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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

June 22, 2000

VIA HAND DELIVERY

Magalie R. Salas
Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: Ex Parte Presentation
WB Docket 94-102

Dear Ms. Salas:

On Wednesday, June 21, 2000, representatives of QUALCOMM Incorporated ("QUALCOMM") met with representatives of the Commission to reconfirm that QUALCOMM will meet development and production schedules for GPSOne chipsets, as reflected in the record of this proceeding. QUALCOMM also discussed previously announced agreements with other manufacturers to develop GPS-enabled chipsets. QUALCOMM presented data on the E-OTD location technology, including results of a recent field trial of this technology. Finally, QUALCOMM discussed industry progress in the application of GPS technology for non-CDMA handsets.

Present at the meeting on behalf of QUALCOMM were Jonas Neihardt, Vice President, Federal Government Affairs and Ellen Kirk, Vice President, Marketing and Strategic Planning. Representing the FCC were Mark Schneider, Office of Commissioner Susan Ness; Bryan Tramont, Office of Commissioner Harold Furchtgott-Roth; Peter Tenhula, Office of Commissioner Michael Powell; Clint Odom, Office of Chairman William Kennard; Adam Krinsky, Office of Commissioner Gloria Tristani. In addition, QUALCOMM met with Tom Sugrue, Dan Grosh, Pat Forester, Martin Liebman, Blaise Scinto and Dr. William Lane, all of the Wireless Telecommunications Bureau.

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The attached materials were distributed at the meeting.

Respectfully submitted,



Veronica M. Ahern

cc: Mark Schneider, Office of Commissioner Susan Ness
Bryan Tramont, Office of Commissioner Harold Furchtgott-Roth
Peter Tenhula, Office of Commissioner Michael Powell
Clint Odom, Office of Chairman William Kennard
Adam Krinsky, Office of Commissioner Gloria Tristani
Tom Sugrue, Wireless Telecommunications Bureau
Dan Grosh, Wireless Telecommunications Bureau
Pat Forester, Wireless Telecommunications Bureau
Martin Liebman, Wireless Telecommunications Bureau
Blaise Scinto, Wireless Telecommunications Bureau
Dr. William Lane, Wireless Telecommunications Bureau



E9-1-1 Phase II Implementation

Presentation to the FCC

June 21, 2000

Summary

- Technology currently is available to meet the Commission's E9-1-1 mandate
- Only very minor tweaks to the Commission's current E9-1-1 rules are necessary to make compliance possible and practical:
 - Define "full deployment" as 95% (a requirement of 100% realistically would be impossible to achieve) and require full deployment by 2005 (rather than 2004), consistent with original APCO proposal
 - Eliminate the obligation to deploy 100% ALI-capable handsets in areas where a PSAP has requested Phase II
 - since handsets are inherently mobile, this effectively would require 100% ALI-capable handset deployment everywhere as soon as any single PSAP requested Phase II
- No other rule changes are needed



Core Wireless-Assisted GPS Technology Availability

- Motorola and Texas Instruments both licensed the core SnapTrack wireless-assisted GPS technology over a year ago. Together, these two companies:
 - produce over 80% of chipsets for GSM handsets globally
 - produce the majority of chipsets for TDMA handsets
 - produce 100% of chipsets for iDEN handsets
- Both Motorola and Texas Instruments participated in the extensive SnapTrack CDMA Test Group Tampa, FL field trials in April, 1998
 - Multiple Motorola prototype phones tested (cellular and PCS, internal and external antennae), as well as prototypes from Samsung, LGIC, and Hyundai
- Qualcomm MSM-3300 CDMA chipset with embedded wireless-assisted GPS capability will begin volume production in 4Q00
 - Pin-compatible with MSM-3100 chipset being used in today's phones

GSM Location Issues

- 18-member SnapTrack GSM Test Group will complete Phase II field trials in July 2000
 - Cross-border roaming (simultaneous location of phones in France and throughout Europe)
 - Motorola prototype wireless-assisted GPS phone
- E-OTD deployment requires not only software additions to new handsets but also significant additional hardware and software modifications in the network
 - Once this technology is installed, operators will resist removing equipment which has barely begun to be depreciated, regardless of whether it is compliant with the FCC's rules

E-OTD Issues

- The “Safety Net” solution proposed by Aerial does not address Public Safety’s Phase II requirements
 - Associated positioning errors can be several kilometers in magnitude
 - “Tuning” such overlay solutions (e.g., with signal strength) is impractical
- Publicly available E-OTD test data indicates at best ~100m average accuracy
 - This is characteristic of methods that exclusively use terrestrial network measurements
 - Similar to expected, simulated, and demonstrated uplink-TOA performance
- Proposed improvement from 100m to 50m accuracy is unrealistic
 - Highly constrained test conditions and/or test methodologies must be employed to demonstrate accuracy that approaches 50m
 - There is no feasible and cost effective way to get to a robust 50m E-OTD capability

Conclusions

- Compliant location technologies are available that support all major air interfaces (GSM, TDMA, CDMA, iDEN)
- Only minor adjustments to the rules are necessary
- Holding to existing performance requirements will meet public safety objectives, although the realization of those objectives may be delayed
 - Diluting the performance requirements will insure these objectives are never met, and technology deployment may be delayed anyway