PUBLIC NOTICE

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INTERNATIONAL BUREAU INVITES FURTHER COMMENT REGARDING ADOPTION OF 911 REQUIREMENTS FOR SATELLITE SERVICES

IB Docket No. 99-67

SUPPLEMENTAL COMMENTS DUE: February 19, 2001

SUPPLEMENTAL REPLIES DUE: March 6, 2001

The purpose of this public notice is to solicit additional comments regarding implementation of 911 emergency-call features in satellite systems providing commercial mobile radio service.[1]

I. BACKGROUND

In 1996, the Commission adopted rules for the provision of basic and Enhanced 911 (E911) service by terrestrial commercial mobile radio service (CMRS) carriers. Basic 911 is the delivery of emergency 911 calls to a Public Safety Answering Point (PSAP).[2] E911 includes additional features, including automatically reporting the caller's location and telephone number. The Commission concluded that requiring wireless carriers to provide these 911 services helped implement its statutory mandate to "promot[e] safety of life and property through the use of wire and radio communication."[3] Specifically, the Commission adopted rules requiring cellular licensees, broadband PCS licensees, and other terrestrial wireless carriers providing two-way voice communication via interconnection with the public switched telephone network to offer basic 911 and E911 under a phased schedule.[4]

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[1] As defined in the Communications Act, "commercial mobile service" means communication service provided for profit to users equipped with mobile terminals, by means of radio facilities interconnected with the public switched telephone network, offered to the general public or to classes of eligible users comprising a substantial portion of the public. 47 U.S.C. §§ 3(27) and 332(d), *see also* 47 CFR § 20.3.

[2] "PSAP" is a point that has been designated to receive 911 calls and route them to emergency service personnel. A "Designated PSAP" is a PSAP that is designated by the local or state entity that has the authority and responsibility to designate the PSAP to receive wireless 911 calls. We use the term in this notice to refer to any local facility performing such functions, whether or not pursuant to a state-government mandate. *See* 47 CFR § 20.3.

[3] Section 1 of the Communications Act, 47 U.S.C. § 151.

[4] *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems (First Report and Order and Further Notice of Proposed Rulemaking)*, 11 FCC Rcd 18676 (1996) ("*Wireless E911 Order*"), *on recon.*, 12 FCC Rcd 22665 (1997) ("*Wireless E911 Recon Order*"), *on further*

In the 1996 Order, the Commission exempted providers of Mobile Satellite Service (MSS) from these rules. While the Commission expressed its belief that the public interest will ordinarily require that providers of real time two-way voice services offer emergency service, it reasoned that adding specific regulatory requirements to MSS at that time might impede development of a service then in early development stages.[5] Further, the Commission agreed with commenters who maintained that emergency-service requirements for global MSS systems should be developed in an international forum in the first instance. The Commission stated that it expected that CMRS voice MSS carriers would eventually provide appropriate access to emergency services, however, and it urged carriers and other interested parties to do so as soon as feasible.[6]

In 1999, Congress enacted the Wireless Communications and Public Safety Act of 1999, with the purpose of "facilitat[ing] the prompt deployment … of a seamless, ubiquitous, and reliable end-to-end infrastructure for communications, including wireless communications, to meet the Nation's public safety … needs." To implement parts of this Act, the Commission has designated 911 as the universal emergency telephone number in the United States for both wireline and wireless telephone service and requested comment, inter alia, on what actions to take to encourage and support coordinated statewide deployment plans for wireless emergency communications networks that include E911 service.[7] The Act also contains provisions granting liability protection or immunity to wireless carriers, and to users of wireless 911 services, not less than that granted to providers and users of wireline services.[8]

The Commission revisited the subject of emergency-call service for MSS users in the current rulemaking in IB Docket No. 99-67, which primarily concerns adoption of rules to facilitate and promote international circulation of customer-operated satellite earth terminals used for Global Mobile Personal Communications by Satellite (GMPCS). In the initial Notice of Proposed Rulemaking in that proceeding, issued last year, the Commission sought comment as to whether, in light of recent technological developments, it should require MSS providers to implement 911 features, subject to transitional measures to avert adverse impact on systems already in operation or at an advanced stage of development.[9]

In the Notice of Proposed Rulemaking proposing licensing and service rules for the 2GHz MSS,

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recon., 14 FCC Rcd 20850 (1999) ("*Wireless E911 Second Recon Order").* *See, also, Second Report and Order*, 14 FCC Rcd 10954 (1999); and *Third Report and Order*, 14 FCC Rcd 17388 (1999), *on recon.* FCC 00-326, released Sept. 8, 2000. For further information on the wireless 911 proceeding and rules, see <www.fcc.gov/e911>.

5 *Wireless E911 Order* at ¶83; *Wireless E911 Recon Order* at ¶87.

6 *Wireless E911 Recon Order* at ¶88.

7 *Wireless Communications and Public Safety Act of 1999*, 113 Stat 1286, amending 47 U.S.C. §§ 222 and 251(e); *see also Implementation of 911 Act (Fourth Report and Order and Notice of Proposed Rulemaking)*, FCC 00-327, released Aug. 29, 2000.

8 *Wireless Communications and Public Safety Act of 1999*, at Section 4.

9 *Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements; Petition of the National Telecommunications and Information Administration to Amend Part 25 of the Commission's Rules to Establish Emissions Limits for Mobile and Portable Earth Stations Operating in the 1610-1660.5 MHz Band*, 14 FCC Rcd 5871 (1999), at ¶98.

the Commission more narrowly inquired as to whether it should require licensees in that particular MSS service to implement basic and/or enhanced 911 capabilities.[10] In the *2 GHz Report and Order*, the Commission acknowledged that 911 services can save lives and that significant strides had been made in developing location technology, but found that the information in the record was insufficient to support adoption of specific 911 requirements in the 2 GHz MSS service rules proceeding. Therefore, the Commission decided that it would be better to address issues concerning 911 requirements for 2 GHz MSS in the more-general 911 inquiry conducted in the *GMPCS* proceeding.[11] To that end, the Commission directed the International Bureau to issue a public notice in the *GMPCS* proceeding requesting additional information "regarding the technological, regulatory, and international aspects of Basic 911 and E911 for satellite services."[12]

II. REQUEST FOR FURTHER COMMENT

In accordance with the Commission's instruction in the *2 GHz Report and Order*, and in order to obtain a more substantial record, we seek additional comment from interested parties and members of the general public in response to the following questions. We also encourage commenters to identify and discuss any other issues relevant to the implementation of 911 services by MSS licensees.

A. General Considerations

The general issues on which we seek comment and information are: first, whether it would improve public safety and promote the overall public interest to eliminate the exception allowed to MSS carriers under the wireless 911 rules and require MSS carriers to provide 911 emergency services; and, second, if rules are warranted, what the terms of those rules should be, including relevant implementation time frames.

We recognize that there are operational differences between MSS systems and terrestrial wireless systems that may have a bearing on resolution of these issues. MSS can provide voice service at locations where no terrestrial service is available, for instance, such as in maritime environments and remote areas. Cellular carriers interconnect with local wireline carriers at many points throughout their service areas and can generally make use of existing facilities to route 911 calls directly to local PSAPs in the areas where the calls are placed. MSS carriers, on the other hand, interconnect with the public switched telephone network at only a few points in the United States and do not interconnect directly with most local wireline carriers. Routing emergency MSS calls to the appropriate local emergency service providers may therefore present special challenges. To route MSS calls automatically to the most appropriate PSAP may require location information for each call and a national database to correlate callers' geographic positions with the service areas of local PSAPs and identify locations where no PSAP operates. Alternatively, emergency MSS calls might be routed to central operators, who could redirect the calls to the appropriate emergency response agencies in the caller's area. In some cases, public safety needs may best be met by routing MSS emergency calls to someone other than a local PSAP, for instance to the Coast Guard.

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[10] *Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band*, 14 FCC Rcd 4843, 4885 ¶94 (1999) ("*2 GHz NPRM*").

[11] *Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band, Report and Order*, FCC 00-302, IB Docket No. 99-81 ¶125 (rel. Aug. 25, 2000) ("*2 GHz Report and Order*").

[12] *Id.* ¶125.

For terrestrial wireless emergency 911 calls, several technologies are being developed to identify the caller's location, including solutions that employ equipment in the wireless network and technologies employing upgraded handsets, with features such as Global Positioning System (GPS) capability.[13] Location solutions relying on facilities in terrestrial networks may not be available for MSS providers, however, and incorporation of handset-based position determination might affect MSS providers and terrestrial services differently with regard to such matters as handset performance, bulk, weight, battery life, cost, and price.

The National Telecommunications and Information Administration (NTIA) and the National Emergency Number Association (NENA) have recommended that we seek input on these issues from an ad hoc fact-finding committee. We request comment on this suggestion and, if this approach appears useful, how it might best be implemented.[14] For example, would it be more productive to postpone consideration of information gathered from this Public Notice until after such a group has provided a report to the Commission identifying or addressing relevant issues? We note that a Consensus Agreement that helped form the basis of the wireless 911 rules was developed by a voluntary ad hoc group with representatives of both the public safety and the wireless communities.[15]

B. Specific Issues

Scope. The 911 rules for terrestrial wireless systems apply only to commercial mobile radio service involving provision of "real-time, two-way switched voice service … utiliz[ing] an in-network switching facility which enables the subscriber to reuse frequencies and accomplish seamless handoffs of subscriber calls."[16] Should 911 rules for satellite services, if adopted, be limited to the same extent? Are any MSS services analogous to the maritime and aeronautical services that are exempt from the 911 requirements for terrestrial wireless systems?[17] Does the rationale for exempting "SMR licensees offering mainly dispatch services to specialized customers in a more localized, non-cellular system configuration"[18] apply to any MSS providers?

If the Commission were to adopt 911 rules for MSS, should it adopt uniform requirements for all covered MSS, or should it develop varying requirements for different types of MSS systems or services? Should the rules distinguish, for instance, between provision of service to callers with single-mode MSS terminals and service to callers equipped with dual-mode terminals incorporating cellular or PCS transceivers?

Are there safety needs that MSS systems are uniquely or especially capable of meeting? How do MSS

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13 The Global Position System (GPS) is a network of U.S. government satellites that transmit signals that can be used to calculate the location of receivers.

14 Comments of National Emergency Number Association in IB Docket No. 99-67 filed May 3, 1999 at p.2; Reply Comments of the National Telecommunications and Information Administration in IB Docket No. 99-67, filed July 21, 1999, at p.10.

15 *See, Wireless E911 Order* at 18678.

16 47 C.F.R. §20.18(a).

17 *Wireless E911 Order, supra,* at ¶82.

18 *Id.* at ¶81.

providers currently serve those or other public safety needs, or plan to serve them?[19] Are there relevant differences in the public safety needs that different MSS services and providers provide?

Basic 911 issues. Would it serve the public interest to require MSS licensees to provide basic 911 service[20] at this time? If not, please explain in detail why the public interest would not be served. If so, should MSS licensees be required to route 911 calls directly to PSAPs in the caller's vicinity, or should they have the option of initially routing the calls to special operators at central emergency-call bureaus for relay to PSAPs based on information obtained from the callers? What would be the impact, if any, of requiring basic 911 automatic routing on the cost and price of, and demand for, MSS?

Has a nationwide database been developed that emergency-call operators could use to ascertain which PSAP to contact in any given instance? If so, does the database include long-distance telephone numbers for contacting emergency-call handlers at each PSAP?[21]

If the Commission were to adopt a basic 911 requirement for MSS, how much lead time would be needed for compliance? How much more lead time, if any, would MSS providers need for achieving compliance with a rule requiring provision of basic 911 by automatic routing to PSAPs than with a rule permitting implementation by means of operator-assisted connection?

E911 issues. Should the Commission require MSS licensees to implement Automatic Number Identification (ANI)[22] for 911 calls and, if so, by what date? Would compliance with such a requirement be more problematic for MSS providers than for terrestrial wireless carriers subject to the ANI requirement in Section 20.18(d) of the Commission's rules and, if so, why? How much lead-time would be appropriate?

Is there any reason why implementation of *handset-based* Automatic Location Identification (ALI)[23] would be more problematic for MSS licensees than for terrestrial wireless carriers? Has handset-based ALI technology been developed for terrestrial wireless systems that is readily adaptable for use in MSS systems? Is it likely that such technology would be available to MSS licensees from competing commercial suppliers at prices comparable to prices charged for supplying equivalent technology to terrestrial carriers?

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19 Although the Coast Guard has provided information on these points in previous comments, we would welcome additional comments in this regard, particularly from service providers. *See* Comments of the United States Coast Guard in IB Docket No. 99-67, Attachment 1 ("Search and Rescue Disaster Support MSS Capabilities Comparison Developed by the ISCAR CMSS Working Group"), filed June 21, 1999.

20 *See* 47 CFR § 20.18(b).

21 In earlier comments, The Association of Public-Safety Communications Officials International, Inc. (APCO) and the National Emergency Number Association (NENA) have acknowledged that development of a national PSAP database is necessary to enable GMPCS licensees to provide 911 services. In reply comments filed in July 1999 NENA reported that it was compiling a national PSAP database but had not finished the task.

22 ANI, *i.e.*, Automatic Number Identification, in this context, means automatic transmission of a callback number that a call-handler at a PSAP could dial to re-establish contact with a 911 caller in the event of a broken connection. *See* 47 CFR § 20.3.

23 ALI, *i.e.*, Automatic Location Identification, means automatic transmission of information specifying the caller's location.

To what extent would incorporation, either internal or external (*e.g.*, GPS), of components for reception and correlation of satellite radiolocation signals affect the size, weight, battery life, and/or per-unit cost of new MSS handsets? What expenses, if any, aside from additional handset costs, would ALI implementation entail for MSS providers? How would implementation of ALI affect market demand for MSS and the commercial viability of MSS?

Is it feasible for some MSS systems to provide ALI without installing separate satellite radiolocation receivers (*e.g.*, GPS) in user terminals?[24] If so, what degree of accuracy can be achieved by this means, expressed in terms allowing comparison with the accuracy specifications for terrestrial wireless systems in Section 20.18 of the Commission's rules? How would the cost of implementing ALI by this means compare with the cost of implementation based on reception of satellite radionavigation signals?

Would it serve the public interest to adopt a flexible rule requiring MSS providers to make their systems ALI-capable and offer ALI-capable terminals for sale or lease to customers who want them without barring continued provision of non-ALI-capable terminals to customers who prefer them? How would adoption of such a rule affect the cost, price, and demand for MSS?

How much lead-time should the Commission allow for meeting a flexible or other E911 ALI requirement for MSS, if adopted?

Compliance with other 911 and E911 rules and policies. If the Commission were to adopt 911 rules for GMPCS, would there be any need to devise special regulatory policies regarding any of the matters listed below, or should uniform policies apply alike to GMPCS and terrestrial wireless 911 services in these respects?

- Call priority (discussed in *Wireless E911 Order* at ¶¶ 117-19)
- Calls from unauthorized and unidentified users (see *Wireless E911 Recon Order* at ¶¶ 13-41)
- ALI interoperability (see *Wireless E911 Third Report and Order* at ¶¶ 59-61)
- Compliance verification (see *id.* ¶¶ 83-85 and OET Bulletin No. 71, *Guidelines for Testing and Verifying the Accuracy of E911 Location Systems*, http://www.fcc.gov/oet/info/documents/bulletins)
- Coordination with LECs and PSAPs (see *Wireless E911 Second Recon Order* at ¶¶ 75-103 and Public Notice DA 00-1875 in Docket No. 94-102, released August 16, 2000)
- TTY access
- Waivers (see *Wireless E911 Fourth Memorandum Opinion and Order*[25] at ¶¶ 42-45)
- Cooperation with the Coast Guard.[26]

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[24] Orbcomm, a Little LEO licensee, has reported that it can automatically ascertain the location of a user terminal that has remained stationary for ten minutes within a 500-meter error radius 95% of the time, using calculations based on Doppler variations in the signals received from its low-orbit satellites. Comments of Orbital Communications Corporation in IB Docket No. 99-67, filed May 3, 1999. Globalstar, L.P. asserted that its Big LEO system has inherent position-location capability with an error radius of approximately 10 kilometers and that it expects to improve positioning accuracy over time. Comments of Globalstar, L.P. in IB Docket No. 99-81, filed July, 26, 1999.

[25] FCC 00-326, released September 8, 2000.

[26] The Coast Guard has recommended adoption of a rule requiring providers of two-way mobile radio services to furnish coverage maps on request showing the areas where they provide emergency-calling service in order to facilitate enforcement of certain Coast Guard regulations. Comments of the U.S. Coast Guard in IB Docket No. 99-67, filed June 21, 1999.

Consumer notification. Should the Commission adopt a disclosure rule requiring manufacturers or sellers of GMPCS terminals that cannot be used for 911 emergency calls or with full E911 features to apprise users and potential purchasers of the functional limitations? If so, should the Commission require the notice to be affixed to the equipment or would another means of notification suffice?[27]

International issues. Three years ago, the Commission urged the public safety community and participants in the MSS industry "to continue their efforts to develop and establish … standards [for emergency calling] along with the international standards bodies."[28] What pertinent efforts, if any, have interested parties put forth, and with what result? What remains to be done, and how might the Commission promote its accomplishment?

What specific effect(s), if any, would FCC adoption of 911 requirements for MSS systems, including a requirement allowing operator-assisted connection, have on the use of U.S.-certified GMPCS terminals for calling in other countries and on the use of terminals imported from other countries for emergency calling in the U.S.? How likely would it be that other countries will adopt inconsistent emergency calling requirements or different protocols for ALI signals, and, if so, what issues and difficulties would be raised? Would it be feasible, in that event, to achieve systemwide ALI compatibility in a global or regional MSS system by means of processing at the gateway stations? How might such regulatory divergence affect handset design and marketing and what bearing would it have on domestic enforcement of technical and/or legal requirements for GMPCS handsets?

Would there be any need for special provisions pertaining to emergency MSS calls placed from within the U.S. but routed via foreign gateway stations?

III. PROCEDURAL MATTERS

Pursuant to Sections 1.415 and 1.419 of the Commission's rules, 47 C.F.R. §§ 1.415, 1.419, interested persons may file Supplemental Comments limited to the issues addressed in this Public Notice no later than February 19, 2001 and Reply Comments no later than March 6, 2001. Comments should reference IB Docket No. 99-67 and the DA number shown on this Public Notice. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS).[29] Comments filed through the ECFS can be sent as an electronic file via Internet to http://www.fcc.gov/e-file/ecfs.html. In completing the ECFS transmittal screen, parties responding should include their full name, mailing address, and the applicable docket number, IB Docket No. 99-67. Parties who choose to file by paper must file an original and four copies of each filing. All filings must be sent to the Commission's Secretary, Magalie Roman Salas. Office of the Secretary, Federal Communications Commission, 445 12th Street, S.W., Rm. TW-A325, Washington, D.C. 20554. One copy of all comments should also be sent to the Commission's copy

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[27] *Compare Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band*, FCC 00-302, released August 25, 2000, at ¶126 (imposing interim requirement to affix notification stickers to 2 GHz GMPCS handsets without 911 capability) *with Wireless E911 Recon Order*, *supra*, at ¶80 (allowing affected carriers to choose among various ways of notifying dispatch customers that their 911 calls will not be directly routed to PSAPs).

[28] *Wireless E911 Recon Order*, *supra*, at ¶89.

[29] *See Electronic Filing of Documents in Rulemaking Proceeding*, 63 Fed. Reg. 24121 (May 1, 1998).

contractor. Copies of all filings are available for public inspection and copying during regular business hours at the FCC Reference Information Center, Portals II, 445 12th Street, S.W., Washington, D.C. 20554, telephone 202-857-3800, facsimile 202-857-3805.

The Commission presented an Initial Regulatory Flexibility Analysis, as required by the Regulatory Flexibility Act (RFA),[30] in the NPRM in IB Docket 99-67.[31] If commenters believe that the proposals discussed in this Public Notice require additional RFA analysis, they may state their reasons for concluding so in their Supplemental Comments.

For *ex parte* purposes, this proceeding continues to be a "permit-but-disclose" proceeding, in accordance with Section 1.1200(a) of the Commission's rules, and is subject to the requirements set forth in Section 1.1206(b) of the Commission's rules.

For further information, please contact: William Bell, Satellite Policy Branch, (202) 418-0741.

Action by the Chief, International Bureau

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[30] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et seq. seq*., has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

[31] 14 FCC Rcd at 5871 ¶101.