COAI Response to TRAI Consultation Paper On 'Compensation to the Consumers in the Event of Dropped Calls'

September 21, 2015

I. Preliminary Submissions:

1. At the outset, we would like to submit that all the COAI members remain committed to delivering high quality network services to its customers and resolving any issues pertaining to the QoS & Call drops.

2. The Indian Mobile industry has proven itself beyond doubt handling Voice traffic of over **11 billion minutes per day**, no other Sector in India has delivered so much in such a short period of 18 years. Telecom Industry has played vital role in nation building by contributing **Rs. 70,000 crores per annum to government exchequer** and generating direct employment for more than **7.3 lac citizens**

3. **Investments:** Indian mobile operators have investetd significant amount in excess of **INR 744,319 crs** for expansion of service and coverage.

4. **Indian Industry undergoing major Transformation:** Massive network launches and 3G coverage expansion is happening in India.

Fig: 1: New Network Launches by operators in coming months

Networks	2G	3G	4G
New Launches	1	25	73

Source: COAI Estimates

5. **Indian Telecom Industry facing unprecedented challenges:**

   a. **Issuance of Fresh Spectrum after License expiry:** The same has lead to the retuning of the network equipment in major circles/cities e.g. Delhi, Mumbai, Kolkatta etc.

   b. **Actions by various State bodies/Municipal Corporations:** Despite the DoT guidelines of August 2013, State bodies continue to initiate actions such as disconnecting electricity, sealing the premises and even dismantling of tower sites without any prior notice leading to coverage disruptions and network congestion.

6. **Reasons for the call drops:** Following are major factors leading to coverage disruptions, network congestion, overload on the different network elements, which in turn results in the Call Drop:

   a. **Shortage of Spectrum amid surging data traffic growth:**

   b. **Continuing challenges of installing mobile towers:**

      - Restrictions imposed by State Governments and Municipalities for wireless sites for erecting towers in non-commercial areas:
      - Hurdles in installing mobile towers in residential areas because of "radiation issues".
      - Issues pertaining to Right of Way (RoW) for Fibre.

7. **Spectrum interference**: Service providers are experiencing severe interference in their allocated bands in J&K, Punjab etc circles. This severely impacts quality of service including call drops.

8. **Call Drop is not a PAN India issue:** We would like to submit that the problem of the Call drop, which has surfaced in the last few weeks, is not a PAN India phenomenon. It is restricted to some of the selected areas wherein the issues such as lack of site availability, lack of ROW for in-building solutions, non-operational towers etc. are prevalent. For e.g. certain areas of Mumbai, Delhi and Patna etc.

9. **Steps taken by Industry:** Various efforts have been made by the operators in last couple of months to resolve the issue of Call Drops and improving the Network Coverage and Capacity. These include steps such as Deployment of Small Cells / IBS, RF Tuning, TRX reshuffling, Roll out of 3G & 4G network to offload traffic from 2G network, Offloading the traffic to Wi-Fi etc.

10. **Improvement in Call Drops:** Operators are working on the war footing bassis to resolve the issue and the results are showing in the reduction in the number of Call Drop instances. The Improvement in Call Drops is even been acknowledged by Hon'ble Telecom Minister Ravi Shankar Prasad, he has said:

    " The Government has seen an improvement in the call drops situation based on its internal checks, but telecom operators need to do far more to bring it up to a level that consumers acknowledge as acceptable. DoT (Department of Telecommunications) is meeting the industry each week and a proper report is taken. We have found that about 35,000 towers were defective of which 15,000 have been rectified by telcos,"

11. **International Precedents** –

    a. From our research we find that mandatory compensation for dropped calls is not on regulators' radar in South Asian countries (Bangladesh, Sri Lanka and Pakistan) and Southeast Asian countries (Malaysia, Indonesia, Cambodia and Singapore).

    b. In the markets listed above, there has been strong tendency for regulators to use mandatory standards of QoS as a tool to manage the QoS issues.

    c. In this regard, TRAI has already implemented stringent QoS guidelines for last few years & Service providers have been submitting their compliance to these guidelines on monthly/ quarterly basis. E.g. the TRAI Benchmark of 3% for QOS parameter – "Worst affected cells having more than 3% TCH call drop" is a very stringent benchmark and Service Providers have to do regular Optimization to comply with this QoS parameter.

12. **Way Forward:**

    a. Compensation to the Consumers in the event of the Dropped Calls:

    i. Industry is of the view that consumer compensation will not resolve problem of the call drops**.**

    ii. Internationally nowhere the compensation to consumers for the Drop Call is mandated, except for one country i.e. Columbia. There are some instances where

some operators in certain geographies are following such measures, but not all operators in those geographies are compensating for call drops. These individual operators largely adopt such measures as per their own business model/case.

iii. There are several Technical and Reconciliation issues such as identification of the responsible TSP for the Call Drop; issues pertaining to handset quality, interference due to illegal wideband repeaters etc. resulting in call drops.

iv. We are of the view that following steps/initiative can resolve the issue of the Call Drops substantially:

- Focused efforts to secure government buildings and constructive center-industry engagement with local bodies.

- Learning from spectrum change-over issues in metro service area in order to avert larger scale problems in future.

In light of above we believe that in order to resolve concern on call drop, genuine multi stakeholder alignment and collaboration is the only way. Compensation to the Consumers for the Call Drop is not the correct approach and will not resolve the problem of call drops.

b. Support Required by industry: Following support is required by the Industry from various Government Departments in orderv to tackle the issue of Call Drops:

i. DoT & TRAI

- Uniform Enforcement of Mobile Tower policy and RoW guidelines
- 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

ii. Central, State Governments and Municipal Corporations

- 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

Our Request:

1) The growth of the Indian Telecom Industry is the result of tariff forbearance, light touch regulation and independent & balanced approach adopted by TRAI on various issues.

2) Support from TRAI is far more necessary in resolving the cahllanges being faced by the industrt and in improving the quality of service. We therefore request TRAI to support industry on uniform enforcement of mobile tower policy and RoW guidelines and in educating the citizens on no health impact of EMF radiation.

3) We thus request TRAI not to make the compensation to the customers for the Call Drops a mandatory requirement for the operators.

II. Detailed Submission:

A. Investments made by the Industry:

1. At the outset, we would like to submit that the mobile customers should get the best of the QoS and it is operator's job to provide them the best of the service by investing in optimising their network and Upgrading/installing new site to improve the coverage and capacity.

2. In this regard, we would like to mention that operators have made massive investments in site upgradations/ new site installations for coverage and capacity related issues, since **January 2015**. A summary of such investments is as under :

Fig 2: Sites in Numbers added since January 2015:

Network	2G sites	3G sites	Total Sites
Total	**31,197**	**29,880**	**61,077**

Source: COAI Estimates

3. **Investment in improving the capacity:**

   a. TRAI in the Consultation paper has highlighted that the investment made by the operators in the network Infrastructure (other than spectrum) i.e. around 2,11,691 crore till F.Y. 2013-14, was not able to keep pace with the growth in the usage in the same period and hence it is one of the main reason for the call drops.

   b. In this regard, we would like to submit that the capacity of the network cannot be just determined by the sites alone but also by the investment made by the operators in acquiring the spectrum and in the investment made by the operators in other traffic bearing electronics i.e. channel elements.

   c. Thus, we would like to highlight that the total investments made by the telecom industry in FY2014-15 in India is to the tune of approx. INR 50,000 crores. This includes investments in total assets – tangible (such as plant and machinery) and intangible

assets (such as radio spectrum and licenses) and capital work in progress. These investments are critical for expansion and improvement of telecom services in India. Hence, the investments made by the Telecom sector is far higher than the figure of Rs.9325 crore mentioned in TRAI Consultation paper (Table 2.3, Page 9 of Consultation Paper)

B. Reasons for the Call Drop:

1. We are surprised to note that while TRAI has highlighted various technical reasons for the Calls to Drop, TRAI has not mentioned the factors which cause such technical issues. We would like to highlight following major factors causing Coverage Disruptions, Network Congestions, overload of the different elements of the network etc., which in turn result in the Call Drop:

a. Continuing challenges of installing mobile cell-sites:

i. **State bodies initiate actions against the towers** without any prior notices like disconnecting electricity supplies, sealing the premises and even dismantling of tower sites for reasons some of which are highlighted below (we are enclosing a note on the specific details on the issues been faced with certain State governments/municipal corporations as per **Annexure A.**

- Alleged EMF radiation hazards in installing mobile cell-sites in residential areas, even though very stringent guidelines have been made by DoT.
- Artificial restrictions to install towers on educational institutions, hospitals, forest lands, historical & archeological protected areas, and even residential areas;
- Local bodies not adhering to State policies with regard to application process, fees & levies, multiple documentations and NOCs from different authorities, etc.
- State bodies insisting on multiple levies like registration/installation/sharing /renewal fees, property tax, etc. considering telecom/ telecom infrastructure as a revenue-making exercise for the exchequer.

ii. **Restrictions imposed by State Governments and Municipalities** for wireless sites for erecting cell-sites in non-commercial areas, Sealing of the Cell-sites by Municipal Authorities.

iii. **Issues pertaining to Right of Way (RoW)** – due to no approval, operators are not even in position to put up sites. We are enclosing a note on the RoW issue as **Annexure -B.**

iv. ***No policy for deployment of sites on Government Land/ Buildings/ Residences and in Defence areas:*** Lack of enabling policy in respect of deployment of antennas/ BTS on Government land/ buildings/ residences and in Defense establishments has leads to coverage gaps thereby leading to incidences of call drops and poor signal quality.

v. **Frequent fiber cuts due to infrastructure** projects are recurring phenomena in almost all circles.

vi. **Site outages on account of long power failures** and delay in restoration of power supply by electricity boards.

vii. **Owner/legal issues** – This is an important factor, because if the operator does not obtain the permission to set up the cell site, the call would be dropped.

viii. **Interference** due to illegal wide band radio and coverage restrictions arising out of cross border spectrum interference

Fig 3: No. of BTSs made non-operational due to above-mentioned disruptions is as follows

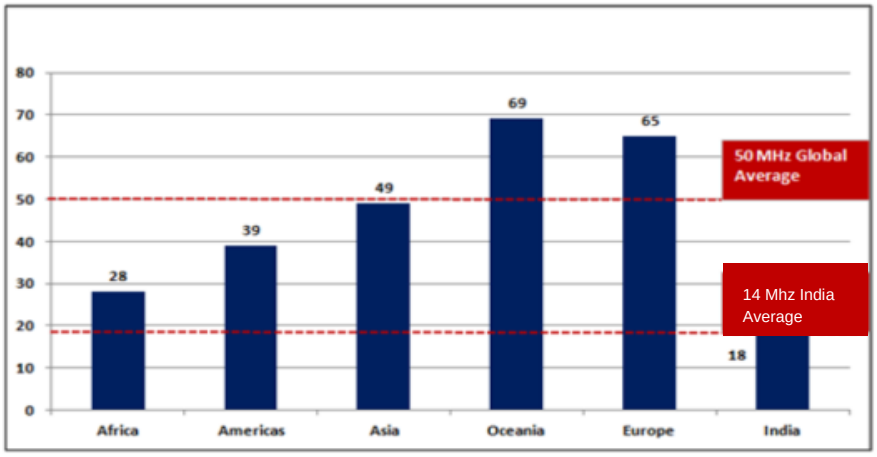
City	Delhi	Mumbai	Chandigarh	Bangalore	Hyderabad	Patna	Total
Total Sites	713	659	119	74	140	11	1716

Source: COAI estimates

b. **Shortage of Spectrum amid surging data traffic growth:**

i. The telecom industry combined has invested heavily over the last few years on infrastructure upgrades to provide seamless connectivity to everyone. However, it is a well-recognized fact that as per international standards, telecom service providers in India have the lowest spectrum holding in the world and that too fragmented as it's divided among 7-10 operators in a circle, apart from being non-continuous, which is a basic necessity for high-speed data services. The same is also recognised by the TRAI.

Fig 4: Global average spectrum per operator:



Source: TRAI Recommendations on "Delivering Broadband Quickly: What do we need to do?" dated 17/04/2015 & COAI Estimates

ii. **Low Spectrum Allocation per subscriber:** The spectrum allocation for the typical Indian operator is around 0.08 MHz/ mn Subs, which is very low, compared to other countries.

Fig 5: Comparison spectrum per subscriber

Operators	Spectrum/ Subscriber (MHz/ Mn subs)
Indian Operator 1	**0.07**
Indian Operator 2	**0.07**
Indian Operator 3	**0.08**
China Mobile	**0.12**
China Unicom	**0.21**

Source: COAI estimates, GSMA intelligence

iii. On Comparing Subscribers per Base Station and MOUs per BTS shows that typical India operators has

- 2 to 3 times subscribers per base station
- to 2.5 times Minutes of Usage per customer then the operators in other countries.

Fig 6: Comparison Subscribers per Base Station and MOUs per BTS

Operators	Subscribers	Base Stations	Subs/ Base Station	Spectrum	MOU/ Subs
CMCC, China	870M	2,000K	430	100MHz	429
Singtel, Singapore	5M	6.3K	700	80MHz	279
Vodafone, UK	21M	45K	450	68MHz	194
Typical Operator (INDIA)	**230M**	**200K**	**1,200**	**22MHz**	**494**

Source: GSMA intelligence, COAI estimates

iv. **Spectrum Related issues having major impediment on QoS (resulting in Call drops):**

- lack of globally harmonized spectrum in contiguous form
- Delay in allocation of spectrum;
- Major changeover of frequencies within and across the 900 MHz and 1800 MHz bands on the live networks for some TSPs.

b. **DoT Norms on EMF Radiation:**

i. In 2008, DoT introduced EMF limits for the Towers and the cell-phones, in line with the WHO recommended ICNIRP (International Commission for Non-Ionising Radiation Protection) Limits. These limits are standards in last majority of countries.

ii. In 2012 Government of India further reduced the Tower Limits, on a precautionary measure, to 1/10th of the ICNIRP limit, in order to address public concern in some areas though the lowering of the limits was not warranted as the exposure from the towers is very low in intensity.

iii. However, despite following stringent safer norms as compared to several other countries world over, there is lack of public awareness on the issue. On the contrary, there is misspelled fear of emissions in public, which has led to shutdown/ no permission for sites in residential areas/ schools/ hospitals. To aggravate, many States have come up with tower policies, which mandate no installation of sites in residential areas/ schools/ hospitals.

iv. TRAI along with DoT is, therefore, requested to come up with an informative campaign educating the public that their fears on harmful effects of emissions are unfounded and there has no conclusive evidence till date that establishes the harmful effect of emissions on the health of humans.

C. Efforts made by the operators to resolve the Call Drop issue: Over the last several weeks the issue of call drops has been an area of major concern which has attracted much attention. The industry has taken serious recognition of the issue and is working on a war footing basis to reduce the Call drop incidence. Some of the initiatives taken are enclosed

1. Special Drive test conducted by the operators to analyse the reasons for the Call drops i.e. for the Radio Frequency Optimization.

2. Roll out of the 3G and 4 G network i.e. offloading the traffic from 2G networks and optimised hand-offs between 2G. 3G & 4G sites.

3. Reached out to customers, seeking their help to identify areas where they face call drops and their suggestions on setting up mobile cell-sites.

4. Offloading of the traffic to Wi-Fi

5. Installation of IBS and Small cells for improving indoor coverage

6. Augmentation of existing RF resources.

7. Continous Optimization efforts:

   a. Regular Drive test to identify the NW quality issues

   b. Regular Parameter Optimization – to fix the Quality issues

   c. Operators are using SON-Automated Optimization Tool,

   d. Running Automated Frequency Planning (AFP) tool

   e. Using Geo-spatial analysis tool

   f. TRX reshuffling to Optimize Capacity

   g. Physical Antenna Optimization as per Traffic pattern

8. Implementation of new features like OSC (Orthogonal Sub Channel) to increase capacity

9. Fine tuning of AMR FR / HR thresholds to Optimize Capacity / Quality

10. Interference Suppression and Cell Edge Coverage improvement

11. T.V program conducted by the Industry in creating awareness of the issue of Call drops

D. Challenges being faced by the Operators:

Indian Telecom Industry is facing unprecedented challenges since last couple of years the same are highlighted below:

1. **Issuance of Fresh Spectrum after License expiry:**

   a. Nowhere in the world running and well-performing licensees, with settled and stable networks serving millions of customers, have had their in use spectrum taken away and replaced with that of completely different frequencies. There is change in the quantum and the frequency spots of the auction spectrum won by the operators. **The same has lead to the retuning of the network equipment major circles/cities e.g. Delhi, Mumbai, Kolkatta etc.**

   b. The network existing prior to the expiry of licenses was set up with due planning and has been established over a period of 20 years. A transition of that network to new frequencies required due planning and time for execution.

   c. The importance of sufficient time for changeover had been acknowledged both by DoT and TRAI. DoT in its reference back dated 10th October, 2011 on TRAI's May 2010 recommendations has expressed the following view:

      "Looking at the technical and implementation issues, it is observed that 6 months period may not be sufficient to migrate the network from 900MHz to 1800MHz band on extension of licence(s)."

   d. We would further like to highlight on the issue that from December 2015, various networks in the 17 more telecom circles will undergo massive re-tuning and will thus

require mush more efforts from the Industry is resolving the QoS & Call Drop related Issues.

2. **Actions by various State bodies/Municipal Corporations:**

a. In order to ensure uniform and standardized practices across the country for installation of Telecommunication Cell-sites, DoT Guidelines dated August 1, 2013 were issued to Chief Secretaries of all State Governments vide letter dated August 08, 2013.

b. However, of late, due to various issues, State Governments and local authorities have not been able to devise bylaws and state-specific tower installation and RoW guidelines which could address the issue of cell-site locations, inadequate telecom network coverage in the States leading to the Call drop issues.

c. Further, state bodies initiate actions against the towers without any prior notices like disconnecting electricity supplies, sealing the premises and even dismantling of tower sites resulting in the coverage disruptions and network congestion i.e. to many consumers latching on to single tower

3. **No action on the Industry representation on following issues taken up with various government organisation:**

We would hereby like to highlight that the Industry had made various representation to TRAI on various issues having impact on the QoS of the operators, however these issues are yet not resolved and thus bearing on the QoS performance of the operators.

a. Interference in border areas
b. Delay in grant of SACFA Clearance
c. Delay in grant of import licence
d. Delay in allocation of Spectrum post auction
e. Sealing of sites by the Municipal Corporations
f. Uniform Right of Way (RoW) norms across circles

Detailed note highlighting the various representation made by the Industry in last two years is enclosed as Annexure C.

E. Call Drop is not a PAN India issue:

1. We would like to submit that the problem of the Call drop, which has surfaced in last few months, is not a PAN India phenomenon. It is restricted to some of the selected areas wherein the issues such as lack of site availability, lack of ROW for in-building solutions, Non-operational towers etc. are prevalent. These problems are faced by operators in certain areas of Mumbai, Delhi etc.

2. Learnings from Drive Test in Mumbai & Delhi:

a. It has been found that there are few areas in the Mumbai and Delhi service areas wherein the problem of the Call Drops occurred:

i. **Mumbai** - Parsi Colony, Five Garden, Dadar, Navy Nagar Colaba, Malabar Hill, Daulat Nagar, Santa Cruz West, Bharat Nagar BKC, Maratha Colony Santacruz East, Railway Land, etc.

ii. **Delhi** - Lutyens Area, Delhi Cantt, Laxmi Nagar, Preet Vihar, Mayur Vihar, Vasant Vihar, Vasant Kunj, RK Puram, High-Rise Buildings in Noida & Gurgaon (IBS ROW hard to secure)

This is thus a localised problem which the operators are trying to resolve and this does not merit mandating of compensation to the subscribers. .

3. Steps taken by the Industry in resolving the issue in the Delhi & Mumbai:

a. Constant optimization is being undertaken for which we have deployed high end tools such as:

- SON-Automated Optimization Tool, which detects neighbor anomalies, interface automatically from network nodes, correct power levels, populates and delete neighbor definitions every 15 minutes
- Geo-spatial analysis tool, which does microanalysis of throughput, interference, signal levels at 50 mtr. X 50 mtr. Grid and recommends clear actions for aligning directions, tilts and putting small cells.
- Automated Frequency Planning (AFP) tool, which studies interference levels based on live measurements, detects neighbor anomalies and suggests the best frequency plan and missing neighbours which reduce interference levels thereby improving Quality of Service to the End Subscribers.

F. Way Forward :

1. Compensation to the Consumers for the Call Drop:

a. As highlighted above, we would like to submit that the issue of the Call Drop is prevalent only in selected areas within a service area or is restricted to certain areas within cities, wherein due to the issue of lack of site availability, lack of ROW for in-building solutions, local government action the problem of Call Drop might exist. Thus, it is not the measure of the QoS of the entire City or Service Area.

b. **Mandatory Compensation not an option as 100% coverage not possible:**

i. TRAI would appreciate that the Wireless Technology by law of physics cannot provide 100% call retainability; hence the benchmark of 98% has been prescribed by the TRAI for the Call Drop parameter. This is the practice internationally.

ii. Further, as per the access licenses, the operators are mandated to rollout network so as to cover 90% on street coverage in a minimum number of DHQs/ BHQs. The criteria of 90% on street coverage has been set up considering the fact that it is never possible to provide 100% coverage in any area.

iii. Thus, we are of the view that compensating the consumer for call drop where there is no coverage by network design would effectively mean mandating 100%

coverage even inside the building and uncovered area which is against the provision of license/NIA.

c. **Compensattion through credit of monetory terms or minute will note resolve Call Drop Issue:**

i. We are of the view that consumer compensation will not resolve problem of the call drops, since the key factors resulting in the Call Drops such as non-availability of sites and spectrum constraints will still remain.

ii. If quality network is not available to make a call, it will also not be available even to use the free minute if provided. Therefore, we should adopt a solution which leads to good quality network which provides a ubiquitous coverage instead of any monetary compensation.

iii. We would like to submit that on the Pan India Basis around 75% of subscribers of our member operators are on tariff plans with per second pulse. In the consultation paper TRAI has contended that despite a majority customers being are on per-second plan, they get converted to per minutes plan due to subscribing to STVs. In this regard, we would like to submit that such STVs offer much lower tariff and is availed by the customer voluntarily and find it more economical and beneficial. Further, we would like to submit that even the STVs are available on per second and per minute basis and the customers are free to choose the STVs which suit them.

iv. We would also like to submit that the tariffs of the per minute plans are lesser then the per second plans being offered by our members, so even for about 25% of the customers who are on the per min plans there is added benfit for the reduced tariffs.

d. **Technical and Reconciliation related Issues:** There are several Technical and Reconciliation issues which need to be addressed before we decide on the compensation to the Consumer for the Call Drops.

i. **Identification of the root cause of the Call Drop:** Operators are not mandated to have 100% coverage in particular service area, there is situation wherein the subscriber may roam in the non- coverage area. It would not be appropriate to penalise operators for such a situation. Further, it is not possible to identify the root cause of the Call Drop, for e.g.

- there may be a situation wherein customer enters a lift or in a basement due to which there is call drop.
- the call drop happens due to poor in-building coverage, cluttered zones, inside high rises, in basements and in lifts may also lead to call drops on which operator has no control
- the poor coverage arising from non-permission of building sites in that area such as Defense area on which operator has no control

ii. **Call Drop due to external factors:** Call Drop may occur due to the external factors such as the use of the Jammers, illegal use of wideband repeaters, Cross Broader Interference,in the areas defining the border between two service areas due to subscriber moving from its subscription area to roaming etc. We would like to submit that it would not be justified to mandate operators to compensate to the customers, wherein they are not at fault for the Call Drops at all.

iii. **Identification of the responsibility of the Operator:** It is not possible to identify the operators who are responsible for the call Drops i.e. whether the drop call has occurred at the called party end or calling party end. It will not be correct for only the Calling Operators to compensate to its customer while the call drop has occurred due to the failure at the end of the Called Operator.

iv. **Call drop due to handset quality issues:** There is also possibility that call drop may occur due to the quality of the handsets being used by the subscriber.

e. **International Experience:**

i. The Compensation to the subscriber for the drop calls is not mandated anywhere in the world, except for one country i.e. Columbia.

ii. In various countries operators provide the credit of the Talk time in minutes as a differentiated offering to its customers and not because of any government mandate. Further, not all operators in these countires are compensating for call drops.Individual operators largely adopt such measures as per their own business model/case.

iii. Even in the South Asian countries (Bangladesh, Sri Lanka and Pakistan) and Southeast Asian countries (Malaysia, Indonesia, Cambodia and Singapore) mandatory compensation for dropped calls is not on regulators' radar.

f. **Alternate Approach to resolve the Issue of Call Drop rather than Compensation:**

We are of the view that following steps/initiative can resolve the issue of the Call Drops substantially rather than compensation to the subscribers:

- Focused efforts to secure government buildings and constructive center-industry engagement with local bodies.
- Learning from spectrum change-over issues in metro service area in order to avert larger scale problems in future.
- Scientific measures of call drop/quality of service necessary to avoid subjectivity.

In light of above we believe that in order to resolve concern on call drop, genuine multi stakeholder alignment and collaboration is the only way to resolve matter. Compensation to the Consumers for the Call Drop is not the correct approach and will not resolve the problem of call drops.

Thus, we request TRAI not to make the compensation to the customers for the Call Drops a mandatory requirement for the operators.

2. Request from government and TRAI:

In view of the above, we require Government support on the following fronts:

a. **Standard Uniform Guidelines for the installation of Cell-sites:** While DoT has come out with Uniform Guidelines regarding issuance of clearance for installation of Mobile cell-sites on 1st August 2013, and has also advised the State Governments to align their tower policies with the DoT guidelines, these guidelines are not being uniformly adopted at the State level. Multiple policies are being implemented by different Municipal Corporations within a State and most State policies adopt cumbersome procedures, multiple clearances from different authorities, very high fees, etc.

   DoT/TRAI support is required to have uniform enforceable guidelines across all the states for providing permission for installing more mobile cell-sites and **Right of Way (RoW)** to lay additional optical fibre cable (OFC).

b. **Single-window, time-bound clearance should be encouraged for installation of cell-sites to ensure the rapid development of national networks**.

c. Government to treat telecoomunication serives as Essential service and provide 24/7 Power to the cell-sites on priority basis & - industrial rates should be -applicable.

d. **Joint Media campaign by Industry and DoT on the EMF related Issue:** Extensive consumer awareness and education programmes should be organized so that consumers fully understand the latest scientific information on EMF radiation and its potential impact on health.

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.

&

Q2. Do you agree that calling consumer should also 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.

&

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

COAI Comments:

1) Please refer to detailed submissions above.

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Annexure – A

Brief note on Key issues with State Government(s) regarding Tower Installation Guidelines

1) State Government(s) not aligned with DOT objectives:

a) Multiple Documentation

The State Governments/Municipalities/ Concerned Authorities are forcing the IP's to submit numerous documents. For example,

(i) the ANDHRA PRADESH tower policy demand for Site plan, Location Plan, Elevation plan, Sections, Occupancy certificates, tower drawing, capacity of tower, vicinity of HT/LT electric lanes, Affidavit from the owner or the association of owners of the commercial building, etc.

(ii) BIHAR has moved a step further demanding for revenue documents in Original; thus making the entire process complex. Moreover these multiple documents resulting in delayed processing and is often time consuming.

(iii) Madhya Pradesh mandates requirement of NOC from the building/ premise owner apart from Agreement, which is clearly a duplication of documents.

These multiple documentation just add additional administrative works and cause huge delay in processing of applications.

2) EMF radiation related issues

a) Artificial restrictions for tower installation

The State governments /Municipalities restricts the tower and cell-sites installation in and around water bodies, hospitals, Airports, Defence establishments, Canals, sensitive buildings

(i) ANDHRA PRADESH, ODISHA and BIHAR State governments restrict the tower installations near hospitals, Schools, religious buildings to a range of 100mts.

(ii) HARYANA government demands a safe distance of 50mts from the residential areas.

(iii) PUDUCHERRY has mandated for no-towers within 1500mtrs radius of jails . This is another example of ad-hoc decision-making by States.

(iv) Chandigarh has restricted tower installation to open areas, excluding parks, and on roof-tops of commercial and institutional buildings with total height of the tower to be not more than 36meters from the ground. Even the generator set for power backup has been mandated to be put underground or upto a maximum of 2 feet height.

Therefore, there are varying requirements for each of these States. The State policies also restricts the number of cell-sites on building/wing of building to 1 or 2 which has an impact on tower sharing and this makes it more capital intensive.

DOT Guidelines do not mention any restrictions on location and number of towers mentions that all technical issues relating to exposure limits of radio frequency field emissions, monitoring their compliance, etc. to be dealt with only by TERM cells of DoT.

b) Safe distance Table

The safe distance table is for the internal use of the TERM Cells for audit purpose and is not be considered while installation of towers. However, this leads to many misconceptions and local authorities consider this as a thumb rule. However, the EMF guidelines by DOT are self-sufficient with regard to all issues pertaining to radiations. Therefore, such 'distance-tables' complicate matters at the State level where decisions are made by the people who are not technical experts.

For example, Chandigarh Tower policy states that the operator cannot have another tower site within a radius of 300metres.

DOT Guidelines mentions that all technical issues relating to exposure limits of radio frequency field emissions, monitoring their compliance, etc. to be dealt with only by TERM cells of DoT.

3) Sealing / disconnection of electricity at tower sites

We would also like to bring to your kind notice that a few state governments take strong actions like sealing of BTS, disconnection of electricity on demands by vested interests. All this is being done without consent of State TERM cells – a key suggestion in the recent DOT Guidelines.

DOT guidelines do not impose any artificial restrictions on tower installations and as per the DOT guidelines, no coercive action can be taken on telecom on towers without the consent of State TERM cells.

4) Mandating of SACFA approval for Municipal permissions

Some State Governments mandate SACFA approval prior to submission of NOC applications to the respective Authority/ Municipal Corporation whereas DoT itself has mentioned that the copy of SACFA application for the said locations submitted to WPC wing of DoT with registration number should be sufficient.

DOT Guidelines mandates "Copy of SACFA clearance / copy of SACFA application for the said location submitted to WPC wing of DoT with registration number as WPC acknowledgement" to be acceptable by State Governments.

5) <u>High Permission Fees, Renewal Fees and even Sharing Fees</u>

Multiple fees under the guise of Renewal Fee, Sharing Fee, Compounding Fee, Development charges, lump sum deposits for demolition etc are being levied on Tower installation with the sole aim for revenue maximization for the Government exchequer.

Some State governments have divided the entire territories in to various categories like Corporations/Municipalities / Nagar Panchayats in ANDHRA PRADESH and High/Medium/low potential zones in HARYANA to levy differential fees. Chandigarh has a Non-refundable license fees @ Rs. 5.00 lacs for 7 years which shall double after expiry of every 7 years. A few States i.e. Goa are asking for Performance Bank Guarantees of an amount equal to the fees/ levy over and above the fee payable.

DOT guidelines stipulates only "a nominal One time Administrative Fee" to recover administrative expenses to be levied for processing of all applications.

6) **<u>Delay in processing of Applications and requirement of multiple approvals</u>**

State governments are consuming a lot of time in providing the permission for installation of towers ranging from 45-75 days approximately and forcing submission of many NOC's from different departments who in turn ask for NOC's of other departments making the entire chain complex and time consuming which impacts the pace of roll-outs. For example :

(i) In Haryana the entire process ranges from 90-105 days for grant of license
(ii) In Kerala the total time taken to issue of license ranges from 45- 90 days because of the multi-level hierarchy (Direct Collector /state committees) which increases the complexity in the process
(iii) In Odisha the maximum time taken by the authorities is 2 months post which the application is deemed to be accepted.
(iv) GOA is asking for an Undertaking that the TSP/ IP-1 will enter into an agreement with the Competent Authority prior to getting any permission.

The DOT guidelines mandates Single Window clearance within a specified time i.e. 30days for faster processing of applications and granting permission/ approvals which will help in early telecom rollouts.

(v) State government of Andhra Pradesh mandates a Completion Certificates to provide power connection. This clause has to be removed as IP's require power even at the time of deployment of towers at sites. The States insists on providing Clearance Certificates from the State Pollution Control Boards for the DG set installed at sites. We would like to highlight that the Type-test certificate itself certifies that the DG set is as per noise and emission norms. So no separate confirmation from State Governments is required.

DOT guidelines stipulates specific and relevant documentation to accompany applications and the same should be followed by the State Governments.

7) Uniform Policy across State(s)

Various Municipal Corporations within a State have issued varied policies, thus creating confusion, chaos and a plethora of policies resulting in unwarranted and costly legal action(s) by infrastructure providers/ telecom service providers. For example, in Maharashtra separate Tower Installation Policies have been notified by PUNE MC, MUMBAI MC, GREATER MUMBAI MC, NAGPUR MC, THANE MC, ETC.

In states like KERALA, MADHYA PRADESH the applicants have to obtain tower structure design by local institutions or executive engineers of concerned departments.

Key issues in various States on Tower Installation Policies

Sr. No.	Issues	DOT Guidelines dt 1st August 2013 states
1	**Multiple Documentation** The State Governments/Municipalities/ Concerned Authorities forcing the IP's to submit numerous documents.	Multiplicity of documents resulting in delayed processing and often time consuming. List of documents as per DOT guidelines covers all basis requirements and hence be followed. DOT guidelines stipulates specific and relevant documentation to accompany applications and the same should be followed by the State Governments.
2	**EMF radiation related issues** Artificial restrictions for tower installation The State governments /Municipalities restricting the tower instalment in and around the water bodies, hospitals, Airports, Defence establishments, Canals closer to sensitive buildings of radius 100-500 mtrs in each different tower policies.	DOT Guidelines does not mention any restrictions on location and number of towers mentions that all technical issues relating to exposure limits of radio frequency field emissions, monitoring their compliance, etc to be dealt with only by TERM cells of DoT.
3	**EMF radiation related issues** Safe distance Table The safe distance table leads to lots of misconceptions and local authorities considering this as a thumb rule.	The safe distance table is for the internal use of the TERM Cells for audit purpose and is not be considered while installation of towers. DOT Guidelines mentions that all technical issues relating to exposure limits of radio frequency field emissions, monitoring their compliance, etc to be dealt with only by TERM cells of DoT.

4	**Sealing / disconnection of electricity at tower sites** Few state governments taking strong actions like sealing of BTS, disconnection of electricity on demands by vested interests.	DOT guidelines states, no coercive action can be taken on telecom on towers without the consent of State TERM cells.
5	**Mandating of SACFA approval for Municipal permissions** The State Governments are mandating SACFA approval prior to submission of NOC applications to the respective Authority/ Municipal Corporation	DOT Guidelines mandates "Copy of SACFA clearance / copy of SACFA application for the said location submitted to WPC wing of DoT with registration number asWPC acknowledgement" to be acceptable by State Governments.
6	**High Permission Fees, Renwal Fees and even Sharing Fees** Multiple fee under the guise of Renewal Fee, Sharing Fee, Compounding Fee, Development charges, lump sum deposits for demolition etc are being levied on Tower installation with the sole aim for revenue maximization for the Government exchequer.	DOT guidelines stipulates only "a nominal One time Administrative Fee" to recover administrative expenses to be levied for processing of all applications.
7	**Delay in processing of Applications and requirement of multiple approvals** State governments are consuming a lot of time in providing the permission for installation of towers ranging from 45-75 days approximately and forcing to submit many NOC's from different departments	The DOT guidelines mandates Single Window clearance within a specified time i.e. 30days for faster processing of applications and granting permission/ approvals which will help in early telecom rollouts.

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Annexure - B

Suggestions and inputs on critical area of Laying of OFCs

The Government of India, in its Digital India program aimed at transforming India into a digitally empowered society and knowledge economy, has envisaged nine foundation pillars for Digital India. Building Broadband Highways is the first pillar which has been further categorized under three subheads- Broadband for all Rural, Broadband for all Urban and National Information Infrastructure. It is worth mentioning here that the "Broadband for all in urban area" comprises of communication infrastructure in new urban developments and buildings.

It is thus clearly recognized that mobile broadband will be the platform through which this vision will be realized. **In order to facilitate this,** an **expeditious rollout of fibre, telecom tower and telecom infrastructure in the new buildings/ real estate will be the key enabling factor.** The NTP-2012 also recognizes this imperative as it enunciates the need to review and **simplify sectorial policy for Right of Way** for laying cable network and installation of towers, etc. for facilitating smooth coordination between the service providers and the State Governments/ local bodies.

The requirement for rollout of backhaul fibre networks has increased the importance of RoW (Right of Way).

In this regard, the following measures are suggested:

a) Supporting trenching activities of USOF through Mahatma Gandhi National Rural Employment Guarantee Scheme as discussed in TRAI consultation paper on "National Broadband Plan" released on 10th June 2010.
b) Stipulated time frame with accountability for RoW clearances will enable timely implementation of telecom networks. The Central/ State Government / Local bodies/ Ministry of Surface Transport etc. should take necessary steps to provide the necessary directives.
c) For National Optic Fibre Network(NOFN) rollout, the Government has had success with 13 states and 3 Union Territories which have signed MoU with BBNL and have provided free Right of Way (RoW) to Bharat Broadband Network Limited(BBNL). The Central Government, through Universal Service Obligation Fund (USOF), will fund the project while the contribution of State Government would be by providing free Right of Way (RoW) for laying OFC. **However, telecom operators continue to be charged at exorbitant rates to obtain RoW permissions, especially in big cities**. It is desirable that similar Arrangements can be made for Telecom Service providers for laying of Intra city OFC.

d) All State governments should extend the facility of right of way for laying underground Telecom cables, to all licensees without payment of any compensatory charges/ levy /lease rentals/ licence fee/ free bandwidth/ revenue share/ cashless equity etc.
e) **The only admissible charges should be reinstatement charges or charges directly linked to the restoration work.**
f) The RoW permission should be granted "on priority". Any denial for RoW in exceptional circumstances should be recorded in writing with reasons.
g) Single Window mechanism for granting RoW permission

Further, the In-building solutions (IBS) can be used to provide seamless telecom connectivity. Similarly, the new township developments can be provisioned with duct space along the roads along with the other public utility lines / ducts and such ducts may then be shared between different telecommunication service providers/ IPs, to provide the services. Similarly, the street lights/ lightening poles on the roads can be used to install low powered telecommunication devices and they can be connected to a telecommunication hub which may be built by the IPs to service a particular number of devices in a given area. The laying of the Optical Fiber is a heavily capital intensive work and would require adequate benefits to be given by the Central Government to invite the IPs to invest in such integration works in the new real estate developments and developments of new townships.

The Following may be considered:

a) During development of a sector/town, all roads/bridges should have utility ducts provisioned to lay OFC at a later stage. This will avoid unnecessary damage to newly laid roads and utilities.
b) All buildings/towers should be provisioned with vertical conduits for carrying out last mile building wiring for FTTH services.
c) **Mandate placing ducts, if not optical fibre, with well-defined access mechanisms, on all new road constructions** along national highways, as well as inter & intra city roads.
d) **Change building bye-laws** which currently deem only electricity, water, and fire safety as necessary infrastructure for the issue of a completion certificate **to include mandatory inclusion of either ducts /optical fibre with well-defined access mechanisms in all upcoming office complexes, commercial spaces and residential complexes. This would have a measurable net positive impact on the goal of constructing national broadband highways**.
e) A tower and a common transmission/ equipment room in every panchayat in the village - the rental of tower and room shall fund panchayat running through USOF along with fiber.
f) Incentives to residential societies & RWA for deployment of small cells / WiFi networks.
g) Policy for arrangement with the power companies for deploying fiber along the transmission lines /towers.
h) Places where digging is not possible and RoW is not available, there should be proper overhead space for pulling fiber and associated infra.

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