



National Centre for Next Generation Network

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STATUS OF NGN C-5 SWITCH

A. General

1. Inter Operability Test Schedule approved.
2. Acceptance Testing Schedule for Battery, Power Plant & UPS approved.
3. Acceptance Testing Schedule for LMG and LAN Switch approved.
4. Acceptance Testing Schedule for IMS Core equipment approved.
5. Validation Testing Schedule for Core & Access Switch is in process for approval.

B. Infrastructure Status of South & East Zone

1. NGN Core site Bangalore:
Installation and A/T of Battery & Power plant completed. Installation of UPS completed.
2. NGN Core site Hyderabad:
Installation and A/T of Battery & Power plant completed. Installation of UPS completed.
3. NGN Core site Kolkata:
Installation and A/T of Battery & Power plant completed. Installation of UPS completed. Installation and A/T of Earthing completed.
4. NGN Core site Bhubaneshwar:
Installation and A/T of Battery & Power plant completed. Installation of UPS completed. Installation and A/T of Earthing completed.

C. Integration with existing BSNL network for South & East zone

1. Integration of IP/MPLS PE Router with IMS C-5 core equipment completed.
2. Integration of IP TAX on SIP I with IMS C-5 core equipment is complete at South & East zone
3. Integration of PLMN (SIP I) with IMS C-5 switches is complete at South zone and calls to PLMN routed via IP TAX in East zone.
4. Integration of TDM TAX through STM with IMS C-5 core is complete.
5. Integration BBRAS with IMS C-5 core is complete.
6. Integration of CDR billing with IMS C-5 core equipment is in progress.
7. Integration with C-DOT MAX NG Gurgaon is complete.
8. Integration with C-DOT MAX NG Noida is complete
9. Integration with PRBT is complete on E1.

D. Primary Inter Operability/ Interworking test

Primary inter operability/ interworking tests is the basic check for interworking of NGN network and network equipments with existing BSNL network, like NGN with PSTN, PLMN, CDOT MAX NG, etc. The IOT tests are being conducted at NGN Core site Bangalore as per the approval of competent authority, BSNL Corporate Office, New Delhi. The status of IOT tests being carried out at Bangalore is as mentioned below:

Total IOT test cases: 158

Total Test cases carried out: 138

Total successful test cases: 86

Total partially successful test cases: 52

Pending test cases: 20

Primary Inter-operability/ interworking test both for NGN core and NGN Access equipment are in progress at NGN Core site, Bangalore.

E. Acceptance Testing of NGN Core sites

1. NGN Core site Bangalore:

Check of LAR, cabling and power distribution is complete for CSCF, MGCF/BGCF, HSS, SAS, SBC (A/N) and ENUM. A/T is yet to be started.

2. NGN Core site Hyderabad:

A/T is under process for CSCF, BGCF/MGCF, SPG, Media Gateway, CGP.

3. NGN Core site Kolkata:

A/T is under process for CSCF, BGCF/MGCF, HSS, SAS, SBC (A/N), Media Server, LAN switch, SPG, Media Gateway, CGP, Charging function.

4. NGN Core site Bhubaneshwar:

Pre switch ON tests complete. A/T is yet to be started.

F. Infrastructure Status of West & North Zone

1. NGN Core site Pune:

Civil and Electrical works are complete. Precision AC units installed.

2. NGN Core site Ahmedabad:

Civil and Electrical works are completed. Two Precision AC units diverted and installed to start the work.

3. NGN Core site Chandigarh:

Civil and Electrical works complete. Precision AC received installation in progress.

4. NGN Core site Lucknow:

Civil and Electrical works complete. Precision AC received installation in progress.

G. Workshop on NGN Access Network planning conducted at ALTTC Ghaziabad during 3rd & 4th April 2014 for North & West zone.

NCNGN has conducted workshop on NGN Access network planning at ALTTC, Ghaziabad. Circles are advised to examine for PE ports and plan for NGN Access equipment in accordance with the revised planning guidelines issued by NWP-CFA unit BSNL Corporate Office, New Delhi vide letter no. 254-33/2012-NGN-Implementation /NWP-CFA/Access Dated 1-04-2014 for NGN Access equipment by ITI (OEM UT Starcomm)[http://intranet.bsnl.co.in/bsnl/admin/dir_cfa-np/circulars/NGN-Access-planning%20guidelines-UP_E_.pdf] and No.254-33/2012-NGN-Implementation /NWP-CFA/Access Dated 01-04-2014 for NGN Access equipments by M/s Huawei. [http://intranet.bsnl.co.in/bsnl/admin/dir_cfa-np/circulars/NGN-Access-planning%20guidelines-PB.pdf]

1. TECHNICAL OBSERVATIONS

1.1 C-DOT: Restoration problem in C-DOT RSUs

Whenever media fails between main exchange and RSU, on restoration of PCM, sometimes the link between main exchange and RSU is not self restored, but after resetting the RSU, the link will get established. However, such practice is not advisable by C-DOT as it will disrupt the services.

As per C-DOT, the RSU restores automatically, once the DTKs are restored. It recovers at 'Stable-CLEAR' level. In case RSU does not restore automatically then this could be a site specific problem. In such situations, following activities need to be performed by the exchange-in-charge for restoration of RSU before going for resetting of RSU.

- i) Change the ETS/ESM cards with OK cards and then check the system.
- ii) Sometimes media may not be in very healthy condition. So, change in PCMs may help to resolve the problem.
- iii) The BPU & TSU links may be bad, so change of CPU/TSU cards with OK cards may resolve the problem.

Therefore, exchange-in-charges are requested not to reset the RSU every time they notice the above problem, but to follow the steps prescribed by C-DOT to rectify the fault before going for resetting of RSU.

2. **ACTIVITIES CARRIED OUT DURING MARCH 2014**

A. C-DOT TECHNOLOGY

✦ **INSPECTION**

Inspection of following CDOT exchanges was carried out during March 2014:

South Zone: Kadappa, Gandhinagar, Rajampet, Chitoor-I, Chitoor-II, Palamaner, Pinneru, Perambara, Panari, Arikulam, Ambasamudram, Cheranmahadevi, Kadayanallur, Shencottai, Surandai, Chidambaram, Temple, Annamalainagar, Neyveli Township, Neyveli-II, Ammeri, Vridhachalam, Pennadam, Arani, Ranipet, Wallajah Road.

West Zone: Pandharpur, Mangalweda, Sangola, Akluj, Mohol, Kurudwadi, Karmala, Barsi, Akkalkot.

✦ **SUPPORT EXTENDED BY C-DOT ORGANISATION**

Software for C-DOT Switches has been prepared by C-DOT and provided on Deliverable Media (Cartridges / EPROMs): Nil during March 2014.

CORRECTIVE MAINTENANCE

- Problems Solved (Telephonically/ in writing) : 397
- Exchange Data Correction : 4

CRITICAL FIELD PROBLEMS

Critical Field Problems were attended in the following C-DOT Exchanges during March 2014:

South Zone: Kasargod (KL), Chikaballapur (KTK), Ponkunnam (KL).

PREVENTIVE MAINTENANCE VISIT

Preventive maintenance visit was carried out in following C-DOT Exchanges during March 2014:

East Zone: Mukochung (NE-II), Kandi (WB), Chakardharpur (JH), Madhepura (BH), Port Blair (A&N).

North Zone: Khalilabad (UPE), Poonch-I (J&K), Uttarkashi (UK)

B. **NEW TECHNOLOGY**

✦ **INSPECTION**

Inspection of following New Technology Exchanges was carried out during March 2014:

South Zone:

- **OCB-283:** Kadappa, Sivagamipuram, Kotturpuram, Kolathur, Vallarnagar, Perambur, Kaladipet, Nethajinagar, Redhills, Mananchira, Ashokapuram, Malaparamba, Palayamkottai, V M Chatram, Melapalayam, Ranipet, Sipcot.
- **EWSD:** Chitoor.
- **5ESS:** Kalpatta, Meppadi, Meenangadi.
- **AXE-10:** Annanagar, Ambattur, Mogappair East, Triplicane.

West Zone:

- **OCB-283:** Solapur Local, Solapur TAX.

3. PLAN FOR PERIOD : APRIL – JUNE 2014

A. C-DOT TECHNOLOGY

✦ INSPECTION

Inspection of the following CDOT Exchanges has been planned for period from April 2014 to June 2014:

APRIL 2014:

South Zone: Tisaiyanvillai, Kayalpatnam, Vikramasingapuram, Annaimalai, Kothagudam, Khammam, Bhadrachalam, Karimannur, Thodupuzha, Kothamangalam, Bellary, Hospet, Kopal, Iritty.

MAY 2014:

South Zone: Arakonam, Thirupathur, Thiruvannamalai, Kadri, Machilipatnam, Vuyyuru, Jagaiyapet, Chikmangalur, Tumkur-I, Tiptur, Salem, Attur, Velur, Gadwal, Mahabubnagar, Nagarkurnool, Wanaparthy, Karkala, Sankaranarayana.

JUNE 2014:

South Zone: Usilampatti, Thirumangalam, Theni, Bodinayakkanur, Ottanchatiram, Kodaikanal, Palani, Cumbum, Jangareddigudam, Nidadavulu, Tanuku, Periyakulam, Batlagundu, Chinnalapatti, Mancherial, Sirpurkhagaznagar.

B. NEW TECHNOLOGY

✦ INSPECTION

Inspection of the following New Technology Exchanges has been planned for period from April 2014 to June 2014:

APRIL 2014:

South Zone:

- **OCB-283:** Ramnagar, Thalassery, Kodambakkam, St.Thomas Mount RSU → Ullagaram.

- **EWSD:** Khammam, Kodambakkam, Kodambakkam RSU → Gandhi Nagar, Arumbakkam, West K K Nagar, Choolaimedu.
- **5ESS:** Tripunithura, Kanhangod, Kuthuparamba.
- **AXE-10:** Anna Road RSU → Cathedral Road.

MAY 2014:

South Zone:

- **OCB-283:** Thiruvannamalai, Kadri, Raj Bhavan, R K Nagar, Raj Bhavan RSU → Taramani Link Road, St.Thomas Mount RSU → Ekkaduthangal, Velachery, Pallikaranai, Harbour RSU → Annanagar Quarters.
- **5ESS:** Pandeswar.
- **AXE-10:** Anna Road RSU → Avadi.

JUNE 2014:

South Zone:

- **OCB-283:** Tirur, Adilabad, Harbour, St.Thomas Mount RSU → Kilkattalai, Mugalivakkam, Vijayanagar, Ramavaram, Nanganallur, Thillai Ganga Nagar.
- **5ESS:** Tirur, Malapuram, Perinthalmanna, Ponnani.
- **AXE-10:** Anna Road.



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**CIRCLE WISE DETAIL OF SUPPORT EXTENDED BY C-DOT ORGANIZATION DURING
MARCH 2014**

S.N.	Telecom Circle	C1	C2	C3	C4	C5	C6	C7
1	A & N	2	2					
2	Andhra Pradesh	23		1				
3	Assam							
4	Bihar	8	1					
5	Chhattisgarh	2						
6	Gujarat	11						
7	Haryana	38						
8	Himachal Pradesh	17						
9	J & K	8	2					
10	Jharkhand		1					
11	Karnataka	38	10					1
12	Kerala	14	4					2
13	Madhya Pradesh	44						
14	Maharashtra	29						
15	NE-I (Shillong)	4		1				
16	NE-II (Dimapur)	1	1					
17	Orissa	7						
18	Punjab	20						
19	Rajasthan	25						
20	Tamil Nadu	19						
21	UP - East	31	3					
22	UP - West	44		1				
23	Uttarakhand	11	2	1				
24	West Bengal	1	1					
	Total	397	27	4	Nil	Nil	Nil	3

C1	Problems Solved (Telephonically/ In-writing)	397
C2	Site Visit	27
C3	Exchange Data Correction	4
C4	Engineering Change Note (ECN) Implementation	Nil
C5	Software Retrofits	Nil
C6	Deliverable Media Preparation (Cartridges/ EPROMs)	Nil
C7	Critical Field Problems	3

Maintenance support philosophy for landline Exchanges in BSNL network

✦ New Technology Exchanges i.e. OCB-283, EWSD, AXE-10 and 5ESS

- AMC for hardware and software support with vendors: Alcatel-Lucent, ITI Ltd., Nokia-Siemens and Ericsson.
- The AMC includes tele-assistance, on-site assistance, PCB repairing, computer terminal repairing, MTU repairing, racks inter-connecting cables repairing, software upgradation etc.
- Nodal officer in circle/ region: PGMs/ GMs/ DGMs in Circle office
- Reference:
 - No. 43-1/2004-PHM/Vol. III dated 20.05.2005
 - No. 117-03/2004-MMD/Vol.III dated 11.03.2008
 - No.43-10-2012/NWO-CFA-MSE dated 11.06.2012
 - No.43-1/2012/NWO-CFA-MSE dated 24.08.2012

✦ C-DOT Exchanges

- Software support: MoU with C-DOT comprising tele-assistance and on-site assistance
- References:
 - No. 36-2/2006-PHM dated 23.05.2007
 - No. 36-2/2005-PHM-MSE dated 23.05.2008
 - No. 36-2/2005-PHM-MSE dated 30.05.2008
 - No. 36-1/2011-PHM-MSE dated 21.12.2011
- Hardware support: the field units should get the C-DOT PCBs repaired through following manner:
 - Through in-house repair centers
 - Through tender at circle level from authorized manufacturers
- Reference:
 - No. 36-3/2004-PHM dated 22.03.2005
 - No. ND/NCES/32-1/Vol.V/61 dated 02.01.2009
 - No. 36-4/2008-PHM-MSE dated 04.04.2012

✦ E10B Exchange

- Hardware support: the faulty E10B PCBs shall be got repaired through Annual repair contract through ITI Ltd. only.
- References:
 - No. 19-11/2006-PHM/MSE dated 19.06.2007
 - No. ND/NCES/8-3/PNC/Vol. V/53 dated 23.06.2007
 - No. ND/NCES/8-3/PNC/Vol.VI/30/1481 dated 31.10.2009
 - No. ND/NCES/8-3/PNC/Vol.VII/5 dated 15.01.2013

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