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October 31, 2002

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

VIA HAND DELIVERY AND E-MAIL

Mr. Lawrence Clance
Federal Communications Commission
Enforcement Bureau
Technical and Public Safety Division
445 12th Street, S.W., Rm. 7A-721
Washington, DC 20554

RE: Clarification of Compliance with E911 Rules
Nevada Wireless, LLC

Dear Mr. Clance:

On behalf of Nevada Wireless, LLC ("Nevada" or "Company"), we wish to supplement and clarify the Company's August 20. 2002 response to your July 30, 2002 letter inquiring into the status of Nevada's compliance with the Federal Communications Commission ("FCC" or "Commission") rules governing Enhanced 911 ("E911") Phase II requirements, as codified in Section 20.18 of the FCC Rules.[1] The FCC's inquiry related to the Harmony Wireless Communication System™ ("Harmony" or the "System") initially deployed by the Company in Reno, NV. The Company's original report to the Commission in 2001 and its more recent letter indicated that Nevada intended to implement a handset-based location solution Nevada advised the Commission of that intention based on extensive discussions with Motorola, Inc , the manufacturer of the Company's proprietary technology hardware and switch.

More recently, Nevada has become increasingly concerned that neither Motorola nor any third party supplier would be able to cost-justify development of an E911 network or handset solution for Harmony that conforms to the Phase II requirements of FCC Rule Section 20.18 (b)-(h). As described more fully below, Harmony is a niche technology with a minuscule commercial

[1] 47 C.F.R. § 20.18

deployment that is unable to take advantage of the developments in E911 capabilities developed for the more widely used cellular, PCS and even iDEN platforms.

Therefore, as detailed below, and after continued investigation into the E911 options available to it, Nevada has determined that it instead will meet its E911 obligations on its 800 MHz Specialized Mobile Radio (SMR) system by routing any customer emergency calls through a dispatcher as provided in FCC Rule Section 20.18(k).[2] In accordance with the FCC's rules and as described more fully below, the Company will make every reasonable effort to notify current and potential dispatch customers explicitly that, in the event of an emergency. the dispatcher should be contacted.

I. HARMONY SYSTEM DESCRIPTION

A. The Harmony System Fills a Unique Niche by Providing a Low Tier. Digital Dispatch Option Tor Business and Governmental Users in Relatively Small, Geographically Discrete Markets.

The Company has deployed its first Harmony system in Reno, NV. Harmony is described by Motorola as a digital integrated wireless system offering the core voice communication capabilities of dispatch and telephone interconnect services. As the Commission is aware, Motorola developed the digital iDEN platform that is used throughout much of the country by Nextel Communications, Inc. ("Nextel") and Nextel Partners, Inc. ("NPI"). Those companies provide a sophisticated menu of services including cellular voice communications, short messaging, Internet access, data transmission and Direct Connect®, a digital two-way radio feature that permits direct communications between designated subscribers. By contrast, the Harmony system is a small business, micro-digital derivative of iDEN that currently operates only in the 800 MHz band regulated under Subpart S of Part 90 of the FCC Rules.[3] Unlike the iDEN network which utilizes a Nortel switch, the Harmony switch is a Motorola product. The Harmony technology is in its first generation. It currently will support only up to sixteen transmitter sites and five thousand (5,000) subscriber units when and if it reaches full capacity.[4] However, although both the switch and the

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[2] 47 C.F.R. §20.18(k).

[3] *See* 47 C.F.R. § 90.601 *et seq.* Like iDEN, Harmony is a proprietary technology. Motorola is Nevada's sole equipment source for its switch, its repeaters and its customers' units.

[4] Motorola has committed to future software releases which will permit the system to increase its capacity with up to as many as forty-eight sites and ten thousand subscribers. However, these figures may prove optimistic. Nevada's modeling of erlang usage indicates the System may experience a quality of service limitation at fewer than ten thousand customer units even with a

repeater software are different than iDEN, the Hamiony customer units were developed for use on the iDEN network.[5]

Harmony system. including the Company's. are dwarfed by even most relatively small cellular and PCS operators. In fact, the product was developed. not for commercial operators. but for tlic private, internal custonicr. the manufacturing facility, utility, or construction company with a primary need for dispatch communications, but with a large enough fleet and a sufficiently extensive communications requirement to justify investing in a digital network with interconnect capability and other enhanced features. It is the Company's understanding that Motorola has sold a number of Hamiony systems for this type of private. internal communications and that such operations arc the targeted marketplace for the technology

To the best of its knowledge, Nevada is only one of two operators in North America that has deployed the Harmony system in a commercial environment.[6] The limited commercial application of this product is directly related lo the highly successful deployment of the iDEN network throughout much of the United States. In the Company's opinion. it is not technically or economically feasible to invest in the digital capability of tlic Harmony system unless tlic operator controls at least sixty 800 MHz channels in a geographically delimited area with a population core in the two to four hundred thousand range. plus surrounding, geographically dispcrscd communities. Because the vast majority of 800 MHz commercial channels (as well as many non-commercial channels) have been acquired by Nextel or NPI for use in their iDEN networks, there arc only a limited number of markets. and no major markets. in the nation that satisfy both the spectrum availability and population criteria.

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significant preponderance of dispatch, rather than mobile telephone, traffic.

[5] Although all Harmony handsets also are capable of operating on the iDEN network, their capabilities are limited to those that are consistent with the more limited Harmony switch. Moreover, although the same repeaters are used in both the iDEN and Harmony systems, the software is entirely different, reflecting the consumer-oriented, interconnection focus of the former versus the business-oriented dispatch focus of the latter. It is Nevada's understanding that the E911-capable handsets being developed for deployment on the Nextel/NPI network will not be able to be used on a Harmony system because of these fundamental differences in the two networks.

[6] The other commercial Harmony licensee, Airtel Wireless LLC, operates in a few of the more populated markets in Montana.

[7] Nevada participated in Auction Nos. 34 and 43 and acquired 800 MHz EA licenses with coverage of a number of relatively rural markets in Nevada, California, New Mexico, Arizona, Idaho, Montana, Washington and Alaska. It intends to build Harmony systems in communities

Nevada elected to implement Harmony first in the Reno, Nevada market[8] because the Company's decades-long two-way radio experience in that area supported a determination that its prospective customers would benefit from the system's integrated digital dispatch/interconnection capability.[9] Harmony offers a business-to-business and government-to-government communications solution.[10] The Company focuses on smaller business, industrial and governmental radio dispatch users, some of which have an ancillary need for interconnection.[11] The Company does not market to individual subscribers and has none on its System. All of its customers have dispatch fleets of various sizes and configurations and every unit on the System is dispatch-enabled. The average fleet on the System has eighteen units: the majority operate twenty-five to thirty units. Dispatch messages generally are between a dispatcher at a fixed control location and one or more units within the fleet as directions and other business directives are exchanged among employees. Typically, the owner or managers of such fleets may elect the interconnect option while limiting the rest of the drivers in the fleet to dispatch-only mode. It even is not uncommon for customers to rely on this type of system for their more abbreviated business communications while using iDEN or a cellular or PCS system for personal or lengthier calls.

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meeting these criteria. That plan will need to be revisited should the FCC determine that the system does not satisfy the requirements of FCC Rule Section 20.18(k).

[8] The Company's Reno system is Motorola's first commercial application of Harmony.

[9] Nevada's System was the first commercial Harmony launch in the United States and went live with Beta software in December, 2001. Because the software still is in test mode, the System has not yet been "accepted" for commercial use by Nevada.

[10] Currently, System customers include a mix of state and local governmental entities, school districts, U.S. governmental entities, a range of commercial businesses such as ski resorts, construction companies, and service-related companies, disaster relief organizations with more than two hundred units in operation, as well as certain local Indian Colonies. For example, the Reno Sparks Indian Colony uses the System as its primary means of communications for its police, fire, utility and other governmental operations.

[11] Consolidating the needs of many small users on a single, technologically advanced system has the additional benefit of being highly spectrum efficient. *See, Public Notice*, Spectrum Policy Task Force Seeks Public Comment on Issues Related to Commission's Spectrum Policies, DA 02-1311 (rel. June 6, 2002).

B. The Harmony System is Designed with Dispatch as its Priority Function.

The ancillary nature of interconnection on a Harmony System is dictated by a number of factors. First, the Hannony switch does not provide the full functionality of switches used in the iDEN network or, to the best of the Company's knowledge, in any cellular or PCS systems. For example, it does not offer a number of advanced features routinely available on other Commercial Mobile Radio Service (CMRS) systems such as roaming, call waiting. 3-way calling or wireless Internet. Those who expect their cellular telephones to function essentially like a landline instrument likely would not be satisfied with the capabilities of the Harmony System and are not among the businesses in Nevada Wireless' customer base.

Second, because dispatch communications are primary, a Harmony system is functionally limited in the number of lines that can be used for interconnect communications. The system relies on what is identified as a Multi-frequency (MF) or Primary Kate Interface (PRI), rather than SS7 signaling, for its interface with the telephone network. an interface commonly associated with private internal rarher than comincrcial systems. Each telco T1 span can handle twenty-four (24) lines and the Harniony switch can accommodate only four (4) telco or voice mail spans. Typically. one (1) span is used for voice mail leaving only seventy-two (72) interconnect lines available on a Harmony network at any time. This network design deliberately favors dispatch over interconnect transmissions; interconnect capability is capped even if dispatch capacity is available at a particular moment. The great majority of capacity is reserved for dispatch service because that is deemed the priority function for the customers on a Harmony Systeni. In fact, the subscriber capacity model provided to the Company by Motorola is based on an assumption that sixty percent (60%) of the subscribers will use both the dispatch and interconnect features, while forty percent (40%) will use dispatch only." That assumption has proved accurate

[12] Historically, something less than half of the transmissions on the System are interconnected calls. See Attachment A.

II. NEVADA INTENDS TO SATISFY ITS E911 OBLIGATIONS IN ACCORDANCE WITH THE SECTION 20.18(k) CRITERIA ESTABLISHED FOR COVERED CARRIERS PROVIDING DISPATCH SERVICE.

A. The Rules Provide an Alternative E911 Approach for Covered Carriers Providing Dispatch Service.

The Company recognizes the importance of providing wireless as well as wireline users with the ability to deliver messages relating to emergency situations to an appropriate individual. The Commission's wireless E911 rules are intended to create that capability by enabling mobile telephone subscribers to have such calls delivered to a local Public Safety Answering Point (PSAP) along with the caller's call-back number and the unit's physical location with a high degree of accuracy.[13]

The FCC already has determined that not all CMRS systems should be subject to the full panoply of E911 requirements. It recognized as early as the first Order in that proceeding that the public interest did not require all for-profit systems with interconnection capability to assume E911 obligations. The Commission instead decided that the requirements should be applicable to cellular and broadband PCS carriers, and to those interconnected SMR licensees that compete with them in providing mobile telephone service to the public.[14]

The FCC's initial definition of "covered" versus non-covered SMRs, separating SMR systems that were "covered" by the E911 rules and those that were not, was revisited in a later Commission Order in the E911 proceeding.[15] On reconsideration, the FCC reaffirmed that "...a distinction was warranted between SMR providers that will compete directly with cellular and PCS providers, and SMR providers that offer mainly dispatch services in a localized non-cellular system configuration."[16] It agreed that "...the 'covered SMR' definition should be narrowed to include only those systems that will directly compete with cellular and PCS in providing comparable public

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[13] *See* 47 C.F.R. § 20.18(b) - (h).

[14] *Report and Order and Further Notice of Proposed Rulemaking*, CC Docket No. 94-102, 11 FCC Rcd 18676 (1996).

[15] *Memorandum Opinion and Order*, CC Docket No. 94-102, 12 FCC Rcd 22665 (1997) at ¶¶ 79 - 80 ("MO&O").

[16] *Id.* at ¶ 75.

mobile interconnected service."" It thus adopted the current definition of a covered carrier[18] that identifies in-network switching capability as the "best indicator" of an SMR licensees' ability to compete with cellular and broadband PCS.

However, in that same Order, the FCC expressly acknowledged a fundamental distinction between cellular phone systems in which a subscriber communicates exclusively with other wireless handsets or wireline telephone instruments and "covered carrier" systems that also provide dispatch capability, and recognized an alternative method for handling emergency calls on systems with the latter:

> In adopting this definition of "covered" service, we note that some "covered" SMR providers that utilize in-network switching and provide seamless handoff may also provide their customers with dispatch capability. We agree with Geotek and Nextel that in such instances, customers' emergency needs may be as well served by the dispatcher as by providing 911 dialing access. We therefore conclude that "covered" SMR systems that offer dispatch services to customers may meet their E911 obligations *to* their dispatch customers either by providing customers with direct capability for E911 purposes. or alternatively, by routing dispatch customer emergency calls through a dispatcher."[19]

This Commission decision is reflected in FCC Rule Section 20.18 (k) which states the following:

> Dispatch service. A service provider covered by this section who offers dispatch service to customers may meet the requirements of this section with respect to customers who utilize dispatch service either by complying with the requirements set forth in paragraphs (b) through (e) of this section, or by routing the customer's emergency calls through a dispatcher. If the service provider chooses the latter alternative, it must make every reasonable effort to explicitly notify its current and potential dispatch customers and their users that they are not able to directly reach a PSAP by calling 911 and that. in the event of an emergency, the dispatcher should be contacted.

17 *Id.* at ¶ 78.

18 47 C.F.R. § 20.18(a)

19 *Id.* at ¶ 79.

A. All of Nevada's Customers Have Dispatch Capability: Their Emergency Requirements Will be Satisfied in Accordance with the **E91**1 Requirements of FCC Rule Section 20.18(k).

Nevada's System is precisely the type of system contemplated by this provision of the Commission's rules. It has the in-network switching capability that the FCC identified as presumptively indicative of an ability (and an intention) to compete directly with cellular and broadband PCS, but is, at its core, a dispatch operation with ancillary interconnection. As detailed above, the Harmony system has been designed with a dispatch priority. Every customer on the System uses dispatch capability. None are individual subscribers; all units operate as part of a larger dispatch fleet and have the capability of communicating with other members of that fleet in an emergency.

Moreover, the Commission's expectation that dispatch customers would continue to rely on their dispatcher to transmit any emergency messages has been confirmed on the System. In addition to quantifying the number of dispatch versus interconnect transmissions on Nevada's System for the months from May, 2002 through August, 2002, Attachment **A** also identifies the number of 911 calls made by the Company's customers in those same months. The **highest** percentage of 911 transmissions in any given month was .045%. It is clear that, as the FCC anticipated, the relationship between users and dispatchers means that, almost uniformly, users communicate emergency information by calling their dispatchers, not by dialing 911. FCC Rule Section 20.18(k) accurately reflects the practice of subscribers on dispatch systems, even those using networks such as Nevada's Harmony System that meet the "covered carrier" definition.

Nevada will notify all current and potential customers that the dispatcher should be contacted in the event of an emergency since the System will not be able to deliver geographically precise location information **to** a PSAP. This notification will be accomplished with an insert in billing statements, newsletters, disclosure prior to entering into service agreements, in-service-training, or other means, and will not he a surprise to Nevada's system who view their service as providing dispatch capability, not a cellular telephone service. In the highly unlikely event that an existing customer expected full E911 capahility and is not prepared to use its dispatcher to relay emergency messages, Nevada will release that customer from any contractual obligation to remain on the System

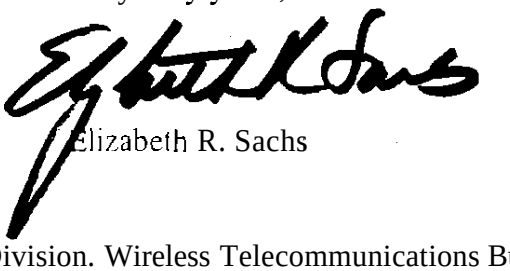
III. CONCLUSION

The FCC rules acknowledge the difference between the needs and practices of customers on dispatch systems versus those receiving cellular service. Unless the Commission advises us to the contrary within folly-live (45) days of receipt of this letter, we will assume that the FCC agrees that

Nevada will satisfy the E911 obligations for its Harmony System by meeting the requirements of FCC Rule Section 20.18(k) as described above.

Kindly refer any questions or correspondence regarding this matter to the undersigned

Very truly yours,



Elizabeth R. Sachs

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