

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

In the Matter of)	
)	
Improving Spectrum Efficiency Through Flexible Channel Spacing and Bandwidth Utilization for Economic Area-based 800 MHz Specialized Mobile Radio Licensees)	WT Docket No. 12-64
)	
Request for Declaratory Ruling that the Commission's Rules Authorize Greater than 25 kHz Bandwidth Operations in the 817-824/862-869 MHz Band)	WT Docket No. 11-110
)	

To: The Commission

COMMENTS OF SOUTHERNLINC WIRELESS

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than 25 kHz Bandwidth Operations in the)
817-824/862-869 MHz Band)

To: The Commission

COMMENTS OF SOUTHERNLINC WIRELESS

Southern Communications Services, Inc. d/b/a SouthernLINC Wireless (“SouthernLINC Wireless”) hereby submits its comments in response to the Commission’s *Notice of Proposed Rulemaking* (“*NPRM*”) proposing the elimination of a legacy channel spacing and bandwidth limitation for Economic Area (“EA”)-based Enhanced Specialized Mobile Radio (“ESMR”) licensees in the 800 MHz band.¹

SouthernLINC Wireless applauds the Commission for its prompt action in this proceeding. As the Commission observed in its *NPRM*, the elimination of this legacy technical restriction will enable the deployment of more advanced wireless technologies and services to

¹ / *Improving Spectrum Efficiency Through Flexible Channel Spacing and Bandwidth Utilization for Economic Area-based 800 MHz Specialized Mobile Radio Licensees, Request for Declaratory Ruling that the Commission’s Rules Authorize Greater than 25 kHz Bandwidth Operations in the 817-824/862-869 MHz Band*, WT Docket Nos. 12-64, 11-110, Notice of Proposed Rulemaking, FCC 12-25 (rel. Mar. 9, 2012) (“*NPRM*”).

the benefit of consumers.² At the same time, the Commission has proposed appropriate measures to ensure that the use of wider channels by EA-based ESMR licensees will not result in increased interference to public safety licensees in the 800 MHz band.

SouthernLINC Wireless emphasizes that the need for final Commission action allowing wideband operations in the 800 MHz ESMR band is not theoretical but is both real and immediate. Technologies capable of providing mobile broadband services in the 800 MHz ESMR band are either available already or will be on the market within the next year. Accordingly, the sooner the Commission acts to allow wideband operations in the 800 MHz ESMR band, the sooner 800 MHz ESMR licensees can invest in the widespread deployment of advanced technologies and bring new, competitive wireless services to consumers.

As discussed below in these comments, SouthernLINC Wireless submits that the Commission's proposal allowing EA-based 800 MHz ESMR licensees to exceed the channel spacing and bandwidth limitations of Section 90.209 will confer significant benefits on consumers, will encourage investment and innovation, and will not impose any additional cost or burden on other licensees in the 800 MHz band, including public safety licensees. In addition, the *National Broadband Plan* recommends making 500 MHz of spectrum "newly available" for wireless broadband over the next ten years and further recommends that, of this amount, 300 MHz between 225 MHz and 3.7 GHz be made available for "mobile flexible use" within the next five years. According to the *National Broadband Plan*, the Commission "has a number of tools at its disposal to make spectrum usable for broadband," including modifying service and technical rules. The Commission's proposal is precisely the type of measure recommended by the *National Broadband Plan*.

² / *NPRM* at ¶¶ 1 and 12.

The conditions proposed by the Commission for wideband operations in the 800 MHz ESMR band will be more than sufficient to ensure continued interference protection for 800 MHz public safety licensees. Significantly, regardless of the technology deployed or the channels or bandwidths utilized, SouthernLINC Wireless and other 800 MHz ESMR licensees will remain obligated under Section 90.673 of the Commission's Rules to abate unacceptable interference caused knowingly or unknowingly, directly or indirectly, to any 800 MHz public safety licensee. This strict responsibility to protect 800 MHz public safety licensees from interference will not be lessened or affected in any way by the adoption of the Commission's proposed rule.

SouthernLINC Wireless accordingly strongly supports the proposed rule and urges the Commission to act as expeditiously as possible to enable wideband operations in the 800 MHz ESMR band.

I. INTRODUCTION

SouthernLINC Wireless, a wholly owned subsidiary of Southern Company, operates a commercial digital 800 MHz ESMR system using Motorola's proprietary Integrated Enhanced Digital Network ("iDEN") technology to provide interconnected voice, dispatch, push-to-talk ("PTT"), Internet access, and data transmission services over the same handset. SouthernLINC Wireless provides these services across a 128,000 square mile service territory covering Georgia, Alabama, southeastern Mississippi, and the panhandle of Florida, including large swaths of very rural areas in these states. Because of its expansive and reliable coverage within the region, SouthernLINC Wireless' service is widely used by local and statewide public safety agencies, school districts, rural local governments, public utilities, and other emergency responders. It is also utilized by commercial and other government entities in both urban and rural areas. Finally,

the electric utility affiliates of Southern Company utilize SouthernLINC Wireless' services in ensuring the safe and reliable delivery of electricity across the company's southeastern footprint.

II. THE COMMISSION SHOULD ELIMINATE THE LEGACY CHANNEL SPACING AND BANDWIDTH LIMITATIONS FOR 800 MHZ ESMR LICENSEES

The need for the Commission's proposed rule arises from the continued existence of a legacy technical rule that limits the bandwidth and channelization that can be utilized by EA-based ESMR licensees in their licensed 800 MHz ESMR spectrum. Unless this restriction is eliminated, it will significantly inhibit the deployment of new wireless broadband networks and restrict the availability of competitive mobile broadband communications services for US consumers.

Specifically, Section 90.209 of the Commission's Rules, which applies to Part 90 services generally, provides for a 25 kHz channel spacing and an authorized bandwidth of 20 kHz for the 809-824/854-869 MHz frequency bands.³ Although these channelization and bandwidth limitations date back to 1978,⁴ these limitations were left unchanged when the Commission established a new licensing framework for SMR services in the 800 MHz band in 1995, even though the Commission clearly stated its intent at that time to make contiguous spectrum available for "wide-area SMR systems" in order to "permit[] use of spread spectrum and other broadband technologies that are available to other CMRS providers but unavailable to systems operating on non-contiguous spectrum."⁵

³ / 47 C.F.R. § 90.209.

⁴ / *See NPRM* at note 12.

⁵ / *Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band*, PR Docket No. 93-144, First Report and Order, Eighth Report and Order, and Second Further Notice of Proposed Rulemaking, 11 FCC Rcd 1463, 1476 (1995) ("800 MHz SMR Report and Order") ¶ 9.

Initially, EA-based ESMR licensees such as SouthernLINC Wireless and Nextel (later Sprint Nextel) deployed networks using iDEN technology to provide competitive voice, dispatch, PTT, and data services to consumers. Because the operating parameters for iDEN conformed with the legacy channelization and bandwidth limitations of Section 90.209, the impact of these limitations was not immediately apparent. However, as 800 MHz ESMR licensees began looking into deploying new technologies capable of providing mobile broadband services (such as LTE, HSPA, or newer versions of CDMA), it became apparent that the technical limitations established in Section 90.209 would prohibit ESMR licensees from aggregating their contiguous licensed channels into channels wide enough to support these technologies, thus effectively – and unnecessarily – foreclosing the use of this spectrum for competitive wireless broadband services.

In order to address the impact of these legacy limitations on the deployment of new advanced wireless technologies, the Commission is proposing to amend Section 90.209 of its Rules to eliminate the current channel spacing and bandwidth limitations for EA-based ESMR licensees. At the same time, the Commission has proposed certain conditions to ensure that the use of wider channels by EA-based ESMR licensees will not result in increased interference to public safety licensees in the 800 MHz band.

In particular, the Commission proposes to allow EA-based 800 MHz ESMR licensees to exceed the channel spacing and bandwidth limitations in the 813.5-824/858.5-869 MHz band in NPSPAC regions where the rebanding of all 800 MHz public safety licensees is complete.⁶ In those NPSPAC regions where rebanding is not yet complete, ESMR licensees would be allowed to exceed the channel spacing and bandwidth limitations only in the 813.5-821/858.5-866 MHz

⁶ / *NPRM* at ¶ 13.

band, and they would be able to exceed these limitations in the entire 800 MHz ESMR band once rebanding in the region is complete.⁷ Finally, all ESMR licensees intending to exceed the channel spacing and bandwidth limitations of Section 90.209 would be required to provide at least 30 days written notice to all 800 MHz public safety licensees with base stations in the affected NPSPAC region and to all 800 MHz public safety licensees with base stations within 113 km (70 miles) of the border of the affected NPSPAC region.⁸

The Commission has requested comment on this proposal, including comment on the accompanying costs and benefits.⁹ As discussed below in these comments, SouthernLINC Wireless submits that the Commission's proposal allowing EA-based 800 MHz ESMR licensees to exceed the channel spacing and bandwidth limitations of Section 90.209 will confer significant benefits on consumers, will encourage investment and innovation, and will not impose any additional cost or burden on other licensees in the 800 MHz band, including public safety licensees. Nevertheless, the Commission must act swiftly to adopt its proposal as a final rule in order to ensure that these benefits may be realized as soon as possible.

SouthernLINC Wireless accordingly strongly supports the proposed rule and urges its prompt adoption by the Commission.

III. THE COMMISSION MUST ACT SWIFTLY TO ENABLE WIDEBAND OPERATIONS IN THE 800 MHZ ESMR BAND

SouthernLINC Wireless emphasizes that the need for final Commission action allowing wideband operations in the 800 MHz ESMR band is not theoretical but is both real and immediate. Technologies capable of providing mobile broadband services in the 800 MHz

⁷ / *Id.*

⁸ / *Id.* at ¶ 14.

⁹ / *Id.* at ¶ 12.

ESMR band are either available already or will be on the market within the next year. Prompt action by the Commission will therefore enable the process of deploying these advanced technologies to begin almost immediately.

As discussed in the *NPRM*, Sprint Nextel announced its plans to deploy wideband CDMA technology requiring a 1.25 MHz channel bandwidth in its licensed 800 MHz ESMR spectrum and has already begun initial deployment and testing pursuant to waivers and special temporary authorizations granted by the Commission.¹⁰ However, CDMA is not the only broadband-capable technology that could be deployed in the 800 MHz ESMR band in the immediate future.

On March 1, 2012, the 3rd Generation Partnership Project (“3GPP”) – the international organization responsible for developing standards for third and fourth generation wireless technologies¹¹ – formally approved an LTE standard for “Band 26,” which includes the 800 MHz ESMR band in the United States. With the approval of these specifications, manufacturers can now begin developing products capable of providing LTE in the 800 MHz ESMR band.¹² Programmable base stations capable of providing LTE in the 800 MHz ESMR band are in fact already available on the market, and LTE-capable handsets should become available in 2013. In addition to LTE, specifications have been developed for the use of UMTS and HSPA in Band 26 and these specifications are currently awaiting finalization by 3GPP.

¹⁰ / See *NPRM* at ¶¶ 7 – 8.

¹¹ / See <http://www.3gpp.org/About-3GPP> (last visited Apr. 9, 2012).

¹² / The specifications for Band 26 will be included in LTE Release 11 when it is formally issued in September 2012. However, specifications for new bands (such as Band 26) are “release-independent” and manufacturers can begin building chipsets and other equipment for the specifications for a new band once those specifications have been approved.

Accordingly, the sooner the Commission acts to allow wideband operations in the 800 MHz ESMR band, the sooner 800 MHz ESMR licensees can invest in the widespread deployment of advanced technologies and bring new, competitive wireless services to consumers.

IV. THE PROPOSED RULE WILL CONFER SIGNIFICANT BENEFIT AT AN INSIGNIFICANT COST

SouthernLINC Wireless submits that the Commission's proposed rule will serve the public interest by opening up additional spectrum for mobile broadband services, encouraging investment in new wireless broadband networks, making new competitive mobile broadband services available to US consumers, and facilitating the deployment of advanced wireless services to rural, unserved, and underserved areas while continuing to protect against interference to public safety licensees in the 800 MHz band. For these reasons, the Commission should act swiftly to adopt this proposed rule.

A. The Proposed Rule Advances the Public Policy Goals Set Forth in the *National Broadband Plan*

According to the *National Broadband Plan*, "Wireless broadband is poised to become a key platform for innovation in the United States over the next decade."¹³ However, the *National Broadband Plan* also provides the following caution:

The growth of wireless broadband will be constrained if government does not make spectrum available to enable network expansion and technology upgrades . . . If the U.S. does not address this situation promptly, scarcity of mobile broadband could mean higher prices, poor service quality, an inability for the U.S. to compete internationally, depressed demand and, ultimately, a drag on innovation.¹⁴

¹³ / Connecting America: The National Broadband Plan at 75 (2010) ("*National Broadband Plan*").

¹⁴ / *Id.* at 77.

In order to meet the growing demand for wireless broadband services, the *National Broadband Plan* recommends making 500 MHz of spectrum “newly available” for wireless broadband use over the next ten years and further recommends that, of this amount, “300 MHz between 225 MHz and 3.7 GHz should be made available for mobile flexible use within five years.”¹⁵ The *National Broadband Plan* observes that the Commission “has a number of tools at its disposal to make spectrum usable for broadband, including changing allocations and modifying service, technical and auction rules.”¹⁶ The *National Broadband Plan* further notes that “[M]aking spectrum available for broadband means taking steps appropriate to the specific circumstances of individual bands.”¹⁷

Under the current channel spacing and bandwidth limitation of Section 90.209, 800 MHz ESMR licensees are restricted to using 20 kHz channels with 5 kHz of separation even if these channels are located within the licensee’s contiguous licensed spectrum. Not only does this restriction effectively render useless up to 20 percent of the licensee’s assigned spectrum, but it also prevents 800 MHz ESMR licensees from deploying new broadband technologies that require greater than 25 kHz bandwidth channels. For example, Sprint Nextel has noted that CDMA requires contiguous spectrum and occupies a 1.25 MHz bandwidth. Similarly, any deployment of LTE likewise requires contiguous spectrum, as well as a minimum bandwidth of 1.4 MHz, and other mobile broadband technologies, such as WiMAX and HSPA+, have similar spectrum and bandwidth requirements.

By promptly adopting its proposed rule allowing EA-based 800 MHz ESMR licensees to exceed the channel spacing and bandwidth limitations of Section 90.209, the Commission will

¹⁵ / *Id.*, Recommendation 5.8 at 84.

¹⁶ / *Id.* at 85.

¹⁷ / *Id.*

enable the technology upgrades necessary to provide new competitive mobile broadband services, thus making this spectrum immediately available for broadband. The Commission's proposed elimination of the legacy technical limitations of Section 90.209 for EA-based ESMR licensees is therefore precisely the type of measure recommended by the *National Broadband Plan*.

B. The Proposed Rule Will Encourage Investment and Benefit Consumers

Allowing EA-based 800 MHz ESMR licensees to operate wider bandwidth technologies will also encourage significant investment in the deployment of new advanced wireless infrastructure and equipment. The conversion of an entire wireless network to a new technology is a resource-intensive, multi-million dollar effort, and no entity will be willing to make such a substantial investment unless it has sufficient regulatory certainty. The Commission's proposed rule provides the certainty needed for these vital investments to be made.

Enabling 800 MHz ESMR licensees to deploy competitive advanced wireless services also confers significant benefits on consumers. For many consumers, the deployment of these new technologies will provide them with more competitive choice for advanced wireless services, and the Commission has frequently noted the positive effect that increased competition has on prices, service quality, and innovation. In addition, 800 MHz ESMR licensees would be able to deploy advanced wireless services to rural areas that currently have few (if any) service options, thus increasing the availability of and access to these services for consumers in unserved and underserved areas.

C. The Proposed Rule Protects Public Safety Licensees and Imposes Only Minimal Regulatory Costs on Service Providers

In its *NPRM*, the Commission recognizes the need to protect public safety licensees in the 800 MHz band, particularly in NPSPEC regions where 800 MHz rebanding has not yet been

completed.¹⁸ The Commission therefore proposes that wideband operations be allowed in the entire 813.5-824/858.5-869 MHz band only in NPSPAC regions where rebanding is complete and that wideband operations be allowed only in the 813.5-821/858.5-866 MHz portion of the ESMR band in NPSPAC regions where rebanding is not yet complete. The Commission further proposes requiring all ESMR licensees intending to exceed the channel spacing and bandwidth limitations of Section 90.209 to provide at least 30 days written notice to all 800 MHz public safety licensees with base stations in the affected NPSPAC region and to all 800 MHz public safety licensees with base stations within 113 km (70 miles) of the border of the affected NPSPAC region.

SouthernLINC Wireless submits that the conditions proposed by the Commission will be more than sufficient to ensure continued interference protection for 800 MHz public safety licensees. As an initial matter, SouthernLINC Wireless notes that, regardless of what technology it might deploy or what technical conditions it may operate under, SouthernLINC Wireless and other 800 MHz ESMR licensees are obligated and will remain obligated under Section 90.673 of the Commission's Rules to abate unacceptable interference caused knowingly or unknowingly, directly or indirectly, to any 800 MHz public safety licensee.¹⁹ This strict responsibility to protect 800 MHz public safety licensees from interference will not be lessened or affected in any way by the adoption of the Commission's proposed rule allowing wideband operations in the 800 MHz ESMR band.

The Commission's proposal also will not affect Section 90.691 of the Commission's Rules, which establishes strict out-of-band emissions ("OOBE") requirements for the "outer"

¹⁸ / *NPRM* at ¶ 13.

¹⁹ / 47 C.F.R. § 90.673.

channels of an EA-based 800 MHz ESMR licensee's contiguous spectrum, as well as for spectrum adjacent to "interior" channels used by incumbent site-based licensees.²⁰ Accordingly, these OOB requirements will continue to serve as yet another form of protection from interference for 800 MHz public safety licensees.

Finally, SouthernLINC Wireless supports the Commission's proposal to require 800 MHz ESMR licensees to provide at least 30 days notice to public safety licensees with base stations in the NPSPAC region and within 113 km (70 miles) of the NPSPAC region border prior to commencing wideband operations. This requirement will impose only a modest burden on ESMR licensees and will ensure that 800 MHz public safety licensees are fully informed, thus making it easier to swiftly resolve any issues or concerns that may arise.

V. CONCLUSION

The Commission's proposal to eliminate the legacy channel spacing and bandwidth limitations for EA-based licensees in the 800 MHz ESMR band will enable these licensees to deploy competitive new wireless technologies to meet the public's increasing demand for advanced mobile wireless services. Thus, through this simple and straightforward revision of an outdated technical rule, the Commission will effectively open up this spectrum to mobile broadband services in furtherance of the national public policy goals set forth by Congress and the Administration and articulated in the *National Broadband Plan*. The Commission should therefore act as expeditiously as possible to formally adopt its proposal allowing wideband operations in the 800 MHz ESMR band.

²⁰ / 47 C.F.R. § 90.691.

WHEREFORE, THE PREMISES CONSIDERED, SouthernLINC Wireless respectfully requests the Commission to take action in this docket consistent with the views expressed herein.

Respectfully submitted,

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