

**VIL comments to TRAI Consultation Paper on
Tariff issues related to SMS and Cell broadcast alerts disseminated through
Common Alerting Protocol (CAP) platform during disasters/non-disasters**

Question-wise Comments

Question 1: 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?

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Question 2: Which method of mass message dissemination for alert, Short Service Message or Cell Broadcast Service, is preferred? Please provide supporting reasons.

VIL comments:

Cell Broadcast:

1. VIL does not have its own cell broadcast platform.
2. Challenges associated with implementation of Cell Broadcast through CAP are given as follows:
 - a. **Inherent technical challenges:**
 - i. Cell broadcast works only if UE (User Equipment) has CMAS capability.
 - ii. VIL does not have CBC platform to integrate with CAP platform.
 - iii. CBC feature License is not available in Packet core MMEs (network element) of few OEMs deployed in VIL.
 - iv. Information to consumer is not very well understood as compared with SMS.
 - v. Being one-way communication, delivery is not known.
 - vi. Proper cell broadcast for emergency alerts (CMAS feature), is not supported by non-4G devices as well as by some 4G devices also.
 - b. **Costing:** Cost for CBC platform deployment can only determine through the RFP process. However High-level estimate, it would have huge cost of around \$85 to 9 Mn for PAN India deployment in VIL.

SMS broadcast

1. VIL CAP platform is integrated with SMSC to send SMS alerts. This application for broadcasting has been developed by a third party vendor for CAP Platform for a short and targeted need.

2. Presently, the CAP platform is a standalone system and not integrated to any billing system hence, there is no commercial service offered over CAP platform through SMS dissemination modes. However, we intend to put in place commercial mechanism for SMS dissemination mode.
3. Due to above, so far we have not charged for SMS dissemination through CAP platform on Government's request during disasters. However, considering ever increasing requirement of disaster as well as non-disaster related messages, there is a need to have charging in place for such messages.
4. **Challenges:**
 - a. As per present SMSC capacity allocated for broadcast of these alerts, SMS Broadcast can be sent to 4.5 lakhs subscribers in 15 mins. The existing disaster based SMS broadcasts through CAP platform also occupies large capacity in terms of network resource and manpower. Thus, said broadcasts should be kept minimal, to address specifically disaster alerts.
 - b. It also involves lot of additional technical and manual activities, which are time consuming and manually intensive, to generate target audience MSISDNs for the said broadcast, feed the same to CAP platform for dissemination and manage such requests through offline channels. The activity requires a dip in the vast VLR dump which takes minimum 7-8 hours for even downloading the dump, post which the cell ID is fetched and then the MSISDNs are mapped against these cell IDs. Post mapping, files require processing and generation of ALERT SMS for sending to the subscribers.

Preferred mode of Alert dissemination

1. Besides, points mentioned above, SMS is well understood by end consumers, Cell based broadcast doesn't add any significant value to the alert systems for disaster management, besides other technical challenges including it being handset dependent.
2. **Keeping all above in view, SMS broadcast is the preferred mode of alert dissemination during disaster or even for non-disaster related alerts.**

Question 3: 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.

VIL comments:

1. On an average, current Success Rate is 99%, as all the SMSs are delivered to the SMSC by the CAP platform and 1% of the SMS failure observed due to Subscriber and Network issues.
2. VIL does not have cell broadcast platform hence, no comments can be provided on its success rate.

Question 4: 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.

VIL comments:

1. VIL does not have cell broadcast platform.
2. The key challenge related to cell broadcast is the handset compatibility. For Cell broadcast services, the customer's handset specifications should support CMAS capability. Also the presentation of the message may vary depending upon the handset device.
3. Proper cell broadcast for emergency alerts (CMAS feature), is not supported by non-4G devices as well as by some 4G devices also.
4. Presentation of cell broadcast to consumer and its understanding would be a substantial challenge, as compared to SMS which is very well understood by consumers.

Question 5: 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?

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Question 6: 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?

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Question 7: 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?

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Question 9: 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.

VIL comments:

1. For doing a separate tariff fixation exercise, it would require a detailed and in-depth analysis for the same, for arriving at providing comments on methodology. This will take time and would neither commensurate the need which is sudden and immediate, nor the volume of traffic expected to be disseminated.

2. The costing would require detailed and in-depth analysis of different costs elements viz (a) One time cost: Platform cost + Platform software license cost + network License cost (2g/3g/4g/5g) + Integration cost; (b) Recurring cost: Platform maintenance cost+ man power+ License renewal cost.
3. Further, the costing & Pricing will also depend on the frequency of the messages being disseminated on a daily basis as configurations, capabilities and capacities may change depending upon the frequency/volumes/number of entities sending it/geographies etc.
4. Also, VIL does not have its own CAP platform for Cell broadcast. For SMS dissemination also, there are different activities both technical and manual which are involved in a SMS dissemination through CAP platform.
5. We again reiterate that presently, it is not part of our commercial offering and considering the disadvantages of cell broadcast, there is neither a need to mandate it nor a need to regulate/fix any tariff for the same.
6. Hence, there is no need of a separate tariff fixation exercise for CAP messages.
7. For these alerts, there are substantial additional technical and manual activities in case of dissemination of SMS alerts through CAP platforms and volumes are very low as compared with other commercial offerings over SMS thus, there should be mechanism for reimbursement through tariffs.
8. For fixation of the tariff for CAP messages through SMS dissemination, we would like to recommend that there is already a service SMS charge defined by the Authority through the TCCCP Regulation 2018 i.e. Rs 0.05 per SMS + Rs 0.02 SMS termination charge, which should be used for fixing the tariff for non-disaster SMS (i.e. which are not specific to a disaster or its handling) through CAP platforms.
9. Further, during disaster there is significant cost escalation in running the network and said services therefore, we recommend the Authority to put in place tariff/reimbursement of SMS termination charge (i.e. Rs 0.02/SMS) for disaster specific SMS alerts sent through CAP platform.
10. Additionally, for Cell Broadcast alerts we would like to mention as follows:
 - a. We would like to mention here about the practice recently adopted by one of the state government wherein they have given a contract with one of the CBC platform agency to reach out to the masses during disasters.
 - b. The Andhra Pradesh government has given the contract to Celltick (an entity) to deploy CBC platform for disaster alerts for AP circle. The company has tied up with VIL and has signed a commercial contract, to integrate Celltick's platform with VIL RAN network.

- c. It is suggested that a similar model can be adopted by other State Governments in other parts of the country.

11. Considering all above, we recommend that

- a. No separate or detailed tariff fixation exercise should be carried out for SMS or cell based alerts through CAP platform.
- b. The tariff for SMS alerts for non-disaster (i.e. which are not specific to a disaster), should be fixed at Rs 0.07 per SMS, as is the case of Service messages which are sent under TCCCP Regulation 2018. For disaster specific SMS, tariff/reimbursement of SMS termination charge at Rs 0.02/SMS should be put in place.
- c. No tariff be fixed for Cell broadcast through CAP platform.

Question 8: 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.

VIL comments:

We would like to re-iterate that the Cell Broadcast platform is not deployed in VIL, therefore, the CBC based broadcast is not feasible at present.

Further, there are certain operational challenges mentioned as under for SMS broadcast:

1. The Subscriber data is fetched from VLR and MMEs. When the VLR dump is initiated, especially in the case of our telecom circles with large subscriber base, the VLR dump takes considerable time to complete the dump, especially during the peak hours and it affects the VLR's other processing capabilities as well.
2. Moreover in VIL network architecture, all the MSS are in pooled architecture, hence it is not possible to locate the exact serving MSS to fetch the live dump and the dump runs in sequence.
3. Hence the real time SMS broad cast is not being possible, especially in the above scenarios and are sent with this delay.

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

VIL Comments: No further comments