

ANNEXURE A

Idea Cellular response to the TRAI Consultation Paper on “Compensation to the Consumers in the Event of Dropped Calls” dated 04.09.2015”

Summary submissions

At the outset, we thank the Authority for initiating the consultation on the issue of call drops, which lately has been a subject of heightened media attention and customer perception. We also thank the Authority for giving a patient hearing on this subject at the CEOs meeting held on 09/09/2015. As discussed, we assure you that we would take all necessary steps to mitigate issues surrounding the call drops and eagerly look forward to Government and Regulatory support on issues of a uniform tower policy etc.

While we fully appreciate the TRAI concern on the issue of call drops and remain committed to take all necessary action, however we humbly submit that issues surrounding call drops are at best localized to a few specific locations in the Metro cities of Delhi and Mumbai (due to specific reasons mainly surrounding tower approvals, sealing by municipalities and unfounded fears of EMF – details covered in our response). However the disproportionate attention on these localized issues cannot be the basis to take away the tremendous amount of work already achieved by Telecom service providers. Mobile telephone is today accessible by more than 881 million (active VLR) subscribers, across 22 telecoms service areas, covers more than 5 lac villages and provides internet services to more than 93 million subscribers (as per TRAI reports). Is the problem of call drops spread across this entire subscriber national base, across both urban and rural subscribers, is an issue which TRAI needs to consider.

The TRAI has highlighted some reasons for call drops, but the reasons themselves are not fully exhaustive, since they fail to recognize the external factors which are beyond the control of Telecom operators - like non –availability of sites at various locations in city environment, abrupt site sealing by Municipal Authorities and rabid action by Resident Welfare Associations on site shut down and factors not in control of operators. On such issues, TRAI and the DoT need to fully participate in supporting the operators.

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Briefly stated, the TRAI consultation has failed to appreciate the following:

- A. No wireless network technology allows for 100% availability of network at all times, without any call drops.
- B. The license issued by the licensor viz. DoT, in India and even by other Licensors/ Regulators worldwide take cognizance of the above fact and hence do not mandate 100% coverage at all times or zero percent call drops in wireless networks.
- C. TRAI regulation on QoS is already very stringent and Idea Cellular remains fully compliant to the Regulations.
- D. Problems of call drops are localized at few locations in Metro towns and not a Pan India phenomenon.
- E. Existing TRAI Regulations have mechanism of disincentives in case of not meeting QoS parameters and hence any proposed compensation for customers would act as double whammy to operators.
- F. Even the customer complaint scores reflect that customer complaints on call drops are within the specified benchmarks.
- G. TRAI methodology of drive tests in Delhi & Mumbai is non-transparent and hence cannot be the basis for any fresh mandate, particularly when operators are meeting existing benchmarks or being penalized for deviations, if any.
- H. The factors leading to call drops are not always within the control of the operator and hence operators cannot be held liable for compensation.
- I. Due to complexities involved, it cannot be always confirmed whether 'A' party or 'B' party is responsible for call drops.
- J. Authority has failed to appreciate the actual genesis behind call drops – spectrum changeover issues, Municipality sealing, Right of Way issues, evolving technologies etc.
- K. Adequate capacities and massive investments have been made by operators and TRAI concerns on this account are misplaced and invalid.
- L. Operators require more resources to set up a call than to continue a call. TRAI concerns on call drops lead to increased duration of calls, result in higher revenues to operators, networks not optimized etc. are misplaced and not based on facts.
- M. Call drop is not limited to few operators. In fact private operators, in general, are more efficient, have more subscribers and have made massive investments in acquiring spectrum and rolling out networks. Call drops are thus present in all networks, including BSNL and MTNL.

- N. Any discussion on compensation without having complete understanding on how such compensation can be auditable and accurately verifiable, would only lead to chaos in the telecoms sector and increase litigation.
- O. Issues of compensation would involve disputes and hence require adjudication. The mechanism for such adjudication resolution rests solely with TDSAT.
- P. Currently there are a multiplicity of service providers / wireless services, and if a customer is not satisfied, they can port to an alternate service provider through MNP. In fact that is the purpose of Regulatory interventions like MNP in which more than 140 million customers have exercised their choice to shift to another operator.
- Q. No corresponding compensation mechanism is available for the mobile operators in the event of recurrent issues such as non-availability of sites due municipality etc., delayed allocation of spectrum by Licensor, non-issuance of equipment import approvals, delay in Right of Way approvals, no resolution on interference issues etc.
- R. Finally, we believe that benefits such as credit of talk time or discounts in tariffs in the event of call drops, should continue to be guided by the “spirit of forbearance” and “customer delight”, and should not get driven by regulatory mandates.

In view of the above, we believe there is no need for TRAI to seek compensation for call drops. Method of determining whether the call drop is due to poor network or any other technical issue itself is a question mark. It is very difficult to establish that call drop is because of which operator and what is the actual reason for the same is itself a complex issue. Thus any discussion or decision on compensation for call drops would lead to chaos and more litigation, thereby taking the time and energy of operators and Regulators in wrong direction, when need of the hour is to look for definite resolutions. Further mandating any compensation for call drops, would only increase the cost of doing business, which would be to the detriment to the consumers.

We now proceed to respond to the queries raised in the consultation paper.

Q1. Do you agree that calling consumers should not be charged for a call that got dropped within five seconds? In addition, if the call gets dropped any time after five seconds, the last pulse of the call (minute/second), which got dropped, should not be charged. Please support your viewpoint with reasons along with the methodologies for implementation.

Idea Submission:

Before we respond to this query, we would first like to address some major issues as also address some invalid concerns raised in consultation paper:

A. No wireless technology or License provides or mandates 100% network coverage and zero percent call drops.

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B. The license issued by the licensor viz. DoT, in India and even by other Licensors/ Regulators worldwide take cognizance of the above fact and hence do not mandate 100% coverage at all times or zero percent call drops in wireless networks.

- Wireless mobile coverage is heavily technology driven, with best resources in the world being utilized to serve more than 7 billion million customers worldwide (as per GSMA). However no technology provides for 100% network coverage or zero percent call drops.
- Typically the customers may want to use their network in areas like basement etc., or may want to use their mobiles in specific locations where no coverage is currently provided by an operator. In such a situation, the operators cannot be mandated to ensure 100% coverage and zero percent call drops.

- **Call drop phenomenon which is inherent to Wireless communication technologies:**

It is well known fact that in Mobile telephony, call drops will be unavoidable due to very nature and Physics of Radio waves propagation. The signal received by the Mobile from the BTS and vice versa will most of the times be indirect signal received through vector addition of reflected/ diffracted rays by Multipath propagation. This will always be prone to fading dips. Also very tight reuse of allocated frequencies will cause some amount of collisions especially into high traffic zones / cells resulting into call drops due to interference. The “Radio signal fading phenomenon” & “Interference probability” which are main causes of call drop, can at best be optimized but not eliminated. These can be very dominant factors in spectrum starved networks. Typically around 2-3% call drops are accepted in Mobile networks worldwide even

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in well optimized networks. TRAI in its QoS regulation has also set a threshold of 2% call drop at NW level. Hence the hypothesis that call drops will not / should not occur at all in Mobile networks is not correct.

- In view of the above, no License mandates 100% coverage or zero percent call drops.

Thus it is unreasonable and unjustified to discuss compensation on call drops.

C. TRAI regulation on QoS is already very stringent and operators remain fully compliant to the Regulations.

- The TRAI has vide its QoS Regulation, 2009 laid out the parameters relating to network and Service quality. The parameters were laid out after considerable deliberations by the Authority and have been amended from time to time. The Regulation covers detailed parameters related to various network call drop parameters.
- **Idea Networks are fully compliant with TRAI Regulations** - It is submitted that **IDEA Cellular is meeting the necessary norms laid down by the Regulator across the country, on both the network and customer service parameters.** The norms specified by the TRAI are comparable to world standards.
- The details of relevant Network parameters for all our 22 service areas for last 4 quarters is enclosed as per Annexure B. **You would note that Idea Cellular is fully compliant on all QoS network parameters for last 4 quarters.**

D. Problems of call drops are localized at few locations in Metro towns and not a Pan India phenomenon.

- **While the TRAI has given various anecdotal references on call drops, in terms of concrete data, it has only shared drive test reports of two cities, to highlight the call drop phenomenon.**
- From the chart given at Annexure B, it is apparent that we are fully compliant to all network parameters. If the call drop issues were dominant it would have naturally occurred in the TRAI reports. However the report themselves do not highlight any prevalent dominant or recurrent issue. The TRAI has itself based the consultation paper purely on drive tests conducted in just two cities, thus clearly highlighting that the issues are restricted to few locations within the metro cities.

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E. Existing TRAI Regulations have mechanism of disincentives in case of not meeting QoS parameters and hence any proposed compensation for customers would act as a double whammy to operators.

- The Authority has also prescribed disincentive in case the parameters are not being met by the service providers. In this regard, you would note that **Idea Cellular has not been levied any disincentive (during last 4 quarters) with regard to deviation of Network parameters or QoS parameters.**
- **The Authority need to consider that in case operators are fully compliant with TRAI laid QoS norms and have not been dis-incentivized for any deviation, whether any form of compensation to customers can then be considered at all.** If we are fully compliant with norms, then the question of any additional compensation, beyond the scope of current Regulation is not justified or even legally tenable.

F. Customer complaints scores reflect that customer complaints on call drops are within the specified benchmarks.

- As can be seen below the percentage of Call Drop complaints continues to remain at a mere 0.02% of the Customers. When measured as a percentage of all complaints they are a mere 5%, and in fact they are trending down.

Total Complaints- 'Call Drops'					
TAS	Apr'15	May'15	Jun'15	Jul'15	Aug'15
C-Call Drop	2,725	2,968	3,660	3,399	3,509
Grand Total	22,964	24,925	28,151	26,574	24,857

Total Complaints- 'Call Drops' as a % of Total EOP					
TAS	Apr'15	May'15	Jun'15	Jul'15	Aug'15
C-Call Drop	0.002%	0.002%	0.002%	0.002%	0.002%
Grand Total	0.01%	0.02%	0.02%	0.02%	0.02%

Total Complaints- 'Call Drops' as % of Total Complaints					
TAS	Apr'15	May'15	Jun'15	Jul'15	Aug'15
C-Call Drop	0.65%	0.73%	0.76%	0.70%	0.71%
Grand Total	5.49%	6.12%	5.84%	5.49%	5.04%

- Idea Cellular effectively handles customer complaints pertaining to 'Call Drops' and 'Connectivity' issues as follows:
 - Upon the customer call to Call Centre or visit to the Service Center for registering a Call Drop or Connectivity complaint, complete and relevant information is obtained from the customer through a structured questionnaire and this information is updated in our CRM system.
 - Once the information is updated, the system automatically and appropriately directs such complaints to our specialized group of network experts located at all our operating areas called the "Technical Support Group" (TSG) team.
 - The team analyzes the complaints pertaining to their area of responsibility, does a Root Cause Analysis to understand if there is a pattern / reason as to why the customer is facing the stated problem.
 - If required they also make field visits to better understand & analyze the issue, they then immediately plan and work on changes or corrections required if any or augmentation requirements or configuration changes as required. Appropriate action is taken by the TSG team and accordingly the outcome is updated in CRM.
 - Such feedback is routed in CRM to the SD team, who in turn then outcalls customer and updates the resolution to the customer.

G. TRAI methodology of drive tests in Delhi & Mumbai is non-transparent and hence cannot be the basis for any fresh mandate, particularly when operators are meeting existing benchmarks.

- **For reference, Idea Cellular is fully compliant with existing TRAI regulations for these two cities for last 4 quarters.** Details as under :

QoS Parameters		Benchmark	DELHI				MUMBAI			
			QE Sep`14	QE Dec`14	QE Mar`15	QE Jun`15	QE Sep`14	QE Dec`14	QE Mar`15	QE Jun`15
Network Availability	BTSs Accumulated downtime (not available for service)	≤ 2%	0.01	0.01	0.01	0.01	0.07	0.06	0.07	0.08
	Worst affected BTSs due to downtime	≤ 2%	0.00	0.00	0.00	0.00	0.07	0.04	0.03	0.03
Call Set-up Success Rate (within licensee's own network)		≥ 95%	99.96	99.96	99.88	99.78	97.97	98.57	98.33	98.93
Connection Establishment	SDCCH/Paging Chl. Congestion	≤ 1%	0.50	0.48	0.47	0.73	0.48	0.71	0.50	0.31
	TCH Congestion	≤ 2%	0.90	0.53	0.93	1.69	1.25	0.88	1.34	0.71
Connection Maintenance	Call Drop Rate	≤ 2%	0.56	0.51	0.60	0.59	1.93	1.66	1.24	1.24
	Worst affected cells having more than 3% TCH drop (call drop) rate	≤ 3%	1.48	1.52	2.04 #	2.44 #	2.81	2.68	2.39	2.00
	Connection with good voice quality	≥ 95%	98.80	98.84	98.66	98.61	95.46	95.93	96.36	96.22
POI	Total No. of POIs where congestion is	> 0.5%	0	0	0	0	0	0	0	

increase due to new 900 MHz UMTS launch.

- Further, In our humble submissions, the drive test methodology adopted by the TRAI for the two cities was not fully transparent and does not take into account the efforts made by operators on network improvements.
- Infact, the results of the Drive tests quoted in the CP are quite contradictory to results of the monthly drive tests that are conducted by TRAI through its auditors. It is a regular practice that log files of the drive tests are supplied to all the stakeholders. For ex., monthly drive test log files are supplied to TRAI auditor every month by Operator. However in this case the drive test log files were not provided to us in spite of repeated requests. Some of the outcomes of the drive test like “more than 10%” blocked call rate can be analyzed in-depth only with help of log files. Hence the TRAI stand of not providing log files of the drive test is very surprising and contrary to the established practice.
- Below are results of the drive tests (300 kms per month) conducted by TRAI auditor in Mumbai for last six months, which are available with us, duly signed by TRAI auditors:

Month	SSA Name	% Call Drop	% Blocking	% HOSR	Rx Qual (0-5)%
Mar'15	North Mumbai	0.6%	0.0%	98.15	94.6
Apr'15	Thane	0.2%	0.2%	98.93	94.4
May'15	Central Mumbai	0.0%	1.3%	96.83	93.9
Jun'15	Navi Mumbai	0.9%	0.7%	97.93	93.6
July'15	South Mumbai	1.1%	0.3%	98.29	94.8
Aug'15	Kalyan	0.2%	0.2%	98.37	94.7

- Also TERM Cell (DoT) in Mumbai conducted detailed drive test for a continuous 4 days (3rd Aug to 6th Aug) covering length & breadth of Mumbai. The results are as below:

Total Call Attempts	Total Calls Blocked	Total Calls Established	Call Drop	HO Attempt	HO Success	HO Success Rate %	% Blocked Calls	Drop Call %	Accessibility (CSSR)%	Retainability %	Rx Qual (0-5)%	Rx Lev (0-85dbm) %
463	1	462	7	1157	1125	97.23%	0.22%	1.52%	99.78%	98.48%	94.53%	95.32%

- Thus it can be seen that Idea Cellular is fully compliant on the above drive tests and parameters and in absence of details being shared by the TRAI, no conclusion can be drawn from the one off TRAI drive tests being referred to in the TRAI consultation paper. Thus the very basis of the TRAI consultation is misplaced.

H. The factors leading to call drops are not always within the control of the operator and hence operators cannot be held liable for compensation.

Call Drop scenarios which are inherent in Wireless communication & are beyond Service provider's control	
Note that any of below events either in "Calling Party Network" or "Called Party Network" will result into call drop experience to both the users. Both the users are likely to perceive that call drop happened because of their own network which may not be always true.	
1	Any of the mobile user (Either calling or Called) entering no coverage zone while conversation is on (like Basement, Lift)
2	Mobile user entering coverage hole arising due to non-availability of location/infrastructure for deploying BTS site
3	Calls initiated from deep indoors environment where Signal strength is at just minimum threshold level and goes below sustainable level during the call
4	Complex terrains may result into discontinuous coverage causing call drops
5	Sudden dip of signal strength during ongoing call due to fading caused by Multipath phenomenon arising to moving objects (Vehicles, Train etc.)
6	Mobile becomes off during the conversation due to battery getting drained suddenly.
7	Any new structure (building) coming up will change the propagation characteristics of the radio coverage serving the users in the vicinity & can cause call drops
8	User in the vicinity of huge water bodies will drop calls due to unpredictable and unfavorable propagation changes in Radio waves propagation (ex. Beach areas, Riverfronts, bridges over huge water bodies)
9	Huge open area in a dense clutter will have multiple cells serving increasing the interference probability & hence call drops
10	Mobile device (especially smart phones) getting hanged during ongoing call.

11	User travels with ongoing call from one Serving area (PLMN) to other service area (PLMN). Call will drop in such cases since inter PLMN handover is not allowed. For example user moving from Mumbai service area to Maharashtra service area on Mumbai –Pune expressway. Also user moving from Delhi Service area to Haryana service area.
12	Mobile handset settings are set to one technology only (For Ex. UMTS only) and that specific technology coverage is not as strong as other technology coverage thereby not allowing mobile to switch to dominant technology coverage
13	The BTS site to which user is connected goes down (non-operational) due to power outage , interventions by third party
14	The MW link of the BTS to which user is connected goes down intermittently due to fading on account environmental changes (For Eg Rain fading /attenuation)
15	MW links working with degraded fade Margins due to Interference in the MW network due to limited spots availability. This increases probability of intermittent Microwave link fluctuations resulting into call drops of all the users being served by these links.
15	The transmission path between BTS & BSC consists of several links in series (comprising of MW links & Optical fiber link). Any Single link getting disturbed on account of man - made disturbance or fading due to environmental changes. For example heavy rain in one area disturbing one single MW link can affect call drop of all users connected to multiple BTS sites to which this MW link was serving.
16	Cuts /Damages to Optical Fiber network due to non coordinated excavation / digging activities by Government & private agencies result into huge NW disruptions & call drops
17	Broadband boosters with high transmit power creating uplink interference in the Network resulting into call drops
18	CDMA frequencies allocated in India in 850 MHz band are spilling into GSM 900 MHz band creating huge uplink interference and causing severe call drops
19	Inherent cell shrinkage phenomenon in UMTS technology increases call drops at Cell boundary areas
20	Heavy uplink interference from unknown sources in 2100 MHz band in 3G operational geographies of Gujarat, Haryana, Punjab & JK causes huge call drops
21	Very high traffic density (Erlangs/MHz) loads the spectrum causing increase in interference & leading to call drops
22	Service providers do not have any control on mobile handsets and varied receive sensitivities among different low end mobiles causes call drops
23	Sudden increase in Traffic in a cell or group of cells on account of events , Public gatherings will increase call drop probabilities

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24	Significant changes in offered traffic pattern can cause increased call drops.(For Ex. increase in % traffic share from indoors in rainy season)
25	Third party interventions & Damage to the Antenna & Feeder lines connected to BTS will result into suboptimal coverage footprint causing call drops
26	Any disturbance in POI connectivity with other operator will result into dropping on ongoing inter-operator calls
27	Any disturbances in the International long distance carriers' network will affect call drops of ongoing international calls
28	Any disturbances in the National long distance carriers' network will affect call drops of ongoing STD calls
29	Ongoing call of a prepaid user can drop if the balance is exhausted during the call.
30	Temporary switching off of the power by landlords.
31	Diesel mafia shutting of sites / preventing conversion to green sites.
32	Very poor quality of power supply in various parts of the country and wide voltage variations, causing hardware failure. Power supply situation unique to our country, and this has direct impact on network availability.

- **Thus, as would be seen from the above, the network operator cannot always control the call drop situation and hence cannot be held liable for any customer compensation.**

I. Due to complexities involved, it cannot be always confirmed whether 'A' party or 'B' party is responsible for call drops - Problems in Finding the Reasons and Network in which Call drop Occurred.

- When two mobile users A & B are talking to each other & during the conversation if the radio link of any one of the user (Say A) with its serving BTS breaks abruptly, both users experience call drop. Either originating or terminating user's bad radio environment can be cause of call drop. Either of the user A or B will not be able to make out which user was the cause of call drop (unless the user out of his past experience knows that at a specific location, say on a flyover or area like Ridge in Delhi (where there are no sites) the call does drop. In case of calls from a subscriber of one Operator (Say X) to another Operator (Say Y), the call drops, then it would be very difficult to identify in which Operator network the call has dropped and who has to provide remedy to subscriber.

- Supposing, Subscriber A of Operator X has initiated a call to a Subscriber B in Operator Y and the call drops due to an issue in Operator Y, then who would be compensated – the Calling subscriber A or the Called subscriber B, because the charges are being paid only by Subscriber A while the problem or cause of call drop is Operator Y of Subscriber B. In case of compensation, such situations would lead to huge workload in finding the cause of call drop and apportioning to an Operator.
- Also in multiple “Access technology” environment (2G, 3G, LTE), mobile user is free to set different modes in the handset (e.g. GSM only / WCDMA only / WCDMA preferred / LTE). Since all these different access technologies are at different level of aging, maturity and operating at different range of spectrum, their footprint cannot be compared to each other. Hence choosing any specific mode say “UMTS only” mode may result into call drops since coverage may not be as ubiquitous as 2G network. In such a case while technology and operator permits the call to be handed over to 2G to provide continuity, but the subscriber may have debarred 2G in his handset. **Such a call drop cannot be attributed to an Operator.**
- **The above scenario clearly reflect the complexities on this issue and hence the issue of identifying the responsible operator is itself prone with difficulties.**

J. **Authority has failed to appreciate the actual genesis behind call drops – spectrum changeover issues, Municipality sealing, Right of Way issues, evolving technologies etc. Some of the key reasons for call drops are as under :**

- **Issuance of Fresh Spectrum after License expiry and the resultant change in both ‘Quantum’ and ‘Frequency spots’** of auctioned spectrum won leading to complete Re-tuning of network equipment – Delhi, Mumbai, Kolkata, etc.
 - The telecom operations have been in existence for last 20 years and the networks evolved with grants of spectrum made initially in 1995 followed by incremental spectrum allocations in 2000 to 2006. However inspite of License extension rights, the Licenses and associated spectrum was made to expire and lapse, by applicable Government policy. Resultantly the operators had to bid for fresh spectrum and were actually allocated spectrum which was mostly different from existing spectrum. Allocation of fresh spectrum spots naturally implies fresh network changes, retuning and change of repeaters etc. These changes can be disruptive and adequate time for spectrum allocation and usage is necessary to avoid network changeover issues. **In fact the TRAI itself noted this issue in its letter addressed**

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to DoT on 17.10.2014, wherein it inter alia stated its concern about partial break out in services and suggested immediate meetings to avoid customer inconvenience.

- The spectrum changeover problem is going to re-occur across the country in coming year and the DoT and TRAI need to support the operators on issues surrounding spectrum changeover since these impact roll outs and subsequently customer service quality.
- *The Authority needs to take note that issues of spectrum changeover and resulting network changes are not fully controllable by operators and requires prompt Government support.*
- Coverage disruption due to Non-availability of sites / Sealing of sites by Municipal Corporations and local Government bodies.
 - Operational BTS site getting shut down due to unfounded radiation fears of the RWAs of that building. The total sites shut down in Mumbai due to RWA related EMF issues in last two years is around 80.
 - **Sites getting switched off or locked by the local municipal bodies** - The total sites shut down in Delhi Metro service area due to Municipal related EMF issues in last two years is around 142.
 - The Authority should appreciate that whenever a given site is sealed/ shut down, it impacts 3-4 sites in its vicinity (sometimes even more, if the site happens to be BSC hub site), which compounds the problem of sites shut down. In addition, the load increases on nearby sites and impacts network availability at such sites.
 - It is becoming increasing difficult to get new sites especially in metros because of the unfounded perception of radiation due to action by some action groups. These sites are required by us to deploy new BTS site as a corrective action for avoiding call drops.
 - In many areas in metros, it is just not possible to get any site as all buildings are owned by Government and they do not give permission to install sites. Examples of these are Lutyens Delhi, Cantonments across the country including Delhi Cantonment, Navy Nagar in Mumbai, Pune Cantonment, and Delhi T3 airport. List of some of key areas in Delhi & Mumbai, where no site is available is as Annexure C.

- **Another unique challenge faced by Industry is in respect of exorbitant RoW rates and unwarranted fiber cuts.**

➤ It may be noted that despite DoT August 2013 guidelines, unabated disconnection of electricity supplies, sealing of premises, dismantling of towers by local authorities, artificial restrictions on installing towers on educational institutions, hospitals, defence & forest lands, historical, and even residential areas, and non-adherence to State policies by local authorities on tower application, documentation, fees charges and NOC issuance continues unabated. Further, in respect of Right of Way (RoW) for Fibre, often there are no / protracted delay in approvals, and frequent fibre cuts from other infrastructure projects over-riding RoW rights of mobile operators.

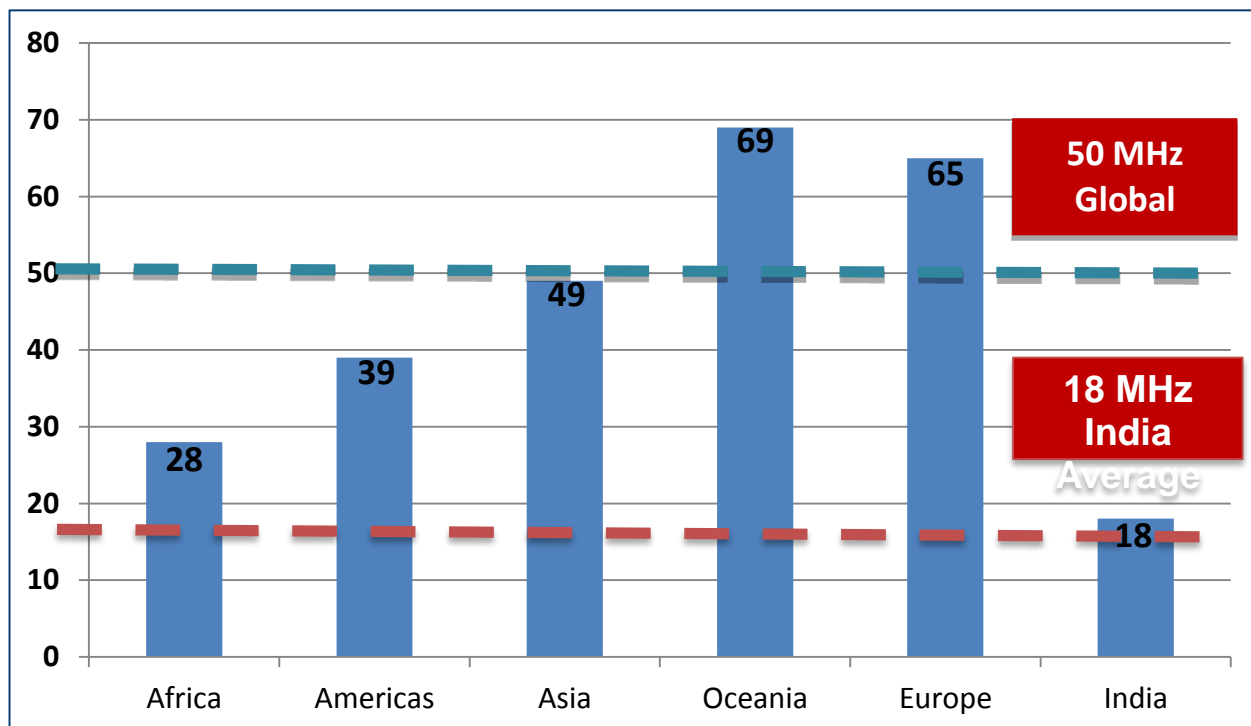
- **Issues relating to interference and unauthorized radio/ jammers**

Idea Cellular highlighted issues relating to interference at various locations throughout the country at following locations:

- Gujarat – 3G interference
- Punjab - 3G interference
- J&K - 3G interference
- Haryana - 3G interference
- Delhi – 900 MHz interference from CDMA operator, despite Idea using adequate filters in its network.
- Vishakhapatnam – jammer issue
- Bangalore – jammer issue

Inspite of repeated reminders, no resolution was put forward either by TRAI or DoT on above issues. Finally for some of the above locations, the matter had to be taken to the TDSAT, where it currently remains sub judice. If the basic resource for providing service is itself unusable, then how can an operator provide complete service?

- **Availability of spectrum** - Over the last few years, the demand for spectrum has progressively moved up and continues to be on the rise. However, on a comparative basis, the spectrum allocation in India is among poorest globally (*Refer Chart below*)



The Authority needs to note that issues highlighted above and resulting network changes are not fully controllable by operators and requires prompt Government support.

K. **Adequate capacities and massive investments have been made by operators and TRAI concerns on this account are misplaced and invalid.**

- Idea Cellular has till date invested Rs 40,713 crores in setting up its network across 22 service areas and serves over 160 million subscribers. To be able to provide services to such a large subscriber base, we have set up world class 2G & 3G networks with more than 142,658 number of sites, through which we cover around 364,308 number of cities and villages.

- In para 2.17 and 2.18 some industry data has been given about growth in Voice traffic and growth in Gross Block. At the outset we would like to state that **there is no direct correlation between amount of Capex and Capacity creation because of multiple reasons. In any case, we are giving herein below Idea's data as under-**

	Unit	June-15	June-13	Growth
Voice Minutes for the Quarter	Mn Minutes	195,752	147,315	32.9%
Gross Block incl. CWIP as of end of Quarter (excl. Spectrum)	Rs. Mn	407,139	324,022	25.7%

- It can be seen from above data that the increase in the Gross Block over last 2 years is very significant at 25.7% (Rs.83,117 mn), whereby the actual voice and data capacity created is multiple times the % increase in amount due to following reasons –
 - New equipment is technologically more efficient and hence the cost per unit of capacity has come down from the historical costs
 - Capex per site has come down significantly
 - The investment for increasing the capacity of an existing site is much lower than setting up a new site as has been explained in subsequently in Table 1 below.
 - There has been a steep fall in average cost of capex for generating voice minutes and data so direct correlation between historical cost and latest cost is not feasible.
- In addition to investment in gross block, significant investment has been made in acquiring additional spectrum for creating additional capacity. For example in Delhi and Mumbai alone, where tests have been conducted, Idea has invested Rs.44,670 mn in additional spectrum in 900 MHz and 1800 MHz bands for creating additional capacity.
- **Hence, lack of investment is not at all the reason for call drops.**
- **We feel that there is no direct and linear relationship between the Capex investment and the capacity built / augmented in a network. Following are relevant examples:**
 - The cost of capacity upgrade in a BTS is only a fraction of the cost of the complete BTS put up initially in the network. The capacity upgrade of a BTS site (say from 2+2+2 configuration to 4+4+4 configuration in 2G) will consume only 15-20 % of Capex required for new site

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since Capex for new site will include infrastructure, Antenna & Feeder system, and Transmission links including Microwave link & OFC in some cases. It may also be noted that delta TRXs added in the network give capacity increase at more than a linear scale, in case of above example of augmentation from 2+2+2 to 4+4+4, the Erlang capacity of a site increases from 17.4 Erlangs to 60 Erlangs. Refer the BTS site configuration capacity matrix in table 1. Thus the Capex required for adding voice capacity in a network is only 10-15% of MOU growth.

Table -1

Sr. No	Site configuration	Traffic capacity in single hour	Delta Capacity growth w.r.t. Previous config.
1	1+1+1	4.98	
2	2+2+2	17.52	252%
3	3+3+3	36.99	111%
4	4+4+4	57.81	56%
5	5+5+5	73.89	28%
6	6+6+6	95.76	30%
7	8+8+8	134.82	41%

- With every TRX addition in the sites the data capacity also get augmented since TRX –time slots are common resource used for both voice & data capacity. The growth in data usage does not affect the voice call KPI’s since voice call has priority over data traffic. Data traffic uses the dedicated time slots of TRX which are configured for data usage and dynamically expand in voice time slots if there is no voice traffic. Another important factor for data traffic is that in data busy hour (10 PM to 11 Pm) the voice traffic is hardly at 55 to 60 % level of its peak so 40 to 45 % available voice time slots capacity can be used for data traffic.
- Similarly in case of 3G, the Paper brings out that while the 3G data grew by 252%, the No of Node B has increased by only 61%. It may be noted that the initial roll out of 3G was for coverage and sites were added to provide ubiquitous coverage in a town. But the capacity was built for a full site at launch. As the 3G subscribers grew and started using data, the unused capacity was utilized and hence capacity enhancement was not required to the same extent as the data growth. Like in 2G, the capacity enhancement in a 3G site is done by soft resource upgrade or adding sectors and the cost of additional sector is much less that the cost of a full site. Hence, it would be incorrect to assume that the Capex spend on

capacity augmentation in data has to be directly proportional to the increase in data growth.

- **The table below of Sites addition & TRX addition confirms the fact that Idea cellular has never been short of capacity requirement.** The parameters “Traffic in Erlangs per TRX in peak hour” and “Traffic per site in peak hour” are maintained year on year in spite of significant traffic growth. It may be noted that that with features like AMR & VAMOS, average equipped capacity per site in peak hour can easily be targeted in a range of 55 to 70 Erlangs. However Idea Cellular, has maintained the carried traffic in the range of 32-35 Erlangs. However Idea Cellular, has maintained the carried traffic in the range of 32-35 Erlangs, at 60% utilization of capacity, by deploying sufficient TRXs. Also steady migration of voice traffic to 3G has resulted into sufficient capacity cushion in 2G network for voice & data.

	Mar 12	Mar 13	Mar 14	Mar 15
Carried Peak Hour traffic in K Erlangs	2,768	3,249	3,510	3,937
2G Sites	83,190	90,094	104,778	112,367
Average carried Traffic per BTS in Erlangs in Peak Hr.	33	36	34	35
TRXs in the Network	725,232	818,999	945,215	1,023,992
Erlang / TRX (carried)	3.82	3.97	3.71	3.84

➤ **3G network voice traffic utilization**

	Mar 12	Mar 13	Mar 14	Mar 15
Node B (3G BTS)	12,825	17140	21381	30,291
Carried Peak Hour traffic in K Erlangs	34	65	114.6	239.7
Average carried Traffic per BTS in Erlangs in Peak Hr.	2.65	3.79	5.36	7.91
Average Voice capacity utilization of Node B (Considering Typical Capacity of Node B for single hour of 30 Erl)	9%	13%	18%	26%

It can be seen from the above that while our 2G network is at less than 60% utilization, the 3G voice utilization is only at 26% utilization, as of March 2015. Hence the networks have adequate capacity and the same is augmented whenever necessary.

L. **Operators require more resources to set up a call than to continue a call. TRAI concerns on call drops lead to duration calls, result in higher revenues to operators, networks not optimized etc. are misplaced and not based on facts.**

- **Call set up time is a loss to operator as resources are used without any revenue.**

- **Call drops lead to increased duration calls** - Apropos billing practice, we wish to submit the methodology followed by Idea Cellular :
 - It may be noted that out of Idea's 163.92 Mn subscribers, 155.5 Mn subscribers, which is more than 94% of subscribers, are on Per Second Billing (PSB) plan. This means that a subscriber is charged only for the period that a subscriber is connected on a call. If the call drops and the subscriber makes a fresh call, he is charged only for the period that the subscriber is connected on the call. Thus, no extra money is made in case of call drop.

 - In case of subscribers on Per Minute Billing (PMB), the base rate tariff is cheaper than that for Per Second Billing (PSB) plan. This adequately caters for the additional cost, which may be paid by a subscriber in case of call drop or the call being of lesser duration. Also all subscribers have the option to freely shift to Per Second Billing (PSB) plan whenever they want to do so.

- **TRAI's misplaced concern that Call drops result into higher revenues for the TSP:**
 - While the earlier paragraphs have indicated that commercially the operators do not benefit by call drops, even technically also call drops impact the network adversely. It may be noted that maximum RF and Core network resources are used during the "Call set up procedures" for which no charges are levied on a customer. A traffic channel is allocated once the subscriber number starts ringing and that uses resources both on the calling party side and receiving party side, while the normal time taken for a subscriber to answer a call is 15 to 20 seconds. During this time the operator has earned

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no revenue (*that is why some applications are also advertising giving a missed call to get a response*), while its resources have been used and in case the call had not dropped, the operator would have earned the revenue. Hence, it is in the interest of the operator to ensure continuity of the calls & avoid call drops to the best possible extent.

- As an Operator, Idea Cellular has continuously invested in procuring the latest features available with the vendor to improve the network quality. To minimize call drops Idea cellular has invested significant additional Capex in last 12 months merely in buying and deploying advanced features given below across the network:
 - Automatic FLP
 - BTS Soft Synchronization
 - BCCH Power Savings
 - Packet Data Efficiency
 - Edge Performance Package
 - Advanced PS UL Power Control
 - GPRS/EGPRS Downlink Power Control
 - VAMOS & VAMOS advanced
- **TRAI misplaced concern on Call drops result into greater revenues to the TSP:**
 - We would like to state that continuous optimization and fine tuning of network is being done by a dedicated team of Radio Network engineers. The KPIs are studied on daily basis and any degradation that happens is captured promptly and necessary corrective actions are taken. The OMCR team monitors the network 24 X 7 basis and there is strong mechanism in place to identify operational issues like BTS site outages, Hardware faults, any disturbances in Antennas & Transmission feeder lines, Microwave and OFC transport network.
 - However, for ease, convenience & benefit of consumers, Idea Cellular and various other service providers have continuously innovated and made geography specific, capex & opex investments that allow subscribers to make best quality calls without call drops. Efforts have been directed at Improving Network Coverage and Capacity Enhancement through expediting capital investment (Top operators already announced 50-100% increase in

annual capex budget), network optimisation (Small Cells / IBS / RF Tuning, etc.), and roll out of 3G & 4G network to offload traffic from 2G network.

M. **Call drop is not limited to few operators. In fact private operators, in general, are more efficient, have more subscribers and have made massive investments in acquiring spectrum and rolling our networks. Call drops are thus present in all networks, including BSNL and MTNL.**

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N. **Any discussion on compensation without having complete understanding on how such compensation can be auditable and accurately verifiable, would only lead to chaos in the telecoms sector and increase litigation.**

- The Authority has provided two examples on call drop compensation. These examples are localized and there is no reference on whether there has actually been any benefit or improvement in call drop situation post this intervention.
- We believe there is no rationale for TRAI to mandate any compensation for call drops. Method of determining whether the call drop is due to poor network or any other technical issue itself is a question mark. It is as difficult to establish the operator responsible for the call drop as it is to establish the reason. Thus, any discussion or decision on compensation for call drops would be bereft of proper reasoning and would thus lead to an arbitrary decision. Infact, being very complex, it would lead to chaos and avoidable litigation, thereby resulting in wastage of operator's time and energy, when the need of the hour is something else.
- It should be noted that even the Government backed operators or PSUs are not sufficiently capable of avoiding call drops, despite all the support and backing in terms on infrastructure and spectrum.
- Further, the situation has been rendered complex due to the presence of 6-10 operators in each circle. Such intense competition has resulted in non-sustainable tariffs (consequently majority of operators, including BSNL, MTNL are not able to cover their cost of capital and hence incur losses), for customers and most of the subscribers are charged on Per Second Tariff (almost 95%), hence there is no incentive or benefit for telcos from call drop, as indicated by TRAI in it's consultation paper. It is a wrong notion that telcos benefitting from it.
- Consumer has been given enough choice to opt for Per Second or Per minute plan as it suits them. There are no such restrictions from Telcos side on choosing a per second or per minute plan.

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- Compensation dispute may be negligible when compared to the cost of handling the customer calls. Moreover consumer calling for such negligible compensation which in many cases will not be verifiable, will only lead to chaos. No Telco in the world has any such online system for passing on such credit online, hence an offline system will bound to create more confusion.
- Examples quoted by TRAI in its consultation paper are, all claims by Telcos, none of which have been audited and verified. Worldwide there is no country where zero call drop has been achieved and hence no regulation, despite other countries having better infrastructure and spectrum availability. Hence we strongly recommend that we should not introduce any such legislation.

O. **Issues of compensation would involve disputes and hence require adjudication. The mechanism for such adjudication resolution rests solely with TDSAT.**

- Any such decision related to call drop, will lead to creating confusion for customer also, as it is difficult to judge which is the legitimate call drop and which is not. This will unnecessarily lead to calls flooding at call centre and hence customer service itself taking a hit.
- Any proposal on compensation would give rise to huge (and needless) litigation due to issues on Manageability of situation (load on the system) given there are millions of subscriber's all over the country.
- The CP has to be seen in the context of the regulatory framework. The TRAI has framed regulations for QoS norms in 2009 . This has prescribed the norms to be met by the operators.
- These norms are the yardstick and benchmark for service quality based on which Networks are established and made available. The stipulated network parameters have been achieved / fulfilled in line with the regulatory mandate.
- This is a self-contained code by itself as it also has disincentives to act as a deterrence (I.e. penalties). Hence no other (punitive / coercive) measure should be imposed / thrust outside of this / over and above this.
- As you are aware under the scheme of the TRAI ACT, adjudicatory powers are only with the TDSAT. In this regard:
 - Compensation by definition requires ADJUDICATION.
 - Quantum has to be established on facts (in each case).

- And a link / nexus has to be made out in individual cases
- Call drops could be due to a variety of factors (as covered above); these will have to be examined and a direct nexus has to be established before compensation is given.
- Under the TRAI ACT individual cases / matters have to go to the CONSUMER FORUMS. They have the power to grant compensation if deficiency of service is established.
- **Thus this issue must be seen in correct context and perspective that there is a full-fledged mechanism in place to address such issues. Hence no further intervention is called for so that regulatory clarity and certainty is always maintained.**

P. **Currently there are a multiplicity of service providers / wireless services, and if a customer is not satisfied, they can port to an alternate service provider through MNP. In fact that is the purpose of Regulatory interventions like MNP in which more than 140 million customers have exercised their choice to shift to another operator.**

- Call drop is more of a customer dissatisfaction, which can result in consumer porting out to the network or operator of their choice. With MNP and Full or National MNP consumers are no more bounded to remain in any network or service area, if they face call drop due to poor quality of Network.
- Apart from Financial disincentives for Telcos, this was the main reason why MNP and Full MNP was introduced by TRAI, as an option to address consumer grievances resulting from poor network quality and poor service . Fact that PSU operators lost most of the subscribers in MNP is the proof that issue is not of private operators not putting enough investment, but it is more of the technology issue including shortage of spectrum and interference, hence one cannot achieve zero call drop. Hence there is no need for another regulation on call drop. Millions of customers who are opting for MNP every month is the proof that customer has enough choice, if he is not satisfied with the Telcos.

Q. **No corresponding compensation mechanism is available for the mobile operators in the event of recurrent issues such as non-availability of sites due municipality etc., delayed allocation of spectrum by Licensor, non-issuance of equipment import approvals, delay in Right of Way approvals, no resolution on interference issues etc.**

- The Authority needs to also consider the issues faced by operators for swift roll-outs are not being adequately addressed by licensing authorities and other Government departments. Typically the following Government approvals takes months and repeated reminders for final approvals :
 - Spectrum allotment approvals. Even spectrum won in auction, takes months for allotment.
 - Microwave access and backhaul allotment, without networks cannot spread remain pending for years together.
 - SACFA clearances, without which sites cannot be operationalized, takes months. In fact some SACFA cases have been pending with WPC for more than a year.
 - Wireless Operating Licenses for some service areas have remained pending for years.
 - Approval for importing telecom equipment takes 2-3 months. No equipment, means no site rollout.
 - Permissions for Right of Way are not cleared for months.
 - Permissions from Municipalities are prone with red tape and takes months to achieve.
- In case the above are not guaranteed to operators in time, then how is it that operators are made liable for stringent and time bound obligations. The Authority also has to take care of interest of operators and protect telecom investments.

R. **Finally, we believe that benefits such as credit of talk time or discounts in tariffs in the event of call drops, should continue to be guided by the “spirit of forbearance” and “customer delight”, and should not get driven by regulatory mandates.**

- Idea Cellular submits that Regulatory intervention is desirable only when market forces do not themselves lead to redressal of issues for consumers. However, intense competition in the Indian mobile telephony segment already ensures that the service providers offer only the best and most competitive services to the consumers, and make all possible efforts to address issues on a prompt basis to prevent customers from porting out to other service providers. In that context, we are intrigued that this Consultation has come in at a time when competition has evolved to a point where consolidation has become necessary and the customers have an easy option of porting out to any service provider of their choice.

Hence we absolutely do not agree with the TRAI proposal on compensation to the customers in case of call drops since it is presumably based on the wrong assumption made by TRAI that the TSPs are incentivized to drop the calls & thereby get the so called benefit of charging for the full pulse for partial calls interrupted midway & also, get the benefit of longer call duration & greater call revenue due to customer spending more time on apologizing for the call interruption, etc. The Authority seems to have failed to recognize the root cause for the call drop & have failed to appreciate that the kind of customer dissatisfaction which arises due to call drop & its consequent impact on the churn, the brand image, customer loyalty etc. outweighs the alleged benefits of pulse.

As already submitted, call set up time is a loss to operator as resources are used without any revenue. Hence TSPs are already losing because of call drops for reasons beyond their control. Also as highlighted, TSPs do not get any benefit whatsoever in per second billing. It is therefore, respectfully submitted to the Authority not to draw conclusions on the basis of just perceptions & prescribe a solution based on such perceptions & instead get into a root cause analysis to solve this industry wide phenomenon.

As already submitted, Idea Cellular believe that benefits such as credit of talk time or discounts in tariffs in the event of call drops should continue to be guided by the “spirit of forbearance”, and should not get driven by regulatory mandates. This is because the existing level of competitive intensity and the financial health of telecom sector do not justify any need for introduction of “Compensation for call drops”.

Further, a robust telecom infrastructure is indispensable for providing reliable services to the telecom consumers. In the overall value chain the maximum cost is incurred by the TSPs. This includes costs for spectrum, huge infrastructure running into thousands of crores to increase reachability and maintain Quality of service, servicing the end customer etc. However, though Infrastructure is key to growth of telecom in the Country, operators have to often grapple with multiple hurdles, various policy impediments and multiple levies which inhibit expansion of telecom infrastructure in the country. The **Government therefore needs to evolve and enforce a Regulatory framework which addresses following concerns of mobility players:**

- **Uniform Enforcement of Mobile Tower policy and RoW guidelines**
- **Declare telecom service as an essential service.**
- **Expedite Spectrum Harmonisation**
- **Increase quantum of spectrum – 1800 / 2100 / 2300 MHz**
- **Push for tower space on government buildings and defence land, and faster RoW approval**
- **Remove interference from illegal wideband radios – intra-country and cross border**
- **Educate citizens on no health impact of EMF radiation**
- **Alignment of state policies with DoT Mobile Tower policy**
- ***Single window, Time bound clearance of cell sites & RoW***
- **Installation on Government buildings and Defence land.**
- **Supportive and affordable RoW for Fibre.**
- **24/7 power supply to cell sites at Industrial rates**

In this regard, attention is also invited to the joint Industry letter dated 11.09.2015 (copy attached) addressed jointly to the Secretary (DoT) and Chairman, TRAI seeking the Licensor and Regulator's help and intervention in the matter of widespread and arbitrary sealing of telecom towers and pole antennas by all the 3 Municipal Corporations of Delhi that has already resulted in an increase in call drops and consequent inconvenience to customers.

While more efforts are required from the Regulator and Licensor to address these specific issues that are very real from an access operator's perspective, the Authority needs to appreciate that operators have made huge investments over the last few years on setting up networks to reach the remotest areas of Indian geography. Access operators are also constantly incurring huge costs & efforts in carrying out the complex task of acquiring & retaining customers and any regulatory intervention to compensate the customers will be tantamount to imposing additional burden on the debt-ridden Industry that is seeing progressively declining returns.

We would also like to assure that we have a strong mechanism of monitoring call drop on daily basis and improving the same through continuous Network optimization activities. We completely take cognizance of the observations and feedback provided by various forums and would take all necessary steps including network and radio optimization to ensure that issues of call drop are addressed at the earliest and sincerely hope that DoT would provide necessary support on site issue as highlighted above, so that results are upto the desired levels.

In view of the above, it is only appropriate that the Authority continues to focus on creation of an enabling Regulatory framework that allows telecom players to continue investing in Base Stations and electronics in 2G, 3G and 4G to provide good customer experience.

Q2. Do you agree that calling consumers should be compensated for call drops by the access service providers? If yes, which of the following methods would be appropriate for compensating the consumers upon call drop:

(i) Credit of talk-time in minutes/ seconds

(ii) Credit of talk-time in monetary terms

(iii) Any other method you may like to suggest

Please support your viewpoint with reasons along with the methodologies for implementation.

Idea Submission:

We absolutely do not agree with the above proposal. We would like to reiterate that the Authority should get into root cause analysis of finding the real reasons for the call drops. Detailed reasons and complexities on this issue has been shared in our summary comments. Call set up time is a loss to operator as resources are used without any revenue.

Idea Cellular submits that Regulatory intervention is desirable only when market forces do not themselves lead to redressal of issues for consumers. However, intense competition in the Indian mobile telephony segment already ensures that the service providers offer only the best and most competitive services to the consumers, and make all possible efforts to address issues on a prompt basis to prevent customers from porting out to other service providers. In that context, we are intrigued that this Consultation has come in at a time when competition has evolved to a point where consolidation has become necessary and the customers have an easy option of porting out to any service Provider of their choice.

If the above proposal of the TRAI is to be accepted, it will aggravate the TSP's financial position severely impacting their already strained business model and instead of solving the call drop issue, it will further constrain their ability to expand their networks in order to reduce call drops

Q3. If the answer to the Q2 is in the affirmative, suggest conditions/limits, if any, which should be imposed upon the provision of crediting talk-time upon call drop and usage thereof.

Idea Submission:

Not applicable since the answer to Q2 is not in the affirmative.

Q4. Is there any other relevant issue which should be considered in the present consultation on the issue of call drops?

Idea Submission:

We recommend that the Authority should release the Consultation Paper on identification of key issues faced by TSPs which are resulting into call drops & possible solutions to resolve the issues.

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