

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In the Matter of )  
 )  
The Commercial Mobile Alert System ) PS Docket No. 07-287  
 )  
 )

To: The Commission

**REPLY COMMENTS OF  
SQUARELOOP, INC.**

SquareLoop, Inc. (“SquareLoop” or the “Company”), in accordance with Section 1.415 of the Federal Communications Commission (“FCC” or the “Commission”) rules and regulations, respectfully submits its Reply Comments in the above-entitled proceeding.<sup>1</sup> The stated purpose of the *NPRM* is to ensure compliance with the directives of the Warning Alert and Response Network (“WARN”) Act<sup>2</sup> that the Commission “enable commercial mobile service alerting capability for providers that elect to transmit emergency alerts.”<sup>3</sup>

The number of Comments filed in this proceeding is encouraging. This vital issue – the delivery of Commercial Mobile Alert System (“CMAS”) capability – has engaged the attention of mobile carriers and a variety of parties involved in the wireless industry, including many that participated in the preparation of the Commercial Mobile Service Alert Advisory Committee (“CMSAAC”) report required by the WARN Act.

Indeed, the focus of most comments is the CMSAAC report. A number of carriers and wireless equipment vendors urged the Commission to endorse it as drafted and cautioned that

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<sup>1</sup> *In the Matter of the Commercial Mobile Alert System*, PS Docket No. 07-287, Notice of Proposed Rulemaking, 22 FCC Rcd 21975 (2007) (“*NPRM*” or the “Order”).

<sup>2</sup> Security and Accountability For Every Port Act of 2006 (SAFE Port Act), Pub.L. 109-347, Title VI-Commercial Mobile Service Alerts.

<sup>3</sup> WARN Act, §602(a).

any deviations from it could slow the CMAS certification and implementation process or discourage voluntary opt-ins by carriers, or both. Other commenting parties asserted that their technologies could provide mass emergency alerting capabilities today on both CDMA and GSM networks if the commercial network operators would merely activate dormant cell broadcast or comparable features already resident in their network infrastructure, contrary to the findings of the CMSAAC report.<sup>4</sup> Certain parties claimed that they have some other mass emergency alerting delivery mechanism that is available today and that is equal or superior to the approach recommended in the report.<sup>5</sup>

SquareLoop's Comments proceeded from the assumption that the broad range of expertise and viewpoints represented by the membership of the CMSAAC can be relied upon to have provided a generally accurate and current picture of the capabilities of the deployed cellular infrastructure and technologies in the United States as they are relevant to CMAS topics. In any event, the Company agreed that the CMSAAC report is consistent with the requirements of the WARN Act. It acknowledged that the recommendations in the report represent a path toward a scalable mobile emergency alert warning service, one capable of delivering mass notifications to the general public, like the current Emergency Alert System ("EAS"), that could provide significant public benefits by delivering a "robust, reliable and effective CMAS"<sup>6</sup> when and if implemented.

However, SquareLoop also noted that the WARN Act expressly imposes no obligation on carriers to embrace whatever CMAS approach is adopted by the Commission; carrier participation in any CMAS activity is expressly stated in the relevant legislation to be entirely voluntary. The Company also noted that, at the earliest, it will be several years before the

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<sup>4</sup> See, e.g., Comments of CellCast Technologies, LLC.

<sup>5</sup> See, e.g., Comments of DataFM, Inc.

<sup>6</sup> NPRM at ¶ 6.

CMSAAC recommendations will become a reality. Mobile devices capable of receiving the mass public emergency alerts contemplated in the CMSAAC report will take even longer to deploy. Therefore, SquareLoop made the modest proposal that the Commission should encourage carriers to cooperate with governmental entities or companies that choose to deploy the SquareLoop solution, or other interim emergency alerting solutions, provided that doing so would neither harm nor require changes to the carrier's network.

Certain comments in this proceeding suggest that parties may not be fully informed about the current capabilities of SquareLoop's technology which necessarily (given the existing capabilities of as-deployed cellular networks and technologies in the United States) relies on point-to-point, or unicast, delivery mechanisms. The Company wishes to take this opportunity to correct those miscomprehensions so that they do not discourage the interim, voluntary deployment of its technology, a technology that has the capability of saving lives today - albeit on a very focused and targeted basis - while the CMSAAC standardization and implementation process intended to provide mass emergency notification capability for substantially all wireless mobile device users is completed.

#### **I. CLARIFICATION OF POINT-TO-POINT CMAS CAPABILITIES**

The CMSAAC report and some commenting parties make certain assumptions about point-to-point CMAS approaches that are not fully accurate, at least with respect to the SquareLoop technology. While the Company recognizes that there are scalability limitations in the capabilities of any emergency alerting approach that must rely on current commercial mobile network designs, and looks forward to taking advantage of future cell broadcasting or similar

techniques when available, there appears to be a misconception about what can and cannot be done even today.<sup>7</sup>

First, it is not correct that point-to-point techniques are incapable of geo-targeting emergency alerts. The Company described in its Comments that its technology places intelligence in the handset that ensures that messages can be geographically targeted. It explained that coded information to establish the desired relevant location and valid timeframe for the message, as well as the actual message content, are contained in a text, audio, video or other point-to-point transmission that is sent to the devices of subscribers that have “opted-in” to receive emergency alerts. An application on the device itself - which permits the device to establish and track its geographic location independent of location information provided by the network - then determines whether each particular device is (or during a relevant prior timeframe was) in the appropriate target area for the message. If so, and depending on the technology of the network on which it operates, the device either displays the message or opens the link to the SquareLoop server to download the alert.<sup>8</sup> If the device is outside the targeted area, the message is not displayed unless the user comes into the geo-targeted area within the defined timeframe. The SquareLoop technology can adapt its message delivery capabilities to any number of different means of establishing the location of targeted devices, including location approaches that rely on cell site identification, those that rely on Global Positioning System capability resident in the device, and those where triangulation using signal strength and other

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<sup>7</sup> See, e.g., Comments of the Telecommunications Industry Association at 4 citing CMSAAC Recommendations at 62-63.

<sup>8</sup> This explanation will clarify one aspect of the description of SquareLoop’s technology in n. 4 of the Sprint Nextel Corporation (“Sprint”) comments. An emergency alert sent by Contra Costa County to a subscriber on Sprint’s iDEN network is contained in a single message which includes both the geographic identification and the associated text. On Sprint’s CDMA network, only those subscriber devices within the relevant geographic area will open the link to the SquareLoop server to download the message. This aspect of the Company’s technology is designed to minimize the impact on carrier network resources, while still delivering critical emergency alerts in the only way possible given the current network environment.

data is obtained by contact between the device and the network. In fact, the SquareLoop system - utilizing any of these approaches - already is able to geo-target to a more granular degree than the countywide standard recommended in the CMSAAC report.<sup>9</sup>

Second, SquareLoop believes that the expressed concern about significant delivery delays is substantially overstated, at least with respect to its narrowly focused, targeted delivery point-to-point approach under currently deployed cellular transmission technology. Specifically, this objection appears not to take into consideration the opt-in element in the Company's approach, which greatly limits the number of alerts that must be sent. Only those subscribers that affirmatively elect to receive emergency message alerts are contacted. Moreover, emergency alerts rarely require repeated updates over a multi-hour period as occurred during the extraordinary events of 9/11. The more typical message relates to a specific time-limited occurrence. For example, the CMSAAC report noted that there were almost 10,000 tornado and flash flood warnings in 2006 alone. If use of SquareLoop's technology could alert even some number of citizens potentially affected by those events, it is clear that lives may be saved.

Third, some parties also have expressed concern about point-to-point technologies creating network delays or even gridlock that could block voice calls. For the reasons detailed above, that is not the case with the SquareLoop approach. Its system does not send messages indiscriminately to all network subscribers, but only to those that have made a conscious choice to receive such messages. In terms of impact on voice transmissions, these emergency alerts, like all types of non-voice messages that already are transmitted over cellular networks, will need to be evaluated in terms of their network impact. Individual carriers will decide how to

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<sup>9</sup> The National Emergency Number Association ("NENA") emphasized the public safety benefits of achieving better than county-level geo-targeting granularity. NENA Comments at 2. It also noted that the 90 characters recommended in the CMSAAC report might not be adequate. While SquareLoop is not proposing that the CMSAAC recommendations be changed in this respect, it does want to note that its technology does not have that limitation.

organize the delivery of these transmissions vis-à-vis voice calls. SquareLoop would hope that emergency alerts with implications for the protection of safety of life or property would be considered priority communications, but that decision will rest with each individual carrier.

Fourth, while SquareLoop cannot speak to all point-to-point emergency alert messaging systems, certain other objections to SMS-based approaches do not apply to its technology. For example, the Company's technology provides authentication for every message through the use of authentication keys sent from its message delivery engine to the mobile device, thereby eliminating the possibility of SMS spoofing. Further, its approach provides unique sender-designated alert tones that permit recipients to distinguish the message as an emergency alert, as well as vibrating cadences designed to alert hearing-impaired subscribers and those in meetings or other locations where normal alert tones might prove disruptive.

SquareLoop recognized in its Comments that improvements in the message delivery techniques of carrier networks will enhance the scalability and perhaps even the capabilities of emergency alerting services. The Company looks forward to working with the carrier community and the FCC to promote the prompt deployment of the recommendations set out in the CMSAAC report.

However, as that report acknowledged, the path toward CMAS standardization and deployment is long and will require a substantial effort by all interested parties. Even then, there are necessary steps that are outside the control of the carrier community and that could cause even further delays in bringing this essential service to the American public. It is for this reason that SquareLoop again urges the Commission to encourage voluntary carrier support for interim approaches such as that developed by the Company that can provide limited scale, targeted,

