No: 14-01/2010-CIT/IPv6/Vol-II/21   Dated: 03-10-2011

Subject: Minutes of meeting held at BSNL CO, New Delhi on 30/09/2011, to review the progress of implementation of IPv6 in BSNL

A meeting was held in the conference room at 9th floor at BSNL CO to review the progress of implementation of IPv6 in BSNL. The list of attendees is at Annex-A.

1. Background
1.1.   The IPv6 address plan has been approved and has been distributed.
1.2.   As informed by GM (BB) ALTTC, different service providers as on date are having around 40 leased line customers with IPv6 connectivity. In BSNL there are 12 such customers.
1.3.   MPLS core network is now dual stack.

2. General points on which action to be taken.
2.1.   All equipment (Hardware, firmware, software) / services / features should be available on both IPv4 and IPv6 simultaneously (dual stack). This line is to be added in all tenders.
2.2.   As per DOT mandate, the operator should start with some IPv6 service.
2.3.   All equipments are to be made dual stack.
2.4.   Service wise action plan is elaborated below.
2.5.   IPv6 is to be implemented in only the network where public interface exists. At present this is not to be implemented in private network.

3. Mobile
3.1.   Preliminary assessment has been done in the west zone for IPv6 deployment in GSM network. Similar assessment will be done for other zones in Oct 2011. The minutes are being issued.
3.2.   The assessment meeting at Kolkata will be held on 12th Oct 11, at Bangalore on 19th Oct and at Chandigarh on 1st Nov 11.
3.3.   Zone wise address plan has been allotted. The detailed plan has to be made by the zonal in-charges. The zonal in-charge may complete this activity with in 15 days.
3.4.   Post paid and Pre paid CDR format to be finalised. The changes in the equipment handling the CDR have to be identified and modified accordingly.
3.5.   The changes for SIGTRAN links with POI with other operators, the SSTPs and GMSCs (MSS) should support dual stack.
3.6.   All the MSCs and routers in MPVN to be made the dual stack.
3.7.   The complete network diagram of GSM services, component wise may be made and discussed with core team.
3.8.   For testing five phase can be made
    3.8.1. Test an IPv6 call
    3.8.2. Test for other security features like CDR, LI etc.
    3.8.3. Billing and rating of Post Paid and Pre Paid
    3.8.4. Data processing of CDRs in FMCC and DSS (Division Support System).
    3.8.5. International roaming.

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3.9. The phase V GSM tender includes IPv6 features. Ensuring implementation of the same is the responsibility of the NWP-GSM-II unit. The time lines will be given by this unit in line with the time lines given by DOT.

3.10. Action Item:
Sr. GM (NWO-CM) / Sr.GM (NWP-GSM) for issuing detailed instructions to concerned field unit.

4. NIB

4.1. It is decided that to promote IPv6, BBNW Circle will issue instructions to node in charge to provide /56 IPv6 address to all new customers in addition to IPv4 address as per their requirement.

4.2. An E-mail should be sent to all existing leased line customers that BSNL is offering /56 IPv6 address block to them free of cost.

4.3. If a subscriber asks for higher number than /56, then some tariff structure is to be decided by concerned T&C unit in consultation with BBNW unit. Addl GM (BB & DC) to initiate the action. The existing pricing mechanism for IPv4 allocation is also to be reviewed in view of the scarcity of IPv4 address.

4.4. On the main BSNL site, a flash is to be given that BSNL National Internet Backbone is IPv6 ready.

4.5. MPLS VPN is also IPv6 ready and BSNL can offer this service to its customers.

4.6. Direction to be given to all circle heads for advertising IPv6 address block availability to their leased line customers free of cost.

4.7. If a customer wants leased line / or wants to enquire about leased line, then like Project Udan, he should be able to register his enquiry on the web portal. The enquiry should flow to the concerned nodal in charge and the enquiry should be closed by the nodal in charge. Sr GM(LC) to initiate the activity.

4.8. Action Item:
Sr. GM (NWP-BB) / Sr GM(LC) for issuing detailed instructions to concerned field unit.

5. Broad Band

5.1. DSLAM, Tier-1, Tier-2 switches and L2 CPE are layer 2 devices and do not require any IPv6 readiness.

5.2. IPv6 readiness is required in BNG, AAA, applications like LDAP, Billing, messaging, DNS, OSS/ BSS.

5.3. BNG and AAA server are being tested for IPv6 readiness at Bangalore test lab. Status report for the same may be asked from the unit.

5.4. Assessment of IPTV/ STB network is to be done for IPv6 readiness within one month.

5.5. VAS applications like gaming, VOIP etc are to be assessed for IPv6 readiness within one month.

5.6. For all the above activities, time lines have to be given so that the target of 31st Dec 11, as given by DOT can be achieved.

5.7. The minutes of Aug 2010, in which POC was also specified, to be followed up by NWP-BB unit.

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5.8.　　The Financial requirement, if any, required for the up-gradation of the network may be projected.

5.9.　　Out the 5 million BB customers, 1.5 million customers are having IPv6 compliant CPEs.

5.10.　The IPv6 compliant CPEs are of Teracom, VMC, Syrma.

5.11.　Action Item:
　　　　Sr. GM (NWP-BB) for issuing detailed instructions to concerned field unit.

6. Existing Dot Soft Network.

6.1.　　This is the internal network of BSNL.

6.2.　　This need not to be made IPv6 compliant immediately.

6.3.　　As and when the life of the equipment expires, the new equipment to be procured to follow IPv6 guidelines.

6.4.　Action Item:
　　　　Sr. GM (IT-CFA) for issuing detailed instructions to concerned field unit.

7. CDR network

7.1.　　Assessment report to be submitted by Sr GM(CFA-IT).

7.2.　　The applications at the Data centres also to be assessed.

7.3.　Action Item:
　　　　Sr. GM (IT-CFA) for issuing detailed instructions to concerned field unit.

8. CDMA

8.1.　　CDMA radio network do not have IPv6 support.

8.2.　　It is not economically viable to replace the equipment.

8.3.　　In case of any new procurement, IPv6 compliance of equipment shall be made mandatory.

8.4.　Action Item:
　　　　Sr. GM (NWP-Wimax & CDMA) for issuing detailed instructions to concerned field unit.

9. Wi-Max

9.1.　　The letter dated 22-06-11, mentions that "the equipment is IPv4 and future upgradable to IPv6 merely by software up-gradation".

9.2.　　The Wi-Max unit may assess the expenditure involved, if any for the above and a POC may be carried within one month. The billing issues etc also may be verified.

9.3.　　For OSS/BSS, billing it is connected to P3 at Bangalore NOC. Hence P3 needs to be upgraded on priority.

9.4.　Action Item:
　　　　Sr. GM (NWP-Wimax & CDMA) for issuing detailed instructions to concerned field unit.

10. Data centre server at Bangalore on which www.bsnl.co.in site is hosted

10.1.　The site of Kannur SSA is http://web.bsnlkannur.in/index.html is dual stack. Similar action to be taken by BBNW circle to make the servers in dual stack mode and convert BSNL main site as dual stack site.

10.2.　**Action Item:**

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CGM (BBNW) Circle for issuing detailed instructions to concerned field unit.

11. FTTH

11.1.   For OSS/BSS, billing it is connected to P3 at Bangalore NOC. Hence P3 needs to be upgraded on priority.

11.2.   The assessment report is yet to be submitted by Sr GM(CNP).

12. Conclusion & way forward

12.1.   The core group meeting to be called on monthly basis. Next meeting on 4th Nov 11.

12.2.   The minutes to be uploaded on the BSNL Intranet.

12.3.   The concerned units may issue detailed instructions to the field units with a copy to this unit.

(Raman Aggarwal)
Additional GM (CIT)

Copy to :

1. Office Copy.
2. CGM(ITPC) Pune / CGM (BBNW) New Delhi for n/a please.
3. All CGMs for information please.
4. Sr.GM(NWP-BB) / Sr.GM(LC) / Sr.GM(IT-CFA) / Sr.GM(NWO-CM) / Sr.GM (NWP-GSM) / Sr.GM(NWP-Wimax&CDMA) / Sr GM(CNP) for information & n/a please.
5. All participants for information & n/a please.

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Annexure-A

S No.	Name of Participant	Designation
**List of participant in meeting on dated 30.09.2011 at BSNL CO**
1	Sh R K Sharma	GM (CIT)
2	Sh Sudeep Kumar	GM (BB), ALTTC, GBD
3	Sh Sanjeev Tyagi	GM (Wimax&CDMA)
4	Sh Raman Aggarwal	Addl. GM (CIT)
5	Sh Navpreet Singh	Pr. CE, IIT Kanpur
6	Sh Ashok Kumar	Addl. GM (NWP-CDMA)
7	Sh Vivek Narayan	Addl. GM (NWO-CM)
8	Sh Y. Agrohi	Addl. GM (NWP-GSM-II)
9	Ms Sushma Mishra	Addl. GM (BB&DC)
10	Sh S K Varshney	Addl. GM
11	Sh Saji Kumar	Addl. GM
12	Sh Jag Mohan Lal	AGM (CIT-I)
13	Sh B L Bairwa	AGM(CIT-ERP)
14	Sh S K Gupta	DM (ERP-I)
15	Sh Hridayesh Kumar	DM (CDMA)
16	Ms Geena Pal	DM (ERP-II)
17	Sh Shailendra Kumar	AM (ERP-I)
18	Sh Sandeep Singh	JTO
19	Sh Hitender Singh	AM (CME-I)