Country Code Names Supporting Organization

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ccNSO response to NTIA Notice of Inquiry (NOI) on the IANA functions

About the ccNSO
Created in 2003, the ccNSO provides a forum, within ICANN, for ccTLD managers to meet and discuss topical issues from a global perspective. The ccNSO provides a platform to nurture consensus, technical cooperation and skill building among ccTLDs and facilitates the development of voluntary best practices for ccTLD managers. It is also responsible for developing and recommending global policies to the ICANN Board for issues relating to ccTLDs, such as the introduction of Internationalised Domain Name ccTLDs (IDN ccTLDs).

General comments
The ccNSO welcomes the opportunity to provide comments in response to the National Telecommunications and Information Administration's (NTIA's) Notice of Inquiry on the IANA functions. The following statements are supported by the ccNSO's 113 members and have the full endorsement of the ccNSO Council.

The ccNSO welcomes and shares the NTIA's stated commitment to preserving the stability and security of the DNS. The ccNSO also agrees that the continued performance of the IANA functions and, in particular, the responsibilities associated with DNS root zone management, are critical to this goal. As a general observation, the ccNSO believes that the vital nature of all of the IANA functions requires that the NTIA and all stakeholders should approach the topic of reform and possible separation of functions with appropriate caution and consultation, in order to avoid unintended fragmentation.

The ccNSO is aware of proposals to recast the IANA procurement contract as a cooperative agreement, in order to better reflect the multi-stakeholder nature of Internet management, to identify and include the beneficiaries of the IANA services, and to allow flexibility and certainty in the provision of these services. The ccNSO acknowledges that this proposal has a number of potential benefits and should be investigated further, in consultation with relevant stakeholders.

Specific comments relating to root zone management and ccTLD operations
The ccNSO would specifically caution against implementing changes to the aspects of IANA's role in the administration of certain responsibilities associated with Internet DNS root zone management - the IANA function that most closely relates to the stable and secure operation and management of ccTLDs.

IANA's work in managing the root zone is an essential part of ICANN. It is key to the interests and engagement of a large number of ccTLDs and is equally significant to many governments and stakeholders in the gTLD space. As such, ICANN's multi-stakeholder model and processes could be significantly undermined if the IANA functions were to be removed and managed by an entirely unrelated entity.

Furthermore, given projects currently underway within ICANN, it is a particularly inopportune time to consider change to IANA's root zone management role.

In particular, the ccNSO would like to draw the NTIA's attention to the progress and charter of the Delegation, Re-delegation and Retirement Working Group (DRDWG), its recommendations and projects that stem from these recommendations. The DRDWG[1] was established in 2009 to advise the ccNSO Council whether it should launch a formal Policy Development Process (PDP) to recommend changes to the current policies for delegation, re-delegation and retirement of ccTLDs. The WG was comprised of a wide range of ccTLD managers, GAC representatives and independent experts.

The DRDWG conducted an in-depth analysis of the current policies and guidelines used by IANA and ICANN, including documentation such as RFC 1591 and the Government Advisory Committee's (GAC) Principles for delegation and administration of ccTLDs. The DRDWG found that the documents provided broad guidance and policy frameworks, but that the addition of greater detail would assist in facilitating effective, clear and consistent operational interpretation by IANA and the ICANN Board.

Following extensive public consultation, the DRDWG issued its Final Report[2] on 17 February 2011. The report was supported by a number of subordinate analysis documents. In summary, the Working Group recommended:

- the ccNSO Council should initiate a PDP to develop guidelines for the retirement of ccTLDs; and

- the development of a "Framework of Interpretation" that would provide clear guidance to IANA and the ICANN Board on how to interpret the range of policies, guidelines and procedures relating to the delegation and re-delegation of ccTLDs.

These recommendations were endorsed by the ccNSO Council in San Francisco in March 2011. The resultant "Framework of Interpretation Working Group" will follow the same successful, collaborative model used during the IDN fast-track process and will involve the ccNSO, GAC and other relevant stakeholders. The WG will assess documents such as RFC 1591 and the GAC Principles, and develop the additional detail and depth identified by the DRDWG. It is expected that this work will provide the clear, consistent guidance IANA will require to effectively and efficiently meet its root zone management ccTLD-related responsibilities.

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[1] http://ccnso.icann.org/workinggroups/drdwg.htm
[2] http://ccnso.icann.org/workinggroups/final-report-drd-wg-17feb11-en.pdf

Given this ongoing work, and its spirit of collaboration, the ccNSO believes it is inappropriate to implement any change to the current functions of IANA, as they relate to ccTLDs.

Comments on specific questions raised in the NTIA's NOI

1. The IANA functions have been viewed historically as a set of interdependent technical functions and accordingly performed together by a single entity. In light of technology changes and market developments, should the IANA functions continue to be treated as interdependent? For example, does the coordination of the assignment of technical protocol parameters need to be done by the same entity that administers certain responsibilities associated with root zone management? Please provide specific information to support why or why not, taking into account security and stability issues.

As noted above, the ccNSO acknowledges the historical reasons behind the desire to have a single entity undertake a range of interdependent technical functions. The ccNSO believes that, irrespective of the mechanisms and contractual model used, many of the reasons for a single entity executing the functions remain valid.

The topic of reform and possible separation of functions must be approached with appropriate caution and consultation, in order to avoid unintended fragmentation, and that functional separation should only be considered as a response to an identified, irreparable failure or inefficiency of existing mechanisms.

2. The performance of the IANA functions often relies upon the policies and procedures developed by a variety of entities within the Internet technical community such as the IETF, the RIRs and ccTLD operators. Should the IANA functions contract include references to these entities, the policies they develop and instructions that the contractor follow the policies? Please provide specific information as to why or why not. If yes, please provide language you believe accurately captures these relationships.

The ccNSO believes that it is important and appropriate to have relevant stakeholders, including ccTLD managers, identified in the contract for the IANA functions. The inclusion of such a reference would codify and reinforce the principle that the IANA services are executed for the benefit of the entire global internet community, not the interests of one country, organisation or government.

The effective management and execution of these functions, particularly as it relates to ccTLDs, depends upon international consultation with, and advice from, ccTLD managers. The collaboration between stakeholders such as the ccNSO and the GAC is an important part of the current model and should be strengthened and preserved, and should not be undermined in attempts to reform or move to a new model.

3. Cognizant of concerns previously raised by some governments and ccTLD operators and the need to ensure the stability of and security of the DNS, are there changes that could be made to how root zone management requests for ccTLDs are processed? Please provide specific information as to why or why not. If yes, please provide specific suggestions.

The ccNSO believes that the automation of processes relating to IANA's root zone management is one of the most important priorities for IANA, ccTLDs and other affected stakeholders. The ccNSO recognises improvements in the processing of management requests from ccTLDs due to IANA's introduction of automated workflows in 2006[3]and is also aware of, and supports, further work that is currently underway in this area. These improvements must be afforded particularly high priority, given the significant benefits they could bring, particularly to the efficiency of routine, every day zone management changes, and the pending increase in workload associated with the introduction of new gTLDs.

4. Broad performance metrics and reporting are currently required under the contract. Are the current metrics and reporting requirements sufficient? Please provide specific information as to why or why not. If not, what specific changes should be made?

The sufficiency of current reporting mechanisms is difficult to evaluate, given most stakeholders' limited visibility of the detail of these arrangements. Greater transparency of reporting, both of overall IANA performance and individual IANA activities would assist in facilitating stakeholder awareness and remove some of the mystique and confusion surrounding IANA's work. At a broader level, metrics regarding processing of requests all the way through IANA, NTIA and Verisign would further reinforce stakeholder confidence.

Noting this, the ccNSO supports the use of performance metrics and reporting as important mechanisms to ensure the IANA functions are being executed efficiently and meet the changing needs of ccTLDs. However, the ccNSO would also caution against the implementation of a general, overly onerous and bureaucratic reporting regime.

At a practical level, ICANN should work with the community to develop performance metrics and a service level agreement for the IANA services. This should necessarily include framework parameters, service levels and responsibilities relating to IANA's role as root zone manager.

5. Can process improvements or performance enhancements be made to the IANA functions contract to better reflect the needs of users of the IANA functions to improve the overall customer experience? Should mechanisms be employed to provide formalized user input and/or feedback, outreach and coordination with the users of the IANA functions? Is additional information related to the performance and administration of the IANA functions needed in the interest of more transparency? Please provide specific information as to why or why not. If yes, please provide specific suggestions.

This question is closely related to questions 2 and 4, and the ccNSO's advice above applies. Once again, the ccNSO believes that the "customer experience" is paramount and supports refinements and metrics that would directly reinforce the current stakeholder engagement model and stakeholder experience.

The enhancements should include automation of processes, improved process recording and documentation and the development of audit trails and mechanisms to facilitate appeals.

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[3] http://www.iana.org/about/presentations/davies-wellington-ccnsoupd-060327.pdf

As identified by the DRDWG, one of the most useful, practical performance enhancements would be improved transparency and predictability in IANA's processes. This includes improving the consistency of IANA's interpretation of broad policy guidance such as RFC1591 and the GAC ccTLD Principles and publishing information that documents how this is done.

Finally, it is imperative that ICANN / IANA remain mindful of the tenet of national sovereignty as it relates to ccTLDs, including the legitimate interests of governments and local internet communities and the primacy of national laws. This has been clearly stated by the GAC in its ccTLD Principles[4] and the US Government in its 2005 Statement of Principles[5] and should guide the operational philosophies and practices of IANA and decision-making processes of the ICANN Board.

6. Should additional security considerations and/or enhancements be factored into requirements for the performance of the IANA functions? Please provide specific information as to why or why not. If additional security considerations should be included, please provide specific suggestions.

As stated in its general comments, the ccNSO supports the goal of ensuring the secure and stable operation of the DNS, and that the effective execution of the IANA functions, particularly with regard to root zone management, is critical to achieving this. As such, security enhancements should be factored into requirements for the performance of these functions.

At a practical level, these should include:

- better authentication processes for the receipt and management of change requests and issuing confirmations, moving from open, online forms to signed and secured mechanisms;

- Periodic (annual) auditing of the security provisions of the IANA function by external, independent, specialised auditors against a relevant international standard (such as ISO 27001); and a stated commitment from IANA to comply with these standards and expert advice.

Overall, all security enhancements and requirements must remain flexible, as a prescriptive list of requirements would hinder, rather than facilitate, the ability of IANA and its stakeholders to respond to rapid changes in the nature, sophistication and frequency of security threats.

Lesley Cowley
Chair – ccNSO Council

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[4] http://gac.icann.org/system/files/ccTLD_Principles_0.pdf

[5] http://www.ntia.doc.gov/ntiahome/domainname/usdnsprinciples_06302005.htm