# IANA Naming Function Review

**Initial Report** 

IANA Naming Function Review Team 2 October 2020



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# 1 Executive Summary

This report presents the IANA Naming Function Review Team's (IFRT's) initial findings, analysis, issues, and recommendations, as directed and in compliance with Article 18: IANA Naming Function Reviews.

The IANA function review team, in our evaluation of PTIs performance, has found that PTI is operating with a great deal of operational efficiency and is serving the needs of the IANA customers. The IFRT has identified no major areas of deficiency or operational improvement that PTI has not already identified internally or in conjunction with the CSC.

This report reflects the consensus of the full review team. Where consensus was not achieved on a given recommendation, this report identifies the level of support within the team.

Through the Public Comment process, the IFRT is seeking community input to help inform the Final Report. There will be further opportunity for public feedback when the team's Final Report goes up for Public Comment.

After, the report will be delivered to the ICANN Board, which will then develop an action plan for implementation of those recommendations.

The IFRT wishes to thank the staff of both PTI and ICANN for their support and dedication throughout the process of this review, in particular our main staff support Amy Creamer has been invaluable in shepherding the review process to a successful completion and Kimberly Carlson for her professional secretariat skills.

# 2 Review Team Recommendations

## 2.1 IFRT Recommendation 1

Recommendation ID: IFRT-2020-Rec1

Contractual Reference: <u>IANA Naming Function Contract</u>, Article IX, Section 9.3 (a), (b), (c)

Recommendation Summary: The IFRT recommends that PTI publishes the IANA functions transition plan as required by the IANA Naming Function Contract.

Expected Due Date: ICANN Board Recommendation Approval + 30 Days

**Evaluation Criteria** 

1. The Transition Plan is posted publicly on iana.org

Priority: High

#### 2.2 IFRT Recommendation 2

Recommendation ID: IFRT-2020-Rec2

Contractual Reference: IANA Naming Function Contract, Article VI, Section 6.1 (d)

Recommendation Summary: The IFRT recommends that the Annual Attestation of the PTI President that PTI has complied with the requirements of Section 6.1 of the IANA Naming Function Contract be posted on iana.org annually.

Expected Due Date: ICANN Board Recommendation Approval + 90 Days

**Evaluation Criteria** 

- 1. The annual attestations for previous years are posted publicly on pti.icann.org
- 2. A procedure is put in place to ensure future attestations are published on pti.icann.org.

Priority: Medium

## 2.3 IFRT Recommendation 3

Recommendation ID: IFRT-2020-Rec3

Contractual Reference: <u>ICANN Bylaws Section 18.3(j)</u> and <u>IANA Naming Function Contract</u>
Article VIII, Section 8.2

Recommendation Summary: The IFRT in conjunction with the CSC has identified a duplication in the ICANN Bylaws. The remedial action procedures as generated by the CSC and PTI are

referred to as components in the initiation of the Special IFR as outlined in Section 18.12.a of the ICANN bylaws. However, the CSC and the IFRT have identified that section 18.12.a (ii) is redundant as the RAP and the IANA problem resolution process were combined into a single set of procedures (the RAPs) by the CSC.

The recommendation is that ICANN board considers removing the redundant section 18.12.a (ii)

Expected Due Date: ICANN Board Recommendation Approval + 365 Days

#### **Evaluation Criteria**

- 1. The ICANN board initiates a legal review of Section 18.12.a (ii) of the ICANN bylaws.
- 2. If the legal review agrees with the recommendation of the IFRT, a vote should take place within 365 days of the ICANN board approval of this recommendation to remove or amend Section 18.12.a (ii) of the ICANN bylaws.

Priority: Medium

#### 2.4 IFRT Recommendation 4

Recommendation ID: IFRT-2020-Rec4

Contractual Reference: IANA Naming Function Contract, Article VII, Section 7.1 (a)

Expected Due Date: ICANN Board Recommendation Approval + 180 Days

Recommendation Summary: In Article 7 Section 7.1 (a) the IFRT recommends that this statement, "The relevant policies under which the changes are made shall be noted within each monthly report", be removed from the contract, as it is a legacy statement from the NTIA contract that is no longer required. Implementation of this requirement has long been recognized as being operationally impracticable, ever since the time of the NTIA contract, and the IFRT is satisfied that its continued inclusion in the Contract adds no value to the reports.

#### **Evaluation Criteria**

2. The contractual text is updated, and the new contract is posted publicly

Priority: Low

# 3 Background on the Review

The IFR is an accountability mechanism created as part of the IANA stewardship transition to ensure that Public Technical Identifiers (PTI) meets the needs and expectations of its naming customers.

On 16 September 2018, the first IFR was convened by the ICANN Board, in compliance with Article 18 of the ICANN bylaws which state:

The Board, or an appropriate committee thereof, shall cause periodic and/or special reviews (each such review, an "IFR") of PTI's performance of the IANA naming function against the contractual requirements set forth in the IANA Naming Function Contract and the IANA Naming Function SOW to be carried out by an IANA Function Review Team ("IFRT") established in accordance with Article 18

The IFR Review began with a call for qualified volunteers to serve on the RT. Choosing from a pool of candidates seeking nominations, ICANN's Supporting Organizations and Advisory Committees (SO/ACs) nominated a list of candidates to inform SO/AC Chairs' discussions and decisions as they assembled the composition of the review team. A board member serves on the review team in a liaison capacity.

As per the ICANN Bylaws, the review team was selected by ICANN's Supporting Organizations and Advisory Committees (SO/ACs). The review team was assembled in September 2019 and began its work.

	Name	Regio n	SO/AC Nomination
1	Frederico Neves	LAC	ccNSO
2	Peter Koch	EUR	ccNSO
3	Unguec Stephen Kang	AF	ccNSO nomination of non-ccNSO ccTLD manager
4	Rick Wilhelm	NA	RySG
5	Jean-Christophe Vignes	EUR	RySG
6	Kristian Ørmen	EUR	RrSG
7	Christian Dawson	NA	Commercial Stakeholder Group
8	Tomslin Samme-Nlar	AF	Non-Commercial Stakeholder Group
9	Mr. Andreas Dlamini	AF	GAC
1	Patrik Fältström	EUR	SSAC
1	Suzanne Woolf	NA	RSSAC
1 2	Kaili Kan	AP	ALAC
1	James Gannon	EUR	CSC liaison
1	Kim Davies, PTI	NA	PTI liaison
1 5	Steve Conte, ICANN	NA	ICANN Org liaison
1	Danko Jevtovic	EUR	Board liaison

#### Notes:

- The ASO and IAB declined their right to appoint a liaison to the team.
- Per the ICANN Bylaws, Section 18.8:(d) The IFRT shall be led by two co-chairs: one appointed by the GNSO from one of the members appointed pursuant to clauses (c)-(f) of <u>Section 18.7</u> and one appointed by the ccNSO from one of the members appointed pursuant to clauses (a)-(b) of Section 18.7.
  - The ccNSO appointed co-Chair is Frederico Neves.
  - The GNSO appointed co-Chair is Tomslin Samme-Nlar

# 4 Review Execution and Methodology

The review team wrote several founding documents at the start of their work. These documents established a baseline understanding of how the team would work, expectations from each team member, and definitions of scope and timelines to keep the work focused.

The Rules of Engagement provided the team with operating rules to set expectations on how to proceed with their work, as well as defining roles.

The Workplan created a practical and actionable path for the team.

The Scope of Work followed the ICANN Bylaws, defining such points as:

- the objective behind each scope requirement and how the team would execute it
- what inputs should be sought and considered by the team
- where the review had dependencies and where the review should ensure there was no overlap with other work
- expected deliverables
- methodology for drafting recommendations

In summary, it provided a methodology for evaluating the performance of PTI against the requirements set forth in the IANA Naming Function Contract and the IANA Naming Function SOW.

On 31 March 2020, the review team <u>announced</u> completion of these documents.

In addition the IFR wiki ensured transparency of all their work. It included:

- · Email options to contact the team, become an observer, etc.
- · All IFRT created documents such as the initial scoping documents mentioned earlier.
- · List of past and upcoming Plenary meetings with meeting notes, recording, and all materials discussed
- · IANA related webinars from past ICANN meetings and one recorded specifically for the **IFRT**
- · Tracking for Action Items and Decisions Reached
- · Links to resource material required for research
- · Additional IANA naming services and PTI related back-ground material
- · Fact Sheets reporting on the IFRT's productivity
- · Links to IFR related Blogs
- · Correspondence received by the IFRT
- · Access to the team's email archive

# 4.1 The IFRT's Work Methodology

To undertake its work the team used two approaches:

1. The Bylaws required thorough research on PTI's performance against the IANA Naming Function Contract and it's Statement of Work (SOW).

The team carefully laid out each contract section and aligned all of the resources and source material required to evaluate it. Sections were assigned to volunteering team members who then looked more closely at it and oversaw appropriate findings. All information gleaned from Plenary call discussions, subject matter experts, ICANN

Meeting recordings, or other sources, continued to be added and correlated with the appropriate section. In this manner, no section of the contract went unchecked.

The results of this method can be reviewed in Scope and Review Findings, Section 18.3.c. of this report.

2. The IFRT laid out their work in alignment not just with the contract, but with the Bylaws Scope requirements. This cross-referencing between the contract and the scope provided an indication of which Scope requirements the team had met, and any that required more work.

The results of this method is the totality of the Scope and Review Findings in this report.

Using both methods ensured their work was thorough, while facilitating efficient drafting of Recommendations and this Initial Report.

#### 4.2 **Summary of Work**

The first IFRT meeting occurred on 03 December 2019. There was a twice-monthly Plenary Call held fairly consistently, resulting in 18 calls, typically 60 – 90 minutes in length, prior to the first draft of this Initial Report. 18 Leadership Calls preceded the Plenary calls so the co-chairs could discuss the upcoming agenda. An additional six (6) interview and learning sessions were run with ICANN and CSC experts.

The IFRT followed the Bylaws requirements very closely, which included a section on what inputs the team must research and consider (Bylaws Section 18.4. IFR Required Inputs):

- Reviewed all reports provided by PTI in accordance with the IANA Naming Function Contract (section 18.4.a.)
  - -The online "dashboard" of PTI's metrics: https://sle-dashboard.iana.org/
  - -PTI's Monthly SLA Report: https://www.iana.org/performance/csc-reports
  - -Monthly audit report on the root zone files: www.iana.org/performance/root-audit
  - -PTI's Annual Customer Survey:

https://www.iana.org/reports/2019/customer-survey-20191210.pdf

Reviewed reports provided by the CSC as well as recommendations made by the CSC (section 18.4.b and d)

Monthly CSC Reports on PTI's Service Level Agreements (SLAs): https://www.iana.org/performance/csc-reports

Call for community input through the intended Public Comment on the Draft Initial Report (section 18.4.c)

The IFRT found two sources that reflected customer feedback: the CSC, whose mission is to ensure the satisfactory performance of the Internet Assigned Numbers Authority (IANA) naming function, along with PTI's Annual Customer Survey.

The CSC's role is to ensure the satisfactory performance of the Internet Assigned Numbers Authority (IANA) naming function. The CSC is responsible for monitoring Public Technical Identifier's (PTI) performance of the IANA naming function against the service level expectations in the IANA Naming Function Contract. And the CSC analyzes performance reports provided by PTI and publishes its findings.

The ccNSO provided the IFRT with the CSC's Effectiveness Final Report, which satisfied the IFRT that the CSC was an effective and reliable source of information.

There were several learning opportunities: Bart Boswinkle, VP, Policy Development & ccNSO Relations, ICANN, provided an overview on the CSC's responsibilities; the IFRT drafted questions for the CSC; Lars-Johan Liman, Chair of the CSC and Brett Carr, Vice Chair made themselves available to answer those questions and shared their insight and one recommendation for the IFRT to consider.

PTI's Annual Customer Survey is publicly available, and Marilia Hirano, Senior Program Manager at PTI, gave an overview presentation to the IFRT and answered any questions.

The IFRT determined that creating additional customer surveys would merely replicate the work already done, and decided that in the Public Comment for this Initial Draft the Co-Chairs would specifically call for input from the community.

Bylaws Section 18.4.e allowed for an optional site visit. The team determined that they were satisfied with video conferencing. All subject matter experts made themselves available, and PTI was able to demonstrate their systems. The IFRT concluded that a site visit would not produce any additional information.

In order to meet the IFR's goals, additional areas were researched:

- Samantha Eisner, Deputy General Counsel, ICANN provided background on the drafting of the IANA Naming Function Contract during the IANA Stewardship Transition, as well as the intended meaning behind the language.
- Becky Nash, VP of Finance at ICANN, gave a presentation and answered questions regarding PTI's Budget process.
- Kim Davies, VP, IANA Services and President, PTI, provided an educational overview on PTI and its services, which was recorded as an important input to the review.
- Kim Davies also held four subject specific sessions for team members assigned to research those areas.

PTI undergoes 2 annual audits, the SOC3 which is publicly available and the SOC2 which is considered a confidential document.

The IFR is the first review to have team members sign NDAs in order to access non-public documents. Fred Neves. IFRT Co-Chair. Tomslin Samme-Nlar. IFRT Co-Chair, James Gannon, CSC Liaison to the IFR, and Andreas Dlamini, Review Team Member, were provided with the SOC2 reportand attended a comprehensive call where Kim Davies walked them through the methods and meanings of the results.

These four members and liaisons took responsibility for the sections referencing the audits in the IANA Naming Function Contract. They additionally provided input to other sections if they felt that the SOC2 provided satisfactory answers to the team's questions. The rest of the team felt confident in assurances from these four team members about whether PTI met or did not meet contract requirements. This was done without the four team members breaking the terms of the NDA. They found that the SOC2 is a comprehensive audit that demonstrates PTI's performance in many aspects of the contract, and the team believes it to be a crucial information source to future IFRs.

SOC3 Audit: <a href="https://www.iana.org/about/audits">https://www.iana.org/about/audits</a>

The second non-public document made available to those who signed ICANN's NDA was the Contingency and Continuity of Operations Plan ("CCOP"). A redacted version was shared that removed personal information - emails and phone numbers. As with the SOC2, the four team members handled the findings for the appropriate contract sections.

#### 4.3 **Decision-Making Methodologies**

The IFRT followed the meeting rules from the Bylaws Section 18.9. Meetings:

"(a) All actions of the IFRT shall be taken by consensus of the IFRT, which is where a small minority may disagree, but most agree. If consensus cannot be reached with respect to a particular issue, actions by the majority of all of the members of the IFRT shall be the action of the IFRT."

The review team leadership is responsible for designating each decision as having one of the following designations:

- Full consensus no review team members speak against the recommendation in its last readings.
- Consensus a small minority disagrees, but most agree. A rule-of-thumb for judging consensus is that the decision is supported by 80% of the review team. (\*does not override Bylaws Section 18.5 for specific situations)
- Strong support but significant opposition most of the group supports a recommendation but a significant number of members do not. (\*does not override Bylaws Section 18.5 for specific situations)

- <u>Divergence</u> no strong support for any particular position, rather many different points of view. Sometimes this is due to irreconcilable differences of opinion and sometimes it is due to the fact that no one has a particularly strong or convincing viewpoint, but the members of the group agree that it is worth listing the issue in the report, nonetheless.
- <u>Minority view</u> a proposal where a small number of people support the recommendation. This can happen in response to a <u>consensus</u>, <u>strong support but significant opposition</u>, and <u>no consensus</u>; or, it can happen in cases where there is neither support nor opposition to a suggestion made by a small number of individuals.

Based upon the review team's needs, the leadership may direct that review team participants do not have to have their name explicitly associated with any full consensus or consensus view/position. However, in all other cases, and in those cases where a group member represents the minority viewpoint, their name must be explicitly linked, especially in those cases where polls were taken.

Consensus calls should always involve the entire review team and, for this reason, should take place on the designated mailing list to ensure that all review team members have the opportunity to fully participate in the consensus process. It is the role of the leadership to designate which level of consensus is reached and announce this designation to the review team. Member(s) of the review team should be able to challenge the designation of the leadership as part of the review team's discussion. However, if disagreement persists, review team members may use the process set forth below to challenge the designation:

**Section 18.9.**(b) "Any members of the IFRT not in favor of an action (whether as a result of voting against a matter or objecting to the consensus position) may record a minority dissent to such action, which shall be included in the IFRT minutes and/or report, as applicable."

All minority dissents must detail the analysis or recommendations in the final report with which its author(s) disagree(s), including a rationale for that disagreement.

The authors of minority dissents are encouraged to provide alternative recommendations that include the same details and context as is required from the recommendations in this document.

## 4.4 Requirements for Recommendation Drafting

The IFRT integrated Bylaws requirements when drafting their Recommendations:

- 1. Perform Review according to Review Scope
- 2. Make recommendations according to Review Scope
- 3. Initiate a Public Comment period and any other processes for obtaining community input (such as, but not limited to, in-person sessions during ICANN meetings, responses to public surveys and public inputs during meetings 18.4.c\*) on PTI's performance under the IANA Naming Function Contract & SOW (18.3.h\*) as well as improvement recommendations (technical, process or other) (18.4.d\*)
- 4. Request input from the CSC (18.3.j\*)
- 5. Review PTI Reports created to meet IANA Naming Function Contract & SOW requirements and that were created during the IFR period being reviewed (18.4.a\*)

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- 6. Review CSC Reports created to meet the CSC Charter requirements and that were created during IFR period being reviewed (18.4.b\*)
- 7. Review results of any site visits by the IFRT (18.4.e\*) (IV.7.3.b & Annex A: 3.a.ii\*\*)

The Review Team should ensure any recommendation:

- 1. is supported by data and analysis of the existing deficiency and a proposal to address (18.5.b\*)
- 2. provides a proposed remedial procedure with an explanation of how this will correct the issue (18.5.b\*)
- 3. provides a timeline for implementing (18.5.b\*)
- 4. provides prioritization if there is more than 1 recommendation (18.5.b\*)
- 5. is not made public to the community or Board if it impacts gTLD registry operator services and received opposition from the Registry Stakeholder Group's appointed IFRT member (18.5.c\*)
- 6. is not made public to the community or Board if it impacts ccTLD registry operator services and received opposition from the ccNSO's appointed IFRT member (18.5.c\*)
- 7. that would amend the IANA Naming Function Contract or SOW or the CSC charter require (18.6.a\*):
  - a) consultation with the Board and the CSC (18.6.a.i and ii\*)
  - b) a public input session for ccTLD and gTLD registry operators (18.6.a.iii\*)
  - c) a Public Comment period (18.6.a.iv\*)

#### In regards to Review Team actions:

- 5 IFRT actions require a consensus agreement, though consensus does not have a numerical definition
- 6 Members who disagree with an action may file a minority dissent to be included in meeting minutes/or reports
- 7 IFRT meetings and work shall be open to the public and follow transparency procedures

The Secretary acting for the IFRT will transmit meeting minutes, recordings, transcripts, etc. to mailing lists and icann.org

# 5. Scope and Review Findings

## 5.1 Bylaws 18.3.(a)

"Review and evaluate the performance of PTI against the requirements set forth in the <u>IANA Naming Function Contract</u> in relation to the needs of its direct customers and the expectations of the broader ICANN community, and determine whether to make any recommendations with respect to PTI's performance"

#### Objective

Consistent with ICANN's mission and <u>Bylaws</u>, Section 18.3(a), the review team will assess the needs and expectations of IANA naming function direct customers and the broader community, and then determine if there are any gaps in PTI's performance. The IFRT will examine PTI's performance against SLAs originally developed by the community; review PTI's annual Customer Service Survey; discuss PTI's performance with the Customer Standing Committee; solicit input through the first Public Comment of an Initial Draft; and other methods that the Review Team deems appropriate.

#### Findings:

The IFRT has performed a detailed analysis of all the contractual clauses contained within the IANA Naming Function Contract. A detailed summary of the rationale for this conclusion may be found in Section 5.4 of this document. Recommendations resulting from this analysis are documented in their respective sections in this document.

#### **Recommendations:**

The IFRT does not have any recommendations related to this section.

# 5.2 Bylaws <u>18.3.(b)</u>

"Review and evaluate the performance of PTI against the requirements set forth in the <u>IANA Naming Function Contract</u> and <u>IANA Naming Function SOW</u>"

#### **Objective**

Consistent with ICANN's mission and <u>Bylaws</u>, Section 18.3(b), the review team will assess all IANA naming function related requirements in the contract and SOW and determine if PTI has met these. The IFRT will do so through such means as interviews with PTI and ICANN staff and/or community subject matter experts, available monthly reporting and monitoring tools, as well as IANA audit reports that apply to IANA naming functions.

#### **Findings**

The IFRT has performed a detailed analysis of all the contractual clauses contained within the IANA Naming Function Contract. A detailed summary of the rationale for this conclusion may be found in Section 5.4 of this document. Recommendations resulting from this analysis are documented in their respective sections in this document.

#### **Recommendations:**

The IFRT does not have any recommendations related to this section.

# 5.3 Bylaws 18.3.(c)

"Review the <u>IANA Naming Function SOW</u> and determine whether to recommend any amendments to the <u>IANA Naming Function Contract</u> and IANA Naming Function SOW to account for the needs of the direct customers of the naming services and/or the community at large"

#### **Objective**

Consistent with ICANN's mission and <u>Bylaws</u>, Section 18.3(c), and based on the analysis conducted for 18.3.(a) and 18.3.(i) in particular, the Review Team will review the IANA Naming Function Contract and SOW to determine if the needs of IANA naming customers are fully covered through a review team analysis.

#### **Findings**

Contract Section Text	Findings
Article IV, Section 4.3: Scope of the IANA Naming Function  Management of the DNS Root Zone ("Root Zone Management") in accordance with the Statement of Work attached as Annex A to this Contract ("SOW")	(a) The IFRT finds that the SOW lays out service level agreements and definitions around each metric. Monthly reporting, as well as monthly oversight of these reports by the Customer Standing Committee (CSC), has verified that PTI has "met" these SLAs consistently. Changes to the SOW and the SLAs have been agreed up and overseen by the CSC, followed expected community consultations through Public Comments, and followed the Change Processes agreed up by ICANN, PTI and the CSC.
Section 4.3 (b)  Management of the .INT top-level domain	The IFRT finds that PTI manages the .INT TLD as required by the contract. However, the team also found that there is no defined community in ICANN where policy discussion and development on .INT can be had.  The IFRT notes that if in the future changes are needed to evolve the policy management process for .INT, the IANA Function Contract may need to be updated; but no action is required at this point.

#### Section 4.3 (c)

Maintenance of a repository of internationalized domain name tables and label generation rulesets

The IFRT finds that PTI maintains a repository of IDN names as required by the contract. The repository can be found at https://www.iana.org/domains/idn-tables.

#### Section 4.3 (d)

Provision of other services and implementation example is changing PTI's Service Level of modifications in performance of the IANA Naming Function, in each case upon ICANN's request and in conformance with applicable policies and procedures.

The IFRT finds that ICANN has confirmed to the review team that this contract requirement has been adhered to by PTI. An Agreements (SLAs): working with ICANN and the CSC, PTI developed a SLA Change process, and adhered to it when changes were made to three (3) sets of SLAs.

#### Article IV, Section 4.4: Performance of IANA Naming Function

Contractor shall respect the diversity of customers of the IANA Naming Function and shall provide service to its customers in conformance with prevailing technical norms, and in support of the global security, stability and resilience of the DNS. If a customer's receipt of services is based on a contract between such customer and ICANN, Contractor shall continue to provide services to such customer notwithstanding any ongoing or anticipated contractual disputes between ICANN and such customer.

The IFRT finds that PTI has shown that all customers are handled according to the PTI Service Level Agreement that applies. No complaints have surfaced with regard to unequal treatment, or concern that issues between the customer and other ICANN departments have had a bearing on how their IANA requests are processed, which was confirmed by the CSC as well. This section also references PTI's performance obligations which are monitored through monthly SLA reports, and annual audits such as SOC2 and SOC3. ICANN org has indicated its satisfaction at PTI's performance as reflected by these reports.

# Article IV, Section 4.5: Separation of Policy Development and Operational Roles

Contractor shall ensure that its staff performing the IANA Naming Function do not publicly initiate, advance or advocate any policy development related to the IANA Naming Function. Notwithstanding the foregoing, Contractor's staff may (i) respond to requests for information requested by Interested and Affected Parties, and, at Contractor's volition, provide objective information to such customers, in each case, to inform ongoing policy discussions, (ii) request guidance or clarification as necessary for the performance of the IANA Naming Function, and (iii) publish, contribute to or comment on any document related to ongoing policy discussions, provided that, in the case of clause (iii), the primary purpose of such publication, contribution or commentary is to supply relevant IANA Naming Function experience and insight.

The IFRT finds that this clause has been met and in its review and discussions has not found any evidence that PTI staff are engaging in any policy development activities outside of their scope.

#### Article IV, Section 4.6: User Instructions

Contractor shall, in collaboration with all Interested and Affected Parties, maintain user instructions for the IANA Naming Function, including technical requirements. Contractor shall post such instructions at iana.org ("IANA Website").

The IFRT finds that PTI has published user instructions for IANA services and systems on iann.org. IFRT members have reviewed all user instruction documents and noted that they fulfil this requirement.

#### Article IV, Section 4.8: Responsibility and Respect for Stakeholders

Contractor shall apply the policies for the Root Zone Management component of the IANA Naming Function that have been defined, or after the date of this Contract are further defined, by (a) the Generic Names Supporting Organization ("GNSO"), as appropriate under ICANN's Bylaws, (b) the Country Code Names Supporting Organization ("ccNSO"), as appropriate under ICANN's Bylaws, and (c) RFC 1591: /Domain Name System Structure and Delegation/ ("RFC 1591") as interpreted by the Framework of Interpretation of Current Policies and Guidelines Pertaining to the Delegation and Redelegation of Country-Code Top Level Domain Names, dated October 2014 ("FOI"). In addition to these policies, Contractor shall, where applicable, consult the 2005 Governmental Advisory Committee Principles and Guidelines for the Delegation and Administration of Country Code Top Level Domains ("GAC 2005 ccTLD Principles"). Contractor shall publish documentation pertaining to the implementation of these policies and principles on the IANA Website.

The IFRT finds that PTI has complied with all policies regarding the IANA naming service functions.

#### Article IV, Section 4.8: Management of the INT TLD

- (a) Contractor shall operate the .INT TLD within the current registration policies for the .INT TLD.
- (b) Upon designation of a successor registry by ICANN, if any, Contractor shall cooperate with ICANN to facilitate the smooth transition of operation of the .INT TLD. Such cooperation Additional comments on .INT can be found shall, at a minimum, include timely transfer to the successor registry of the then-current toplevel domain registration data.

The IFRT finds that PTI has adhered to all registration policies in managing .INT. The PTI Transition plan applies to the transition of .INT if necessary.

for Article IV, Section 4.3 (b): Scope of the IANA Naming Function which merely states: Management of the .INT top-level domain".

#### Article IV, Section 4.10: General Manager: **Kev Personnel**

- (a) Contractor shall provide trained. knowledgeable technical personnel according to the requirements of this Contract, including the following key personnel: a General Manager, a Director of Security and a Conflict of Interest Officer ("Key Personnel"). All Contractor personnel who interface with ICANN 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.
- (b) The Conflict of Interest Officer shall be responsible for ensuring the Contractor is in compliance with Contractor's internal and external conflict of interest rules and procedures.
- (c) The General Manager of Contractor shall organize, plan, direct, staff, and coordinate the overall performance of the IANA Naming Function; manage contract and subcontract activities as the authorized interface with ICANN and ensure compliance with applicable rules and regulations. The General Manager of Contractor shall be responsible for the overall performance of Contractor under this Contract The IFRT finds that this section of the and shall meet and confer with ICANN (including the Customer Standing Committee ("CSC") and IANA Function Review teams ("IFRT"), as such terms are used in ICANN's Bylaws) regarding the status of specific Contractor activities and problems, issues, or conflicts requiring resolution. The General Manager of Contractor must possess the following skills:
- (i) demonstrated communication skills with all levels of management;
- (ii) capability to negotiate and make binding decisions for Contractor (subject to any requirements of Contractor's Bylaws and the authority delegated to such

contract mirrors the original IANA Service's Dept of Commerce contract, which listed specific roles and titles. Today, while PTI does not have all specific titles listed, the responsibilities under said contract titles are addressed and handled by PTI staff. There has been no community feedback suggesting any functional gaps within PTI. The IFRT believes that PTI has met the intention behind this contract section and suggests that this section would benefit from being re-written to remove specific Title requirements and instead focus on PTI Management's responsibility to staff for optimal performance.

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person by the Contractor's Board of Directors ("PTI Board")):

- (iii) extensive experience and proven expertise in managing similar multi-task agreements of this type and complexity;
- (iv) extensive experience supervising personnel; and
- (v) a thorough understanding and knowledge of the principles and methodologies associated with operations management and contract management.
- (d) Contractor shall obtain the approval of ICANN, after consultation with the PTI Board, prior to making Key Personnel substitutions. Replacements for Key Personnel must possess qualifications reasonably equal to or exceeding the qualifications of the personnel being replaced, unless an exception is approved by ICANN.

# Article IV, Section 4.10: Inspection Of All Deliverables And Reports Before Publication

- (a) Prior to publication or posting of reports and other deliverables anticipated under this Contract on a template that has not been previously approved by ICANN, Contractor shall obtain approval from ICANN for such template, which will not be unreasonably withheld. Any deficiencies identified by ICANN shall be corrected by Contractor and resubmitted to ICANN within 10 business days after Contractor's receipt of notice of such deficiency.
- (b) ICANN reserves the right to inspect the premises, systems and processes of all security and operational components used for the performance of all the requirements and

The IFRT finds that ICANN inspects PTI's deliverables and reports as is required by the contract.

obligations set forth in this Contract.	
Article V, Section 5.1: Constructive	
Working Relationship	
Contractor shall use commercially reasonable efforts to maintain a constructive working relationship with ICANN, the root zone maintainer and all Interested and Affected Parties to ensure quality and satisfactory performance of the IANA Naming Function.	The IFRT finds that PTI has a constructive working relationship with ICANN.
Article V, Section 5.2(a): Continuity of	
Operations	
Either ICANN or the Contractor shall provide, at a minimum, redundant sites in at least two geographically dispersed sites within the United States as well as multiple resilient communication paths to customers to ensure continuation of the IANA Naming Function in the event of cyber or physical attacks, emergencies, or natural disasters.	The IFRT finds that as required by the contract, PTI and ICANN provide geographically separated sites within the United States for the performance of IANA naming function, with multiple resilient communication paths to customers.
Section 5.2(b)	The IFRT finds that as required by the
Contractor shall collaborate with ICANN to develop and implement a Contingency and Continuity of Operations Plan ("CCOP") for the IANA Naming Function. Contractor in collaboration with ICANN shall from time to time update and annually test the CCOP as necessary to maintain the security and stability of the IANA Naming Function. The CCOP shall include details on plans for continuation of the IANA Naming Function in the event of cyber or physical attacks, emergencies, or natural	The team also finds that while the contract requires annual testing as necessary, PTI indicated that by mutual agreement between PTI and ICANN annual testing was not conducted prior to 2019 due to a lack of change in the CCOP and a lack of available

disasters. Contractor shall submit the CCOP to ICANN after each update and publish on the IANA Website a report documenting the outcomes of the CCOP tests within 90 calendar days of the annual test.	
Section 5.2(c)	
(a) Contractor is not authorized to perform the services performed by the root zone maintainer, as such services are contemplated by the RZMA, unless authorized by ICANN. (b) Contractor shall not make changes in the policies and procedures developed by the relevant entities associated with the performance of the IANA Naming Function. (c) The performance of the IANA Naming Function shall not be, in any manner, predicated upon or conditioned by Contractor on the existence or entry into any contract, agreement or negotiation between Contractor and any TLD registry operator or any other third party. Compliance with this Section must be consistent with the SOW.	The IFRT finds that this section has been fulfilled by PTI.
Article VI: Transparency of Decision- Making	The IFRT finds that PTI operated with an appropriate level of transparency in its decision making.
Article VI, Section 6.1 (a): Transparency	The IFRT finds that via the monthly audit
To enhance consistency, predictability and integrity in Contractor's decision-making related to the IANA Naming Function, Contractor shall:  (a) Publish reports pursuant to ARTICLE VII of this Contract and Section 3 of the SOW.	report on the root zone file, which is published according to the contract at:  www.iana.org/performance/root-audit, and the CSC reports, which are published according to the contract at:  https://www.iana.org/performance/csc-reports, PTI has met this requirement.

#### Section 6.1 (b)

Make public all decisions of the PTI Board relating to the IANA Naming Function, unless, upon the determination of the PTI Board, such decision (i) relates to confidential personnel matters, (ii) is covered by attorney-client privilege, work product doctrine or other recognized legal privilege, (iii) is subject to a legal obligation that Contractor maintain its confidentiality or otherwise would result in the disclosure of confidential information of Contractor's customers, (iv) would disclose trade secrets, or (v) would present a material risk of negative impact to the security, stability or resiliency of the IANA Naming Function or the Internet.

The IFRT finds that PTI Board Actions are listed publicly at: https://pti.icann.org/ptiboard-meetings

#### Section 6.1 (c)

Agree not to redact any PTI Board minutes related to decisions concerning the IANA Naming Function, provided that the PTI Board may redact such minutes on the determination that such redacted information (i) relates to confidential personnel matters, (ii) is covered by attorney-client privilege, work product doctrine or other recognized legal privilege, (iii) is subject to a legal obligation that Contractor maintain its confidentiality or otherwise would result in the disclosure of confidential information of Contractor's customers, (iv) would disclose trade secrets, or (v) would present a material risk of negative impact to the security, stability or resiliency of the IANA Naming Function or the Internet.

The IFRT finds that Policies preventing exclusions in PTI Board Meeting Minutes are documented here:

https://www.icann.org/resources/boardmaterial/briefing-materials-guidelines-2019-12-20-en.

#### Section 6.1 (d)

Have the General Manager of Contractor and chairperson of the PTI Board sign an annual attestation that Contractor has complied with the requirements of this Section 6.1.

The IFRT finds that the PTI President has signed the Annual Attestation every year.

The IFRT recommends it be published as well.

Recommendation ID IFRT-2020-Rec2

#### Section 6.1 (e)

Subject to the terms of this Contract, PTI shall operate to the maximum extent feasible in an open and transparent manner and consistent with procedures designed to ensure fairness, in each case, as such concepts are contemplated by ICANN's Bylaws.

The IFRT finds that PTI has operated with an appropriate level of transparency in its decision making.

The IFRT finds that PTI has published publicly suitable reports and audits on a

periodic basis.

#### Article VII: Audits, Monitoring and Reviews

# Article VII, Section 7.1 (a): Audits

Contractor shall generate and publish via the IANA Website a monthly audit report identifying each root zone file and root zone "WHOIS" database change request and its status. The relevant policies under which the changes are made shall be noted within each monthly report. Such audit report shall be due to ICANN no later than 15 calendar days following the end of each month.

The IFRT finds that PTI carries out this function as required while additionally suggesting a contract text revision documented in recommendation IFRT-2020-Rec4

#### Section 7.1 (b):

Contractor shall annually perform a specialized compliance audit of Contractor's security provisions relating to the IANA Naming Function against existing best practices and ARTICLE XI. This specialized compliance audit shall be performed by an external, independent auditor.

The IFRT finds that PTI has engaged an external auditor on an annual basis. The IFRT has reviewed both the public and confidential reports of the auditor and has found them to be complete and successful, thus meeting the contractual requirement. [consider enhancement aligning the audit report statements more closely to the contract.)

# Article VII: Section 7.2 (a): Performance Monitoring

So long as the CSC exists pursuant to ICANN's Bylaws, Contractor acknowledges and agrees that the CSC is entitled to monitor Contractor's performance under this Contract (including the SOW) in accordance with ICANN's Bylaws.

The IFRT finds that PTI has provided monthly reports since October 2016 and continues to work with the CSC. This is acknowledgement that the CSC is entitled to monitor its performance. Reports are available publicly at:

https://www.iana.org/performance/csc-reports and the CSC's notification to their customers can be found at: https://www.icann.org/csc/reports.

Section 7.2 (b):  Contractor shall provide reports to the CSC as contemplated by the SOW.	The IFRT finds that PTI has provided a monthly report to the CSC since October 2016. Reports are available publically at: https://www.iana.org/performance/csc-reports and the CSC's notification to their customers can be found at: https://www.icann.org/csc/reports.
Section 7.2 (c):  Contractor shall act in good faith to resolve issues identified by the CSC.	The IFRT finds that the CSC has had excellent support and communication from PTI on any performance matters raised to date.
Section 7.2 (d):  Contractor acknowledges that the CSC shall be empowered to escalate identified areas of concern as set forth in ARTICLE VIII.	The IFRT finds that ICANN, PTI and the CSC developed and approved the Remedial Action Procedures (RAPs) which PTI adopted on February 2019. A copy can be found at:  https://www.icann.org/en/system/files/files/csc-remedial-action-procedures-19feb19-en.pdf.
Article VII, Section 7.3: IANA Naming Function Reviews  (a) Contractor acknowledges that ICANN's Board of Directors (the "ICANN Board") may cause a review by an IFRT, relating to the IANA Naming Function, this Contract and Contractor's performance under this Contract (including the SOW), in accordance with ICANN's Bylaws (an "IANA Function Review" or "IFR").	
<ul> <li>(b) Contractor shall cooperate with the conduct of any IFRT, including any site visit conducted by an IFRT that has been previously approved by ICANN in accordance with ICANN's Bylaws.</li> <li>(c) Contractor agrees that ICANN may unilaterally amend or terminate this Contract (including the SOW) in accordance with an</li> </ul>	

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The IFRT finds that there is an adequate set of mechanisms in place for escalation, both internal and via community processes.
C

# Article VIII, Section 8.1: Complaint Resolution Process

- (a) If Contractor receives a customer service complaint from a customer (a "Complaint"), Contractor will review the Complaint and attempt to resolve it to the reasonable satisfaction of the person or entity who brought the Complaint (the "Complainant") as soon as reasonably practicable. If the Complaint is not so resolved, the Complainant may escalate the matter in writing to Contractor's management team, in which case Contractor shall notify the CSC. If the Complaint is still not resolved, the Complainant or the President of Contractor may escalate the matter in writing to ICANN's Ombudsman.
- (b) If (i) a Complainant is a customer and (ii) after completing the escalation process provided for in Section 8.1(a), the Complaint is still not resolved, then (A) the CSC may conduct a review to determine whether the Complaint is subject of a persistent performance issue of Contractor or an indication of a systemic problem with Contractor's performance of the IANA Naming Function pursuant to the terms of this Contract (a "Performance Issue") and (B) the Complainant may (x) request mediation, which shall be conducted in a manner consistent with the terms and process set forth below in Section 8.1(c) and (y) if the issue is not resolved following such mediation and the Complaint meets the requirements of the Independent Review Process, initiate an Independent Review Process (as defined in the ICANN's Bylaws). If the CSC determines that a Performance Issue exists, the CSC may seek remediation of the Performance Issue through the IANA Problem Resolution Process described in Section 8.2.
- (c) Customer Mediation Process.
- (i) If a Complainant is a customer of Contractor, after completing the escalation process provided for in Section 8.1(a), the

The IFRT finds that where there have been customer complaints, PTI's complaint resolution process was followed and the CSC duly informed as required by the contract.

customer may initiate mediation by delivering a written notice to the President of Contractor and the Secretary of ICANN.

- (ii) There shall be a single mediator who shall be selected by the agreement of the customer and ICANN. ICANN shall propose a slate of at least five potential mediators, and the customer shall select a mediator from the slate or request a new slate until a mutually agreed mediator is selected. The customer may recommend potential mediators for inclusion on the slates selected by ICANN. ICANN shall not unreasonably decline to include mediators recommended by the customer on proposed slates and the customer shall not unreasonably withhold consent to the selection of a mediator on slates proposed by ICANN. (iii) The mediator shall be a licensed attorney
- with general knowledge of contract law and general knowledge of the DNS and ICANN. The mediator may not have any ongoing business relationship with ICANN, Contractor or the customer. The mediator must confirm in writing that he or she is not, directly or indirectly, and will not become during the term of the mediation, an employee, partner, executive officer, director, consultant or advisor of ICANN, Contractor or the customer. (iv) The mediator shall conduct the mediation
- in accordance with this Section 8.1(c), the laws of California and the rules and procedures of a well-respected international dispute resolution provider.
- (v) The mediation will be conducted in the English language and will occur in Los Angeles County, California, unless another location is mutually agreed between ICANN, Contractor and the customer.
- (vi) ICANN, Contractor and the customer shall discuss the dispute in good faith and attempt, with the mediator's assistance, to reach an amicable resolution of the dispute.
- (vii) ICANN shall bear all costs of the mediator.
- (viii) If ICANN, Contractor and the customer have engaged in good faith participation in the mediation but have not resolved the dispute for any reason, ICANN,

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Contractor and the customer may terminate the mediation at any time by declaring an impasse.	
(ix) If a resolution to the dispute is reached by ICANN, Contractor and the customer, ICANN, Contractor and the customer shall document such resolution.	

#### **Article VIII, Section 8.2: IANA Problem** Resolution Process

Following the Effective Date, Contractor shall work cooperatively with the CSC to develop "Remedial Action Procedures" for the purpose of addressing Performance Issues. If the CSC determines that a Performance Issue exists, the CSC may seek resolution of the Performance Issue with Contractor, in which case Contractor shall comply with such Remedial Action Procedures if and to the extent the CSC also complies with such procedures.

The IFRT finds that the existing Remedial Action Procedure (RAP) adopted by CSC on January 2019 and by PTI on February 2019, meets the contract's requirements. https://www.icann.org/en/system/files/files/cs c-remedial-action-procedures-19feb19en.pdf

However, the CSC believes that there exists a discrepancy regarding RAP in the ICANN bylaws. The bylaws mention the Remedial Action Procedures as two different procedures in sections 18.12(i) and 18.12(ii). The recommendation is that the ICANN board considers removing the duplicates.

Recommendation ID IFRT-2020-Rec3

#### Article VIII: Section 8.3: Notice and **Mitigation Plan**

- (a) Contractor shall promptly inform ICANN of any issue or dispute arising from its performance of the requirements and services contemplated by this Contract prior to the Complaint being escalated pursuant to Section 8.1(a), and shall agree with ICANN on a plan to resolve the Complaint.
- (b) If, for any reason, Contractor fails to meet any of the requirements of this Contract, Contractor shall (i) conduct an analysis of its operations to determine the root cause of such complaints to the CSC to identify any failure, (ii) develop a mitigation plan to avoid the root cause of such failure from occurring in then provide a mitigation plan to address (as the future, and (iii) deliver the report to ICANN upon its completion. Contractor shall modify and update any mitigation plan as directed by ICANN.

The IFRT finds that there are processes currently in place for individual customer complaints, and a procedure for escalations called the Remedial Action Procedures (RAPs). PTI reports any customer potential systemic issues which PTI would part of the RAPs). However, to-date, all customer complaints were resolved without escalation, and the RAPs have never been utilized.

Article IX: TERM; RENEWAL; TRANSITION AND TERMINATION	No findings required for this section
Article IX, Section 9.1: Initial Term  The initial term of this Contract will be five years from the Effective Date (the "Initial Term").	No findings required for this section
Article IX, Section 9.2: Renewal; Termination  (a) This Contract will be automatically renewed for automatically renewed.	
for successive periods of five years (each, a "Renewal Term") upon the expiration of the Initial Term and each successive Renewal Term, unless (i) ICANN terminates this Contract pursuant to an SCWG Recommendation arising from an IANA Naming Function Separation Process (as such terms are defined in ICANN's Bylaws)	
approved in accordance with ICANN's Bylaws or (ii) ICANN elects not to renew the Initial Term or any Renewal Term thereafter pursuant to an IFR Recommendation, Special IFR Recommendation, or SCWG Recommendation (as such terms are defined	
in ICANN's Bylaws) approved in accordance with ICANN's Bylaws by providing Contractor with not less than twelve months prior written notice. Any termination or election by ICANN	No findings required for this section

to not renew this Contract under this Section 9.2 must be approved by the ICANN Board to be effective hereunder.

(b) Subject to Section 9.2(a), the first Renewal Term shall commence immediately following the end of the Initial Term and each Renewal Term thereafter shall commence immediately following the end of the preceding Renewal Term. Each Renewal Term shall end on the fifth anniversary of the commencement of the Renewal Term.

#### Article IX, Section 9.3: Transition

- (a) Contractor shall develop and maintain, with ICANN input, a plan in place for transitioning the IANA Naming Function to a successor provider to ensure an orderly transition while maintaining continuity and security of operations, including in connection with the nonrenewal of this Contract and/or divestiture or other reorganization of PTI by ICANN as contemplated by ICANN's Bylaws. The transition plan shall be submitted to ICANN and posted to the IANA Website within 18 months after the Effective Date. The plan shall thereafter be reviewed annually and updated as appropriate.
- (b) Contractor shall provide support and cooperation to ICANN, and to any successor provider of the IANA Naming Function, in order to effect an orderly, stable, secure and efficient transition of the performance of the IANA Naming Function.
- (c) Contractor agrees to be engaged in the transition plan and to provide appropriate transition staff and expertise to facilitate a stable and secure transition of the IANA

The CSC has not reviewed the plan since the contract requires them to review it only if ICANN finds it necessary.

The IFRT finds that the transition plan has not yet been published.

Recommendation ID IFRT-2020-Rec1

Naming Function to a successor provider.	
Article XI, Sections 11.4: Security Plan, Director of Security	
ICANN shall coordinate with Contractor to develop and execute a security plan that meets the requirements of this Contract and this ARTICLE XI. ICANN and Contractor shall document in the security plan the process used to ensure information systems including hardware, software, applications, and general support systems have effective security safeguards, which have been implemented, planned for, and documented. Contractor shall, in coordination with ICANN, perform periodic reviews of the security plan and update the plan as necessary.	The IFRT finds that PTI falls under the ICANN Security Plan, and is satisfied it meets these requirements. The Security Plan is reviewed annually, in that it is an input into PTI's annual SOC2 report.
Article IX, Section 9.3 (d): Transition  (d) ICANN, in conjunction with the CSC as necessary, shall review the transition plan at least every five years.	The IFRT finds that in discussions with the CSC, the CSC has determined that this role is on an as-needed basis and not a mandatory clause. The CSC has stated that it remains available to review the transition plan if requested by ICANN.
Article IX, Section 9.4: Survival of Terms  Upon the expiration or termination of this Contract under this ARTICLE IX, this Contract shall become wholly void and of no further force and effect, and following such expiration or termination no Party shall have any liability under this Contract to the other Party, except that each Party hereto shall remain liable for	No findings required for this section

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any breaches of this Contract that occurred prior to its expiration or termination; provided, however, that the following provisions shall survive the expiration or termination of this Contract: ARTICLE I, ARTICLE III, Section 9.3, ARTICLE XII, ARTICLE XIII, Section 14.1 (but only with respect to obligations accruing prior to the expiration or termination of this Contract), Section 14.2 through Section 14.15, and this Section 9.4.

The IFRT finds that PTI is provided with sufficient budget for its operations.

#### Article X: Resources, Fees and Budget

#### Article X, Section 10.1: Fees

- (a) ICANN shall provide or make available to Contractor the necessary personnel (including seconded employees), material, equipment, services and other resources and facilities to perform Contractor's obligations under this Contract, including funding in accordance with the Approved IANA Budget.
- (b) Contractor may not charge or collect fees from third parties related to the performance of the IANA Naming Function without the prior written consent of ICANN.
- (c) Any fees approved by ICANN and charged by Contractor relating to the IANA Naming Function will be based on the actual costs incurred by Contractor to perform the IANA Naming Function.
- (d) ICANN acknowledges and agrees that the performance by Contractor of the IANA Naming Function is conditioned upon the full and complete performance of all of the services and obligations required of ICANN under the Services Contract between ICANN and Contractor.

The IFRT finds that during discussions with PTI, PTI has that it is sufficiently supported by ICANN.

#### Article X, Section 10.2: Budget Contractor shall comply with the requirements set forth in its Bylaws relating to preparing, submitting and monitoring an annual budget. ICANN will meet annually with the General Manager of Contractor to review the annual budget for the IANA Naming Function, which The IFRT finds that PTI's Operation Plan shall be approved in accordance with and Budget goes through a Public Comment Contractor's Bylaws and ICANN's Bylaws before Board approval and is published ("Approved IANA Budget"). annually. **Article XI: Security Requirements** Article XI, Section 11.1: Computing **Systems** With respect to the performance of the IANA Naming Function, Contractor shall install and operate all computing and communications systems in accordance with best business and security practices. ICANN and Contractor shall implement a secure system for authenticated communications to Contractor's customers when carrying out the IANA Naming Function The IFRT finds that the SOC2 audit pursuant to the terms of this Contract. ICANN thoroughly reviews PTI's computing and Contractor shall document practices and systems, thus satisfactorily meeting the configuration of all systems. requirement. Section 11.2 Contractor shall implement and thereafter The IFRT finds that the SOC2 audit operate and maintain a secure notification thoroughly reviews PTI's systems, system at a minimum, capable of notifying TLD registry operators, of such events as communication and operating processes, thus satisfactorily meeting the requirement. outages, planned maintenance, and new developments. In all cases, Contractor shall notify ICANN of any outages.

Section 11.3  Contractor shall ensure the authentication, integrity, and reliability of the service data in performing the IANA Naming Function.	The IFRT finds that PTI has consistently passed its audits, achieved its SLAs, and there have been relatively few customer/stakeholder complaints. Given this, it stands to reason that IANA has ensured the authentication, integrity, and reliability of the service data in its role of handling the naming function.
Article XI, Section 11.5: Director of Security	
Contractor's Director of Security shall be responsible for ensuring Contractor's compliance with the technical and physical security measures and requirements of this Contract.	The IFRT finds that the completed SOC audits suffice for ensuring PTI's compliance for the technical and physical security measures and requirements of the contract.
Article XII: Confidentiality	No findings required for this section
Article XIII: Intellectual Property	No findings required for this section
Miscellaneous	No findings required for this section

Statement of Work for Management of the DNS Root Zone	No findings required for this section

#### Annex A, 1: Root Zone Management

- a. The Root Zone Management component of the IANA Naming Function is the administration of certain responsibilities associated with the Internet DNS root zone management.
- b. Contractor shall collaborate with Interested and Affected Parties to develop, maintain. enhance and post performance standards for Root Zone Management. Specifically, Contractor shall perform Root Zone Management in accordance with the service levels set forth in Section 2.
- c. Contractor shall also implement DNSSEC in all zones for which ICANN has technical administration authority.
- d. Contractor shall facilitate and coordinate the root zone of the domain name system, and maintain 24 hour-a-day/7 days-a-week operational coverage. Contractor shall work collaboratively with the Root Zone Maintainer, in the performance of this function.
- i. Contractor shall receive and process root zone file 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 file. Contractor shall process root zone file changes as specified in Section 2 of this Annex A.
- ii. Contractor shall maintain, update, and make publicly accessible a Root Zone registration database with current and verified contact information for all TLD registry operators. The Root Zone registration database, at a minimum, shall consist of the following data fields: domain status and contact points for resolving issues relating to the operation of the The IFRT finds that DNSSEC is domain (comprised of at least organizational name, postal address, email address and

The IFRT finds that PTI performs its role in the management of the root zone satisfactorily.

implemented in the zones where ICANN is the technical administration authority.

telephone number). Contractor shall receive and process root zone registration data change requests for TLDs.

- iii. Contractor shall apply existing policies in processing requests related to the Delegation, Revocation and Transfer of ccTLDs, including RFC 1591 as interpreted by the FOI and any further clarification of these policies developed by the ccNSO, as appropriate under ICANN's Bylaws, and approved by the ICANN Board. In addition to these policies, Contractor shall, where applicable, consult the GAC 2005 ccTLD Principles. If an existing policy framework does not cover a specific situation. Contractor will use commercially reasonable efforts to consult with and provide opportunity for input from Significantly Interested Parties and, where necessary, may request the ccNSO to undertake policy development work to address such issues.
- iv. Contractor shall apply existing policy frameworks in processing requests related to retirement of a ccTLD, including RFC 1591 as interpreted by the FOI and any further clarification of these policies developed by the ccNSO, as appropriate under ICANN's Bylaws, and approved by the ICANN Board. If an existing policy does not cover a specific situation, Contractor will use commercially reasonable efforts to consult with and provide opportunity for input from Significantly Interested Parties and, where necessary, may request the ccNSO to undertake policy development work to address such issues. v. Contractor shall verify that all requests related to the delegation and redelegation of generic TLDs are consistent with the
- vi. Contractor shall maintain an automated root zone management system that, at a minimum, includes (A) a secure (encrypted) system for customer communications; (B) an automated provisioning protocol allowing customers to manage their interactions with the root zone management system; (C) an online database of change requests and subsequent actions whereby each customer can see a record of

procedures developed by ICANN.

their historic requests and maintain visibility into the progress of their current requests; (D) a test system, which customers can use to meet the technical requirements for a change request; and (E) an internal interface for secure communications between the Contractor and the Root Zone Maintainer.	

#### Annex A, 2, Service Levels:

Contractor shall perform the Services in accordance with the following "Service Levels". The expectation is that Contractor will normally perform within the threshold. The thresholds will be modified over time as part of periodic reviews of the service level expectation. A subset of the following measures relate to measurement of nonroutine changes where it is not applicable to set a specific threshold for performance. It is expected for measurements of non-routine process steps these will only be reported with no applicable service level expectation.

#### Services Definitions

- i. Category I (Routine updates impacting Root Zone File). Routine change requests that alter the technical data published in the DNS root zone (e.g. changes to NS records, DS records and glue records). A third party may be engaged to compile, publish and distribute the root zone.
- ii. Category II (Routine updates not impacting Root Zone File). Routine change requests that do not alter the DNS root zone (e.g., contact data and metadata). These changes do not require changes to the root zone. iii. Category III (Creating or Transferring a
- gTLD). Requests to create ("delegate") or transfer ("redelegate" or "assign") a generic TLD. These changes require additional processing by Contractor to ensure policy and contractual requirements associated with a change of control for the TLD are met.
- iv. Category IV (Creating or Transferring a ccTLD). Requests to create or transfer a country-code TLD. These changes require additional processing by Contractor to ensure policy requirements are met. This processing includes additional analysis on the change request, production of a report, and review of the report (including verification that all existing registration data has been successfully transferred from the old to new registry operator).

The IFRT finds that PTI operates within the services levels on a monthly basis, as confirmed by the CSC.

- v. Category V (Other change requests). Other non-routine change requests. Contractor is required to process change requests that may have special handling requirements, or require additional documentary evidence or clarifications from the customer or third parties, that prevent automating the handling of the request. These requests include, but are not limited to:
- 1. Customers that require requests to be handled outside the online self-service platform, such as those lodging change requests through the exchange of postal mail: 2. Customers that have placed special handling instructions on file with Contractor, or have otherwise asked for special handling for a request that deviates from the normal process, resulting in the request being executed manually;
- 3. Unique legal or regulatory encumbrances that must be satisfied that require additional processing:
- 4. Removing a TLD from service (i.e. retirement or revocation); and
- 5. Changes that relate to the operation of the root zone itself, including changing the Root Key Signing Key, altering the set of authoritative name servers for the root zone (i.e. the "root servers"), and changes to the "root hints".

#### Annex A, 3: Performance

### No findings required for this section

### Annex A, 3 (a): Program Reviews and Site **Visits**

- i. Contract acknowledges that the CSC is entitled to conduct reviews in accordance with The IFRT finds that the CSC is satisfied that ICANN's Bylaws and the CSC Charter. ii. Contractor acknowledges that an IFRT is
- entitled to conduct site visits in accordance with ICANN's Bylaws.

PTI provides all necessary support to the CSC in order for the CSC to operate in its oversight role. To-date, the CSC has not requested a site visit.

Annex A, 3 (b): Monthly Performance Progress Report	
Contractor shall prepare and submit reports as mutually agreed between Contractor and the CSC.	The IFRT finds that the monthly report is submitted by PTI to the CSC in time every month.
Annex A, 3 (c): Root Zone Management Dashboard	
Root Zone Management Dashboard. Contractor shall work collaboratively with ICANN and Interested and Affected Parties to produce the dashboard to report Service Level Expectations for Root Zone Management, which will be used for real-time reporting of Contractor's performance.	The IFRT finds that PTI has implemented the <u>SLE dashboard</u> and this dashboard is maintained on an ongoing basis as required by this clause.
Annex A, 3 (d): Performance Standards Reports:	
Performance Standards Reports. Contractor shall develop and publish performance standard metric reports for the IANA Naming Function in consultation with the CSC. 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).	The IFRT finds that PTI publishes the performance reports to the satisfaction of the CSC on a monthly basis.
Annex A, 3 (e): Customer Service Survey:	
In accordance with ICANN's Bylaws, Contractor shall collaborate with the CSC and ICANN to maintain and enhance the annual customer service survey consistent with the performance standards for Root Zone Management. The survey shall, at a minimum, include a feedback section for the IANA Naming Function. No later than 60 calendar days after completing a customer service survey, Contractor shall prepare a report (the	The IFRT finds that the <u>annual customer</u> <u>survey</u> is performed with input and reporting to the CSC. The CSC is actively involved in
"CSS Report"), submit the CSS Report to ICANN and publicly post the CSS Report to	the outreach and review of the outcomes of the survey.

Lu Lania var i vi	l I
the IANA Website.	
Annex A, 3 (f): Final Report	
Contractor shall prepare and submit a final	
report on the performance of the IANA Naming	
Function that documents standard operating	
procedures, including a description of the	
techniques, methods, software, and tools	
employed in the performance of the IANA	
Naming Function. Contractor shall submit the	
report to the CSC and ICANN no later than 30	
days after the expiration or termination of the	
Contract.	No findings required for this section
	3
Annex A, 3 (g): Inspection and acceptance	
ICANN will perform final inspection and	
acceptance of all deliverables and reports	
articulated in this Section 3, as set forth in	
Section 4.10(a) of the Contract. Any	
deficiencies identified by ICANN shall be	
corrected by Contractor and resubmitted to	
ICANN within 10 business days after	
•	
Contractor's receipt of notice of such	
deficiency.	No findings required for this section
Annex A, 4 (b): DNSSEC at the authoritative	
Root Zone	
DNSSEC at the authoritative Root Zone	
requires cooperation and collaboration	
between the Contractor and the Root Zone	
Maintainer. The baseline requirements	
encompass the responsibilities and	
requirements for Contractor and these	
responsibilities and requirements must be	The IFRT finds that the relationship between
implemented in cooperation with similar	PTI and the RMZ is functioning and has
responsibilities and requirements defined	received no reports of any deficiencies or
within ICANN's relationship with the Root Zone	
Within 107 tiving 5 relationship with the Root Zone	improvemente required.

Maintainer. Annex A, 4: General Requirements The Root Zone system needs an overall security lifecycle, such as that described in ISO 27001, NIST SP 800-53, etc., and any security policy for DNSSEC implementation must be validated against existing standards for security controls. ii. The remainder of this section highlights security requirements that must be considered in developing any solution. ISO 27002:2005 (formerly ISO 17799:2005) and NIST SP 800-53 are recognized sources for specific controls. Note that reference to SP 800-53 is used as a convenient means of specifying a set of technical security requirements. The systems referenced in this document are assumed to meet all the SP 800-53 technical security controls or equivalent required by a HIGH IMPACT system. iii. Whenever possible, references to NIST publications are given as a source for further information. These Special Publications ("SP") are not intended as auditing checklists, but as non-binding guidelines and recommendations to establish a viable IT security policy. Comparable security standards can be substituted where available and appropriate. The IFRT finds that in reviewing the public All of the NIST document references can be and confidential auditors' reports on the found on the NIST Computer Security security of PTI's systems and processes,

Research Center webpage

(http://www.csrc.nist.gov/).

PTI operates the RZMS in a secure and

stable manner.

### Annex A, 4 (c): Security Authorization and Management Policy

- i. Contractor shall have its own security policy in place; each security policy must be periodically reviewed and updated, as appropriate.
- 1. Supplemental guidance on generating a Security Authorization Policy may be found in NIST SP 800-37.
- ii. The policy shall have a contingency plan component to account for disaster recovery (both man-made and natural disasters).
- 1. Supplemental guidance on contingency planning may be found in SP 800-34
- iii. The policy shall address Incident Response detection, handling and reporting (see 4 below).
- 1. Supplemental guidance on incident response handling may be found in NIST SP 800-61.

The IFRT finds that the Security Authorization and Management Policy used by PTI is documented as part of ICANN's overall Security Policy documents which are reviewed annually. PTI does not maintain a separate security policy document.

Contingency plans are covered in PTI's Contingency and Continuity Operation Plan (CCOP).

#### Annex A, 4 (d): IT Access Control

There shall be an IT access control policy in place and enforced for the key management **functions** 

- 1. This includes both access to hardware/software components and storage media as well as ability to perform process operations.
- 2. Supplemental guidance on access control policies may be found in NIST SP 800-12.
- ii. Users without authentication shall not perform any action in key management.
- iii. In the absence of a compelling operational requirement, remote access to any cryptographic component in the system (such as hardware security modules) is not permitted.

The IFRT finds that access control to hardware/software components and storage media, including appropriate authentication and authorization, is documented in ICANN's security policies. These are tested and audited annually as part of the SOC2 audit.

#### Annex A, 4 (e): Security Training

- i. All personnel participating in the Root Zone Signing process shall have adequate IT security training.
- ii. Supplemental guidance on establishing a security awareness training program may be

The IFRT finds that the completed SOC audits suffice for ensuring PTI's staff receives adequate security training to meet the requirements of the contract.

found in NIST SP 800-50. Annex A, 4 (f): Audit and Accountability **Procedures** i. Contractor shall periodically review/update: (1) its formal, documented, audit and accountability policy that addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; and (2) the formal, documented procedures to facilitate the implementation of the audit and accountability policy and associated audit and accountability controls. 1. Supplemental guidance on auditing and accountability policies may be found in NIST SP 800-12. 2. Specific auditing events include the following: a. Generation of keys. b. Generation of signatures c. Exporting of public key material d. Receipt and validation of public key material (i.e., from the ZSK holder or from TLDs) e. System configuration changes f. Maintenance and/or system updates g. Incident response handling h. Other events as appropriate ii. Incident handling for physical and exceptional cyber-attacks shall include reporting to ICANN in a timeframe and format as mutually agreed by ICANN and Contractor. iii. The auditing system shall be capable of The IFRT finds that in reviewing the public producing reports on an ad-hoc basis for and confidential auditors' SOC reports on ICANN or the CSC. the security of PTIs systems and processes. iv. A version of the reports provided to ICANN PTI operates the RZMS in a secure and

or the CSC must be made publically available. stable manner.

### Annex A, 4 (g): Physical Protection Requirements

- i. There shall be physical access controls in place to only allow access to hardware components and media to authorized personnel.
- 1. Supplemental guidance on token based access may be found in NIST SP 800-73.
- 2. Supplemental guidance on token based access biometric controls may be found in NIST SP 800-76.
- ii. Physical access shall be monitored, logged, The IFRT finds that policies relating to and registered for all users and visitors.
- iii. All hardware components used to store keying material or generate signatures shall have short-term backup emergency power connections in case of site power outage. (See plan and the Contingency and Continuity NIST SP 800-53r3).
- iv. Appropriate protection measures shall be in reviewed annually. In addition, these policies place to prevent physical damage to facilities as appropriate.

i. All hardware and software components must have an established maintenance and update procedure in place.

- 1. Supplemental guidance on establishing an upgrading policy for an organization may be found in NIST SP 800-40
- ii. All hardware and software components provide a means to detect and protect against unauthorized modifications/updates/patching.

physical access controls, including monitoring and emergency power backup to hardware components, are documented in ICANN's security policies, disaster recovery Operation Plan (CCOP)- all of which are are tested and audited annually as part of SOC2 audit.

The IFRT finds that in reviewing the public and confidential auditors' SOC reports on the security of PTI's systems and processes, PTI operates the RZMS in a secure and stable manner.

#### Annex A, 4 (i): Interface Basic Functionality

- i. Contractor's interface shall have the ability to accept and process TLD DS records, including:
- 1. Accept TLD DS RRs
- a. Being able to retrieve TLD DNSKEY record from the TLD, and perform parameter checking for the TLD keys, including verifying that the DS RR has been correctly generated using the specified hash algorithm.
- 2. Having procedures for:
- a. Scheduled roll over for TLD key material;
- b. Supporting emergency key roll over for TLD The IFRT finds that PTI fulfills this key material; and

requirement.

c. Moving TLD from signed to unsigned in the root zone. ii. Ability to submit TLD DS record updates to the Root Zone Maintainer for inclusion into the root zone. iii. Ability to submit RZ keyset to the Root Zone Maintainer for inclusion into the root zone.	
Ammendment 1	
The Parties hereby agree that subsections (c) through (g) of Section 2 of the SOW (Annex A of the Agreement) are deleted and replaced with the following:	No findings are required for this section
Ammendment 1: 1 (c): Service Levels	
Contractor will perform all services relating to Root Zone Management in accordance with the requirements and "Service Levels" specified at https://pti.icann.org/iana-naming-function-services-service-level-agreements#definitions (the "SLAs"), as such services and SLAs may be amended from time to time in accordance with the procedures specified at https://www.icann.org/en/system/files/files/iana-naming-function-sla-amendment- process-28mar19-en.pdf.	The IFRT finds that PTI meets all applied

#### Amendment 1: c (II) through 4: Service Levels

- ii. The fields for the SLAs are as follows:
- 1. Process. The business process that Contractor is requested to perform.
- 2. Metric. The individual metric that will be measured as part of the completion of the business process.
- 3. Threshold. The specified target for each individual change request.
- 4. Type. Whether the threshold specified is a minimum target (compliance must not be less than the target) or a maximum target (compliance must not be more than the target).
- 5. Compliance. The percentage that the target goal in aggregate must be met or exceeded within the specified time period for all requests in the specified category.
- 6. Period. The time over which compliance is measured. (The period of collecting measurements to meet the Service Level Agreement (SLA)).
- 1.d. Process Performance. Total Contractor transaction time for emergency changes should be completed within a target of 12 hours until reviewed by the CSC with Contractor.
- e. These elements reflect activity areas that should be instrumented by Contractor, and reported pursuant to ARTICLE VII of the Contract and Section 3 of this SOW."
- 2. The Parties agree that, except as set forth in this Amendment, the current terms and conditions of the Contract will remain unchanged and in full force and effect and, to the extent applicable, such and conditions terms shall apply to this Amendment as if it formed part of the Contract.
- This Amendment may be executed in one or more counterparts, each of which will be deemed to be an original copy of this Amendment and all of which, when taken together, will be deemed to constitute one and service levels and has supported the CSC in the same agreement.
- 4. Any signature page delivered pursuant to

The IFRT finds that PTI meets all applied refinement and addition of new SLAs as appropriate.

this Amendment via facsimile, email or other electronic means shall be binding to the same extent as an original signature. Any Party who delivers such a signature page agrees to later deliver an original counterpart to any party that requests it.	

### Recommendations

Recommendations IFRT-2020-Rec1 through Rec4 are documented in Section 2 of this document.

### 5.4 Bylaws 18.3.(d)

"Review and evaluate the openness and transparency procedures of PTI and any oversight structures for PTI's performance, including reporting requirements and budget transparency"

#### **Objective**

Consistent with ICANN's mission and <u>Bylaws</u>, Section 18.3(c), the review team will assess PTI's procedures while considering any customer feedback on the openness and transparency for such procedures as assessed in 18.3.(a) and (i). The review team considers PTI oversight structures to include, but not exclusive to: Board oversight, management, community committees and other accountability mechanisms.

#### **Findings**

- In its review of PTIs processes and procedures and in interviews with PTI staff, the IFRT found that PTI operates to a high degree of autonomy and in a transparent manner where possible.
- The IFRT has found that PTIs management team has sufficient oversight over the operation of PTI and is in control of the organization in line with the requirements of the contract.
- The IFRT notes that the PTI Board operates in an administrative capacity only and is not involved in the day to day operations of PTI. The IFRT did not evaluate the oversight and management of PTI leadership by the PTI board during the review.
- The IFRT has found that the PTI budgeting process is open and transparent and that no funding challenges are currently impacting PTI operations and customer service levels.
- The IFRT has met with the CSC and found no issues with the level of reporting between the CSC and PTI and that the CSC feels empowered to execute its oversight function with strong support from PTI management and staff.

Please refer to Section 5.4 for a detailed breakdown of the contract provisions reviewed by the IFRT in coming to this finding.

#### Recommendations

# 5.6 Bylaws 18.3.(e)

"Review and evaluate the performance and effectiveness of the Empowered Community (EC) with respect to actions taken by the EC, if any, pursuant to Section 16.2, Section 18.6, Section 18.12, Section 19.1, Section 19.4, Section 22.4(b) and Annex D"

### **Findings**

To date, no Empowered Community (EC) actions have occurred in relation to Bylaws Section 16.2, 18.6, 18.12, 19.1, 19.4, 22.4(b) and Annex D.

#### **Recommendations:**

# 5.7 Bylaws 18.3.(f)

"Review and evaluate the performance of the IANA naming function according to established service level expectations during the IFR period being reviewed and compared to the immediately preceding Periodic IFR period"

### **Findings**

As this is the first IANA Naming Function Review, Bylaws 18.3 (f) does not apply.

#### Recommendations

# 5.8 Bylaws 18.3.(g)

"Review and evaluate whether there are any systemic issues that are impacting PTI's performance under the IANA Naming Function Contract and IANA Naming Function SOW"

#### **Objective**

Consistent with ICANN's mission and <u>Bylaws</u>, Section 18.3(g), the IFRT will review any complaints and escalations to IANA to evaluate if there are any systemic and/or recurring issues, while also considering input from the community.

#### **Findings**

The IFRT in its review of PTIs interactions with both the CSC and PTI's customers, has found no systemic or recurring issues. PTI continues to perform its service obligations to a high degree of efficiency and adherence to the requirements of the IANA Naming Function Contract and its SLAs.

#### Recommendations

# 5.9 Bylaws 18.3.(h)

"Initiate public comment periods and other processes for community input on PTI's performance under the IANA Naming Function Contract and IANA Naming Function SOW (such public comment periods shall comply with the designated practice for public comment periods within ICANN)"

#### **Objective**

Consistent with ICANN's mission and Bylaws, Section 18.3(h), the review team will solicit input from the community on PTI's performance though such means as holding consultations with the community; a Public Comment period such as for an Initial Draft; and other methods that the Review Team deems appropriate.

#### **Findings**

The IFRT is putting forth this Initial Report to the community through the Public Comment process as a method to obtain community opinion and input, as well as meeting the mandate of Bylaws Section 18.3.h.

#### Recommendations

# 5.10Bylaws 18.3.(i)

"Consider input from the CSC and the community on PTI's performance under the IANA Naming Function Contract and IANA Naming Function SOW"

#### **Objective**

Consistent with ICANN's mission and Bylaws, Section 18.3(i), the review team will discuss PTI's performance with the Customer Standing Committee; and solicit input from the community through such means as holding consultations with the community; a Public Comment period such as for an Initial Draft; and other methods that the Review Team deems appropriate.

#### **Findings**

The IFRT met with the CSC and evaluated all of the CSC's reports to date. In our review we find that PTI is meeting its SLA thresholds and is executing the IANA functions to a high degree of operational efficiency.

#### Recommendations

# 5.11 Bylaws 18.3.(j)

"Identify process or other areas for improvement in the performance of the IANA naming function under the IANA Naming Function Contract and IANA Naming Function SOW and the performance of the CSC and the EC as it relates to oversight of PTI"

### **Objective**

Consistent with ICANN's mission and <u>Bylaws</u>, Section 18.3(j), based on the Review Team's findings from 18.3.(a) to 18.3.(i), the Review Team will make recommendations for specific measurable steps that can be taken to improve any deficiencies or gaps.

#### **Findings**

The IFRT has found no additional areas of improvement required beyond our recommendations as defined in Section 2 of this document. The IFRT however makes a recommendation, not related to PTI performance, on removing duplicate bylaws text in Recommendation 3 which we have chosen to capture in this section.

#### Recommendations

A recommendation on duplication in bylaws text is captured in IFRT-2020-Rec3.

# 5.12Bylaws 18.3.(k)

"Consider and assess any changes implemented since the immediately preceding IFR and their implications for the performance of PTI under the IANA Naming Function Contract and IANA Naming Function SOW."

### **Objective**

As this is the first IANA Naming Function Review, Bylaws 18.3 (k) does not apply.

#### Recommendations

# **Appendices**

# **Appendix A: Definitions**

An assessment of this type requires a common understanding of the key terms associated with the review. Initially, the IFR Review Team is operating under the following definitions as well as the Definitions from the IANA Naming Function Contract's Definition Section:

#### From Glossary of IANA Terms:

- Customer: A gTLD registry operator, a ccTLD manager or registry operator or other direct customer of the IANA naming Services provider, as defined by the IANA Naming Function Contract, Article 1, Section 1.1 (k).
- Country-code top-level domain (ccTLD): A class of top-level domains only assignable to represent countries listed in the ISO 3166-1 standard. At present these are two-letter codes like ".UK", ".DE" etc., however in the future it is expected there will be non-Latin equivalents also available. Much of the policy-making for individual countrycode top-level domains is vested with a local sponsoring organisation, as opposed to other top-level domains where ICANN sets the policy. It is a requirement that ccTLDs are operated within the country they are designated so appropriate local laws, governments etc. have a say in how the domain is run.
- **Delegation:** Refers to the process by which the operator of the IANA naming function initially assigns management responsibility or assigns previously assigned responsibility or assigns previously assigned responsibility (after a revocation) for the management of a ccTLD, as further defined in the RFC 1591 as interpreted by the FOI. [pulled from IANA Naming Function Contract]
- DNS Domain Name System: The Domain Name System (DNS) helps users to find their way around the Internet. Every computer on the Internet has a unique address - just like a telephone number - which is a rather complicated string of numbers. It is called its "IP address" (IP stands for "Internet Protocol"). IP Addresses are hard to remember. The DNS makes using the Internet easier by allowing a familiar string of letters (the "domain name") to be used instead of the arcane IP address. So instead of typing 207.151.159.3, you can type www.internic.net. It is a "mnemonic" device that makes addresses easier to remember.
- **DNSSEC:** A technology that can be added to the Domain Name System to verify the authenticity of its data. The works by adding verifiable chains of trust that can be validated to the domain name system.
- DNS zone: a section of the Domain Name System name space. By default, the Root Zone contains all domain names, however in practice sections of this are delegated into smaller zones in a hierarchical fashion. For example, the ".COM" zone would refer to the portion of the DNS delegated that ends in ".COM".
- domain name: A unique identifier with a set of properties attached to it so that computers can perform conversions. A typical domain name is "icann.org". Most commonly the property attached is an IP address, like "208.77.188.103", so that computers can convert the domain name into an IP address. However the DNS is used for many other purposes. The domain name may also be a delegation, which transfers responsibility of all sub-domains within that domain to another entity.

- **domain name label:** a constituent part of a domain name. The labels of domain names are connected by dots. For example, "www.iana.org" contains three labels "www", "iana" and "org". For internationalised domain names, the labels may be referred to as A-labels and U-labels.
- domain name registrar: An entity offering domain name registration services, as an agent between registrants and registries. Usually multiple registrars exist who compete with each other, and are accredited. For most generic top-level domains, domain name registrars are accredited by ICANN.
- **domain name registry**: A registry tasked with managing the contents of a DNS zone, by giving registrations of sub-domains to registrants.
- **domain name server**: A general term for a system on the Internet that answers requests to convert domain names into something else. These can be subdivided into authoritative name servers, which store the database for a particular DNS zone; as well as recursive name servers and caching name servers.
- **Domain Name System (DNS)**: The global hierarchical system of domain names. A global distributed database contains the information to perform the domain name conversations, and the most central part of that database, known as the root zone is coordinated by us.
- **Domain Name System Root**: see Root Zone.
- **Domain:** A set of host names consisting of a single domain name and all the domain names below it.
- **Domain Name:** As part of the Domain Name System, domain names identify IP resources, such as an Internet website.
- GNSO Generic Names Supporting Organization: The supporting organization responsible for developing and recommending to the ICANN Board substantive policies relating to generic top-level domains. Its members include representatives from gTLD registries, gTLD registrars, intellectual property interests, Internet service providers, businesses and non-commercial interests.
- gTLD Generic Top Level Domain: Most TLDs with three or more characters are referred to as "generic" TLDs, or "gTLDs", such as .COM, .NET, and .ORG. In addition, many new gTLDs such as .HOTELS and .DOCTOR are now being delegated.
- IDNs Internationalized Domain Names: IDNs are domain names that include characters used in the local representation of languages that are not written with the twenty-six letters of the basic Latin alphabet "a-z". An IDN can contain Latin letters with diacritical marks, as required by many European languages, or may consist of characters from non-Latin scripts such as Arabic or Chinese. Many languages also use other types of digits than the European "0-9". The basic Latin alphabet together with the European-Arabic digits are, for the purpose of domain names, termed "ASCII characters" (ASCII = American Standard Code for Information Interchange). These are also included in the broader range of "Unicode characters" that provides the basis for IDNs.
- Internet Architecture Board (IAB): The oversight body of the IETF, responsible for overall strategic direction of Internet standardisation efforts. The IAB works with us on how the protocol parameter registries should be managed. The IAB is an activity of the Internet Society, a non-profit organisation.
- Internet Assigned Numbers Authority (IANA): A suite of various Internet coordination functions, relating to ensuring globally-unique protocol parameter

assignment, including management of the root of the Domain Name System and IP Address Space.

- Internet Coordination Policy (ICP): A series of documents created by ICANN between 1999 and 2000 describing management procedures. Three such documents were published before the numbering system stopped being used. Subsequent ICANN publications have not been given ICP numbers.
- Internet Engineering Steering Group (IESG): The committee of area experts of the IETF's areas of work, that acts as its board of management.
- Internet Engineering Task Force (IETF): The key Internet standardisation forum. The standards developed within the IETF are published as RFCs. Our protocol parameter registries are closely aligned with the work of the IETF.
- Internet Protocol (IP): The fundamental protocol that is used to transmit information over the Internet. Data transmitted over the Internet is transmitted using the Internet Protocol, usually in conjunction with a more specialised protocol. Computers are uniquely identified on the Internet using an IP Address.
- IP address: A unique identifier for a device on the Internet. The identifier is used to accurately route Internet traffic to that device. IP addresses must be unique on the global Internet, although some are re-used within private networks using a system of private IP addresses and network address translation.
- ISO: International Organisation for Standardisation. An international organisation comprised mostly of national standardisation agencies.
- **ISO 3166:** A suite of international standards for labelling countries, territories, sub-national entities and former countries. Most notable, Part 1 of ISO 3166 (aka ISO 3166-1) is used to determine country-codes for top-level domains.
- recursive name server: A domain name server configured to perform DNS lookups on behalf of other computers. This is often configured at corporate network boundaries and ISPs for their network customers to use. As an individual domain name lookup can often involve multiple queries to different servers, these name servers do these iterative lookups and only provide back to the computer the final answer. They are often combined with the functions of a caching name server to improve network performance, and therefore are also known as caching resolvers.
- **Redelegation**: The transfer of a delegation from one entity to another. Most commonly used to refer to the redelegation process used for top-level domains.
- Redelegation process: A special type of root zone change where there is a significant change involving the transfer of operations of a top-level domain to a new entity. Such a change must be evaluated by ICANN staff to ensure that the new entity meets a number of criteria, and must be voted on and agreed by the ICANN Board of Directors.
- **Registrant**: The entity that has acquired the right to use an Internet resource. Usually this is via some form of revocable grant given by a registrar to list their registration in a registry.
- Registrar: Domain names can be registered through many different companies (known as "registrars") that compete with one another. The registrar you choose will ask you to provide various contact and technical information that makes up the registration. The registrar will then keep records of the contact information and submit the technical information to a central directory known as the "registry." This registry provides other computers on the Internet the information necessary to send you e-mail or to find your web site. You will also be required to enter a registration contract with the registrar, which sets forth the terms under which your registration is accepted and will be maintained.

- Registry: The "Registry" is the authoritative, master database of all domain names registered in each Top Level Domain. The registry operator keeps the master database and also generates the "zone file" which allows computers to route Internet traffic to and from top-level domains anywhere in the world. Internet users don't interact directly with the registry operator; users can register names in TLDs including .biz, .com, .info, .net, .name, .org by using an ICANN-Accredited Registrar.
- **registry operator:** The entity that runs a registry.
- reverse IP: A method of translating an IP address into a domain name, so-called as it is the opposite of a typical lookup that converts a domain name to an IP address. Utilises PTR records in the IN-ADDR.ARPA zone for IPv4, and IP6.ARPA for IPv6.
- RFCs: A series of Internet engineering documents describing Internet standards, as well as discussion papers, informational memorandums and best practices. Internet standards that are published in an RFC originate from the IETF. The RFC series is published by the RFC Editor.
- Root: the most central (or all-encompassing) authority of any naming or numbering system. Usually used to refer to the domain name system root (see Root Zone). However, we are also the root for IP addresses, and other systems.
- Root Servers: the authoritative name servers for the Root Zone. These are considered unlike regular name servers in part because they are generally the most critical and heavily-used name servers. They are also special as they are not easily replaced, as changes to them needs to be stored in every name server worldwide in a hints file.
- Root Zone: The top of the domain name system hierarchy. The root zone contains all of the delegations for top-level domains, as well as the list of root servers, and is managed by us.
- **Root Zone Management:** The management of the DNS Root Zone by us.
- **RZM:** see Root Zone Management.
- sponsoring organization: The entity acting as the trustee of a top-level domain on behalf of its designated community. Sponsoring organisations are not assigned ownership of a domain, rather, are custodians appointed by their local Internet community to act as proper stewards in that community's best interests. The Sponsoring Organisation can generally be re-assigned if the local Internet community wishes using the redelegation process.
- sub-domain: A domain that resides within another domain. For example, "www.icann.org" is a sub-domain of "icann.org", and "icann.org" is a sub-domain of "org". Sub-domains are entrusted to other entities through a process of delegation.
- **TLD:** see top-level domain.
- top-level domain (TLD): The highest level of subdivisions with the domain name system. These domains, such as ".COM" and ".UK" are delegated from the DNS Root zone. They are generally divided into two distinct categories, generic top-level domains and country-code top-level domains.
- Trustee: An entity entrusted with the operations of an Internet resource for the benefit of the wider community. In root zone management, usually in reference to the sponsoring organisation of a toplevel domain.
- U-label: The Unicode representation of an internationalised domain name, i.e. how it is shown to the end-user. Contrast with A-label.
- Unicode: A standard describing a repertoire of characters used to represent most of the worlds languages in written form. The collection of scripts used to do this is maintained by the Unicode Consortium and is constantly growing. Unicode is the basis for internationalised domain names.
- unsponsored top-level domain: a sub-classification of generic top-level domain, where there is no formal community of interest.

- Variant: In the context of internationalised domain names, an alternative domain name that can be registered, or mean the same thing, because some of its characters can be registered in multiple different ways due to the way the language works. Depending on registry policy, variants may be registered together in one block called a variant bundle. For example, "internationalise" and "internationalize" may be considered variants in English.
- **variant bundle:** A collection of multiple domain names that are grouped together because some of the characters are considered variants of the others.
- variant table: A type of IDN table that describes the variants for a particular language or script. For example, a variant table may map Simplified Chinese characters to Traditional Chinese characters for the purpose of constructing a variant bundle.
- WHOIS: WHOIS protocol (pronounced "who is"; not an acronym) An Internet protocol that is used to query databases to obtain information about the registration of a domain name (or IP address). The WHOIS protocol was originally specified in RFC 954, published in 1985. The current specification is documented in RFC 3912. ICANN's gTLD agreements require registries and registrars to offer an interactive web page and a port 43 WHOIS service providing free public access to data on registered names. Such data is commonly referred to as "WHOIS data," and includes elements such as the domain registration creation and expiration dates, nameservers, and contact information for the registrant and designated administrative and technical contacts. WHOIS services are typically used to identify domain holders for business purposes and to identify parties who are able to correct technical problems associated with the registered domain.

# **Appendix B: Workplan**

IANA Naming Function Review Workplan, updated August 2020

Task Name	Start Date	End Date Goal	Duration (days)	Completion Date	% Complete
Plan Review					
Administration					
Determine leadership				12-Nov-19	100%
Determine role of observers			63	20-Jan-20	100%
Rules of Engagment, Scope Document and Workplan	3-Dec-19	4-Feb-20	63	4-Feb-20	100%
Determine need for subgroups, and structure	3-Dec-19	4-Feb-20	63	4-Feb-20	100%
Provide community with details on adopted Rules of Engagement, scope document and workplan through notification to the Board, and an announcement on ICANN.ORG	04-Feb-20	30-Mar-20	55	30-Mar-20	100%
Research & Studies					
Assemble repository of background materials	3-Dec-19	3-Dec-2019	1	3-Dec-19	100%
Identify briefings/data sources needed	04-Feb- 2020	3-Mar-2020	28	3-Mar-20	100%
Conduct Review					

Task Name	Start Date	End Date Goal	Duration (days)	Completion Date	% Complete
Workplan execution					
Review, analyze and summarize relevant documentation	3-Mar-20	30-May-20	88	4-Aug-20	100%
Execute Community Input Plan	30-May- 2020	30-Jun-20	31	23-Jun-20	100%
Conduct investigation of identified processes, data, etc.	9-Mar- 2020	30-May-20	82	23-Jun-20	100%
Conduct relevant interviews as appropriate	11-Mar- 2020	30-May-20	80	23-Jun-20	100%
Draft summary of key findings	7-Apr-20	30-Jun-20	84	4-Aug-20	100%
Draft Report					
Administrative duties					
Adopt report format	30-May- 20	30-Jun-20	31	26-May-20	100%
Internal review					
Draft Report	30-May- 20	30-Jun-20	31	11-Aug-20	100%
Cross-check draft recommendations with scope and Bylaws	30-May- 20	30-Jul-20	61	11-Aug-20	100%
Approve draft findings and recommendations	30-May- 20	30-Jul-20	61	25-sep-20	100%

Task Name	Start Date	End Date Goal	Duration (days)	Completion Date	% Complete
Outreach on draft recommendations					
Seek input and guidance from appropriate ICANN and Community Groups according to the nature of the Recommendation and the Bylaws	1-Aug-20	30-Sep-20	60	29-Sep-20	100%
Publishing draft report					
Approve draft report for public comment	30-Sep-20	15-Nov-20	46	02-Oct-20	100\$
Public comment and outreach on draft report					
Publish draft report for public comment	15-Nov- 20	1-Dec-20	16	07-Oct-20	100%
Seek Board Caucus group and ICANN organization's input on implementability of draft recommendations	1-Dec-20	15-Jan-21	45	15-Sep-20	100%
Final Report					
Updating draft report					
Assemble final recommendations and update draft report based on public comments received					
revise report based on feedback	15-Jan-21	30-Jan-21	15		

Task Name	Start Date	End Date Goal	Duration (days)	Completion Date	% Complete
Approval process					
Approve final findings and recommendations	30-Jan-21	30-Jan-21	0		
Approve final report for submission to GNSO and ccNSO Councils (this step is unique to the IFR, as only Recommendations that were accepted by the GNSO/ccNSO Councils would be eligible for an Empowered Community action, if the EC so decided)	30-Jan-21	15-Mar-21	44		
Public comment and outreach on final recommendations					
Publish draft report (for public comment?)	15-Nov- 20	15-Jan-20	-305		
Send final report					
Send final report to ICANN Board	15-Mar- 21	15-Mar-21			
Publish final report	1-Apr-20	1-Apr-20			
Implementation Planning & Feedback					
Complete ICANN organization survey on review process					
Identify one or two review team members to remain available for clarification as may be needed during the implementation planning phase					

# **Appendix C: Fact Sheets**

#### IANA Naming Function Review (IFR)

Fact Sheet as of: 21 AUGUST 2020

#### Overview:

The Board shall cause a periodic review to PTI's performance of the IANA naming function against the contractual requirements set forth in the IANA Naming Function Contract and the IANA Naming Function SOW to be carried out by an IANA Function Review Team (IFRT).

Consistent with ICANN's mission and Bylaws, Section 18.3(a), the review team will assess the needs and expectations of IANA Naming function direct customers and the broader community, and then determine if there are any gaps in PTI's performance. The IFRT will examine PTI's performance against SLAs originally developed by the community; review PTI's annual Customer Service Survey; discuss PTI's performance with the Customer Standing Committee; solicit input through the first Public Comment of an Initial Draft; and other methods that the Review Team deems appropriate.

Wiki Page: https://community.icann.org/display/ifr/IANA+Naming+Function+Review Contact the IFRT: input-to-IFRT@icann.org Review Questions: IFR@icann.org

**IFRT Co-Chairs:** Fred Neves

Tomslin Samme-Nlar

ICANN Project Mngr: Amy Creamer

# **Section I: People**

Review Team members:

**Volunteer Participation Rate** 

?

77% 0% 100%

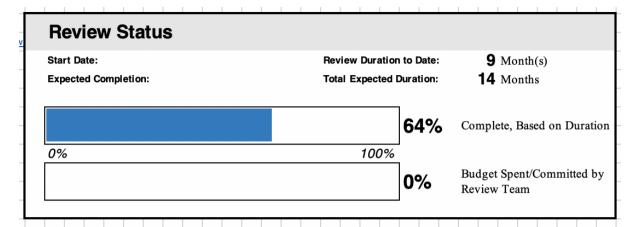
Number of Meetings: plenary and leadership calls

39 Meetings

Volunteer time: plenary and leadership meetings Staff time: plenary and leadership meetings

**391** Hours

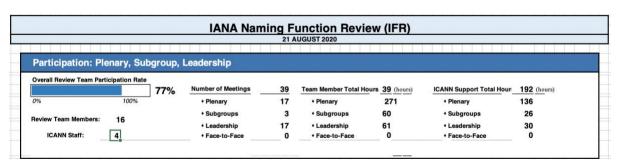
192 Hours



Direct Review Costs <sup>(1)</sup>	Approved Budget	Spent to Date <sup>(2)</sup>	Committed Services <sup>(3)</sup>	Total Spent and Committed to Date	Remaining Budget
Travel	\$53,863	\$0	\$0	\$0	\$53,86
Space & Catering	\$3,375	\$0	\$0	\$0	\$3,37
ICANN Org Support	\$6,933	\$0	\$0	\$0	\$6,93
Total	\$64,171	\$0	\$0	\$0	\$64,17

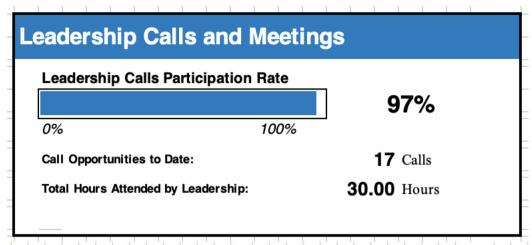
(2) Based on the most recent month end financials (may not include recent expenditures). Represents expenses incurred since inception of work.
(3) Professional services includes services from signed contracts to be provided or invoiced; travel includes projected expenses for planned meetings.

Review Planning	Research	& Studies	Draft I	Report	Final	Report	Т	OTAL:
20% of total effort	20% of total effort (to	be reviewed by RT)	35% of to	otal effort	25% of	total effort	75%	Milestones Complete
% 100%	0%	100%	0%	100%	0%	100%		
Determine role of observers		of background materials	O Review Team member findings to Review Develop/adopt temp	Team	O Review public com incorporate as appr		0%	100
Determine leadership	☑ Identify briefings/da	ata sources needed	o recommendations ar			and obtain feasibility		
Finalize legal docs (Conflict of Interest policy, NDA, Statement of Interest)	O Complete evaluation	of research materials	Assemble findings a recommendations	nd potential	Approve final findi and report for Board	ngs, recommendations d consideration		
Adopt methodology and framework that identifies prioritized focus of RT work	O Determine need for it and develop Stateme		scope/Bylaws, obtai	recommendations with n feasibility assessment	O Submit Final Report	rt to ICANN Board		
Adopt and publish Terms of Reference/communication with Board			O Socialize draft recon community	mendations with		Review Team Members to r clarification as may be		
Adopt and publish Work Plan			O Publish Draft Report	for Public Comment	needed during the			
Define Review Team project management roles and responsibilities, including budget Identify need for and deliver proposal on division of work					implementation of Recommendations	Review Team		
☑ Develop and adopt outreach plan								
Send adopted Terms of Reference and Workplan to Board								

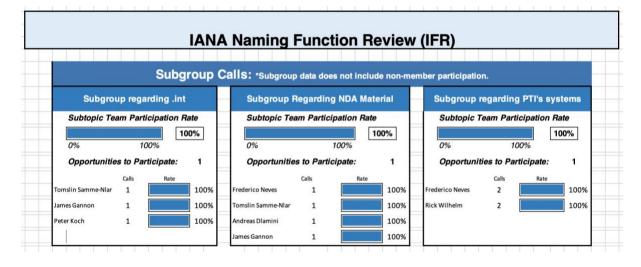


	articipation	nate			
				70%	
0%		100%	6		
Face-to-face	meetings:		<b>0</b> Days		
Call Opportu	ınities to Date:	ß.	1	<b>7</b> Calls	
Total Hours	Attended by Re	eview Team Memb	pers: 270.5	0 Hours	
SO/AC Pa	rticipation F	Rate			
SO/AC	Attended	<b>Apologies</b>	No RSVP	Rate	
ccNSO	42	2	7		82%
	50	11	15		69%
GNSO	59	11	13	44.1	03/0
	12	1	4		71%
GAC		1 1			71%
GAC SSAC	12	1 1 1	4		71% 29%
GAC SSAC RSSAC	12	1 1 1 0	4		71% 29% 41%
GNSO GAC SSAC RSSAC ALAC CSC	12 5 7	1 1 1	4 11 9		
GAC SSAC RSSAC ALAC	12 5 7 13	1 1 0	4 11 9 4		71% 29% 41% 76%

Member	SO/AC	Attended	<b>Apologies</b>	No RSVP	Participation Rate
Frederico Neves	ccNSO	16	1	0	94%
Peter Koch	ccNSO	14	1	2	82%
Unguec Stephen Kang	ccNSO	12	0	5	71%
Rick Wilhelm	RySG	14	2	1	82%
Jean-Christophe Vignes	RySG	10	2	5	59%
Kristian Ørmen	RrSG	12	2	3	71%
Christian Dawson	CSG	8	3	6	47%
Γomslin Samme-Nlar	NCSG	15	2	0	88%
Andreas Dlamini	GAC	12	1	4	71%
Patrik Fältström	SSAC	5	1	11	29%
Suzanne Woolf	RSSAC	7	1	9	41%
Kaili Kan	ALAC	13	0	4	76%
James Gannon	CSC, liaison	15	2	0	88%
Danko Jevtovic	ICANN Board, liaison	7	3	7	41%
Steve Conte	ICANN, liaison	15	0	2	88%
Kim Davies	PTI, liaison	16	1	0	94%



Leadership Calls and Meetings							
Member	Attended	Apologies	No RSVP	Participation Rate			
Frederico Neves	17	0	0	100%			
Tomslin Samme-Nlar	17	0	0	100%			
*Total opportunities to date: 17							





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