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October 21, 2002

Ms. Marlene Dortch, Office of the Secretary
Federal Communications Commission
445 12th Street, S. W.
Washington: D.C. 20554

WT Docket Number 02-46
COMMENTS FROM TENDLER CELLULAR, INC.

Dear Ms. Dortch:

Tendler Cellular, Inc., responsive to the Notice of October 16, 2002 provides the following comments with respect to the Hatfield Report entitled **A Report On Wireless Communication Bureau Technical and Operational Issues Impacting the Provision of Wireless Enhanced 911 Services.**

EXECUTIVE SUMMARY

From analysis of the Hatfield Report it is clear that the major impediment to the implementation of E911 is that all of the proposals require modification of the "antiquated" POTS (Plain Old Telephone System) analog landline system. In the words of the report this has resulted in a monumental "kluge" in which much of the country needs to toss *out* their functional but antiquated systems. It is this commentator's position that rather than proposing systems which require modification or replacement of legacy

networks, the FCC should mandate using the legacy systems without modification to deliver ANI and ALI. Tendler Cellular's FoneFinder system is just such a system. It uses the normal voice channel for delivering ANI and ALI direct to the PSAP that the 911 call was routed to, thus both automatically marrying voice and data at the PSAP and eliminating the problems of separating voice and data in the NCAS systems presently proposed.

Others have referred to FoneFinder's solution as an "end-run". We agree.

BACKGROUND

Tendler Cellular, Inc. is the provider of the FoneFinder system which satisfies both ANI and ALI requirements by transmitting the mobile identification number and the location of the cellular caller via the voice channel to a PSAP without additional infrastructure. In short, the Tendler Cellular, Inc. FoneFinder works on the Plain Old Telephone System without alteration of the system. It thus works anywhere and works now.

Tendler Cellular, Inc. has since the original NPRM for E911 provided information on a system which satisfies not only the original Report and Order, but also all subsequent Report and Orders; and does so in a manner that is instantly deployable and without any additional infrastructure.

Tendler Cellular's solution utilizes an Autonomous GPS receiver which operates on its own without two-way communication with a cell tower. Thus the FoneFinder system works anywhere in the World. Secondly, because it operates over the voice

channel it operates anywhere there is wireless coverage. Based on standard roaming agreements that have been in place between the carriers for many years, FoneFinder has coast-to-coast coverage regardless of carrier footprint.

In short, the FoneFinder system not only reports the latitude and longitude of the wireless handset, it also reports the telephone number or mobile identification number of the handset over the voice channel. FoneFinder therefore satisfies the ANI and ALI requirements without a single penny in additional infrastructure. Note that the cost of the GPS and the FoneFinder-equipped handsets can be completely subsidized through new activation fees.

POTS

One of the major statements made in the Hatfield Report is an observation that the difficulties in E911 implementation stem from the fact that the majority of the PSAP community utilizes antiquated equipment, i.e. the analog wireline service called POTS.

The E911 solutions suggested by various entities are based on the replacement of the antiquated analog wireless equipment with new specialized equipment. The primary purpose of the specialized equipment is to handle the so-called "back-haul". However this back-haul comes at an enormous cost and long deployment time. This is a major bottleneck to the provision of ANI and ALI information to the PSAPs.

From Tandler Cellular's perspective, it is very clear that any solution requiring a redo, adaptation or complete replacement of the analog telephone equipment is bound to fail. Rather, the FCC should concentrate on solutions that utilize what has been tested

the “plain old telephone system” or “POTS”. While it is admitted that very intriguing solutions can be devised if they do not use the present POTS, these implementations will be both costly and not quickly deployable. For instance, across-the-country deployment is estimated to take 20 years, assuming a single standard can be mandated.

Plus from the inception, the FCC’s efforts to provide the PSAP community with location and mobile identification number information has been flawed primarily because it did not envision using the in-place “antiquated” equipment. It is also flawed because it did not address an inherent problem that has currently surfaced, namely the roaming problem.

The roaming problem is that quite simply if one has an appropriate location reporting service in one carrier’s footprint, there is no guarantee that it will operate in another carrier’s footprint. The canvassing of several major carriers revealed that the carriers are only interested in solving the problem in their own footprint because that is what the FCC is requiring them to do. When queried what their customers needs when they roam, there was resounding silence from the carriers.

DISCUSSION

It will be appreciated that there are a number of technologies which are in play to solve the E911 problem.

The end-to-end solution requires 1) a head-end system, 2) a back-haul system and 3) adaptation of terminals at the PSAPs to be able to receive the needed information.

1) Head End Systems

As to head-end systems, there are two categories of systems (E-OTD and A-GPS) which require tower build-outs. Note, Angle of Arrival and E-OTD systems require equipment to be installed at each cellular tower. Estimates have ranged from \$20K to \$50K per tower, and build-out times range from one year to three years per community.

The same is true for Assisted GPS systems in which there must be two-way communication between the tower and the handset, again requiring a tower build-out. The cost of the tower build-out and the time to deployment are approximately the same as the E-OTD systems.

It is noted that neither of these two systems work where there is no tower build-out: and in neither case do either of these two systems provide universal coverage. Even in the footprint of the various carriers, the time to deployment is dependent at the very least on tower build-outs. As a result both E-OTD and Assisted GPS systems are both expensive to build-out, have no uniformity from one footprint to the other, and time to deployment takes the tower build-out portion beyond three years. Most importantly, with respect to these systems there is a privacy issue.

2) Back Haul

As to back-haul, both the Assisted GPS systems and the E-OTD systems require either call path or non-call path signaling (CAS, NCAS) which exceeds the capabilities of POTS. It will be appreciated at the very least that there are devices called Tandems which are eight digit devices. The amount of information that can be passed by a Tandem is thus limited by what can be transmitted by eight digits.

laking ANI for example. ANI requires a 10-digit number including the area code. This cannot be handled by a Tandem. Thus other modalities were needed. Originally, the cost of providing the mobile identification number included the cost of an AT&T switch at \$2 million, or a cost of \$.75 per call due to the fact that the old POTS infrastructure could not be used. NENA's proposal uses a 19-digit message to transmit information to a PSAP. It is noted that 19 digits exceeds the capabilities of any presently available switching system. Furthermore, companies like Intrado have proposed that they provide the back-haul for a fee of \$5.00 per call.

The question of course is who is to pay for the back-haul. The carriers say it is not their responsibility; and certainly the PSAPs do not have anywhere near the money in their very limited budgets to get ready to accept the ANI and AII information. It is noted that PSAPs are often funded on a voluntary basis such as through bake sales or fish fries. This should give the FCC some indication of the lack of funding available to provide either back-haul or PSAP build-out in order to acquire the information that is desired.

Moreover, with the current proposals, new T1 lines and switches are required for the PSAPs to receive the needed information. The funding for these build-outs as mentioned above will not be the responsibility of the carrier and is now squarely placed on the PSAPs, an intolerable situation.

3) Terminal

Finally, with respect to end-to-end solutions, for the proposed systems there needs to be a build-out of the terminals themselves for each of the PSAPs. Companies like Plant Equipment, Positron and TRW provide such equipment. The estimate for a new

terminal or rebuild of old terminals ranges from \$20K per terminal to \$50K per terminal. Assuming that T1 lines and 1A switches are provided to the PSAPs, the additional cost of the terminal build-out is likewise intolerable. More importantly, for Sprint's Assisted GPS solution, the sole PSAP in the State of Rhode Island paid \$1.4 million to modify its PSAP.

SIJMMAKY

From the above it will be seen that any system which does not use POTS is doomed from the point of view of expense, uniformity, deployment times, roaming, and privacy issues.

On the other hand, an Autonomous GPS system such as FoneFinder reports location and the mobile telephone number over the standard voice channel, with no tower build-outs, no additional back-haul, no new 1A switches, no additional T1 lines, and virtually no changes to the terminals at the PSAPs. It is the ultimate end-run.

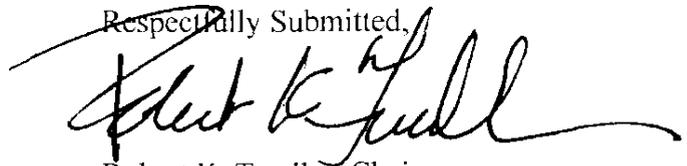
By using the traditional voice channel and the infrastructure that has been in place for a hundred years, and without requiring any additional Tandems, switches, or T1 lines, the FoneFinder system delivers an end-to-end solution which adds vertically nothing to in-place equipment and networks.

The only cost is the cost of fitting handsets with an Autonomous GPS and voice channel signaling system coupled directly to the mike input of the wireless phone, with the cost of the Autonomous GPS and FoneFinder system being completely subsidized by activation fees from the carriers.

It is to the advantage of the carriers to adopt FoneFinder because in the first place the carriers will gain new activations. Secondly, the carriers can comply with the Report and Order without any additional infrastructure cost. Finally, the PSAPs can obtain the information at a cost of no more than \$800.00 per terminal and if the PSAPs has a PC, no more than \$230.00 per terminal.

In short, the FoneFinder system offers a universal, instantly deployable, virtually no cost system to the public safety community. Moreover, at the same time FoneFinder can provide the carriers with a simple way to comply with the E911 Report and Order, both in terms of ANI and in Leims of ALI.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Robert K. Tandler", written over a horizontal line.

Robert K. Tandler, Chairman
Tandler Cellular, Inc.

cc: Dan Grosh