

Telenor (India) Response to TRAI Consultation Paper on Internet Telephony (VoIP) (No 13/2016 dated 22 June 2016)

Preamble

Telenor (India) feels that in this consultation paper multiple issues have been clubbed together which are diverse from licensing perspective. Some of these issues to which we have responded earlier in response to the consultation papers on Net Neutrality and Regulatory Framework for OTT services issued by the Authority still remain unaddressed. We request that our present submission should be read as an extension to our earlier submissions in response to the consultations held in Y2015 and Y2016.

- 1. OTT communication services** - The provision of unrestricted internet telephony is already defined in the scope of Unified License for Access services (Part II, Chapter VIII, Clause 2.1(a)(i)). To that extent internet telephony is not a new concept and it has been around for many years.

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*2.1(a)(i) The Access Service under this authorization covers collection, carriage, transmission and delivery of voice and/or non-voice MESSAGES **over Licensee's network** in the designated Service Area. The Licensee can also provide Internet Telephony, Internet Services including IPTV, Broadband Services and triple play i.e voice, video and data. While providing Internet Telephony service, the Licensee may **interconnect Internet Telephony network with PSTN/PLMN/GMPCS network**. The Licensee may provide access service, which could be on wireline and / or wireless media with full mobility, limited mobility and fixed wireless access. (emphasis supplied).*

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The calls originated on internet and terminated on internet using applications but delivering services similar to licensed telecom services have proliferated in the past years. These applications providing communication services rival the licensed telecom operators and at the same time get classified as IT services. Thus, they claim exemption from licensing and not submitting to the jurisdictional laws and local levies. These are termed OTT communication services and pose major threat to licensed communication services. We have submitted to the various consultation papers over the past 2 years, seeking that the regulatory equality principles of 'Same Service Same Rule' should be uniformly applied to all communication services.

Level playing field (LPF) – the OTT communication services are providing services similar to the Licensed Telecom Service Providers and this has created regulatory inequality, as noted in the DoT committee report also. LPF is about playing by the same rules; ensuring actions in a competitive market are not distorted. 'Same service same rules' can be understood as ensuring "regulatory neutrality", i.e. regulation must be neutral in the sense that it does not treat the same services differently. LPF is a broader concept and principle related to the design of a regulatory framework. **The regulatory equality should be settled first** to establish level playing field between licensed Telecom Service Providers and OTT communication services providing **'internet**

telephony. The present consultation seeks to further distort the inequality and accentuate un-level playing field.

2. **Regulation of 'content' under the present Consultation** - The calls generated over the internet are classified as 'content' as per the Differential Pricing Regulation of 2016' published by TRAI.

"(e) "content" includes all content, applications, services and any other data, including its end-point information, that can be accessed or transmitted over the internet;"

It is also an agreed position of the Authority that 'content' is not covered within the ambit of telecom regulations, at the same time OTT communication services are themselves not submitting to jurisdictional laws of Telecom and taxation.

In addition to that we have represented to the Authority many times in the past on the issues of **regulatory inequality**, regulatory cost arbitrage, national security, privacy of user identity, traceability of users, access to emergency services, lawful intercepts etc. We request the Authority to address such issues regarding OTT communication services (including 'internet telephony) on priority.

3. **Regulatory modernization** - We had also submitted that there is an urgent need for regulatory modernisation with an objective to reduce the regulatory burden on licensed services (**deregulation**). When designing new regulation policy makers should adhere to the established **principles of non-discrimination and technology neutral regulation**. These principles ensure that consumers continue to benefit from innovation and investment based on the merits of the services, rather than to exploit regulatory inconsistencies and limit distortions between providers.
4. **Horizontal regulations** – The present telecom specific regulations are vertical in nature and are not geared up for the Convergence of technology. In order to establish consumer friendly and future proof regulation, horizontal legislation should progressively replace sector or service specific rules. The specific areas are:-
 - a. **Data privacy / retention:** Customer data has become a valuable commodity in the Digital Services market. In many jurisdictions the regulations governing how customer data is collected, processed and stored vary considerably between different market participants depending on their legacy sector of origin. Regulation should evolve toward a common data privacy regulatory framework for the same services which applies equally to all providers of those services.
 - b. **Consumer protection (QoS):** should provide a minimum level of consumer protection based on horizontal rules and above all a high degree of transparency towards customers.
 - c. **Law enforcement/ national security:** There should be consistent horizontal obligations supporting legitimate law enforcement and national security activities.

5. Internet telephony / App based calling -

Thus a distinction is to be made out between different types of calls using the internet.

- i. Telecom service licensee providing 'internet telephony' to its own subscribers using its access network – this is covered under the scope of Access Services
- ii. Internet service licensee providing 'internet telephony' to its own subscribers using its network – TRAI had recommended in Aug 2008 for allocation of 1000 numbers and interconnection through NLD operators for termination in PSTN/PLMN.
- iii. Telecom / Internet service licensee providing 'internet telephony' calls over other service providers access network – this is OTT communication services.
- iv. A call originated over internet and/ or terminated over internet – this is OTT communication services.

In so far as the 'internet telephony' is concerned it is already allowed under the scope of service for TSPs. The OTT communication services providing 'internet telephony' is an unlicensed activity and regulatory parity should be brought about to maintain level playing field.

Telenor (India) requests that Horizontal regulations should be prescribed for all communication service providers (licensed TSPs and OTTs) offering voice, messaging and video services under uniform obligations for consumer protection, lawful intercept, data protection, retention and privacy, service security, reliability, emergency services and local taxes. Beyond that it should be best left to the market force.

6. Myth around VoIP – a perception is being created in the market place that an 'VoIP call is free' however the consumer needs to be suitably informed that data charges and additional charges also apply. The unit for such charges remains as minutes rather than bytes.

The practice for charging for Internet Telephony is generally based on following principles (this includes most of the international operators/ carriers providing VoIP calls facility across the networks).

- a) Flat fee for unlimited calls to certain destination and per minute price for rest of the destinations (e.g. Vonage provides unlimited calls to certain market for a flat fee)
- b) Certain minutes for a pack (e.g. Skype providing 400 mins for 275 Rs a month)
- c) Per minute calling price (one of the large Indian operator)

There is generally an additional charge of the data consumption by the users for both outgoing as well as incoming legs of the call. This is certainly applicable in case VoIP is provided by OTT providers as per net-neutrality principle.

All the Core network components, responsible for recording usage of network resources, Like SIP server, IMS nodes, SBC (session border controller, mandatory element connecting two different VoIP networks), MGW create CDRs / event records to capture

start time and end time and duration which facilitate per minute billing to the User. Thus the inter-operator settlement of IUC should continue to be on per minute basis.

- 7. Advantages (and disadvantages) of Internet Telephony** – while the technological advantages are enumerated in this consultation paper the disadvantages of this technology has been overlooked. In our opinion this should be presented in a balanced way for the consumers to make an informed decision.

Advantages of Internet Telephony

- Low cost
- Same cost across geographies
- Offers wide range of features like video calling

Disadvantages of Internet Telephony

- Unreliability
- Susceptible to low quality with drop in bandwidth
- Cannot make Emergency calls
- Compatibility or interoperability with other systems

8. NLD and ILD licenses

The licensing regime has undergone a change and we have come under the Unified License as recently as Aug 2013. New NLD and ILD licenses have been issued and they have built their networks and business case accordingly. The Authority acknowledges in this paper that internet telephony calls bypass NLD as well as ILD networks. In such an event, the sunset regime for NLD/ILD licensees should be defined by the Govt. as they will no longer be relevant in future.

Similar restrictions in the Access License to mandatorily switch calls within the LSA should be done away with and the service area wise demarcation of licenses should also be removed. Only then the Access / NLD / ILD networks will be technologically equivalent to internet telephony networks.

- 9. Our submission** - We draw the attention of the Authority to the DoT Committee report of May 2015. The relevant excerpts are as below:

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Section 8.11 *In view of the above discussions, the committee recommends the following:*

- (iii) *In case of VoIP OTT communication services, **there exists a regulatory arbitrage wherein such services also bypass the existing licensing and regulatory regime creating a non-level playing field between TSPs and OTT providers both competing for the same service provision. Public policy***

response requires that regulatory arbitrage does not dictate winners and losers in a competitive market for service provision.

- (iv) *The existence of a pricing arbitrage in VoIP OTT communication services requires a graduated and calibrated public policy response. In case of OTT VoIP international calling services, a liberal approach may be adopted. However, **in case of domestic calls (local and national), communication services by TSPs and OTT communication services may be treated similarly from a regulatory angle for the present.** The nature of regulatory similarity, the calibration of regulatory response and its phasing can be appropriately determined after public consultations and TRAI's recommendations to this effect.*

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Section 9.10 To summarize, the Committee favours regulatory oversight on OTT communication service providers as recommended in the previous chapter. The Committee believes that for OTT application services there is no case for prescribing regulatory oversight similar to communication services.

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There is a stringent regulatory regime for access networks in terms of compliance, reporting, equity structure, equity lock-in condition, rollout obligation and revenue share of LF and SUC. In case the Authority decides to recommend unrestricted internet telephony to ‘**software applications riding over the internet**’ (para 4.7), We wonder is the Authority also willing to relax the regulatory regime including license fee and other tax structure in case it is not willing to apply same service same rules principles on OTT services. Internet telephony can also impact spectrum prices since overall business viability of TSPs may be a problem going forward.

Issue wise comments

Question 1: What should be the additional entry fee, Performance Bank Guarantee (PBG) and Financial Bank Guarantee (FBG) for Internet Service providers if they are also allowed to provide unrestricted Internet Telephony?

Response:

The Unified License regime has been recently introduced in Aug 2013, there is no need to effect any change in the basic structure laid down in this licensing framework. The entry fee, PBG and FBG should be same as that for an access licensee. However, the following conditions of the present licensing regime should be followed:

- i. Clause 2.1(a)(i) of the Scope of Access Service defines that *'interconnect Internet Telephony **network** with PSTN/PLMN/GMPCS **network**. The Licensee may provide access service, which could be on wireline and / or wireless media with full mobility, limited mobility and fixed wireless access.'* The **interconnection is between networks** of licensed entities with proper approvals from DoT to carry telecom traffic.
- ii. The existing unified license, a licensee is allowed to provide unrestricted internet telephony to its own subscribers i.e. someone who is using the access network of licensee.
- iii. The existing interconnection agreement prohibits soliciting subscribers of other interconnected networks; this is to foster healthy competition.
- iv. The para # 1.6 of this consultation paper defines a voice call that is originated and terminated on public internet as 'Internet Telephony', however if it is transmitted over a managed IP network then it is 'VoIP'. The VoIP is the over arching set for all IP calls and *internet telephony* is a sub-set of VoIP. While the 'internet telephony' is defined in the Unified License, the term 'VoIP' is not defined in Unified License.

Thus the potential service provider should procure a Unified License for access services and build its own network before interconnecting to other licensees' network. The traffic carried should be for its own subscribers using its network built under the license.

Question 2: Point of Interconnection for Circuit switched Network for various types of calls is well defined. Should same be continued for Internet Telephony calls or is there a need to change Point of Interconnection for Internet Telephony calls?

Response:

The point of interconnection between networks (not content) remains the same as is presently being followed. Presently all access providers are interconnected with each other through direct link, same should continue.

The TRAI recommendation of Y2008 addresses the issue comprehensively, same is reproduced below:

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4.2 Interconnection (para 3.11.30)

*4.2.1 ISPs shall be permitted to have **interconnection with NLD operators** through public Internet (Internet cloud) only for the purpose of provision of unrestricted Internet telephony within country.*

*4.2.2 National Long Distance (NLD) Operators shall be permitted to connect to ISPs through public Internet (Internet cloud) to facilitate termination of Internet telephony calls on PSTN/PLMN and vice-versa including among ISPs both **within telecom circle** as well as **across the telecom circles**.*

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4.2.5 The agreement between ISPs and NLD to facilitate termination of Internet telephony calls on PSTN/PLMN shall be on mutual agreement basis. TRAI shall monitor the progress and may intervene in case mutual agreements are not effective.

4.2.6 NLD shall negotiate carriage charges with ISPs within the ceiling limit prescribed by TRAI under IUC regulations from time to time. In no case, carriage charges shall be more than upper ceiling limit prescribed by TRAI. “

Transit of traffic between access providers should be allowed only in case of emergency like fiber cut or link failure. Same practice should continue for internet telephony.

Question 3: Whether accessing of telecom services of the TSP by the subscriber through public Internet (internet access of any other TSP) can be construed as extension of fixed line or mobile services of the TSP? Please provide full justification in support of your answer.

Response:

The internet call originated on public internet (internet access of any other TSP/ISP) should be **treated as content**. This is within the ambit of the definition under ‘prohibition of discriminatory pricing of data regulation 2016’. This scenario is explained in Section 5 (iii) of our preamble. Hence, any resemblance to mobile or landline does not arise.

The internet call originated on public internet (internet access of home TSP/ISP) should be construed as an extension of mobile, landline, DSL depending on the access network used to provide internet access.

This call does involve some new/different technologies, but this is similar to when NGN technology was introduced, and this did not result in reclassification of fixed or mobile calls. An interconnecting party sees no difference – and should pay/collect the same termination rate as for regular calls.

Question 4: Whether present ceiling of transit charge needs to be reviewed or it can be continued at the same level? In case it is to be reviewed, please provide cost details and method to calculate transit charge.

Response:

In the context of internet telephony, in our opinion no regulatory arbitrage needs to be created by design. The present interconnection regime is efficiently able to handle the vast volume of traffic. All access providers have established direct connectivity with each other for exchange of traffic originated in their network. The facility of transit is limited to emergency situations for short period of time.

Hence, there is **no need for any change in transit charges** for the purpose of internet telephony alone. A cost based revaluation of IUC charges is already under way in a separate consultation, needless to say that it should be uniform for all technologies.

Question 5: What should be the termination charge when call is terminating into Internet telephony network?

Response:

The internet telephony has various connotations as explained in Section 5 of the preamble of this response, same is reproduced below.

Section 5 - different types of calls using the internet

- i. Telecom service licensee providing 'internet telephony' to its own subscribers using its access network – this is covered under the scope of Access Services
- ii. Internet service licensee providing 'internet telephony' to its own subscribers using its network – TRAI had recommended in Aug 2008 for allocation of 1000 numbers and interconnection through NLD operators for termination in PSTN/PLMN.
- iii. Telecom / Internet service licensee providing 'internet telephony' calls over other service providers access network – this is OTT communication services.
- iv. A call originated over internet and/ or terminated over internet – this is OTT communication services.

The scenario 5 (i) is already covered in the TSPs license and also for the reasons explained in Section 6 of our preamble, the termination charge should remain the same as defined in IUC regulation.

For the scenario explained in 5 (ii) as and when ISP is allowed internet telephony, the termination charges should be cost based. However, when looking at the cost in the case of a pure internet telephony provider, we expect the cost base to be exceedingly small, and certainly smaller than that of a regular fixed operator, which is presently regulated to 0 paisa. Thus, as long as fixed termination is **regulated to 0**, it is reasonable to do the same for internet telephony. We have dealt with the fixed termination in detail while responding to Q 6.

For the scenario explained in 5 (iii) and (iv) interconnection with PSTN/PLMN is not possible as it is not a licensed activity.

If regulatory changes were to allow for interconnection between OTT communication services and PSTN/PLMN operators, any termination charge should be cost based. As we explained for 5 (ii), we would expect the costs of a pure internet telephony provider to be very small, and with fixed termination charge regulated to 0, it is reasonable to do the same for internet telephony termination.

At the same time we have explained in response to Q6 on the arbitrage created due to 0 FTC, hence it should be cost based.

Question 6: What should be the termination charge for the calls originated from Internet Telephony Network and terminated into the wireline and wireless Network?

Response:

Again, the termination charge should be based on cost. This means the termination charge should depend on the network it is **terminating into – mobile or fixed**. If it terminates on the fixed network, the charge should be the FTC, and if it is terminating in a mobile network it should be MTC.

FTC arbitrage - the last amendment of IUC regulation has created an arbitrage between FTC and MTC, the 0 charge for FTC not being cost based. This has been exploited by a few in the recent past for routing of calls through fixed network into mobile network. Even the rationale of TRAI while fixing 0 FTC was to proliferate broadband, it was never envisaged to route 'internet telephony' calls through this 0 charge route. We urge that this arbitrage should be revisited and plugged by arriving at a cost based FTC.

Question 7: How to ensure that users of International Internet Telephony calls pay applicable International termination charges?

Response:

In the present license 'internet telephony' is allowed under the scope of Access service license and access service provider cannot build network outside the country, hence this scenario of 'International Internet Telephony call' does not arise. As per our license these international calls have to be routed through ILD operators licensed in India, hence it is the responsibility of ILDO to ensure proper payment of International termination charges.

The lawful intercept of the International Internet Telephony calls may be addressed by the originating service provider and ILDO.

Question 8: Should an Internet telephony subscriber be able to initiate or receive calls from outside the SDCA, or service area, or the country through the public Internet thus providing limited or full mobility to such subscriber?

Response:

The issue of limited or full mobility for a call originated on the internet in the application layer is not technically justifiable by any stretch of imagination.

This arbitrage created by the Authority itself by prescribing non cost based FTC has given rise to this situation of routing calls originated on internet through 0 charge route from landline to mobile network. This should be plugged by a cost based FTC.

Question 9: Should the last mile for an Internet telephony subscriber be the public Internet irrespective of where the subscriber is currently located as long as the PSTN leg abides by all the interconnection rules and regulations concerning NLDO and ILDO?

Response:

Those calls for which the last mile is public internet is classified as content in the Differential Data Pricing Regulation 2016. Such calls (or content) cannot be regulated under the present telecom regulation.

Question 10: What should be the framework for allocation of numbering resource for Internet Telephony services?

Response:

The scenario explained in 5(i) is for TSPs and they are allocated number series as per prescribed criteria, any new recommendation is not required presently.

The scenario in 5 (ii) is for ISPs for their own customers served by their network. The Authority had in the Y2008 recommended SDCA based numbering scheme for ISPs:

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4.3 Numbering (para 3.13.13)

4.3.1 Allocation of E.164 number resources may be permitted to ISPs also for providing Internet telephony.

4.3.2 TEC to conduct the study to assess Internet Telephony number resource requirement. Based on the study, appropriate number blocks may be earmarked for Internet telephony in newly recommended 11 digit numbering plan.

4.3.3 ISPs providing Internet telephony services shall be allocated number resources from the earmarked Internet Telephony **number resources in a block of 1000 numbers** or it's multiple.”

The internet telephony calls explained in scenario 5 (iii) and (iv) are in the application layer and OTT communication services. Hence, allocation of number series is not applicable.

Question 11: Whether Number portability should be allowed for Internet Telephony numbers? If yes, what should be the framework?

Response:

The MNP for TSPs is already defined and being followed, as far as MNP for ISP explained in scenario 5 (ii) is concerned, our response is below.

Earlier the Authority had recommended allocation of SDCA based numbering scheme for internet telephony to be provided by ISPs. These recommendations were issued after public consultation, same should be followed.

The MNP process of numbers allocated for internet telephony should be the same as being followed for fixed telephony number series, as SDCA based numbering is part of landline numbering scheme.

MNP for scenario 5 (iii) and (iv) is not applicable.

Question 12: Is it possible to provide location information to the police station when the subscriber is making Internet Telephony call to Emergency number? If yes, how?

Response:

It is always possible to obtain the geo-location of subscriber equipment, this is used extensively for advertisement services. TRAI should mandate compulsory usage of 'location services' prior to initiating internet telephony calls.

There cannot be a case for exemption to access to Emergency Services, in order to facilitate adoption of new technology and bringing efficiency in transmission systems.
