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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of	)	
	)	
Implementation of Sections 3(n) and 332 or the Communications Act	)	GN Docket No. 93-252
	)	
	)	
Regulatory Treatment of Mobile Services	)	

REPLY COMMENTS OF
GEOTEK COMMUNICATIONS, INC.

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SUMMARY

The overwhelming majority of comments support adoption of the proposed "substantially similar" test. Geotek agrees with the Commission that the test "should focus primarily on the services provided to end users and the extent to which such services meet substantially similar customer needs and demands." Further Notice at ¶ 13. In applying the test, however, Geotek notes that the Commission incorrectly focused on whether the SMR provider served a wide geographic area rather than focusing on the services provided to end users. Geotek submits that there is a distinction between ESMR (Enhanced Specialized Mobile Radio) systems -- wide-area, multichannel, digital SMR systems that seek to compete with cellular -- and SMR providers, such as Geotek, who provide SMR service over a "wide-area," but do not compete with cellular.

The technical issues involved in this rulemaking are complex and far reaching and will have a substantial impact on the mobile services market well into the future. Further, the major impact of any proposed rule changes will fall on reclassified CMRS service providers who have relied on the existing technical and operational rules in Part 90 in designing their systems and services. The comments do not reflect the engineering analysis needed to ensure that the final rules do not impose unnecessary restrictions on carriers' ability to provide service in an efficient and economical manner. Thus, the Commission should adopt general rules on service

areas and licensing procedures and defer to future rulemakings the technical rules concerning co-channel interference, emission masks, antenna height and power requirements.

In the event, however, that the Commission adopts such rules without further rulemakings, Geotek suggests that as between the common carrier and the private radio rules the Commission use the more flexible of the two -- either the Part 90 or Part 22 rules or a combination thereof -- and apply such rules to all CMRS providers. Such an approach would not unduly restrict either service nor harm carriers that have invested substantial time and money in reliance on the existing rules. At the very least such an approach would allow certain carriers more flexibility than they currently enjoy under the existing rules.

With regard to the Commission's specific proposals, there is general consensus among the commentors that the 900 MHz SMR frequencies should be licensed for ten-year terms on an MTA market basis. Further, among the commenting 900 MHz parties, there is a consensus that incumbent licensees should be permitted to build-out their existing systems to the MTA borders -- similar to the "fill-in" period afforded cellular carriers -- prior to accepting competing applications or subjecting such expansion to competitive bidding. At the end of the "fill-in" period the Commission could then conduct auctions for licenses to serve any "unserved areas." Finally, the Commission should eliminate the 40-mile rule and loading requirements.

Finally, NABER and Nextel proposed a bifurcation of the 800 MHz SMR band. NABER's proposal differs from Nextel's in two important ways. First, NABER proposes to permit all SMR operators the opportunity to operate exclusive service-area systems -- not just existing 800 MHz SMR service providers with wide-area licenses. Secondly NABER rejects Nextel's approach which would mandate relocation or re-tuning of existing high power/analog SMR systems. Geotek notes that this issue was not raised by the Commission in the Further Notice. If the Commission decides to act on one of these proposals in this docket, however, it supports the NABER proposal and rejects the Nextel approach. Mandatory retuning would create operational and customer related problems for existing 800 operators and if forced to move to an "analog" portion of the 800 MHz SMR band, would limit their future ability to convert their systems to digital technology and devalue their licenses.

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REPLY COMMENTS OF GEOTEK COMMUNICATIONS, INC.

Geotek Communications, Inc. ("Geotek"), on behalf of its subsidiaries providing specialized mobile radio ("SMR") services, submits these reply comments in the above-captioned docket.

I. THE COMMENTS SUPPORT THE PROPOSED "SUBSTANTIALLY SIMILAR" TEST FOR ESTABLISHING REGULATORY SYMMETRY AMONG COMPETING MOBILE SERVICES

The overwhelming majority of commenters, both private and common carrier licensees,[1] support the Commission's proposed "substantially similar" test.[2] While Geotek agrees with the test -- services are substantially

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[1] See, e.g., McCaw Cellular Comments at 21-22 and New Par Comments at 3, RAM Mobile Data USA Ltd. ("RAM Mobile") Comments at 6, American Mobile Telecommunications Assoc. Comments at 6, and Pittencrieff Communications Comments at 3.

[2] See Further Notice at ¶¶ 15-16.

similar if they compete to provide similar services to customers[3] -- it submits that the Commission's focus in the Further Notice ignores the competitive relationship, or lack thereof, between the services and incorrectly divides SMR providers into two classes based on geographic area.

Specifically, the Commission stated that the SMR service is comprised of only two types of service providers: 1) wide-area, multichannel SMR providers, and 2) small, local SMR providers that seek to deliver traditional dispatch services.[4] The Commission's characterization of the SMR market is oversimplified. Geotek submits that the Commission has inappropriately used the broad term "wide-area" instead of the more specific term "Enhanced Specialized Mobile Radio" or "ESMR," in referring to SMR entities that compete with cellular.

The term ESMR was "coined" by NEXTEL and has been traditionally used by the industry to refer to wide-area, multichannel, digital SMR systems <u>that seek to compete with cellular</u>, such as the proposed ESMR systems of Nextel and others that plan to utilize Motorola's MIRS technology.[5] The term "wide-area" by itself, however, merely refers to authorizations to provide service

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[3] Further Notice at ¶ 13.

[4] Further Notice at ¶¶ 15-16.

[5] <u>See</u> NEXTEL Comments at n.11; <u>see</u> <u>also</u> Brown and Schwaniger Comments at 2-3; McCaw Cellular Comments at 22-23.

to significant coverage areas. Under the Commission's rules, entities in the Industrial, Land Transportation and Public Safety services are expressly authorized to provide wide-area service.[6] The rules for wide-area providers of internal-use only communications have for many years allowed, for example, gas and electric utility companies to provide coverage to large geographical areas. The internal-use services offered by such wide-area entities are obviously not substantially similar to cellular service.

Similarly, although Geotek provides SMR service over a "wide-area," it is not an ESMR. Rather, Geotek markets itself as a provider of dispatch services to business subscribers. Geotek's SMR systems are designed to use a new digital Frequency Hopping Modulation Access ("FHMA") technology based on the traditional SMR model of high power transmitters -- not a multiple, low power cellular configuration proposed for the ESMRs. Thus, if properly applied, the proposed test, with its focus on the type of service provided to end users, would distinguish between cellular-like ESMR providers and carriers such as Geotek that compete in the traditional SMR market for dispatch services.

II. SPECIFIC PROPOSALS

As a preliminary matter, as Geotek stated in its comments, many of the technical issues involved in this proceeding are complicated and far

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[6] See 47 C.F.R. §§ 90.629 and 90.631 (wherein the term "wide-area" is expressly used in the generic sense) .

reaching and will have a substantial impact on the mobile services market well into the future. The Further Notice sought comment on a wide variety of proposed rule changes, including technical rules, that will fundamentally change the nature of the mobile industry. Many of these technical changes require in-depth engineering analysis to ensure that the final rules do not impose unnecessary restrictions on carriers' ability to provide service in an efficient and economical manner and to protect against service degradation and interference.

Geotek submits that, upon review of the comments filed in response to the Commission's proposals, such an analysis is not reflected in the record. While the comments generally address the issues, very few propose specific technical and operational parameters for critical matters such as the optimum power or service contours that should be permitted along market boundaries; the effect of requiring SMR providers to conform to the cellular height and power limits; interoperability standards, etc. Geotek reiterates its support for adopting general rules on service areas and licensing procedures and deferring to future rulemakings the technical rules concerning co-channel interference, emission masks, antenna height and power requirements. Such an approach would be consistent with the Act which only requires that the Commission adopt

rules within the one year time frame that are "necessary" to implement regulatory parity among similar services.[7]

A. Commenters Support Flexible Antenna Height and Transmitter Power Limits.

Comments filed by both common carrier and private radio licensees recommend that the Commission adopt rules to allow both SMR systems and cellular systems to have greater flexibility over station power within the interior portions of their service areas and to limit such power at the licensee's service area border.[8] Such a rule would be compatible with licensee's existing or proposed systems and technology or, at the very least, would maintain existing height and power levels, particularly within the interior portions of their service areas. Further, it would not tie new service providers to a specific architecture or technology while at the same time protect adjacent carriers at the borders of the service areas.

The alternative stricter proposals -- to require SMR carriers to conform to the cellular height and power limits -- rely on the same false premise

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[7] Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, Title VI, § 6002(d)(3)(A), 107 Stat. 312, 392 (1993).

[8] See RAM Mobile Comments at 1, AMTA Comments at 19, GTE Comments at 11-12, Industrial Telecommunications Association and the Council of Independent Communication Suppliers Comments at 5-7, NABER Comments at 26, The Personal Communications Industry Association Comments ("PCIA") at 10-12, and US West Comments at 5-9.

that all "wide-area" SMR providers are ESMR providers, as discussed above, and thus, should be regulated like cellular to achieve parity.[9] As NABER points out in its comments, any strict "harmonization" proposals for antenna height and power could unfairly compel SMR dispatch service providers that do not compete with cellular to adopt the cellular height and power limits. Although ESMRs, as competitors to cellular generally employ the cellular model of low power multiple base stations, traditional SMR providers such as Geotek do not.

Companies like Geotek have invested substantial time and resources in developing new spectrum efficient technologies in reliance on the Part 90 rules. Absent a compelling reason for forcing it and others like Geotek to abandon their plans and implement a cellular configuration, the Commission should adopt a flexible approach and allow all carriers (SMR, ESMR, Cellular, etc.) licensed on a market basis to operate at the less restrictive Part 90 height and power limits. The rules should only mandate a more restrictive height and power configuration if it is required to protect adjacent carriers at the market borders (e.g. MTA, MSA, etc.).

B. Subscriber Unit Emission Standards

Geotek notes that although few commenters followed its lead and commented directly on subscriber unit emission standards, its position was

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9 See e.g., New Par Comments at 7-9.

supported by the comments of RAM Mobile. As with height and power limitations, Geotek has relied on the existing SMR technical rules in designing the subscriber unit to function with its innovative FHMA technology. In any radio based technology there must be a balance between the power emissions of the base station and the power emissions of the subscriber unit. Thus, any change to the subscriber unit emissions will necessarily effect the capabilities and coverage of the FHMA technology.

In its comments, Geotek recommended that handset power emissions should not be changed or, if changed, should remain compatible with ET Docket No. 93-62 examining equipment standards to ensure the safety of radio frequency emissions ("RF Emissions").[10] Geotek reiterates that the Commission should not change handset emission standards absent a compelling reason, such as radiation frequency emission concerns. In addition, Geotek emphasizes that the dispatch 900 MHz SMR market constitutes a "controlled" environment of business subscribers who are more aware of the hazards of RF emissions than the general public to which the uncontrolled criteria applies.

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[10] Geotek Comments at 17 (citing In the Matter of Guidelines for Evaluating the Environmental Effects of Radio Frequency Radiation, ET Docket No. 93-62 (proposing to adopt ANSI-IEEE C-95-1 1992 ("SAFETY LEVELS WITH RESPECT TO HUMAN EXPOSURE TO RADIO FREQUENCY ELECTROMAGNETIC FIELDS")). See also RAM Mobile Comments at 8, and Southwestern Bell Comments at 12.

C. Interoperability Standards

Geotek supports the comments that recommended that the Commission not adopt strict interoperability requirements.[11] In addition, Geotek notes that it was unique among the commenters in recommending that the Commission limit any interoperability rules to only require that users on one CMRS system be capable of communicating with users on other CMRS systems.[12] Because all CMRS providers will, by definition, provide interconnection to the public switched telephone network ("PSTN"), such interoperability can be most effectively accomplished through the switching capability of the PSTN. Such an approach would create a flexible regulatory environment and encourage the introduction of new and innovative subscriber equipment while avoiding the need to adopt new air interface standards.

D. Change in Control

In the Further Notice the Commission proposed to allow assignment or transfer of most CMRS licenses upon completion of construction and commencement of operation, provided that the applicant can demonstrate that the

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[11] See e.g., Ericsson Corp. Comments at 2, and New Par Comments at 10-11.

[12] Geotek Comments at 20-21. See also BellSouth Comments at 13-14, AMTA Comments at 43, and Airtouch Paging and Arch Communications Comments at 13-14.

assignment or transfer would serve the public interest, convenience and necessity.[13] In its comments, Geotek supported this policy but also recommended that the Commission permit an existing carrier that has both constructed and unconstructed licensed facilities to transfer or assign its unconstructed systems as part of a larger transaction. Such a policy would facilitate bona fide transactions such as stock transfers constituting a transfer of control of a license or transfer or assignment of unconstructed facilities where such facilities (licenses) are incidental to the transaction as a whole. The essence of Geotek's recommendation was supported by several commenters.[14]

E. The Comments Support Allowing 900 MHz SMR Licensees to Build-Out their Existing Systems to their MTA Borders

Geotek strongly supports the comments of RAM Mobile which argue that the Commission must release 900 MHz SMR licensees from "regulatory limbo" and allow them to build-out from their existing Designated Filing Areas ("DFAs") to the borders of the Major Trading Area ("MTA").[15] In addition, Geotek agrees with RAM Mobile's recommendation that the Commission reject the proposal contained in the Further Notice that a two kilometer

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[13] Further Notice at ¶ 145.

[14] See, e.g., Airtouch Paging and Arch Communications Comments at 13, and Paging Network Comments at 45-46.

[15] RAM Mobile Comments at 1-5 (in addition, RAM Mobile recommends the adoption of "modified MTAs").

transmitter move would constitute a major modification and potentially be subject to competitive bidding.[16] No basis exists for treating SMR carriers differently than cellular by denying them the ability to build out their systems to the market boundary free of competing applications during a specified "fill-in" period.[17] Moreover, the Commission has discretion to avoid subjecting such build out to competitive bidding.[18]

F. If the Commission Adopts a Bifurcation of the 800 MHz SMR Band, Geotek Supports a Voluntary Relocation Policy

In its comments, NABER proposed that the FCC permit service-area based licensing for only the 861/865 MHz portion of the SMR pool. Licenses would be awarded for Commission-defined service areas (i.e. MTAs or BTAs). If an applicant wanted a service area license, it would be required to move all non-affiliated licenses in the service area on the requested frequencies to the 856-860 MHz spectrum to accommodate the relocated licenses. All new

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16 RAM Mobile Comments at 5.

17 See 47 C.F.R § 22.31(a)(1)(i). See also 47 C.F.R. § 22.2 (defining the "fill-in" period for cellular licensees).

18 See 47 C.F.R. § 309(j)(3) (giving the Commission discretion to refrain from requiring competitive bidding for certain applications if the public interest warrants). See also Second Report and Order, PP Docket No. 93-253, at ¶¶ 41-43 (declining to subject initial applications for "intermediate microwave links" to the competitive bidding process).

licensing by the Commission would be service-area based in the 861-865 MHz band and transmitter-based for the rest of the 800 MHz band.

An alternative bifurcation proposal was suggested by Nextel. Under Nextel's proposal, existing high-power transmitter-based SMR systems in the 861-865 MHz band would be required to move to other channels by a certain date if (1) the wide-area operator in the subject area could offer them similar channels in the 856-860 MHz band and (2) if the wide-area system paid the costs to relocate the incumbent licensee's channels.

NABER's proposal differs from Nextel's in two important respects. First, NABER would provide all SMR operators the opportunity to operate exclusive service-area systems -- not just existing 800 MHz SMR service providers with wide-area licenses. Secondly, NABER rejects any licensing scheme that would result in the mandatory relocation or re-turning of existing high power/analog SMR systems. Geotek notes that this issue was not raised by the Commission in its Further Notice. If the Commission decides to act on one of these proposals in this docket, however, then as a holder of 800 MHz SMR licenses, Geotek supports the NABER proposal and rejects the Nextel approach. Mandatory retuning would create operational and customer related problems for existing 800 MHz operators and if forced to move to an "analog" portion of the

800 MHz SMR band, would limit their future ability to convert their systems to digital technology and devalue their licenses.

G. Matters of Consensus

Lastly, Geotek notes that there is a consensus among the commenters on the following 900 MHz SMR issues. Accordingly, Geotek submits that the public interest would be served by the adoption of the following rules and policies:

- The 900 MHz SMR frequencies should be licensed on an MTA based service area.[19]
- 900 MHz SMR incumbents should be permitted to build-out their existing systems to the borders of their new MTA service areas.[20] Further, if applications are required for such build out, they should not be subject to competitive bidding.[21]
- 900 MHz SMRs should be obligated to meet a Commission imposed population coverage requirement within their MTA license area.[22]

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[19] See, e.g., AMTA Comments at 17-19, NABER Comments at 22, Nextel Comments at 15, and RAM Mobile Comments at 7.

[20] See e.g., AMTA Comments at 19, and RAM Mobile Comments at 1.

[21] See e.g., AMTA Comments at 19 and 41-42, and RAM Mobile Comments at 1 and 5.

[22] See e.g., Nextel Comments at 43-44, RAM Mobile Comments at 10.

- 900 MHz SMR licenses should be granted on a ten-year license term;[23] and

- The 40-mile rule and loading requirements are no longer necessary and should be eliminated.[24]

CONCLUSION

The major impact of any proposed rule changes will fall on reclassified CMRS service providers who have relied on the existing technical and operational rules in Part 90 in designing their systems and services. Changes in these rules should only be adopted after a more complete record is compiled in further rulemakings that are service specific. Alternatively, as between the common carrier and private radio rules, the Commission should use the more flexible of the two -- either the Part 90 or Part 22 rules or a combination thereof -- and apply such rules to all CMRS providers. Such an approach would not unduly restrict either service nor harm carriers that have invested substantial time and money to provide services to the public in reliance upon the existing Commission rules -- at the very least it will allow certain carriers more flexibility than they currently enjoy.

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[23] See e.g., Airtouch Paging and Arch Communications Comments at 7, AMTA Comments at 42, BellSouth Comments at 18-19, NABER Comments at 46.

[24] See e.g., Airtouch Paging and Arch Communications Comments at 11, AMTA Comments at 11-13, NABER Comments at 32, Nynex Comments at 4, PCIA Comments at 17, RAM Mobile Comments at 10.

Finally, there is a consensus among the commenters on the 900 MHz SMR service that it should be licensed on an MTA service area basis and that existing licensees should be permitted to expand their current coverage to the MTA borders without competitive bidding, but subject to a Commission's established population coverage requirement.

Respectfully submitted by:

Geotek Communications, Inc.

Michael S. Hirsch

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I, Tracey DeVaux, do hereby certify that on this 11th day of July, 1994, copies of the foregoing Reply Comments of Geotek Communications, Inc. were mailed, first class postage prepaid, to the following:

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