July 11, 2023

Advisor (Networks, Spectrum and Licensing)
Telecom Regulatory Authority of India,
Mahanagar Doorsanchar Bhawan,
Jawaharlal Nehru Marg (Old Minto Road),
New Delhi – 110002

Kind Attn: Shri Akhilesh Kumar Trivedi

Subject: Comments on the TRAI's Consultation Paper on "Definition of International Traffic" dated May 02, 2023

Dear Sir,

This is with reference to the above mentioned consultation paper from TRAI on "Definition of International Traffic" dated May 02, 2023.

In this regard, kindly find enclosed herewith comments from Vodafone Idea Limited to the said consultation paper.

We hope our comments will merit kind consideration of the Authority, please.

Thanking you,

Yours sincerely,

For **Vodafone Idea Limited**

P. Balaji
Chief Regulatory & Corporate Affairs Officer

Enclosed: As stated above

At the outset, we are thankful to the Authority for giving us this opportunity to provide our comments to the TRAI Consultation Paper on "Definition of International Traffic" dated 02.05.2023.

In this regard, we would like to submit our question-wise comments for Authority's kind consideration, as given below:

Q1. Whether it would be appropriate to define the term 'international traffic' in the telecommunication service license agreements as 'the international long-distance traffic originating in one country and terminating in another country, where one of the countries is India'? Kindly provide your response with a detailed justification.

and

Q2. In case your response to the Q1 is in the negative, kindly provide an alternative definition along with a detailed justification.

VIL Comments to Q. no. 1 and 2

1. **Genesis of the matter:**

   a. Clause no. 1.9 of the Consultation paper provides the background of this matter as representations received from two entities, relating to the treatment of their SMS traffic. Relevant extract given below for ease of reference:

      1.9 In the year 2021, TRAI received representations from two entities on the matter relating to treatment of their SMS traffic. While one of the entities requested TRAI to instruct telecom service providers (TSPs) to allow transmission of its SMS traffic under the domestic route, the other entity requested TRAI to provide a clarification to TSPs to route its transactional messages under domestic route as compared to an international route.

   b. The underlying issue was that the said entities were originating the SMS from servers which were located outside of India. These messages were handed over to servers in India, and thereafter to the aggregators/telemarketers (domestic A2P route and/or P2P route for some other entities) for pumping into the telecom network and terminating on to the end consumer.

   c. As the SMS were bring originated from servers located outside India, TSPs have classified these messages as International messages as such, these messages were required to be pushed through ILD network in India.

d. It is pertinent to note that International SMS involves commercials which are separate and higher than the domestic SMS as such, there are chances of certain entities masquerading these International SMS as Domestic and evade bringing them through legal ILDO route and bypass payment of higher commercial charges to the ILDOs/TSPs, which eventually is loss to National Exchequer as well.

e. Furthermore, it was pointed out by TSPs that such masquerading of International SMS as domestic SMS (through A2P or P2P route) is akin to gray voice call frauds where International calls were terminated on end Indian consumers as domestic calls, due to commercial gains and was quite prevalent in past.

f. **Masquerading of International SMS as domestic (A2P or P2P) is a serious threat to national security, can lead to phishing messages and it also siphons away a major chunk of revenue which otherwise could have accrued to the TSOs/ILDOs and thus, to Indian Government in shape of levies and taxes.**

g. **Most importantly, if such SMS are allowed to be sent as Domestic SMS, it will lead to explosion of all existing SMS coming through valid ILDO route, to shift to this illegal gray route and masquerade it to be as domestic SMS and thus, exploit the price arbitrage as well as controls put in place. This will have far reaching security issues and would also wipe off significant revenues from International SMSs for TSPs/ILDOs and National Exchequer.**

h. Due to advancement in technologies, economic activities being more and more digital and proliferation of applications over mobile, the consumer usage is becoming digital wherein SMS on a MSISDN becomes a prominent and trusted way of authentication and information/communication. Certain entities may not have any interest in bringing their platforms/servers in India and would attempt to bypass local licensing requirements of routing International SMS through ILDO by wrongly raising issues of ambiguities or consumer concerns, till such licensing requirements are clearly upheld and amply clarified leaving no chances of ambiguities.

i. With such advancement in technologies and further evolutions expected sooner than later, any attempt to hard code definition of international SMS (or traffic) in license, will always be limited and generic in nature and will not serve the purpose. It will still give way to certain entities for using proxy servers to bypass the robust ILD route and claim International SMS as Domestic SMS.

j. **In our view, the actual need is not to define what international traffic but, it is to clarify that SMS being originated by International servers/entities and masqueraded as domestic SMS by introducing a proxy server in India (just like it was the case of gray voice calls), would classify as International message as per existing licensing norms. Similarly, SMSs which are originating from Indian servers and are meant to be terminated on international numbers, has to go through Indian ILD route. There is no ambiguity regarding treatment of international traffic or what constitutes international traffic and a robust licensing and regulatory framework exists in India for decades, and basis which gray voice calls have been dealt with legally for years.**

k. **Hence, there is no requirement of defining International traffic, basis request from two entities. We most humbly request TRAI to opt for issuing clarifications or lay down guiding principles on traffic being handled by International servers/entities.**

2. **ILD Network arrangement to handle International SMS traffic:** We would like to draw your attention towards the Network arrangement being followed for dealing with International SMS traffic:

   a. **ILD Licensing framework:** As per licensing framework in India, International Long Distance Operator (ILDO) route is a crucial component of international communication, enabling service providers to establish connectivity and facilitate traffic transmission across international boundaries. This ILDO route refers to the network infrastructure and agreements established by telecom operators to enable international communication. It allows telecom operators to interconnect their networks and exchange traffic across different countries, ensuring seamless global communication. The ILDO route functions through a series of interconnected networks and agreements, involving multiple telecom operators. The following steps outline the typical process of ILDO routing:

   b. **ILDO Agreement:** Telecom operators enter into bilateral or multilateral agreements with other operators to facilitate international connectivity. These agreements outline terms, conditions and pricing structures for exchanging traffic between their networks.

   c. **International Gateway:** Each ILD operator maintains an international gateway, which serves as a point of entry and exit for international traffic. The gateway is equipped with necessary infrastructure, such as switches, routers, and protocols, to ensure efficient routing of SMS traffic.

   d. **Traffic Routing:** When a user initiates an international SMS, their TSP identifies the ILDO route that offers the most favorable terms and pricing for that particular destination. The SMS is then routed to the international gateway of the respective ILDO operator.

   e. **ILDO Interconnect:** At the ILDO operator's international gateway, the SMS is handed over to the ILDO network of a foreign partner. The ILDO operator leverages its own infrastructure and agreements to transmit the traffic across international boundaries.

   f. **Destination Operator:**

      i. **Message Routing:** The ILD gateway examines the recipient's phone number and determines the appropriate international route for delivering the message. This involves considering factors such as cost, quality, and available network capacity.

ii. **Delivery to Local Service Provider:** The ILD gateway forwards the message to the local service provider in the recipient's country, using established interconnection agreements and protocols.

3. **Existing Regulatory and Licensing Provisions:**

a. Clause no. 2.14 of the paper states that the Unified License agreement does not provide a definition of international traffic whereas paras 36 and 37 of Annexure I (Definition of Terms and expression) of the Unified License agreement provide the definitions on ILD network and ILD service. The definition of ILD Network is reproduced as below for ease of reference:

*"36. INTERNATIONAL LONG-DISTANCE NETWORK means a network of transmission and switching elements connected in a predetermined fashion to provide international bandwidth/ switched bearer interconnection from/ to POP of the ILD Service Provider **to/ from the international destination**."*

b. **Therefore, it already means that any traffic which comes from / goes to international destination, would have to be treated as international traffic and thus, a lawful activity to be carried out under ILD authorization only.**

c. Further, clause 8 of Chapter IV on "Functions of Access Providers" of the TCCCPR, 2018 states as below:

Every Access Provider shall undertake following activities in accordance with the provisions of these regulations before allowing any commercial communication through its network(s):-

(1) Develop Code(s) of Practice to establish system and make arrangements to govern the specified activities: -

(a) Code of Practice for Entities of ecosystem (CoP-Entities) as per Schedule-I;
(b) Code of Practice for Registration of preference(s), recording consent(s) and revocation of consent(s) (CoP-Preference) as per Schedule-II;
(c) Code of Practice for Complaint Handling (CoP-Complaints) as per Schedule-III;
(d) Code of Practice for Unsolicited Commercial Communications Detection (CoP-UCC_Detect) as per Schedule-IV;
(e) Code of Practice for monthly reporting (CoP-Reports) as per Schedule-V

d. Based on the above, we understand that some of the TSPs have defined International SMS in their Code of Practice, extract of which is given below. It is pertinent to mention that both the regulatory framework and licensing framework are interlinked and this definition in the CoP is consistent with the prevalent licensing norms related to international messages.

International SMS: Any data/application/system/servers etc. which influences, generates, control, facilitate or enable the generation, dissemination/ transmission of messages from a location outside the territory of India will constitute as International messages. Any mirroring solution in India shall not impact and/or change the nature of such International SMS to national SMS.

e. In this regard, we have communicated during various meetings at TRAI and DoT that we support the above mentioned definition of International SMS and would like to add that definition for International traffic will also be similar to this.

f. In addition to the above, clause 19 of Chapter V on "Obligations of Service Providers" of the TCCCPR, 2018 provides as follows:

The Authority reserves the right to formulate a standard Code(s) of Practice in case the formulated CoP is deficient to serve the purposes of these regulations.

g. **In this regard, we would like to mention that these CoPs (along with the definitions of International SMS) stand valid till today and are compliant to the provisions of TCCCPR 2018. Therefore, there is no new definition of International traffic required in this regard.**

4. **Grey Market:**

a. For further deliberating on the clarifications required w.r.t. SMS originated by foreign servers, it is imperative to examine the gray market pattern across voice and SMS.

b. "Grey calling route" has been one of the most common telecom fraud whereby international calls are masqueraded as domestic calls through unlicensed and illegal telecom set-ups thereby, bypassing licensed ILDOs. In such cases, the voice call originates outside India, is brought over Internet and pushed/patched into the Indian telecom networks through a domestic number.

c. **Such routing setup poses serious threat to national security as well as such routing of calls siphon away a major chunk of revenue which otherwise could have accrued to the TSPs and thus, to Indian Government in shape of levies and taxes.**

d. The existence of this activity was evidenced and has been acted upon by DoT and its field units along with the LEAs for past more than decades. Also, such grey market detection is part of charter of field units of DoT as issued by DoT on April 20, 2018, extract[1] as below:

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[1] https://dot.gov.in/sites/default/files/CharterOfDuties.pdf

> *"Security: Security Audit, CMS, **Grey Market detection,** etc.*
> *(i) Matters related to national security and Lawful Interception*
> *(ii) Act as technical interface between Security Agencies and Telecom Service Providers*
> *(iii) Operation and Maintenance of CMS/ IMS*
> ***(iv) Curbing illegal activities/ Control over clandestine/ illegal operation of telecom networks***
> *…….."*

e. **SMS gray route:** SMS gray route is similar to voice gray route, and is designed to transmit international SMS traffic masqueraded as domestic, by having illegal set-ups in India. Such activities bypassing ILDOs is a national security risk and leads to revenue leakage for TSPs as well as Government.

f. Kindly see below diagram/architecture illustrating gray route for SMS (as intended to be followed by the entities which approached TRAI first) is principally same as gray route for voice calls.

Gray Route for Voice Calls
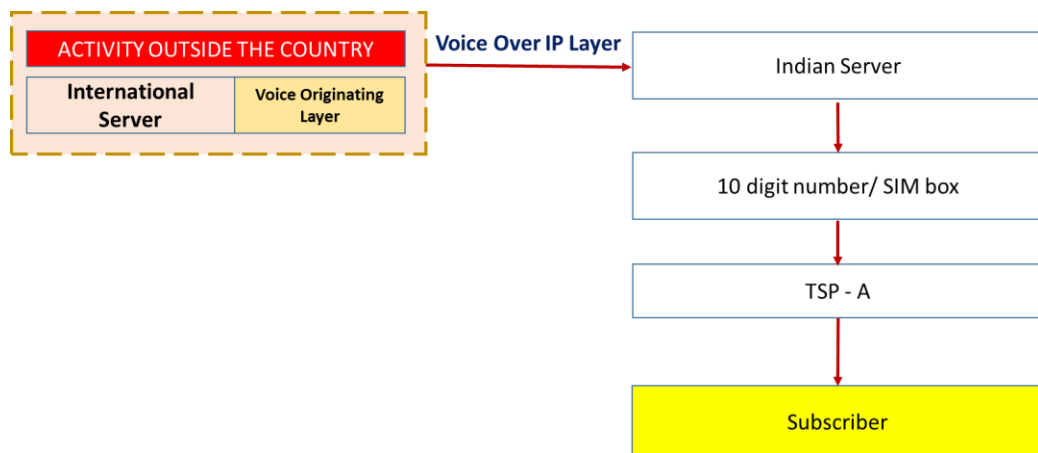
Gray Route for SMS
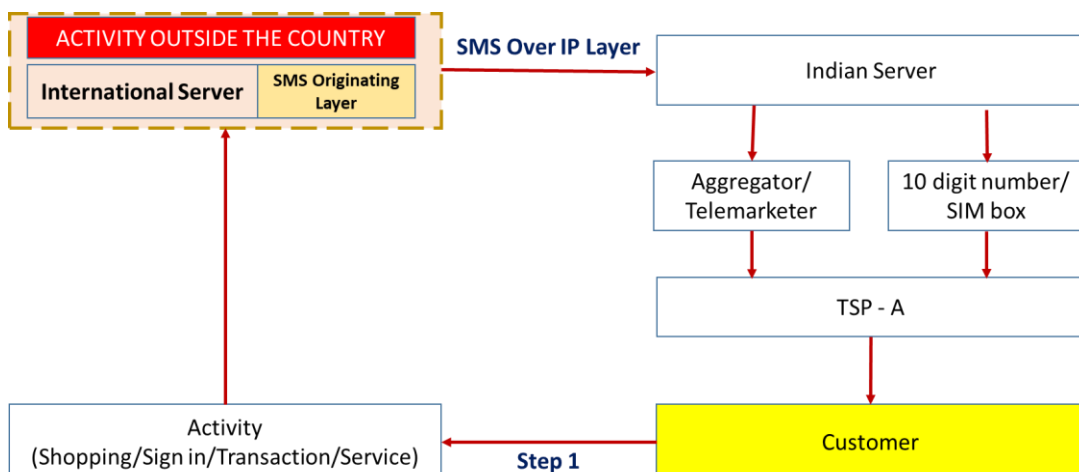
g. Comparison of both the above diagrams shows that the activity being carried out by business entities also come under the same ambit since the transfer of information is being carried outside Indian geography.

h. Since, gray route for voice was considered as a threat to national security as well as leakage of TSPs and Government revenues, similarly, gray route for SMS also deserves to be seen from the same prism, for both scenarios i.e. SMS originated from international servers and terminating on Indian customer as well as SMS originated from Indian server and terminating on International customers.

i. Such activities by various entities clearly bring out that it is therefore the physical location of the main servers hosting the source application which is the criteria to define whether the nature of SMS is national or international. The existing licensing framework for international messages specify that the same has to be routed via licensed ILDOs.

j. **Therefore, in case of SMSs, the location of servers which are originating such SMSs, is very important and need to be carefully looked into. Such SMS traffic carried out by international entities is similar to grey voice call routing and any SMS traffic which comes from / goes to international destinations, would have to be treated as international SMS traffic and thus, a lawful activity to be carried out through ILDO route only.**

5. **Areas of Ambiguity:**

   a. **International Traffic being considered Domestic by some Entities:**

      i. Certain international entities are generating traffic in terms of SMS from their servers located outside India, but claiming that such traffic should be treated as Domestic, since international traffic results in higher tariffs than domestic traffic. Businesses carried out by such entities are well supported by their servers which are responsible to initiate the entire transaction starting from the activity when the customer signs up on the account, authenticates using OTPs or carries out an e-commerce transaction, swipes credit card details and upon completion, receives SMS informing of the completion of purchase etc. Further, subsequent updates till the goods are delivered via the main application which activates and controls the transactions are also catered by such servers and we understand that these servers are not located in India.

      ii. Such entities carry out all the business related activities through their applications which perform operations like prompting/controlling and sending information and customer interactions back and forth to the servers outside India. Thus, their Indian infrastructure acts as mere transmission channel only, which collate the traffic (SMS) triggers generated outside and terminate to access networks in India which includes all the TSPs.

iii. We understand that these entities have made selective representation to the Government which highlight only some part of the content being transmitted in India but have not mentioned the role and location of their servers. Plain dissemination of content via proxy servers through telemarketers, shipping agents, DSAs or through other channels cannot be classified into domestic SMS.

iv. Keeping above in mind and considering the advancement in technologies and complex architecture of proxy servers followed by certain entities, as explained above, giving a definition of International traffic would always have chances of it becoming outdated or else would also give chance to entities for bypassing the same.

v. **Therefore, we highly recommend that no separate definition is required for International traffic instead, TRAI may opt for issuing clarifications on following areas of ambiguities and/or issue guiding principles in this regard.**

b. **Clarifications required** in terms of the treatment to be given to the traffic from following entities (should be seen for both the scenarios i.e. SMS originated from international servers and terminating on Indian customers as well as SMS originated from Indian server and terminating on International customers.):

i. Domestic entities acquired by international entities and vice-versa.
ii. International entities whose products are made or assembled in India.
iii. International entities that sell their goods or services in India.
iv. Entities registered outside of India and operating in India.
v. Embassies, visa service centers, etc. that send information outside of India. Currently the traffic for all these entities is sent via domestic route.

6. **Final Submissions:**

a. <u>**International services/Network already defined under UL (ILDO):**</u>

i. **The present licensing and regulatory norms are adequate to bifurcate between domestic and international SMS.**

ii. **There is no new definition of International traffic required in this regard. TRAI should opt for laying down guiding principles on traffic being handled by International servers/entities.**

iii. **The Authority should clarify that SMS originated outside India (P2P or A2P through servers) and terminating on Indian consumers, would have to be treated as international incoming traffic and has to be brought inside India through ILD authorization only. Similarly SMS originated from India (P2P or A2P through servers) and terminating on International numbers, would have**

to be treated as international outgoing traffic and has to be carried outside India through ILD authorization only.

iv. We also request the Authority to provide clarification in terms of the treatment to be given to the following entities in respect of International traffic:

- Domestic entities acquired by international entities and vice-versa.
- International entities whose products are made or assembled in India.
- International entities that sell their goods or services in India.
- Entities registered outside of India and operating in India.
- Embassies, visa service centers, etc. that send information outside of India. Currently the traffic for all these entities is sent via domestic route.

v. However, if TRAI considers defining it to be important, in our view, the definition of International SMS as defined by TSPs in their Code of Practice can be used to build the similar definition for International traffic. Also, TRAI should look into following factors/criteria while consulting upon as well as deciding its recommendation on definition of International and Domestic SMS.

- Location of server or any entity exercising control/decision/influence on the content of SMS (message), in partial or in full.
- Location of server or any entity exercising control/decision/influence on the originating/terminating party number, in partial or in full.
- Location of server or any entity exercising control/decision/influence on the decision pertaining to the termination of the message, in partial or in full.

Q3. Since the terms 'Inter circle traffic' and 'Intra circle traffic' are already defined in the telecommunication service license agreements, whether there is still a need to define the term 'domestic traffic' in the telecommunication service license agreements? If yes, what should be the definition of the term 'domestic traffic'? Kindly provide your response with a detailed justification.

VIL Comments to Q. no. 3

1. We would like to submit that the current telecom network architecture in India has been well established by all the TSPs based on the terminologies defined in their respective license and authorizations and we believe that there is no market need to this extent.

2. The terms "Inter circle traffic" and Intra circle traffic" jointly constitute "domestic traffic" and their definitions already clarify the term "domestic traffic" and serve the purpose for managing such traffic.

3. **Any such new definition would lead to amendments in the Unified License and other Authorizations which need to be avoided to prevent confusion and interpretation issues that may arise.**

4. **In our view, there is no market requirement to define the term 'domestic traffic' in the telecommunication service license agreements and any new amendments should be avoided.**

Q4. Whether there are any other issues/ suggestions relevant to the subject? If yes, the same may kindly be furnished with proper justification.

VIL Comments to Q. no. 4

1. **Clarification required:** As submitted in our comments to question no. 1 and 2, we request the Authority to provide clarification in terms of the treatment to be given to the following entities in respect of International traffic:

   a. Domestic entities acquired by international entities and vice-versa.
   b. International entities whose products are made or assembled in India.
   c. International entities that sell their goods or services in India.
   d. Entities registered outside of India and operating in India.
   e. Embassies, visa service centers, etc. that send information outside of India. Currently the traffic for all these entities is sent via domestic route.

2. **Regulating OTT communication service providers:**

   a. OTT communication service providers provide similar services outside the ambit of Licensing and Regulatory ecosystem and are presently not mandated to adhere to any regulatory obligations. These providers have also been generating spam, with non-transparent policies and practices.

   b. TSPs have to follow huge set of licensing and regulatory norms for providing communication services i.e. to preserve consumer's interest related to transparency, privacy and reducing spam, meet national security requirements, follow various standards and to also share levies and duties. However, the OTT communication service providers are not required to follow any such norms and they continue to run their services unregulated leading to no tangible recourse for consumers, risks on national security and also creating non-level playing field for TSPs.

   c. Therefore, we strongly urge the Authority for upholding level playing field by regulating the OTT communication services and recommending a licensing and regulatory framework as is applicable for TSPs. While we note that Authority has issued a consultation paper in this regard, however, above is being brought to the attention of Authority as it is linked to this topic as well.

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