

ORIGINAL

Before the  
Federal Communications Commission  
Washington, D.C. 20554

MAR 11 1996

In the Matter of )  
)  
Revision of the Commission's Rules to En- )  
sure Compatibility with Enhanced 911 Emer- )  
gency Calling Systems )

CC Docket No. 94-102  
RM-8143

DOCKET FILE COPY ORIGINAL

To: The Commission

**REPLY COMMENTS**

**BELLSOUTH CORPORATION**

John F. Beasley  
William B. Barfield  
Jim O. Llewellyn  
1155 Peachtree Street, N.E.  
Atlanta, Georgia 30309-3610  
(404) 249-4445

Charles P. Featherstun  
David G. Richards  
1133 21st Street, N.W., Suite 900  
Washington, D.C. 20036  
(202) 463-4132

*Its Attorneys*

March 11, 1996

No. of Copies rec'd  
List ABCDE

014

## TABLE OF CONTENTS

SUMMARY .....	1
I. THE COMMISSION SHOULD CONVENE AN INDUSTRY ADVISORY GROUP REGARDING WIRELESS E911 IMPLEMENTATION .....	2
II. THE CONSENSUS AGREEMENT RAISES A MULTITUDE OF QUESTIONS THAT MUST BE ADDRESSED BEFORE THE COMMISSION ADOPTS MANDATORY TIMETABLES FOR WIRELESS E911 IMPLEMENTATION .....	5
A. There Is Not Yet a Wireless Industry Consensus on the Timing of Wireless E911 Implementation .....	6
1. Many Technical Issues Remain Regarding Implementation of ANI and Pseudo-ANI Information .....	7
2. It Is Premature To Establish Specific ALI Requirements For Wireless Systems Since ALI Technology is Still in the Developmental Stages .....	8
B. The Consensus Agreement Fails To Address Its Applicability To Carriers Other than Urban/Suburban Analog Cellular Carriers .....	9
C. The Provision Of ALI Technology Should Not Be Required In Areas Where The PSAPs Do Not Have The Ability To Retrieve The ALI Information .....	11
III. THE COMMISSION MUST ADDRESS COST RECOVERY ISSUES IN ADVANCE OF MANDATED IMPLEMENTATION .....	12
CONCLUSION .....	13

RECEIVED

MAR 11 1996

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

Before the  
Federal Communications Commission  
Washington, D.C. 20554

In the Matter of )  
)  
Revision of the Commission's Rules to En- ) CC Docket No. 94-102  
sure Compatibility with Enhanced 911 Emer- ) RM-8143  
gency Calling Systems )

To: The Commission

### REPLY COMMENTS

BellSouth Corporation ("BellSouth"), by its attorneys, hereby replies to the comments filed in response to the "Public Safety-Wireless Industry Consensus, Wireline Compatibility Issues" ("Consensus Agreement") jointly submitted in the above-referenced proceeding by the Cellular Telecommunications Industry Association ("CTIA"), National Emergency Number Association ("NENA"), Association of Public-Safety Communications Officials ("APCO"), and National Association of State Nine One One Administrators ("NASNA").<sup>1</sup> BellSouth reemphasizes its support for the Consensus Agreement's efforts to facilitate wireless compatibility with enhanced 911 ("E911") services but remains concerned about the viability of implementing such specific requirements and timetables without further information and analysis from affected groups.

### SUMMARY

It is clear from the comments submitted in response to the Consensus Agreement that many unanswered questions remain regarding the technical and economic issues concerning the imposition of enhanced 911 ("E911") requirements on wireless providers, including whether the provisions of

---

<sup>1</sup> FCC Public Notice, *Commission Seeks Additional Comments in Wireless Enhanced 911 Rulemaking Proceeding Regarding "Consensus Agreement" Between Wireless Industry Representatives and Public Safety Groups*, DA 96-198 (Feb. 16, 1996).

the Consensus Agreement should apply to all wireless providers. The Consensus Agreement urges the Commission to establish a mandatory twelve to eighteen month time frame for the provision of cell site information using a 7 or 10-digit pseudo-ANI<sup>2</sup> and a 7 or 10-digit caller automatic number identification (“ANI”), and a five-year time frame for the provision of automatic location identification (“ALI”) information accurate to latitude and longitude coordinates of 125 meters root mean square (“RMS”).<sup>3</sup> In the absence of a broad consensus on the technical and economic issues among all the groups affected, however, it is premature to set such deadlines.

The Commission should reevaluate the time frames and specific objectives that should be met regarding wireless E911 by utilizing a negotiated rulemaking approach. Accordingly, BellSouth joins others in urging the Commission to establish an Industry Advisory Group (“IAG”) composed of representatives from all affected groups. Its mission would be to seek consensus on economically and technologically reasonable requirements and timetables for the implementation of E911 services.

#### **I. THE COMMISSION SHOULD CONVENE AN INDUSTRY ADVISORY GROUP REGARDING WIRELESS E911 IMPLEMENTATION**

The numerous comments submitted in response to the Consensus Agreement indicate that, despite the progress that has been made since the *NPRM*, a multitude of technical, compatibility, and cost recovery questions remain unanswered. In order to address the concerns raised by the various affected groups, BellSouth urges the Commission to establish an Industry Advisory Group (“IAG”) composed of wireless providers, wireless manufacturers, local exchange carriers (“LECs”), Public Safety Answering Point (“PSAP”) associations, and vendors of location technology products. The

---

<sup>2</sup> “Pseudo-ANI” refers to the transmission of coded information identifying a cell site or sector instead of the billing number ordinarily transmitted as ANI.

<sup>3</sup> Consensus Agreement at 1-2.

goal of the IAG would be to obtain information from each of the affected groups regarding the technical and implementation problems, possible timetables, and solutions to address the concerns of *all* affected groups. The Consensus Agreement reflects an increased understanding among the wireless industry and public safety organizations of each other's respective capabilities and concerns. Nevertheless, there are many viewpoints not taken into account by the Consensus Agreement: Input is still needed from vendors, manufacturers, and wireline providers. BellSouth suggests that convening an IAG would best accommodate the views of all affected interests and permit the Commission to conduct a negotiated rulemaking to achieve its goal of ensuring broad availability of 911 services to users of wireless systems.

This concept has been before the Commission in various formats since the initial set of comments filed in response to the Commission's original *NPRM* in this proceeding.<sup>4</sup> In its initial comments, ALLTEL proposed the establishment by the Commission of a broad-based industry advisory board to address wireless 911 issues through a deliberate and thorough evaluation of need, expenses and technological capabilities.<sup>5</sup> NYNEX determined that the appropriate role for the Commission prior to implementation of any standards is to encourage interested parties to participate in industry forums and to establish general guidelines for forum activity.<sup>6</sup>

Similarly, Nextel encouraged the Commission to facilitate a coordinated effort among all segments of the industry to determine the most appropriate means of fulfilling the 911 objectives for the wireless industry.<sup>7</sup> Bell Atlantic submitted that the Commission should defer its 911

---

<sup>4</sup> *Notice of Proposed Rule Making*, CC Docket No. 94-102, FCC 94-237 (Oct. 19, 1994), 59 Fed. Reg. 54878 (1994) ("*NPRM*").

<sup>5</sup> ALLTEL Mobile Communications, Inc. ("ALLTEL"), Initial Comments to *NPRM*, at 1.

<sup>6</sup> The NYNEX Companies ("NYNEX"), Initial Comments to *NPRM*, at 10.

<sup>7</sup> Nextel Communications, Inc. ("Nextel"), Initial Comments to *NPRM*, at 2.

proceedings pending completion of proceedings by joint industry experts on appropriate protocol and standards for implementation of the 911 objectives for the wireless community.<sup>8</sup> In its comments regarding the Phase II timetable outlined in the Consensus Agreement, GTE suggests that the Commission should charge an industry work group, composed of a well balanced industry representation, with the task of establishing a work plan to meet milestone dates, disseminate information to the industry and report back to the Commission.<sup>9</sup>

As indicated by the above referenced comments, the most important aspect of the IAG is that its members represent all the affected groups, such as trade associations and public safety organizations as well as LECs, vendors, wireless providers, manufacturers, and federal, state, and local governments. The record that has been developed before the Commission in this proceeding currently contains insufficient information that is essential to a reasoned decision, due to the lack of comment from location technology groups and standards groups. These groups can provide the Commission with the most reliable information concerning technological capabilities and implementation time frames that is essential to achieving the goals of both the Commission and the Consensus Agreement.

BellSouth indicated in its comments on the Consensus Agreement that it has recently issued a Request for Information (“RFI”),<sup>10</sup> because of the lack of reliable information from vendors regarding the technical issues associated with the Commission’s proposal. The RFI seeks information from emergency service providers, wireless service providers, and suppliers of technology, hardware, software, network and operational support infrastructure, and subscriber

---

<sup>8</sup> Bell Atlantic Initial Comments to *NPRM*, at 1.

<sup>9</sup> GTE Service Corporation Comments at 5 (“GTE”).

<sup>10</sup> BellSouth Comments at 7, Attachment A.

terminals regarding the technical feasibility of providing wireless caller location of E911 services. BellSouth anticipates that once it receives the responses to its RFI it will be in a much better position to understand the alternatives and relative costs associated with the implementation of E911 by wireless providers and a better position to assess realistic timetables for deployment of location technology.

Now is the right time for the Commission to take an more active role in moving all affected groups to reach a consensus. BellSouth urges the Commission to follow the suggestions of the commenters and establish an IAG composed of representatives from all affected groups, and request information from these groups. This will allow the Commission to obtain information that will enable it, through a negotiated rulemaking, to address the numerous questions raised in this proceeding, the technological possibilities and constraints of the Commission's proposal, the costs associated with such a proposal, and set realistic timetables for the deployment of each phase of the Consensus Agreement.

## **II. THE CONSENSUS AGREEMENT RAISES A MULTITUDE OF QUESTIONS THAT MUST BE ADDRESSED BEFORE THE COMMISSION ADOPTS MANDATORY TIMETABLES FOR WIRELESS E911 IMPLEMENTATION**

BellSouth encourages the Commission not to act with undue haste in mandating implementation timetables for E911 services. Before adopting a mandatory implementation schedule, the Commission must resolve the many difficult issues that have been raised in response to the Consensus Agreement, and it should obtain information from all affected groups regarding the technical and economic issues associated with the implementation of E911 by the wireless industry.

**A. There Is Not Yet a Wireless Industry Consensus on the Timing of Wireless E911 Implementation**

The majority of commenters expressed concerns similar to those of BellSouth regarding the practicality and reality of the implementation time frames proposed by the Consensus Agreement. Relative to Phase I implementation, other parties raised specific concerns regarding the use of ANI and pseudo-ANI, whereas BellSouth's concerns focused primarily on calling party number ("CPN"). PCIA points out that since ANI and ALI technologies "have been reviewed by only a small portion of the parties responsible for their implementation, and the technology is not currently available to implement certain aspects of these proposals, [it] is not convinced that the suggested implementation schedule is realistic."<sup>11</sup> Similarly, GTE believes that the "Phase I and Phase II implementation deadlines require further study"<sup>12</sup> and that due to the lack of rigorous field testing, it is premature at this time to commit to a definitive date for Phase II implementation.<sup>13</sup>

Motorola asserts that the Phase I 12 to 18 month implementation schedule for ANI is "almost certainly unachievable"<sup>14</sup> and that given the "unpredictability of technological developments" it cannot assure the Commission that it would be able to meet the Phase II timetable.<sup>15</sup> Nortel concurs that the Phase I time frame is "not sufficient to allow for deployment" of the Phase I functionalities and that it may require up to 24 months after adoption of an Order to complete this process.<sup>16</sup> Other commenters, however, supported the implementation schedules set forth in the Consensus

---

<sup>11</sup> Personal Communications Industry Association Comments at 3 ("PCIA").

<sup>12</sup> GTE Comments at 1

<sup>13</sup> *Id.* at 4.

<sup>14</sup> Motorola, Inc. Comments at 1 ("Motorola").

<sup>15</sup> *Id.* at 7.

<sup>16</sup> Northern Telecom Inc. Comments at 3-4 ("Nortel").

Agreement.<sup>17</sup> In short, there is no consensus even among the vendors whose participation is essential to achieving any implementation schedule.

Until affected groups have had an opportunity to form a consensus on how to best address these and other issues relating to the provisioning of location information, it is pointless to set timetables for implementation of specific features. No one commenter has provided credible evidence that the proposed Phase I and Phase II time frames can actually be achieved, and major manufacturers and equipment vendors have voiced serious doubts about the achievability of these objectives. Further discussions are essential. Until the Commission has received input from all affected groups, particularly vendors and manufacturers, it is premature to require date certain ANI and ALI implementation.

**1. Many Technical Issues Remain Regarding Implementation of ANI and Pseudo-ANI Information**

Numerous technological developments and standards must occur before specific emergency service access requirements can be imposed on wireless providers. As BellSouth emphasized in its comments on the Consensus Agreement, the provision of reliable and ubiquitous calling party number information requires the existence of Switching System 7 (“SS7”) and ISDN user part (“ISUP”) capabilities in both the wireline and wireless networks.<sup>18</sup> Imposing this requirement on carriers would impose substantial additional costs to these parties and may not be economically or technically feasible in some cases.

PCIA concurs that upgrading SS7 to provide both ANI and pseudo-ANI is a costly undertaking—and not all LECs and wireless carriers even operate SS7 networks.<sup>19</sup> Motorola voices

---

<sup>17</sup> See KSI, Inc. Comments at 2-3; Concepts to Operations Comments at 2.

<sup>18</sup> BellSouth Comments at 4.

<sup>19</sup> PCIA Comments at 9-10.

similar concerns and also points out that since SS7 currently accepts only one form of ANI, a “new protocol must be defined by standards bodies, implemented, tested, and deployed in both wireless and wireline networks before both ANI and Pseudo-ANI can be transmitted.”<sup>20</sup> Motorola further notes that “[i]n order to provide PSAPs with both pieces of information either SS7 capable selective routers must be installed in LEC networks or an interim alternative arrangement must be defined.”<sup>21</sup> Both BellSouth and PCIA anticipated that comments submitted in this proceeding by manufacturers would shed some light on these technical issues. Nevertheless, the comments of the only manufacturers to respond, Motorola and Nortel, make clear that these issues are far from being resolved.

An industry consensus among *all* affected members of the industry must be reached. Before the Commission can reasonably request LECs and wireless carriers to implement such costly changes to their existing systems, it is essential that there be a reasonable degree of certainty concerning the technical efficacy of these changes.

**2. It Is Premature To Establish Specific ALI Requirements For Wireless Systems Since ALI Technology is Still in the Developmental Stages**

In its comments, BellSouth urged the Commission to refrain from imposing specific 911 capabilities for wireless systems until standards are developed by affected groups and technology develops further.<sup>22</sup> A number of other commenters agreed that the imposition of specific requirements would be premature. PCIA points out, for example, that the state of technology has not sufficiently advanced in the past year since the issuance of the *NPRM* to the point where the

---

<sup>20</sup> Motorola Comments at 4.

<sup>21</sup> *Id.* at 5.

<sup>22</sup> BellSouth Comments at 5; BellSouth Initial Comments to *NPRM*, at 12-13.

newly proposed five year deadline is any more feasible for the implementation of a less precise location technology than that originally proposed.<sup>23</sup>

BellSouth agrees with PCIA that the Commission “should not over-extrapolate the results of the three city trial using cellular telephone technology discussed in the Exhibits [attached to the Consensus Agreement] into sweeping technical requirements encompassing every air interface technology used by the entire wireless industry.”<sup>24</sup> This performance could even vary from state to state, city to city, depending on various factors involved.<sup>25</sup> BellSouth anticipates that the results it receives from its RFI will provide more information from a variety of sources that will make it better able to analyze the feasibility of providing ALI technology capable of meeting the proposed 125 meter RMS standard.

Access to 911 services by wireless customers is being hampered because of a lack of standards, not because of a lack of effort by wireless providers, as some would have the Commission believe.<sup>26</sup> Because of the lack of standards and proven location technologies, BellSouth continues to urge the Commission to defer consideration of specific ALI requirements for wireless systems until affected industry and technical groups establish standards, and determine that accurate, economically feasible location technologies are available.

**B. The Consensus Agreement Fails To Address Its Applicability To Carriers Other than Urban/Suburban Analog Cellular Carriers**

Many questions are raised by the Commenters inquiring as to which members of the wireless industry should be subject to E911 compatibility requirements. For example, questions have been

---

<sup>23</sup> PCIA Comments at 11.

<sup>24</sup> *Id.* at 12.

<sup>25</sup> *See* GTE Comments, at 4-5.

<sup>26</sup> *See* Ad Hoc Alliance for Public Access to 911 Comments.

raised regarding the applicability of the E911 requirements in the Consensus Agreement on commercial mobile radio service (“CMRS”) providers that are in rural areas, Mobile Satellite Service (“MSS”) and private mobile radio services (“PMRS”) providers not connected to the public switched telephone network (“PSTN”), or providers that utilize a “cell system” incompatible with that envisioned by the Consensus Agreement.

The Consensus Agreement’s proposal to implement ALI requirements with 125 meter RMS accuracy would be extremely burdensome and costly for CMRS providers in rural areas. The majority of ALI technologies use triangulation to locate the caller, which requires the existence of three overlapping cell sites. Most rural systems, however, are engineered using large, widely-spaced cells, so that it would be uncommon to find three overlapping cell sites within a given area. Thus, rural area service providers may not be able to meet the 125 meter standard without building unnecessary and costly cell sites, the sole purpose of which would be to make triangulation possible.<sup>27</sup>

ICSAR and AMSC, providers of MSS, argue that E911 features related to caller location would not serve their purpose with MSS systems since one cell in a system may encompass the area from Quebec to Florida<sup>28</sup> or the entire continental US.<sup>29</sup> Similarly, it is unclear whether PMRS providers will be subject to E911 compatibility requirements, and, if so, the manner in which any

---

<sup>27</sup> See Rural Cellular Association Comments; GTE Comments.

<sup>28</sup> AMSC Comments, at 4.

<sup>29</sup> ICSAR Comments, at 1.

such requirements will apply.<sup>30</sup> Traditional local area SMR providers and dispatch-only providers seek clarification as to the applicability of the rules to their unique situation.<sup>31</sup>

It is clear from the commenters that the Consensus Agreement does not account for a wide variety of wireless situations. Further industry analysis must be done prior to requiring MSS, PMRS, SMR, and rural area wireless providers to incur the substantial costs involved in redesigning systems that users may not even expect to use for 911 access.

**C. The Provision Of ALI Technology Should Not Be Required In Areas Where The PSAPs Do Not Have The Ability To Retrieve The ALI Information**

Many commenters noted that requiring wireless carriers to provide ALI information is useless without the existence of a PSAP who is willing and able to use such data. In establishing rules and policies in this proceeding, the Commission should “keep in mind that any obligation imposed on a wireless carrier must be premised on the availability and willingness of a PSAP to take the call and the information provided.”<sup>32</sup> The deployment of Phase I and Phase II technology should be driven by the needs and capabilities of the PSAPs to use these new technologies effectively. Otherwise, many wireless providers will incur substantial costs in upgrading their existing systems for the provision of ALI technology and information, but no one will be receiving this information.

BellSouth supports SBMS’ proposal requiring that a carrier’s obligation to provide such service is based on a bona fide request for such service from the local municipalities, public service organizations or other PSAPs.<sup>33</sup>

---

<sup>30</sup> Comments of Blooston, Mordkofsky, Jackson & Dickens.

<sup>31</sup> See Nextel Comments, AMTA Comments.

<sup>32</sup> Southwestern Bell Mobile Systems, Inc. Comments at 2 (“SBMS”).

<sup>33</sup> *Id.*

### **III. THE COMMISSION MUST ADDRESS COST RECOVERY ISSUES IN ADVANCE OF MANDATED IMPLEMENTATION**

A number of commenters urged the Commission to develop a method for recovering the costs associated with providing access to E911 services wireless systems.<sup>34</sup> BellSouth agrees. Because the Commission is proposing to provide wireless subscribers access to E911 services similar to those enjoyed by traditional landline customers, a mechanism for recovering the costs of providing access to these services must be developed.

BellSouth further supports the application of this mechanism in both the Phase I and Phase II time frames. The Consensus Agreement contemplates that the expenses involved with Phase I will be minor.<sup>35</sup> Nevertheless, U S WEST correctly observes that the Consensus Agreement does not take into account the costs that will be incurred by landline carriers for installing new technologies to provide the pseudo-ANI information.<sup>36</sup>

To ensure that all such issues are fully addressed, the Commission must establish an IAG with representatives from all affected groups, including the LECs, so as to resolve the many issues raised by the *NPRM* and the Consensus Agreement.

---

<sup>34</sup> See SBMS Comments at 5; U S WEST Comments at 5; Vanguard at 6-7; RCA at 5-6.

<sup>35</sup> Consensus Agreement at 3 n.9

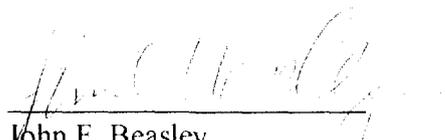
<sup>36</sup> U S WEST Comments at 5.

## CONCLUSION

For the forgoing reasons, BellSouth urges the Commission to forego the adoption of mandatory E911 time tables for wireless systems until an industry consensus can be reached regarding technology, standards, economics, and feasibility of providing access to pseudo-ANI, ANI, and ALI services. BellSouth further urges the Commission to implement an Industry Advisory Group to seek consensus on the economical and technical requirements associated with the implementation of E911 services by wireless providers.

Respectfully submitted,

**BELLSOUTH CORPORATION**

By: 

John F. Beasley  
William B. Barfield  
Jim O. Llewellyn  
1155 Peachtree Street, N.E.  
Atlanta, Georgia 30309-3610  
(404) 249-4445

By: 

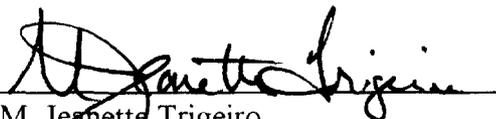
Charles P. Featherstun  
David G. Richards  
1133 21st Street, N.W., Suite 900  
Washington, D.C. 20036  
(202) 463-4132

*Its Attorneys*

March 11, 1996.

**CERTIFICATE OF SERVICE**

I, M. Jeanette Trigeiro, a secretary in the law firm of Wilkinson, Barker, Knauer & Quinn, do hereby certify that a copy of the foregoing Reply Comments of BellSouth Corporation in CC Docket No. 94-102 was served this 11th day of March, 1996, by first class mail, postage prepaid, to the persons on the attached list.

  
M. Jeanette Trigeiro

THE AD HOC TELECOMMUNICATIONS USERS COMMITTEE,  
THE CALIFORNIA BANKERS CLEARING HOUSE AND  
THE NEW YORK CLEARING HOUSE ASSOCIATION

c/o James S. Blaszak  
Ellen G. Block  
Levine, Blaszak, Block & Boothby  
1300 Connecticut Avenue, N.W.  
Suite 500  
Washington, D.C. 20036

ADCOMM ENGINEERING COMPANY

c/o Joseph P. Blaschka, Jr., PE  
14631 128th Avenue, N.E.  
Woodinville, WA 98027

ALAMO AREA COUNCIL OF GOVERNMENTS

c/o Al J. Notzon III  
118 Broadway, Suite 400  
San Antonio, TX 78205

ALLTEL MOBILE COMMUNICATIONS, INC.

c/o Glenn S. Rabin  
655 15th Street, N.W.  
Suite 220  
Washington, D.C. 20005

AMERICAN MOBILE TELECOMMUNICATIONS ASSOCIATION, INC.

c/o Elizabeth R. Sachs, Esq.  
1150 18th Street, N.W.  
Suite 250  
Washington, D.C. 20036

AMERICAN PERSONAL COMMUNICATIONS

c/o Kurt A. Wimmer  
Covington & Burling  
1201 Pennsylvania Avenue, N.W.  
P.O. Box 7566  
Washington, D.C. 20044

AMERITECH

c/o Frank Michael Panek  
Room 4H84  
2000 West Ameritech Center Drive  
Hoffman Estates, IL 60196-1025

AMSC SUBSIDIARY CORPORATION

c/o Lon C. Levin  
10802 Park Ridge Boulevard  
Reston, VA 22091

ASSOCIATED GROUP, INC.

c/o William F. Adler  
Steven N. Teplitz  
Fleischman and Walsh  
1400 16th Street, N.W.  
Washington, D.C. 20036

ASSOCIATION OF COLLEGE & UNIVERSITY  
TELECOMMUNICATIONS ADMINISTRATORS

c/o Randal R. Collett  
152 West Zandale Drive  
Suite 200  
Lexington, KY 40503-2486

ASSOCIATION OF PUBLIC-SAFETY COMMUNICATIONS  
OFFICIALS-INTERNATIONAL, INC.

c/o Robert M. Gurs  
Wilkes, Artis, Hedrick & Lane  
1666 K Street, N.W., #1100  
Washington, D.C. 20006

NATIONAL EMERGENCY NUMBER ASSOCIATION

c/o James R. Hobson  
Donelan, Cleary, Wood & Maser, P.C.  
1100 New York Avenue, N.W. #750  
Washington, D.C. 20005

**ADCOMM ENGINEERING COMPANY**

c/o Joe Blaschka  
14631 128th Avenue, N.E.  
Woodlinville, WA 98072

**BELL ATLANTIC**

c/o Betsy L. Anderson  
1320 N. Courthouse Road, 8th Floor  
Arlington, VA 22206

**BELLSOUTH CORPORATION,  
BELLSOUTH TELECOMMUNICATION, INC.  
BELLSOUTH ENTERPRISES, INC.  
BELLSOUTH CELLULAR CORP.**

c/o Jim O. Llewellyn  
115 Peachtree Street, N.E.  
Atlanta, GA 30309-3610

**C.J. DRISCOLL & ASSOCIATES**

2066 Dorado Drive  
Rancho Palos Verdes, CA 90275

**CABLE PLUS**

c/o Gary O'Malley  
11400 S.E. 6th Street, Suite 120  
Bellevue, WA 98004

**COUNTY OF LOS ANGELES**

c/o Thomas H. Bugbee  
Telecommunications Branch  
Information Technology Services  
P.O. Box 2231  
Downey, CA 90242

**DEPARTMENT OF CORRECTIONS**

c/o G. Kevin Carruth  
Planning and Construction Division  
P.O. Box 942883  
Sacramento, CA 94283-0001

**CONSTELLATION COMMUNICATIONS, INC.**

c/o Robert A. Mazer  
Albert Shuldiner  
Vinson & Elkins L.L.P.  
1455 Pennsylvania Avenue, N.W.  
Suite 700  
Washington, D.C. 20004-1008

PEOPLE OF THE STATE OF CALIFORNIA AND  
THE PUBLIC UTILITIES COMMISSION OF THE STATE  
c/o Ellen S. Levine  
505 Van Ness Avenue  
San Francisco, CA 94102

NATIONAL ASSOCIATION OF STATE  
EMERGENCY MEDICAL SERVICES DIRECTORS  
c/o Mark S. Johnson  
EMS Communications Committee  
1947 Camino Vida Roble  
Suite 202  
Carlsbad, CA 92008

CELLULAR NETWORKING PERSPECTIVES LTD.  
c/o David Crowe  
636 Toronto Crescent, NW  
Calgary, Alberta T2N 3W1  
CANADA

CELLULAR TELECOMMUNICATIONS  
INDUSTRY ASSOCIATION (CTIA)  
c/o Michael F. Altschul  
1250 Connecticut Avenue, N.W.  
Suite 200  
Washington, D.C. 20036

CMT PARTNERS  
c/o Adam A. Andersen  
651 Gateway Boulevard, 15th Floor  
South San Francisco, CA 94080

COMSAT CORPORATION  
c/o Alicia A. McGlinchey  
22300 Comsat Drive  
Clarksburg, MD 20871

CONSUMERS FIRST AND THE AD HOC  
ALLIANCE FOR PUBLIC ACCESS TO 911  
c/o Jim Conran  
P.O. Box 2346  
Orinda, CA 94563

DEPARTMENT OF DEFENSE

c/o Paul R. Schwedler  
Carl W. Smith

TELECOMMUNICATIONS, DOD  
DEFENSE INFORMATION SYSTEMS AGENCY  
Code DO1  
701 S. Courthouse Road  
Arlington, VA 22204

E.F. JOHNSON COMPANY

c/o Susan H.R. Jones  
GARDNER, CARTON & DOUGLAS  
1301 K Street, N.W.  
Suite 900, East Tower  
Washington, D.C. 20005

ELERT & ASSOCIATES

c/o Ed Hazelwood  
140 Third Street South  
Stillwater, MN 55082

ERICSSON CORPORATION

c/o David C. Jatlow  
Young & Jatlow  
Suite 600  
2300 N Street, N.W.  
Washington, D.C. 20037

ESPN AND ESPN2

c/o Edwin M. Durso  
605 Third Avenue  
New York, NY 10158-0180

FEDERAL HIGHWAY ADMINISTRATION  
U.S. DEPARTMENT OF TRANSPORTATION

c/o Christine Johnson  
400 7th Street, S.W.  
Washington, D.C. 20590

HILLSBOROUGH COUNTY  
OFFICE OF THE COUNTY ADMINISTRATOR

c/o B.J. Smith  
P.O. Box 1110  
Tampa, FL 33601

LAKE COUNTY INFORMATION SERVICES  
E9-1-1 TELECOMMUNICATIONS  
c/o Bruce E. Thorburn  
P.O. Box 7800  
Taveres, FL 32778-7800

NATIONAL EMERGENCY NUMBER ASSOCIATION (NENA)  
c/o John Schroeder  
8744 Government Drive  
New Port Richey, FL 34654

GE CAPITAL-RESCOM  
c/o Danny E. Adams  
Ann M. Plaza  
Wiley, Rein & Fielding  
1776 K Street, N.W.  
Washington, D.C. 20006

A.P.C.O.-GEORGIA CHAPTER  
c/o James M. Dye  
140 N. Marietta Parkway  
Marietta, GA 30060

CITY OF MARIETTA EMERGENCY COMMUNICATIONS  
c/o Robert L. Williams, Jr.  
112 Haynes Street, Suite 911  
Marietta, GA 30060

NATIONAL EMERGENCY NUMBER ASSOCIATION-  
GEORGIA CHAPTER  
c/o James M. Dye  
140 N. Marietta Parkway  
Marietta, GA 30060

GEOTEK COMMUNICATIONS, INC.  
c/o Susan H.R. Jones  
Gardner, Carton & Douglas  
1301 K Street, N.W.  
Suite 900, East Tower  
Washington, D.C. 20005

**GTE**

c/o Andre J. Lachance  
David J. Gudino  
1850 M Street, N.W.  
Suite 1200  
Washington, D.C. 20036

**HARRIS CORPORATION**

c/o R. Daniel Foley  
P.O. Box 1188  
Novato, CA 94948-1188

**HONG, SCOTT**

667 Arbor Lane  
Warminster, PA 18974

**IDB MOBILE COMMUNICATIONS, INC.**

c/o Robert S. Koppel  
Richard S. Whitt  
15245 Shady Grove Road  
Suite 460  
Rockville, MD 20850

**ILLINOIS TELEPHONE ASSOCIATION**

c/o John F. Tharp  
P.O. Box 730  
Springfield, IL 62705

**INTERNATIONAL COMMUNICATIONS ASSOCIATION**

c/o Brian R. Moir  
Moir & Hardman  
2000 L Street, N.W.  
Suite 512  
Washington, D.C. 20036-4907

**INTERAGENCY COMMITTEE ON SEARCH AND RESCUE (ICSAR)**

c/o Chairman Pennington  
United States Coast Guard  
2100 2nd Street, S.W.  
Washington, D.C. 20593-0001

**KENTUCKY EMERGENCY NUMBER ASSOCIATION (KENA)**

c/o Jack Y. Sharp  
1240 Airport Road  
Frankfort, KY 40601

KSI INC.  
c/o Charles J. Hinkle, Jr.  
7630 Little River Turnpike  
Suite 212  
Annandale, VA 22003

LIBERTY CELLULAR  
c/o David L. Nace  
Marci E. Greenstein  
Lukas, McGowan, Nace & Gutierrez  
1111 19th Street, N.W.  
12th Floor  
Washington, D.C. 20036

CADDO PARISH COMMUNICATIONS  
DISTRICT NUMBER ONE  
c/o Martha Carter  
1144 Texas Avenue  
Shreveport, LA 71101

DEPARTMENT OF PUBLIC SAFETY AND CORRECTIONAL  
SERVICES EMERGENCY NUMBER SYSTEMS BOARD  
c/o Theodore I. Weintaub  
Suite 209, Plaza Office Center  
6776 Reisterstown Road  
Baltimore, MD 21215-2341

OFFICES OF THE ATTORNEY GENERAL  
c/o Stephen H. Sachs  
Emory A. Plitt, Jr.  
C.J. Messerschmidt  
Munsey Building  
Calvert and Fayette Streets  
Baltimore, MD 21202-1918

MCI TELECOMMUNICATIONS CORP.  
c/o Larry A. Blosser  
Donald J. Elardo  
1801 Pennsylvania Avenue, N.W.  
Washington, D.C. 20006

JACKSON COUNTY EMERGENCY COMMUNICATIONS  
DISTRICT MISSISSIPPI CHAPTER OF NENA

c/o Patricia M. Balduf  
600 Convent Avenue  
Pascagoula, MS 39567

MOTOROLA, INC.

c/o Michael D. Kennedy  
Michael A. Menius  
1350 I Street, N.W.  
Suite 400  
Washington, D.C. 20005

NATIONAL ASSOCIATION OF REGULATORY  
UTILITY COMMISSIONERS

c/o Paul Rodgers  
P.O. Box 684  
Washington, D.C. 20044

NATIONAL CELLULAR SAFETALK CENTER, INC.

c/o John Cusack  
385 Airport Road, Suite A  
Elgin, IL 60123

DEPARTMENT OF LAW AND PUBLIC SAFETY  
STATE OFFICE OF THE ATTORNEY GENERAL

c/o George N. Rover  
Hughes Justice Complex  
CN 080  
Trenton, NJ 08625-0080

NEXTEL COMMUNICATIONS, INC.

c/o Robert S. Foosaner  
Lawrence R. Krevor  
800 Connecticut Avenue, N.W.  
Suite 1001  
Washington, D.C. 20006

NORTH AMERICAN TELECOMMUNICATIONS ASSOCIATION

c/o Albert H. Kramer  
Robert F. Aldrich  
Keck, Mahin & Cate  
1201 New York Avenue, N.W.  
Penthouse Suite  
Washington, D.C. 20005-3919