

 सत्यमेव जयते	भारत सरकार दूरसंचार विभाग दूरसंचार अभियांत्रिकी केंद्र Government of India Department of Telecommunications Telecommunication Engineering Centre K.L. Bhawan, Janpath, New Delhi- 110001	 ISO 9001:2015
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No. 28-1/2023-FA/TEC

Date: 28.08.2023

Subject: Minutes of meeting on “Implementation of Interoperability between OLT and ONT/ONU in a multivendor environment” held on 16.08.2023.

The meeting on “Implementation of Interoperability between OLT and ONT/ONU in a multivendor environment was held on 16.08.2023 under the chairpersonship of Sh. R.R. Mittar, Advisor, TEC and in the presence of Ms. Tripti Saxena, Sr.DDG, TEC through video-conferencing. List of participants is placed at Annexure-A.

2. Sh. Deepak Pathak, Director (FA) TEC welcomed all the participants and briefly explained the agenda of the meeting.

3. At the outset, Sh. R.R. Mittar, Advisor, TEC welcomed the participants and emphasized the need to address the interoperability issues between OLT and ONTs across multivendor equipment. He stated that service providers are nowadays increasingly relying on complex, multi-vendor networks to deliver their services and therefore ensuring interoperability between network devices of different vendors has become more critical than ever. He pointed out that lack of interoperability between OLT and ONT/ONU also impacts the services as well as resulting to limited choice of ONT/ONU to the service providers / customers.

4. Sh. Mittar also mentioned that several complaints on the lack of interoperability between OLT and ONT have been flagged by FTTH customers as well as ISPs during various consultation with TEC / D/o Telecommunications and TEC has been entrusted the responsibilities to address the challenges involved in this regard and working out possible solutions thereof. He further informed that TEC has formed an expert group to prepare a test schedule with the aim to address the challenges in making OLT-ONT interoperable and this group carried out a detailed study and analysis of international standards and test plans. Expert team has worked out several functional tests and conforming these tests would ensure interoperability between OLT and ONU/ONT. He requested all TSPs/ISPs to start working on ensuring interoperability between OLT and ONU/ONT as this technical requirement is to be enforced in a near future.

5. Sh. Rakesh Desai, DDG (FA) TEC briefly explained GPON technology deployment in India and presented about the technological challenges involved in ensuring interoperability between different vendors' OLT and ONU devices, as well as between different models or versions of the same vendor's devices. He apprised the participants that in order to address these interoperability challenges, international organizations such as the ITU-T and the BBF have developed guidelines and specifications like ITU-T Rec. G.984.x, G.988 and BBF TR-

247 & 255 test suits to help service providers and equipment vendors in ensuring that their GPON products are interoperable with those from other vendors, making it easier to deploy multi-vendor GPON networks. He also explained the requisite functional tests to ensure interoperability between OLT and ONU/ONT.

6. Mrs. Seema Tiwari, GM (Broadband), MTNL stated that M/s Alphion make OLT is not interoperable with another make ONTs/ONUs. She further mentioned that M/s Alphion falsely claimed that their OLT is interoperable with other make ONTs.

7. Mr. Rajesh Kher, Catvision Ltd., stated that OLTs & ONTs compliant to OMCI standards need to be deployed in the FTTH network to avoid any interoperability issues. He further asked about the timelines for implementation of Interoperability between OLT and ONT.

8. Sh. Vivek Dua, GM, BSNL CO mentioned that BSNL is also facing interoperability problems in FTTH services provided under Bharatnet. He suggested that TEC may specify the minimum number of different make OLTs and ONTs that are tested for interoperability while issuing certificate to particular model of OLT and ONT / ONU and mention the same in the certificate. As the number of OEMs for OLT and ONT are large, he requested TEC to circulate the matrix of SPOC (single point of contact) of OLT/ONT OEMs having MTCTE certificates so that such SPOC may be approached in case of any interoperability issues.

9. Sh. Pradeep Pandey, M/s FibRSol Global Network Limited, stated that they noticed interoperability issues in case of M/s ITI make OLTs based on CDOT technology. He was requested to take up the specific technical issue with CDOT separately.

10. Sh. Piyus Dedhia from M/s Optilinks raised the concern about different WAN configuration at OLT level and suggested to define vendor-specific MEs properly to sort out interoperability issue.

11. M/s Airtel representative informed that they have noted the functional tests explained by TEC during the meeting and they will further coordinate with their OEMs to ensure interoperability between OLT and ONT/ONU.

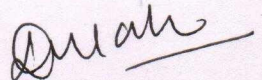
12. Sh. Murli from Asianet stated that they have initiated the interoperability testing and will ensure interoperability of different network devices in their FTTH network.

13. Sh. Anand Katoch, DDG (TC), TEC informed that about 65 OLT/ONT OEMs have been given the certificate for their different models against TEC standard and the list can be seen at MTCTE Website (<https://www.mtcte.tec.gov.in/>). He suggested that OEMs may carry out sample testing for interoperability in their in-house testing facility with different make of products. He further mentioned that TEC may be informed in case TSPs/ISPs facing interoperability issues with MTCTE certified products and the concerned OEM does not respond to them.

14. Sh. Rakesh Desai, DDG (FA), in his concluding remarks, requested all TSPs / ISPs to work upon interoperability testing for FTTX services and ensure the interoperability between OLT and ONT/ONU in a multivendor environment within next 3 months. He stated that TEC

is shortly calling MATCOF meeting for revision of ER (essential requirements) on 'PON Family of Broadband Equipment' to specify interoperability requirement. He also mentioned that TEC will share the list of SPOC of OEMs of OLT & ONT/ONU to the TSPs once compiled.

15. The meeting ended with the vote of thanks to the chair.


(Deepak Pathak)
Director (FA), TEC

Encl: Annexure -A

To,
All the participants / TSPs / ISPs

Copy to:

1. DDG (AS), DOT HQ, Sanchar Bhawan, Delhi. For kind information w.r.to ADET (AS-I) F.No.20-1236/2021-AS-I (Vol.II) dated 02.05.2023.
2. AD (IT), TEC: with a request to upload this reference on TEC website.

List of participants

Meeting on “Implementation of Interoperability between OLT and ONT/ONU in a multivendor environment” held at TEC on 16/08/2023

1. Sh. R.R Mittar, Advisor & Head TEC
2. Ms. Tripti Saxena, Sr. DDG, TEC
3. Sh. Anand Katoch, DDG (TC), TEC
4. Sh. Rakesh Desai, DDG (FA), TEC
5. Sh. Deepak Pathak, Director (FA-I), TEC
6. Sh. P. K. Panda, Director (CA-II), TEC
7. Sh. Avadhesh Singh, Director (TC-I), TEC
8. Ms. Mudita Chandra, ADET (Tx), TEC
9. Sh. Ragunathan J., AD(FA), TEC
10. Sh. Abhilash
11. Sh. Abhinav, M/s Bharti Airtel Ltd.
12. AGM CFA NOW BBIN
13. Sh. Ajay Shukla, CDOT, Delhi
14. Sh. Akhilesh Mishra
15. Sh. Amandeep Singh
16. Sh. Amit Kumar, M/s Shyam Spectra Pvt. Ltd.
17. Sh. Ankur Dubey, M/s ITI Ltd.
18. Mr. Asgar Abu
19. Sh. Ashok Kumar
20. Sh. Ashok-Tikona
21. Sh. Ashutosh Gupta
22. Ms Deepti
23. Delhi LSA
24. Sh. Dheeraj
25. Sh. Dipankar Biswas, M/s EHOOME IOT Pvt. Ltd.
26. DM FTTHNOC MTNL Mumbai
27. Dr. Prakriti, Vodafone Idea Ltd.
28. Mr. Faheem Shaikh, M/s Bharti Airtel Ltd.
29. GM NOC BBNW BG
30. GTPL Broadband
31. Sh. Guharajan Shivakumar, M/s Aprecomm Pvt. Ltd, Bangalore.
32. Sh. Gulshan Arora
33. Icy Varghese
34. ITI Limited, Raebareli
35. ITI Limited, Mankapur
36. Sh. Krishnakumar T.B., BBNW
37. Sh. Manoj, M/s Bharti Airtel Limited
38. Sh. Murali, M/s Asianet
39. Sh. Neeraj Singh, M/s Amftthmbi
40. Sh. Nitin Singh, M/s Vodafone Idea Ltd.
41. Sh. Pankaj Sonawane

42. Sh. Peeyush Mishra, M/s QTL Infotelconnect
43. Sh. Piyush Dedhia, M/s Optilink
44. Sh. Pradeep Pandey, M/s FibRSol Global Network Ltd.
45. Sh. Prashant Singh, M/s DEN Broadband Ltd.
46. Sh. Rahul Dhar, M/s Aprecomm Pvt. Ltd., Bangalore
47. Sh. Rajeev Rai
48. Sh. Rajesh Kher, Catvision Ltd.
49. Sh. Rajesh Lohgaonkar
50. Sh. Rajesh T
51. Sh. Rana
52. Sh. Samir Pathak, M/s YOU Broadband India Ltd.
53. Sh. Sanjay Khare, PGM, MTNL Mumbai
54. Sh. Sanjeev Gulati
55. Sh. Satyawar Khedkar
56. Ms. Seema Tiwari, GMBB, MTNL Mumbai
57. Mr. Shakeel Khan
58. Sh. Shankar Deshmukh, M/s You Broadband
59. Sh. Sudhagar, M/s Verizon Communications India Pvt. Ltd.
60. Sh. Sudhir Shetye, M/s Hathway Cable and Datacom Ltd.)
61. Sh. Sunil Yadav
62. Sh. Vaibhav Gupta, M/s Bharat Test House Pvt. Ltd.
63. Ms. Veena, BBNW
64. Sh. Vineet Nayyar, M/s Shyam Spectra Private Limited
65. Sh. Vivek Dua, GM, BSNL Co, Delhi
