Government of India
Ministry of Communications & IT
Department of Telecommunications
Networks and Technologies Cell

Dated: 30th January, 2012

<u>Sub</u>: **Minutes of first meeting of the Vendors on "Readiness of IPv6 compliant Equipment" on 10th January, 2012 in Sanchar Bhawan.**

First meeting of the Vendors on readiness of IPv6 compliant equipment was held on 10th January, 2012 in Sanchar Bhawan under the Chairmanship of Advisor (T), DoT. It was attended by the senior officers of the leading vendors and their representatives from around 15 organizations from various domains. Shri R.M. Agarwal, DDG (NT), DoT welcomed Advisor (T), and all other distinguished participants. He delivered the welcome address while indicating the need of this meeting that end user devices and mobile systems and handsets need to be IPv6 ready and started the proceedings with the brief introduction of the members.

2.   Advisor (T) addressed the gathering and stressed the importance of transition from IPv4 to IPv6. He said that Service providers as well as Government organizations are being pursued for taking necessary actions. He said that this is the first meeting with vendors for taking some decision and having first hand information from the vendors about their IPv6 deployment roadmaps. He said to the participants that the IPv6 standards have already been released by TEC and all concerned should benefit by using them. The same is available at TEC. He further said that as the usage of smart phones are there in the market, handset of which are V6 compliant and percentage increasing every day, further in mobile/ Broad band sector some of the CPEs are also IPv6 ready and some of the websites are also available on IPv6, but still lot of work need to be done by the vendors for all future equipment and gadgets to be IPv6 compliant. So now we should decide to work on these as fast as we can and this meet is also in line with this & need of Major Service Providers, Government Organizations and other vendors.

3.   Dir (NT) Sh N Ram gave presentation to participants on the activity of DoT NT cell and the India IPv6 task force. He gave presentation about the progress of the Major Service Providers and Government Organization in this regards. Following to this presentation discussions were held as follows:

3.1   Advisor (T) said that vendors may also provide IPv6 details on their websites and a link may also be provided with DoT or TEC website for IPv6 activity link, so that large number of stakeholders can access the information and it will give a boost to make aware the masses.

3.2   DDG (NGN) said that TEC test bed will be ready by March and it will have remote testing capabilities also, vendors can use this facility for testing their products even from remote end.

3.3   Representatives from various vendors present in the meeting asked whether the product/equipment already having IPv6 Ready Logo certificates need to be tested

again in TEC lab or not. It was clarified that as TEC standards have been formulated after in depth study of USGV6 and IPv6 Ready Logo Standards and some of the security related issues in Indian context, so all parameters may not require to be tested but security parameter may need to be tested in TEC lab, for which TEC will be ready by March, 2012 and further any clarification if needed can be asked from TEC after going through the Standards of TEC.

3.4   TEC will publish about how to go for testing as soon as test bed will be ready. DDG (NGN) informed to the representatives of the vendors that as TEC is ISO certified body and you need not be worry as testing and all will be hassle free and for any types of clarification and modification if needed it will be done in consultation with all.

3.5   Participant from NSN said that DoT may organize one common meeting with Service Providers, OEMs/Vendors to understand the actual scenario of the IPv6 progress made by one and all.

3.6   Advisor (T) and DDG (NT) suggested that some of the OEMs/Vendors can be members of the Core Committee and they may send their consent to director (NT) by e-mail as soon as possible. DDG (NT) deliberated the preview of the Core Committee and Expert group in IPv6 implementation and requested the members to be part of Expert group also. It was also informed to all that we are also trying to hold one IPv6 global summit in Delhi soon.

3.7   Participants also discussed issues related to Tunneling and dual stacking and they shared that dual stacking is emerging as a preferred option.

4.   <u>After this discussion, the representatives of all the participating organizations/Vendors were asked by DDG (NT) to discuss about their IPv6 migration plans:</u>

4.1   Representative from TEJAS said that they are dealing with Layer-1 & Layer-2 products only and IPv6 has no role as of now, however for the internal network and management, some of the product with which they are dealing has got IP, and for that they are planning to migrate same within a year's time.

4.2   NetApp representative said that they are dealing with data store and data management and their products are IPv6 ready, however it needs to check that they are IPv6 Ready Logo certified or not. It was informed that they would like to have testing of their product in TEC test bed as and when it becomes operational.

4.3   Representative from IBM said that they are dealing with Data Servers and Data Storage devices and all are IPv6 compliant. They are not dealing with any end user devices. It was informed that security wise whatever testing will require they will get tested in TEC test lab.

4.4   Representative from ZTE said that they are providing Broad Band product and are IPv6 compliant in the market, they said that BSNL is the main client mostly. They are also dealing with DSLAM and are also ready on V6. Wireless product, they are dealing with and it was informed that they need to work out as far as IPv6 is concerned for the wireless products.

4.5   Representative from Microsoft said that they are dealing with Server OS (web servers)/ Client OS & other OS and all are IPv6 compliant. It was informed that their products are IPv6 ready Logo certified.

4.6   Representative from UTStar said that they are dealing with access equipment and their client is BSNL mostly and their product, DSLAM is IPv6 ready but they did not have IPv6 ready Logo certificate. It was informed that they are also dealing with RPR and other network devices and all are IPv6 compliant.

4.7   Representative from Huawei said that they are dealing with end to end IP device and their products are IPv6 compliant.

4.8   Representative from CISCO said that they are dealing with Routers/Switches/ Storage devices and many other products and all are IPv6 complaint. It was informed that CISCO has released specification of their some of the products. Advisor (T) said that TEC can liaise with CISCO for checking the USGV6/LOGO/TEC Standards to see the differences. DDG (NT) said that Mr. Anup Pandey from CISCO was asked to provide some of the techno economic solutions in Indian context for smart grid/smart building solution to publish in the newsletters/newspapers for showcasing the economic impact of the IPv6 sensor based projects in the country. Mr. Mathur from CISCO agreed that they will send some of the reports to NT cell very soon.

4.9   Representative from Ericsson said that they are having wide range of products in the market like DNS/OSS/BSS etc. and as of now for mobile network their packet core network is IPv6 ready. It was said that they have three plane strategies like User plane, Transport Plane and O & M equipment plane and planning to go for IPv6 compliant in all planes as per plan.

4.10   Representative from NSN said that they in the 2G/3G/4G and OSS/BSS system and their packet core network is IPv6 ready and for others like for user plane and control plane by next 1 or 2 years all will be fully compliant.

4.11 Representative from Juniper said that they are dealing with routers/Switches/Security etc and all are fully IPv6 compliant. Advisor (T) and DDG (NT) said that juniper can be active member of task force and be involved in some of the working groups as co leads members, same was agreed by the representative and said that they will forward an e- mail request for the same. It was discussed that some write up from Juniper is solicited for information to all for enabling migration without affecting the existing services. Further deliberation is needed on the performance parameters while using NAT scenario.

4.12 Representative from CSN said that they are the management software developer and having global development centre at Hyderabad and is fully IPv6 compliant and as far as certification is concerned same will be checked and inform accordingly. It was also said that their network/product is dual stack and fully complaint.

5.0   DDG (I) TEC discussed the cost issue as was raised by ISPAI in first Oversight Meeting. He said that for tier-2 and tier-3 cost component study needs to done by vendors and send a report to TEC and a copy to NT cell. It was also discussed that it need to know from tier-2 or tier-3 about their new technology vendors etc and based on that only vendors can say what is exactly is required to upgrade, for this a format needs to be developed to ask information from ISPs and the format for same will be prepared and sent by NSN/Juniper/CISCO and other vendors to TEC within a week's time. TEC will ask information from tier-2 & tier-3 and then hold a meeting accordingly.

6.0   DDG (NT) said that whether websites of all the vendors are IPv6 compliant, CISCO, Juniper and Ericsson representative confirmed that their websites are dual stack and other said that they need to check.

6.1   It was also discussed that 'Akash' tablet is proposed to be launched in India very soon in a big way and it is very likely that it is not IPv6 compliant, it was decided that respective company may be intimated in this regard and may also be called in the next meeting.

7.0   Advisor (T) and DDG (NT) finally requested to all the participants to complete the questionnaire send by NT cell and return the same at the earliest. In the end DDG (NT) said that as discussed earlier Performa for asking report from ISP to be send to TEC urgently and nomination of for the core committee and expert group etc need to be also sent urgently. At last Sh. N Ram Director (NT) gave vote of thanks to all distinguished members for sparing their valuable time and making the discussions fruitful.

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Copy for Information to:
1. Secretary (T), DoT.
2. Member (T), DoT.
3. Advisor (T), DoT.
4. Sr. DDG, TEC
5. All members of Oversight Committee.

Copy for information and necessary action to:
1. All members of Steering Committee
2. All Lead organizations
3. All participants
4. Central and State Nodal Officers
5. Director (IT), DoT & Director (I), TEC to kindly upload the same on the respective website under IPv6 Activity link.