



Submission

UAE Telecommunication Regulatory Authority response to NTIA Notice of Inquiry (NOI) on the IANA functions

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About TRA

The Telecommunications Regulatory Authority (TRA) of the United Arab Emirates (UAE) has been established according to the UAE's *Federal Law by Decree No. 3 of 2003 Regarding the Reorganization of the Telecommunications Sector* (the "**Telecom Law**"), Pursuant to the Telecom Law, the TRA is responsible for the management of the telecommunications and information technology industries in the UAE. Despite its relatively short life-span, TRA has exceeded expectations by achieving its projected goals in record time.

The organizational objectives of TRA are derived from Article (13) of the Telecom Law, its Executive Order and the UAE National Telecommunications Policy. These objectives include: ensuring adequacy of telecommunications services throughout the UAE; achieving enhancement of services, both in terms of quality and variety; ensuring quality of service and adherence to terms of licenses by licensees; encouraging telecommunications and IT services within the UAE; promoting and enhancing the telecommunications sector within the UAE; resolving disputes between the licensed operators; establishing and implementing a regulatory and policy framework; promoting new technologies; ensuring that the UAE becomes the regional ICT hub; developing the country's human capital; and encouraging research and development.

The TRA, is entrusted with a wide range of responsibilities related to the telecommunications and information technology sector. According to the Telecom Law, the TRA is to exercise its functions and powers and under this Law and its Executive Order to:

- Ensure that the telecommunications services provided throughout the state, are sufficient to satisfy the public demands of those who wish to make use of such services
- Enhance the level of service provided by the telecommunications sector in order to promote the interests of such services
- Ensure that licensees meet quality standards of performance and adhere to the terms and conditions of the licenses granted to them
- Encourage, promote, and develop the telecommunications and information technology industries in the state
- Promote and enhance the telecommunications system in the state as indicated by the development and the establishment of industry related training institutions and through the availability of the latest apparatus, equipment, and facilities provided by telecommunications technologies

General Remark

Historically, the government of the United States of America (the “US government”) (acting through relevant federal authorities and departments such as Department of Commerce) has made a very strong contribution towards the creation and development of the Internet as we know it today. The TRA is of the view that the US government with the support of multi-stakeholder organizations such as the ICANN and the IETF, has done an excellent job in accelerating the openness and growth of the Internet, so as to allow the delivery of innovative services and products to consumers.

The Internet has become an essential resource for the whole world, and affects the lives of almost everyone on the planet. The undertaking by IANA of its four functions is crucial to the availability, stability and security of the Internet. In the TRA’s view, IANA’s functions (including the role of Administrator, the Root Zone Operator and IANA function Operator) should be subject to a governance model responsive to the needs and requirements of IANA’s multiple stakeholders. All stakeholders should be able to contribute to this framework, with strong presence and support from governments, so as to ensure the continuous security, stability and availability of the Internet to everyone.

We believe the current structure which is based on a procurement contract from a single government is not an appropriate model to maintain a resource that is being used and owned by the entire world. We believe that this structure must be enhanced to fulfill the above objectives, especially given that the Internet has reached a mature stage of development..

ccTLD Concerns

Efficient coordination between the IANA function operator and the Root Zone Maintainer, is necessary to ensure that the affected parties (e.g. the ccTLD managers) are aware of the time of changes to the Root Zone in instances where any of the Root Zone information is changed, and especially the ccTLD zone files. From the TRA’s past experience, actual changes to the Root Zone are not made in coordination with the requester of the change (ccTLD manager). This can affect the operation of the ccTLD manager. Transparency and coordination between all parties is necessary, especially between the Root Zone Maintainer and the Administrator, and affected third parties such as the ccTLD operator.

The current process flow of delegation and redelegation of TLDs is not very clear and transparent, especially with respect to the timeframes of each step throughout the process. There are some steps in this process which require extensive analysis and verifications, while there are other “technical” steps which do not require such extensive analysis (e.g. actual delegation on the Root Zone by the Root Zone Maintainer). Hence we believe that there should be very clear timeframes and detailed process-flows for each of these steps. The TRA is hopeful that this concern will be taken into consideration during the current review.

Imbalances in IPv4 Allocation

For historical reasons, the IPv4 allocation between countries is not balanced. Smaller organizations in developed countries took the advantage of being early-adopters, and were able to secure large blocks of IPv4. By contrast many large operators in developing countries lack comparable IPv4 block sizes.

The redistribution and reallocation of IPv4 blocks on a more equitable basis is urgently required, especially when at present the gap between IPv4 blocks assigned to developing on the one hand and to developed country on the other hand is very wide, and takes no account of the growth rate of Internet penetration in developed and developing countries. The distribution of IPv4 address space is handled by multiple organizations in addition to the IANA function operator, such as organizations 'down-stream' from the IANA function operator including the RIRs and the LIRs. However, the TRA believes that the IANA function operator must influence some of the policies related to the reallocation of unused or under used IPv4 pools.

The TRA understands that IPv6 is the future; however with the current challenges in slow adoption of IPv6, IPv4 will remain valuable for a long period of time. Therefore, we believe that we must make continued efforts to efficiently use the unutilized IPv4 pools. The TRA recommends that the future operating model of the IANA functions should take into consideration such policies, and should take into consideration the interest of stakeholders in developing countries.

For example, IANA should adopt policies to promote bridging the gap between the developing and developed countries by governing:

1. the transfer of IPv4 policies to encourage efficient use of under-utilized IPv4 blocks;
2. reclaiming the unused IPv4 blocks;
3. limiting the commercialization of IPv4 addresses; and
4. ensuring that the historical problems associated with the allocation of IPv4 do not exist in the IPv6 space.

AS regards the questions specifically asked in the NOI, the TRA has the following responses

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.

Considering the inter-relationship between the various roles of the IANA functions, we believe that it is more efficient and practical to leave the situation as it is with respect to grouping all various functions in one single entity. We also believe that allocating these responsibilities to different organizations, would increase the burden on the community of stakeholders to coordinate and ensure common practical solutions to problems. It will also drive up the overall cost of managing these functions, because of a lack of economy of scale.

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?

IANA functions are critical to the operation of the global Internet, and hence should be subjected to service level agreements with clear performance indicators. There should be a clear description within each SLA to all of the root zone management functions, and the process and timeframe should be clearly set out.

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.

Clear documentation should be provided by IANA detailing its functions, processes & procedures and timelines, so as to ensure that there is greater predictability and transparency of the IANA processes. A platform should be provided through which the customer is able to view the status of their outstanding requests, and all previous requests. Additionally, the IANA should consider implementing customer satisfaction surveys where the results are transparently presented on its website. The survey results should be utilized to fill the gaps and improve the overall service delivery.

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.

A secure communication system should be introduced to the receipt and management of the change requests, as email authentication is not sufficient. We would recommend the development of an online system adhering to the international security best practice, where communication with IANA is secure. The system should be used to notify the customers of any new developments, planned maintenance and outages. Additionally the system should provide the customer with the ability to view his request status among other services in line with the IANA functions.