Re: Counter Comments by Dua Consulting on the Consultation Paper dated September 16, 2019 on "Duration of alert for the called party".

From: Dua Consulting
Date: October 7, 2019

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1. Introduction

TRAI's consultation paper dated 16th September2019 on "Duration of alert for the called party" ("**Consultation Paper**")provides background aspects relating to duration of the "call ring" including standards and practices being followed by both, domestic and international telecom service providers and discusses an approach to discover appropriate duration of the ring call and poses certain issues for consultation. While a number of stakeholders have provided their viewpoints, through this note, we are providing our counter-comments on the suggestions made which are detailed below.

2. Key considerations

2.1 The Consultation Paper has been studied in light of the international as well as domestic practice standards prescribed by Agencies and followed by Telecom/Mobile Service providers across some of the countries and in reference to the prevailing legal framework in India.

2.2 It is felt that some principal issues that need to be re-considered are:

a) Whether India should follow the international standard as prescribed by 3GPP / ITU in respect of duration of "call ring". This may include responsibilities and accountabilities of calling/called parties and service providers.

(b) Whether a standard be prescribed afresh leaving the existing practice of duration of 30 second in respect of a "call ring" and also the existing framework applicable to calling/called parties and service providers.

c) The mechanism to enforce the standards and best practices which is now proposed to be prescribed by the TRAI

(d) Penalty in case of non-compliance of the standards / regulations / best practices prescribed by the TRAI

2.3 The communication technology is undergoing tremendous transformation and innovation both with respect to protocols, architecture and application. Unlike in the past where different service providers were using different technologies and architecture for different applications namely packet switching / circuit switching etc., service provider in India and world-wide are now using similar standards and technologies both in respect of transmission and access through any media. This will get complicated with the telephone service provider moving to the next generation 5G technology. 5G technology and future versions of communication standards will use a mix of, both transmission and access through, any media. Such transmission

will have seamless global connectivity using heterogeneous devices connected to the communication network.

In such an environment, it is imperative that India should proceed towards following the international standards and best practices, including, in respect of duration of alerts for "called party",

TRAI in our opinion must prescribe the standards in respect of duration of alert for the called party as has been prescribed by 3GPP and ITU.

2.4 The existing practice in respect of duration of alert for the called party is a more customary and weak practice. There is no binding requirement on the service provider serving both calling and called party to adhere to the prevalent practice of 30 seconds. This is reflected from the Consultation Paper of TRAI as TSPs have reduced the duration of alert for the called party from 30 seconds to 20 seconds on certain grounds.

2.5 It is therefore imperative that standard protocols and practices in respect of duration of alert for the called party as may be proposed and specified by TRAI be enforced in letter and spirit. The standard and protocol to be prescribed by TRAI must provide that the called party as well as the service providers supporting the called party and calling party should not have any right to change/tamper/disconnect the "call ring" by using any technological mechanism including automatic mechanism. The called party should only have the right to disconnect the call at any point of time during the ringing of the call, unless the calling party decides to disconnect.

2.6 It may be mentioned here that billions of devices will get connected with a common communication network many of which will have embedded SIMs.

2.7 It is therefore necessary that India should consider the issue regarding the duration of alert of the called party in light of the innovation and transmission in the communication technology. It is a fact that world is moving towards convergence technology, convergence of processes and best practices. Mobility is the direction of the future.

2.8 In such a converged technological world, any citizen may use any device either for calling or receiving calls from anywhere in the world. Such calls could be IP enabled.

2.9 TRAI must enforce the standard and compliance in respect of protocols, standard and best practices laid down by them as an outcome of the Consultation Paper.

2.10 Non-compliance of the standards, protocols and best practices which may be prescribed by TRAI must attract appropriate penalty. Service Providers not complying with the standards, protocols and best practices must pay the penalty to be prescribed by TRAI. It may be mentioned that disconnection/tampering of the call ring initiated by the calling party by the service provider violates the right of the calling party apart from non-compliance of the standard prescribed in this regard by TRAI. An appropriate framework may be needed to address this issue in legal terms.

2.11 Section 79 of the Information Technology Act, 2000 provides for exemption of liabilities to intermediaries. Mobile and telephone service providers are also classified as intermediaries.

Section 79 (2) provides the following:

a) the function of the intermediary is limited to providing access to a communication system over which information made available by third parties is transmitted or temporarily stored or hosted; or,

b) the intermediary does not

i) initiate the transmission,
ii) select the receiver of the transmission, and
iii) select or modify the information contained in the transmission;

c) the intermediary observes due diligence while discharging his duties under this Act and also observes such other guidelines as the Central Government may prescribe in this behalf."

This Section should be made applicable for violation or non-compliance of the standards, protocols and best practices as may be prescribed by the TRAI. Disconnection of "call / call ring" through any mechanism by the service provider may be taken as violation of the right of the calling and called party. It should be treated at par with interception and interference with the rights of the calling and called party and an appropriate legal framework as prevailing in India be made applicable.

3. Counter Comments by Dua Consulting

3.1 Arbitrary value of $T_{ringing}$ impacting the consumer experience.

a) All Telecommunication Service Providers (**TSPs**) having provided their view that arbitrarily reducing the $T_{ringing}$ value will adversely affect the consumer experience. TSPs are of the view that the $T_{ringing}$ value should be standardized for all operators as it would lead to better utilization of resources by the terminating operator. One TSP (BSNL) cites a sample analysis to state that 95 percent of the calls are answered in the first 30 seconds. Reducing the $T_{ringing}$ below 30 seconds might lead to drop in the Answer-Seizure Ratio (**ASR**) which will adversely impact the network resource utilization.

b) We are also of the opinion that preparing a standard statistical questionnaire to be filled by all TSPs containing the time taken to answer a call, and a subsequent rate of ASR at such specified timeframes could best explain the impact of $T_{ringing}$ on the customer.

3.2 Appropriate values of Tringing from the customer's perspective

a) One of the TSP (Bharti Airtel) stated that a reduction in TRinging value from 30 seconds to 20 seconds has resulted into an increased variation of calls among TSPs by approximately 5.7%and is of the view that the $T_{ringing}$ value be retained at 30 seconds. ASR is a direct reflection of the customer behaviour and will help in setting the $T_{ringing}$ value. Another TSP it says that $T_{ringing}$ value should not be less than 30 seconds to provide consistent customer experience in international roaming. Other

TSPs are of a view that $T_{ringing}$ value should only be set after a detailed study on the customer behaviour with respect to the ASR.

b) We are of the view that a statistical data mining is required from all TSPs before a final opinion is taken on $T_{ringing}$. We may also take public poll of individual stakeholders, also provisioning for them to subjectively mention other pain points so that they may be addressed while drafting a policy in this regard.

3.3 Typical values for $T_{ringing}$

a) All TSPs are of the view that the $T_{ringing}$ value should not be less than 30 seconds and the $T_{ringing}$ value of the originating operator should not be less than the $T_{ringing}$ value for the terminating operator. If the $T_{ringing}$ value for the originating operator is less than the $T_{ringing}$ value for the terminating operator, it would lead to failure in services such as call forwarding which cannot be adjusted over the air. One Operator (Bharti Airtel) suggests that the $T_{ringing}$ value for the originating value should be 75 seconds and terminating operator should be 45 seconds. According to the TSP (Bharti Airtel) the 30 second difference in $T_{ringing}$ value would help in call forwarding in case of no answer. Another operator (MTNL) suggest the $T_{ringing}$ value should be 60 seconds as large portion of Public Switched Telephone Network (**PSTN**) traffic is toll free traffic with multiple mapped numbers.

b) All TSP except two (Reliance Jio and Vodafone Idea Network) suggest that the $T_{ringing}$ value should be standardized by the TRAI. Vodafone Idea Network suggests that TRAI should interfere only if the $T_{ringing}$ of the originating operator is less than the $T_{ringing}$ value of the terminating operator. Reliance Jio says that $T_{ringing}$ value has never been the same across networks and the same is changed by TSPs after discussion.

c) In our opinion, there is a requirement to configure values of timers relating to ringing in a uniform manner. Such standards may form a part of Quality of Service directives that have to be followed my all TSPs and allowing variability in the services may act as elements of oversight.

3.4 Options to change or modify the duration of ringing time.

a) All TSPs except one (Reliance Jio) are of the view that customer need not be offered the option of changing or modifying the $T_{ringing}$ value. They say that the control of disconnecting the call should be with the originating customer and not with the TSP. The originating customer can disconnect the call whenever it wants to by pressing the disconnect button. Moreover, as the services like voice mail are not prevalent in India, customizing the $T_{ringing}$ value in India will not be useful for the customer and might lead to additional costs. One TSP Reliance Jio says that such service can be provided at the self-care level. Customer can be given the option of increasing the value by 10-15 seconds in trenches of 5 seconds.

b) Choice of consumer may not be viable as it may be difficult to match the duration of the originating and terminating operator, leaving a greater room for ambiguity. In case such ambiguity could be eradicated, Customers may additionally apply for modification of the duration of their ringing time by dialling a particular code, as is followed in other countries.

3.5 Appropriate values of percentage of calls that can be force released by the network i.e. value of C_{REL}, which may be acceptable in general from customer's perspective

a) C_{REL} cannot be determined in isolation from a customer's perspective alone. It is important to ascertain what value of the C_{REL} would derive maximum benefits to both, the customers and include optimum utilisation of spectrum resources as well as network capacities, and a comprehensive and corrective optimisation needs to be carried out. A voice call is setup in multiple sates and the radio spectrum resources are engaged and release only when the call is disconnected. It was also suggested by one TSP that that the Integrated Services Digital Network User Part (**ISUP**) needs to be analysed to ascertain the practical limitations.

b) In the opinion of one of the TSPs, in order to optimally utilise the $T_{ringing}$ values and C_{REL} values to create an optimal user experience, $T_{ringing}$ value should be set as minimum 30 seconds at the terminating side. Another statistical value by a TSP states that reducing the $T_{ringing}$ time by 10 seconds resulted in an additional call capacity of 46 Crore calls per day.

c) Appropriate time values can be arrived at by analysing the time range in which most of the calls are answered, resulting to an equilibrium point where, at a low $T_{ringing}$ value, there is not an exponential C_{REL} value

3.6 Impact on the utilization of different types of telecommunication resources such as radio spectrum, point of interconnect etc. may be assessed due to the change in the values of timers, related to duration of ringing, configured at originating network or at terminating network

a) On the basis of the research done by several TSPs, increasing the ringing time reduces the ASR substantially. Another research also depicted that an increase in the ringing timing causes a heavy impact on the voice capacity utilisation and Spectrum capacity. And while the increase in ringing timer explains the needed increase in voice capacity, it does not explain impact on the effect of terminating cost and time, concluding that it has little or no effect on network resources. Further, some stakeholder stated that various call scenarios spread across network covering local, NLD, ILD calls are required to be analysed to validate the appropriate timer values.

b) One TSP (Reliance Jio) was of the opinion that they provide unlimited calling to all their customers, which tends customers belonging to other telecom service providers to give a missed call, and this ratio is considered to be very high, spanning between 20% to 25% missed calls resulting in a very high cost per day, and the same cannot be justified other operators when they state the loss on missed call since they have high per second charging rates. While we may agree to this situation at the erstwhile telecom practices on the launch of new services by this TSP, the bundling of services has caused TSPs to reduce the cost of calling, enabling a flat rate for calls, sizably reducing such rate of missed calls.

Network design is based on all these considerations as mentioned above. As has been observed internationally, most countries are adopting upto 30 seconds. Further reducing this time may not be very beneficial in our opinion since, in case of forced termination, the other party will re-dial, what the TSPs want to then save and optimise shall not cause the desired impact due to increased ASRs only causing a further stress on TSPs. It is pertinent to note that the called party termination must

never be less than the caller party and is a violation under Section 79 of the Information Technology Act, 2000. It is necessary to have mechanisms in place that ensures that the same is implemented uncompromisingly.

3.7 Network adaptive by utilizing Artificial Intelligence (AI) and Machine Learning (ML) techniques to discover appropriate value of ringing duration specific to a subscriber or class of subscriber

a) Most TSPs were in the favour of exploring AI and ML techniques to discover appropriate value of ringing duration specific to a class of subscribers in the nature of data mining.

b) We believe there not a requirement to adapt new techniques to discover a specific ringing duration since this is a onetime analysis based on the historical reports of records collected and sorted by all Unified License Holders. It may be discretionary to each TSP on the method of providing such data and the analysis may be done based on the aggregate report received.

c) In our opinion the ring duration may be demarcated based in the numbering scheme the telecom provider provides to specific devices. For instance, the $T_{ringing}$ may be shorter in case of M2M PSTN communication but may be longer in case of connection with a Landline system which rings at a fixed location, allowing the customer more time to respond to the line.

d) Such segregation may be done based on numbering schemes. Forced termination should be barred as a part of such quality of service and the policy must be framed in such a manner to allow the termination.

3.8 Other issues

a) Non-compliance of the standards, protocols and best practices which may be prescribed by TRAI must be non-negotiable and accordingly attract appropriate penalty. TSPs not complying with the standards, protocols and best practices must pay the penalty to be prescribed by TRAI. It may be mentioned that disconnection/tampering of the call ring initiated by the calling party by the service provider violates the right of the calling party apart from non-compliance of the standard prescribed in this regard by TRAI. Actions such as forced termination also need strong action in order to ensure less loss to TSPs and a better user experience. An appropriate framework needs to be created in order to ensure the best utilisation of resources and the creation of a forum where the customers may easily address their Quality of Service grievances.

b) A stakeholder has also stated that one must take a holistic approach to the issue of call completion, abandoned call, progress tone, and paging time, ensuring to serve the overall customer call experience. This consultation Paper may further give way to a new series of Consultations in order to study and streamline consumer experience and leeway for providing innovation in services in this continually technically acing industry leading to service provider resource optimisation.