Dated: 7th October, 2011

Sub: **Minutes of 2nd Oversight Committee Meeting for IPv6 Policy Implementation held on 4th October, 2011.**

Second meeting of the Oversight Committee under India IPV6 task force was held on 4th October, 2011 in Sanchar Bhawan under the Chairmanship of Secretary (T), DoT. It was attended by the Oversight Committee members and the Leads of all working groups. Shri R.M. Agarwal, DDG (NT), DoT welcomed Secretary (T), Member (T) and all other distinguished participants. He delivered the welcome address and started the proceedings with the brief introduction of the members.

2. Member (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. Various steps were taken to gear up all stakeholders in this regard and the progress from 1st Oversight meeting to till date is as follows:

	1st Oversight on 28.04.11	2nd Oversight 0n 04.10.11
Nodal Officers Nomination **Pending** (Central)	30/90	20/90
Nodal Officers Nomination **Pending** (States/UTs)	7/35	4/35
IPv6 implementation activity sheet **Received** (Central)	3/90	21/90
IPv6 implementation activity sheet **Received** (States/UTs)	2/35	8/35
IPv6 Awareness Workshop for State 7 UTs	1/26	8/26
India IPv6 Task Force Newsletters issued	--	2 issues (June & August)

He also informed that DOT is in process of finalizing a panel of IPv6 Consultants for Government Organizations and for which 13 bids have been received, which are under evaluation and expected to be finalized in next two months time. He further said that all the working groups of IPv6 task force needs to work together to supplement need of one another and give required momentum to service providers and Government organizations in achieving their targets.

3. Secretary (T) in his address said that though all concerned will be getting ready, however they need to make sure that timely start of the IPv6 services happen in India. He informed that Government has recently announced the ICT policy and several things have been emphasised in it by increasing the involvement of all members of society in general in ICT sector. He informed that as per the new ICT policy, there will be more demand of IP addresses in various applications of ICT sector and time bound transition

to IPv6 becomes the necessity from security angle also. He further said that IP address is an important part of ecosystem of innovations in ICT sector, so we need to comply with the timelines and we should discuss various issues for orderly and timely migration.

4.   Shri R.M. Agarwal started proceeding of the meeting with review of the actionable points of the 1st Oversight committee meeting and discussed one by one as follows:

   i.   <u>TEC website to be updated on regular basis for all IPv6 related activities and a link of the same to be given in DoT website</u> —
> It is being updated regularly on both the websites DoT as well as TEC.

   ii.   <u>DIT to submit the firm proposals for ongoing pilot projects</u>—

> Mrs. Tulika Pandey from DIT informed that due to the revision of proposals as per the requirement of the States, finalization of the proposals is taking more time, however they have received Pilot Project proposal in different fields from seven States which are under discussions within their working group and these proposals will be finalized & intimated shortly.

   iii.   <u>A standing committee to be formed consisting of officers from DOT/ DIT and committee to meet on monthly basis</u>—

> Committee formed under the chairmanship of Advisor (T) and two meetings held till date however any member from DIT could not be present in both the meetings.

   iv.   <u>All Nodes of NIXI to be upgraded and make IPv6 compliant earliest possible</u>-

> NIXI informed that all the nodes have been made IPv6 compliant.

   v.   <u>The global IPv6 summit in India to focus on showcase and innovations in India in regard to products, applications and deployments</u>—

> This is proposed to be covered in the APNIC meeting to be held in Delhi in February, 2012. Mr. Hemanth Dattatreya, VP, IPv6 forum India said that IPv6 forum India would like to host this event with the support of DoT on the same line as was done in December, 2009.

   vi.   <u>All service providers to share their IPv6 network information with TCL within 10 days time to enable them to prepare a Report</u>---

> TCL presented the complete report in its presentation and said that the Objective of Creating "Transition Pipe" has been met with the existing Network of Major SPs.

   vii.   <u>In IPv6 awareness workshop of DoT being organized by BSNL, the speakers /Panelist from ISPAI & IAMAI to be included and target audience to be intimated by ISPAI & IAMAI. All 3 working groups to work in close coordination</u>—

Workshops are being held regularly and till date 8 workshops have already been conducted, however participation from ISPAI & IAMAI is not encouraging**.**

viii. <u>Nomination for Security working groups by Tata, Sify, ISPAI, COAI, BSNL, MTNL, C-DoT, TEC, Tech Mahindra etc. to be sent immediately</u>**—**

Security group formed and one meeting has been held on 8th Sept, 2011.

ix. <u>DoT's Security wing to have specific case study for the security issues in IPv6</u>—

DDG (Security) in his presentation informed that without live IPv6 traffic it is not possible right now.

x. <u>To focus on PR ship for wide publicity, updating national and international community</u>-

- India IPv6 newsletter – two issues have already been released and in future also it will be released on bimonthly basis.
- Paper presentation of India IPv6 policy at various national/International forums by NT cell DoT,
   However more efforts need to be done in this regard. Mr. N. K. Goyal president, CMAI said that the IPv6 newsletters can be uploaded on their website also, it was agreed in the meeting for uploading pdf file of the newsletter for wide publicity. DDG (NT) further informed the members that it is already available on DoT and TEC websites as well and has been sent to different groups by e-mails also and hardcopies are being circulated in the meetings as well as in awareness workshops to all participants.

- <u>For up gradation from IPv4 to IPv6, the ISPAI raised that equipment vendors are charging abnormal rates, TEC to come out with details and possible solution</u>—

   Sr. DDG (TEC) informed that TEC held two meetings in this regard with manufacturing vendors, and in these meeting after discussions with venders it was concluded that they are charging on case to case basis which is not abnormal however in both the meeting no representation from ISPAI was there. DG (NIC) said that as newly procured equipment are already IPv6 compliant than how this cost factor comes into picture, Mr. Anup Pandey from CISCO said that this cost is for complete replacement of the legacy equipment and for some software up gradation and it is case to case basis and as per them it is not abnormal. <u>Secretary (T) directed that this issue needs further deliberations and in depth study by TEC from all angles including AMC.</u>
   DG (NIC) said that we could have a group of 3-4 technical persons from Service Providers and vendors who may under take similar types of issues & other technical problems. DDG (NT) informed that in this regard a core committee consisting of technical persons from service Providers, Vendors, TEC, NIC, DIT & DoT is already in place and it has already met once and taking care of such issues. Details about the core committee members and minutes are already available on the websites so that anyone can send queries to them.

Secretary (T) finally directed that we can form an expert group from the principal vendors and other concerned stakeholders with whom the core committee members can interact as per the technical requirements.

xi. It is proposed to fund the rural based IPv6 pilot project through USO fund.

Certain queries were raised by the USO (F) cell on pilot project proposals and the same was asked for from DIT and still pending. Mrs. Tulika Pandey from DIT said that the information asked for is specific in nature so right now it is not possible to reply in view of the non finalization of the pilot projects yet. Secretary (T) directed that DIT should at least send the required information in whatever form they have.

5. **Other important points for smooth transition to IPv6**:

i. Inadequate awareness about IPv6 and its capabilities.

DDG (NT) said that despite holding awareness workshops in all States, we need to have more concentrated trainings & workshops in this regard. Secretary (T) said that awareness issue is open ended issue so we should concentrate on quality and focus on the participants and needs to have critical people involved in awareness workshops. We should target SIs, entities & Organizations and within that the prime people should be focused. So we need to have a focused & concentrated effort for awareness. On this, Sh. N K Goyal, appraised the chair that he conducted five IPv6 workshops throughout the country in coordination with TEC/DoT and without any cost to Government. Member (T) asked him to continue it in current case also for the focused groups and others may also be pursued in this regard.

Mr Hemant Dattatreya from IPv6 forum said that based on the effects of IPv6 in various sectors of economy like impressing upon the economic impact/ benefits to various IPv6 based applications in the country, we can publish the details showing the effect in the newspapers for information to all. It was also suggested that a group/lead group can take this responsibility for preparing and presenting the same to all concerned in the form of economic implication/benefits of IPv6.

DIT should present some of the pilot projects in the states so that this can also showcase the impact of IPv6 to the public.

Secretary (T) said that as we all know that IPv6 is not only for the addresses point of view but it has got certain potentials in the other sectors of economy and has got greater potential in the energy, education, medical and many more.

ii. Content Providers and Application Developers not adequately ready.

DDG (NT) said that efforts are on to pursue content and application providers for making them ready, however more and more applications and content providers need to be pursued in this regard. Secretary (T) again directed to adopt the focused approach in this regard also.

iii. <u>IPv6 based pilot projects – no complete project at present to demonstrate proof of concept / showcase the benefits</u>.

Mrs. Tulika Pandey from DIT said that they are in the process of finalizing the some of the project in the states and same will be finalized & intimated shortly.

iv. <u>Top Indian websites to make IPv6 ready</u>.

Secretary (T) said that we should target NIC and four more top websites to be IPv6 ready as a first step.

v. <u>IPv6 monitoring system still under development</u>.

Mr. Vipin Tyagi, Director C-DOT said that they are working on it and by December, 2011 the Lawful Interception & Monitoring System (LIMS) system will be ready and there will not be any problem in IPv6 traffic monitoring.

vi. <u>No test bed facility, certification agency for testing equipments claiming to be IPv6 Compliant</u>.

Sr. DDG (TEC) said that test bed is expected to be ready by January, 2012 in TEC HQ and accordingly certification facility/agency will be available.

vii. <u>Empanelment of Security Audit teams for IPv6</u>.

DDG (NT) said that there are security audit teams for IPv4 empanelled by CERT and no such audit teams are available for IPv6 security audit, so CERT (DIT) has to take up the same for empanelment of audit teams for IPv6 also. Secretary (T) said that action should be taken accordingly.

viii. <u>Promotion of IPv6 in educational institutions</u>.

DDG (NT) said that this work was with the lead group ISPAI and progress is not satisfactory. Secretary (T) said that this needs to be done by NKN, NIC, ERNET and ISPAI simultaneously so that IPv6 promotion in educational institutions can happen.

ix. <u>Mobile handsets and other end user devices not IPv6 compliant</u>.

DDG (NT) said that very less number of availability of IPv6 compliant handsets and end user devices may affect the proliferation of IPv6 based services in future. This is one of the main concerns of the major Service Providers.

Secretary (T) said that we need to look this issue considering the following aspects like 'Standards', 'Commercial', 'Security' and which aspect is to be followed need to be discussed. This issue was discussed in detail and members were of the opinion that we may follow the angle of 'standards' and TEC may take follow up action accordingly and may coordinate with BIS, if required.

x. <u>All Government websites to be IPv6 compliant by NIC</u>.

DG (NIC) said that 2-3 websites will be made available on Ipv6 shortly. DDG (NT) enquired for the remaining Government websites for which NIC committed in 1st Standing committee meeting to do the same by December, 2011.

Summing up the review and important points, Secretary (T) said that most of the issues belong to the next phase, which needs to be taken up on priority and for which some strategy has to be adopted. He further wanted to confirm from

the Service Providers that, are they really ready to offer IPv6 services by December, 2011, as presented in the meeting and asked that if there is any hitches in it. Nobody in the meeting raised any concern in this regard.

On this DDG (NT) informed the committee members that most of the major service providers have assured to be ready by the given timelines with some riders, like MTNL informed that they will require more time to be ready for mobile network and readiness of LIMS, end user devices, contents & applications and actual traffic will depend on the IPv6 enabled websites, contents & end users.

He further informed that Government organizations progress is not encouraging in spite of best efforts by DoT and they need more time to start using the IPv6 services.

6. Review of the progress of Working Groups:

a.) Action Plan &IPv6 Network implementation (WG-2) & IPv6 Implementation in the Government Network:
DDG (NT) informed that he has already covered most of the progress/issues in the review points and further informed that a proposal for country wise block of address allocation has been taken up with APNIC in Busan (S. Korea) meeting in August, 2011 and the proposal is under discussion for which regular meeting on monthly basis is required to be held with NIXI, DIT, NIC, Service Providers and other stakeholders. Next meeting is proposed to be held on 12/13th October, 2011 in NIXI HQ. This issue will be taken up further in next APNIC-33 meeting to be held in New Delhi in February, 2012.

b).Training and Awareness (WG-1):

- Lead Organization of WG-1, BSNL informed that 8 DoT sponsored workshops have been conducted so far out of 26 and remaining shall be conducted during this Financial Year as per schedule.
- BSNL also informed that they are organizing IPv6 specialised workshops for other Government departments and recently proposal from NIC have been received.
- BSNL have planned to upgrades all its labs facilities available in their training centers across India for which financial support has been asked for from DoT, which is still pending in DoT.

c).India6 Network (WG-4):

Mr. Naveen Dhar gave presentation on India6 network and said that The Objective of Creating "Transition Pipe" has been met with the existing Network of Major SPs. He also proposed the next stage plan for this working group is to Set up Test Bed by using the v6 Connectivity between Service Providers, Identify the interested SPs, Identify the existing v6 connectivity's between these SPs, Commission V6 connectivity between the SPs if not available, Prepare the Test Plan, Perform the tests and share the results with SP community and various other organizations.

d).Pilot Projects (WG-6):

        Mrs. Tulika Pandey gave presentation in this regard and said that they are in the process of finalizing the some of the project in the states and same will be submitted shortly.

e).Application Support Working Group 7:

        Mr. Ravinder Singh from Tech Mahindra gave presentation on the key area of work and achievements and also presented the future targets for the groups and said that they are planning to have conferences and workshops with the content providers & application developers in this regards.

f).Security Working Groups WG-10:

        DDG (Security) gave a presentation and said that a group has been formed and one meeting has also been conducted and some of the key areas are looked into and a small group of experts has also been formed to look into and identify the actual issues. He further said that for the security issues members need specialized training in IPv6. DDG (Security) further informed that without live IPv6 traffic it is not possible right now to have case study on security issues.

7. Important points emerged from the meeting:

i.   Cost issue (Higher Cost charged by Vendors) needs further deliberation and in depth study by TEC.

ii.   An expert group to be formed from the principal vendors and other concerned stakeholders with whom the core committee members can interact as per the technical requirements.

iii.   Pilot Project proposal in different fields from seven States which are under discussions, to be finalized & intimated shortly by DIT.

iv.   IPv6 forum, India to host the Global IPv6 summit in India with the support of DoT.

v.   The economic impact/ benefits of IPv6 based applications in the country, need to be published in the newspapers for information to all and a group/lead group may take up this responsibility.

vi.   CMAI & others to hold focussed workshops with different groups.

vii.   Applications and content providers need to be pursued by all to be IPv6 ready.

viii.   Top websites to be made IPv6 ready.

ix.   C-DOT to make LIMS ready for monitoring of IPv6 traffic by December, 2011.

x.   Test bed expected to be ready by January, 2012 by TEC and accordingly certification facility will be made available.

xi.   CERT (DIT) to take up for empanelment of audit teams for IPv6.

xii.   NKN, NIC, ERNET and ISPAI to work for promotion of IPv6 in educational institutions.

xiii.   TEC to take action on standards for IPv6 compliant handsets and coordinate with BIS, if required.

xiv.   Major Service providers assured to be ready by the given timelines with some riders.

xv.   Government organizations progress is not encouraging and they need more time to start using the IPv6 services.

xvi.   2-3 Government websites to be made available on IPv6 shortly by NIC.

xvii.   BSNL have planned to upgrades all its labs facilities available in their training Centers across India for which financial support has been asked for from DoT, which is pending in DoT.

xviii.   WG 7 Lead Tech Mahindra planned to have conferences and workshops with content providers & application developers.

The meeting ended with vote of thanks by Shri N Ram, Director (NT), DoT.

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Copy for Information to:
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8. All Lead Organizations.