



Telecom Regulatory Authority of India



**Recommendations
on
“Network Testing Before Launch of Commercial Services”**

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CHAPTER I – INTRODUCTION

GENERAL

- 1.1 Telecom service providers (TSPs) are providing mobile services under Cellular Mobile Telephone Service (CMTS) Licence, Unified Access Service Licence (UASL) and Unified Licence (UL) with access authorisation. TSPs who want to provide access services using mobile technologies are bound by roll-out obligations and other licence conditions. The TSPs are required to install applicable systems for providing mobile services to the subscribers. A licensee has to ensure that its service meets the Quality of Service (QoS) standards prescribed by the Licensor and/or Telecom Regulatory Authority of India (TRAI). Ensuring QoS is also important from commercial point of view as in services segment, the subscriber experience is one of the important differentiating factors. Therefore, it is important that all applicable systems are tested before commencement of commercial service.

DOT's REFERENCE

- 1.2 The Department of Telecommunications (DoT), through its letter dated 9th September 2016 (**Annexure**), communicated that at present, network testing is being carried out by licensees on the basis of erstwhile practices followed by DoT/BSNL; and test SIM Cards are issued by such licensees to check the quality of network before the commercial launch of services. The present licences for various services issued by DoT do not prescribe any time period for network testing before commercial launch of services by the licensees. 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.

CONSULTATION PAPER

- 1.3 The Authority issued a consultation paper on 1st May 2017 to discuss various issues involved and the possible framework to bring clarity on the matter. The last date for submission of the comments and counter-comments were 29th May 2017 and 12th June 2017 respectively. On request from the stakeholders, the last date for submission of comments and counter-comments were extended to 12th June 2017 and 26th June 2017 respectively. The Authority received comments from 16 stakeholders and counter-comments from 3 stakeholders. These were posted on TRAI's website www.trai.gov.in. An Open House Discussion was conducted on 18th August 2017.
- 1.4 Based on the inputs received from various stakeholders and its own analysis, these Recommendations have been framed. Chapter-I of the Recommendations gives an introduction of the subject. Chapter-II analyses various issues which were raised in the Consultation Paper and frames recommendations on each of them. Chapter-III summarises the recommendations made in this document.

CHAPTER-II: NETWORK TESTING GUIDELINES

2.1 Generally, TSPs use test Subscriber Identity Module (SIM) cards to check the quality of its network. DoT's circular dated 29th August 2005 on 'subscriber base methodology' stipulates that test SIM/Service cards are those SIMs that are given free of cost to business partners including roaming operators to check the Quality of Service from time to time. However, the service licence does not provide clear guidelines on testing of network and processes such as time-line of testing, acquisition of subscribers during test-phase, limit on number of SIM cards that can be issued etc. Till date, need was not felt to specify these aspects of testing. However, in 2016, a TSP carried out testing of its Long-Term Evolution (LTE) network on a very large scale and enrolled substantial number of subscribers as test subscribers before commercial launch of its services. The TSP contended that LTE/ VoLTE is a new technology and its throughputs are highly dependent on Signal to Noise Ratio (SNR); and it is conducting test trials to estimate optimal network parameters for best throughput in network under load condition. Some incumbent operators filed representations through their Industry Association expressing that this practice is unfair.

2.2 In view of the above, there seems to be a need to lay down guidelines for testing of network, systems and the processes. In its Consultation Paper dated 1st May 2017, the Authority has brought out various issues involved and the possible framework to bring clarity on the matter. Each of issue is being examined below:

A. Should a TSP be allowed to enroll subscribers as test subscribers?

2.1 As per the service licence provisions, the Telecom Service Providers (TSPs) are required to install applicable systems for providing mobile services to the subscribers and interconnect with networks owned by other TSPs. Like any other service, it is important that before the

services are launched, the network and the systems are thoroughly tested. A TSP is required not only to meet the laid down Quality of Service (QoS) standards but also to ensure that subscriber's experience is good. Therefore, thorough testing of the network is desired, particularly if a new technology is being launch by a TSP.

- 2.2 There is an obvious need to designate some SIM cards as test SIM cards for carrying out different functionality tests and to check the QoS. If test cards are meant to be given only to business partners, there is a natural limit on the number of test SIM cards which can be issued. If test SIM cards are issued in limited numbers and for limited period of time, then there may not be any point of contention among service providers. However, if a TSP decides to conduct extensive testing of network before commercial launch and enrolls subscribers (other than its employees and business partners) as test subscribers to test its network under sufficient load condition, the relevant issues are: (a) should it be allowed to do so? And (b) If yes, should there be any restrictions on the number of test subscribers and the period of such use? The stakeholders were requested to respond on both these issues.

Comments received from the stakeholders

- 2.3 Some stakeholders claimed that licence does not permit enrolment of subscribers during the testing phase and there is no concept of test subscriber. Some of these stakeholders submitted that testing of a network is confined mainly to functional testing of installations, applicable systems and interfaces whereby the testing is limited to test subscribers and a limited number of SIMs are allotted in order to check network functioning and interconnection with other operators. According to these stakeholders, the new network or 'Network under test' cannot conduct a stress test with a live network of other TSP. Load testing, if required, is to be carried out in a simulated lab environment only. These stakeholders further submitted that offering

of full-fledged services during test phase has several regulatory implications and it may allow the concerned TSP to evade various compliances and scrutiny on various fronts such as IUC, pricing, QoS, revenues and fair competition.

- 2.4 Some stakeholders were of the view that a TSP should be allowed to enrol subscribers as test subscribers but there should be restrictions on the number test subscribers and also restrictions on period of such use. According to one of these stakeholders, the period of testing should be limited to maximum 45-60 days only with the limited subscribers (say 2-5% of network switching capacity of the TSP in that service area). A couple of them suggested that there should be a limit of 1 Lakh per LSA on number of test SIM/Subscribers and the period of testing should not be more than three months.
- 2.5 Some stakeholders submitted that there is no need to put any restrictions on the service providers for enrolling subscribers as test subscribers as it can be counterproductive to the health of sector. One of these stakeholders argued that it would be highly unreasonable to believe that the testing would not lead to commencement of service. The stakeholder submitted that the TSPs are permitted to onboard subscribers on their network only after the DoT's approval for Lawful Interception and Monitoring ("LIM") facilities. The stakeholder also submitted that TSPs also need to be in compliance with DoT's prevailing instructions on subscriber verification. Another stakeholder suggested that if an operator wants to conduct trial on large scale, and also pays for the interconnection costs, no one should have any objection.
- 2.6 A few of the stakeholders have submitted that there is a need to distinguish a new TSP commencing commercial operations, from an existing TSP provisioning only additional services for its existing or new subscribers.

Analysis

- 2.7 The Authority examined the comments of the stakeholders. The comments received from the stakeholders can be broadly divided into three categories: (a) Licence does not permit enrolment of subscribers during the testing Phase; (b) Test subscribers may be enrolled but there should be an upper limit for such test subscribers (2-5% of switching capacity/1 lakh per LSA) with limited Test duration (45/60/90 days); and (c) TSPs must be allowed to enrol subscribers without any restriction on number and period of use.
- 2.8 Post launch of services, TSP has to meet the Quality of Service standards as prescribed by Licensor and/or TRAI. The onus is on the TSP to install applicable systems and test the new network to its fullest satisfaction before commercially launching its services. There cannot be two views on the fact that it is better that the services are launched after due testing and trials so that customers are not inconvenienced.
- 2.9 In case of a completely new technology, requirement of testing of network and systems could be even more important. The testing is critical if the operator is a green field operator and is relying on a single technology network with no fall-back option. In such a scenario, greater scrutiny about the coverage test, load bearing capability of the network etc. may be required apart from the functional test and interoperability test.
- 2.10 Keeping in view the importance of network testing, it would not be prudent to restrict the testing to a few test SIMs. It should be left to the discretion of the licensee to decide about enrolling test subscribers to carry out the network testing. Therefore, the Authority is of the opinion that a TSP should be permitted to enrol test subscribers during testing phase.

2.11 In view of the above, **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.**

2.12 Some stakeholders suggested that if test subscribers are enrolled then there should be some time-limit on the period of testing. Some stakeholders have expressed apprehension that permitting test subscribers during test phase may have several regulatory implications and it may allow the concerned TSP to evade various compliances and scrutiny on various fronts such as IUC, pricing, QoS etc. The Authority is of the view that suitable measures needs to be put in place so as to rule out any the possibility of its misuse. The terms and conditions applicable on a TSP w.r.t. a test subscriber, scope of services that can be offered to a test subscriber etc., needs to be defined, which are discussed in subsequent sections.

B. Demarcation of test phase from commercial launch

2.13 Should a TSP be allowed to provide all the services free of cost to test subscribers even before commercial launch of services is one of the issues that arose in recent past. One view is that providing full-blown services during test phase may have implications on the IUC, pricing, QoS and other regulatory aspects and as such can be viewed against the spirit of level playing field. To ensure that allowing enrolment of test subscribers for testing of systems is actually used only for testing of systems and not to circumvent the regulatory requirements, following options were proposed in the Consultation Paper:

- a) Testing may be restricted within the network of the concerned Licensee/TSP. For testing of processes/systems which may require connectivity with the networks belonging to other TSPs, the same could be carried out using the test SIMs given to business partners or employees on a small scale.

- b) Put a limit on the time period for which any test subscriber can be provided the services during test phase.
- c) Provide a temporary number series to the TSP for testing of network before commercial launch of services, which would be withdrawn upon commercial launch by the TSP and a fresh number series would be issued for enrolling commercial subscribers. This would ensure that enrolment of subscribers prior to commercial launch is not exploited or misused by a TSP to circumvent the regulatory provisions and compliances.
- d) To limit the number of test subscribers by way of allotment of smaller chunks of numbers, say 10000, as against about 10 lakh per series, during test phase. The test subscribers may be enrolled purely on temporary basis.
- e) Perform intensive testing on the Radio Access Network (RAN) in a relatively smaller geography, for which small number of test subscribers would be required. The TSP could perform load testing in one city or a couple of cities and tune the network in other parts of the service area. In any case, the network tuning is a continuous exercise performed by the network providers so as to optimally meet the dynamic demand.

2.14 The stakeholders were requested to comment on which of the above measures should be put in place so as to clearly differentiate test phase from commercial launch. The stakeholders were also requested to comment on whether there is a need to have a defined timeline for testing phase i.e. period beyond which a TSP should start offering commercial services and, if yes, what should be that timeline.

Comments received from the stakeholders

2.15 Some stakeholders reiterated that as per the existing terms and conditions of licence, there is no provision for enrolment of

subscribers in the test phase. One of these stakeholders submitted that no test service should be permitted to be offered – whether on-net or off-net, as it will lead to a circumvention of licensing and regulatory requirements. Some stakeholders submitted that testing should ideally be restricted to own network by the concerned licensee; for testing with networks belonging to other TSPs, the same can be carried out using the test SIMs given to business partners and roaming operators.

2.16 Some stakeholders urged that in case the Authority decides to prescribe enrolling test subscribers prior to commercial launch, there should be clear distinction between test phase and commercial services. Some of these stakeholders suggested that separate test number series should be specially earmarked for testing and be different from commercial number series, which would be withdrawn upon commercial launch by the TSP. However, a few stakeholders were of the view that a separate numbering series is not required because test cards are used by business/roaming partners even after commencement of services.

2.17 Some stakeholders suggested that only limited number of subscribers on temporary basis should be enrolled for testing purpose and the testing should be carried out for limited period only. One stakeholder was of the view that the licensing conditions and subsequent letters clearly indicate that test SIMs/users are meant solely for the purpose of network testing. On the other hand, the licensee has a contractual obligation with the subscriber in terms of QoS etc. Hence, according to the stakeholder, the distinction between the test phase and commercial launch is already embedded in the Licence.

2.18 A few stakeholders submitted that a TSP should be free to take a call on the scale and duration of network testing and unnecessary regulatory obstacles should not be created for the new entrant. These stakeholders urged that none of the options suggested in the

consultation paper is desirable. One of these stakeholders submitted that the measures proposed in the consultation paper will have a chilling effect on all new service providers because (a) only on-net testing and small scale testing of off-net functionalities will mean that the off-net service will be at the mercy of incumbent service providers post commencement of service. (b) Limiting the duration of testing would imply that the service provider desirous of offering new technology will not get sufficient time to test and deploy the technology. (c) Providing temporary number series to the TSP for testing would be counterproductive as the sole purpose of test subscribers is to provide necessary scale for testing and assuring seamless movement to paid subscription. (d) Limiting the number of test subscribers by way of allotment of smaller chunks of numbers during test phase or to perform intensive testing on the radio access network (RAN) in a relatively smaller geography are also not desirable as new technology deployment demands testing at sizable scale. One stakeholder argued that since new operators pay charges for IUC, Licence Fee, SUC, etc during trial period also, there is no question of any level playing field being disturbed.

2.19 On the issue of exploring the need to have a defined timeline for completion of testing phase, beyond which a TSP must start offering commercial services, a number of stakeholders submitted that such timelines cannot be fixed. One of these stakeholders submitted that network testing can have various hues depending on the technology and scale and there cannot be a 'one size fits all' solution. The stakeholder further argues that there is no rationale for imposing such timelines for auctioned spectrum, as the service provider, itself, is the biggest loser in case of delayed monetization. Another stakeholder commented that it cannot be believed that the testing phase will continue for indefinite period because any TSP will like to monetize his investment as soon as possible.

- 2.20 One stakeholder submitted that there should not be any defined timeline for the testing phase as long as the operator is not acquiring customers. Another stakeholder was of the view that the testing period cannot extend beyond the date when self-certification of MRO obligation of the first DHQ/ Metro has been filed with the TERM Cell.
- 2.21 One submission made was that the period of testing should be limited to maximum 45-60 days with the limited users. However, after completion of testing phase, the commercialization/commercial launch of services may be left to the TSP. A few stakeholders suggested that time period for testing should not be more than 3 months. One view was that trial periods need to be longer when a new technology is being introduced and in such situation, a case by case approval can be provided by the regulator.

Analysis

- 2.22 As was discussed earlier, the requirement of test subscribers could vary based on the size of the network and technology being deployed. If the technology is newer with no or very less roll-outs elsewhere, the TSP would like to test it thoroughly. Surely, commercial launch of any network without sufficient testing serves nobody's purpose. Therefore, it is desirable to have an enabling test-framework, without too many strings attached. With this broad objective into consideration, the Authority examined the comments of the stakeholders.
- 2.23 The comments received from various stakeholders can be broadly divided into three categories: (a) There should not be enrolment of subscribers during test phase because licence does not permit it; (b) Test subscribers can be enrolled with restrictions on their numbers and duration of use; and (c) TSPs must be allowed to enrol users/subscribers without any restrictions.
- 2.24 One of the options given in the consultation paper was that the TSP could perform intensive testing on the Radio Access Network (RAN) in

a relatively smaller geography, for which small number of test subscribers would be required. Putting a restriction on the extent of geographical area for test purpose is akin to prescribing the scale of testing. Further, it has a potential to take away the requisite flexibility to fulfil the basic need of network testing from the TSP. Therefore, the Authority is not in favour of it.

2.25 Another option given in the consultation paper was to have a separate number series for testing phase. Such a restriction may discourage people to get enrolled as test subscribers to some extent; and when the services are commercially launched, the subscriber will be allotted a new mobile number and the process of verification of subscribers will need to be repeated. Therefore, a more balanced and rational approach needs to be adopted.

2.26 The basic purpose of enrolling test subscribers is to test entire network with full functionality and take corrective measures to bring the network under test to a stage where network is ready for commercial deployment. The TSP should have liberty to decide the scope and extent of testing. Therefore, restricting the testing to intra-network only does not seem a workable proposition.

2.27 In this era, where technological developments are happening at very fast pace, defining a very restrictive test-framework may not be appropriate as it may come in way of required amount of testing. However, suitable ring-fencing measures should be put in place so that the allowance of enrolling of test subscribers during test phase is not misused by a TSP.

2.28 As brought out by a few stakeholders, as long as TSP conducts testing using Test SIMs, there is no point of contention. However, if it decides to conduct network testing using test customers, it may acquire subscribers in the garb of testing and at the same time it may not be subjected to the regulatory compliances. As the services are generally offered free of charge during test phase, some stakeholders have

pointed out that it may disturb the level playing field. However, if the number of test subscribers that can be acquired by a TSP can be limited and a time limit on the test phase involving test subscribers can be defined, it would be sufficient to allay these apprehensions regarding the misuse of testing provisions to gain subscribers and disturb the level playing field to a large extent. Having said that, the limit should be such that it is neither very restrictive that it may come in the way of required amount of testing and should not be too lenient that could disturb the level playing field. The Authority is of the opinion that prescribing a limit of 5% of network switching capacity for an LSA on the number of test subscribers that can be acquired by a TSP in that LSA would be appropriate. As regards time limit on the testing period involving test subscribers, the Authority is of the view that it should be limited to 90 days. 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 reasons which may be decided by the Licensor on case to case basis.

2.29 In view of the above, **the Authority recommends that:**

- a. There should 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.**
- 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 atleast 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.

C. Fulfilment of subscriber acquisition related conditions and regulatory reporting requirements during test-phase

2.30 There are certain subscriber acquisition related conditions and regulatory reporting requirements laid down in the licence. Some of these are listed below:

37.4 *The Licensee shall, prior to commencement of Service, confirm in writing to the Licensor that the Licensee has taken all necessary steps to ensure that it and its employees shall observe confidentiality of customer information. (Part of Confidentiality of information)*

39.18 *The complete list of subscribers shall be made available by the Licensee on their website (having password controlled access), so that designated Security Agencies are able to obtain the subscriber list at any time, as per their convenience with the help of the password. The list should be updated on regular basis. Hard copy as and when required by security agencies shall also be furnished. (Part of Security Conditions)*

39.17 (i) *The Licensee shall ensure adequate verification of each and every customer before enrolling him as a subscriber; instructions issued by the Licensor in this regard from time to time shall be scrupulously followed. The Licensee shall make it clear to the subscriber that the subscriber will be responsible for proper and bonafide use of the service. (Part of Security Conditions)*

2.31 After commercial launch of its services, a TSP enrolls subscribers to its network, and, therefore, is bound to follow above provisions. In case enrolling of subscribers as test subscribers before commercial launch is allowed, whether subscriber acquisition related conditions and regulatory reporting requirements laid down in the licence, be imposed for the test subscribers enrolled before commercial launch? The stakeholders were asked to share their comments over this issue.

Comments received from the stakeholders

- 2.32 Some stakeholders pleaded that subscribers cannot and should not be enrolled during the test phase. Some stakeholders submitted that provisions like subscriber verification, observing confidentiality of customer information, reporting requirement etc must be adhered to during the trial period for all the enrolled subscribers. A few stakeholders suggested that by calling the subscriber a ‘test subscriber’, the licensee cannot evade the licensing and regulatory requirements. According to these stakeholders, a TSP is bound to follow licence provisions related to charging of tariffs as per TRAI tariff orders, fulfillment of requirements regarding publication of tariffs, observing confidentiality of customer information, follow laid down subscriber verification processes etc.
- 2.33 Some stakeholders submitted that testing phase of TSP should not be subject to any regulatory and financial obligations except the requirements of Law Enforcement Agencies and Subscriber Verification for activation of a connection.
- 2.34 One stakeholder suggested that for all practical purposes the test users will act as subscribers of the service provider; therefore, the service provider should comply with all subscriber related conditions and provisions relating to LIM and CDRs etc. However, only bare minimum and critical reporting requirements should be mandated. Another stakeholder was of the view that provisions like subscriber verification, observing confidentiality of customer information, reporting requirement etc must be adhered to during the trial period for all the enrolled subscribers. However, a new entrant must be allowed certain flexibility in terms of allowing him to offer tariff at zero level (free) or nominal charges.

Analysis

- 2.35 The Authority examined the suggestions of the stakeholders. A number of stakeholders were of the view that even during test phase, a TSP should comply with all subscriber related conditions and provisions relating to LIM and CDRs etc. Some stakeholders were of the view that while the subscriber related conditions should be applicable, regulatory reporting requirement should be kept to minimum.
- 2.36 In the previous section, the Authority has recommended that there should be a limit of 90 days on the test phase involving test subscribers. The compliance of this provision can be ensured only if the Licensor/TRAI gets the prior intimation about the enrollment of test subscribers in a network under test. Therefore, the Authority is of the opinion that if a TSP wants to enrol test subscribers in its network before the commercial launch of services for testing purpose, it should give prior intimation to DoT and TRAI atleast 15 days before commencing enrolment of test subscribers.
- 2.37 There are certain access licence provisions which are related to subscribers, at the time enrolment or otherwise. Adequate verification of each and every customer before enrolling him/her as a subscriber and making available the complete list of subscribers by the Licensee on their website (having password controlled access), so that designated Security Agencies are able to obtain the subscriber list at any time are some of the security related conditions which are related to enrolment of subscriber. Ensuring confidentiality of customer information, which is part of 'Confidentiality of Information', is a provision related to the enrolled subscribers in the network. If licensee is enrolling any subscriber to its network, it has to necessarily abide with such provisions. In these aspects, test subscribers cannot be treated differently. Therefore, the Authority is of the opinion that if a licensee acquires test subscribers (subscribers before the commercial

launch of its services), 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.

2.38 As regards reporting requirements to DoT/TRAI, the licensee is bound to send all relevant reports such as subscriber related statistics and their usage, and other information as directed by TRAI/DoT. The Authority is of the view that the same should also be applicable during testing of network with involvement of test subscribers.

2.39 In view of the above, **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 atleast 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.

D. MNP facility for test subscribers

2.40 Mobile Number Portability (MNP) is a facility, which provides an option to a mobile subscriber to switch to another TSP without having to

change his number. If a TSP is allowed to enrol test subscribers during testing phase, should such test subscribers be given facility of MNP i.e. should test subscribers be allowed to port out to another TSP? This was an issue raised in the consultation paper.

Comments received from the stakeholders

- 2.41 Most of the stakeholders were of the view that MNP facility should not be extended to the test subscribers. Some of them have submitted that test SIM/subscriber is temporary, i.e. valid for a limited period only; there cannot be any provision for MNP during the test Phase. Some of these stakeholders have submitted that MNP is only meant to be extended to migration of regular subscribers and not for test subscribers. One stakeholder suggested that test subscribers of the new TSP should not be extended MNP facility with the exception of those who are Employees and Business partners of new TSP.
- 2.42 One stakeholder, having the contrarian view, submitted that the testing stage of network should have no bearing on POI, IUC and MNP as long as the extant regulations on these subjects are complied with and the mandated payments are made. Further, MNP should be provided to all subscribers, whenever they desire, and no artificial restriction should be put to prevent it.

Analysis

- 2.43 The Authority examined the comments of all the stakeholders and noted that most of the stakeholders were of the view that MNP facility should not be extended to the test subscribers. The purpose of acquiring test subscribers is to test the performance of the network. A test subscriber cannot expect a committed level of service in network which is under test. He/she may also not be paying for the test services. Therefore, there is no justification to provide MNP facility to test subscribers, which is a tool to migrate to another service provider mainly due to some level of dissatisfaction from his/her present

service provider. Similarly, there is no justification for allowing porting of subscriber to a test network from any other network having mandated to provide specific level of QoS. Allowing a TSP to provide MNP facility before commercial launch of services may not be appropriate and would also be against the spirit of both, (i) allowance of enrollment of test subscribers before commercial launch of services and (ii) the Telecommunications Mobile Number Portability Regulations 2009 as amended.

2.44 In view of the above, **the Authority recommends that MNP facility should not be extended to network under testing.**

E. Information to test subscribers about test phase

2.45 While it is important that a TSP is allowed to extensively test its network before commercial launch of services, it is equally important that the interests of the test subscribers are protected and they are transparently informed about it. Some of the options listed in the consultation paper were:

- a. The subscribers may be transparently informed that they are being enrolled as test subscribers only; and that too for a defined period of time.
- b. It may not be appropriate to charge any kind of fee/charges i.e. subscription fee or usage based charges from the test subscribers as they are being enrolled for test purpose.

2.46 The stakeholders were requested to submit their suggestions on provisions relating to information to the test subscribers that needs to be put in place for the TSP testing its network involving test subscribers.

Comments received from the stakeholders

2.47 Some stakeholders submitted that there cannot and should not be any enrolment of subscribers during the testing phase. Therefore, as

per these stakeholders, the requirement for informing subscribers about test SIM being temporary, etc. does not arise. Some stakeholders submitted that subscribers enrolled on the network in the test phase should be transparently communicated about the validity of the test SIMs and the time period after which these test SIMs would be deactivated. Most of these stakeholders have also submitted that no fee / charges of any kind should be imposed on test subscribers for the test services.

2.48 Some stakeholders suggested that if it is decided to prescribe regulation for enrolling test subscribers prior to commercial launch, TSP enrolling test subscribers should inform them about the modalities of testing, tentative testing period and deactivation of test SIM post completion of network testing. Some of the stakeholders have opined that the subscriber should have the choice of continuing with the same SIMs even after the trial period is over. One of the stakeholders was of the view that test subscribers shall be informed about his test status and free service with possibility of sub-optimal performance during the test phase and that he/she will be migrated seamlessly to normal commercial service subject to his consent.

2.49 One stakeholder argued that there are two pre-requisites for enrolling subscribers as test subscribers for network testing. The Licensee's network should be compliant with LIM related requirements and the subscribers would be enrolled as test subscribers in full compliance with DoT's extant instructions on subscriber verification. In case the service provider is compliant in both the above requirements, then there is no difference in the subscribers acquired as test subscribers and the subscribers acquired post the commencement of service. The service provider should inform test subscribers that he/she will seamlessly become a paid subscriber post completion of the test phase. Besides this, there should be no additional requirements.

Analysis

- 2.50 The Authority examined the comments of all the stakeholders. The Authority noted that a number of stakeholders are of the view that a test subscriber should not be charged any kind of fee. As regards informing the test subscribers about the test phase, there were three kinds of views: (a) There cannot not be enrolment of subscribers during the testing phase; (b) TSP conducting test trials should appropriately inform the test subscribers about modalities of testing, tentative testing period and deactivation of test SIM post completion of network testing; and (c) Test subscribers should be informed that they will seamlessly become a paid subscriber post completion of the test phase.
- 2.51 As the TSP, who is still conducting test trials, cannot be expected to provide a commitment on the quality of services such as coverage, uptime of connection, reasonable time lag etc., any charges (even if nominal) imposed on the test subscribers, may not be appropriate. Further, the TSP is enrolling test subscribers on its own interest i.e. for testing its network. Therefore, the Authority is of the view that the test subscribers should not be charged any kind of fee (fixed charges or usage based charges). It is equally important that test subscribers are informed transparently that they are being enrolled as test subscriber; and during test phase, TSP is not mandated to adhere to specified level of QoS. Therefore, there may be sub-optimal level of network performance. Also, they may be informed about the scope of services available to them during test phase. Test subscribers should also be informed that MNP facility would not be available to him/her till the services are launched commercially after the completion of network testing.
- 2.52 In view of the above, **the Authority recommends that if a TSP wants to enrol 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. MNP facility won't be available till the services are commercially launched.**
- d. There won't be any charge (fixed charge or usage based charge) during the test phase.**
- e. Likely date of commercial launch.**

CHAPTER-III: LIST OF 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. (Para 2.11)**

- 2. The Authority recommends that:**
 - a. There should 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.**

 - 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 atleast 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.**

(Para 2.29)

- 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 atleast 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.

(Para 2.39)

- 4. The Authority recommends that that MNP facility should not be extended to network under testing. **(Para 2.44)**
- 5. The Authority recommends that if a TSP wants to enrol 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. MNP facility won't be available till the services are commercially launched.
 - d. There won't be any charge (fixed charge or usage based charge) during the test phase.
 - e. Likely date of commercial launch.

(Para 2.52)

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

12th Floor, Sanchar Bhawan, Ashoka Road, New Delhi

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

Dated: 09.09.2016

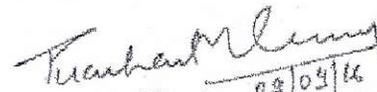
To,

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.



(Prashant Verma)
ADG (AS-II)

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