipt by the IANA system. Note, in certain circumstances, the request is initiated by other means such as fax or written letter. In these situations, email may not necessarily be used in communications.

3. Automated technical checks conducted by the IANA system on the change request. These checks ensure conformance of the technical data with agreed minimum standards, and check for errors in the material submitted.

4. Seeking consent from the relevant contacts for the domain, through an automated email verification process where approval requests are sent to both, at a minimum, the admin and technical contacts at the Registry for both parties to consent to the update. (Note: Some contacts are slow to respond which creates inefficiency in the validation process. In certain circumstances, third party verification is also required, e.g. governmental approvals).

5. The verified change request is transmitted to NTIA for authorization. For changes that impact the root zone file, the change request is also transmitted to the Root Zone Maintainer This is performed via an online interface.

6. Once confirmed, notification is sent by NTIA to the IANA Functions Operator, and for changes that impact the root zone file, to the Root Zone Maintainer authorizing the change request for implementation.

7. Prior to implementation, the Root Zone Maintainer repeats automated technical compliance checks on the request and once verified, implements the change within the root zone file. This file is typically published twice daily.

8. On publication of updates to the Root Zone file, Root Zone Maintainer notifies the IANA Functions Operator, who verifies the changes match the requested changes, and notifies the Registry.

C. The processing role currently undertaken by the NTIA will no longer exist in a post-transition environment and those steps will no longer be undertaken. This means that IANA will have responsibility for triggering implementation at the conclusion of processing and communicating directly with the maintainer of the Root Zone.

D. IANA's online systems operate 24 hours a day, 365 days a year, except for maintenance periods, as befits a service that has customers around the globe.

Monitoring Past Performance:

(We accept past performance is no indication of future performance but is does capture the status-quo**).**

The CWG-Stewardship conducted a historical analysis of IANA performance based on two sources: data published in IANA performance reports, and transaction logs provided by ccTLD registries interacting with the IANA root management function. The data sources were for the period September 2013 to January 2015, which provided approximately 565 total data points – only 27 transactions took longer than 9 days and 13 took longer than 12 days. It should also be highlighted that some/much of the delay is as a result of the Registry not responding to the IANA Functions Operator to authorize the change request – so the delay is not necessarily within the IANA Functions Operator's control. Four transactions took longer than one year (which is not necessarily a problem if the stability of the DNS is assured). A summary of this research is presented here.

Work to define the final SLE to be included with the proposal submitted to the NTIA will be run in parallel with the ICG process to review the CWG-Stewardship proposal. The objective is to ensure that the CWG-Stewardship proposal is not delayed by work to define the SLEs and so to optimize use of the time prior to the final submission of a proposal to the NTIA. Review of the ongoing work can be viewed here: https://community.icann.org/x/CA4nAw.

P1. Annex I: IANA Customer Service Complaint Resolution Process for Naming Related Functions

(Modified Procedure)

Refer to the existing ICANN-IANA process at http://www.iana.org/help/escalation-procedure.

If anyone experiences an issue with the IANA Functions Operator's delivery of the IANA services, then it should be reported to the IANA Functions Operator as follows. This process should be used in cases where response has been too slow, where a possible mistake has been made, or when there appears to have been inequitable service delivery.

Phase 1 – Initial remedial process for IANA naming functions

The complainant could send an e-mail to escalation@iana.org and provide the ticket numbers of the requests where the problem arose. If the problem is not resolved, IANA staff will escalate the problem to the following team members in this order as applicable:

- IANA Function Liaison for Root Zone Management;
- IANA Functions Program Manager; and
- Ombudsman (voluntary step).

Efforts are made to resolve complaints as soon as possible but the structured process above allows escalation of complaints to the IANA management team. If, at any point, the complainant is not satisfied with the resolution process, the complainant can use the Ombudsman (or similar process) instead.

Who can use the process?

This process is open to anyone.[106] The functions include:

- Protocol Parameters management, including the management of the .ARPA TLD.
- Root Zone Management;
- Root DNS KSK Management;
- Internet Number Resources Allocation; and
- Management of the .INT TLD.

What information must be provided?

In addition to providing the ticket numbers for the requests where the problem arose, the customer should provide any other information that may be needed to understand and resolve the complaint.

[106] Including individuals, ccTLD regional organizations, ICANN SO/ACs, etc.

What is the expected time line?

Receipt of a complaint will be acknowledged within one business day and a substantive response will be sent within two business days. Efforts will be made to resolve complaints as soon as possible.

Is there another resolution process?

The Ombudsman or similar service can help resolve problems using Alternative Dispute Resolution techniques. (In the case of the current IANA Functions Operator, the ICANN Ombudsman web pages have more details.)

Escalation contact information for the current IANA Functions Operator (ICANN)

Role	Name	Email Address
IANA	IANA Staff	iana@iana.org
IANA Function Liaison for Technical Protocol Parameters Assignment	Michelle Cotton	michelle.cotton@icann.org
IANA Function Liaison for Root Zone Management	Kim Davies	kim.davies@icann.org
IANA Function Liaison for Internet Number Resource Allocation	Naela Sarras	Naela.sarras@icann.org
IANA Functions Program Manager	Elise Gerich	elise.gerich@icann.org
Ombudsman	Chris LaHatte	ombudsman@icann.org

If an issue is escalated to members of the IANA team and/or to the Ombudsman or equivalent, the CSC is notified of the issue for informational purposes only.

Phase 2 (for IANA naming services only)

Should the issue not be resolved after Phase 1, the following escalation mechanisms will be made available to direct customers, the IFO and the ICANN Ombudsman:[107]

a) If issue is not addressed, the complainant (direct customer), IFO or the ICANN Ombudsman may request mediation.[108]

b) CSC is notified of the issue by complainant and/or the IANA Functions Operator. CSC reviews to determine whether the issue is part of a persistent performance issue and/or is an indication of a possible systemic problem. If so, the CSC may seek remediation through the IANA Problem Resolution Process (see Annex J).

c) The complainant (direct customer) may initiate an Independent Review Process or pursue other applicable legal recourses that may be available, if the issue is not addressed.

[107] Non-direct customers, including TLD organizations,that are of the view that an issue has not been addressed through Phase 1 may escalate the issue to the ICANN Ombudsman or via the applicable liaisons to the CSC to Phase 2.

[108] The CWG-Stewardship recommends that as part of the implementation of this proposal, ICANN Staff explore possible approaches with regards to mediation such as, for example, Section 5.1 of the Base gTLD Registry Agreement (https://www.icann.org/resources/pages/registries/registries-agreements-en).

P1. Annex J: IANA Problem Resolution Process (for IANA naming services only)

(New procedure)

Problem resolution (including responding to persistent performance issues or systemic problems)

The Customer Standing Committee (CSC) is authorized to monitor the performance of the IANA Functions against agreed service level targets on a regular basis. In the event that persistent performance issues are identified by the CSC, the CSC will seek resolution in accordance with a Remedial Action Plan, which includes:

1) CSC reports persistent performance issues to the IANA Functions Operator staff and requests remedial action in a predetermined number of days.

2) CSC confirms completion of remedial action.

3) If CSC determines that the remedial action has been exhausted and has not led to necessary improvements, the CSC is authorized to escalate to the PTI Board and further if necessary.

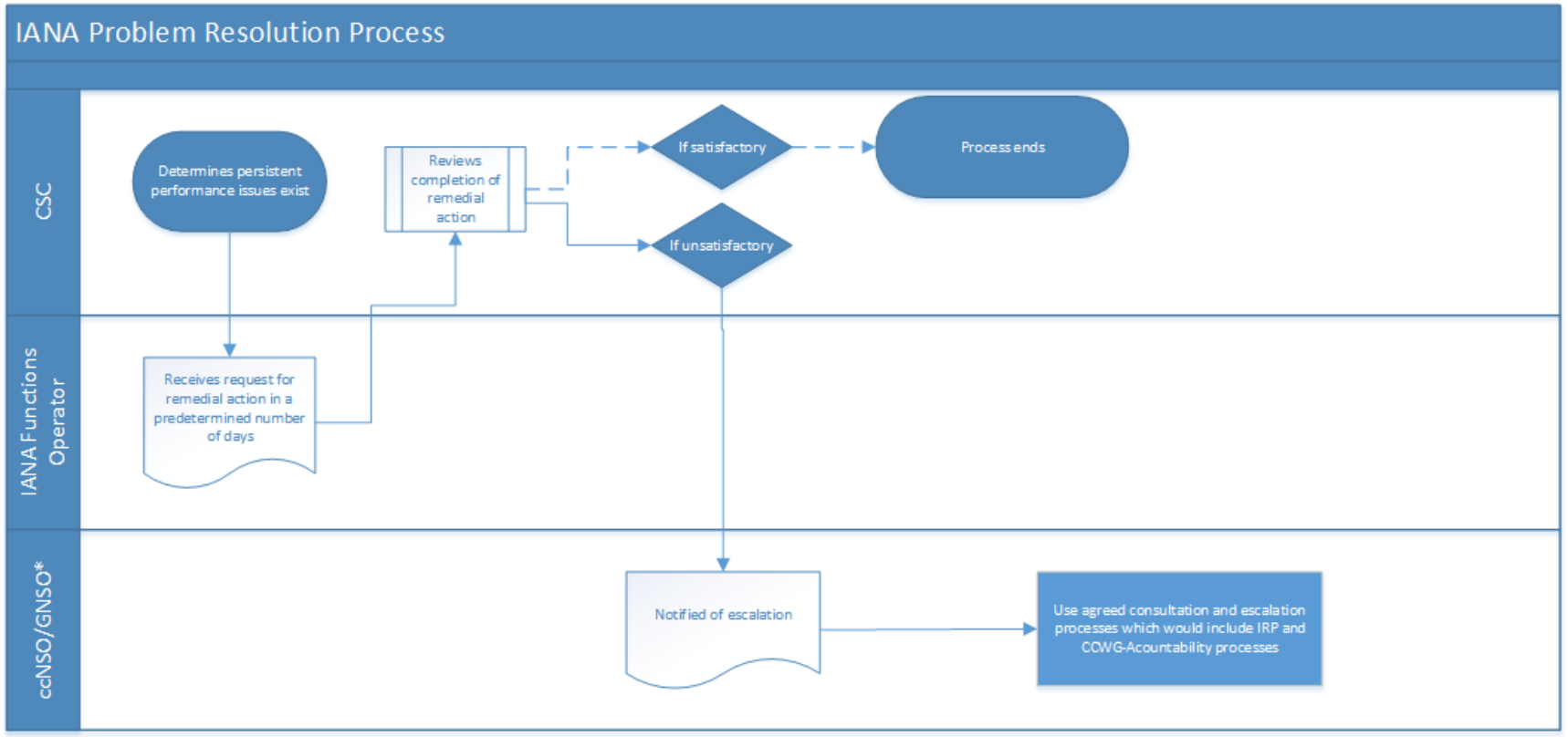
4) If the performance issues are still not resolved after escalation to the PTI Board, the CSC is authorized to escalate to the ccNSO and/or the GNSO,[109] which might then decide to take further action including the initiation of a Special IFR.

Systemic problems

The IANA Function Review will include provisions to consider and address whether there are any systemic issues that are impacting IANA naming services.

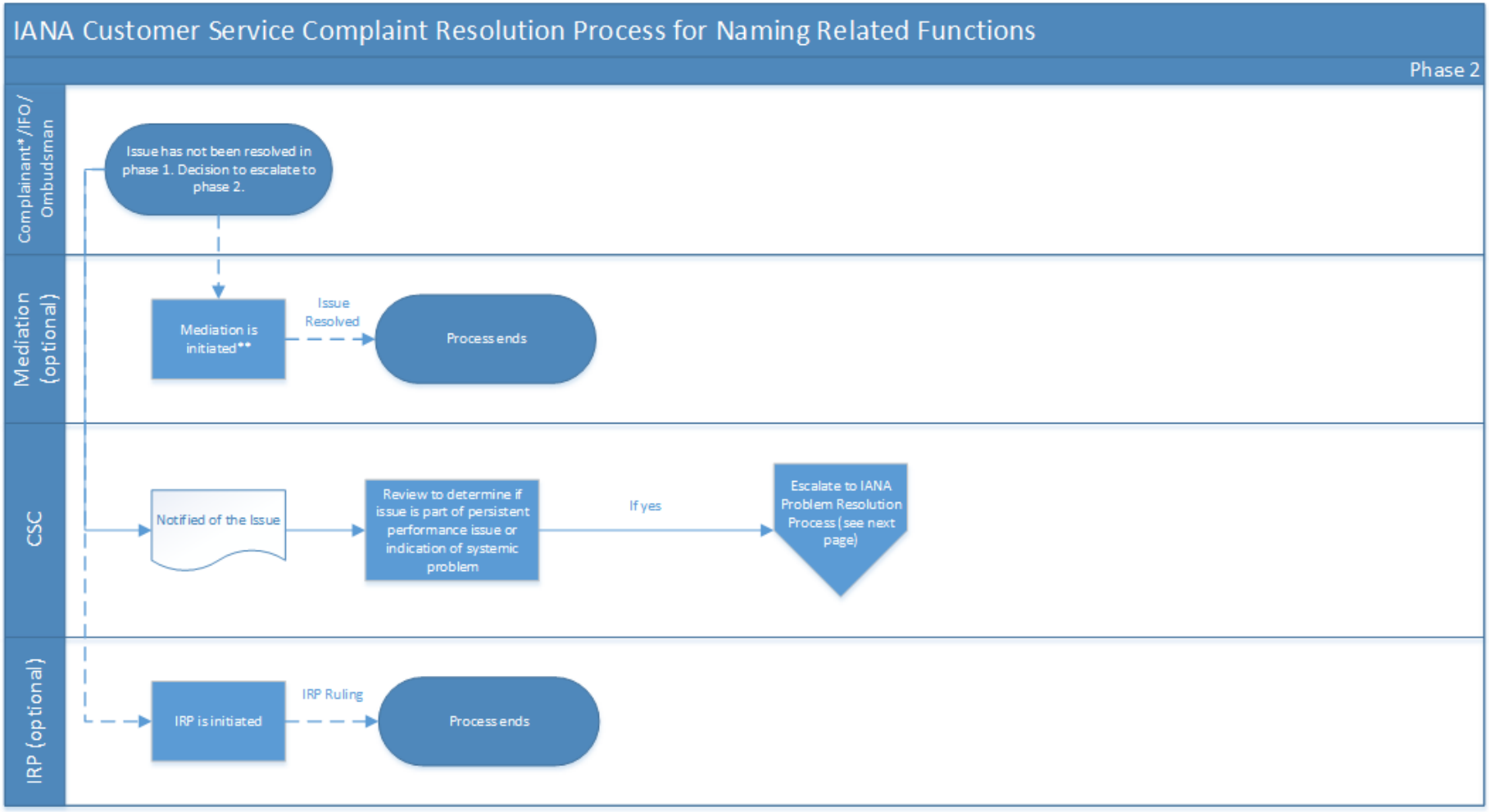
[109] The roles of the ccNSO and GNSO in this step should be further investigated to ensure that this is consistent with their missions as well as to identify any actions that may be needed by the SOs to allow for this role.

P1. Annex J-1: Escalation Mechanisms Flow Charts

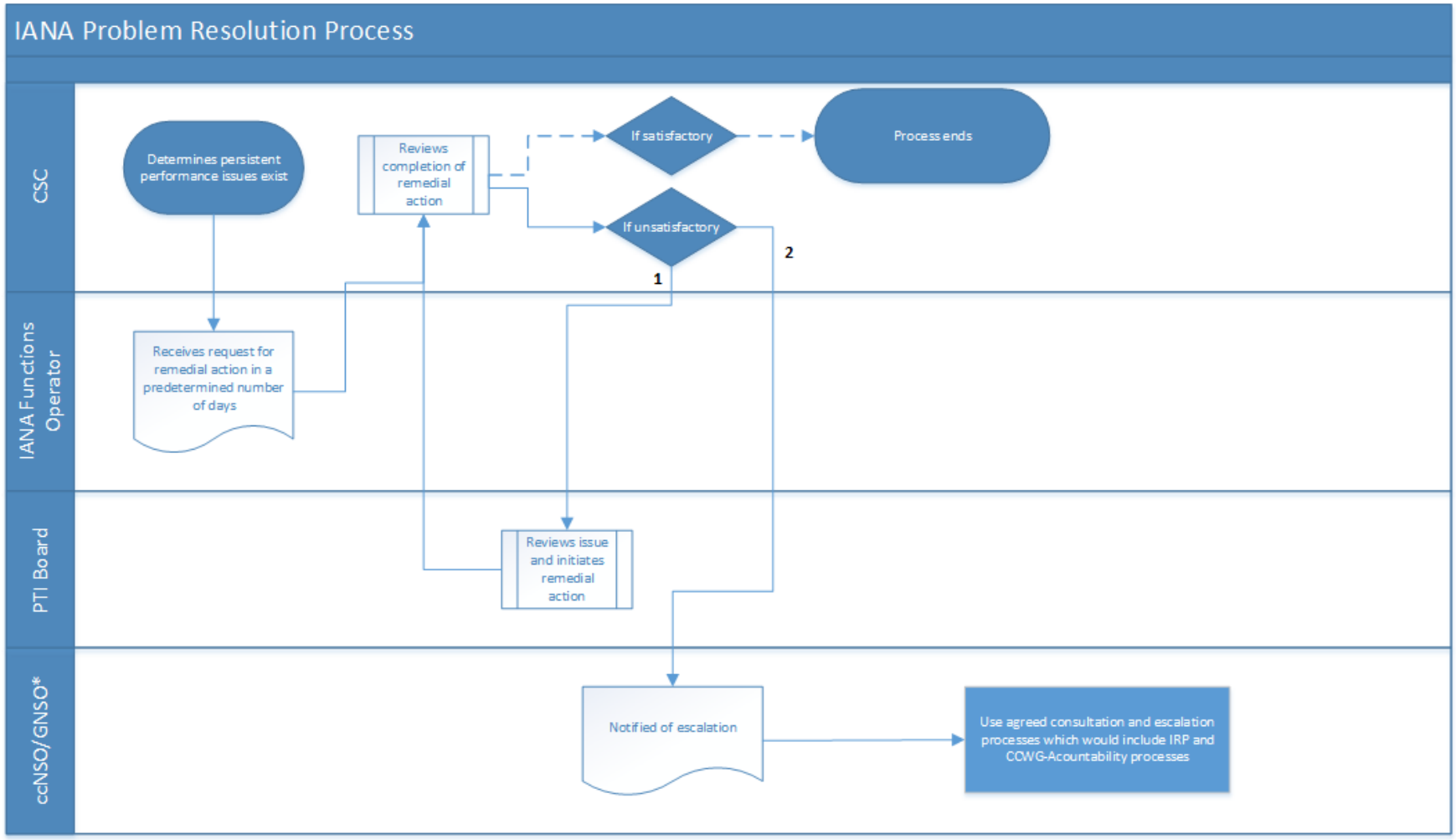


* The roles of the ccNSO and GNSO in this step should be further investigated to ensure that this is consistent with their missions as well as to identify any actions that may be needed by the SOs to allow for this role.

Note: The IANA Function Review will include provision to consider whether there are any systemic issues that are impacting IANA Naming services, which might then decide to take further action using agreed consultation and escalation mechanisms which would include IRP and CWG-Accountability Work Stream 1 accountability mechanisms.



* Phase 2 is reserved for direct customers complaints (either initiated by complainant, IFO or ombudsman)
** The CWG-Stewardship recommends that as part of the implementation of this proposal, ICANN Staff explore possible approaches with regards to mediation such as, for example, Section 5.1 of the Base gTLD Registry Agreement (https://www.icann.org/resources/pages/registries/registries-agreements-en).



* The roles of the ccNSO and GNSO in this step should be further investigated to ensure that this is consistent with their missions as well as to identify any actions that may be needed by the SOs to allow for this role.

Note: The IANA Function Review will include provision to consider whether there are any systemic issues that are impacting IANA Naming services, which might then decide to take further action using agreed consultation and escalation mechanisms which would include IRP and CWG-Accountability Work Stream 1 accountability mechanisms.

P1. Annex K: Root Zone Emergency Process

1387 In addition to general staff availability during standard business hours, the IANA Functions Operator will continue to provide TLD managers with a 24×7 emergency contact number that allows TLD managers to quickly reach the IANA Functions Operator to declare an emergency and seek to expedite a Root Zone change request. The IANA Functions Operator will execute such changes in accordance with the obligations of the standard Root Zone management workflow as expeditiously as possible. This prioritization will include performing emergency reviews of the request as the first priority, out of ordinary business hours if necessary, and informing its contacts at the Root Zone Maintainer of any pending changes that will require priority authorization and implementation.

1388 Please note that both figures below are consistent with existing processes but terminology has been updated to ensure consistency and general applicability.

Figure 1.2-41. 24x7 Emergency Process

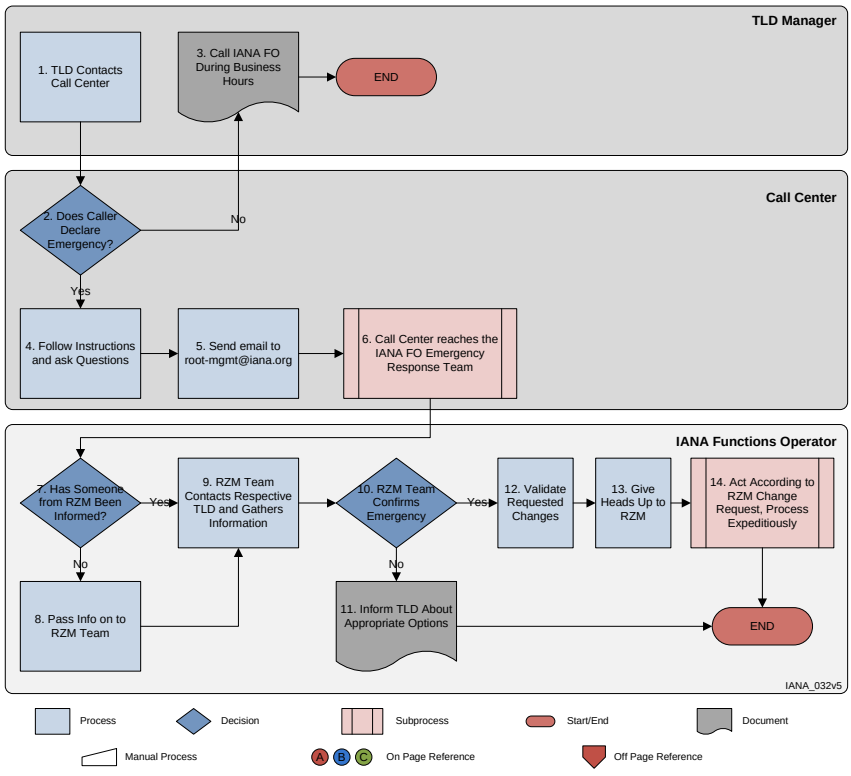


Figure 1.2-42. 24x7 Emergency Process Step-by-Step Description

1	TLD Contacts Call Center
Description	All TLD managers are provided with an emergency contact telephone number that will reach a 24x7 call center.
2	**DOES CALLER DECLARE AN EMERGENCY?**
Description	The caller is asked if the issue is an emergency that requires an urgent root zone change, and can not wait until regular business hours.
3	**CALL IANA Functions Operator DURING BUSINESS HOURS**
Description	In the event the caller decides it is not an emergency, their contact details are logged and they are advised to speak to IANA Function staff during regular business hours.
4	**FOLLOW INSTRUCTIONS AND ASK QUESTIONS**
Description	Call center staff follow a set of instructions to solicit relevant information relating to the nature of the emergency, and the contact details of the TLD manager.
5	**SEND EMAIL TO** ROOT-MGMT@IANA.ORG
Description	The particulars of the emergency call are sent by the call center staff to the ticketing system. This opens a ticket and starts an audit log of the specific request.
6	**CALL CENTER REACHES THE IANA Functions Operator EMERGENCY RESPONSE TEAM**
Description	The call center has the emergency roster of IANA Functions staff, as well as escalation points for IANA Functions Operator senior management. The call center will call through the roster until they contact a person to hand the issue to. The IANA Function staff member that receives the issue will be the primary person responsible for resolution of the issue.
7	**HAS SOMEONE FROM THE ROOT ZONE MANAGEMENT (RZM) TEAM BEEN INFORMED?**
Description	The primary person responsible checks if the Root Zone Management team within the IANA Functions staff is aware of the issue.
8	**PASS INFO ON TO RZM TEAM**
Description	If necessary, information relating to the emergency request is communicated to the Root Zone Management team.
9	**RZM TEAM CONTACTS TLD MANAGER**
Description	The IANA Functions staff performing the root zone management functions contacts the TLD manager using the contact details provided to the call center. The nature of the issue is discussed in more detail, and a plan is devised to resolve the issue.
10	**RZM TEAM CONFIRMS EMERGENCY**

Description	Following dialog with the TLD manager, the RZM team confirms the particulars of the issue and the need to perform an emergency root zone change to resolve the issue.
11	**INFORM TLD ABOUT APPROPRIATE OPTIONS**
Description	In the event the TLD manager and RZM team deem that an emergency root zone change can not resolve the issue, IANA Functions Operator will inform the TLD manager about what other options they have to resolve the issue.
12	**VALIDATE REQUESTED CHANGES**
Description	IANA Functions Operator validates the request in accordance with the standard procedures described in the Root Zone Change process, including performing technical checks and performing contact confirmations. IANA Functions Operator takes steps to conduct these as quickly as possible.
13	**GIVE HEADS UP TO Root Zone Maintainer**
Description	IANA Functions Operator takes all available steps to inform personnel at the Root Zone Maintainer that there is an active emergency change request being conducted, and encourages the Root Zone Maintainer to process the request as quickly as possible.
14	**ACT ACCORDING TO ROOT ZONE CHANGE REQUEST**
Description	IANA Functions Operator executes the root zone change request as quickly as possible according to all standard policies and procedures. IANA Functions Operator prioritizes the rapid implementation of the request above other requests at normal priority.

P1. Annex L: Separation Process

1389 In the event that an IANA Function Review results in a decision to initiate a separation process, the following processes must be followed.

1390 If the IFR determines that a separation process is necessary, it will recommend the creation of a Separation Cross Community Working Group (SCWG). This recommendation will need to be approved by a supermajority of each of the GNSO and the ccNSO Councils, according to their normal procedures for determining supermajority, and will need to be approved by the ICANN Board after a public comment period, as well as a community mechanism derived from the CCWG-Accountability process.[110] A determination by the ICANN Board to not approve a SCWG that had been supported by a supermajority of the ccNSO and GNSO Councils will need to follow the same supermajority thresholds and consultation procedures as ICANN Board rejection (by a supermajority vote) of a PDP recommendation that is supported by a GNSO supermajority.

1391 There will be no prescribed result arising from the separation process. It will be empowered to make a recommendation ranging from "no action required" to the initiation of an RFP and the recommendation for a new IFO, or the divestiture or reorganization of PTI. The SCWG will follow the overall guidelines and procedures for ICANN Cross Community Working Groups. The SCWG working procedures should ensure transparency to the fullest extent possible by creating open discussion listservs and holding open calls, with read- or listen-only modes for non-participants.[111]

1392 ## Composition

1393 The SCWG will be composed as follows:[112]

- ccNSO - 2
- ccTLDs (non-ccNSO) - 1
- Registry Stakeholder Group (RySG) - 3
- Registrar Stakeholder Group (RrSG) - 1
- Commercial Stakeholder Group (CSG) - 1
- Non-Commercial Stakeholder Group (NCSG) - 1
- Government Advisory Committee (GAC) - 1

[110] This community mechanism could include ICANN membership, if ICANN were to become a membership organization per the CCWG-Accountability work efforts.

[111] Any other recommendations produced by the Special IFR would need to include implementation recommendations, including the possible initiation of an SCWG with a specific mandate, and would need to be approved by a supermajority of each of the ccNSO and GNSO Councils, the ICANN Board and a community mechanism derived from the CCWG-Accountability process.

[112] Given the unique purpose and task of the Separation Cross Community Working Group, if this composition diverges from the recommendation of the Cross Community Working Group on Principles for Cross Community Working Groups, the structure in this proposal shall prevail.

- Security and Stability Advisory Committee (SSAC) - 1
- Root Server Operators Advisory Committee (RSSAC) - 1
- At-Large Advisory Committee (ALAC) - 1
- CSC Liaison (selected by CSC) - 1
- Special IFR Team Liaison (selected by IFR Team) - 1
- Liaison from Protocol operational community - 1 (TBD with their approval)
- Liaison from Numbers operational community - 1 (TBD with their approval)

1394 Each group will be responsible for appointing its own representative to the SCWG. In the case of the non-ccNSO ccTLD representative, the ccNSO will be the appointing body; in appointing the non-ccNSO representative it is strongly recommended that the ccNSO also consult with the Regional ccTLD Organizations, namely AfTLD, APTLD, LACTLD, and CENTR.

1395 It is strongly recommended that the representatives appointed to the SCWG be different representatives than those that participated in the Special IFR (with the exception of the liaison to the IANA Function Review Team appointed by the CSC). This will provide an additional check, accounting for the fact that different skill sets may be required for the two processes, and provide for broader community representation in the IANA oversight process.

1396 To the extent possible, it is recommended that individuals with experience managing an RFP process be appointed to the SCWG. For communities appointing more than one representative to the SCWG it is strongly advised that, to the extent possible, the appointed representatives come from different ICANN geographic regions, to provide for diversity on the SCWG.[113]

1397 Responsibilities

1398 The SCWG will be responsible for:

- Determine how to resolve the issue(s) which triggered formation of the SCWG; and
- If the decision is to issue an RFP:
  - Developing RFP Guidelines and Requirements for the performance of the IANA Naming Functions;
  - Soliciting input on requirements to plan, and participation in, the RFP Process;
  - Reviewing responses to the RFP[114];
  - Selecting the entity that will perform the IANA Naming Functions; and

[113] One specific expectation is that with six total registry seats on the SCWG, including ccTLD and gTLD registries, all five ICANN geographical regions be represented.

[114] The then current IFO would not be prevented from participating in the RFP. In the event of the PTI, it would be possible for either the S-IFR or the PTI itself to recommend changes to its structure to better accomplish it task and to remediate any problems. This remediation could include recommendations for further separation.

- Managing any other Separation Process.

- If a different process such as PTI divestiture or other reorganization is to be recommended, develop recommendations for that process.

1399 The selection of a new operator to perform the IANA Naming Functions or other separation process will be subject to approval by the ICANN Board, and a community mechanism derived from the CCWG-Accountability process.[115] A determination by the ICANN Board to not approve a recommendation by the SCWG that had been supported by a supermajority of the ccNSO and GNSO Councils will need to follow the same supermajority thresholds and consultation procedures as ICANN Board rejection (by a supermajority vote) of a PDP recommendation that is supported by a supermajority of the GNSO.

The entity prevailing in the RFP will carry out the role currently performed by PTI for the IANA naming functions. ICANN will remain the contracting party for the performance of the IANA naming functions and would enter into a contract, including a statement of work, with this entity. If PTI were selected to continue performance of the IANA Functions, it would remain an affiliate of ICANN (unless a structural change was a condition of the bid proposal or of the selection). Otherwise, the new entity would be a subcontractor for the performance of the IANA Functions. It should be noted that this does not address the way that non-naming IANA functions would be provided; depending on the arrangements with other communities, it is possible that those functions would move in concert with the naming functions; it is equally possible that they would not.

1400 ## CCWG Accountability Dependencies

1401 Enumeration of the relevant accountability mechanisms that could or must be exhausted before a separation process could be triggered:

- Creation of an ICANN fundamental bylaw to describe the IANA Function Review (IFR) and establish the above voting thresholds for triggering a Special IFR and approving the outcomes of an IFR.
- Creation of an ICANN fundamental bylaw to describe the procedure for creating the SCWG and its functions and establish the voting thresholds for approval of a new operator for the performance of the IANA Functions or other end-result of the SCWG process.
- Approval by a community mechanism derived from the CCWG-Accountability process to approve the final selection of the SCWG (if this tenet of the CCWG-Accountability proposal is not implemented a new approval mechanism will have to be put in place.
    - Per the above separation process the selection of the entity that would perform the IANA naming functions following a separation process will require community approval through the established mechanism derived from the CCWG-Accountability process.

[115] This community mechanism could include ICANN membership, if ICANN were to become a membership organization per the CCWG-Accountability work efforts.

P1. Annex M: Framework for Transition to Successor IANA Functions Operator

Framework principles

- The integrity, stability, and availability of the IANA Functions must be the core concern during any transition of the IANA Functions.
- Both the incumbent and any possible future IANA Functions Operator will be required to fully engage in the transition plan.
- All involved parties will be required to provide appropriate transition staff and expertise to facilitate a stable transition of the IANA operations.

Framework recommendations

1) The transition framework outlined in this document must be further developed into a detailed, fully functional, transition plan within 18 months of the date of implementation of the overall IANA Stewardship Transition.

2) The budget for IANA operations should be augmented with specific funding for the detailed transition plan development referred to in 1 (see above).

3) The process established for the potential transitioning of the IANA Functions to an operator other than the incumbent operator should specifically recognize that the detailed transition plan referred to in 1 (see above) must be in place before the commencement of the transitioning process.

4) Once developed, the full Transition to Successor IANA Functions Operator Plan should be reviewed every year to ensure that it remains up to date and every five years to ensure that it remains fit for purpose.

Dependencies

Some elements of this framework may have to be adapted further depending on the CWG-Stewardship names model selected and the final transition proposal from the ICG to NTIA.

Additionally, part of the final proposal development work will need to identify those elements/clauses of the CWG-Stewardship's proposal that are relevant to the transition framework (using the NTIA-ICANN Functions Contract clauses table in C.7.3 for guidance).

Note on terminology: While the current plan is based on a contractual relationship between the NTIA and ICANN, the CWG-Stewardship has elected to refer to the "operator" of the IANA Functions rather than "contractor" for the purposes of this

annex. So ICANN as the current operator is referred to as the Incumbent IANA Functions Operator (IIFO) and the successor operator is referred to as the Successor IANA Functions Operator (SIFO) in this Annex M.

(Revised) plan: framework for transition to Successor IANA Operator

This framework plan outlines key actions that will allow the incumbent IANA Functions Operator (IIFO) to ensure an orderly transition of the IANA Functions to a successor IANA Functions Operator (SIFO) while maintaining continuity and security of operations.

Document structure

This document identifies those functions, systems, processes and documents that might need to be transitioned by the incumbent IANA Functions Operator, including actions that would be required to allow a successor operator to perform the IANA Functions.

Additional documents of importance to a transition include:[116]

- Current KSK Operator Function Termination Plan.
- Current CCOP (DIDP was not able to be released as requested through the DIDP process due to security and stability related concerns).
- Current ICANN Plan for Transition to Successor Contractor.

Transition actions

1) **IANA website:** The Incumbent IANA Functions Operator will transfer the content of the IANA website and provide copies of, or links to, the publicly available text for all processes, performance standards, request templates, and other pages used to support operations or provide context to reporting. Intellectual property rights related to the IANA website and published documents will need to be assigned or licensed to the successor operator.

2) **IANA Functions registry data**: Data held by IANA Functions Operator will also need to transition, and some of that data will affect other communities; details of the data that is being transitioned will be determined when the full transition plan is produced.

3) **Root Zone automation system:** The Incumbent IANA Functions Operator will transfer relevant information and management software, as appropriate and as determined by the transition plan.

4) **Request history data:** The Incumbent IANA Functions Operator will provide a

[116] All documents are available on the CWG-Stewardship Wiki here: https://community.icann.org/display/gnsocwgdtstwrdshp/DT-L+Transition+Plan.

copy of the databases it has used to store requests data, including ticketing systems and workflow management systems used for protocol parameter registries and the maintenance of the DNS Root Zone. The Incumbent IANA Functions Operator will also provide copies of any published reports and paper records it holds supporting these request histories.

5) **Documentation and knowledge:** The Incumbent IANA Functions Operator will provide a copy of all documentation that captures formalized processes, institutional knowledge and experience related to the operation of the IANA Functions. The IIFO is also encouraged to provide documentation related to Monthly Performance Progress reports, Customer Satisfaction Surveys, External Auditor reports, Conflicts of Interest processes established by the IIFO, and the IIFO's Contingency and Continuity of Operations Plan.

6) **Secure notification system data** The Incumbent IANA Functions Operator will provide details of the notification categories, the subscribers to those categories and a history of notifications.

7) **Root KSK transition** In 2010, ICANN developed a Root Zone KSK Operator Function Termination Plan that sets out the steps ICANN will take if required to transition its duties and responsibilities as the Root Zone Key Signing Key (KSK) operator to another entity. This plan was provided to NTIA in 2010.[117] That plan requires that a full KSK rollover be done so the successor starts fresh.[118]

8) **Transition assistance**: The Incumbent IANA Functions Operator will assist the successor IANA Functions Operator during the transition period until the time the requisite service levels, security and stability are achieved. Such assistance would include training the employees of the successor IANA Functions Operator and developing training material.

9) **Security for data retention**: The Incumbent IANA Functions Operator will continue to provide security for any data retained by it after transferring such data to the successor IANA Functions Operator.

[117] KSK Termination Plan (June 2010)

[118] Given that there has up to now never been such a KSK roll-over and given the desire to maintain stability of security of the root zone a somewhat lighter procedure can be followed (TBD). The important part is the transfer of administration of the HSMs, related infrastructure and the operation of the key ceremonies. This is not unlike the process that took place in April 2015 when the Hardware Security Modules (HSM) were replaced - see: https://www.icann.org/news/announcement-3-2015-03-23-en

P1. Annex O: ccTLD Appeals Mechanism Background and Supporting Findings

1414 While the CWG-Stewardship's 1 December, 2014 draft proposal contained an appeal mechanism that would have applied to ccTLD delegation and redelegations, some question arose as to the level of support within the ccTLD community on aspects of this proposal (see below). Design Team B was formed to assess whether there might be sufficient consensus within the ccTLD community on such an appeal mechanism. DT-B decided to undertake a survey of the ccTLD community to assess this (see the survey and the results summarized below).

1415 After informing the ccTLD community about the upcoming survey, it was sent to the 'ccTLD World' list, the most comprehensive list of the managers of the 248 ccTLDs on March 23, 2015 with responses accepted to 3 April 2015. Overall, responses on behalf of just 28 managers were received (see below). Such a low level of response was judged to be an insufficient basis to provide a mandate for the inclusion of an appeal mechanism in the CWG-Stewardship's proposal. While acknowledging the limitations of drawing any conclusions from a survey with such a low response rate, it is nevertheless worthwhile pointing out that these limited responses tended to reinforce the overall recommendation.

1416 While 93% of respondents (Q.1) believe there is a need for an appeal mechanism, only 58% (Q.2) believe that it should be developed and introduced now as part of the IANA Stewardship Transition and 73% (Q.3) agreed that it should be developed and introduced after the IANA Stewardship Transition has taken place. Questions designed to probe the level of consensus on the parameters of such an appeal mechanism (see Q.5 – Q.9) elicited no consensus suggesting that it would take considerable time for the ccTLD community to come to a consensus view on the details of an appeal mechanism. Some 71% of respondents (Q.3) indicated that they would not wish to see the design of such a mechanism delay the finalization of the IANA Stewardship Transition.

1417 Survey of ccTLD Managers on Need for Appeal Mechanism for ccTLD Delegations and Redelegations

1418 On 1 December 2014, the Cross Community Working Group on NTIA Stewardship Transition issued a draft proposal which contained a proposal for an "independent appeals panel":

1419 "Independent Appeals Panel (IAP) - The CWG-Stewardship recommends that all IANA actions which affect the Root Zone or Root Zone WHOIS database be subject to an independent and binding appeals panel. The Appeals Mechanism should also cover any policy implementation actions that affect the execution of changes to the Root Zone File or Root Zone WHOIS and how relevant policies are applied. This need not be a permanent body, but rather could be handled the same way as commercial disputes are often resolved, through the use of a binding arbitration

process using an independent arbitration organization (e.g., ICDR, ICC, AAA) or a standing list of qualified people under rules promulgated by such an organization."

1420 There exists in the ccTLD community an apparent lack of consensus on the question of the introduction of an 'appeals mechanism' in respect of ccTLD delegations and redelegations. At ICANN 51 in Los Angeles an overwhelming majority of ccTLD representatives at the 15 October 2014 ccNSO meeting indicated their wish for an 'appeal mechanism' as part of the IANA transition, though what was meant by 'an appeal mechanism' was not defined. In a survey of all ccTLD managers undertaken in November 2014, 94% of respondents agreed that 'if the IANA operator does not perform well or abuses its position, the affected ccTLD should have the opportunity to (have access to) an independent and binding appeal process'. The expression of need resulted in the appeal mechanism proposal that the CWG-Stewardship released on 1 December 2014. The proposal indicates that such a mechanism could be used in disputes over the consistency of ccTLD delegation or redelegation decisions.

1421 A survey was undertaken in January of this year of CWG-Stewardship members and participants (this includes representation from many communities, not just ccTLD managers) on many aspects of the CWG-Stewardship's 1 December proposal. It found that 97% of respondents agreed that, "*ccTLD registry operators should have standing to appeal delegation and re-delegation decisions to which they are a party that they believe are contrary to applicable laws and/or applicable approved ccTLD policy*". However when questions were posed about potential specific parameters of such an appeal mechanism support for it was reduced. For example, only 54% of respondents agreed that "*ccTLD registry operators should have standing to appeal delegation and redelegation decisions to which they are a party that they believe are contrary to applicable laws and/or applicable approved ccTLD policy, even if the operator is not a party involved in the delegation or redelegation".* In addition, only 60% of respondents agreed that, "*Governments should have standing to appeal any ccTLD delegation or redelegation decisions that they believe are contrary to applicable laws*".

1422 This information suggests that while there may be support for an appeal mechanism in general, consensus may be difficult to achieve on some of the important aspects of such a mechanism, including:

- Who would 'have standing' to appeal decisions,
- What aspects of decisions might be subject to an appeal,
- Whether the scope should be limited to determining whether the process followed was complete and fair,
- Whether the dispute resolution panel would have the authority to substitute its own view on a delegation, for example, direct that the incumbent manager be retained rather than a proposed new manager, or
- Be limited to requiring that the delegation process be repeated.

1423 As a consequence, this survey is intended to determine whether they might be sufficient consensus within the ccTLD community as a whole to seek a binding

appeal mechanism and if so, whether this should be sought as part of the IANA Stewardship Transition process.

Questions

Overall Need for an Appeal Mechanism

1) Do you as a ccTLD manager believe that there is a need for an appeal mechanism on ccTLD (re)delegation decisions?

2) If you answered 'yes' should such a mechanism be

a) Developed now and introduced as part of the IANA Stewardship Transition, or

b) Developed later, likely by the ccNSO, and introduced after the IANA transition has taken place.

3) If the design of this appeal mechanism were preventing the finalization of the IANA Stewardship Transition, would you agree to defer finalizing it so that the IANA process could be completed (this would likely entail the ccNSO proceeding with a separate process).

Form of Appeal Mechanism and Composition of Panel

4) The CWG-Stewardship indicated it believes that an appeal need not be a permanent body, but rather could be handled the same way as commercial disputes are often resolved, through the use of a binding arbitration process, an independent arbitration organization, such as the ICC, ICDR or AAA, or a standing list of qualified panelists under established rules promulgated by such an organization. The CWG-Stewardship recommended that a three-person panel be used, with each party to a dispute choosing one of the three panelists, with these two panelists choosing the third panelist. Do you agree with this overall approach to establishing an appeal mechanism? Do you have another idea – please indicate.

5) Where there is a panel of individuals, should they be chosen:

a) From a list of recognized international experts regardless of country, or

b) From individuals the country that the ccTLD represents.

c) In another manner (please specify).

Eligibility to Appeal a (re)delegation decision.

6) Who do you believe should be permitted to appeal a ccTLD (re)delegation decision?

a) The governmental or territorial authority referred to in a. above?

b) The incumbent ccTLD manager?

c) Other individuals, organizations, companies, associations, educational institutions, or others that have a direct, material, substantial, legitimate and demonstrable interest in the operation?

7) Should any of the parties referenced above be excluded from the appeals process? If yes, please indicate.

Scope and Authority of the Appellant Organization

8) Should there be any limit on the scope of the appeal?

a) Should the scope be limited to questions about whether procedures have been followed properly?

b) Should a panel have the authority to order that an existing delegation process be done again?

c) Should it have the authority to suspend a pending delegation?

d) Should it have authority to order to revoke and existing delegation?

e) Should it have the authority to order that another party be delegated the ccTLD?

1428 **Survey Results**

Question	Data			Percentage	
	Yes	**No**	**Total**	**Yes**	**No**
1. Do you as a ccTLD manager believe that there is a need for an appeal mechanism on ccTLD (re)delegation decisions?	26	2	28	93	7
2. If you answered 'yes' should such a mechanism be -					
a. Developed now and introduced as part of the IANA Stewardship Transition	14	10	24	58	42
b. Developed later and introduced after the IANA transition has taken place.	11	4	15	73	27
3. If the design of this appeal mechanism were preventing the finalization of the IANA Stewardship Transition, would you agree to defer finalizing it so that the IANA process could be completed (this would likely entail the ccNSO proceeding with a separate process).	20	8	28	71	29
4. The CWG-Stewardship indicated it believes that an appeal mechanism need not include a permanent body. It suggested that disputes could be handled the same way	13	8	21	62	38

as many commercial disputes, through the use of a binding arbitration process, using an independent arbitration organization, such as the ICC, ICDR or AAA, or a standing list of qualified panelists under established rules promulgated by such an organization. The CWG-Stewardship recommended using this approach and that it use a three person panel, with each party to a dispute choosing one of the three panelists, with these two panelists choosing the third panelist. Do you agree with this overall approach to establishing an appeal mechanism?						
	Do you have another idea – please indicate.					
	The approach should not be designed now. However I do not see any reason to decide on how it will be set now An "as and when" appeal panel is good because it allows panelist rotation which is an important safeguard against (permanent) panelist that may be lobbied or influenced by parties to a delegation dispute. One can have more confidence in a decision taken by a jointly agreed panel which is only convened for a specific dispute. The only potential challenging area is the choice of a 3rd panelist by the 2 appointed panelists. It may be more plausible to leave the appointment of the 3rd panelist to an arbitration organisation instead of the individual panelists themselves. I think ALL panelist should be chosen independently from each other, from an approved list of panelists, similar to a jury selection process. Let the ccs develop their own mechanism I do not think a central appeals mechanism is workable for ccTLD del/redel appeals but would think that every ccTLD designs its own appeals mechanisms together with its own local internet community (including the relevant government(s). The ccTLD community should be empowered enough to seek redress at an international independent court in case of unfair treatment by IANA functions Operator. Since national laws are respected in ccTLD policies processes and development, disputes involving Governments with the IANA Functions Operator requires a mechanism that would be acceptable to such sovereign nations. I will suggest Court of Arbitration for IANA functions at the International Court of Appeal at the Hague, similar to Court of Arbitration for Sports put in place by FIFA. The issues are either much more complicated (for example, contested re-delegations) than could be sensibly dealt with by an independent appeals group, or are much simpler in that they just look to see whether due process has been followed and documented. In the first case, I would oppose the creation of such a group. In the second, it would work, but would not necessarily need a complex solution as is proposed. 2. There will be issues for ccTLDs of an organisation in another jurisdiction having a say over the national ccTLD. This is not an acceptable position. ce qui importe, c'est surtout la base sur laquelle ce panel doit se prononcer. Concernant les CCTLD, le cadre légal et réglementaire national doit être la base de la décision prise sur un recours, en même temps que le respect des procédures techniques de délégation - redélégation					
5.	Where the appeal mechanism uses a panel of individuals, should they be chosen:					
a.	From a list of recognized international experts regardless of country	11	13	24	46	54
b.	From individuals the country that the ccTLD represents.	11	10	21	52	48

c.	In another manner (please specify)	(no responses)				
6. Who do you believe should be permitted to launch an appeal a ccTLD (re)delegation decision?						
a.	The governmental or territorial authority associated with the ccTLD?	23	3	26	88	12
b.	The incumbent ccTLD manager?	24	0	24	100	0
c.	Other individuals, organizations, companies, associations, educational institutions, or others that have a direct, material, substantial, legitimate and demonstrable interest in the operation?	5	16	21	24	76
7. Should any of the parties referenced above be excluded from the appeals process? If yes, please indicate.						
	The FOI recommends only that the incumbent manager should have the right to appeal a non-consented revocation decision. As already mentioned, my understanding was that the goal of the survey was to learn if the appeal mechanism is needed in general; than decide if it is mandatory at this stage of project to enable its completion within planned time frame. So my preliminary answer to all the questions here was YES, however as already pointed out the detail design of the mechanism may be agreed and completed later on. "Other individuals, organisations...." should be excluded because their interest will be very hard to define & quantify. For example, if the ccTLD in dispute accredits foreign registrars, then foreign registrars have interest in the ccTLD operation even though they may not be from the concerned ccTLD country. Rather, let us keep the appeal process to the concerned government & to the incumbent ccTLD manager. No, but there should be clear guidelines on what issues can trigger a valid appeal to prevent appeals tying up the process of running a ccTLD and wasting time and money. Let the ccs develop their own process...who can appeal and the scope will depend on the development of that anyone with a relevant interest (to be determined locally per ccTLD) There might be good reason for the third category, but it would be in limited cases where the role of these organisations was already defined. dans une décision de délégation -redélégation, on peut s'attendre à ce que l'autorité territoriale soit celle qui effectue la demande, et que le conflit se situe entre elle et le gestionnaire du CCTLD. Les autres parties, qui doivent être consultées (consensus de la communauté internet locale) ne devraient pas pouvoir interjeter appel d'une décision, sauf à rendre le processus extrêmement instable.					
8. Should there be any limit on the scope of the appeal?		19	7	26	73	27
9. Should the scope be limited to questions about whether procedures have been followed properly		18	8	26	69	31
a.	Should a panel have the authority to order that an existing delegation process be done again?	17	8	25	69	31
b.	Should it have the authority to suspend a pending delegation?	14	6	20	70	30
c.	Should it have authority to order to revoke and existing delegation?	4	21	25	16	84
d.	Should it have the authority to order that another party be delegated the ccTLD?	2	22	24	8	92

P1. Annex P: IANA Operations Cost Analysis

1429 **Preamble:**

1430 The cost estimate below corresponds to a "fully absorbed" IANA Functions operations cost for ICANN. It therefore reflects the benefit of leveraging economies of scale from ICANN's infrastructure and expertise of other functions. The fully absorbed IANA Functions operations cost within another entity would be different, as would be a "standalone" cost estimate as the cost of a fully operational and mature IT infrastructure would be higher, economies of scale would not exist, and additional costs of operating a separate organization would be created (relative for example to governance, communication, reporting...).

1431 The below analysis includes a placeholder estimate for the annual depreciation of assets, but does not include any capital costs, or representation of the value of the capital assets that are currently supporting the IANA Functions as operated by ICANN.

US Dollars in millions	**Using the FY15 Budget basis**	**Description**
[A] Direct Costs (IANA department)	$2.4	These costs cover direct and dedicated personnel (12 employees) and associated costs assigned to delivering the IANA functions: registration and maintenance of protocol parameter registries; allocation of Internet numbers and the maintenance of the Internet number registries; validation and processing of root zone change requests as well as maintenance of the root zone registry; management of the .int and .arpa domains; and holder of the root zone key signing key for the security of the DNS root zone.

[B] Direct Costs (Shared resources)	$1.9	Within ICANN departments other than the IANA department perform or participate in processes directly related to the delivery of the IANA functions. The costs of the activities carried out by other departments to perform the IANA Functions were evaluated by each department's budget owners by identifying the direct external costs (professional services, infrastructure,...), and estimating the time spent by personnel from the department on the identified activities valued at the annual cost of each employee (base+benefits). The full description of the activities that are carried out by those departments are summarized below: - *Request processing - IT* - *Root Key Signing - IT, Registry technical Services, SSR, GSE*
[C] Support functions allocation	$2.0	Support functions which organize the ability for operational activities to be carried out. The total costs of these functions [D], after excluding the shared from those functions included in [B], were divided by the total costs of operational functions [E], to determine a percentage of support functions ([D]+[E]= total costs of ICANN Operations). This percentage was then applied to the total costs of IANA (both IANA department direct costs and shared resources direct costs as defined above), to determine a cost of support function allocated to IANA. This cost [C] is additive to [A] and [B]. List of functions included: - *Executive* - *Communications* - *Operations (HR, Finance, Procurement, ERM, PMO/BI, HR development, Operations Executive, Administrative / Real Estate)* - *IT (cyber-security, admin, infrastructure, PMO, Staff facing solutions)* - *Governance support (Legal, Board support, NomCom)*
Total Functional costs of IANA Functions operations	**$6.3**	

1432 [B] Direct costs (shared resources), associated with operations of the IANA Functions and dependencies on other ICANN departments:

21) Request processing

a) RT trouble ticketing system supported and provided by IT

b) RZMS software development, support and maintenance by IT

c) Email system provided and supported by IT

d) Online connectivity provided and supported by IT

e) OFAC checks supported by Legal

f) Board resolutions reviewed by Legal/sometimes drafted by Legal. Delegation/Redelegation Reports reviewed by Legal on an as-needed basis

g) All hardware and infrastructure provided and supported by IT

h) Support from GSE to gather information for ccTLD requests

22) Root Key Signing

a) Roles in ceremonies by IT, Registry Technical Services, SSR, Strategy, GSE, and program department

b) Suite of Security documents reviewed and adopted by SSR and IT departments

c) Facility rent and connectivity to the Key Management Facility (KMF) provided by IT

d) DNSSEC SysTrust Audit requires work samples from IT, Legal, and SSR

e) Third Party Contract/RFP prepared by Procurement and reviewed by Legal

23) IANA Website

a) Hardware provided, administered, and supported by IT

b) Contract compliance requirements reviewed by Legal

c) Web-admin support to post reports and documents on ICANN website

24) Security to protect data and systems

a) Security plan reviewed and accepted by IT and SSR

b) Reviewed by Legal prior to submission to NTIA

25) Continuity and Contingency of service

a) Dependent on IT and Finance

b) Plan reviewed by IT, SSR, HR, Legal, and Finance prior adoption

26) Conflict of Interest compliance

a) Annual report prepared by HR and Legal

27) Monthly reporting of performance

a) Posted on hardware maintained and administered by IT

b) Contract compliance requirements reviewed by Legal

28) Customer Service Survey

a) RFP prepared by Procurement

b) Final report from 3rd party reviewed by Legal prior to posting

29) Administrative support

a) Share Administrative Assistant with Contractual Compliance – 50% dedicated to supporting IANA department

30) Annual updates to Agreements

a) Legal review of annual Supplemental Agreement to the IETF MOU

P1. Annex Q: IANA Budget

1433 The costs of providing the IANA services by ICANN under its agreement with the NTIA are currently not sufficiently separated from other ICANN expenses in the ICANN operating plans and budgets to determine reasonable estimates of projected costs after the IANA stewardship is transferred away from NTIA. The need for clearer itemization and identification of IANA Functions operations costs is consistent with current expectations of the interested and affected parties of the IANA Functions, and the broader community as expressed in ATRT1 and ATRT2, to separate policy development and IANA Functions operations. As a result, the CWG-Stewardship has provided recommendations with regard to the information and level of detail it expects to receive from ICANN in relation to the IANA budget in the future (see Section III.A, paragraph 161).

1434 In addition, the CWG-Stewardship recommends three areas of future work that can be addressed once the CWG-Stewardship proposal is finalized for SO/AC approval and again after the ICG has approved a proposal for IANA Stewardship Transition:

1) Identification of any existing IANA naming services related cost elements that may not be needed after the IANA Stewardship Transition, if any.

2) Projection of any new cost elements that may be incurred as a result of the IANA Stewardship Transition and in order to provide the ongoing services after the transition.

3) A review of the projected IANA Stewardship Transition costs in the FY16 budget to ensure that there are adequate funds to address significant cost increases if needed to implement the transition plan without unduly impacting other areas of the budget.

CCWG Accountability Dependencies

Enumeration of the relevant accountability mechanisms relating to the IANA Budget:

- The ability for the community to approve or veto the ICANN budget after it has been approved by the ICANN Board but before it comes into effect. The community may reject the ICANN Budget based on perceived inconsistency with the purpose, mission and role set forth in ICANN's Articles and Bylaws, the global public interest, the needs of ICANN stakeholders, financial stability or other matters of concern to the community. The CWG-Stewardship recommends that the IFO's comprehensive costs should be transparent and ICANN's operating plans and budget should include itemization of all IANA operations costs to the project level and below as needed. An itemization of IANA costs would include "Direct Costs for the IANA department", "Direct Costs for shared resources" and "Support functions allocation". Furthermore, these costs should be itemized into more specific costs related to each specific function to the project level and below as needed. PTI should also have a yearly budget that is reviewed and approved by the ICANN community on an annual basis. PTI should submit a budget to ICANN at least nine months in advance of the fiscal year to ensure the stability of the IANA services. It is the view of the CWG-Stewardship

that the IANA budget should be approved by the ICANN Board in a much earlier timeframe than the overall ICANN budget. The CWG (or a successor implementation group) will need to develop a proposed process for the IANA-specific budget review, which may become a component of the overall budget review.

P1. Annex R: Evaluation Method for Implications

1435 For the purposes of this document "workability" will be defined as per the following methodology:

- Criteria to be evaluated:
  - Complexity of the new method.
  - Implementation requirements for the new method.
  - Impact on the IFO for working with the new method.
  - Impact on the IFO customers resulting from using the new method.
  - Potential impact on the security, stability and resiliency of the DNS.
- Classification of evaluation of criteria:
  - 0 - signifies significant requirements or negative impact.
  - 1 - signifies moderate requirements or negative impact.
  - 2 - signifies minor requirements or impact.
  - 3 - signifies no requirements or impact.

1436 Scoring method: Add the score of all the criteria to generate a workability evaluation. The best possible score is 15 = 100% which would be judged very workable. The worst score possible would be 0 = 0% and should be considered completely unworkable. Beyond the total score other factors may influence the final workability assessment, such as considering changes which are evaluated as having a significant negative impact on the security, stability, and resiliency of the DNS, as being automatically unworkable. Overall unless there are special factors being considered, a score of 50% or above would be considered workable.

Summary of evaluations:

Element Being Analysed	Score	Evaluation
PTI as an affiliate of ICANN	score = 8/15 = 53%	workable
Contract between ICANN and PTI	score = 12/15 = 80%,	workable
IFR	score = 9/15 = 60%	workable
CSC	score = 11/15 = 73%	workable
Customer complaint and escalation procedures	score = 11/15 = 73%	workable
Approving changes to the Root Zone environment	score = 8/15 = 53%	workable
Replacing NTIA as the Root Zone Management Process administrator	score = 13/15 = 87%	workable

Detailed Evaluation

- **PTI as an affiliate of ICANN (total score = 8/15 = 53%, workable)**
  - What is changing: IANA is currently internal to ICANN. Creating a separate legal entity for the IANA functions will obviously require changes to the procedures as to how the IFO relates to ICANN.
  - Complexity of the new method:
    - 1 – IANA is currently operating as a division of the Global Domains Division; further separation into PTI is an important step but can be considered moderate in this case.
  - Implementation requirements for the new method:
    - 0 – Establishing PTI involves significant implementation work.
  - Impact on the IFO for working with the new method:
    - 1 – The actual impact on the IFO of transitioning to the PTI as an affiliate of ICANN should be moderate.
  - Impact on the IFO customers resulting from using the new method:
    - 3 – This should be transparent for the IANA naming customers.
  - Potential impact on the security, stability and resiliency of the DNS:
    - 3 – Given the current IFO systems, processes, procedures and personnel for these activities to be transferred to PTI, as an affiliate of ICANN, no additional risks are foreseen for the security, stability, or resiliency of the Internet.
  - Total score = 8/15 = 53%, workable.

- **Contract between ICANN and PTI (total score = 12/15 = 80%, very workable)**
  - What is changing: Currently the contract is between ICANN and the NTIA. The new contract will be between ICANN and PTI. This will require new processes and procedures.
  - Complexity of the new method:
    - 2 – IANA currently works under the NTIA IANA Functions Contract and the PTI-ICANN Contract should mirror this contract in most aspects. As such the impact should be considered minor.
  - Implementation requirements for the new method:
    - 2 – The new contract will have to be adjusted to reflect the withdrawal of NTIA and the addition of PTI but this should be considered minor.
  - Impact on the IFO for working with the new method:
    - 2 – Given IANA currently reports and ICANN and is subject to the NTIA IANA Functions Contract it is estimated that the ICANN-PTI Contract will only have a minor impact on the IFO.

- Impact on the IFO customers resulting from using the new method:
    - 3 – This should be transparent for the IANA naming customers.
- Potential impact on the security, stability and resiliency of the DNS:
    - 3 – None compared to the current NTIA IANA Functions Contract.
- Total score = 12/15 = 80%, very workable.

- **IFR (total score = 9/15 = 60%, workable)**
    - What is changing: Currently the NTIA is responsible for the evaluation of IANA services and the decision to extend the current contract or undertake an RFP. The IFR is the proposed mechanism to replace the more complex oversight elements.
    - Complexity of the new method:
        - 0 – Given this requires the creation of a non-standing committee for each review and detailed processes around these reviews, this will be complex.
    - Implementation requirements for the new method:
        - 1 – Adding the IFR and its powers to the ICANN Bylaws will be a significant undertaking.
    - Impact on the IFO for working with the new method:
        - 3 – Given the last NTIA Process, which led to the IANA Functions Contract this should not represent any additional impact to the IFO.
    - Impact on the IFO customers resulting from using the new method:
        - 3 – This should be transparent for the IANA naming customers.
    - Potential impact on the security, stability and resiliency of the DNS:
        - 2 – Given the IFR can recommend a change in IFO provider (subject to further approvals) this could have some impact on the security, stability and resiliency of the DNS, if a transition is ultimately required.
    - Total score = 9/15 = 60%, workable.

- **CSC (total score = 11/15 = 73%, workable)**
    - What is changing: Currently IANA is responsible for ongoing monitoring of IANA performance of its functions. The CSC is the proposed mechanism to replace this function.
    - Complexity of the new method:
        - 1 – Given this requires the creation of a new ICANN standing committee with a new charter this is considered moderately complex.
    - Implementation requirements for the new method:

        - 1 – Adding the CSC and its powers to the ICANN Bylaws will be a significant undertaking.
    - Impact on the IFO for working with the new method:
        - 3 – Given IANA currently works with the NTIA for performance tracking and that the CSC role is limited to this. It should have no additional impact on the IFO.
    - Impact on the IFO customers resulting from using the new method:
        - 3 – This should be transparent for the IANA naming customers while providing mew mechanisms for resolving customer issues.
    - Potential impact on the security, stability and resiliency of the DNS:
        - 3 – None foreseeable.
    - Total score = 11/15 = 73%, workable.

- **Customer complaint and escalation procedures (total score = 11/15 = 73%, workable)**
    - What is changing: The NTIA had its internal procedures for addressing lack of performance and complaints by IANA customers. These customer complaint and escalation procedures seek to replace these.
    - Complexity of the new method:
        - 1 – More complex than current methods.
    - Implementation requirements for the new method:
        - 2 – Most of the implementation should have been covered in the IFR and CSC.
    - Impact on the IFO for working with the new method:
        - 2 – Some changes required – limited impact.
    - Impact on the IFO customers resulting from using the new method
        - 3 – There should be no negative impact on the IFO customers as complaint and escalation procedures are either similar or improved.
    - Potential impact on the security, stability and resiliency of the DNS:
        - 3 – None foreseeable.
    - Total score = 11/15 = 73%, workable.

- **Approving changes to the Root Zone environment (total score = 8/15 = 53%, workable)**
    - What is changing: NTIA was responsible for approving all changes to the Root Zone environment. This section proposes a replacement for this process.
    - Complexity of the new method:

        - 0 – Significantly more complex than current NTIA-only approval.
    - Implementation requirements for the new method:
        - 1 – This should include procedure for creating review teams, draft terms of reference for review teams and process for obtaining ICANN Board approval for changes.
    - Impact on the IFO for working with the new method:
        - 3 – Not different than the current process for IFO.
    - Impact on the IFO customers resulting from using the new method:
        - 3 – There should be no negative impact on the IFO customers – possibly more transparency about the process.
    - Potential impact on the security, stability and resiliency of the DNS:
        - 1 – Changes to the Root Zone environment have a potential to threaten the security, stability and resiliency of the DNS. Although one expects the same participants would be involved as would be under the current process and the safeguards should be the same or better, any change to the Root Zone environment should be evaluated as moderate.
    - Total score = 8/15 = 53%, workable.

- **Replacing NTIA as the Root Zone Management Process administrator (total score = 13/15 = 87%, very workable)**
    - What is changing: NTIA currently approves all changes to the Root Zone or its WHOIS database. This will no longer be required.
    - Complexity of the new method:
        - 3 – Removing the requirement for a third party approval of all changes to the Root Zone removes a layer of complexity.
    - Implementation requirements for the new method:
        - 2 – Minor coding and process documentation changes.
    - Impact on the IFO for working with the new method:
        - 3 – Lowering the complexity produces a positive impact on the IFO.
    - Impact on the IFO customers resulting from using the new method:
        - 3 – From a process point of view this will be transparent to clients with the possible exception of some performance increases.
    - Potential impact on the security, stability and resiliency of the DNS:
        - 2 – Although basically considered a formality the NTIA authorization could be considered as providing a minor added value to the security, stability and resiliency of the Internet.
    - Total score = 13/15 = 87%, very workable.

P1. Annex S: Draft Proposed Term Sheet (as proposed by Legal Counsel)

What follows below is an initial draft proposed term sheet that could be the precursor to the ICANN-PTI Contract. This is based on a legal memorandum prepared by legal counsel to the CWG-Stewardship on May 18, 2015. To the extent this term sheet is inconsistent with the current proposal, the current proposal governs. The term sheet will be subject of negotiation between PTI and ICANN (with PTI having independent legal advice).

PROPOSED KEY TERMS FOR ICANN-PTI CONTRACT

- All terms are subject to further review and discussion
- Terms in [square brackets] are placeholders only
- Terms connected by "*or*" are alternatives
- TBD means To Be Determined

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
PARTIES	• The Parties to the ICANN-PTI Contract are: o ICANN o PTI (IANA Functions Operator for naming functions)		III.A
DURATION		F	
Initial Term	• The period of performance of the ICANN-PTI Contract shall commence on [October 1, 2015] (the "Commencement Date") and shall end on the [fifth (5th)] anniversary of the Commencement Date.	F.1, I.70	
Renewal Terms	• The ICANN-PTI Contract will provide for automatic renewal, unless ICANN elects not to renew the ICANN-PTI Contract upon recommendation by an IANA Function Review Team (IFRT), with support of the ICANN Board. • Any ICANN election of non-renewal shall be provided with not less than [[__] months] prior written notice, and PTI shall provide full support and cooperation to ICANN, and to any successor entity to PTI, in order to effect an orderly, stable, secure and efficient transition of this Contract and	I.59, I.70	III.A.

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
	services and obligations provided by PTI hereunder. See also the Continuity of Operations provisions below. • If the ICANN-PTI Contract automatically renews, the extended contract shall include this automatic renewal clause. • The renewal period shall commence immediately following the end of the initial term and shall end on the [fifth (5th)] anniversary of the commencement of the renewal term [TBD]		
IANA Function Review	• The IANA Function Review (IFR) of PTI's performance will be conducted by the IFRT in accordance with the processes set forth in ICANN's governance documents. • PTI shall submit to the procedures and scope of the IFR. PTI agrees to make any necessary changes, including amendment to the ICANN-PTI Contract, as adopted and implemented by ICANN and approved by the Members of ICANN following an IFR. • An initial IFR shall take place two years following the transition of the IANA functions to PTI. • Subsequent IFRs shall occur at no more than five-year intervals. • A Special IFR may also be initiated by the ccNSO and GNSO Councils, following the exhaustion of the identified escalation mechanisms.		III.A./Annex F
Performance Monitoring	• The CSC will be established to monitor PTI performance of the IANA naming function according to the ICANN-PTI Contract and Service Level Expectations (SLEs). • PTI shall act in good-faith to resolve all issues identified by CSC directly and to submit to the escalation mechanics set forth in the ICANN-PTI Contract and ICANN governance documents. • The CSC shall be empowered to escalate identified areas of concern as set forth in		III.A./Annex G

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
	"Escalation Mechanisms" below.		
ESCALATION MECHANISMS (IANA Customer Service Complaint Resolution Process)	• Phase 1: If anyone experiences an issue with PTI's delivery of IANA naming functions, the complainant can send an email to PTI, which will escalate the complaint internally as required. This process is open to anyone, including individuals, registries, ccTLD regional organizations and ICANN SO/ACs. • Phase 2: If the issue identified in Phase 1 is not addressed by PTI to the reasonable satisfaction of the complainant, then complainants that are direct customers only may request mediation. ICANN and CSC will be notified of the issue and CSC will conduct a review to determine whether the issue is part of a persistent performance issue or an indication of a systemic problem. If so, the CSC may seek remediation through the Problem Resolution Process described below. This process is only open to direct customers. Non-direct customers, including TLD organizations, who have issues unresolved in Phase 1, may escalate the issues to the ombudsman or the applicable liaisons to the CSC. • The complainant may also initiate an Independent Review Process if the issue is not addressed in the steps above.		III.A./ Annex I
ESCALATION MECHANISMS (IANA Problem Resolution Process)	The CSC may seek resolution with PTI performance issues in accordance with the Remedial Action Plan which includes: • CSC reports persistent issues to PTI and requests remedial action in [TBD] days. • CSC confirms completion of the remedial action by PTI. • If CSC determines that the remedial action has been exhausted and has not led to necessary improvements, the CSC is authorized to escalate to the ccNSO and/or the GNSO, who might then decide to take further action using		III.A/ Annex J

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
	agreed consultation and escalation processes to be finalized post-transition.		
ESCALATION MECHANISMS (Root Zone Emergency Process)	[Retain provisions from current ICANN-NTIA Contract.]		III.A/ Annex K
ESCALATION MECHANISMS (Separation Review)	• A separation review can be triggered by IFRT in accordance with provisions to be inserted in ICANN governance documents. PTI shall submit to and comply with the IFR mechanics, including the separation review mechanics, adopted and implemented by ICANN. • All recommendations resulting from the separation review must be approved by the ICANN board.		III.A/ Annex L
CONTINUITY OF OPERATIONS	• Retain provisions from current ICANN-NTIA Contract, except that ICANN will perform duties of the Contract Officer (CO) and Contract Officer Representative (COR). PTI agrees to be fully engaged in the transition plan and to provide appropriate transition staff and expertise to facilitate a stable transition of the IANA functions on terms more fully developed in the ICANN-PTI Contract. • ICANN, in conjunction with CSC as necessary, shall review the transition plan every five years.	C.7	III.A/ Annnex M
COST/PRICE	• Fees, if any, will be based on direct costs and resources incurred by PTI. • After one year of charging fees, PTI must collaborate with all Interested and Affected Parties to develop the fee structure and a method to tracks costs for each IANA function. PTI must submit copies of the above and a description of the collaboration efforts to ICANN. • "Interested and Affected Parties" means the multistakeholder, private sector led, bottom-up policy development model for the DNS that ICANN represents; **[**the IETF, the IAB, 5 RIRs;] ccTLD and gTLD operators; governments; and the Internet user	B.2	

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
	community.		
CONSTRUCTIVE WORKING RELATIONSHIPS	PTI must maintain constructive working relationships with all Interested and Affected Parties to ensure quality and satisfactory performance.	C.1.3	
PTI REQUIREMENTS			
Subcontracting; [U.S. Presence Requirements]	• No subcontracting. • PTI must be U.S. owned and operated, incorporated and organized under U.S. law. • Primary IANA functions must be performed in the U.S. • PTI must have a U.S. physical address.	C.2.1	
Performance of IANA Functions	• IANA functions must be performed in a stable and secure manner. • IANA functions are administrative and technical in nature based on established policies developed by the Interested and Affected Parties. • PTI must treat each IANA function with equal priority and process all requests promptly and efficiently.	C.2.4	
Separation of Policy Development and Operational Roles	PTI staff members will not initiate, advance, or advocate any policy development related to the IANA functions. This section shall not be construed to prevent contributions by staff members by way either of background information or direct text contribution to any document, provided both that the PTI staff are not the only authors of the contribution and that the primary function of the staff member's contribution is in supplying relevant IANA experience and insight.	C.2.5	
Transparency and Accountability	PTI shall collaborate with all Interested and Affected Parties to develop and post user instructions including technical requirements for the IANA naming function.	C.2.6	Annex C
Performance; Service Levels	PTI shall collaborate with all Interested and Affected Parties to develop, maintain, enhance and post performance standards for each IANA function. ICANN and PTI shall develop service level agreements (SLAs) to be annexed to the Contract in accordance with the SLEs attached as	C.2.8	Annex C/ Annex H

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
	Annex I hereto for the performance of these functions.		
Internet Assigned Numbers Authority (IANA) Naming Functions	IANA naming functions include: the administration of certain responsibilities associated with the Internet DNS root zone management; and other services related to the management of the ARPA and INT top-level domains (TLDs).	C.2.9	
IANA Functions	IANA functions include (1) the IANA Naming Functions, (2) the coordination of the assignment of technical Internet protocol parameters, and (3) the allocation of Internet numbering resources.		
Responsibility and Respect for Stakeholders	PTI shall collaborate with all Interested and Affected Parties to develop and post for each IANA function a process for documenting the source of policies and procedures and how each will be implemented.	C.2.7	

Perform Administrative Functions Associated With Root Zone Management	• PTI will facilitate and coordinate the root zone of the DNS and maintain 24/7 operational coverage.
	• Process flow for root zone management involves two roles that are performed by two different entities:
	  ○ PTI as the IANA Functions Operator
	  ○ VeriSign (or its successor) as the Root Zone Maintainer (RZM).
	• PTI shall work collaboratively with the RZM.
	• Any amendment to the roles and responsibilities of PTI and the RZM with respect to root zone management will require approval of the ICANN Board [and the Members of ICANN or a Special IFR.]
		C.2.9.2	III.A./

Root Zone File Change Request Management	• The RZM will receive and process from PTI root zone file change requests for TLDs, including addition of new or updates to existing TLD name servers (NS) and delegation signer (DS) resource record (RR) information along with associated 'glue' (A and AAAA RRs). A change request may also include new TLD entries to the root zone file. No authorization for TLD change requests will be needed. • RZM shall process root zone file changes	C.2.9.2.a	III.A.

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
	as expeditiously as possible.		
Root Zone "WHOIS" Change Request and Database Management	• PTI will maintain, update, and make publicly accessible a Root Zone "WHOIS" database with current and verified contact information for all TLD registry operators, at a minimum: o TLD name; o the IP address of the primary nameserver and secondary nameserver for the TLD; o the corresponding names of such nameservers; o the creation date of the TLD; o name, address, email, phone and fax numbers of the TLD registry operator; o name, address, email, phone and fax numbers of the technical contact for the TLD registry operator; o name, postal address, email address, phone and fax numbers of the administrative contact for the TLD registry operator; o reports; o date record last updated; o any other information relevant to the TLD requested by the TLD registry operator. • The RZM shall receive and process root zone "WHOIS" change requests for TLDs from PTI. No authorization for TLD change requests shall be required.	C.2.9.2.b	III.A., paragraph 150
Delegation and Redelegation of a Country Code Top Level -Domain (ccTLD)	• PTI shall apply existing policy frameworks in processing requests related to the delegation and redelegation of a ccTLD, such as RFC 1591, the GAC Principles (2005) and any further clarification of these policies by Interested and Affected Parties. • If a policy framework does not exist to cover a specific instance, PTI will consult	C.2.9.2.c	III.A, paragraph 160/ Annex O

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
	with the Interested and Affected Parties; relevant public authorities; and governments on any recommendation that is not within or consistent with an existing policy framework. • PTI shall also take into account the relevant national frameworks and applicable laws of the jurisdiction that the TLD registry serves. • PTI shall submit its recommendations to the [[CSC] or [RZM] or [Independent Evaluator]] via a Delegation and Redelegation Report.		
Delegation and Redelegation of a Generic Top Level Domain (gTLD)	• PTI shall verify that all requests related to the delegation and redelegation of gTLDs are consistent with the procedures developed by ICANN. • PTI shall submit its request to the RZM via a Delegation and Redelegation Report, with a copy to ICANN and the registry operator(s) involved.	C.2.9.2.d	
Root Zone Automation	• PTI shall work with ICANN, the CSC and the RZM, and collaborate with all Interested and Affected Parties, to deploy a fully automated root zone management system promptly, including, at a minimum: ○ a secure (encrypted) system for customer communications; ○ an automated provisioning protocol allowing customers to manage their interactions with the root zone management system; ○ an online database of change requests and subsequent actions whereby each customer can see a record of their historic requests and maintain visibility into the progress of their current requests; ○ test system, which customers can use to meet the technical requirements for a change request; ○ an internal interface for secure	C.2.9.2.e	

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
	communications between ICANN, PTI, and the RZM.		
Root DNSSEC Key Management	• PTI shall be responsible for the management of the root zone Key Signing Key (KSK), including generation, publication, and use for signing the Root Keyset.	C.2.9.2.f	
.INT TLD	• PTI shall operate the .INT TLD within the current registration policies for the TLD. • If ICANN designates a successor registry, PTI will facilitate a smooth transition.	C.2.9.4	
Inspection Of All Deliverables And Reports Before Publication	• [ICANN] will perform final inspection and acceptance of all deliverables and reports, including those articulated as Contractor Requirements in the NTIA-ICANN Contract.	C.2.11	
PTI To Provide Qualified Program Manager	• PTI shall provide trained, knowledgeable technical personnel with excellent oral and written communication skills (i.e., the capability to converse fluently, communicate effectively, and write intelligibly in the English language). • PTI's IANA Functions Program Manager organizes, plans, directs, staffs, and coordinates the overall program effort; manages contract and subcontract activities as the authorized interface with ICANN, including CSC, and the IFRT and is responsible for the following: ○ Shall be responsible for the overall ICANN-PTI Contract performance and shall not serve in any other capacity under the ICANN-PTI Contract. ○ Shall have demonstrated communications skills with all levels of management. ○ Shall meet and confer with ICANN regarding the status of specific PTI activities and problems, issues, or conflicts requiring resolution. ○ Shall be capable of negotiating and making binding decisions for PTI within his or her scope of delegated authority.	C.2.12.a	

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
	○ Shall have extensive experience and proven expertise in managing similar multi-task contracts of this type and complexity.		
Key Personnel	• In addition to the Qualified Program Manager, PTI shall assign to the ICANN-PTI Contract the following key personnel: ○ IANA Functions Program Manager ○ IANA Function Liaison for Root Zone Management	C.2.12.b	
Changes to Key Personnel	• PTI shall obtain PTI Board consent prior to making key personnel substitutions. • Replacements for key personnel must possess qualifications equal to or exceeding the qualifications of the personnel being replaced, unless an exception is approved. • Requests for changes in key personnel shall be submitted to the PTI Board at least 15 working days prior to making any permanent substitutions. The request should contain a detailed explanation of the circumstances necessitating the proposed substitutions, complete resumes for the proposed substitutes, and any additional information requested by the PTI Board. The PTI Board will notify PTI within 10 working days after receipt of all required information of the decision on substitutions.	H.8	
Budget Meetings; Funding	ICANN will meet [annually] with the [President of PTI] to review and approve the budget for the IANA Naming Services for the next [three] years. ICANN shall fund PTI at agreed budget levels.		
TRANSPARENCY OF DECISION-MAKING	To enhance consistency, predictability and integrity in decision-making of IANA related decisions, PTI shall: • Continue the current practice of public reporting on naming related decisions. • Make public all recommendations by PTI on naming related decisions. • Agree not to redact any PTI Board minutes related to naming decisions.		

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
	• Have the President and PTI Board Chair sign an annual attestation that it has complied with the above provisions. • ICANN shall provide PTI a budget sufficient to allow it to hire independent legal counsel to provide advice on the interpretation of existing naming related policy. • These provisions regarding reporting and transparency, along with the availability of independent legal advice, are intended to discourage decisions that may not be fully supported by existing policy.		
SECURITY REQUIREMENTS	Retain from current ICANN-NTIA Contract.	C.3	
PERFORMANCE METRIC REQUIREMENTS			
Program Reviews and Site Visits	• Program Reviews shall be conducted monthly by CSC and ICANN. • Site Visits shall be conducted on-demand by the IFRT.	C.4.1	Annex F
Monthly Performance Progress Report	• PTI shall prepare and submit to the CSC and ICANN a performance progress report every month (no later than 15 calendar days following the end of each month) that contains statistical and narrative information on the performance of the IANA functions (i.e., assignment of technical protocol parameters; administrative functions associated with root zone management; and allocation of Internet numbering resources) during the previous calendar month. • The report shall include a narrative summary of the work performed for each of the functions with appropriate details and particularity. The report shall also describe major events, problems encountered, and any projected significant changes, if any, related to the performance of requirements set forth in C.2.9 to C.2.9.4 of the ICANN-NTIA Contract.	C.4.2	Annex F
Root Zone	• PTI shall work collaboratively with ICANN	C.4.3	

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
Management dashboard	and the RZM, and all Interested and Affected Parties, to maintain and enhance the dashboard to track the process flow for root zone management.		
Performance Standards Reports	• PTI shall publish reports for each discrete IANA function consistent with Section C.2.8 of the ICANN-NTIA Contract. The Performance Standards Metric Reports will be published via a website every month (no later than 15 calendar days following the end of each month).	C.4.4	
Customer Service Survey	• PTI shall collaborate with the CSC and ICANN to maintain and enhance the annual customer service survey consistent with the performance standards for each of the discrete IANA functions. The survey shall include a feedback section for each discrete IANA function. No later than 30 days after conducting the survey, PTI shall submit the CSS Report to ICANN and publicly post the CSS Report.	C.4.5	Annex F
Final Report	• PTI shall prepare and submit a final report on the performance of the IANA functions that documents standard operating procedures, including a description of the techniques, methods, software, and tools employed in the performance of the IANA functions. PTI shall submit the report to the CSC and ICANN no later than 30 days after expiration of the ICANN-PTI Contract.	C.4.6	
Inspection and acceptance	• The CSC and ICANN will perform final inspection and acceptance of all deliverables and reports articulated in Section C.4 of the ICANN-NTIA Contract.	C.4	
AUDIT REQUIREMENTS / IANA FUNCTION REVIEW & IFRT	• Retain provisions from current ICANN-NTIA Contract, except that ICANN is the CO and COR. • PTI shall submit to the procedures and scope of the IFR and CSC as set forth in ICANN governance documents. • PTI agrees to make any necessary changes, including amendment to the ICANN-PTI Contract, as adopted and implemented by	C.5	Annex F

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
	ICANN following an IFR.		
CONFLICT OF INTEREST REQUIREMENTS	Retain provisions from current ICANN-NTIA.	C.6, H.9	
PERFORMANCE EXCLUSIONS			
PTI not authorized to make changes to Root Zone; link to VeriSign Cooperative Agreement	PTI not authorized to make modifications, additions, or deletions to the root zone file or associated information. (The ICANN-PTI Contract will not alter the root zone file responsibilities as set forth in Amendment 11 of the [Cooperative Agreement NCR-9218742 between the U.S. Department of Commerce and VeriSign, Inc. or any successor entity]). See Amendment 11 athttp://ntia.doc.gov/files/ntia/publications/amend11_052206.pdf.	C.8.1	
PTI not to change policies and procedures or methods	PTI not authorized to make material changes in the policies and procedures developed by the relevant entities associated with the performance of the IANA functions. PTI shall not change the established methods associated with the performance of the IANA functions without prior approval of ICANN.	C.8.2	
Relationship to other contracts	The performance of the functions under the ICANN-PTI Contract, including the development of recommendations in connection with Section C.2.9.2 of the ICANN-NTIA Contract, shall not be, in any manner, predicated or conditioned on the existence or entry into any contract, agreement or negotiation between PTI and any party requesting such changes or any other third-party. Compliance with this Section must be consistent with C.2.9.2d of the ICANN-NTIA Contract.	C.8.3 (which cross-references C.2.9.2)	
Baseline Requirements for DNSSEC in the Authoritative Root Zone	DNSSEC at the authoritative Root Zone requires cooperation and collaboration between the root zone management partners and ICANN. The baseline requirements encompass the responsibilities and requirements for both PTI and the RZM, to be retained as set forth in Appendix 2 to the ICANN-NTIA Contract.	Appendix 2	
INSPECTION AND ACCEPTANCE	ICANN will perform representative final inspection and acceptance of all work performed, written communications regardless of form, reports, and other services and deliverables related to Section C prior to any publication/posting called for by the ICANN-PTI Contract. Any deficiencies shall be	E	

PROVISION	SUMMARY OF KEY TERMS	Current IANA Contract Section	Final Proposal Section
	corrected by PTI and resubmitted to ICANN within 10 workdays after notification.		
INTELLECTUAL PROPERTY			
Trademarks	[ICANN will grants PTI an exclusive, royalty-free, fully-paid, worldwide license to use the IANA trademark and all related trademarks in connection with PTI's activities under the ICANN-PTI Contract.]		
Patents, Inventions, Copyrights, Copyrightable Works and Trade Secrets	ICANN shall own all intellectual property conceived, reduced to practice, created or otherwise developed by PTI under the Contract. PTI shall assign, and shall cause any employees or contractors to assign, all rights in any patentable subject matter, patent applications, copyrights, trade secrets and all other intellectual property created by the PTI during the course of PTI's duties under the ICANN-PTI Contract to ICANN. With respect to copyright, the ICANN-PTI Contract is a "work for hire" agreement and ICANN shall be deemed the author and shall own all copyrightable works created by PTI hereunder, and all copyright rights thereto. In the event this is not deemed a work for hire agreement, PTI shall assign ownership of the copyrightable works and copyrights to ICANN. ICANN shall license back any patents, patent applications, copyrights and trade secrets to PTI for the duration of the ICANN-PTI Contract solely to the extent necessary for PTI to perform its obligations under the ICANN-PTI Contract. This license shall be non-exclusive and royalty-free.	H.2	
CONFIDENTIALITY AND DATA PROTECTION	The ICANN-PTI Contract will contain reasonable and customary provisions relating to confidentiality and data protection.	H.10	
INDEMNIFICATION	[ICANN shall indemnify, defend and hold harmless PTI from all claims arising from PTI's performance or failure to perform under the ICANN-PTI Contract.]	H.13	

P1. Annex T: ICANN Response to CWG-Stewardship Consultation

See https://community.icann.org/x/-Zk0Aw.

Part 2. Response from the Internet Number Community

Response to the IANA Stewardship Transition Coordination Group Request for Proposals on the IANA from the Internet Number Community

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Response to the IANA Stewardship Transition Coordination Group Request for Proposals on the IANA from the Internet Number Community

P2. Abstract

2001 This document is a response from the Internet Number Community to the IANA Stewardship Transition Coordination Group (ICG) Request for Proposals made on September 8, 2014. This document was prepared by the CRISP Team, which was established by the Internet Number Community through the Regional Internet Registries specifically for the purpose of producing this document.

2002 Please note that an appendix, including uncommon acronyms and defined terms, is included at the end of this document.

P2. Proposal type

2003 *Identify which category of the IANA functions this submission proposes to address:*

[ ] Names **[X] Numbers** [ ] Protocol Parameters

P2.I. The Community's Use of the IANA

2004 *This section should list the specific, distinct IANA services or activities your community relies on. For each IANA service or activity on which your community relies, please provide the following:*

A description of the service or activity.

A description of the customer of the service or activity.

What registries are involved in providing the service or activity.

A description of any overlaps or interdependencies between your IANA requirements and the functions required by other customer communities

2005 P2.I.A. The service or activity

2006 The IANA activities relevant to the Internet Number Community are:

- the allocation of blocks of Internet Number Resources (namely IPv4 addresses, IPv6 addresses, and Autonomous System Numbers, AS Numbers, or ASNs) to the Regional Internet Registries (RIRs);

- the registration of such allocations in the corresponding IANA Number Registries;
- other related registry management tasks including the management of returned IP address space, and general registry maintenance; and
- the administration of the special-purpose “IN-ADDR.ARPA” and “IP6.ARPA” DNS zones, in accordance with IPv4 and IPv6 allocations, respectively.

2007 These activities are referred to in this document, collectively, as “IANA Numbering Services.”

2008 P2.I.B. The customer of the service or activity

2009 The RIRs, the not-for-profit membership-based organizations accountable to the Internet Number Community, manage the registration and distribution of Internet Number Resources (as defined above) on a regional basis. The five RIRs are:

AFRINIC	Serving Africa
APNIC	Serving the Asia-Pacific Region
ARIN	Serving Canada, some North Atlantic and Caribbean islands, Antarctica, and the United States
LACNIC	Serving Latin America and portions of the Caribbean
RIPE NCC	Serving Europe, Central Asia, and the Middle East

2010 The RIRs receive blocks of Internet Number Resources from the IANA Number Registries managed by the IANA Numbering Services Operator and distribute and register those number resources at the regional level. The RIRs also fill a secretariat role, facilitating the open, transparent, and bottom-up number resource Policy Development Process.

2011 The RIRs have a long-standing and straightforward operational relationship with the IANA. The IANA maintains the IANA Number Registries from which the RIRs receive allocations to distribute to the community. The RIRs also coordinate with the IANA to correctly register any resources that are returned to the IANA Number Registries. Collectively, the system for administering Internet Number Resources is referred to as the Internet Number Registry System and is described in detail in RFC 7020.

2012 P2.I.C. Registries are involved in providing the service or activity

2013 The relevant IANA registries are:

- the IPv4 address registry: http://www.iana.org/assignments/ipv4-address-space
- the IPv6 address registry: http://www.iana.org/assignments/ipv6-unicast-address-assignments
- the ASN registry: http://www.iana.org/assignments/as-numbers
- the IN-ADDR.ARPA DNS zone

- the IP6.ARPA DNS zone

2014 Collectively these registries are referred to as the IANA Number Registries.

2015 P2.I.D. Overlaps or interdependencies between your IANA requirements and the functions required by other customer communities

2016 The Internet Engineering Task Force (IETF) is responsible for the specification of the entire IP address space and AS number space. Through the respective IANA Number Registries (see above), the IETF delegates unicast IP address and AS number space into the Internet Numbers Registry System (RFC 7020). These registries are published via the IANA.ORG web site.

2017 Within the IANA Number Registries, there may be reserved values or ranges and special-purpose registries which are outside the Internet Number Registry System and instead administered under the direction of the IETF. The delineation of the specific ranges delegated to the Internet Numbers Registry System is provided in RFC 7249. It is expected that this delineation may change from time to time by actions of the IETF (through the RFC process) or the RIRs (through the global policy development process). Potential reasons for changes include the release of previously reserved space for general use and the reservation of previously unused space for a special purpose.

2018 The global Internet community also depends upon the IANA Numbering Services Operator for administration of the special-purpose IN-ADDR.ARPA and IP6.ARPA DNS zones which are associated with IPv4 and IPv6 address spaces, respectively. These zones are delegated to the IANA by the Internet Architecture Board (IAB) and “[s]ub-delegations within this hierarchy are undertaken in accordance with the IANA’s address allocation practices” (RFC 3172). The Internet Corporation for Assigned Names and Numbers (ICANN), in its role as the IANA Numbering Services Operator, administers these zones as “agreed technical work items” per the *IETF-IANA MoU*. This work is outside the scope of the National Telecommunications and Information Administration (NTIA) contract.

2019 Provision of reverse DNS services in the IN-ADDR.ARPA and IP6.ARPA domains may also require interaction with the .ARPA registry. Collectively these registries are referred to as the IANA Number Registries.

2020 The Internet Number Community also makes use of the term IANA in the description of their processes, policies, and public database records.

2021 **Relevant links:**

IETF-ICANN MoU Concerning the Technical Work of the Internet Assigned Numbers Authority: https://www.icann.org/resources/unthemed-pages/ietf-icann-mou-2000-03-01-en

NTIA IANA Functions Contract: http://www.ntia.doc.gov/page/iana-functions-purchase-order

RFC 3172, Management Guidelines & Operational Requirements for the Address and Routing Parameter Area Domain (”arpa”): https://tools.ietf.org/html/rfc3172

RFC 7020, *The Internet Numbers Registry System*: https://tools.ietf.org/html/rfc7020

RFC 7249, *Internet Numbers Registries*: https://tools.ietf.org/html/rfc7249

P2.II. Existing Pre-Transition Arrangements

2022 *This section should describe how existing IANA-related arrangements work, prior to the transition.*

2023 P2.II.A. Policy Sources

2024 *This section should identify the specific source(s) of policy which must be followed by the IANA functions operator in its conduct of the services or activities described above. If there are distinct sources of policy or policy development for different IANA activities, then please describe these separately. For each source of policy or policy development, please provide the following:*

Which IANA service or activity (identified in Section I) is affected.

A description of how policy is developed and established and who is involved in policy development and establishment.

A description of how disputes about policy are resolved.

References to documentation of policy development and dispute resolution processes.

2025 P2.II.A.1. Affected IANA service or activity

2026 The affected services and activities are those describe in I.A and I.C above.

2027 IANA Numbering Services are provided without involvement by the NTIA.

2028 P2.II.A.2. How policy is developed and established and by whom

2029 The policies under which the IANA Numbering Services are provided are developed and agreed within the Internet Number Community via an open, transparent, and bottom-up policy development process. The community engages in regional policy development processes facilitated by each RIR; these processes are open to all stakeholders regardless of specific background or interest or geographic location of residence or activity. Links to the regional Policy Development Processes (PDPs) are included in the RIR Governance Matrix published on the Number Resource Organization (NRO) web site: www.nro.net/about-the-nro/rir-governance-matrix

2030 Any individual may submit a global policy proposal to the Global Policy Development Process, or gPDP. The community must ratify the proposed policy within each RIR. The NRO Executive Council (NRO EC) then refers the proposal to the Address Supporting Organization Address Council (ASO AC), which reviews the process by which the proposal was developed and, under the terms of the *ASO Memorandum of Understanding* (ASO MoU), passes it to the ICANN Board of Directors for ratification as a global policy.

2031 There are currently three global policies related to management of the IANA Number Registries of IPv4 addresses, IPv6 addresses, and Autonomous System Numbers: https://www.nro.net/policies

- IANA Policy for Allocation of IPv6 Blocks to Regional Internet Registries;
- IANA Policy for Allocation of ASN Blocks to Regional Internet Registries; and
- Global Policy for Post Exhaustion IPv4 Allocation Mechanisms by the IANA.

2032 A fourth global policy, ICP-2, *Criteria for Establishment of New Regional Internet Registries*, governs the community's formation of new RIRs.

2033 The global gPDP described in the *Global Policy Development Process Document* (https://www.nro.net/documents/global-policy-development-process) is used for all of the number-related IANA activities described in Section I, but the policy by which "IN-ADDR.ARPA" and "IP6.ARPA" domains must be delegated following IPv4 and IPv6 address allocations is specified by the IETF in RFC 3172.

2034 P2.II.A.3. How disputes about policy are resolved

2035 The gPDP mentioned above is formally defined in Attachment A of the ASO MoU**,** signed by ICANN and the RIRs in 2004 (and signed by AFRINIC when it was established as the fifth RIR in 2005). This MoU includes provisions for resolving disputes between the IANA Numbering Services Operator and the Internet Number Community. Although the gPDP allows for the ICANN Board to dispute the outcome of a consensus community decision (escalating to mediation between ICANN and the RIRs), it does not include any role for the IANA contract holder (currently the NTIA). The ASO MoU is an agreement between the Internet Number Community and ICANN; the NTIA has no oversight role in policy-making for IANA Numbering Services, and its transition out of its current role would have no effect on the policy-making framework.

2036 A separate MoU, the NRO MoU, establishes the NRO as " a coordinating mechanism of the RIRs to act collectively on matters relating to the interests of the RIRs" and includes provisions for dispute resolutions between RIRs on issues relating to global policy development or implementation.

2037 It is the responsibility of the NRO Number Council ("NRO NC"), a group comprising fifteen community members to confirm that the documented RIR PDPs have been followed in the development of policy. Further, this group reviews the policy followed by the Internet Number Community to assure itself that the significant viewpoints of interested parties are adequately considered, and only after this confirmation does it then consider forwarding global policy proposals to the ICANN Board for ratification.

2038 The NRO NC also acts in the role of the ICANN ASO AC, and as such it presents the agreed global policy proposal to the ICANN Board for ratification and operational implementation.

2039 The ICANN Board reviews the received global number resource policy proposals and may ask questions and otherwise consult with the ASO Address Council and/or the individual RIRs acting collectively through the NRO. The ICANN Board may also consult with other

parties as the Board considers appropriate. If the ICANN Board rejects the proposed policy, it delivers to the ASO AC a statement of its concerns with the proposed policy, including in particular an explanation of the significant viewpoints that were not adequately considered during the RIR processes. By consensus of the Internet Number Community in accordance with the PDPs, the ASO AC may forward a proposed new or modified policy to the ICANN Board. If the resubmitted proposed policy is rejected for a second time by ICANN, then the RIRs or ICANN shall refer the matter to mediation.

In case of disputes where mediation has failed to resolve the dispute, the ICANN ASO MoU provides for arbitration. Via the ASO, the RIRs have been participating in the periodic independent reviews by the Accountability and Transparency Review Team (ATRT) that are called for in ICANN's Bylaws.

P2.II.A.4. References to documentation of policy development and dispute resolution processes

Relevant links:

ICANN ASO MoU: https://www.nro.net/documents/icann-address-supporting-organization-aso-mou

NRO MoU: https://www.nro.net/documents/nro-memorandum-of-understanding

About the NRO Number Council: https://www.nro.net/about-the-nro/the-nro-number-council

RIR Governance Matrix: https://www.nro.net/about-the-nro/rir-governance-matrix

Global Policies: https://www.nro.net/policies

RFC 3172, Management Guidelines & Operational Requirements for the Address and Routing Parameter Area Domain ("arpa"): https://tools.ietf.org/html/rfc3172

P2.II.B. Oversight and Accountability

This section should describe all the ways in which oversight is conducted over IANA's provision of the services and activities listed in Section I and all the ways in which IANA is currently held accountable for the provision of those services. For each oversight or accountability mechanism, please provide as many of the following as are applicable:

- *Which IANA service or activity (identified in Section I) is affected.*
- *If the policy sources identified in Section II.A are affected, identify which ones are affected and explain in what way.*
- *A description of the entity or entities that provide oversight or perform accountability functions, including how individuals are selected or removed from participation in those entities.*
- *A description of the mechanism (e.g., contract, reporting scheme, auditing scheme, etc.). This should include a description of the consequences of the IANA functions operator not meeting the standards established by the mechanism, the extent to which*

the output of the mechanism is transparent and the terms under which the mechanism may change.

- *Jurisdiction(s) in which the mechanism applies and the legal basis on which the mechanism rests.*

P2.II.B.1. Which IANA service or activity is affected?

The IANA Numbering Services and IANA Number Registries as defined above.

P2.II.B.2. If the policy sources identified in Section II.A are affected, identify which ones are affected and explain in what way.

A decision by the NTIA to discontinue its stewardship of the IANA Numbering Services, and therefore its contractual relationship with the IANA Functions Operator, would have no significant impact on the continuity of IANA Numbering Services currently provided by ICANN. However, it would remove a significant element of oversight from the current system.

ICANN has historically provided IANA Numbering Services via the IANA Number Registries under the terms of the NTIA IANA Functions contract, and therefore IANA Numbering Services for the RIRs are currently subject to change in accordance with that agreement.

P2.II.B.3. The entity or entities that provide oversight or perform accountability functions

A description of the entity or entities that provide oversight or perform accountability functions, including how individuals are selected or removed from participation in those entities.

All institutional actors with a role in management of Internet Number Resources are accountable to the open community that develops the policies under which those resources are distributed and registered. The mechanisms used to ensure and enforce this accountability differ for each of these actors.

P2.II.B.3.i. NTIA

ICANN, as the current IANA Numbering Services Operator, is obligated by the NTIA agreement to manage the IANA Number Registries according to policies developed by the Internet Number Community.

Although the IANA operator escalation and reporting mechanisms are public in nature, the NTIA has an oversight role in the provision of the services through its contract with ICANN. The ultimate consequence of failing to meet the performance standards or reporting requirements is understood to be a decision by the contracting party (the NTIA) to terminate or not renew the IANA Functions Agreement with the current contractor (ICANN).

P2.II.B.3.ii. The Regional Internet Registries

Administration by the IANA Numbering Services Operator consists predominantly of processing of requests from the RIRs for issuance of additional number resources. The five RIRs are intimately familiar with global numbering policies under which the requests are made and maintain communications with the IANA Numbering Services Operator throughout the request process.

The RIRs are not-for-profit membership-based organizations, and as such they are accountable to their members by law. The specific governance processes for each RIR differ depending on where they have been established and the decisions made by their membership, but in all RIRs members have the right to elect individuals to the governing board and to vote on matters related to the respective RIR.

At the same time, an RIR's registration and allocation practices are directed by policies developed by the community. Each RIR's PDP defines how these policies are developed, agreed, and accepted for operational implementation.

The corporate governance documents and PDPs of each RIR are accessible via the RIR Governance Matrix, published on the NRO web site: www.nro.net/about-the-nro/rir-governance-matrix

P2.II.B.4. Description of the mechanism

(e.g., contract, reporting scheme, auditing scheme, etc.). This should include a description of the consequences of the IANA functions operator not meeting the standards established by the mechanism, the extent to which the output of the mechanism is transparent and the terms under which the mechanism may change.

The NTIA IANA Agreement currently defines obligations of the IANA Operator for Internet Number Resources.

This obligation is specifically noted in section C.2.9.3 of the NTIA agreement:

> *C.2.9.3 Allocate Internet Numbering Resources – The Contractor shall have responsibility for allocated and unallocated IPv4 and IPv6 address space and Autonomous System Number (ASN) space based on established guidelines and policies as developed by interested and affected parties as enumerated in Section C.1.3.*

The NTIA agreement also lays out specific deliverables for the IANA Numbering Services Operator (ICANN) to produce as a condition of the agreement (see "Section F – Deliveries and Performance"), including performance standards developed in cooperation with the affected parties (in the case of the IANA Number Registries, the affected parties are the RIRs and the Internet Number Community), customer complaint procedures, and regular performance reporting.

These deliverables are met by ICANN via monthly reporting on their performance in processing requests for the allocation of Internet Number Resources; these reports include IANA operational performance against key metrics of accuracy, timeliness, and transparency, as well as the performance metrics for individual requests. The IANA

operations team also provides escalation procedures for use in resolving any issues with requests, as per the “IANA Customer Service Complaint Resolution Process.”

P2.II.B.5. Jurisdiction and legal basis of the mechanism

Jurisdiction for the current mechanism is the United States of America under applicable federal government contracting laws and regulations.

Relevant links:

NTIA IANA Agreement: http://www.ntia.doc.gov/page/iana-functions-purchase-order

ICANN ASO MoU: https://www.nro.net/documents/icann-address-supporting-organization-aso-mou

NRO MoU: https://www.nro.net/documents/nro-memorandum-of-understanding

IANA Customer Service Complaint Resolution Process: http://www.iana.org/help/escalation-procedure

IANA Performance Standards Metrics Report: http://www.iana.org/performance/metrics

RIR Governance Matrix: https://www.nro.net/about-the-nro/rir-governance-matrix

P2.III. Proposed Post-Transition Oversight and Accountability

This section should describe what changes your community is proposing to the arrangements listed in Section II.B in light of the transition. If your community is proposing to replace one or more existing arrangements with new arrangements, that replacement should be explained and all of the elements listed in Section II.B should be described for the new arrangements. Your community should provide its rationale and justification for the new arrangements.

If your community’s proposal carries any implications for the interface between the IANA functions and existing policy arrangements described in Section II.A, those implications should be described here.

If your community is not proposing changes to arrangements listed in Section II.B, the rationale and justification for that choice should be provided here.

P2.III.A. The elements of this proposal

- ICANN to continue as the IANA Functions Operator for the IANA Numbering Services, hereinafter referred to as the IANA Numbering Services Operator, via a contract with the RIRs;
- IPR related to the provision of the IANA services remains with the community;

- Service Level Agreement with the IANA Numbering Services Operator; and
- Establishment of a Review Committee, with representatives from each RIR, to advise the NRO EC on the review of the IANA functions operator's performance and meeting of identified service levels.

2074 This proposal assumes that specific IANA customers (i.e., the number community, the protocol parameter community, and the name community) will have independent arrangements with the IANA Functions Operator related to maintenance of the specific registries for which they are responsible. At the same time, the Internet Number Community wishes to emphasize the importance of communication and coordination between these communities to ensure the stability of the IANA services. Such communication and coordination would be especially vital should the three communities reach different decisions regarding the identity of the IANA Functions Operator after the transition. Efforts to facilitate this communication and coordination should be undertaken by the affected communities via processes distinct from this stewardship transition process.

2075 P2.III.A.1. ICANN to continue as the IANA Numbering Services Operator via a contract with the RIRs

2076 To maintain stability and continuity in operations of the IANA Numbering Services, very minimal changes to the arrangements listed in Section 2.2 are proposed, including the identification of the proposed initial IANA Numbering Services Operator. As noted in numerous NRO communications over the past decade, the RIRs have been very satisfied with the performance of ICANN in the role of the IANA Numbering Services Operator. Taking this into account, and considering the Internet Number Community's strong desire for stability and a minimum of operational change, the Internet Number Community believes that ICANN should remain in the role of the IANA Numbering Services Operator for at least the initial term of the new contract.

2077 Although there are no concrete needs or plans to do so at this point, the Internet Number Community may in the future determine that the IANA Numbering Services related to number resources should be transferred to a different contractor. In such a case, selection of a new contractor shall be conducted in a fair, open, and transparent process, consistent with applicable industry best practices and standards.

2078 P2.III.A.2. IPR related to the provision of the IANA services remains with the community

2079 There are several intellectual properties related to the provision of the IANA services whose status should be clarified as part of the transition: the IANA trademark, the IANA.ORG domain name, and public databases related to the performance of the IANA Numbering Services, including the IANA Numbers Registries.

2080 It is important that the IPR status of the registries remains clear and ensures free and unrestricted access to the public registry data throughout the stewardship transition. It is the expectation of the Internet Number Community that the IANA Number Registries are in the public domain.

2081 It is also the expectation of the Internet Number Community that non-public information related to the IANA number resource registries and corresponding services, including the provision of reverse DNS delegation in IN-ADDR.ARPA and IP6.ARPA, is managed by the IANA operator and will be transferred to its successor(s). All rights on non-public information related to the IANA number resource registries and corresponding services must be transferred to the RIRs.

2082 It is the preference of the Internet Number Community that all relevant parties agree to these expectations as part of the transition.

2083 With regards to the IANA trademark and the IANA.ORG domain, it is the expectation of the Internet Number Community that both are associated with the IANA Numbering Services and not with a particular IANA Numbering Services Operator. Identifying an organization that is not the IANA Numbering Services Operator and which will permanently hold these assets will facilitate a smooth transition should another operator (or operators) be selected in the future. It is the preference of the Internet Number Community that the IANA trademark and the IANA.ORG domain name be transferred to an entity independent of the IANA Numbering Services Operator, in order to ensure that these assets are used in a non-discriminatory manner for the benefit of the entire community. From the Internet Number Community's perspective, the IETF Trust would be an acceptable candidate for this role.

2084 The transfer of the IANA trademark and IANA.ORG domain to the IETF Trust will require additional coordination with the other affected communities of the IANA Services, namely, protocol parameters and names. It is the preference of the Internet Number Community that all relevant parties agree to these expectations as part of the transition.

2085 P2.III.A.3. Service Level Agreement with the IANA Numbering Services Operator

2086 The Internet Number Community proposes that a new contract be established between the IANA Numbering Services Operator and the five RIRs. The following is a proposal to replace the current NTIA IANA agreement with a new contract that more directly reflects and enforces the IANA Numbering Services Operator's accountability to the Internet Number Community. The proposal attempts to ensure the continuity of processes and mechanisms that have proved successful and with which the community is satisfied.

- The services provided by the IANA Numbering Services Operator in relation to the IANA Numbering Services remain unchanged.
- The policy sources identified in Section II.A are unaffected.
- The oversight and accountability mechanisms detailed in Section II.B remain unchanged.
- The entities that provide oversight or perform accountability functions (the RIRs) remain the same.
- The consequence of failure to meet performance standards remains unchanged: termination or non-renewal of the contract.

2087 The agreement, essentially a Service Level Agreement for the IANA Numbering Services, would obligate the IANA Numbering Services Operator to carry out the IANA Numbering Services according to policies developed by the Internet Number Community via the gPDP as well as management of the delegations within IN-ADDR.ARPA and IP6.ARPA domains. The agreement would include specific requirements for performance and reporting consistent with current mechanisms and would specify consequences should the IANA Numbering Services Operator fail to meet those requirements, the means for the resolution of disputes between the parties, and the terms for renewal or termination of the agreement. IANA Numbering Services should be reliable and consistent, with any registry changes made in an open and transparent manner to the global community. The agreement should also require the IANA Numbering Services Operator to appropriately coordinate with any other operator of IANA services. The agreement would also provide for jurisdiction and governing law regarding the new arrangement.

2088 It is expected that the RIRs, as the contractual party of this agreement, will draft the specific language of this agreement. During the drafting process, the RIRs are expected to consult their respective RIR communities, and that the drafting process will be guided by the principles listed below. References to relevant sections of the current NTIA agreement are also noted, as it is expected the new agreement will share many of the same contractual goals and mechanisms.

2089 **IANA Service Level Agreement Principles**

1. **Separation of Policy Development and Operational Roles**
   The IANA Numbering Services Operator will merely execute the global policies adopted according to the global Policy Development Process defined in the ASO MoU.
   Relevant section(s) in the NTIA contract: C.2.4, C.2.5

2. **Description of Services Provided to RIRs**
   The IANA Numbering Services Operator will maintain the IANA Number Registries and provide IANA Numbering Services to the RIRs in accordance with the specific processes and timelines described in this section of the agreement.
   Relevant section(s) in the NTIA contract: C.2.9.3

3. **Obligation to Issue Reports on Transparency and Accountability**
   The IANA Numbering Services Operator will commit to certain obligations so as to perform the function as expected by the Internet Number Community and will be obliged to periodically issue reports illustrating its compliance with the Internet Number Community's expectations.
   Relevant section(s) in the NTIA contract: C.2.6, C.2.7, C.2.8

4. **Security, Performance, and Audit Requirements**
   The IANA Numbering Services Operator will commit to specific security standards, metric requirements, and audit requirements and will be obliged to periodically issue reports illustrating its compliance with them.
   Relevant section(s) in the NTIA contract: C.3, C.4, C.5

5. **Review of the IANA Operations**
   The RIRs will perform reviews to assess whether the IANA Numbering Services Operator complies with all requirements described in the agreement whenever they

deem appropriate. The IANA Numbering Services Operator will be obliged to facilitate this review.

6. **Failure to Perform**
   If the IANA Numbering Services Operator fails to perform as agreed, there will be specific consequences. One of these consequences may be termination of the agreement.
   Relevant section(s) in the NTIA contract: E.2, I.67

7. **Term and Termination**
   RIRs will be able to periodically review the agreement and evaluate whether they want to renew the agreement. Either party may terminate the agreement with reasonable prior notice.
   Relevant section(s) in the NTIA contract: Page 2 of Award, I.51, I.52, I.53

8. **Continuity of Operations**
   If, at the end of the term, the RIRs decide to sign an agreement for provision of IANA Numbering Services by a different party, the previous IANA Numbering Services Operator will be obliged to ensure an orderly transition of the function while maintaining continuity and security of operations.
   Relevant section(s) in the NTIA contract: C.7.3 and I.61

9. **Intellectual Property Rights and Rights Over Data**
   The contract will implement the RIR community expectations as described in section III.A.2.
   Relevant section(s) in the NTIA contract: H.4, H.5

10. **Resolution of Disputes**
    Disputes between the parties related to the SLA will be resolved through arbitration.

11. **Fee**
    The fee is based on costs incurred by the IANA Numbering Services Operator in providing the IANA Numbering Service.
    Relevant section(s) in the NTIA contract: B.2

P2.III.A.4. Establishment of a Review Committee

To ensure that the service level defined in the proposed agreement is maintained by the IANA Numbering Services Operator, the NRO EC will periodically review the service level of the IANA Numbering Services provided to the Internet Number Community.

The RIRs shall establish a Review Committee that will advise and assist the NRO EC in its periodic review. The Review Committee will, as needed, undertake a review of the level of service received from the IANA Numbering Services Operator and report to the NRO EC any concerns regarding the performance of the IANA Numbering Services Operator, including especially any observed failure or near-failure by the IANA Numbering Services Operator to meet its obligations under the proposed agreement. Any such Review Committee will advise the NRO EC in its capacity solely to oversee the performance of the IANA Numbering Services, and the Review Committee's advice and comment will be limited to the processes followed in the IANA Numbering Services Operator's performance under

the proposed agreement. Activities of the Review Committee shall be conducted in an open and transparent manner. Reports from the Review Committee shall be published.

2093 The Review Committee should be a team composed of suitably qualified Internet Number Community representatives from each RIR region. The selection of the Review Committee members should be conducted in an open, transparent, and bottom-up manner appropriate for each RIR region. There should be equal representation from each RIR region within the Review Committee.

2094 P2.III.B. Implications for the interface between the IANA functions and existing policy arrangements

2095 This proposal carries no implication for the interface between IANA Numbering Services and existing policy arrangements described in Section II.A. The text in Attachment A of the ICANN ASO MoU meets the current and anticipated requirements for a community-driven global policy development process.

2096 As an additional measure of security and stability, the RIRs have documented their individual accountability and governance mechanisms and asked the community-based Number Resource Organization Number Council (NRO NC) to undertake a review of these mechanisms and make recommendations for improvements that may be warranted given the nature of the stewardship transition for Internet Number Resources.

P2.IV. Transition Implications

2097 This section should describe what your community views as the implications of the changes it proposed in Section III. These implications may include some or all of the following, or other implications specific to your community:

- *Description of operational requirements to achieve continuity of service and possible new service integration throughout the transition.*
- *Risks to operational continuity and how they will be addressed.*
- *Description of any legal framework requirements in the absence of the NTIA contract.*
- *Description of how you have tested or evaluated the workability of any new technical or operational methods proposed in this document and how they compare to established arrangements.*

2098 P2.IV.A. Operational requirements to achieve continuity of service throughout the transition

- *Describe operational requirements to achieve continuity of service and possible new service integration throughout the transition.*
- *Risks to operational continuity and how they will be addressed.*

2099 The intent of the proposal described above is to:

- Minimize risks to operational continuity of the management of the IANA Numbering Services, and;
- Retain the existing framework for making those policies that describe the management of the IANA Number Registries, as this framework is already structured to ensure open, transparent, and bottom-up development of such policies.

2100 Under current arrangements, the NTIA is responsible for extending or renewing the IANA functions agreement and setting the terms of that contract. A new agreement with the five RIRs and the IANA Numbering Services Operator as signatories would shift the responsibility for renewing, setting terms, or terminating the contract to the RIRs, who would coordinate their decisions via the NRO EC. Decisions made regarding the agreement would be based on operational circumstances, past performance, and input from the Internet Number Community.

2101 The shift from the existing contractual arrangement to one or more new contracts covering the IANA Numbering Services Operator's ongoing management of the IANA Numbering Services should result in no operational change for management of the IANA Number Registries. This will help minimize any operational or continuity risks associated with stewardship transition.

2102 By building on the existing Internet registry system (which is open to participation from all interested parties) and its structures, the proposal reduces the risk associated with creating new organizations whose accountability is unproven.

2103 A new agreement specifying IANA operation of the IANA Number Registries can and should be established well before the September 2015 transition target, as we propose to simply reconcile the contracting party with the policy authority, without changing service levels or reporting.

2104 P2.IV.B. Description of any legal framework requirements in the absence of the NTIA contract

2105 The necessary legal framework in the absence of the NTIA contract will be fulfilled by the proposed agreement between the IANA Numbering Services Operator and the RIRs. As stated in Section III above, the Service Level Agreement for the IANA Numbering Services, would obligate the IANA Numbering Services Operator to carry out those IANA Numbering Services according to policies developed by the community via the gPDP, as well as management of the delegations within IN-ADDR.ARPA and IP6.ARPA domains.

2106 P2.IV.C. Workability of any new technical or operational methods

2107 Description of how you have tested or evaluated the workability of any new technical or operational methods proposed in this document and how they compare to established arrangements.

2108 This proposal does not propose any new technical or operational methods. There is inclusion of a proposed Review Committee to be established by the five RIRs acting

cooperatively and coordinating through the NRO EC; however, this does not carry any new operational method, as the IANA Numbering Services Operator would remain accountable to the party with whom it is contracting, in this case the five RIRs in place of the NTIA. The proposed Review Committee is a tool for the Internet Number Community to evaluate and review performance of the IANA Numbering Services provided.

P2.V. NTIA Requirements

2109 Additionally, NTIA has established that the transition proposal must meet the following five requirements:

- *Support and enhance the multistakeholder model;*
- *Maintain the security, stability, and resiliency of the Internet DNS;*
- *Meet the needs and expectation of the global customers and partners of the IANA services;*
- *Maintain the openness of the Internet.*
- *The proposal must not replace the NTIA role with a government-led or an inter-governmental organization solution.*

This section should explain how your community's proposal meets these requirements and how it responds to the global interest in the IANA functions.

2110 This proposal addresses each of the NTIA's requirements:

2111 P2.V.A. Support and enhance the multistakeholder model

2112 The RIRs are not-for-profit membership-based organizations accountable to their community. The processes developed by the community over time are open, transparent, and bottom-up, and inclusive of all stakeholders, ensuring the opportunity for anyone with an interest in management of Internet Number Resources to participate in policy-making.

2113 Shifting stewardship of the IANA Numbering Services to the Internet Number Community is an important step in acknowledging the maturity and stability of the multistakeholder governance model and in recognizing the success and de facto authority of that model under the current arrangement.

2114 P2.V.B. Maintain the security, stability, and resiliency of the Internet DNS

2115 No changes are proposed in this document that affect the security, stability, or resiliency of the DNS.

2116 This proposal is chiefly concerned with Internet Number Resources, which also need security, stability, and resiliency. The existing operational and policy-making structures related to management of the IANA Number Registries have served the Internet community well over time, and the Internet Number Community has expressed a strong desire for

stability and operational continuity of this critical element of the Internet infrastructure. Accordingly, this proposal suggests minimal changes to existing processes.

P2.V.C. Meet the needs and expectation of the global customers and partners of the IANA services

The Internet Number Community is the customer of the Internet number resource IANA Numbering Services. The Internet Number Community has often expressed its satisfaction with the current management of the IANA Numbering Services, which have effectively implemented policies developed by the community and efficiently provided Numbering Services to the RIRs. This proposal has been developed by the Internet Number Community, as the customer of the IANA Numbering Services, and meets its need for continuity and stability in the operation of the IANA Numbering Services. It does this by solidifying the IANA Numbering Services Operator's accountability to the Internet Number Community.

P2.V.D. Maintain the openness of the Internet

An open Internet relies on the effective implementation of policies developed via open, transparent, and bottom-up processes, ensuring the transparent and coordinated distribution and registration of Internet Number Resources. The Internet Number Community has a long-standing history of open, transparent, and bottom-up policy-making and operational processes (including the transparent publication of all registration information). By building on the structures developed by the Internet Number Community, this proposal ensures that in this regard the openness of the Internet is maintained.

In addition, the proposed community Review Committee will ensure community involvement in the open and transparent evaluation of the IANA Numbering Services.

P2.V.E. Not a government-led or inter-governmental solution

This proposal does not replace the NTIA role with a government-led or an inter-governmental organization solution. This proposal places the RIRs in the role currently occupied by the NTIA. The RIRs are not-for-profit organizations, accountable to the community. The Internet Number Community is open to anyone who wishes to contribute and includes participants from all Internet stakeholder groups, including operators, civil society, business, the technical community, and governments. Open, community-driven, and consensus-based policy development processes mean that no single stakeholder group has a dominant role in policy-making.

P2.VI. Community Process

2124 *This section should describe the process your community used for developing this proposal, including:*

- *The steps that were taken to develop the proposal and to determine consensus.*
- *Links to announcements, agendas, mailing lists, consultations and meeting proceedings.*
- *An assessment of the level of consensus behind your community's proposal, including a description of areas of contention or disagreement.*

2125 P2.VI.A. Steps taken to develop consensus and the proposal

2126 The Internet Number Community process is open, transparent, and bottom-up, with the initial discussions and proposal elements agreed on a regional basis in each region of the Internet Number Community. The consensus output of these five regional discussions has been consolidated in a single global proposal.

2127 This process was deliberately modeled on the processes that the Internet Number Community has successfully employed for policy-making at the regional and global levels. It reflects the strong commitment emerging from all community discussions to employing proven structures and mechanisms in this process.

2128 The proposal development can therefore be seen as two distinct phases, first at the regional level and then at the global level. It is important to emphasize that neither of these phases occurred in isolation; throughout the first phase there was communication between the five regions, and during the second phase each region remained apprised of progress and provided feedback on successive iterations of the global proposal.

2129 P2.VI.B. Regional Processes

2130 The Internet Number Community's process for developing a new agreement for operation of the IANA Numbering Services was founded on the regional Internet Number Community structure, in which stakeholders discuss policies and other issues relevant to numbers resources. The Internet Number Community has for many years fostered the open, transparent, and bottom-up participation of a broad range of stakeholders. Existing mechanisms and communication channels therefore existed to facilitate the IANA stewardship transition discussion, eliminating the need for new processes, communication channels, or bodies. The RIRs have worked actively over the years to engage the full range of stakeholders via outreach activities within their regions as part of their commitment to openness, inclusiveness, and transparency. Building on these outreach activities, the RIRs and the CRISP Team have ensured that this proposal has been the product of input and feedback from the full range of stakeholders with an interest in Internet Number Resources.

2131 The RIRs operate according to open, transparent, bottom-up, and consensus-based processes, allowing anyone with an interest to participate in the discussions on an equal footing. Holding the IANA stewardship discussion within this community has ensured broad participation and facilitated examination of the issues raised in the context of local and

regional circumstances. The very active community engagement within all regions not only shows the positive commitment of the Internet Number Community to this process but also demonstrates the Internet Number Community's mature and well-functioning decision-making processes.

2132 The Internet Number Community discussed the IANA stewardship issues on five regional and two global mailing lists and at RIR and other public meetings, both face-to-face and via remote participation. Although the discussions have been uniformly open and transparent, with all discussions archived on mailing lists and meeting records, each region has contributed to the community consensus via regionally defined processes suitable to their particular local needs and culture.

2133 Links to specific output documents and archives of all of the Internet Number Community discussions are available at https://www.nro.net/nro-and-internet-governance/iana-oversight/timeline-for-rirs-engagement-in-iana-stewardship-transition-process

2134 P2.VI.B.1. AFRINIC regional process

2135 The AFRINIC community held an IANA oversight transition workshop during the May 25 through June 6, 2014, Africa Internet Summit in Djibouti. As a follow-up to the meeting, AFRINIC set up a mailing list to provide a platform for the African Internet community to discuss the IANA oversight transition process. The mailing list was announced on July 4, 2014. The list and its archives can be found at https://lists.afrinic.net/mailman/listinfo.cgi/ianaoversight

2136 AFRINIC has a dedicated web portal for sharing information on the IANA stewardship transition: http://afrinic.net/en/community/iana-oversight-transition

2137 AFRINIC also conducted a survey seeking community input on the IANA Stewardship Transition: http://afrinic.net/images/stories/Initiatives/%20survey%20on%20the%20iana%20stewardship%20transition.pdf

2138 The last face-to-face meeting at which IANA oversight transition consultations were held with the community was during the AFRINIC-21 meeting, held in Mauritius from November 22 through 28, 2014. Recordings of the session are available: http://meeting.afrinic.net/afrinic-21/en/vod

2139 Discussions continued on the ianaoversight@afrinic.net mailing list until the closure of comments set by the CRISP Team on January 12, 2015.

2140 The AFRINIC region CRISP Team was appointed by the AFRINIC Board of Directors. Key milestones of the appointment process were:

2141 October 27, 2014: Public Call for nominations — The call was sent by the AFRINIC CEO to major community mailing lists, indicating intent of the Board to make appointments by November 12, 2014: https://lists.afrinic.net/pipermail/announce/2014/001326.html

2142 November 8, 2014: The AFRINIC CEO announced the 5 nominated candidates: https://lists.afrinic.net/pipermail/ianaoversight/2014-November/000099.html

November 13, 2014: The AFRINIC Board Chair announced the three CRISP Team members selected to the community: https://lists.afrinic.net/pipermail/rpd/2014/004381.html

The AFRINIC IANA oversight transition information page: http://www.afrinic.net/en/community/iana-oversight-transition

P2.VI.B.2. APNIC regional process

APNIC set up a public mailing list on April 1, 2014, to develop a regional position on the IANA stewardship transition: http://mailman.apnic.net/mailman/listinfo/IANAxfer

A web site dedicated to sharing up-to-date information on the IANA stewardship transition was set up: http://www.apnic.net/community/iana-transition

A draft proposal was discussed at the dedicated session at the APNIC 38 Meeting in September 2014, and a regional community consensus was reached. The meeting included bidirectional remote participation via live webcast and a virtual conference room: https://conference.apnic.net/38/program#iana

On October 23, 2014, through a post to the APNIC IANAxfer mailing list, APNIC sought volunteers from the Asia Pacific community to nominate to join the CRISP Team. The nominees were asked to provide information about their qualifications and interest to the APNIC Executive Council for its consideration. The nomination period was open for two weeks. On November 12, 2014, the APNIC Executive Council announced the three APNIC representatives selected to join the CRISP Team: http://blog.apnic.net/2014/11/13/dr-govind-and-ms-okutani-appointed-to-nro-crisp-team

Information was also posted on APNIC's IANA oversight transition web site: http://www.apnic.net/community/iana-transition

Discussion continued on the ianaxfer@apnic.net mailing list until the closure of the comments on January 12, 2015.

P2.VI.B.3. ARIN regional process

ARIN held a community consultation from October 1 through October 10, 2014, including a live session on October 9, during the ARIN 34 meeting in Baltimore, USA.

On October 13, ARIN established a mailing list, iana-transition@arin.net, to facilitate regional discussion of the IANA stewardship transition planning process. This mailing list remained open for comments and updates throughout the transition planning process. The archives are open and available for all Internet community members to view: http://lists.arin.net/pipermail/iana-transition

A regional survey was conducted from October 13 through 20, 2014, eliciting 64 responses: https://www.arin.net/participate/governance/iana_survey.pdf

On October 25, 2014, ARIN put a call out for volunteers to serve on the CRISP Team as community representatives of the ARIN region. The call for volunteers ended on October 31,

2014. The ARIN Board of Trustees considered all the resulting nominees and on November 8 announced the appointment of its three CRISP Team members.

2157 On November 21, 2014, the first ARIN draft proposal was shared on iana-transition@arin.net and discussion followed: http://teamarin.net/wp-content/uploads/2014/03/ARIN_draft_proposal.pdf

2158 ARIN has set up a web portal dedicated to the IANA Stewardship Transition planning process: http://teamarin.net/education/internet-governance/iana-transition

2159 P2.VI.B.4. LACNIC regional process

2160 The LACNIC community began a consultative process on August 15, 2014, with a public teleconference in which LACNIC's CEO discussed the methodology, expected timeline, and consultation scope with the community. The primary goal was to obtain the region's input to the multistakeholder debate on the transition of stewardship of the IANA Numbering Services, gathering regional points of view, concerns, suggestions, and recommendations, specifically concerning Internet number resource management.

2161 From that starting point, three representatives from the community guided the regional debate: http://www.lacnic.net/en/web/transicion/representantes

2162 Discussion took place on the internet-gov@lacnic.net mailing list.

2163 From August 15 through September 15, 2014, open discussion was held.

2164 On September 23, moderators presented a preliminary transition document summarizing all contributions and discussions.

2165 A thirty-day community discussion of the preliminary document ended on October 24.

2166 During the October 27 through 31 LACNIC meeting in Santiago, the preliminary transition document was discussed in two sessions. The first session focused on the global IANA oversight transition process and the work done by the name, number, and protocol communities. The second focused on the proposals from the mailing list and began the process of drafting a final LACNIC regional community proposal.

2167 Following these sessions, there was an additional week of community discussion ending November 15, before the proposal was ratified by LACNIC's Board of Directors and submitted to the CRISP Team.

2168 Announcement of the appointment of the LACNIC region members of the CRISP Team: http://www.lacnic.net/en/web/anuncios/2014-crisp-team

2169 After the board appointed the CRISP Team members, there was continued dialog between the Community Leaders and the LACNIC CRISP Team representatives through email and teleconferences.

2170 The final result of the Consultation at LACNIC Community: http://www.lacnic.net/en/web/transicion/resultado-consulta-publica

2171 The list internet-gov@lacnic.net remained open for regional discussion until the closure of the comments on January 12, 2015.

2172 P2.VI.B.5. RIPE regional process

2173 The RIPE community agreed at the RIPE 68 Meeting in May 2014 that the development of a community position on IANA stewardship should take place in the existing RIPE Cooperation Working Group and via that working group's public mailing list: https://www.ripe.net/ripe/mail/wg-lists/cooperation

2174 The RIPE NCC, as secretariat for the RIPE community, also facilitated discussion of the IANA stewardship in national and regional forums across the RIPE NCC service region from May through November, 2014. Some of these forums also included remote participation facilities. Summaries of all discussions were posted to the RIPE Cooperation Working Group mailing list and on the RIPE web site: https://www.ripe.net/iana-discussions

2175 Although there were active, and at times passionate, discussions in the community throughout the consultation period, there was clearly strong agreement on the needs of the Internet Number Community and the general principles that should underpin transition of IANA stewardship. From September through November 2014, RIPE community discussion converged on a set of principles reflecting the community's primary concerns and needs in the development of an IANA stewardship transition proposal. These discussions are reflected in the discussions on the mailing list from that time: http://www.ripe.net/ripe/mail/archives/cooperation-wg

2176 Discussions at the RIPE 69 meeting in November 2014 reached consensus on the principles discussed on the mailing list. During the RIPE 69 meeting a general invitation for community volunteers to the CRISP Team was distributed via various RIPE NCC membership and RIPE community mailing lists: http://www.ripe.net/ripe/mail/archives/ripe-list/2014-November/000877.html

2177 This announcement noted the procedure whereby the RIPE Chair, in consultation with the RIPE NCC Executive Board, would select two community representatives and a staff representative. At the conclusion of RIPE 69, the community expressed its support for the three RIPE representatives to the CRISP Team.

2178 RIPE Cooperation Working Group Session: https://ripe69.ripe.net/programme/meeting-plan/coop-wg/#session1

2179 RIPE 69 Closing Plenary Session: https://ripe69.ripe.net/archives/video/10112

2180 P2.VI.B.6. Internet Number Community Process (CRISP Team)

2181 Following the broad consultations and active discussion within the five regions, a mechanism was established to develop a single proposal from the Internet Number Community, based on the consensus of the five regions.

2182 On October 16, 2014, the Internet Number Community proposed the formation of the CRISP Team to develop a single Internet Number Community proposal to the IANA Stewardship Coordination Group (ICG). Established around a model similar to the community-based

NRO Number Council, the CRISP Team comprises three community members from each of the RIR regions (two community members and one RIR staff). The selection of the CRISP Team members from each region was facilitated via transparent but distinct processes within each RIR. Details of these selection processes are included in the RIR process descriptions above.

2183 The CRISP Team members are:

AFRINIC Region:

Alan P. Barrett – Independent Consultant
Mwendwa Kivuva – Network Infrastructure Services, University of Nairobi
Ernest Byaruhanga (Appointed RIR staff)

ARIN Region:

Bill Woodcock – Executive Director, Packet Clearing House
John Sweeting – Sr. Director Network Architecture & Engineering, Time Warner Cable
Michael Abejuela (Appointed RIR staff)

APNIC Region:

Dr Govind – CEO, NIXI
Izumi Okutani – Policy Liaison, JPNIC
Craig Ng (Appointed RIR staff)

LACNIC Region:

Nico Scheper – Manager, Curacao IX
Esteban Lescano – Vice Chairman, Cabase Argentina
Andrés Piazza (Appointed RIR staff)

RIPE NCC Region:

Nurani Nimpuno – Head of Outreach & Communications, Netnod
Andrei Robachevsky – Technology Programme Manager, Internet Society
Paul Rendek (Appointed RIR staff)

2184 ### P2.VI.B.7. CRISP Team Methodology

2185 The charter of the CRISP Team describes its methodology, to ensure maximum transparency and openness of the process. The charter is available on the NRO web site: https://www.nro.net/crisp-team

2186 From that charter:

- The CRISP Team shall meet entirely via teleconference for its activities; these teleconferences will be open to the public who wish to listen to the CRISP Team discussions, and will be facilitated by the Regional Internet Registries.

- The CRISP Team shall also work through a public mailing list and the archive of such mailing list will be publicly available. The name of the mailing list will be ianaxfer@nro.net.

- The results of each CRISP Team meeting shall be published on the ianaxfer@nro.net mailing list and additionally by each RIR to the community. The CRISP Team members from the region shall monitor and participate in the community discussion in their region regarding CRISP Team outputs.

2187 The CRISP Team held its first teleconference on December 9, 2014. At that meeting, Izumi Okutani (APNIC region) and Alan Barrett (AFRINIC region) were selected as the Chair and Vice-Chair, respectively. A timeline for the process was defined, published, and announced. All CRISP teleconferences have been announced on the relevant regional mailing lists as well as the global ianaxfer@nro.net list. As stipulated in the charter, all CRISP teleconferences have been open to observers. Archives of the audio, video, and minutes of all CRISP teleconferences, as well as several iterations of the proposal draft and a spreadsheet of issues raised by community members and their current status, have been made available online: https://www.nro.net/crisp-team

2188 Additionally, the CRISP Team decided that in the interests of efficiency an “internal” CRISP mailing list would be established – only members of the CRISP Team would be able to send mail to this list or receive mail sent to the list, but the list content would be archived publicly on the NRO web site. This archive is available: https://www.nro.net/pipermail/crisp/

2189 Throughout the CRISP Team process, CRISP Team members have engaged with their regional communities, ensuring that the communities are informed and sharing information with other CRISP Team members on key events and discussions in their regional forums. They have also consulted the discussion archives of their regional communities as necessary throughout the process to ensure the fair and accurate representation of their community’s views. CRISP Team members have been active in encouraging feedback from their regions, whether on the global ianaxfer@nro.net mailing list or in the regional discussion forums.

2190 P2.VI.C. Level of consensus behind the community’s proposal

2191 Throughout CRISP Team deliberations, consensus was determined when, following discussions within the team, no further comments, concerns, or objections were observed. A 24-hour window was set for decisions made during CRISP Team teleconferences and shared on the CRISP Team mailing list to allow those who were not at the call to provide input.

2192 A similar approach was taken for the ianaxfer@nro.net list. Consensus was determined following discussions on the list around an issue raised or a new suggestion when no further comments, concerns, objections were observed.

2193 Prior to submitting this proposal to the ICG, two drafts were published, along with calls for feedback from the global community. These two comment periods were important in ensuring that the community had a chance to actively contribute to resolving issues identified during the process.

2194 In addition, the CRISP Team has called for community feedback on this current draft of the proposal. ICG members and other interested parties can observe the level of support for the proposal in the archives of ianaxfer@nro.net mailing list.

2195 In comparing output coming from each RIR region, many commonalities were identified early in the process, and there was a clear consensus across the five RIR communities on the basic principles for this proposal. The Internet Number Community tradition of open, transparent, and bottom-up processes defined the discussions in all regions, and a solid trust in the RIR system was consistently expressed throughout the process. Although all five regional inputs differed, no major conflicts or irreconcilable points of contention were identified.

Notable points of difference included the views on the format of the agreement to be established between the IANA Numbering Services Operator and the RIRs, and on the need for an oversight body to periodically review the agreement. The current proposal reflects the consensus agreement reached on these issues through discussion within the CRISP Team and in public forums, especially the ianaxfer@nro.net mailing list.

2196 In the global discussions at ianaxfer@nro.net, several issues received close attention and provoked significant discussion. These issues included:

- Composition of Review Committee
- Details of the agreement, including its term and termination conditions, dispute resolution and the need of SLA text to be submitted
- Intellectual property rights of the data and trademarks associated with the IANA Numbering Services

2197 Comments mainly focused on clarification of details of these issues. Support was expressed by several people on the ianaxfer@nro.net mailing list on the final, agreed elements of the proposal listed in Section III.

2198 There was clear agreement from the global community on positions regarding each of these issues, as reflected in the content of the current proposal. The CRISP Team believes therefore that the current proposal fully reflects the consensus of the global Internet Number Community.

P2. Appendix: Definitions

Address Supporting Organization (ASO): a Supporting Organization in the ICANN structure, as defined in the ICANN Bylaws, and was formed in 2004 by the ICANN ASO MoU. The ASO's role is to review and develop recommendations on Internet Protocol (IP) address policy and to advise the ICANN Board. The functions of the ASO are carried out by the Address Supporting Organization Address Council (ASO AC). https://aso.icann.org/about-the-aso/

Address Supporting Organization Address Council (ASO AC): has the following responsibilities in the ICANN structure and processes: undertaking a role in the global policy development process; defining procedures for the selection of individuals to serve on other ICANN bodies, in particular seats 9 and 10 on the ICANN Board, and implementing any roles assigned to the AC in such procedures; and providing advice to the ICANN Board on number resource allocation policy, in conjunction with the RIRs. The ASO AC function is carried out by the members of the NRO NC.

CRISP Team: The Consolidated RIR IANA Stewardship Proposal (CRISP) team was established by the five RIRs specifically for the purpose of producing this document.

Global Policies: Internet number resource policies that have the agreement of all RIRs according to their policy development processes and ICANN, and require specific actions or outcomes on the part of IANA or any other external ICANN-related body in order to be implemented.

Global Policy Development Process (gPDP): The RIR communities' process for the development of policy relating to management of the global Internet number registries. The gPDP is employed in the development of policies relating to all of the number-related IANA activities described in Section I, except those relating to maintenance of the "IN-ADDR.ARPA" and "IP6.ARPA" domains. The gPDP is formally defined in Attachment A of the ASO MoU and posted on the NRO website: https://www.nro.net/documents/global-policy-development-process

IANA Number Registries: Refers collectively to the IPv4, IPv6, and ASN registries, as well as the associated IN-ADDR.ARPA and IP6.ARPA DNS zones. The registries can be found here: http://www.iana.org/numbers

IANA Numbering Services Operator: The party contractually engaged to perform the IANA Numbering Services.

IANA Numbering Services: The IANA activities relevant to the Internet Number Community, which are the allocation of blocks of Internet Number Resources (namely IPv4 addresses, IPv6 addresses, and Autonomous System Numbers or ASNs) to the Regional Internet Registries (RIRs); the registration of such allocations in the corresponding IANA Internet Number Registries; other related registry management tasks including the management of returned IP address space, and general registry maintenance; and the administration of the special-purpose "IN-ADDR.ARPA" and "IP6.ARPA" DNS zones, in accordance with IPv4 and IPv6 allocations, respectively.

ICANN Address Supporting Organization Memorandum of Understanding (ICANN ASO MoU): A Memorandum of Understanding signed by ICANN and the NRO in 2004, under which the NRO shall fulfill the role, responsibilities and functions of the ASO (including that the NRO NC shall carry out the functions of the ASO AC).

Internet Number Community or RIR Community: Collaborative forum operating through decision-making processes that are bottom-up, inclusive and open to all parties interested in the IANA numbering services as well as in the services of the five RIRs.

Internet Number Registry System: The system for administering Internet Number Resources, whereby the IANA maintains the Number Registries from which the RIRs receive allocations to distribute to the

community and the RIRs coordinate with the IANA to correctly register any resources that are returned to the Number Registries. This system is described in detail in RFC 7020.

Internet Number Resources: IP addresses (IPv4, IPv6) and Autonomous System (AS) Numbers.

Number Resource Organization (NRO): A coordinating mechanism of the RIRs to act collectively on matters relating to the interests of the RIRs, established by an MoU between the RIRs.

Number Resource Organization (NRO): The Number Resource Organization (NRO) is a coordinating mechanism of the RIRs to act collectively on matters relating to the interests of the RIRs. It was established in 2003 by a Memorandum of Understanding between the four RIRs in operation at that time (and signed by AFRINIC upon its establishment in 2005). https://nro.net/

Number Resource Organization Executive Council (NRO EC): A group of appointed representatives of each RIR, normally the CEOs.

Number Resource Organization Executive Council (NRO EC): Body that represents the NRO and its suborganizations in all matters. Made up of one representative from each RIR, generally the CEO or Director of the RIR. Chairmanship of the NRO EC rotates through each of the RIRs on an annual basis.

Number Resource Organization Memorandum of Understanding (NRO MoU): A Memorandum of Understanding signed in 2003 by the four RIRs in operation at the time, and subsequently signed by AFRINIC in 2005. The MoU established the Number Resource Organization and defines its activities and sub-organizations.

Number Resource Organization Number Council (NRO NC): A body made up of three community members from each RIR community. It acts in an advisory capacity to the NRO Executive Council and to review of any global policy proposal to confirm that the documented RIR PDPs and relevant procedures were followed in its development and approval. In the ICANN structure, the members of the NRO NC serve the functions of the Address Supporting Organization Address Council (ASO AC).

Policy Development Process (PDP): The process within each RIR by which the community makes policies relating to the distribution and registration of Internet number resources within its service region. While these PDPs differ in some specifics, the share common characteristics: all RIR PDPs are open to all and follow an established, bottom-up process of collaboration; all RIR PDPs are transparent in their working methods, utilizing public mailing lists and open community forums; all RIR PDPs reach conclusions by community consensus; and the policies produced by an RIR PDP are made freely and publicly available.

Regional Internet Registry (RIR): The not-for-profit membership-based organizations responsible for the distribution and registration of Internet Number Resources in continent-sized geopolitical regions, as first proposed by the IETF in RFC 1366. The RIRs are an important element in the Internet Number Registry System as defined in RFC 7020. The RIRs were established in a bottom-up fashion and serve a secretariat role for their communities, facilitating the open, inclusive, bottom-up development of number resource policy. There are currently five RIRs in operation, as described in Section 1.B. of this document.

Part 3. Response from Protocol Parameters Registries Community

Draft Response to the IANA Stewardship Transition Coordination Group Request for Proposals on the IANA Protocol Parameters Registries

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Draft Response to the IANA Stewardship Transition Coordination Group Request for Proposals on the IANA Protocol Parameters Registries

P3. Abstract

3001 The U.S. NTIA has solicited a request from ICANN to propose how the NTIA should end its oversight of the IANA functions. After broad consultations, ICANN has in turn created the IANA Stewardship Transition Coordination Group. That group solicited proposals for thre three major IANA functions: names, numbers, and protocol parameters. This document contains the IETF response to that solicitation for protocol parameters. It is meant to be included in an aggregate response to the NTIA alongside those for names and numbering resources that are being developed by their respective operational communities.

3002 Status of This Memo

3003 This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79. Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at http://datatracker.ietf.org/drafts/current/. Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

3004 This Internet-Draft will expire on July 10, 2015.[119]

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P3.1. IETF Introduction

3008 In March of 2014 the U.S. National Telecommunications & Information Administration (NTIA) announced its intent to transition oversight of Internet Assigned Numbers Authority (IANA) functions [NTIA-Announce]. In that announcement, NTIA asked the Internet Corporation for Assigned Names and Numbers (ICANN) to establish a process to deliver a proposal for

[119] The draft is being held for publication in the RFC Editor's queue.

transition. As part of that process, the IANA Stewardship Transition Coordination Group (ICG) was formed. The charter for the ICG can be found in Appendix B. The ICG in turn solicited proposals regarding post-transition arrangements from the names, numbers, and protocol parameters communities in order to put forth a proposal to the NTIA. The final request for proposal (RFP) can be found in Appendix C.

3009 While there are interactions between all of the IANA functions and IETF standards, this document specifically addresses the protocol parameters registries function. Section 1 (this section) contains an introduction that is sourced solely within the IETF. Section 2 contains the questionnaire that was written by the ICG and a formal response by the IETF.[120]

3010 We note that the following text was stated as footnote in the original RFP:

> In this RFP, "IANA" refers to the functions currently specified in the agreement between NTIA and ICANN [http://www.ntia.doc.gov/page/iana-functions-purchase-order] as well as any other functions traditionally performed by the IANA functions operator. SAC-067 [https://www.icann.org/en/system/files/files/sac-067-en.pdf] provides one description of the many different meanings of the term "IANA" and may be useful reading in addition to the documents constituting the agreement itself.

P3.2. The Formal RFP Response

3011 The entire Request for Proposals, including introduction, can be found in Appendix C.

3012 **Proposal type**

3013 *Identify which category of the IANA functions this submission proposes to address:*

[ ] Names [ ] Numbers **[X] Protocol Parameters**

3014 This response states the existing practice of the IETF, and also represents the views of the Internet Architecture Board and the IETF.

P3.I. The Community's Use of the IANA

3015 *This section should list the specific, distinct IANA services or activities your community relies on. For each IANA service or activity on which your community relies, please provide the following:*

A description of the service or activity.

A description of the customer of the service or activity.

What registries are involved in providing the service or activity.

A description of any overlaps or interdependencies between your IANA requirements and the functions required by other customer communities

[120] This proposal has been reformatted.

P3.I.A. The service or activity

IETF Response:

Many IETF protocols make use of commonly defined protocol parameters. These parameters are used by implementers, who are the primary users of the IETF standards and other documents. To ensure consistent interpretation of these parameter values by independent implementations, and to promote universal interoperability, these IETF protocol specifications define and require globally available registries containing the parameter values and a pointer to any associated documentation. The IETF uses the IANA protocol parameters registries to store this information in a public location. The IETF community presently accesses the protocol parameter registries via references based on the iana.org domain name, and makes use of the term "IANA" in the protocol parameter registry processes [RFC5226].

P3.I.B. The customer of the service or activity

IETF Response:

The IANA protocol parameters registries operator maintains the protocol parameters registries for the IETF in conformance with all relevant IETF policies, in accordance with the Memorandum of Understanding [RFC2860] and associated supplemental agreements that include service level agreements (SLAs) established between the IETF and ICANN [MOUSUP].

The IETF is a global organization that produces voluntary standards, whose mission is to produce high quality, relevant technical and engineering documents that influence the way people design, use, and manage the Internet in such a way as to make the Internet work better [RFC3935]. IETF standards are published in the RFC series. The IETF is responsible for the key standards that are used on the Internet today, including IP, TCP, DNS, BGP, and HTTP, to name but a few.

The IETF operates in an open and transparent manner [RFC6852]. The processes that govern the IETF are also published in the RFC series. The Internet Standards Process is documented in [RFC2026]. That document explains not only how standards are developed, but also how disputes about decisions are resolved. RFC 2026 has been amended a number of times [BCP9info]. The standards process can be amended in the same manner that standards are approved. That is, someone proposes a change by submitting a temporary document known as an Internet-Draft, the community discusses it, and if rough consensus can be found the change is approved by the Internet Engineering Steering Group (IESG), who also have day-to-day responsibility for declaring IETF consensus on technical decisions, including those that affect the IANA protocol parameters registries. Anyone may propose a change during a Last Call, and anyone may participate in the community discussion.

P3.I.C. What Registries are involved in providing the service or activity

IETF Response:

The protocol parameters registries are the product of IETF work. These also include the top-level registry for the entire IP address space and some of its sub-registries, autonomous system number space, and a number of special use registries with regard to domain names. For more detail please refer to the documentation in the "overlaps or interdependencies" section.

Administration of the protocol parameters registries is the service that is provided to the IETF.

P3.I.D. Overlaps or interdependencies between your IANA requirements and the functions required by other customer communities

IETF Response:

In this context, the IETF considers "overlap" to be where there is in some way shared responsibility for a single registry across multiple organizations. In this sense, there is no overlap between organizations because responsibility for each registry is carefully delineated. There are, however, points of interaction between other organizations, and a few cases where the IETF may further define the scope of a registry for technical purposes. This is the case with both names and numbers, as described in the paragraphs below. In all cases, the IETF coordinates with the appropriate organizations.

It is important to note that the IETF does not have formal membership. The term "the IETF" includes anyone who wishes to participate in the IETF, and IETF participants may also be members of other communities. Staff and participants from ICANN and the Regional Internet Registries (RIRs) regularly participate in IETF activities.

- The IETF has specified a number of special use registries with regard to domain names. These registries require coordination with ICANN as the policy authority for the DNS root, including community groups that are responsible for ICANN policy on domain names such as the Generic Names Supporting Organization (GNSO) and the Country Code Names Supporting Organization (ccNSO). There are already mechanisms in place to perform this coordination, and the capacity to modify those mechanisms to meet new conditions as they might arise. [RFC6761]

- The IETF specifies the DNS protocol. From time to time there have been and will be updates to that protocol. As we make changes we will broadly consult the operational community about the impact of those changes, as we have done in the past.

- The IETF specifies minimum requirements for root servers. [RFC2870] Those requirements are currently under review, in consultations with the root server community.

- The routing architecture has evolved over time, and is expected to continue to do so. Such evolution may have an impact on appropriate IP address allocation strategies. If and when that happens, the IETF will consult and coordinate with the RIR community, as we have done in the past.

- The IETF is responsible for policy relating to the entire IP address space and AS number space. Through the IANA protocol parameters registries, the IETF delegates unicast IP address and AS number ranges to the RIRs [RFC7020], [RFC7249]. Special address allocation, such as multicast and anycast addresses, often require coordination. Another example of IP addresses that are not administered by the RIR system is Unique Local Addresses (ULAs) [RFC4193], where local networks employ a prefix that is not intended to be routed on the public Internet. New special address of the standards. In all cases, these special assignments are listed in the IANA protocol paramters registries.
- The IETF maintains sub-registries for special IPv4 and IPv6 assignments. These are specified in [RFC3307], [RFC5771], and [RFC6890]. The IETF coordinates such assignments with the RIRs.
- Changes to IETF standards may have impact on operations of RIRs and service providers. A recent example is the extensions to BGP to carry the Autonomous System numbers as four-octet entities [RFC6793]. It is important to note that this change occurred out of operational necessity, and it demonstrated strong alignment between the RIRs and the IETF.

P3.II. Existing Pre-Transition Arrangements

This section should describe how existing IANA-related arrangements work, prior to the transition.

P3.II.A. Policy Sources

This section should identify the specific source(s) of policy which must be followed by the IANA functions operator in its conduct of the services or activities described above. If there are distinct sources of policy or policy development for different IANA activities, then please describe these separately. For each source of policy or policy development, please provide the following:

- *Which IANA service or activity (identified in Section I) is affected.*
- *A description of how policy is developed and established and who is involved in policy development and establishment.*
- *A description of how disputes about policy are resolved.*
- *References to documentation of policy development and dispute resolution processes.*

P3.II.A.1. Affected IANA service or activity

IETF Response:

The protocol parameters registries.

P3.II.A.2. How policy is developed and established and by whom

IETF Response:

Policy for overall management of the protocol parameters registries is stated in [RFC6220] and [RFC5226]. The first of these documents explains the model for how the registries are to be operated, how policy is set, and how oversight takes place. RFC 5226 specifies the policies that specification writers may employ when they define new protocol registries in the "IANA Considerations" section of each specification. All policies at the IETF begin with a proposal in the form of an Internet-Draft. Anyone may submit such a proposal. If there is sufficient interest, a working group whose scope includes the proposed work may choose to adopt it, the IESG may choose to create a working group, or an Area Director may choose to sponsor the draft. In any case, anyone may comment on the proposal as it progresses. A proposal cannot be passed by the IESG unless it enjoys sufficient community support as to indicate rough consensus [RFC7282]. In each case, a "Last Call" is made so that there is notice of any proposed change to a policy or process. Anyone may comment during a Last Call. For example, this process is currently being used to update RFC 5226 [I-D.leiba-cotton-iana-5226bis].

P3.II.A.3. How disputes about policy are resolved

IETF Response:

Most disputes are handled at the lowest level through the working group and rough consensus processes. Should anyone disagree with any action, Section 6.5 of [RFC2026] specifies a multi-level conflict resolution and appeals process that includes the responsible Area Director, the IESG, and the IAB. Should appeals be upheld, an appropriate remedy is applied. In the case where someone claims that the procedures themselves are insufficient or inadequate in some way to address a circumstance, one may appeal an IAB decision to the Internet Society Board of Trustees.

P3.II.A.4. References to documentation of policy development and dispute resolution processes

IETF Response:

As mentioned above, *[RFC2026] Section 6.5* specifies a conflict resolution and appeals process. [*RFC2418*] specifies working group procedures. Note that both of these documents have beenamended in later RFCs as indicated in the [RFC-INDEX].

P3.II.B. Oversight and Accountability

This section should describe all the ways in which oversight is conducted over IANA's provision of the services and activities listed in Section I and all the ways in which IANA is currently held accountable for the provision of those services. For each oversight or accountability mechanism, please provide as many of the following as are applicable:

- *Which IANA service or activity (identified in Section I) is affected.*

- *If the policy sources identified in Section II.A are affected, identify which ones are affected and explain in what way.*
- *A description of the entity or entities that provide oversight or perform accountability functions, including how individuals are selected or removed from participation in those entities.*
- *A description of the mechanism (e.g., contract, reporting scheme, auditing scheme, etc.). This should include a description of the consequences of the IANA functions operator not meeting the standards established by the mechanism, the extent to which the output of the mechanism is transparent and the terms under which the mechanism may change.*
- *Jurisdiction(s) in which the mechanism applies and the legal basis on which the mechanism rests.*

P3.II.B.1. Which IANA service or activity is affected?

IETF Response:

The protocol parameters registries.

P3.II.B.2. If the policy sources identified in Section II.A are affected, identify which ones are affected and explain in what way.

IETF Response:

All policy sources relating to the protocol parameters registry are affected.

P3.II.B.3. The entity or entities that provide oversight or perform accountability functions

A description of the entity or entities that provide oversight or perform accountability functions, including how individuals are selected or removed from participation in those entities.

IETF Response:

The Internet Architecture Board (IAB) is an oversight body of the IETF whose responsibilities include, among other things, confirming appointment of IESG members, managing appeals as discussed above, management of certain domains, including .ARPA [RFC3172], and general architectural guidance to the broader community. The IAB must approve the appointment of an organization to act as IANA operator on behalf of the IETF. The IAB is also responsible for establishing liaison relationships with other organizations on behalf of the IETF. The IAB's charter is to be found in [RFC2850].

The IAB members are selected and may be recalled through a Nominating Committee (NOMCOM) process, which is described in [RFC3777] and its updates. This process provides for selection of active members of the community who themselves agree upon a slate of candidates. The active members are chosen randomly from volunteers with a history

of participation in the IETF, with limits regarding having too many active members with the same affiliation. The selection of the active members is performed in a manner that makes it possible for anyone to verify that the correct procedure was followed. The slate of candidates selected by the active members are sent to the Internet Society Board of Trustees for confirmation. In general, members are appointed for terms of two years. The IAB selects its own chair.

3049 The IAB provides oversight of the protocol parameters registries of the IETF, and is responsible for selecting appropriate operator(s) and related per-registry arrangements. Especially when relationships among protocols call for it, registries are at times operated by, or in conjunction with, other bodies. Unless the IAB or IETF has concluded that special treatment is needed, the operator for registries is currently ICANN.

3050 ## P3.II.B.4. Description of the mechanism

3051 *(e.g., contract, reporting scheme, auditing scheme, etc.). This should include a description of the consequences of the IANA functions operator not meeting the standards established by the mechanism, the extent to which the output of the mechanism is transparent and the terms under which the mechanism may change.*

IETF Response:

3052 A memorandum of understanding (MoU) between ICANN and the IETF community has been in place since 2000. It can be found in [RFC2860]. The MoU defines the work to be carried out by the IANA functions operator for the IETF and the Internet Research Task Force (IRTF), a peer organization to the IETF that focuses on research.[RFC2014] Each year a service level agreement is negotiated that supplements the MoU.

3053 Day-to-day administration and contract management is the responsibility of the IETF Administrative Director (IAD). The IETF Administrative Oversight Committee (IAOC) oversees the IAD. The members of the IAOC are also the trustees of the IETF Trust, whose main purpose is to hold certain intellectual property for the benefit of the IETF as a whole. IAOC members are appointed by the Internet Society Board of Trustees, the IAB, the IESG, and the NOMCOM [RFC4071]. The IAOC works with the IANA functions operator to establish annual IANA performance metrics [METRICS] and operational procedures, and the resulting document is adopted as an supplement to the MoU each year [MOUSUP]. Starting from 2014, in accordance with these supplements, an annual audit is performed to ensure that protocol parameter requests are being processed according to the established policies. The conclusions of this audit will be available for anyone in the world to review.

3054 To date there have been no unresolvable disputes or issues between the IETF and the current IANA functions operator. [RFC2860] specifies that should a technical dispute arise, "the IANA shall seek and follow technical guidance exclusively from the IESG." In the unlikely event that a more difficult situation should arise, the IAOC and the IAB would engage ICANN management to address the matter. The MoU also provides an option for either party to terminate the arrangement with six months notice. Obviously such action would only be undertaken after serious consideration. In that case a new IANA functions operator would be selected, and a new agreement with that operator would be established.

P3.II.B.5. Jurisdiction and legal basis of the mechanism

IETF Response:

This mechanism is global in nature. The current agreement does not specify a jurisdiction.

P3.III. Proposed Post-Transition Oversight and Accountability

This section should describe what changes your community is proposing to the arrangements listed in Section II.B in light of the transition. If your community is proposing to replace one or more existing arrangements with new arrangements, that replacement should be explained and all of the elements listed in Section II.B should be described for the new arrangements. Your community should provide its rationale and justification for the new arrangements.

If your community's proposal carries any implications for the interface between the IANA functions and existing policy arrangements described in Section II.A, those implications should be described here.

If your community is not proposing changes to arrangements listed in Section II.B, the rationale and justification for that choice should be provided here.

IETF Response:

No new organizations or structures are required. Over the years since the creation of ICANN, the IETF, ICANN, and IAB have together created a system of agreements, policies, and oversight mechanisms that already cover what is needed. This system has worked well without any operational involvement from the NTIA.

IANA protocol parameters registry updates will continue to function day-to-day, as they have been doing for the last decade or more. The IETF community is very satisfied with the current arrangement with ICANN. RFC 2860 remains in force and has served the IETF community very well. RFC 6220 has laid out an appropriate service description and requirements.

However in the absence of the NTIA contract a few new arrangements may be needed in order to ensure the IETF community's expectations are met. Those expectations are the following:

- The protocol parameters registries are in the public domain. It is the preference of the IETF community that all relevant parties acknowledge that fact as part of the transition.
- It is possible in the future that the operation of the protocol parameters registries may be transitioned from ICANN to subsequent operator(s). It is the preference of the IETF community that, as part of the NTIA transition, ICANN acknowledge that it will carry out the obligations established under C.7.3 and I.61 of the current IANA functions contract between ICANN and the NTIA [NTIA-Contract] to achieve a smooth transition to subsequent operator(s), should the need arise. Furthermore, in the event of a transition it is the expectation of the IETF community that ICANN, the IETF, and subsequent

operator(s) will work together to minimize disruption in the use the protocol parameters registries or other resources currently located at iana.org.

3063 In developing our response we have been mindful of the following points that the IETF community has discussed over the last year [ProtoParamEvo14] that have led to the following guiding principles for IAB efforts that impact IANA protocol parameter registries. These principles must be taken together; their order is not significant.

1. The IETF protocol parameters registries function has been and continues to be capably provided by the Internet technical community. The strength and stability of the function and its foundation within the Internet technical community are both important given how critical protocol parameters are to the proper functioning of IETF protocols. We think the structures that sustain the protocol parameters registries function need to be strong enough that they can be offered independently by the Internet technical community, without the need for backing from external parties. And we believe we largely are there already, although the system can be strengthened further, and continuous improvements are being made.

2. The protocol parameters registries function requires openness, transparency, and accountability.

   Existing documentation of how the function is administered and overseen is good [RFC2860], [RFC6220]. Further articulation and clarity may be beneficial. It is important that the whole Internet community can understand how the function works, and that the processes for registering parameters and holding those who oversee the protocol parameters function accountable for following those processes are understood by all interested parties. We are committed to making improvements here if necessary.

3. Any contemplated changes to the protocol parameters registries function should respect existing Internet community agreements.

   The protocol parameters registries function is working well. The existing Memorandum of Understanding in RFC 2860 defines "the technical work to be carried out by the Internet Assigned Numbers Authority on behalf of the Internet Engineering Task Force and the Internet Research Task Force." Any modifications to the protocol parameters registries function should be made using the IETF process to update RFC 6220 and other relevant RFCs. Put quite simply: evolution, not revolution.

4. The Internet architecture requires and receives capable service by Internet registries.

   The stability of the Internet depends on capable provision of not just IETF protocol parameters, but IP numbers, domain names, and other registries. Furthermore, DNS and IPv4/IPv6 are IETF-defined protocols. Thus we expect the role of the IETF in standards development, architectural guidance, and allocation of certain name/number parameters to continue. IP multicast addresses and special-use DNS names are two examples where close coordination is needed. The IETF will continue to coordinate with ICANN, the RIRs, and other parties that are mutually invested in the continued smooth operation of the Internet registries. We fully understand the need to work together.

5. The IETF will continue management of the protocol parameter registry function as an integral component of the IETF standards process and the use of resulting protocols.

   RFC 6220 specifies the role and function of the protocol parameters registry, which is critical to IETF standards processes and IETF protocols. The IAB, on behalf of the IETF, has the responsibility to define and manage the relationship with the protocol registry operator role. This responsibility includes the selection and management of the protocol parameter registry operator, as well as management of the parameter registration process and the guidelines for parameter allocation.

6. The protocol parameters registries are provided as a public service.

   Directions for the creation of protocol parameters registries and the policies for subsequent additions and updates are specified in RFCs. The protocol parameters registries are available to everyone, and they are published in a form that allows their contents to be included in other works without further permission. These works include, but are not limited to, implementations of Internet protocols and their associated documentation.

   These principles will guide the IAB, IAOC, and the rest of the IETF community as they work with ICANN to establish future IANA performance metrics and operational procedures.

P3.IV. Transition Implications

3064 *This section should describe what your community views as the implications of the changes it proposed in Section III. These implications may include some or all of the following, or other implications specific to your community:*

- *Description of operational requirements to achieve continuity of service and possible new service integration throughout the transition.*
- *Risks to operational continuity and how they will be addressed.*
- *Description of any legal framework requirements in the absence of the NTIA contract.*
- *Description of how you have tested or evaluated the workability of any new technical or operational methods proposed in this document and how they compare to established arrangements.*

IETF Response:

3065 No structural changes are required for the handling of protocol parameters. The principles listed above will guide IAB, IAOC, and the rest of the IETF community as they work with ICANN to establish future IANA performance metrics and operational procedures, as they have in the past.

3066 As no services are expected to change, no continuity issues are anticipated, and there are no new technical or operational methods proposed by the IETF to test. The IETF leadership,

ICANN, and the RIRs maintain an ongoing informal dialog to spot any unforeseen issues that might arise as a result of other changes.

3067 What is necessary as part of transition is the completion of any supplemental agreement(s) necessary to achieve the requirements outlined in our response in Section III of this RFP.

P3.V. NTIA Requirements

3068 *Additionally, NTIA has established that the transition proposal must meet the following five requirements:*

- *Support and enhance the multistakeholder model;*
- *Maintain the security, stability, and resiliency of the Internet DNS;*
- *Meet the needs and expectation of the global customers and partners of the IANA services;*
- *Maintain the openness of the Internet.*
- *The proposal must not replace the NTIA role with a government-led or an inter-governmental organization solution.*

3069 *This section should explain how your community's proposal meets these requirements and how it responds to the global interest in the IANA functions.*

3070 This proposal addresses each of the NTIA's requirements:

3071 P3.V.A. Support and enhance the multistakeholder model

IETF Response:

3072 Because the IETF is open to everyone, participation is open to all stakeholders. IETF processes outlined in Section I were used to develop this proposal. Those same processes have been and shall be used to amend governance of the protocol parameters function. As mentioned previously, anyone may propose amendments to those processes, and anyone may take part in the decision process.

3073 P3.V.B. Maintain the security, stability, and resiliency of the Internet DNS

IETF Response:

3074 No changes are proposed in this document that affect the security, stability, and resiliency of the DNS.

P3.V.C. Meet the needs and expectation of the global customers and partners of the IANA services

IETF Response:

Implementers and their users from around the world make use of the IETF standards and the associated IANA protocol parameters registries. The current IANA protocol parameters registries system is meeting the needs of these global customers. This proposal continues to meet their needs by maintaining the existing processes that have served them well in the past.

P3.V.D. Maintain the openness of the Internet

IETF Response:

This proposal maintains the existing open framework that allows anyone to participate in the development of IETF standards, including the IANA protocol parameters registries policies. Further, an implementer anywhere in the world has full access to the protocol specification published in the RFC series and the protocol parameters registries published at iana.org. Those who require assignments in the IANA protocol registries will continue to have their requests satisfied, as specified by the existing policies for those registries.

P3.V.E. Not a government-led or inter-governmental solution

IETF Response:

Policy oversight is performed by the IAB, which is neither a government-led or an intergovernmental organization.

P3.VI. Community Process

This section should describe the process your community used for developing this proposal, including:

- *The steps that were taken to develop the proposal and to determine consensus.*
- *Links to announcements, agendas, mailing lists, consultations and meeting proceedings.*
- *An assessment of the level of consensus behind your community's proposal, including a description of areas of contention or disagreement.*

P3.VI.A. Steps taken to develop consensus and the proposal

IETF Response:

The IESG established the IANAPLAN working group to develop this response. Anyone was welcome to join the discussion and participate in the development of this response. An open mailing list (ianaplan@ietf.org) has been associated with the working group. In addition, IETF's IANA practices have been discussed in the broader community, and all input has

been welcome. Normal IETF procedures [RFC2026] [RFC2418] were used to determine rough consensus. The chairs of the working group reviewed open issues and, after an internal working group last call, determined that all had been satisfactorily addressed, and subsequently the IESG did a formal IETF-wide Last Call followed by a formal review and determined that the document had rough consensus.

P3.VI.B. Links to announcements, agendas, mailing lists, consultations and meeting proceedings

IETF Response:

The following list is not exhaustive, as there have been many open discussions about this transition within the IETF community in the past few months.

Creation of an open mailing list to discuss the transition:

http://mailarchive.ietf.org/arch/msg/ietf-announce/Ztd2ed9U04qSxIk9-Oj80jJLXc

Announcement of a public session on the transition:

http://mailarchive.ietf.org/arch/msg/ietf-announce/M5zVmFFvTbtgVyMB_fjUSW4rJ0c

Announcement by the IESG of the intent to form a working group:

http://mailarchive.ietf.org/arch/msg/ietf-announce/QsvU9qX98G2KqB18jy6UfhwKjXk

The working group discussion:
http://www.ietf.org/mailarchive/web/ianaplan/current/maillist.html

2014-10-06 Interim Meeting Agenda, Minutes, and presentations:
http://www.ietf.org/proceedings/interim/2014/10/06/ianaplan/proceedings.html

Working group last call:
http://mailarchive.ietf.org/arch/msg/ianaplan/EGF9rfJxn5QpQnRXmS2QxYKYR8k

Agenda from IETF 91 IANAPLAN WG meeting:
http://www.ietf.org/proceedings/91/agenda/agenda-91-ianaplan

Minutes of IETF 91 IANAPLAN WG meeting:
http://www.ietf.org/proceedings/91/minutes/minutes-91-ianaplan

Shepherd write-up: http://datatracker.ietf.org/doc/draft-ietfianaplan-icg-response/shepherdwriteup/

IETF last call: http://mailarchive.ietf.org/arch/msg/ietf-announce/i5rx6PfjJCRax3Lu4qZ_38P8wBg

P3.VI.C. Level of consensus behind the community's proposal

IETF Response:

This document has attained rough consensus of the IETF Working Group and of the IETF community as a whole, as judged first by the working group chairs and then by the sponsoring Area Director, and then by the IESG in accordance with [RFC2026] during the 18 December 2014 IESG telechat. The IESG has approved the draft, pending insertion of this answer in this section and the IAB approval note. The IAB approved a statement for inclusion in the document on 19 December 2014.

Over the course of the development of the document, several suggestions were raised that did not enjoy sufficient support to be included. Two general areas of suggestion that generated much discussion were

- A suggestion for a stronger statement over what terms the IAOC should negotiate.
- A suggestion that "iana.org" and other associated marks be transferred to the IETF trust.

At the end of the working group process, although there was not unanimous support for the results, the working group chairs concluded that rough consensus existed in the working group. The document shepherd's summary of the WG consensus for this document can be found here:

https://datatracker.ietf.org/doc/draft-ietf-ianaplan-icg-response/shepherdwriteup/

During IETF last call, additional people voiced support for the document. There were several editorial comments that resulted in changes, as well as some discussion of more substantial comments some of which resulted in text changes. There was some discussion of comments already discussed earlier in the process, and but no new objections were raised during the IETF last call. A summary of the last call comments can be found from here:

http://www.ietf.org/mail-archive/web/ianaplan/current/msg01500.html

New draft versions were prepared that took into account all the agreed changes from the last call. The final version was then approved by the IESG.

P3.4. IANA Considerations

This memo is a response to a request for proposals. No parameter allocations or changes are sought.

P3.5. Security Considerations

While the agreement, supplements, policies, and procedures around the IANA function have shown strong resiliency, the IETF will continue to work with all relevant parties to facilitate improvements while maintaining availability of the IANA registries.

P3.6. IAB Note

The IAB supports the response in this document.

P3.7. Acknowlegments

This document describes processes that have been developed by many members of the community over many years. The initial version of this document was developed collaboratively through both the IAB IANA

Strategy Program and the IETF IANAPLAN WG. Particular thanks go to Jari Arkko, Marc Blanchet, Brian Carpenter, Alissa Cooper, John Curran, Leslie Daigle, Heather Flanagan, Christer Holmberg, John Klensin, Barry Leiba, Milton Mueller, Andrei Robachevsky, Andrew Sullivan, Dave Thaler, Greg Wood, and Suzanne Woolf.

P3.8.References

P3.8.1 Normative References

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[METRICS] "Performance Standards Metrics Report", <http://www.iana.org/performance/metrics>.

[MOUSUP] "Supplements to RFC 2860 (the Memorandum of Understanding between the IETF and ICANN)", <http://iaoc.ietf.org/contracts.html>.

[NTIA-Announce] "NTIA Announcement of Intent to Transition Key Internet Domain Name Functions", March 2014, <http://www.ntia.doc.gov/press-release/2014/ntiaannounces-intent-transition-key-internet-domain-namefunctions>.

[NTIA-Contract] "The NTIA Contract with ICANN", <http://www.ntia.doc.gov/files/ntia/publications/sf_26_pg_1-2-final_award_and_sacs.pdf>.

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P3.7.2 Informative References

[I-D.leiba-cotton-iana-5226bis]
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[ProtoParamEvo14]
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P3. Appendix A. Changes

NOTE: This section to be removed by RFC Editor at publication.

A.1.Changes from -08 to -09

- Update URL for summary of the IETF Last Call.
- Two minor editorial improvements.

A.2. Changes from -07 to -08

- Update text describing the consensus process.
- Insert IAB approval text.
- Point to the proceedings of IETF 91 for IANAPLAN WG agenda and minutes.

A.3. Changes from -06 to -07

- Merge "No new changes are needed" with "No new organizations or structures are required". Fewer words to say the same thing.
- consult to consult and coordinate.
- RFC Editor comments.
- Edits resulting from Security Area review by Sean Turner.
- Edits resulting from AD comments.

A.4. Changes from -05 to -06

- Inclusion of agreed substantial comments from the AD.
- Editorial changes.

A.5. Changes from -04 to -05

- Change to simpler text for answer about stability and security.
- Mention of RFC 5226bis.

A.6. Changes from -03 to -04

- Additional text regarding what is needed in Section III.
- Appropriate language modifications in section IV to match the above changes in III.
- Acknowledgments edits.

A.7. Changes from -02 to -03

- Terminology consistency.
- Add IAB section.
- Changes based on WG discussion on what we prefer as part of the transition regarding IPR.
- Add discussion about .ARPA domain.
- Elaboration of what registries are involved.
- Additional text around coordination with ICANN.
- Working groups can adopt items within their charters.
- IAB appointments generally last two years.
- Add mention of the Trust.
- Security Considerations update.

A.8. Changes from -01 to -02

- A better description special registries and BGP ASNs.
- Clarity on how the address space and ASNs are delegated.
- Many editorials corrected.
- Mention of the annual review as part of the SLAs.
- Change about how overlap is presented.
- A number of small wording changes based on feedback.

A.9. Changes from -00 to -01

- Front matter greatly reduced.
- Appendices with charter and RFP added.
- Jurisdiction text changed.
- Proposed changes include supplemental agreement(s) to address jurisdiction, dispute resolution, and IPR, including names and marks.
- Transition implications slightly modified to reference supplemental agreement

P3. Appendix B. The Charter of the IANA Stewardship Coordination Group

https://www.icann.org/en/system/files/files/charter-icg-27aug14-en.pdf

P3. Appendix C IANA Stewardship Transition Coordination Group RFP

https://www.icann.org/en/system/files/files/rfp-iana-stewardship-08sep14-en.pdf