

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

In the Matter of)	
)	
Modification of Parts 2 and 15 of the)	
Commission's Rules for unlicensed devices)	ET Docket No. 03-201
and equipment approval.)	
)	

**REPLY COMMENTS OF
SPRINT NEXTEL CORPORATION**

I. Introduction

The Commission has sought comment on a whether there is a need to require unlicensed transmitters operating in the 915 MHz, 2.4 GHz, and 5.8 GHz bands under Sections 15.247 and 15.249 of the FCC's rules to comply with a spectrum etiquette requirement, such as the etiquette proposed in this proceeding by Cellnet Technology ("Cellnet"), and the impact that requiring an etiquette would have on the development and operation of unlicensed devices operating in these bands.¹ Sprint Nextel shares the concerns raised by numerous other commenters, such as IEEE 802.18, Motorola, TIA, CEA, and Cisco, that the imposition of a spectrum etiquette: 1) would eliminate or severely constrain important existing uses within the band, including capabilities that permit public safety and other cellphone users to communicate during network outages; 2) would destroy the well-crafted, flexible, regulatory balance that has permitted millions of divergent uses to successfully share this band; and 3) would unnecessarily restrain new and innovative uses of the band. Accordingly, the Commission should not adopt a mandatory

¹ See *Memorandum Opinion and Order and Further Notice of Proposed Rule Making*, FCC 07-117, ET Docket No. 03-201 (rel. June 22, 2007) ("FNPRM").

spectrum etiquette for the band and instead should retain its existing unlicensed band regulatory framework.

II. Discussion.

The Commission's flexible rules for this band have resulted in the development and use of millions of low power transmitting devices that operate in these bands. The rules have encouraged innovation and, through a balanced approach, have permitted many different types of unlicensed devices and licensed users to share these bands in relative harmony. For example, Sprint Nextel supplements its industry-leading, on-network, push-to-talk offering – Nextel Direct Connect[®] – with an off-network unlicensed push-to-talk capability that operates in the 915 MHz band under Part 15 rules. This “Direct TalkSM” capability offers Sprint Nextel's customers reliable communications during emergencies, during network outages, or in remote areas. Direct TalkSM permits users – including public safety officials that use this feature – to communicate directly to individuals or work groups without having to go through the Sprint Nextel network. Sprint Nextel has sold (and continues to sell) millions of Nextel phones that provide such capability between compatible phones, and these devices have successfully shared this band for many years with millions of cordless telephones, wireless local area networking devices, baby monitors, meter reading equipment, and garage door openers.

The FNPRM states that “there appears to be a potential for a digitally modulated device or a group of digitally modulated devices to essentially occupy the entire 915 MHz band, leaving little or no opportunity for other devices to gain access to the spectrum.”² The Commission asks whether a spectrum etiquette is needed to address this situation, or other similar situations where some unlicensed devices preclude the operation of other unlicensed devices. In particular, the

² FNPRM at para. 19.

FNPRM seeks comment on a spectrum etiquette that ties the permitted power level to the transmitter duty cycle, as proposed by Cellnet, for digitally modulated devices operating under Section 15.247 in the 915 MHz band. It also seeks comment on alternative types of etiquettes, including etiquettes that would apply to frequency hopping devices operating under Section 15.247, such as Direct Talk phones.³

Cellnet's proposed spectrum etiquette, if applied to frequency-hopping devices operated pursuant to Section 15.247, would eliminate the ability for Sprint Nextel to continue to offer Direct Talk capability. Motorola, the manufacturer of Sprint Nextel's Direct Talk phones, states "Cellnet's proposal will not allow for real-time voice communications ... as this requires synchronization between devices with limited delays. [V]arying the output power from 30 dBm to 0 dBm depending on traffic will significantly affect the range, availability and voice quality of the product due to increased bit error rate, resulting in the inability for [Direct Talk] devices to connect and in dropped calls."⁴

Yet Direct Talk phones do not have the potential to cause the blocking problems that are the focus of the FNPRM. IEEE 802.18, CEA and other parties have pointed out that existing unlicensed devices already have built-in duty cycles, quiet times, and other features that minimize the likelihood for a device (or a network of devices) to cause interference or to monopolize the band. In particular, Direct Talk phones transmit only on a push-to-talk basis for sporadic and short communications between users, thus generally limiting transmissions to only a few seconds at a time at random intervals and in widely-varying locations. Direct Talk phones also use frequency-hopping technology, further limiting the potential for interference to other devices or users operating in the band. Accordingly, the likelihood of Direct Talk phones

³ Section 15.247 currently applies different requirements to frequency hopping and digitally modulated devices.

⁴ See *Comments of Motorola, Inc.*, October 15, 2007

causing interference to other band users is extremely low, particularly for Cellnet's low duty cycle meter reading systems that spurred the original concerns raised in this proceeding.

In addition, as pointed out by IEEE 802.18, low-duty cycle meter reading systems, such as those sold by Cellnet, already have many tools available to mitigate any interference problems that may occur.⁵ This includes finding naturally quiet times to transmit, retransmitting data when needed, changing to a different channel within the band, using frequency hopping to avoid interference, or changing to another unlicensed band. The Commission should not adopt a spectrum etiquette that would eliminate Direct Talk or other existing operations in the band just to accommodate other unlicensed users that already have the ability to solve any interference problems themselves.

III. Conclusion

The FCC's flexible rules have permitted American consumers to benefit from a myriad of communications devices that operate in the unlicensed bands. Manufacturers generally have been successful in developing products that are robust enough to operate in the crowded unlicensed bands and to accommodate the many variety of devices operating there. Cellnet and other advocates for a spectrum etiquette have not demonstrated that an etiquette can be achieved that meets the Commission's goal "to balance the concerns about the co-existence of different types of unlicensed devices with the concerns about inhibiting unlicensed device innovation."⁶ Instead, the proposed spectrum etiquettes threaten to undermine that balanced approach, advantaging certain types of equipment – such as the automated meter reading equipment produced by Cellnet – while disadvantaging numerous other users of the bands, including public safety and other users of Sprint Nextel's Direct Talk capabilities. The Commission should retain

⁵ See *Comments of IEEE 802.18*, at 5.

⁶ *FNPRM* at para. 19

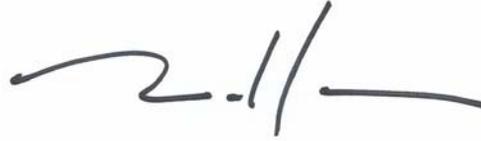
its current regulatory approach for unlicensed devices and reject (as it did in 2004) the requests for adoption of a spectrum etiquette.

Respectfully submitted,

SPRINT NEXTEL CORPORATION



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