

Internet Corporation for Assigned Names and Numbers: An Overview

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Abstract - Internet is a global system which is basically interconnected computer networks and spread around the world. The network of networks, internet basically composed and consists with millions of several kind of private, public, academic, business and commerce, administrative and government, health and medical computer systems. Today millions of people are using internet but it is a fact that there is no control or property or authority on this system; however the internet name space and also Domain Name System basically governed by the ICANN and the technical standard and similar activities hundred by the IETF (i.e.) Internet Engineering Task Force. The ICANN was established on 1998 in California, USA. This paper is an overview based literature on ICANN; including its activities, functions, structure, and other similar activities.

Keywords: Internet, IT, Information Systems, Internet Protocol, ICANN, WWW, DNS, Internet System, Social Development

I. INTRODUCTION

The internet is the main and core power of today's world including the development activities and so on. The ICANN was established on 18th September, 1998 to manage the numbers related to internet protocol including the Domain Name System. The ICANN is responsible for the internet activities and mainly the coordinating, monitoring and implementing (with oversee) several databases in regard to internet. The core aim and agenda of ICANN is the managing and implementing the world wide domain name system. The implementation of top level domain is also fall under the system is the core of the ICANN with their motto "One world. One Internet". The ICANN basically supposed by three main supporting organizations—GNSO, ccNSO, ASO. It is also responsible to get advice from its advisory committee. The uniform domain name dispute resolution policy and proposed collimation of public DNS.

II. OBJECTIVE OF THE STUDY

1. To know about the basic activities of the ICANN including its main aim and agenda.
2. To learn about the core function and assignment of the ICANN with future potentials.
3. To find out the structure and body and other related affairs of the ICANN.

4. To know about the future R/D assignment of the ICANN.
5. To learn about the notable events and other activities of the organization in brief manner.

III. METHODOLOGIES

This is a theoretical paper and the main agenda of this paper is to learn about the ICANN and its agenda, aim, objectives. Thus for the information gathering from the web sources have played an important and most valuable role. The official site of the ICANN (www.icann.org) and Wikipedia (Information Infrastructure Division) used as major information source. The related organizations web such as IETE, Internet Society, and their websites have also used.

IV. ICANN: AN OVERVIEW

The ICANN (i.e. The Internet Corporation for Assigned Names and Numbers) is a scientific, non-profit making company responsible for the maintenance and also coordination of the namespace internet. It is dedicated to the controlling internet address pools including the DNS Root registries. The policy development for the internationalism of the DNS and also the new type of generic top level domains and root name services are most important and valuable agenda of the ICANN. The basic function and development of the internet system is many ways responsible for some other indirect internet dealing which includes alternative DNS root, Domain name, domain name register, domain slamming, top level domain etc. The ICANN is basically governed with the International band of directors (*comprises with the technical, business, academic, research communities*).

VI. ICANN: THE HISTORICAL FOUNDATION

Though the ICANN was established in 1998 but the activities of the ICANN was already active and supported by others. The IANA was the initial player in this regard and it was directed by the Jon Postel. Due to the growing internet trend and user base, the ICANN was established on 1998, based on a Given paper had been expressed by the National Telecommunication and Information Administration (NITA) and based on that with other

supports it was established. The ICANN was managed with the Department of Commerce, United States by the Internet Assigned Numbers Authority (IANA). However the scope and periphery of the ICANN was gradually increased and come to the today's periphery. The first CTO of the corporation was Jon Postel. In 1999 the ICANN board received the DNSO protocol for its development in several contexts. The policy was mainly related with the DNS. Since then the ICANN has contracted with many other

organizations and corporation and mainly with the Department of Commerce, United States. In the latest time, on March, 2016 the ICANN and Department of Commerce (DOC) signed a significant MoU for removing the ICANN and IANA under the control of DOC, United States. And now it is under the treatment and final approval of the United States. The National Telecommunication and Information Administration and its core activities have been are listed in Table 1.

TABLE 1 THE CORE ACTIVITIES OF ITIA (THE BACKBONE OF ICANN)

Core Activities of the ITIA, US
Digital Literacy
Broadband USA
Internet Policy
Creation of National Broadband Map
Working for Public Safety, Grants, Central Database Creation etc

VII. ICANN: THE CORE AGENDAS

Managing the internet protocol numbers and domain name systems are the core activities of the ICANN with the slogan of "One World. One Internet". The ICANN is also maintains the registry of the internet protocol identifies. The ICANN is responsible for the following assignments and activities

- a. Monitoring and managing the databases related to the namespace for a solid, stable and network services and internet operation.
- b. Apart from the activities of the Domain Name System (the policy and modernizing the DNS systems); it is also deals the TLDs (i.e. Top Level Domains) and also operation of the root name servers.
- c. The DNS root registry and its allied activities including the internet protocol address and healthy space for the IPv4 and IPv6.
- d. The ICANN is also responsible in the transporting protocols and also many others protocol.
- e. They have to keep the coordination among the other organization such as Internet Engineering Task Force, Internet Architecture Board, Internet Research Task Force, Internet Research Steering Group and so on.
- f. The ICANN is manages the IANA (Internet Assigned Numbers Authority) under the Department of Commerce, United Sates.

VIII. ICANN: THE STRUCTURE

The ICANN is actively supported by the three supporting organizations which include the Generic Names Supporting Organization, Country Code Names Supporting Organization, Address Supporting Organization. The top level of the ICANN is directed by the 16 board members. The board normally appointed the CEO/President of the corporation. However the ICANN is also supported by the some of the Advisory Committees (it is just voluntarily and non mandatory) these are Governmental Advisory Committee, At-Large Advisory Committee, Root Server System Advisory Committee. The ICANN in many cases get the help of other Regional Internet Registries (RIRs) [36]

- a. African Network Information Center (AFRINIC) for Africa
- b. American Registry for Internet Numbers (ARIN) for the United States, Canada, several parts of the Caribbean region, and Antarctica.
- c. Asia-Pacific Network Information Centre (APNIC) for Asia, Australia, New Zealand, and neighboring countries
- d. Latin America and Caribbean Network Information Centre (LACNIC) for Latin America and parts of the Caribbean region
- e. Réseaux IP Européens Network Coordination Centre (RIPE NCC) for Europe, Russia, the Middle East, and Central Asia
- f. Among the supporting agencies the important with their functions have been depicted in the Table: 2. Whereas Importantly the GAC is also comprised with many observers which are listed in the Table 3.

TABLE 2 SUPPORTING AGENCIES OF ICANN [29], [30]

Committees	Composed with
GAC	Composed with the members for the Government of many countries around the world.
ALAC	Composed with the general internet users selected by the Regional At large Organization.
SSAC	Compared with the internet users and composed with the other technical bodies, scientific societies and other bodies.

TABLE 3 GENERAL OBSERVER OF GAC [29], [30]

Observer of GAC	
1. African Telecommunications Union	1. Organisation for Economic Co-operation and Development
2. Asia-Pacific Telecommunity	2. The Organization for Islamic Cooperation
3. Caribbean Telecommunications Union (CTU)	3. Organization of American States
4. Commonwealth Telecommunications Organisation (CTO)	4. Organisation internationale de la Francophonie (OIF)
5. Council of Europe	5. Pacific Islands Forum
6. Economic Commission for Africa (ECA)	6. Secretariat of the Pacific Community (SPC)
7. European Broadcasting Union	7. Inter-American Telecommunication Commission (CITEL)
8. European Organization for Nuclear Research (CERN)	8. International Criminal Court
9. European Space Agency	9. United Nations Educational Scientific and Cultural Organization (UNESCO)
10. International Labour Office	10. Universal Postal Union
11. International Telecommunication Union (ITU)	11. World Bank
12. International Criminal Police Organization (INTERPOL)	12. World Health Organization (WHO)
13. International Red Cross and Red Crescent Movement	13. World Intellectual Property Organization (WIPO)
14. Latin American Association of Telecom Regulatory Agencies (REGULATEL)	14. World Meteorological Organization
15. League of Arab States	15. World Trade Organization
	16. New Partnership for Africa's Development (NEPAD)

IX. CONCLUSION

The ICANN is one of the important and most valuable organizations around the world and it is rising day by day. The US Government directed that the ICANN that it should work biased free and democratic way and mention that “in a bottom up, consensus driven, democratic manner”. For its better and healthy development it is now proposed that one internet governance forum is to be open-up. Among the important and valuable activities, most important is Uniform Domain-Name Dispute Resolution Policy (UDRP). The ICANN was created in some events and also conducted some of the IBSA Proposal, Montevideo statement on the future on internet on the future of internet governance, Netmundia Initiative. The country code top level domain, General top level domain, Geographic top level domains are most important and valuable task in many contexts.

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