DOCKET FILE COPY ORIGINAL

KRASKIN, LESSE & COSSON, LLP
ATTORNEYS AT LAW
TELECOMMUNICATIONS MANAGEMENT CONSULTANTS

2120 L Street, N.W., Suite 520
Washington, D.C. 20037

Telephone (202) 296-8890
Telecopier (202) 296-8893

November 9, 2000

RECEIVED

NOV 9 2000

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Magalie Roman Salas, Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Attn: Jay Whaley, Policy Division, Wireless Telecommunications Bureau

Re: CapRock Cellular, LP, Cellular Properties, Inc. dba Cellular One of East Central Illinois, C.T. Cube, Inc. dba West Central Wireless, East Kentucky Network, LLC dba Appalachian Wireless, Farmers Cellular Telephone, Inc., Glenn W. Ishihara, Great Lakes of Iowa, Inc., Hargray Wireless, LLC, North Carolina RSA 3 Cellular Telephone Company, Inc. dba Carolina West Wireless, Panhandle Telecommunications Systems, Inc., Pine Belt Cellular, Inc. dba Pine Belt Wireless, Pine Belt PCS, Inc. dba Pine Belt Wireless, Poka Lambro Telecommunications, Inc. dba Digital Cellular of Texas, Poka Lambro PCS, Inc. dba Poka Lambro Wireless, Taylor Telecommunications, Inc. dba Texas Cellular, Texas RSA 1 Limited Partnership dba XIT Cellular, Union Telephone Company and Valley Telecommunications Company, Inc.
Carrier Reports on Implementation of Wireless E911 Phase II Automatic Location Identification - CC Docket No. 94-102

Dear Ms. Salas:

Rural Cellular Association ("RCA") members CapRock Cellular, LP, Cellular Properties, Inc. dba Cellular One of East Central Illinois, C.T. Cube, Inc. dba West Central Wireless, East Kentucky Network, LLC dba Appalachian Wireless, Farmers Cellular Telephone, Inc., Glenn W. Ishihara, Great Lakes of Iowa, Inc., Hargray Wireless, LLC, North Carolina RSA 3 Cellular Telephone Company, Inc. dba Carolina West Wireless, Panhandle Telecommunications Systems, Inc., Pine Belt Cellular, Inc. dba Pine Belt Wireless, Pine Belt PCS, Inc. dba Pine Belt Wireless, Poka Lambro Telecommunications, Inc. dba Digital Cellular of Texas, Poka Lambro PCS, Inc. dba Poka Lambro Wireless, Taylor Telecommunications, Inc. dba Texas Cellular, Texas RSA 1 Limited Partnership dba XIT Cellular, Union Telephone Company and Valley Telecommunications Company, Inc., hereinafter "RCA Members," hereby file their reports on implementation of Wireless E911 Phase II Automatic Location Identification ("ALI") (CC Docket No. 94-102) pursuant to Section 20.18(i) of the Commission's Rules.

No. of Copies rec'd 0+4
List ABCDE

RCA Members Have Made Diligent Efforts To Obtain Information From Vendors

RCA and individual member companies have engaged in extensive research seeking to identify vendors that provide network-based, handset-based and hybrid Phase II location technologies and have produced a list with contact names, summary of the technology and a brief description of the products offered (*see* Attachment 1). RCA staff and its members have sought diligently to contact the vendors listed with little success to date (*see* Attachment 2 - representative letters sent to vendors requesting information; Attachment 3 - information received from Grayson Wireless, the only network-based provider that has responded; Attachment 4 - information received from Tendler Cellular, the only handset-based provider that has responded).

Cell-Loc and U.S. Wireless are not an Option for Most Rural Carriers

Two vendors that have yet to respond to requests for information are Cell-Loc and U.S. Wireless. These vendors were specifically referenced by the Commission as alternatives to the traditional high-cost network-based vendors because they offered location information for free or through a service bureau approach.[1] The Commission stated that the proposed services of these two vendors provide a basis for denying waiver or extension requests made on behalf of rural carriers.[2] Contrary to the Commission's contention that these vendors provide an opportunity for rural carriers to avoid up-front investment in network-based solutions, however, it appears that the proposed services will not be available on a timely basis to most rural carriers because the named vendors are concentrating on urban markets.[3]

---

[1]*See In the Matter of Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems: Fourth Memorandum Opinion and Order*, CC Docket 94-102, para. 29 (rel. Sept. 8, 2000) (Fourth MO&O) (Commission specifically noting that Cell-Loc proposes to provide location information for 911 calls to carriers without charge, with the costs to be recovered from commercial applications of location technology, and noting that U.S. Wireless proposes to provide location information as a service to carriers).

[2]*Id.* at para. 71 & n.127 (Commission denying a request for extension of the Phase II deadline for rural carriers filed by United States Cellular Corporation ("USCC") based in part on its finding that "other network-based solutions may prove less expensive for rural carriers . . . to implement, especially where they are being offered on terms that do not require an up-front investment by carriers" and referencing as examples the vendor proposals of Cell-Loc and U.S. Wireless).

[3]*See* Cell-Loc June 29 *Ex Parte* Letter at 2 ("[t]his network will offer addressability to 50% of the US Wireless subscriber base by October 2001, by being fully deployed in the top 45 markets in the country"(emphasis supplied)); "Verizon Wireless and U.S. Wireless Corporation Announce Successful Testing of CDMA Location System for Emergency 911 Caller Location" www.uswcorp.com (March 10, 2000) ("U.S. Wireless plans to build and operate its nationwide location service bureau in 100 major markets across the United States, beginning with the Washington, D.C./Baltimore metro area"(emphasis supplied)).

Traditional Network-Based Vendors are Prohibitively Expensive for Rural Carriers

The Commission has previously acknowledged that providing ALI in some rural areas may not be technically and economically feasible and that in these areas, individual waivers may be required.[4] Through its efforts, RCA has identified one network-based vendor, Grayson Wireless, which appears to have a product that is technically feasible in many of the rural areas covered by RCA members.[5] However, the cost of deployment of such a solution is estimated to be approximately $25,000 per cell site plus a $65,000 central control system.[6] Such cost is prohibitively expensive to rural carriers even in situations where states provide for some cost recovery of a carrier's cost related to implementation of E911.

With Limited Exception, Handset-Based or Hybrid Technologies are not Viable Solutions for Most Rural Markets

Rural markets typically have a lower rate of activations than urban markets due to the slower population growth and a lower rate of churn due to the lower number of competing wireless providers. Additionally, subscribers in rural areas tend to keep their handsets for much longer than average, especially since many rural carriers have not encountered a market or technical demand to convert from analog to digital systems. Accordingly, instead of achieving a substantial level of coverage as a result of "normal" handset turnover and growth, many RCA Members choosing a handset-based or hybrid approach would be forced to institute an almost wholesale conversion of handsets to replace current phones with ALI-capable handsets in order to achieve the 95 percent penetration required by the Commission's December 31, 2005 deadline. This wholesale conversion would be extremely costly to the rural carriers forced to absorb the cost of the equipment in order to maintain a competitive position.[7]

---

[4]*See In the Matter of Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems: Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 18676, 18718 (1996) (citing Consensus Agreement which suggested that some rural areas may have system configurations which, "without augmentation at special expense," would not be able to deliver ALI accuracy comparable to that which the Commission's Rules require and determining that these cases can be dealt with through individual waivers).

[5]*See* Attachment 3 (Information provided to RCA Members by Grayson Wireless, a division of Allen Telecom).

[6]*See* North Carolina RSA 3 Cellular Telephone Company, Inc. dba Carolina West Wireless Individual Report below; *see also* Fourth MO&O at para. 71 (Commission citing USCC's estimate that it would cost about $90 million to upgrade its more than 2,500 cell sites to employ TruePosition's network-based solution (approximately $36,000 per cell site)).

[7]Only one handset-based technology provider, Tendler Cellular, which offers the FoneFinder system, has supplied specific product information (*see* Attachment 4). Currently, this handset-based provider offers only one type of handset, the Audiovox CDM-9000 and is available only in CDMA/analog phones. Tendler Cellular has informed RCA Members that TDMA/analog phones are under development.

Evidence Supports Reversal of Commission's December 8, 1999 Decision

RCA filed petitions for reconsideration and for stay of the Commission's decision in this proceeding in which it amended the existing rules by eliminating a critical precondition for implementation of E911 service, that a carrier cost recovery mechanism be in place.[8] The Commission has failed act upon RCA's petitions. As demonstrated herein, the Commission's goal of implementing E911 Phase II by its October 1, 2001 deadline is now further frustrated by the inability of rural carriers to afford the prohibitively expensive traditional network-based solutions or purchase the cadre of phones that will be needed to convert its subscriber base to ALI-capable handsets. Clearly, the public interest would be served by a more reasoned approach. Rather than forcing carriers to choose between the few vendors that have developed "solutions" in order to meet preset deadlines, RCA urges the Commission to revise its implementation requirements to coincide with the development and rollout of location-based services of the majority of equipment and phone manufacturers.[9]

Individual Reports of RCA Members

RCA Members participating in this filing, hereby provide their individual plans for implementing E911 Phase II[10] subject to the constraints referenced above and with the caveat that these plans do not constitute a final or irrevocable commitment to the ALI technology they will employ.[11] Updates will be provided as appropriate. Given the minimal number of vendors that offer reasonably priced viable solutions for rural markets, RCA Members are unable to provide specifics regarding testing and verification other than what is provided in Attachments 3 and 4. Additionally, to date, none of the participating RCA Members have received a Phase II request from a PSAP that is capable of receiving and utilizing the data elements and has a mechanism in place for recovering the PSAP's costs. Accordingly, the individual plans do not reference any schedules for installation of the hardware and software needed to implement the chosen technologies.

---

[8]*See Petition for Reconsideration of the Rural Cellular Association*, CC Docket 94-102; RM-8143 filed Jan. 28, 2000; *Reply of the Rural Cellular Association*, filed April 5, 2000; *Petition for Stay* filed April 21, 2000 (seeking reversal of FCC's Second Memorandum Opinion and Order in its E911 proceeding and stay of the Commission's amended rule that became effective in April 2000).

[9]*See, e.g.*, East Kentucky Network, LLC dba Appalachian Wireless Individual Report below (providing information regarding projected rollout of ALI-capable phones by major phone manufacturers).

[10]Declarations by authorized company representatives attesting to the accuracy of their company's individual reports are attached to this joint report. In some cases, facsimile copies of the Declaration are provided. A supplemental filing will be made containing the original Declarations after they have been received.

[11]*See Wireless Telecommunications Bureau Provides Guidance on Carrier Reports on Implementation of Wireless E911 Phase II Automatic Location Identification: Public Notice*, CC Docket 94-102; DA 00-2099 (rel. Sept. 14, 2000) ("*Public Notice*").

CapRock Cellular, LP
TRS # 804978

Contact: Tommy Swaringen, Operations Manager
P.O. Box 119, 121 East Third
Spur, Texas 79370
Phone: 806-271-3344
Fax: 806-271-3601
E-mail: tommys@caprock_spur.com

CapRock Cellular, LP ("CapRock") plans to use a network-based technology and has contacted its switch vendor, Nortel, as well as Grayson Wireless and U.S. Wireless. Grayson Wireless has been the only vendor to supply information. Although the State of Texas does provide a minimal amount of funding for cost recovery of a carrier's cost related to implementation of E911, the cost of such a network-based solution is still prohibitive. CapRock has taken the necessary steps to provide Phase I; however, at this time the data is not being transmitted to the PSAP due to problems with routers; these difficulties are outside of CapRock's control. CapRock has not received a Phase II PSAP request.

C.T. Cube, Inc. dba West Central Wireless
TRS# 808167

Contact: Michael Easterwood, Technical Operations Manager
2289 Knickerbocker Road
San Angelo, Texas 76904
Phone: 915-944-9016
Fax: 915-656-7059
E-mail:mikee@wcc.net

C.T. Cube, Inc. dba West Central Wireless ("West Central") plans to use a hybrid technology but has yet to identify a vendor with a solution that is applicable to its system or that is not prohibitively expensive. The company has contacted TruePosition (it has yet to receive a response), Radix Technologies & Sigma One Corp. (neither have solutions for TDMA), Telcordia/Signal Soft (does not sell equipment, only software) and Grayson Wireless (cost too prohibitive even taking into account the minimal amount of funding that the State of Texas provides for cost recovery of a carrier's cost related to implementation of E911).

The company has also contacted Tendler Cellular regarding its FoneFinder handset solution; however, rather than transmitting data elements, the current product transmits the GPS location via synthesized voice and DTMF tones over the voice channel direct to the PSAP (*see* Attachment 4). This mode of transporting information may not be the mode required by the Texas PSAPs. Additionally, the only currently available model is a CDMA version which would not be compatible with West Central's TDMA system.[12]

West Central has received a PSAP request for Phase I and is in the process of implementation. The company has yet to receive a PSAP request for Phase II.

---

[12]Tendler Cellular's literature specifies that the company is currently developing TDMA/analog phones (*see* Exhibit 4).

Farmers Cellular Telephone, Inc.
TRS# 808824

Contact: Gary Kirk, General Manager
P.O. Box 1429
Rainsville, Alabama 35986
Phone: 256-638-2100
Fax: 256-638-2110
E-mail:fcti@farmerstel.com

Farmers Cellular Telephone, Inc. ("FCTI") plans to use a network-based technology. The company has contacted its switch vendor, Nortel, and is reviewing the technical and pricing information provided by Grayson Wireless. However, it appears that the Grayson Wireless solution is prohibitively expensive even taking into account the minimal amount of funding that the State of Alabama provides for cost recovery of a carrier's cost related to implementation of E911. FCTI plans to deploy the ALI-capable handsets according to the FCC's phase-in deployment schedule. The company has already implemented Phase I. To date no request has been received to provide Phase II.

Great Lakes of Iowa, Inc.
TRS# 815624

Contact: Dean Lonning, Systems Engineer
800 N. Grand Ave.
Spencer, Iowa 51301
Phone: 712-262-4444
Fax: 712-262-3333
E-mail:dean@iowaone.net

Great Lakes of Iowa, Inc. ("Great Lakes") plans to use a network-based technology and is reviewing the technical and pricing information provided by Grayson Wireless. The State of Iowa provides a minimal amount of funding for cost recovery of a carrier's cost related to implementation of E911; however, it appears that the cost of the Grayson Wireless product is still prohibitive. No request from a PSAP has been received by the company to provide either Phase I or Phase II E911 location information. When and if Great Lakes is required to provide ALI, Great Lakes has been informed that the information will be routed to Qwest, which will then transport the ALI to the PSAP.

Hargray Wireless, LLC
TRS# 818108

Contact: Philip T. Jones, Network Operations Manager
P.O. Box 5986
Hilton Head Island, South Carolina 29938
Phone: 843-683-1280
Fax: 843-706-2335
E-mail: ptj@hargray.com

Hargray Wireless, LLC ("Hargray") plans to use a network-based technology. The company has contacted its switch vendor, Lucent Technologies. Lucent has informed Hargray that its software release for network-based solutions to support E911 Phase II (release 16.1) is projected to be generally available in March of 2001. Hargray is also reviewing the technical and pricing information provided by Grayson Wireless; however, it appears that the cost of the Grayson Wireless

product is prohibitive. To date, no request from a PSAP has been received by the company to provide either Phase I or Phase II E911 location information.

North Carolina RSA 3 Cellular Telephone Company, Inc. dba Carolina West Wireless
TRS# 801552

Contact: William R. Crownfield, Project Coordinator
Box 275
Dobson, North Carolina 27017
Phone: 336-386-8713
Fax: 336-386-4539
E-mail: Bcrownfield@surry.net

North Carolina RSA 3 Cellular Telephone Company, Inc. dba Carolina West Wireless ("Carolina West") plans to use network-based technologies and has contacted its vendor, Nortel, as well as Sigma-1, Grayson Wireless, True Position and U.S. Wireless. The only vendor that has responded with any technical and/or pricing information is Grayson Wireless. Grayson Wireless has provided Carolina West with a quote of $915,000 for engineered, furnished and installed equipment using the time distance of arrival technology (34 cell sites at $25,000 per cell site plus $65,000 for a central control system). Although North Carolina does provide a minimal amount of funding for cost recovery of a carrier's cost related to implementation of E911, the cost of such a network-based solution is still prohibitive.

The company has implemented and is providing Phase I services with all PSAPs that have requested Phase I service to date. To date, no formal request has been received to provide Phase II; however, all six counties covered by Carolina West have expressed an intent to provide necessary terminals for use with the Sprint and BellSouth tandems.

Panhandle Telecommunications Systems, Inc.
TRS# 804717

Contact: Gary Burke, Plant Manager
603 S. Main Street
P.O. Box 511
Guymon, OK 73942
Phone: 580-468-2260
Fax: 580-468-3799
E-mail:garyb@ptsi.net

Panhandle Telecommunications Systems, Inc. ("PTSI") plans to use a network-based technology and has contacted its switch vendor, Nortel. Nortel has yet to provide any information regarding products that it intends to offer. In reviewing the estimated costs of the Grayson Wireless solution, PTSI has determined that the solution is prohibitively expensive given that the State of Oklahoma does not provide any funding for cost recovery of a carrier's cost related to implementation of E911. PTSI has taken the necessary steps to provide Phase I E911 location information; however, the PSAP, at this time, refuses to accept wireless calls from any carrier.

Pine Belt Cellular, Inc. dba Pine Belt Wireless
Pine Belt PCS, Inc. dba Pine Belt Wireless
TRS# 811304

Contact: Terry Smyly, Customer Service Manager
3984 County Road 32
Arlington, Alabama 36722
Phone: 334-385-5000
Fax: 334-385-2103
E-mail:terry@pinebelt.net

Pine Belt Cellular, Inc. dba Pine Belt Wireless and Pine Belt PCS, Inc. dba Pine Belt Wireless ("Pine Belt Wireless") plan to use a network-based technology and plan to use BellSouth Interconnect Services, the company that Pine Belt Wireless is using for implementation of Phase I. BellSouth Interconnect Services has yet to provide any information regarding products that it intends to offer. In reviewing the estimated costs of the Grayson Wireless solution, Pine Belt Wireless has determined that the solution is prohibitively expensive even taking into account the minimal amount of funding that the State of Alabama provides for cost recovery of a carrier's cost related to implementation of E911.

Poka Lambro Telecommunications, Inc. dba Digital Cellular of Texas TRS# 803513
Poka Lambro PCS, Inc. dba Poka Lambro Wireless TRS# 803512

Contact: Russ Smith, Vice President, Engineering
P.O. Box 1340
Tahoka, Texas 79373-1340
Phone: 806-924-7234
Fax: 806-924-5030
E-mail:rsmith@poka.com

Poka Lambro Telecommunications, Inc. dba Digital Cellular of Texas and Poka Lambro PCS, Inc. dba Poka Lambro Wireless ("Poka Lambro") plans to use a network-based technology and has contacted its switch vendor, Motorola. Motorola has yet to provide any information regarding products that it intends to offer. In reviewing the estimated costs of the Grayson Wireless solution, Poka Lambro has determined that the solution is prohibitively expensive even taking into account the minimal amount of funding that the State of Texas provides for cost recovery of a carrier's cost related to implementation of E911. The company has received a PSAP request for Phase I and is taking the necessary steps for implementation. It has not received a PSAP request for Phase II.

Taylor Telecommunications, Inc. dba Texas Cellular

Contact: Steve Singletary, Operations Manager
P.O. Box 337
Merkel, Texas 79536
Phone: 915-846-4111
Fax: 915-846-4198
E-mail:steves@taylortel.com

Taylor Telecommunications, Inc. dba Texas Cellular ("Taylor") plans to use a hybrid approach but has yet to identify a vendor with a solution that is not prohibitively expensive. It has contacted its switch vendors Nortel and GTETSI; however, to date neither company has provided any information regarding products that they intend to offer. In reviewing the estimated costs of the Grayson Wireless solution, Taylor has determined that the solution is prohibitively expensive even

taking into account the minimal amount of funding that the State of Texas provides for cost recovery of a carrier's cost related to implementation of E911. The company has implemented Phase I but the PSAPs have yet to begin receiving the data due to the routing problems from the two tandems to the eight PSAPs; these difficulties are outside of Taylor's control. The company has not received a PSAP request for Phase II.

Texas RSA 1 Limited Partnership dba XIT Cellular
TRS# 808014

Contact: Darrell Dennis, Assistant General Manager
P.O. Box 1392
Dalhart, Texas 79022
Phone: 806-384-3333
Fax: 806-384-3340
E-mail:darrell@xit.net

Texas RSA 1 Limited Partnership dba XIT Cellular ("XIT") plans to use a network-based technology and has contacted its switch vendor, Nortel, and Grayson Wireless. In reviewing the estimated costs of the Grayson Wireless solution, XIT has determined that the solution is prohibitively expensive even taking into account the minimal amount of funding that the State of Texas provides for cost recovery of a carrier's cost related to implementation of E911. The company has implemented Phase I. The company has not received a PSAP request for Phase II.

Union Telephone Company
TRS# 805325

Contact: John G. Woody, Vice President
P.O. Box 160
Mountain View, Wyoming 82939
Phone: 307-782-4118
Fax: 307-782-6913
E-mail: jowoody@union-tel.com

Union Telephone Company ("Union") plans to use a network-based technology and is reviewing the technical and pricing information provided by Grayson Wireless. It is the company's understanding that the States in which it operates, Wyoming, Colorado and Utah, do not provide funding for cost recovery of a carrier's cost related to implementation of E911. Accordingly, the cost of the Grayson Wireless product is prohibitive. To date, no request from a PSAP has been received by the company to provide either Phase I or Phase II E911 location information.

Valley Telecommunications Company, Inc.

Contact: Virgil Barnard, Contract & Compliance Manager
P.O. Box 970
Wilcox, Arizona 85644
Phone: 520-384-2231
Fax: 520-384-2831
E-mail:virgil.barnard@vtc.net

Valley Telecommunications Company, Inc. ("Valley") plans to use a network-based technology. The company has requested information from several vendors including Nokia, Ericcson, SigmaOne, TruePosition and Grayson Wireless; however, to date Grayson Wireless has

been the only vendor to supply information. The company has identified that the Mobile Positioning Center ("MPC") required for the Grayson Wireless Geometrix system to interface with the PSAP (see Attachment 3) would be GTE. However, it is the company's understanding that the State of Arizona does not provide funding for Phase II E911. Accordingly, the cost of the Grayson product is prohibitive. To date, no request from a PSAP has been received by the company to provide either Phase I or Phase II E911 location information. The company is aware that one of the PSAPs located in Valley's service area is having difficulty in getting residents to adopt a new addressing plan. The company believes that it is unlikely that the PSAP will be requesting Phase I or Phase II location information until problems with basic 911 are resolved.

Cellular Properties, Inc. dba Cellular One of East Central Illinois
TRS# 808518

Contact: Kathleen Robbins, General Manager
28 Towne Center
Danville, Illinois 61832
Phone: 217-442-2355
Fax: 217-442-1708
E-mail:krobbins@cellular1.net

Cellular Properties, Inc. dba Cellular One of East Central Illinois ("Cellular One") plans to use a handset-based technology. The company has contacted Nokia, Ericsson and Motorola. The company's current strategy is to activate ALI-capable handsets according to the FCC's phase-in deployment schedule when new handsets are sold (new activations and when upgrading existing customers' equipment). As location-based products and features become more widely available, the company intends to actively market ALI-capable handsets to its subscriber base to reach the 95 percent penetration required by the end of 2005. The company is currently in the process of implementing Phase I.

East Kentucky Network, LLC dba Appalachian Wireless
TRS# [13]

Contact: James O. Campbell, Controller
Appalachian Wireless
P.O. Box 520
20 Laynesville Road
Harold, Kentucky 41635
Phone: 606-478-9401 x 207
Fax: 606-478-8944
E-mail: jcamp@gearheart.com

East Kentucky Network, LLC dba Appalachian Wireless ("Appalachian Wireless") plans to use a handset-based technology to cover its entire service area (RSAs #9 and #10 in Kentucky). The company has chosen this technology based upon its understanding that its system configuration may not allow the necessary triangulation to implement a network solution. The Commonwealth of Kentucky provides funding for carriers to implement Phase II. Currently, this funding can be up to

---

[13]East Kentucky Network, LLC dba Appalachian Wireless is a new company formed from the merger of two wireless licensees, Appalachian Cellular, LLC (TRS#802104) and Mountain Cellular, LLC (TRS#809167). The new entity has not yet received a separate TRS number.

125 percent of the amount collected from subscribers.

The company plans to use Ericsson, Motorola and Nokia ALI-capable handsets and is coordinating with its switch vendor, Nortel, to ensure that the solutions will work within a Nortel system.[14] Appalachian Wireless has learned the following:

Nokia – company representatives have informed Appalachian Wireless that it plans to begin manufacturing handsets that meet Phase II standards sometime in the second half of 2001. Nokia notes that initially, the phones will be very expensive and that it will be 2003 or 2004 before Nokia will be able to meet Phase II standards in all of their handsets.

Motorola – company representatives have informed Appalachian Wireless that its products are already being manufactured in accordance with Phase I standards and that a target date of the end of 2001 has been established for the distribution of handsets that meet Phase II standards (depending on whether general location (AFLT) or assisted (AGPRS) is necessary).

Ericsson – company representatives have informed Appalachian Wireless that its products are already being manufactured in accordance with Phase I standards and that it has established a target date of third quarter 2001 for supplying handsets that meet Phase II standards.

Appalachian Wireless plans to conduct all applicable tests pursuant to OET Bulletin No. 71, issued April 20, 2000, including tests for uncompleted calls, timing, motion, coverage areas, starting conditions of handset-based systems, technical and competitive neutrality and post-installation monitoring and testing. The company plans to deploy the ALI-capable handsets according to the FCC's phase-in deployment schedule. To date, no PSAP has requested Phase II E911 implementation.

Glenn W. Ishihara

Contact: Adilia Aguilar, Project Manager
100 N. Sepulveda Boulevard, Suite 1100
El Segundo, California 90245
Phone: 310-563-5795
Fax: 425-940-7123
E-mail:aguilar@treyarch.com

Glenn W. Ishihara ("NTCH, Inc.")[15] plans to use a hybrid technology and has contacted its switch vendor, Lucent Technology regarding its IS 801 and PN 3890 standards. NTCH, Inc. has only recently begun providing service. Accordingly, the licensee plans to activate ALI-capable handsets in such a way, that it meets the Commission's deployment schedule and that by December 31, 2005, 95 percent of all of its handsets will be ALI-capable. To date, no request from a PSAP has been received by the licensee to provide either Phase I or Phase II E911 location information.

---

[14]Nortel has informed Appalachian Wireless that it is working with handset manufacturers to understand the solutions that they are offering and that its plans to take the various location enabled handsets through its "Open Solutions Program" to insure that the solutions work within a Nortel system.

[15]NTCH, Inc. is the company that manages the licenses held by Glenn W. Ishihara.

Respectfully submitted,

CapRock Cellular, LP
Cellular Properties, Inc. dba Cellular One of East Central Illinois
C.T. Cube, Inc. dba West Central Wireless
East Kentucky Network, LLC dba Appalachian Wireless
Farmers Cellular Telephone, Inc.
Glenn W. Ishihara
Great Lakes of Iowa, Inc.
Hargray Wireless, LLC
North Carolina RSA 3 Cellular Telephone Company, Inc. dba Carolina West Wireless
Panhandle Telecommunications Systems, Inc.
Pine Belt Cellular, Inc. dba Pine Belt Wireless
Pine Belt PCS, Inc. dba Pine Belt Wireless
Poka Lambro Telecommunications, Inc. dba Digital Cellular of Texas,
Poka Lambro PCS, Inc. dba Poka Lambro Wireless
Taylor Telecommunications, Inc. dba Texas Cellular
Texas RSA 1 Limited Partnership dba XIT Cellular
Union Telephone Company
Valley Telecommunications Company, Inc.

By: _____
Sylvia Lesse
John Kuykendall
Its Attorneys

Kraskin, Lesse & Cosson, LLP
2120 L Street, N.W.
Suite 520
Washington, D.C. 20037
(202) 296-8890

Attachments

ATTACHMENT 1

E-911 LOCATION TECHNOLOGIES
September 2000

The following is a list of some of the vendors who currently offer E911 Phase II location solutions. This list has been developed for the Rural Cellular Association to assist its members in complying with the Federal Communications Commission's ("FCC's") E911 Phase II requirements and does not purport to be a comprehensive list of all E-911 Phase II location technologies that are available or are being developed.

FCC Rules require wireless carriers to implement either a network-based, a handset-based or a hybrid approach. There are two main techniques employed by the network-based technologies: Time Difference of Arrival ("TDOA") and Angle of Arrival ("AOA"). The TDOA technique works by measuring the exact time of arrival of a handset radio signal at three or more separate cell sites. The TDOA technique typically uses existing receive antennas already present at a cell site. The AOA technique determines the direction of arrival of a handset's signal at the cell site. The phase of the signal on elements of a calibrated antenna array mounted at the cell site provides the angle of arrival. The intersection of the angles from two or more sites provides the location.

Although the FCC has noted that one vendor, Cell-Loc (www.cell-loc.com), proposes to offer E-911 Phase II services for free (it would waive the per-locate fee that it would normally charge for 911 calls if a carrier provided facility access for its Cellocate Network), presently Cell-Loc has no plans to provide its services in rural areas.

On September 26th, Ericsson, Motorola and Nokia, the world's three largest suppliers of mobile phones, announced that they have established an organization dedicated to advance the development of location-based services over wireless networks. The organization, the Location Interoperability Forum ("LIF") aims to "define, develop and promote common, ubiquitous offerings to address the lack in interoperability and allow services and applications to be accessed by users irrespective of the handsets and wireless networks they use." More information can be found on LIF's web site at www.locationforum.org.

VENDOR	TECHNOLOGY	DESCRIPTION
1)Allen Telecom, Inc. Grayson Wireless Division 381 Elden Street Suite 1100 Herndon, VA 20170-4842 (703) 787-7944 x 126 George Marble Vice President-Location Services www.allentele.com	Geometrix - Installations can be selected for individual sites from the lowest cost TDOA-only version to the highest performance AOA + TDOA combination (recommended for rural environments)	Network-Based Solution equipment supports AMPS, TDMA, CDMA, iDEN and dual mode phones. Equipment installed at cell sites. Can be shared among multiple wireless service providers if they share tower locations.

2) TruePosition 780 Fifth Avenue King of Prussia, PA 19406 610-680-1000 www.trueposition.com	Has acquired KSI, Inc. and is integrating its TDOA technology with KSI's AOA technology. Also offers KSI's Communications Localization system (CLS) that provides for single site location capabilities which are instrumental in rural and CDMA environments.	Network-Based Solution The two companies have had extensive field-testing experience with CDMA, TDMA and AMPS networks.
3)U.S. Wireless Corp. U.S. Wireless Corporation 2303 Camino Ramon, Suite 200, San Ramon, CA 94583 Ph: (925) 327-6200 Mark Cohn www.uswcorp.com	RadioCamera - uses radio-frequency patterns and multipath characteristics to pinpoint a subscriber's location, eliminating the need for line-of-sight triangulation. System can function from a single site, making it equally effective in sparse rural areas. U.S. Wireless and American Tower Corp have allied to collocate RadioCamera systems on 2500 of the tower company's sites in 100 U.S. markets within three years.	Network-Based Solution Company plans to function as a Service Bureau-au independent shared network platform that will allow multiple carriers and others in the same market to obtain location data without making capital investments in infrastructure. Carriers are actively testing AMPS and CDMA solutions in urban, suburban and rural environments.
4) SigmaOne Corp. 21900 Burbank Boulevard, Suite 114 Woodland Hills, CA 91367 Phone (818) 348-3300 website: www.sigma-1.com	Sigma-5000 TDOA - AOA Location System - uses the TDOA, AOA and SigmaOne's patent pending PowerBoost location technology	Network-Based Solution For cellular carriers with dual mode systems at 800 MHz, Sigma One is developing both TDMA and AMPS-CDMA integrated base stations for the 12.5 MHz range in the A or B band. Also for single mode systems for CDMA and GSM PCS carriers.

5)Radix Technologies 329 North Bernardo Ave. Mountain View, CA 94043 Ph: (650) 988- 4700 website: www.radixtek.com	Geo-Phone System - TDOA/AOA location system applies adaptive antenna technology on RF energy transmitted by each handset, and computes the location using Wavefront analysis techniques.	Network-Based Solution Initial version is designed for CDMA with later versions being adapted for AMPS, TDMA and GSM protocols.
6)Telcordia/SignalSoft Telcordia Technologies, Inc. Lisa Vaga (732)699-5460 website: www.telcordia.com SignalSoft - Boulder Office 1495 Canyon Blvd. Boulder, CO 80302 (303) 381-3000 www.signalsoftcorp.com	Telecordia Technologies and SignalSoft Corp. have teamed up to integrate select software applications and platforms to help operators meet FCC Phase I and Phase II E-911 requirements and offer subscribers personalized new m-commerce offerings (e-commerce services using mobile phones)	Network-Based Technology Allows network operators to location-enable existing ISCP-based enhanced mobile services. Location-based services resident on the ISCP can be utilized from a mobile handset using the SS7 network, or from a WAP or Web browser using XML over an IP network.
7) Integrated Data Communications 1001 Hildebrand Lane NE. Suite 200 Bainbridge Island, WA 98110 Phone: (206) 842-9262 website: www.placethecall.com	"In-Place" technology to receive GPS signals and unobtrusively transmit location information during the wireless call.	Handset-Based Technology

8) Harris Corporation 1025 West NASA Boulevard Melbourne, FL 32919-001 ph:(800) 4-HARRIS(427747) website: www.govcomm.harris.com	MICRO-TRAX Tracking and Location System - one chip tracking and location solution will be offered within the battery packs of existing cellular and PCS phones and will be available to wireless phone and radio manufacturers for future builds	Handset-Based Solution
9) Nokia - Nokia Mobile Phones Manufacturing USA 5650 Alliance Gateway Fort Worth, TX 76178 Tel: 817 491 7800 website: www.nokia.com	In 1998, Nokia invested $3 million in SiRF Technology, a GPS developer in preparation to meet the FCC phase-in requirements - currently still a key investor in SiRF	Handset-Based Solution
10) SnapTrack - a QUALCOMM company SnapTrack, Inc. 4040 Moorpark Avenue Suite 250 San Jose, CA 95117 (408) 556-0400 website: www.snaptrack.com	server-aided GPS technology	Handset-Based Solution
11) Tendler Cellular 65 Atlantic Avenue Boston, MA 02110 Phone: (617) 720-1339 website: www.fonefinder.com	Fone Finder -AMPS Cellular/GPS/Voice Synthesized Phone - a chip goes into your cellular phone. When you hit the 911 button on your phone it works in conjunction with an onboard GPS receiver to call out your location to the police or EMTs.	Handset-Based Solution

12)Ericsson Enterprise Networks 7001 Development Drive Research Triangle Park, NC 27709 Ph: (800) 444-3742 website: www.ericsson.com	-Mobile Positioning System (MPS), a positioning system for GSM telephones -Ericsson is finalizing an agreement with Cambridge Positioning Systems for Ericsson to incorporate Cursor (see below) into its infrastructure equipment	Handset-Based Solutions
13) Cambridge Positioning Systems 62/64 Hills Road, Cambridge CB2 1LA (UK) ph: +44 1223 326900 website: www.cursor-system.co.uk	-CURSOR Mobile Location System -signed a joint marketing agreement with SignalSoft to promote mobile location solutions to the GSM industry (intend to combine CPS' handset-based technology and SignalSoft's network-based technology)	Hybrid Solution Requires only a software upgrade to the handset and can be implemented within a mobile phone network using a minimal overlay of equipment
14) Lucent/Qualcomm Lucent Technology Sam Gronner ph: (973) 386-5065 Qualcomm - Consumer Prod. Carolyn Brown ph: (619) 651-7739 website: www.qualcomm.com	- Lucent/QUALCOMM teamed up to provide a hybrid approach that combines signals from GPS satellites, CDMA standard cellular and PCS networks, and modifications to the handsets. The solution enhances location services availability, accelerates the location determination process and provides better accuracy for a caller in an emergency situation.	Hybrid Solution

ATTACHMENT 2

KRASKIN, LESSE & COSSON, LLP
ATTORNEYS AT LAW
TELECOMMUNICATIONS MANAGEMENT CONSULTANTS

2120 L Street, N.W., Suite 520
Washington, D.C. 20037

Telephone (202) 296-8890
Telecopier (202) 296-8893

VIA FACSIMILE

November 6, 2000

Mark Conn
U.S. Wireless Corporation
2303 Camino Ramon, Suite 200
San Ramon, California 94583

Dear Mr. Conn:

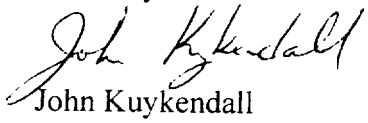
As I explained in the messages that I left on your voice mail on September 25th and 27th, our firm represents the Rural Cellular Association ("RCA") whose members are seeking to comply with the FCC's E911 Phase II requirements. RCA member companies provide service in more than 100 rural and small metropolitan markets where approximately 13 million people reside.

In the FCC's Forth Memorandum Opinion and Order, released in September of this year, the FCC specifically noted that U.S. Wireless proposes to provide location information as a service to carriers and stated that the company's service bureau approach may prove less expensive than traditional network-based solutions, especially in the context of rural carriers.[1]

As you are aware, carriers must file reports with the FCC this Thursday regarding their plans to implement E911 Phase II. It is unfortunate that neither you nor your company representatives have returned calls to discuss the services that your company has to offer rural service providers. However, even at this late date, any information you could provide would be helpful for RCA members as they could consider your company as an alternative to the network-based, handset-based or hybrid solutions that they have presently chosen.

I look forward to your prompt response to this request for information. I can be reached at 202-296-8890 or via e-mail at jkuykendall@klctele.com.

Sincerely,



John Kuykendall

---

[1] *See In the Matter of Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems: Fourth Memorandum Opinion and Order*, CC Docket 94-102, paras. 29 & 71 (rel. Sept. 8, 2000).