

**RELIANCE JIO INFOCOMM LTD'S COMMENTS ON TRAI'S CONSULTATION PAPER ON  
"DURATION OF ALERT FOR THE CALLED PARTY"  
(Consultation Paper Dated 16<sup>th</sup> September 2019)**

**General Comments:**

1. At the outset, we thank the Authority for issuing this consultation paper to take stakeholders views on the issues pertaining to fixation of the duration of alert for the called part.
2. As mentioned by the Authority, this timer for domestic calls has not been regulated by any of the regulatory bodies in the country. Neither Telecommunication Engineering Centre (TEC) nor Department of Telecommunications (DOT) has ever chosen to comment on the same for want of any need to do so. Further, it is evident from the consultation paper that the Authority has also, so far, taken a considered position that the determination of the duration of alert for the called party, does not require regulation and has chosen to never discuss the same.
3. The considered regulatory position so far has been that such timers fall within the domain of the commercial freedom accorded to telecom service providers (TSPs). Thus, the network operators have been at liberty to set this timer as per their convenience in order to optimize the consumer experience. Reliance Jio Infocomm Limited (RJIL) submits that this policy should continue in the interest of light touch regulation and forbearance.
4. Further, with regards to the recent discussions under the auspices of the Authority, it appears that the Authority also favours consensual approach to this issue. RJIL is also favourable to consensus among all operators. However, as there seems to be various considerations at play hindering consensus, another approach can be continuation of forbearance with reference guidelines for the timers by the Authority instead of fixed exact numbers.
5. In India, we have seen different timers for this parameter operating simultaneously across operators without any issues or objections by any of the stakeholders. Further, the TSPs have also never felt compelled to disclose this timer to other parties. For instance, we understand that both Vodafone Idea Ltd and MTNL have implemented timers ranging from 30 seconds to 45 seconds as the duration of alert for the called party, consistent with the above position, without informing the other TSPs and needless to state without any complaints reported by the consumers.



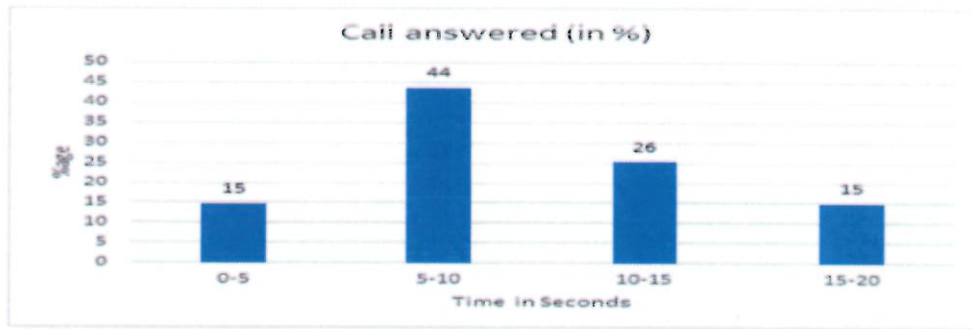
6. Further, as the Authority has noted in the consultation paper, even the international bodies like International Telecommunication Union (“ITU”), European Telecommunications Standards Institute (“ETSI”), GSM Association (“GSMA”), 3rd Generation Partnership Project (“3GPP”) etc. have also not chosen to delve and much less intervene in this issue except for ITU suggesting the values for international long distance calls.
7. Furthermore, the Authority has also recognized the relevance of this alert timer to the optimum utilization of spectrum resources. The Authority notes that

*“In mobile networks, the maximum time allowed to the called party to answer the call takes on more importance as the alerting phase also engages scarce radio spectrum resources. Ringing or alerting for a long time, when called party is unlikely to answer the call, would led to non-optimal utilization of resources.”*

8. Therefore, we understand that the Regulatory wisdom has been that the calibrated and well analyzed reduction in the call ringing timer, only to the extent of avoiding the wastage of precious resources, would enhance the efficient utilization of scarce spectrum resources, in mobile networks. As the spectrum is the most valuable resource of a TSP, availed at very high market prices, the TSPs should have a solemn right as well as obligation to utilize the same in the most optimum manner.
9. We further submit that as noted by the Authority, internationally this parameter is kept at the discretion of the service providers and many leading operators keep this value at minimal levels close to 20 seconds. In fact, in many cases the duration of alert is less than 15 seconds, the prime example being United Kingdom. Similarly, in Australia, Telstra and Optus and, Vodafone in the United Kingdom, have configured their networks with a ringing duration as 15 seconds while AT&T in USA has set default value as 20 seconds. Of course, some of these networks give flexibility to the subscribers to alter this value to some extent and the same can be discussed in Indian context as well, if required.
10. As already submitted to the Authority, RJIL believes that the optimum value of this timer is 20 seconds. We have carried out an extensive analysis based on the number of calls being answered within different timelines in our network. We submit that there is no logic of keeping these limits at higher side as the handheld devices are generally kept very close to the users and most calls are being answered within 15 seconds as demonstrated by the following chart.







11. Thus, in order to optimize the spectrum resources and considering the proximity of the handheld device to the customer network resources without compromising customer experience and basis the histogram analysis of time to answer, RJIL had implemented this timer at 20 seconds. Further, as mentioned above, we came to understand during the TRAI meetings that prior to such implementation by RJIL, Vodafone and MTNL had already done similar exercises and configured this timer to 30 seconds in selective service areas. Pertinently, in none of these cases, the operator carrying out this exercise informed any other operators or the TRAI of the change and rightly so, as this was not required, as no one was affected in any manner.
12. We further submit that this change has not affected any other quality of service parameters and it has only had a positive effect of optimum use of spectrum resources. We have also compared the Answer to Seizure Ratio (ASR) both prior to and after the change and found no sizable differences.

ASR Details	Date	ASR
<b>ASR before change in Timer value</b>	01-07-2019	47.38
	02-07-2019	47.14
	03-07-2019	47.52
<b>ASR after change in ringing timer</b>	01-08-2019	46.56
	02-08-2019	47.12
	03-08-2019	47.05

13. Further, we submit that we are not getting any complaints from the subscribers on this implementation and are rather surprised with the other operators raising this issue, because there is no plausible negative impact on them. Even if all of such claims and data is accepted at face value, it is surprising to note that these operators are



more concerned by paltry increase in RJIL's IUC revenue whereas in reality they would be realizing much higher revenue due to the increased outgoing calling by their subscribers, most of whom are on a pulse-based charging plan.

14. We further submit that a longer ringing timer does not only annoy mobile phone users (who generally have ready access to their mobile phones), but also leads to inefficient use of spectrum. We have already submitted to the Authority as to how the spectrum will be available to more customers for their usage leading to higher customer satisfaction if the duration of alert for the called party was reduced. Therefore, we request the Authority to leave this issue under forbearance.
15. We also reiterate our submissions that, if at all a value for this parameter is to be specified, it should be done post a detailed study by a technical committee comprising of experts from DOT and TEC. This is due to the fact that this is more of a technical issue rather than regulatory issue and such technical committee can take into consideration every aspect including international trends and practices, the defined parameter's impact on network resources, spectrum efficiency, subscriber expectations and behaviour.

**16. Conclusion:**

- 1. The Authority should keep the duration of alert for called party under forbearance and there is no need for any regulatory intervention.**
- 2. If at all the Authority deems fit to specify in this issue, the same should be in the form of a reference guideline and not in the form of a mandated value.**
- 3. In such case, the range of 20 seconds to 25 seconds may be prescribed as reference guideline.**
- 4. In case the Authority still decides to fix a value for the alert timer, the same should be done only post a detailed study by a technical committee comprising of experts from DOT and TEC.**



issue wise response:

**Q. 1. Can the arbitrary value of  $T_{\text{Ringing}}$  impacts consumer experience? Please give your views with detailed justifications.**

And

**Q. 2. How to discover the appropriate values of  $T_{\text{Ringing}}$  from customer's perspective? What may be the guidelines to be followed when configuring specific values of relevant timers in the originating and terminating networks to achieve  $T_{\text{Ringing}}$ ? Please give your views with detailed justifications**

**RJIL Response:**

1. We submit that the value of  $T_{\text{Ringing}}$  should never be set in an arbitrary manner. This is an important consumer experience related parameter and the networks should consider all relevant factors before settling on a value. We submit that this value should be well researched and well-reasoned so that the needs of majority of subscribers are catered alongwith the optimum use of network and spectrum resources.
2. For instance, RJIL carried out a detailed research of the calls being answered in its network and set this value at 20 seconds in a phase wise calibrated manner. RJIL continued to monitor any cases of customer complaints and when it found that there was minimal impact on customers, this parameter was implemented all across for outgoing calls. We understand that similar changes have been carried out by Vodafone and MTNL in the past without any visible or reported cases of consumer discomfit.
3. We submit that first step of the ideal method to discover this value from consumer perspective is the histogram analysis of the current calls being answered in the network. The service provider then needs to finalize the optimum value of this histogram and implement the timer in a calibrated and phased manner. Next important step is to monitor any customer issues being reported at any level of such implementation and taking corrective action as the timer is implemented for all calls.
4. As mentioned in the General Comments, internationally as well as in India, so far this timer has been left to the discretion of the service providers and the same needs to be continued.
5. We submit that any reasonable and well planned and executed reduction in this timer would have minimal impact on consumers. Another connected false issue being raised is the assumed impact on the nature of the POI traffic. We submit that this timer would not alter the nature of traffic at POIs substantially. Further, we submit that it is





inexplicable to understand that why an operator would worry about termination charges of 6 paise when the same operator would be realizing much higher revenue due to the increased outgoing calling by its subscribers, most of whom are on a pulse-based charging plan as high as Rs.1.50 per minute. Therefore, we request the Authority to ignore any such submission and to not mandate a fixed value for this parameter.

6. We request the Authority to keep this parameter under forbearance and in case required, prescribe a range of 20-25 seconds as guidance value for this timer, as submitted earlier as well. Further, in case the Authority still decides wishes to fix a value for the alert timer, the same should be done only post a detailed study by a technical committee comprising of DOT, TRAI and TEC.

**Q. 3. Is there a requirement to configure values of timers related to ringing in a uniform manner across the networks or is there also a requirement to maintain additional time margins for the timer in the originating network with respect to the typical values of timer configured in the terminating networks? Please suggest typical values for  $T_{\text{Ringing}}$  along with supporting data and explain with detailed justifications.**

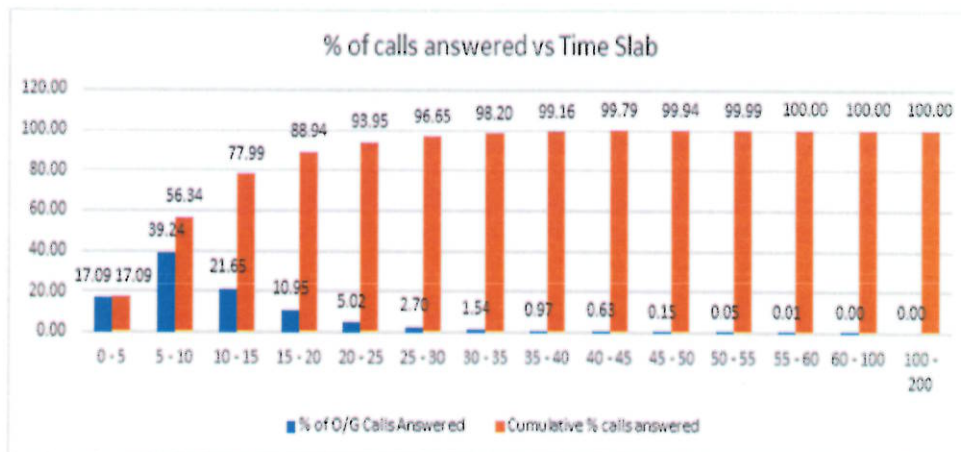
**RJIL Response:**

1. We submit that there is no requirement of configuring the  $T_{\text{Ringing}}$  value uniformly across the networks, each network should be free to set the appropriate values as determined by it in a scientific manner.
2. We also submit that there is no need to prescribe the requirement to maintain additional time margins for the timer in the originating network with respect to the typical values of timer configured in the terminating networks. The networks interact among each other and these values are adjusted in an unobtrusive manner.
3. The  $T_{\text{Ringing}}$  value has never been same across the networks, as is evident from the minutes of meeting held by the Authority on this subject. Vodafone and MTNL have implemented values ranging from 30 seconds to 45 seconds, without any issues being raised by any other parties. Other networks like Airtel have mentioned very high values. Thus, forbearance has worked well as far as this timer is considered.
4. In fact, the only time an issue has been raised is against the current implementation by RJIL. Even this is clearly a case of vested interests and nothing else, as RJIL has done complete due diligence of all possible customer and network centric issues. As expected, we have not faced any customer issues and even the alleged customer



issues being faced by one operator remain unsubstantiated, the Authority may validate such claims and not take the same on face value.

- Further, with regards to our analysis, we are hereby reproducing the histogram analysis already submitted with the Authority.



It is evident, that 20 seconds is the optimum value as most calls are being answered in this timeline.

**Q. 4. Whether customers need to be offered options to change or modify the duration of ringing time particularly for them? If yes what should be the typical range of values within which one can set the values and what should be the granularity to make such a change? To modify values, What procedure is suggested to be followed by the customer to make such changes? Please give your views with detailed justifications.**

**RJIL Response:**

- The  $T_{\text{Ringing}}$  value is set to accommodate the normal behaviour in answering of calls for most customers. However, we agree with the TRAI that there can be customers that do not fall into the parameters suitable for the majority and may require a longer or shorter  $T_{\text{Ringing}}$  time, for instance the cases of, old people, phone in handbag scenario etc.
- We submit that the customers can be enabled with the facility of alter the  $T_{\text{Ringing}}$  timer to some extent. We understand that in case the default setting is 20 seconds, then the customers can be enabled to increase/decrease the same by 10-15 seconds. This can be provided in tranches of 5 seconds. In order to enable maximum customers enjoying this facility, this can be enabled at the self-care level, where the customer can alter the timer at their will.





**Q. 5. How to discover the 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? How this value affects with the changes in value of the  $T_{Ringing}$ ? Please suggest typical values for  $C_{REL}$  along with supporting data and explain with detailed justifications.**

**RJIL Response:**

1. We submit that the appropriate value of  $C_{REL}$  cannot be determined in isolation from a customer's perspective. The most important aspect of this determination would be ascertaining as to what value of the  $C_{REL}$  would deliver the maximum benefits to the customer from all aspects and that will include the optimum utilization spectrum resources as well as optimization of network capacities instead of a singular aspect as to whether a particular call was answered or became a missed call.
2. We have already submitted a detailed analysis of the impact of changes in  $T_{Ringing}$  on the availability and creation of network resources, which is paramount from the perspective of fixing and appropriate value of  $C_{REL}$ . We are hereby extracting and reproducing the relevant aspects of the said analysis carried out study on data of 5<sup>th</sup> September 2019 to analyze the increase in capacity due to spectrum efficiency attained by reduction in  $T_{Ringing}$  value as below:

**Additional Voice traffic carried by reducing ringing timer:**

- i. RJIL's network connects millions of subscribers making billions of calls each day. Each voice call involves certain radio and core network resources which amount to a huge network resource usage day for billions of calls.
- ii. There has been a progressive increase in customer voice calling / usage behaviour in India. Subscribers are now making more calls and conversation time of calls has also increased drastically.  
Busy hour call attempts (BHCA) - have increased from 2.0 to 2.8 per subscriber  
Call hold time: has increased from 120 seconds to 162 sec.
- iii. As network resources remain limited, this increase in subscriber's usage needs to be understood, analyzed and corrective optimization needs to be carried out. A voice call is setup in multiple stages and the radio spectrum resources are engaged at the call setup stage and are released only when the call is disconnected.





- iv. Calculation of additional calls due to change in 1 sec of ringing timer considering the above factors:
  - a. Total Calls made per day: 745 Cr
  - b. Average Call hold duration: 162 sec
  - c. Consider a decrease in the ringing timer duration to be: 1 sec
  - d. Total call attempts per subscriber in a day: 33 calls
  - e. Network resource saving per day:  $(A * C) = 745 \text{ Cr seconds}$ .
  - f. Additional calls to be carried per day by 1 second reduction in ringing timer is  $(A * C) / B = 4.6 \text{ Cr Calls}$ .
  - g. If the ringing timer is reduced by 10 seconds, additional call capacity created = 46 crore calls per day.
3. Thus, evidently huge capacities are freed by optimizing the  $T_{\text{Ringing}}$  value that enable better and optimized network resources for the customers. As mentioned earlier in our response, basis the extensive analysis, we have determined that the optimum value is 20 seconds.

**Q. 6. How the 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? Please provide details of computation methodology to make such assessment along with supporting data to justify the suggested value of  $T_{\text{Ringing}}$ .**

**RJIL Response:**

1. We have already detailed the impact on the radio spectrum resources in the previous response. With regards to the alleged impact on the Point of Interconnection, we have also explained that this claim is nothing but a propaganda by vested interests to achieve certain other ulterior motives.
2. Further, as far as missed calls are considered, we submit that RJIL is more of a victim here instead of being a perpetrator. As you are aware, RJIL is the only service provider currently that provided unlimited calls to all its customers whereas all other service providers offer unlimited calls only to high ARPU customers. All their remaining customers are under tariffs with high charge for outgoing. These customers tend to become the missed call givers i.e. whenever they wish to communicate they give a missed call to their RJIL contact and wait for him to call them back. This situation has exacerbated to such an extent that in many service areas the ratio of missed calls is as



high as 25-30%. We have already submitted a sample one-day calculation showing that RJIL ends up bearing the cost in excess of Rs.5 Crore per day for such missed calls.

3. On the other hand, the incumbent operator's claims of suffering on account of missed calls is unsubstantiated and inexplicable, as most of their customers are on high per second charging rates, even if their customers respond to a marginal number of missed calls received due to  $T_{\text{ringing}}$  value, the service provider is realizing better revenue from the customer.

**Q. 7. Whether networks can be 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? Whether networks can also differentiate commercial calls from normal calls from the perspective of ringing duration? Please provide inputs and give your views with detailed justifications.**

**RJIL Response:**

1. With the ongoing developments in the field of Artificial Intelligence (AI) and Machine Learning (ML) techniques, there is no doubt that networks can be made adaptive to appropriate value of ringing duration specific to a subscriber or class of subscriber, however, the same would require much more analysis and testing before implementation.
2. The distinction for the commercial calls and other calls can be made basis the DoT allocated number series for commercial communication, however, there is no need of fixing a lower ringing time for the same, once the optimum timer is implemented for all calls.

**Q. 8. Any other issue which is relevant to this subject?**

**RJIL Response:** None

