



1450 Fashion Island Blvd., Suite 510  
San Mateo, CA 94404  
USA

November 29, 2002

Ms. Magalie Roman Salas, Secretary  
Federal Communications Commission  
Office of the Secretary  
445 – 12<sup>th</sup> Street, S.W. – Room TW-A325  
Washington, DC 20554

**RE: CC Docket No. 94-102**

**REPLY to “Pulver.com comments on the Hatfield E911 Report”, dated October 30<sup>th</sup>, 2002**

Dear Ms. Salas,

This letter is in reply to comments presented by Pulver.com, including the following:

**1. Positioning indoors and in multi-story buildings**

Pulver.com: “Traditional wide-area location technologies... do not address 3 dimensional positioning, which is required for pinpointing location in multi-story buildings. The accurate determination of only longitude and latitude coordinates of an individual in a multi-story building would be insufficient because an emergency team may have to be waste critical time searching every floor.”

**2. VoIP using 802.11 (Wi-Fi)**

Pulver.com: “There is no doubt that voice calls over wireless LANs could complicate the task of locating emergency callers.”

**Bluesoft’s reply:**

Bluesoft’s filing whole-heartedly supports the views expressed by Pulver.com in points 1 and 2 above.



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## **Bluesoft's view:**

The use of cellular telephony-based location solutions, while an improvement over the current situation, is insufficient to provide reliable location information for the providers of emergency services in many metropolitan areas, for two reasons:

- a) Location of calls from cellular telephones located in a multi-story building provide information that will, at best identify a few buildings, from one of which the call originated. Rescue teams will still need detailed floor and department information to find emergency victims.
- b) Calls made from VoIP telephones from enterprises will be located in the same manner as standard wired-line calls today. The wired-line PBX location may in a large enterprise be even miles away from the actual location of the caller. VoIP applications over wireless LAN and Bluetooth networks are already in use today in large enterprises with thousands of employees and are expected to proliferate rapidly.

Technology is available today to address the problems outlined by Pulver.com and that would fulfill the expectations of consumers and enterprises in enabling accurate and reliable E911 services. Bluesoft's unique location-finding solutions are specifically designed to meet such needs. Our solutions for accurately locating mobile devices operating over standard short-range wireless networks, including 802.11 wireless LAN and Bluetooth, can bridge the gap to high-performance E911 services. These technologies use time-of-flight measurements of standard messages to achieve accuracy of up to +/- 1m, achieving reliable measurement performance without significant system calibration. In addition, sophisticated multi-path reduction algorithms minimize the impact of signal reflections in indoor environments.

## **Conclusion**

Bluesoft supports the comments filed by Pulver.com and recommends that the advisory organization investigate the addition of indoor location technologies to complete the task that it set out to achieve – reliable and accurate location of emergency callers using wireless telephones.

Respectfully submitted,

Yuval Bar-Gil  
Chief Executive Officer  
Bluesoft, Inc.