



Response to Consultation Paper on Tariff issues related to SMS and Cell Broadcast alerts disseminated through Common Alerting Protocol (CAP) platform during disasters/non-disasters

Preamble

1. At the outset, we thank the Authority for coming out with this Consultation Paper that recognizes that mass dissemination of disaster related and other messages with geographical intelligence, consume telecom service providers (TSPs) resources and that there is a need to define tariff for these messages.
2. We submit that the issue of mass dissemination of alerts has been discussed at length with the Government for some time now. After carefully evaluating the technical and social requirements, TSPs have already deployed the SMS system to support the dissemination of CAP messages to the subscribers in the target areas. The selection of SMS based method for distribution of CAP messages was done after discussion between DoT, C-DOT, TEC and TSPs.
3. The proposal of implementing Cell Broadcast was discussed between the industry and the Government initially but was, dropped after duly considering various constraints/limitations of Cell Broadcast.
4. The SMS based dissemination has reached its full maturity and has been widely accepted as the preferred method of dissemination. The SMS based broadcast method has been highly successful during COVID-19, where it was used for sending millions of SMSs to subscribers and was instrumental in spreading awareness amongst people.
5. Cell Broadcast method adds no significant value to the system as it is handset dependent. Cell Broadcast method has even caused corruption in the SIMs and instances of SIMs becoming faulty have been faced after the Cell Broadcast. Therefore, without adding any value to the system, Cell Broadcast can potentially cause disruption of services to the customers.
6. We submit that SMS is the preferred mode of disseminating these messages as it is more customer friendly and it provides a clear advantage in the diverse devices spread in the country.
7. It is pertinent to note that in addition to disaster related messages; TSPs get various requests from state and local authorities for SMS blast on various matters of governance, social causes, educational, advisory, awareness, etc. We submit that currently over 150 mn such messages are being disseminated in a month by each TSP, implying considerable consumption of resources.
8. Many a times TSPs are also compelled to send same/similar messages over a large base with repeated frequencies, which is not only a cumbersome exercise for the TSPs but many times also causes inconvenience to the customers. Thus, it is important that the Authority fixes a tariff payable by Government Authorities for such messages so that such crucial resources of the TSPs are used judiciously and effectively. This will ensure that TSPs get fair compensation for the same.

Question Wise Response

Q1: What are the technical options available with the Telecom Service Providers for mass message dissemination through Common Alerting Protocol (CAP) platform during disasters and non-disasters and what are the challenges being faced with respect to these technology options?

AND

Q2: Which method of mass message dissemination for alert, Short Service Message or Cell Broadcast Service, is preferred? Please provide supporting reasons.

COAI Response

1. The technical options available with the TSPs for mass message dissemination through Common Alerting Protocol (CAP) platform during disasters and non-disaster are SMS and Cell Broadcast systems.
2. As stated above, TSPs have already deployed SMS system to support the dissemination of CAP messages SMS to the subscribers in the target areas. The selection of SMS based method for distribution of CAP messages was done after discussion between DoT, C-DOT, TEC and TSPs.
3. The SMS based dissemination has reached its full maturity and has been widely accepted as the preferred method of dissemination. The SMS based broadcast method has been highly successful during the COVID-19, where it was used for sending millions of SMSs to subscribers and was instrumental in spreading awareness amongst people.
4. The proposal of implementing Cell Broadcast was discussed initially but was, dropped after duly considering various constraints/limitations of Cell Broadcast.
5. It is also important to note that Cell Broadcast method adds no significant value to the system (as it is handset dependent), whereas SMS based method is already being used successfully. Cell Broadcast method has even caused corruption in the SIMs and instances of SIMs becoming faulty have been faced after Cell Broadcast. Therefore, without adding any value to the system, Cell Broadcast can potentially cause disruption of services to the customers, which we are sure is not the intent of mass dissemination of alerts.
6. We submit that SMS is the preferred mode of disseminating these messages as it is more customer friendly and it provides a clear advantage in the diverse devices spread in the country, especially in remote and rural areas. We submit that under Cell Broadcast Solution (CBS), delivery of communication is device dependent, which is the not the case with SMS. CBS also fails on many other parameters as end to end CBC delivery feedback is not available and it does not support message retry on failure unlike SMS.
7. Further, the subscribers can also turn-off CBC on their devices, which is not possible for SMS. The performance of SMS is much better on many other parameters like delivery time, reliability, suitability to cover smaller geographic areas etc., making it an obvious choice of disseminating messages to selective geographies.

8. It is also submitted that the reliability related limitations of CBS also make it undeployable commercially. As CBS does not support customer delivery feedback statistics, charging for CBS will have huge challenges and prone to disputes, whereas for SMS such statistics and reports are easily available. The success of SMS based message dissemination is self-evident as millions of COVID-19 related messages were delivered successfully in past one and a half year.

Q3: What is the success rate in delivery of messages in each of the methods adopted by the operators for dissemination of messages to the masses? Please provide details.

COAI Response

1. We submit that under Cell Broadcast Solution (CBS), delivery of communication is device dependent, which is the not the case with SMS.
2. CBS also does not support customer delivery feedback statistics. In CBS, messages are sent point to area instead of point to point; therefore, platform cannot keep track of individual successful delivery count.
3. Unlike SMS, in case user switches off the phone, there is no way message gets delivered later. Subscribers may disable this channel on the handset and may not even get the message even if the handset is switched on.
4. Thus, success rate in delivery of messages is far advanced than in CBS.

Q4: What are the challenges related to customer end devices that may arise due to Cell Broadcast Service? If so, what are they and what is the extent (total number as well as percentage) of such cases encountered so far? In case an operator has first-hand experience, then the same may be shared with facts.

COAI Response

1. The Cell Broadcast method has caused corruption in the SIMs and instances of SIMs becoming faulty have been faced after the Cell Broadcast. Therefore, Cell Broadcast can potentially cause disruption of services to the customers.
2. There are specific disadvantages of Cell Broadcast which are given below:
 - a. Message sent, point to area instead of point to point, therefore, platform cannot keep track of individual successful delivery count.
 - b. Unlike SMS, in case user switches off the phone, there is no way message gets delivered later
 - c. CB may also face issues of handset compatibility which could require manual configuration or software client on handset. Also the presentation of the message may vary depending upon the handset.
 - d. Subscriber may disable this channel on the handset and may not even get the message even if the handset is switched on.
 - e. High recurring capex and opex involved due to multiple connectivity with network entities.

Q5: Is there a need for an elaborate tariff fixation exercise for CAP messages? In the alternative, would it be better from the perspective of ease of regulation to keep all categories of alerts/ messages given in paragraph 2.6 above including those at categories (i), (ii) and (iv) thereof, free of charge? Is keeping all CAP alerts/messages free of charge an economically prudent and viable option?

AND

Q6: If answer to the question number 5 is No, then whether the service SMS charges of up to Rs 0.05 (up to five paise) as mentioned at Regulation 35 of TCCCPR 2018 be adopted for SMS/Cell Broadcast alerts/ messages sent through CAP platform?

COAI Response

1. TRAI in its consultation paper has stated that the system which is implemented allows sending geo intelligent CAP messages as per latitude and longitude of the targeted area. Upon receipt of CAP alert message, TSPs identify Base Transceiver Station (BTS) and their latched subscribers within targeted area. Then SMS/Cell Broadcast is disseminated to identified subscribers within targeted area automatically. Therefore, dissemination of CAP alert SMS through TSPs network is different from propagation of conventional peer-to-peer SMS.”
2. Also it may be noted that during the time of disasters, the input cost of resources like diesel, petrol, transportation costs, etc., required for the functioning of the telecom towers, goes up significantly and this adds to cost burden of the TSPs.
3. Accordingly it **must be appreciated that there is a cost involved which needs to be recovered**. This will enable TSPs to provide efficient and better service during various disasters. Thus it will be economically prudent and viable that tariff should be chargeable at all times (disaster/non-disaster).
4. In light of the above, in order to ensure recovery of costs we are of the view that the SMS charges (through CAP) should be at least 2p for disaster and 7p for non-disaster SMS.

Q7: What tariffs should be charged by TSPs for SMS and Cell Broadcast alerts/messages under category (i), (ii) & (iv) as given at paragraph 2.6 above, in case SMS charges of up to Rs 0.05 (up to five paise) as mentioned at Regulation 35 of TCCCPR 2018 is not to be adopted?

COAI Response

NA

Q8: What are the operational challenges for disseminating mass messages through Short Service Message and Cell Broadcast Service? What is the impact of these operational challenges on the costs involved in such dissemination? Please justify.

COAI Response

1. The technicalities involved are same as regular A2P messages with similar level of resource requirements, with additional resource utilization for integration with the GIS platform and analytics platform for real time extraction of geographical intelligence.

2. In addition, we have already mentioned the technical difficulties like device dependency, lack of delivery feedback and unsatisfactory performance on other parameters like delivery time, reliability and suitability to cover smaller geographic areas that make it unsuitable for delivering emergency communication.

Q9: What methodology should be adopted to do the costing of the Cell Broadcast alerts/ messages? What are the cost items which should be factored in? Please provide supporting reasons.

COAI Response

1. Based on cost data collected from different TSPs a cost methodology might give different results which may create further complexities.
2. Thus as stated in response to question 5 and 6, in order to ensure recovery of costs we are of the view that the SMS charges (through CAP) should be at least 2p for disaster and 7p for non-disaster SMS.

Question 10: If there are any other issues/suggestions relevant to the subject, stakeholders are invited to submit the same with proper justification.

COAI Response

1. We would also like to highlight that to enable the overall Cell Broadcast Service, there are various key dependencies, which if not met, severely impact the delivery of CBS messages. These are:
 - a. Dependency on Govt. side**
 - i. Alert management system on Govt. side should have well defined C-interface requirements, which is usually country specific.
 - b. Dependency on Cell Broadcast system**
 - i. The interface between GIS system and Cell Broadcast system have to be defined to be able to consume the cell information against the geographical area coordinates.
 - ii. Availability of Geographical Maps - usually Govt. authorized maps should be from the relevant Govt. agencies.
 - c. Dependency on 2G/3G/4G Network**
 - i. The BSCs, RNCs, MMEs/Cells need to have the features enabled for Cell Broadcast. All Network elements must support this feature.
 - ii. The vendor/version of the network elements may also differ the integration requirements.
 - d. Dependency on OSS**
 - i. Integration of Cell Broadcast system with FM and PM systems.
 - ii. Interface specifications with FM and PM system would have to be developed and implemented.

e. Dependency on security aspects/IP networking

- i. IPsec is required between Govt. Alert Management and Cell Broadcast system.
- ii. Digital certificates to authenticate alerts coming from the Govt.

f. Dependency on handsets/devices

- i. All key handsets (model/make) should be configured to support cell broadcast service. Sample Handset requirements are -
 - i. Channels
 - ii. Type of alerts
 - iii. Alert Tone/Vibration
