



**Telecom Regulatory Authority of India**



**Draft Recommendations**

**on**

**Network Testing before Commercial Launch of Services for  
Wireline Access Services**

**New Delhi**

**31.12.2019**

**Mahanagar Doorsanchar Bhawan  
Jawahar Lal Nehru Marg,  
New Delhi- 110002**

**Written Comments on the Draft Recommendations are invited from the stakeholders by 30.01.2020 and counter-comments by 13.02.2020. Comments and counter-comments will be posted on TRAI's website [www.trai.gov.in](http://www.trai.gov.in). The comments and counter-comments may be sent, preferably in electronic form, to Shri U. K. Srivastava, Principal Advisor (Networks, Spectrum and Licensing), TRAI on the email ID [pradvnsl@traigov.in](mailto:pradvnsl@traigov.in) with a copy to [rksingh@traigov.in](mailto:rksingh@traigov.in)**

**For any clarification/ information, Shri U. K. Srivastava, Principal Advisor (Networks, Spectrum and Licensing), TRAI, may be contacted at Telephone No. +91-11-23233291, Fax- +91-11-23230056.**

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**Chapter –I**  
**INTRODUCTION**

- 1.1 The Indian telecom sector has witnessed a high pace of market liberalization, technological evolutions and exponential growth since the 1990s. The Indian telecom sector is second largest in the world by number of telephone subscribers with 1195.24 million subscribers (1173.75 wireless + 21.49 wireline) as on 30<sup>th</sup> September 2019; and at the same time, it has one of the lowest tariffs for telecommunication services in the world. It has played a significant role in the socioeconomic development of India and India has been one of the fastest growing telecom markets.
- 1.2 In India, as per the present telecom Licensing framework, licence/authorization from Department of Telecommunications (DoT) is required to offer/provide telecom services. The Unified License (UL) is granted for various services (namely Access, Internet, NLD, ILD, GMPCS, PMTRS, VSAT CUG, INSAT MSS-R Service etc.) as authorized in the license agreement on a non-exclusive basis in the licensed service area. Service Providers holding valid license from DoT are called Telecom Service Providers. Services can be provided by Licensee on National Level, Telecom Circle/Metro Area Level and Secondary Switching Area level. India has been divided into 22 service areas for the award of access service authorisations/license. The Access Service licensee can broadly offer voice, non-voice, internet services including IPTV, broadband, internet telephony and triple play (i.e. voice, video and data) on wireline and/or wireless media in the designated licensed service area. Prior to UL, access services could be provided with Basic Service Licence, CMTS (Cellular Mobile Telephone Services) or UASL (Unified Access Service Licence). Licensees who have not migrated to UL are providing access services under these licences. Thus, the Telecom service providers (TSPs) are providing wireline access services

either under Basic Service License, Unified Access Service License (UASL) and Unified License (UL) with access service authorisation.

- 1.3 The Licensees who want to provide access services are bound by roll-out obligations and other license conditions. It is important that all applicable systems are tested before commencement of commercial services, as a licensee has to ensure that its service meets the Quality of Service (QoS) standards and comply with Regulation/ Directions / Instructions prescribed by the Licensor or Telecom Regulatory Authority of India (TRAI).
- 1.4 The Department of Telecommunications (DoT), through its letter dated 9<sup>th</sup> September 2016 (**Annexure-I**), communicated that the present Licensees for various services issued by DoT do not mandate any time period for network testing before the commercial launch of services by the licensees. However, based on erstwhile practices followed by DoT/BSNL, network testing is being carried out by Licensees and test SIM Cards are being issued to check the quality of network, before the commercial launch of services. Therefore, DoT requested the Authority to provide its recommendations on testing of network before commercial launch of services including enrolment of customers for testing purposes before commercial launch, duration of testing period etc. under the terms of clause 11(1)(a) of TRAI Act 1997 as amended.
- 1.5 TRAI issued a consultation paper “Network Testing before Commercial Launch of Services” on 1st May 2017 seeking comments from stakeholders. Based on the comments received during the consultation process and internal analysis, TRAI issued its recommendations on 04.12.2017. Although the consultation process was carried out with respect to mobile/wireless networks, most of the issues raised are

generic in nature and are also applicable for wireline network testing and deployment.

- 1.6 DoT vide letter no 20-577/2016-AS-I dated 09.10.2018 (**Annexure-II**), specified the norms for the purpose of network testing before launch of commercial services. However, these norms were applicable for mobile services only and the said letter was issued to the Unified licenses with access services, CMTS and UAS licensees for mobile services.
- 1.7 Subsequently, DoT vide letter no 20-577/2016-AS-I dated 16.07.2019 (**Annexure-III**), communicated to TRAI that the Government has accepted the TRAI's recommendations on "Network Testing before Commercial Launch of Services" and it has been decided that TRAI may be requested to give similar recommendations for Wireline Access Services. DoT has requested that recommendations on Network testing before commercial launch of Wireline Access Services may be provided as per clause 11(1)(a) of TRAI Act 1997 as amended by TRAI amendment Act 2000.
- 1.8 Most of the issues raised during the consultation process for the norms for network testing before launch of commercial mobile services, carried out by the Authority are equally applicable for wireline services. However, as per the reference received from DoT in this regard, this consultation process has been initiated to frame recommendations to decide the norms of Network testing before commercial launch for wireline services. In this case; since most of the issues in wireless and wireline networks are similar in nature, draft recommendations have been prepared based on the norms for wireless networks; to solicit the views of the stakeholders. The first chapter introduces the subject at hand. The second chapter lists the issues and analysis by the Authority, on the basis of which the draft recommendations have been framed. The third chapter lists the summary of draft recommendations.

## Chapter – II

### ISSUES AND ANALYSIS

- 2.1 DoT vide letter dated 09.10.2018 (**Annexure-II**) , specified the norms for the purpose of network testing before launch of commercial services on the basis of TRAI recommendations dated 04.12.2017. However, these norms were made applicable for mobile services only.
- 2.2 Telecom service providers (TSPs) are providing wireline access services under Basic Service License, Unified Access Service License (UASL) and Unified License (UL) with access service authorisation. These licenses do not provide guidelines on testing of network and processes such as timeline of testing, acquisition of subscribers during test-phase, limit on number of test users etc. The TSPs are bound by roll-out obligations only. The licensee is also mandated to comply with Regulations/ Directions/ instructions issued by licensor or TRAI. The Licensor or TRAI may carry out performance tests on Licensee's network and evaluate QoS parameters prior to grant of permission for commercial launch of the service. Failure on part of licensee to adhere to license conditions is liable to be treated as breach of terms and conditions of License.
- 2.3 The related clauses of the Unified License (UL) on provision of service, QoS and technical & operating conditions, are reproduced below. There are similar clauses in Unified Access Service License (UASL) as well as Basic Service Licence.:

#### **(a) Provision of Service**

*“The Licensee shall be responsible for, and is authorized to own, install, test and commission all the Applicable systems for providing the Service authorized under this License agreement. The Licensee shall intimate to the Licensor well in advance before the proposed date of commencement of any service in any Service Area containing the details of network and required facilities for monitoring of the service installed by the Licensee. Any service,*

*permitted under the scope of this License Agreement, shall be commenced by the Licensee after giving an intimation to do so to the Licensor. However, the compliance to the scope of the License and requisite monitoring facilities will be demonstrated to the licensor within 90 days from the date of receipt of such intimation from the Licensee.”*

**[Clause 7 under Chapter-II of UL]**

## **(b) Quality of Service**

*“The LICENSEE shall ensure the Quality of Service (QoS) as may be prescribed by the Licensor or TRAI. The LICENSEE shall operate and maintain the licensed Network conforming to Quality of Service standards subject to such other directions as Licensor / TRAI may give from time to time. The LICENSEE shall adhere to such QoS standard and provide timely information as required therein. Failure on part of LICENSEE to adhere to the Quality of Service stipulations by TRAI/Licensor is liable to be treated as breach of terms and conditions of License.*

*The LICENSEE shall provide periodic information on compliance of QoS standards to TRAI/Licensor as per schedule notified.”*

**[Clause 29.1 under Chapter-IV of UL]**

*“The Licensor or TRAI may carry out performance tests on Licensee’s network and also evaluate Quality of Service parameters prior to grant of permission for commercial launch of the service, after successful completion of interconnection tests and/ or at any time during the currency of the LICENSE to ascertain that the network meets the specified standards on Quality Of Service (QoS). The LICENSEE shall provide ingress and other support including instruments, equipment etc., for such tests.”*

**[Clause 29.4 under Chapter-IV of UL]**

## **(c) Operating Conditions**

### **Subscriber Registration and Provision of Service:**

*“The LICENSEE shall register demand/request for telephone connection and or any other Telecom Service without any discrimination from any applicant, at any place in the service area for the service(s) authorized and provide the Service, unless otherwise directed by the Licensor. The LICENSEE shall not in any manner discriminate between subscribers and provide service on the same commercial principle and shall be required to maintain a transparent, open to inspection, waiting list. The LICENSEE shall clearly define the scope of Service to the Subscriber(s) at the time of entering into contract with such Subscriber(s). Licensor shall have right to impose suitable penalty, not*



*limited to a financial penalty, apart from any other actions for breach of this condition. The LICENSEE shall commence the Service on commercial basis only after starting subscriber registration in the manner prescribed. Before commencement of Service in an area, the LICENSEE shall notify and publicize the address where any subscriber can register demand / request for Telecom Service. Any change of this address shall be duly notified by the Licensee.*

*Provided that nothing contained herein will affect or prejudice the rights of the LICENSEE to carry out check on credit worthiness of applicants for its services.”*

**[Clause 30.1 under Chapter-V of UL]**

**(d) Inspection and Testing of Installations:**

*“The Licensor / TRAI may carry out performance tests as required for checking Quality of Service, if it so desires. The LICENSEE shall supply all necessary literature, drawings etc. regarding the equipment installed and shall also supply all the tools, test instruments and other accessories to the testing party of the Licensor / TRAI for conducting the tests. The list of performance tests will be furnished by the Licensee, which may be amended by the Licensor.”*

**[Clause 34.1 under Chapter-V of UL]**

- 2.4 A Licensee, after obtaining license is responsible for and is authorized to own, install, test and commission all the applicable system for providing services. The Licensee can commence any services, permitted under the scope of license agreement only after giving an intimation to the licensor in advance before the proposed date of commencement of service. However, the compliance to the scope of the License and requisite monitoring facilities will be demonstrated to the licensor within 90 days from the date of receipt of such intimation from the Licensee.
- 2.5 It is obvious that before commercial launch of any service, extensive testing of the network is necessary. There is obvious need to create test users for carrying out different functionality tests of network for the compliance of license conditions. The testing of systems and ensuring

QoS is also important from commercial point of view as in telecom services industry, the subscriber experience is one of the important factors which leads to demand generation. Licensees use test users to check the quality of its network before the commercial launch of services.

2.6 DoT has specified the norms for the purpose of network testing before launch of commercial services, for mobile services on the basis of TRAI recommendations dated 04.12.2017. It is obvious that most of the issues in wireline and wireless networks are similar in nature. The Authority after giving due consideration to the similarities and differences between wireline and wireless networks has decided to issue draft recommendations on “Network Testing before commercial launch of services for Wireline Access Services”. The draft recommendations for network testing before commercial launch of wireline access service have been prepared on similar lines in accordance with the norms specified vide DoT letter dated 09.10.2018 for the purpose of network testing before launch of commercial services for mobile networks. The main differences which has been taken care in the draft recommendations are:

- a.** As SIM being used in mobile services only, “test SIM” is replaced with “wireline telephone test connection” for wireline access services.
- b.** Mobile Number Portability (MNP) is not applicable in wireline access service.
- c.** Equipment at subscriber’s end such as landline telephone set, ONT (Optical Network Terminal), ISDN TA (Terminal Adapter), Broadband modem, PABX etc., known as CPE (Customer Premises Equipment) are required in wireline access services while in mobile services there is no such requirement.

2.7 Accordingly, the draft recommendations of the Authority on “Network Testing before commercial launch of services for wireline access services” are listed in the next chapter; for the comments of the stakeholders.

DRAFT

**Chapter III  
DRAFT RECOMMENDATIONS**

- 1. The Authority recommends that a TSP should be allowed to enrol test subscribers in testing phase to carry out the network testing before commercial launch of its services.**
- 2. The Authority recommends that: -**
  - a. There should be no restriction on the time-limit, if the network testing is conducted using wireline telephone test connections given to employees and business partners for test purpose only.**
  - b. The number of test subscribers that can be enrolled by a TSP in an LSA should be limited to 5% of its installed network capacity for that LSA. The service provider will submit the detailed capacity calculations of the network to DoT and TRAI at least 15 days before commencing enrolment of test subscribers.**
  - c. There should be a limit of 90 days on the test phase involving test subscribers. However, if the TSP fails to conclude network testing due to valid reasons, it may make a representation to the Licensor, seeking additional time for network testing giving detailed justification, which may be decided by the Licensor on case to case basis. The requisite norms to be followed for extension of timeline for network testing may be formulated by the licensor. The total time period for network testing provided to the TSP shall not exceed 180 days.**
- 3. The Authority recommends that if a TSP wants to enrol test subscribers in its network before the commercial launch of services for testing purpose:**

- a. It should give prior intimation to DoT and TRAI at least 15 days before commencing enrolment of test subscribers.
  - b. All licensing provisions related to the security and privacy such as ensuring adequate verification of each and every customer before enrolling him as a subscriber, protection and privacy of communication, maintaining Call Detail Record (CDR)/IP Detail Record (IPDR), Confidentiality of Information, Lawful interception & monitoring etc. must be complied with by the licensee.
  - c. During test phase, the licensee should be bound to submit test subscriber related statistics and their usage, and other information as per prevailing instructions of DoT/TRAI.
4. The Authority recommends that if a TSP wants to enroll test subscribers for the testing of its network, it should transparently give the following information to the test subscribers at the time of their enrolment:
- a. During test phase, TSP is not mandated to adhere to specified level of QoS. Therefore, there may be sub-optimal level of network performance.
  - b. The scope of services during the test period.
  - c. There won't be any charge (fixed charge or usage based charge) during the test phase. CPE (Customer Premises Equipment) is also provided free of charge.
  - d. Likely date of commercial launch.

## **List of Acronyms**

<b>S.No.</b>	<b>Acronym</b>	<b>Description</b>
1	TSP	Telecom Service Provider
2	UL	Unified Licence
3	QoS	Quality of Service
4	BSNL	Bharat Sanchar Nigam Limited
5	DoT	Department of Telecommunications
6	TRAI	Telecom Regulatory Authority of India
7	UAS	Unified Access Service
8	ONT	Optical Network Terminal
9	CMTS	Cellular Mobile Telephone Services
10	CPE	Customer Premises Equipment
11	ISDN	Integrated Services Digital Network

**ANNEXURE-I**

Government of India  
Ministry of Communications  
Department of Telecommunications  
(Access Services Cell)

12<sup>th</sup> Floor, Sanchar Bhawan, Ashoka Road, New Delhi

File No: 800-20/2016/AS.II

Dated: 09.09.2016

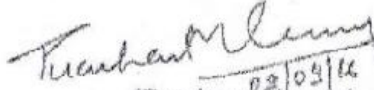
To,

The Secretary  
Telecom Regulatory Authority of India,  
New Delhi

Subject: Recommendations for enrolment of customers for testing purposes before commercial launch of services - reg.

The present Licenses for various services issued by the Department of Telecommunications do not mandate any time period for network testing before the commercial launch of services by the licensees. However, on the basis of erstwhile practices followed by DoT/BSNL, network testing is being carried out by Licensees and test SIM Cards are being issued to check the quality of network, before the commercial launch of services.

2. In view of above, the undersigned is directed to request Telecom Regulatory Authority of India to submit its recommendations under section 11 (1) (a) of TRAI act, 1997 for above mentioned issues like enrolment of customers for testing purposes before commercial launch of services, duration of testing period, etc.

  
09/09/16  
(Prashant Verma)  
ADG (AS-II)  
Tele No.: 011-23354042

## **ANNEXURE-II**

No. 20-577/2016-AS-I  
Department of Telecommunications.  
Access Service Division-I  
1203, Sanchar Bhavan, New Delhi

Dated the 9<sup>th</sup> October, 2018.

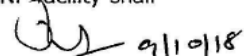
To

**The UL with Access Services , CMTS and UAS Licensees for mobile services.**

**Subject: Norms for Network testing before launch of Commercial Services.**

For the purpose of network testing before launch of commercial services, following conditions are hereby specified:

- a) The number of test subscribers that can be enrolled by a Licensee in an LSA shall be limited to 5% of its installed network capacity for that LSA. The service provider will submit the detailed capacity calculations of the network to DoT and TRAI at least 15 days before commencing enrolment of test subscribers.
- b) If a Licensee wants to enroll test subscribers in its network before the commercial launch of services for testing purpose, it should give prior intimation to DoT and TRAI at least 15 days before commencing enrolment of test subscribers.
- c) All licensing provisions related to the security and privacy such as ensuring adequate verification of each and every customer before enrolling him as a subscriber, protection and privacy of communication, maintaining Call Detail Record (CDR)/ IP Detail Record (IPDR), Confidentiality of Information, Lawful interception & monitoring etc. must be complied with by the licensee.
- d) If a Licensee wants to enroll test subscribers for the testing of its network, it shall transparently give the following information to the test subscribers at the time of enrolment:
  - i. During test phase, TSP is not mandated to adhere to specified level of QoS. Therefore, there may be sub-optimal level of network performance.
  - ii. The scope of services during the test period.
  - iii. MNP facility will not be available till the services are commercially launched.
  - iv. There will not be any charge (fixed charge or usage based charge) during the test phase.
  - v. Likely date of commercial launch.
- e) There shall be no restriction on the time-limit, if the network testing is conducted using Test SIMs (i.e. SIMs given to employees and business partners for test purpose) only.
- f) There shall be a limit of 90 days on the test phase involving test subscribers. However, if the TSP fails to conclude network testing due to valid reasons, it may make representations to DoT, seeking additional time for network testing giving detailed justification, which may be decided by DoT on case to case basis. Requisite norms to be followed for extension of Network testing will be formulated by DoT. The total time period for network testing provided to the TSP shall not exceed 180 days.
- g) During test phase, the licensee shall be bound to submit test subscriber related statistics and their usage, and other information as per prevailing instructions of DoT/ TRAI. The MNP facility shall not be extended to network under testing.

  
(R.K.Soni)  
Director(AS)



**ANNEXURE-III**

F. No. 20-577/2016-AS-I  
Department of Telecommunications,  
Access Service Division-I  
1203, Sanchar Bhavan,  
New Delhi

Dated the 16<sup>th</sup> July 2019.

To

The Secretary,  
Telecom Regulatory Authority of India,  
Mahanagar Doorsanchar Bhawan,  
Jawaharlal Nehru Marg (Old Minto Road)  
New Delhi – 110002.

**Subject: Recommendation for Network Testing before Commercial launch of services for Wireline Access services.**

Sir,

TRAI had issued recommendations on "Network Testing Before Launch of Commercial Services" on 4<sup>th</sup> Dec 2017. The Government has accepted the aforesaid recommendations and it has been decided that TRAI may be requested to give similar recommendations for Wireline Access services.

2. Therefore, it is requested that recommendations on Network testing before commercial launch of Wireline Access services may be provided as per clause 11(1)(a) of TRAI Act 1997 as amended by TRAI amendment Act 2000.

Yours faithfully,

  
(S.B. Singh) 16/7/19  
Deputy Director General (AS)