Internet Society: The pioneers in internet and network science for building digital society and Information Age—*A Case Study*

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Abstract—

Internet is a network of networks and more clearly a global system which interconnected millions of computers based on several protocols and standards. Internet does not have centralized Governance whether in implementation or policies; there are many foundations and associations and institutions which play a lead role in the development and standardization of internet and similar system. Among the foundations and associations 'Internet Society (ISOC)' play an important and valuable role. Officially ISOC formed in 1992 and now actively working worldwide with several internet related affiliations. This is affiliated with the public internet registry. This paper talks about the 'Internet Society'; their role and activities and other assignments. The paper is also highlighted the emerging role of the foundation and extension services.

Keywords-

Internet Society, ISOC, Public Internet Registry, IT Association, Information Infrastructure, Governing Body, IT Management, Internet Growth, Information Age

Introduction—

The 'Internet Society' is established in 1992 as a nonprofit making information technology based association and with headquarters in Virginia, United States and Geneva, Switzerland. It provides membership of several kinds of IT firms and organizations. Today more than 140 organizations have been associated with the 'Internet Society' as automated numbers. Worldwide, 'Internet Society' has more than 80000+ individual members. Internationally 'Internet Society' has 110 chapters. 'Internet Society' is strongly associated with many associations and organizations such as IRTE, CNRI, ACM, IEEE, RIR [23], [24] [25]. 'Internet

Society' is gaining rapid success for implementing the standards, public policy, and other activities (See Fig: 1). However from recent past, 'Internet Society' is also responsible for the providing training and education. The 'Internet Society' chapters are working closely with the other associates and peers for solid and healthy internet infrastructure building and a promotion. The scopes are also rising rapidly [1], [3], [24].
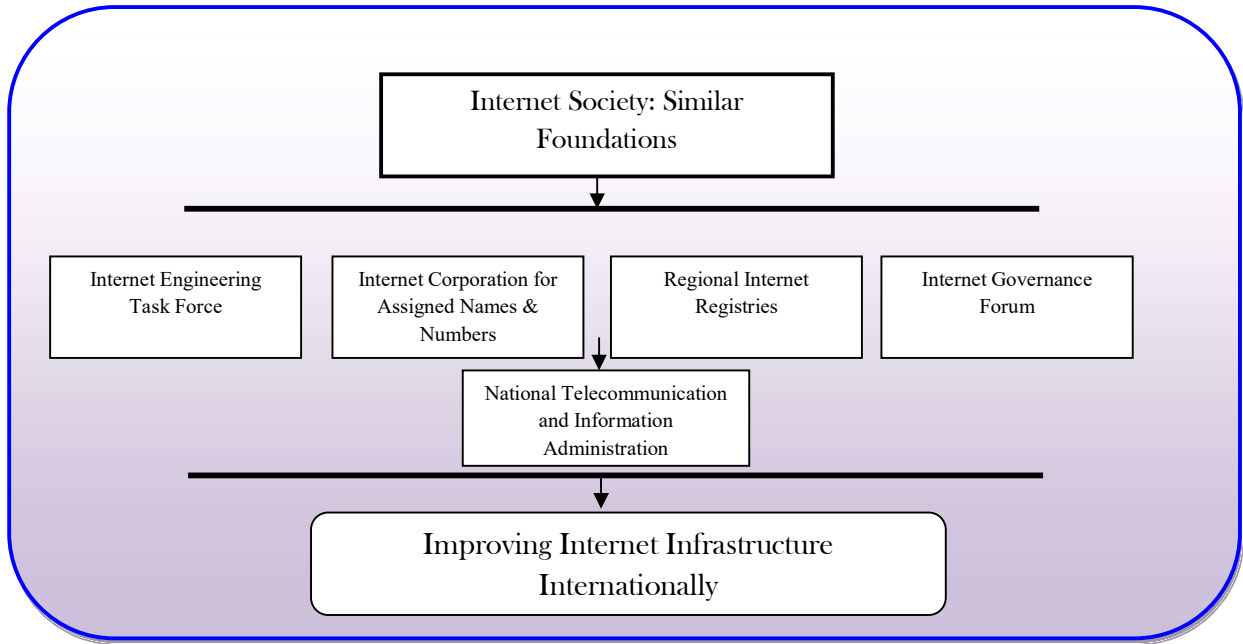

Fig: 1- Depicted the Related Foundations and Societies of the Internet Society.

Objectives—

The main aim and objective of this conceptual paper is dedicated to the 'Internet Society' and some core agenda are listed as follows—

- To know about the basic of 'Internet Society' with its foundation, history etc.
- To learn about the 'Internet Society' including the current role and activities.
- To find out the initial, core and contemporary agenda, vision and mission of the 'Internet Society'.
- To dig out the 'Internet Society' and the contemporary role and associations with the other peer organizations, associations, foundations etc.
- To know about the future role and potentialities of 'Internet Society' and similar foundations.

'Internet Society': Foundation—

Vint Cerf and Katin, the two important figure of the Internet (they also treated as the future of the internet), play a lead role in the establishment of the 'Internet Society' in 1992. According to the mission of the 'Internet Society', it is purely dedicated to the promotion, development, and

evolution and including the use of the internet for the benefit of all people throughout the globe. From the beginning of the foundations, several IT and Internet Guru's are involved and played a lead role [2], [4], [14]. Interestingly many of them are technical pioneers, innovators, global connectors. The most significant fact during the internet age and also after born of the internet society are as under (Also refer Fig: 2)—

In 1970's—The internet protocol, mainly TCP/IP and IT development started and in the year 1974, Vint and Kahn publish a role and guidelines called "a protocol for packet network interconnection".

In 1980's—The DNS had invented by the Paul Mockapetris in 1983. In 1986 (January), the first meeting of the Internet Engineering Task Force (IETE) was formed and conducted. In the same decade, the Tim Berners Lee invented the most waited www in 1989 [23], [24].

In 1990's—Just after two years in 1991, the same www had been opened for the common public. The internet then much alive and with the support of some events such as first INET Conference, 1991 and in 20th June 1991, the formation of the 'Internet Society' declared at the INET Conference at the Copenhagen [5], [7], [14].

1970-80

TCP/IP Started

DNS invented

WWW has been created

1990

WWW strated in Public Domain

INET & Internet Society has been formed

• Amazon and Google has been started

2000's

Internet Society Formed with many bracnhes

Social Networking Sites Emerged

ISOC Collaborated with other Organizations, Branches etc
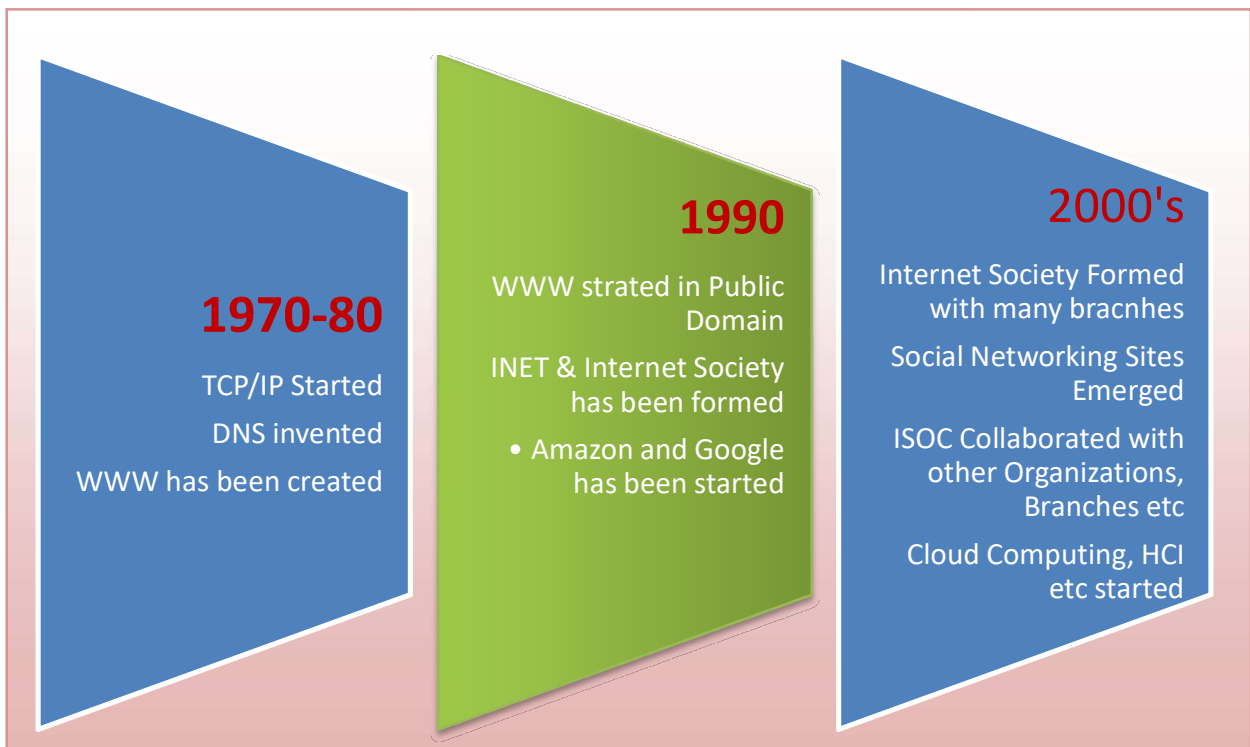
Cloud Computing, HCI etc started

Fig: 2-Depicted the historical overview of the Internet Society with other happening in the Internet Spectrum.

Aim and objectives: 'Internet Society'—

The 'Internet Society' established with many aim and agenda. According to the Announcing document of the 'Internet Society' (as mentioned in the Wikipedia), the core aim and objective of the foundations were as follows [24], [25]—

- *"To facilitate and support the technical evolution of the Internet as a research and education infrastructure and to stimulate involvement of the academic, scientific, and engineering communities (among others) in the evolution of the Internet;*
- *To educate the academic and scientific communities and the public concerning the technology, use, and application of the Internet;*
- *To promote scientific and educational applications of Internet technology for the benefit of educational institutions at all grade levels, industry, and the public at large;*
- *To provide a forum for the exploration of new Internet applications and to foster collaboration among organizations in their operation and use of the Internet".*

The official website of the 'Internet Society' mention that the main mission of the 'Internet Society' is—

"By connecting the world, working with others and advocating for the equal aim to the internet, the 'Internet Society' strives to make the world a better place". The actual website of the 'Internet Society' mention that the main missions of the 'Internet Society' are—

- Development and implementing the standards, protocols, administration and also the whole information and telecommunication infrastructure in the world [11], [15].
- Promoting the professional development and building the healthy and skillful community for participation and better leadership.
- Providing reliable information and data related to the internet and also the future internet possibilities and obviously current scenario and so on [9].
- Providing the blogs, stage, and forum for the discussion of the issues related to the technical, commercial and social context.
- Keep the computers to all stakeholders of the internet and information technology.
- Providing the healthy information sharing forum, education and training situation, and platforms [8], [10].

Activities and Stakeholders—

The main activities and stakeholders are as follows—

- To provide the internet for free and for everyone and thus the organizations are closely associated with the other organizations, associates and governmental activities [12], [15], [17].
- Doing the job by chapters. It has already a wide range of chapters around. These chapters are deals the local and a designated territory for doing the job and activities.
- The 'Internet Society' provides the membership and currently, more than eighty thousand members are engaged worldwide with 100+ countries [13], [16], [24].
- The 'Internet Society' normally engaged by the chapters which are engaged in various activities and out of which important are educational matters such as providing and coordinating the seminars, conference, training and so on [22], [27]. The educational activities include the creation of the awareness and the internet related issues, security, broadband access, IPV6, Internet's advantages and disadvantages etc.
- During the public programs are another important and valuable activities of the 'Internet Society' through its chapters and in this context the major activities are—
     -Providing the policy and helping in the policy makers.

     -Providing about the net-neutrality, copyright related etc.

     -Showing and informing through the censorship and by the human rights.
- Network events are another important and valuable activities of the 'Internet Society', which includes the helping the members, to provide the membership and helps by the corporation etc [18], [19].
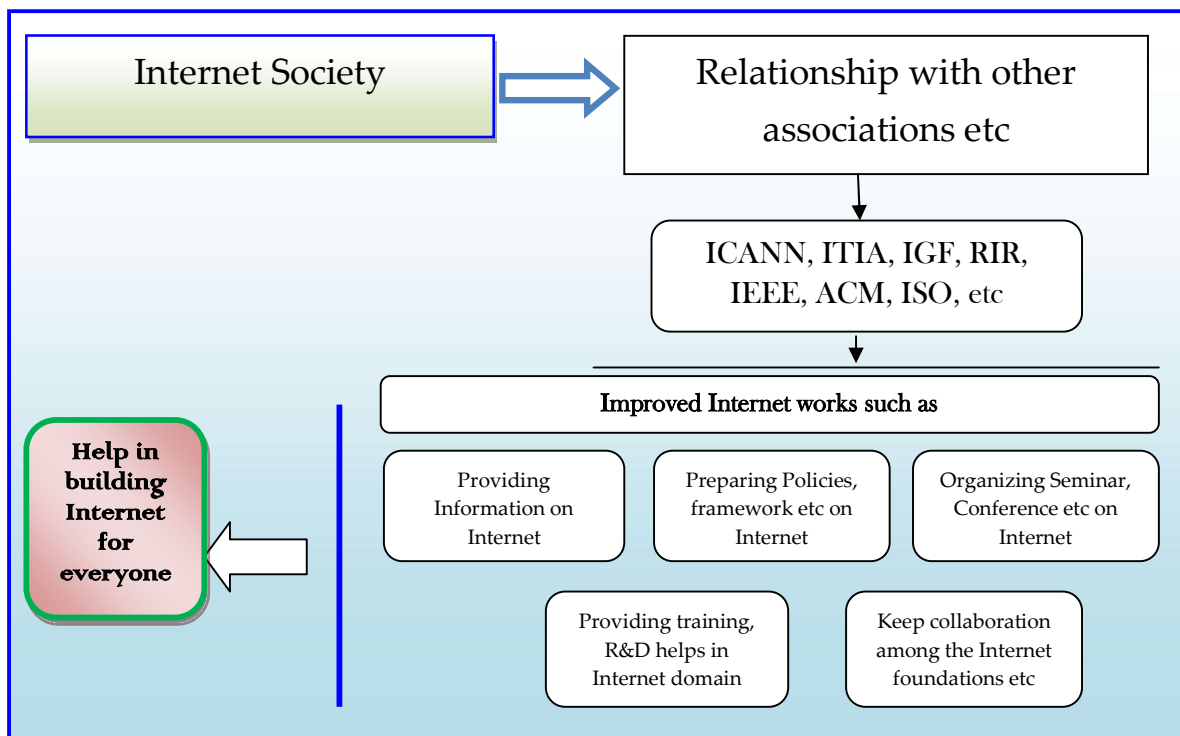

Fig: 3-Showing the core role of the Internet Society in respect of Internet and Network World.

Structure and Council—

The ISOC is actively engaged in the activities of internet issues such as the policy, implementing, good governance, technology and also development. Today internet plays a leading role and sustainable internet is the main activities. Thus, 'Internet Society' plays an important role in this regard [20], [21], [25]. The 'Internet Society' has the Regional Businesses in the following areas; where they did their work—

- Africa.
- Europe.
- Middle East.
- Asia Pacific.
- Latin America and Caribbean.
- North America.

The 'Internet Society' is governed by the Chapters and SIGs (Special Interest Groups). It has the local group and community with the following (*listed in Table: 1*).

Table: 1- Depicted the Local groups of the Internet Society in brief [26], [28].

APEC	African Union
CITEL	Council of Europe
ECOSOC	GAID
Human Right Council	ICANN
Internet Governance Forum	International Telecommunication Union
NPCA	OECD
UNESCO	UNECA

The 'Internet Society' also holds members and advisory committee for the following matters and groups such as—

- Academic and research wing, services and equipment suppliers, content creator and providers.
- Government and intellectual organizations etc.

Initially, it holds 80000+ members from the world with 140 organization members and 110 chapters. The whole team is mentioned by the 'Organization Member Advisory Council (OMAC)'.

Suggestions—

- Ultimately the 'Internet Society' is engaged in more healthy strategies and better initiatives and other activities in educational, societal and also in another context.
- Good cooperation and collaboration are very much important among all the stakeholders and here all the stakeholders need to share and engage their views.
- Proper knowledge sessions and workshop etc may be conducted for the solid implementation of internet system for solid information infrastructure building.

Conclusion—

The main aim and agenda of the 'Internet Society' is "By computing the world, working with others, and advocating for equal access to the internet, the 'Internet Society' strives to make the world a better world".(www.internetsociety.org) [22], [24], [26]. The main vision of the foundation as mention "The internet is for everyone". It is a fact that 'Internet Society' is actively working around the world and with more or less same emphasis in the developing and developed countries. All the chapters and SIGs are fully engaged for the solid implantation of the 'Internet Society'. The development of standardization, their implantation and uses are more or less most valuable and important. International cooperation, community development, and enhancement by removing the digital divide are very much important and valuable agenda and 'Internet Society' in most of the perspectives a successful venture.

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