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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: Ex Parte Presentation in CC Docket No. 94-102

Dear Ms. Salas:

This morning Michael Amarosa of TruePosition, Inc. and I met with Daniel Phythyon, Chief of the Wireless Telecommunications Bureau, and members of his staff to discuss the proposal to implement a strongest signal requirement and the effect such a provision would have on automatic location identification. We left a copy of the attached paper, which reflects TruePosition's views on strongest signal.

Sincerely,

Philip L. Verveer

cc: Daniel Phythyon

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Ex Parte Submission in Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102

Strongest Signal: Good Motives, Public Safety Policy Failure

The Commission and the public safety community have consistently supported similar public policy goals in the promotion of wireless E911 services. The proposal to implement a strongest signal requirement, however, may in actuality create an obstacle to meeting these joint interests. While on its surface the strongest signal proposal appears to offer improved public access to emergency services, the public safety community's detailed review of the plan has exposed many of its weaknesses. For that reason, the public safety interests participating in this proceeding have elected to oppose a strongest signal requirement.

Automatic Location Information is the linchpin of public safety policy. Since the Commission initiated its inquiry into wireless E911 service, one issue has consistently remained at the forefront of the Commission's policy goals: implementation of Automatic Location Identification (ALI). ALI "permits rapid response in situations where callers are disoriented, disabled, unable to speak, or do not know their location. . . . ALI permits the immediate dispatch of emergency assistance. . . . [and] ALI also reduces errors in reporting the location of the emergency and in forwarding accurate information to emergency personnel." (Report and Order at ¶ 5). NENA, along with APCO and NASNA, has also told the Commission matter of factly that "we can't help them if we can't find them." (NENA Ex Parte communication, Feb. 23, 1998) The Ad Hoc Alliance, which supports the strongest signal requirement, has relied upon a few anecdotal stories to bolster its argument. The public safety community, however, has considered the over 80,000 individuals who rely on E911 services and has determined that the true value of wireless E911 will be realized through improved location technology. Even today, after the implementation of Phase I, a high percentage of emergency callers are not able to be located by PSAPs.

Although the Commission's Phase II deadline is more than three years away, carriers have begun to recognize the value of ALI and have undertaken efforts to implement the technology much sooner than the Commission's rules require. Carriers taking these steps realize that their subscribers, as well as potential subscribers in their communities, are demanding the best safety features available. While the proposed strongest signal requirement may appear on its surface to enhance access to wireless E911, in reality, such a proposal will serve as a deterrent to wireless carriers to deploy ALI.

Implementation of a strongest signal requirement would significantly reduce the accuracy of Phase I location information. As the Commission is well aware, carriers are

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building smaller cell sites to satisfy increasing demand for wireless services. The reduction of the size of cell sites has had the added benefit of improving the quality of ALI in Phase I. In other words, the area in which emergency personnel must search for a caller when they receive cell site location under Phase I is reduced, as the total area of a cell site is decreased. A policy implementing strongest signal could thwart technological advancements in ALI accuracy. Generally, carriers emitting the strongest control channels often maintain antenna coverage over a larger area. The Commission, however, should strive to adopt policies which reduce the size of cell sites and improve ALI. A strongest signal regime discourages this result. Thus, the consequence of the strongest signal policy is to reduce the potential accuracy of ALI information in those instances where it is transmitted to the PSAP. Rather than emphasizing improved location technology as part of a socially optimal E911 approach, as the Commission has to date, the strongest signal requirement would actually serve as a disincentive to deployment of ALI without commensurate benefit.

The strongest signal requirement also fails to meet the ALI needs of the public safety community. As NENA points out, PSAPs prefer "to receive a 9-1-1 call with . . . location technology than one with a slightly stronger signal but without Phase I and/or Phase II technology." (NENA Ex Parte communication, Feb. 23, 1998). The public safety community obviously supports the Commission's previous determinations that the true benefits of wireless E911 are only realized when a subscriber's location is transmitted to the PSAP along with the voice call.

Implementation of the strongest signal requirement would serve as a disincentive to carriers considering deployment of ALI. Under the strongest signal proposal the carrier providing presubscribed service is not guaranteed to be the carrier transmitting 911 calls for its customers. Only in those situations in which the subscriber is calling from a location where the carrier's control channel is the strongest will such a call be transmitted on that network. A strongest signal policy would not consider whether a carrier with a usable, albeit weaker control channel signal, has deployed ALI technology. In other words, a consumer who has subscribed to a carrier because it provides better safety protections through ALI would not be assured that the enhanced safety features always would be available. Because a carrier deploying ALI could not guarantee that it could locate subscribers when they call 911, it is less likely that it would invest in technology that may not always be available to its subscribers. Thus, a wireless provider hoping to increase its market share through early deployment of ALI is stripped of any marketing advantages warranting such an investment. As noted by the public safety community,

> [t]he 'strongest signal' concept will cripple the ability to market 9-1-1 location service. . . . [E]ven if we are able to convince the carriers to move forward with location technology, who will take accountability for moving the caller from his carrier of choice, with location technology, to the other carrier which does not have location technology and is, therefore, unable to provide the location data for which the subscriber may be paying a premium? (NENA Ex Parte communication, Feb. 23, 1998)

The public safety enhancements the Ad Hoc Alliance hopes to realize through a strongest signal requirement can be better achieved by mandating in-region roaming in those instances where a caller is unable to receive any signal, and by fostering improved tower siting. The potential problem being addressed through the strongest signal proposal can be better addressed through the recommendations made by NENA and WEIAD. As NENA has noted, the true issue which should be the focus of the Commission's attention is not the decibel level at which an emergency call is being transmitted, but rather improving the likelihood that every call gets to the appropriate PSAP. To realize this goal, the Commission should take steps which permit a subscriber to secure access to a carrier, any carrier, in those rare instances where the presubscribed carrier may not be providing any service -- a coverage gap. To overcome instances of a complete coverage gap by a presubscribed carrier, handsets can be programmed to roam on the network of another carrier providing service in that area. This provision will assure consumers that when they subscribe to a carrier which has deployed ALI, and has a usable signal, their location is being transmitted to the appropriate PSAP every time their carrier transmits a 911 call. Such a guarantee cannot be made if the Commission mandates strongest signal carriage. At the same time, mandating roaming in a coverage gap will substantially increase the likelihood that a call will reach a PSAP during an emergency -- meeting the purpose of the strongest signal requirement.

Implementation of coverage gap roaming will provide consumers with the same benefits of strongest signal, in what will most likely be a shorter period of time. As recommended by WEIAD, two efforts can be undertaken to rapidly introduce handsets that would roam in a coverage gap area. First, WEIAD supports educating consumers about the existing capability of a handset to be programmed, where capable, to use the "A" or "B" channel for 911 calls. Second, WEIAD recommends that analog handsets manufactured after a specified date be programmed to automatically use either channel in a coverage gap area. (WEIAD Joint Report, Appendix A, Jan. 30, 1998) Mandating coverage gap roaming will require a modification of all handsets to "switch" frequencies when the consumer is dialing 911 in certain areas. This software reprogramming is likely to be much simpler than implementing entirely new strongest signal technology. Although both proposals would require a phase-in period of implementation, a policy requiring coverage gap roaming would assure that more calls get through much sooner than a strongest signal requirement.

Rather than mandate strongest signal with its negative side effects, the Commission should strive to address the problem of coverage gaps at its root cause: the inability of carriers to secure sufficient tower sites. Most carriers strive to provide coverage throughout their service area. In those rare instances where a carrier is not providing adequate service in a particular area, it is often caused by restrictions imposed by others on the carrier's service. Several parties in this docket have petitioned the Commission to take steps to resolve this problem. For instance, improved tower siting on federal property consistent with the mandate in the Telecommunications Act of 1996 as well as the President's 1995 Executive Memorandum would go a long way towards improving wireless E911 coverage. Strict adherence to the principles of Section 332 would also improve E911 coverage by prohibiting communities from restricting the placement of antennas in optimum locations.

The strongest signal proposal raises many technical issues which have yet to be resolved. A strongest signal requirement raises complicated technical issues which have not passed through the regular standards-setting processes for technical approval. The Commission should not accept the implicit suggestion of those supporting a strongest signal requirement that it co-opt the normal industrial standards procedures. NENA has also addressed several issues in this matter and has proposed solutions which may not interrupt the deployment of ALI. Consistent with the recommendations of the WEIAD, any inquiry into the strongest signal as well as any other proposals, including NENA's, which attempt to improve wireless E911, must be remanded to the appropriate Standards Development Organization. (WEIAD Joint Report, Appendix A, Jan. 30, 1998)

Upon close examination many of the benefits of strongest signal are not as they appear. The Commission should resist the temptation of implementing a policy based on very limited anecdotal evidence. Adoption of the strongest signal proposal of the Ad Hoc Alliance would unnecessarily thwart the development of valuable E911 location services.