

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Implementing Public Safety Broadband Provisions of the Middle Class Tax Relief and Job Creation Act of 2012)	PS Docket No. 12-94
)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band)	PS Docket No. 06-229
)	
Service Rules for the 698-746, 747-762 and 777- 792 MHz Bands)	WT Docket No. 06-150
)	

To: The Commission

COMMENTS OF ERICSSON

Ericsson hereby submits these comments in response to the Commission’s *Notice of Proposed Rulemaking* (“Notice”)¹ which seeks comment on certain proposals to implement provisions of the Middle Class Tax Relief and Job Creation Act of 2012 (“Act”)² governing deployment of a nationwide public safety broadband network.

INTRODUCTION

Ericsson is a leading supplier of telecom solutions and has been involved in the market for over 130 years. Ericsson is committed to the vision expressed in the Act to establish a nationwide broadband public safety network based on an interoperable common air interface. Our commitment to open and innovative technology standards helps ensure that our public

¹ Implementing Public Safety Broadband Provisions of the Middle Class Tax Relief and Job Creation Act of 2012, PS Docket Nos. 12-14, 06-229 and WT Docket No. 06-150, *Notice of Proposed Rulemaking*, FCC 13-31, 28 FCC Rcd 2715 (Mar. 8, 2013).

² Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, 126 Stat. 156 (2012).

safety offerings are interoperable among various networks, devices, and operators. Moreover, Ericsson also has special expertise in the public safety realm, offering products that are effective in day-to-day operations as well as during extraordinary incidents. Ericsson is proud to play a role in helping shape the functioning of the Public Safety Broadband Network (PSBN), and supports the Commission's goals in this proceeding of harmonizing rules and offering more regulatory certainty in the process implementing the PSBN.

Ericsson is a key vendor in the jurisdictions that have been given the authority to deploy public safety networks using the spectrum allocated in the Act (763-769 / 793-799 MHz) and the adjacent D-block spectrum (758-763 / 788-793 MHz). We have supported those jurisdictions that were in the vanguard of establishing their own networks, arguing that the Commission should promptly authorize deployments by those agencies that sought to do so.³

In addition, Ericsson has long argued in favor of establishing a common air interface based on LTE in the deployment of an interoperable PSBN.⁴ Given our position as the world leader in LTE deployments and our commitment to public safety, we offer these comments specifically to address the Commission's goals of building a unified set of rules for the PSBN.

DISCUSSION

Ericsson supports removing D-Block service rules from Part 27 of the Commission's rules and placing them, instead, in Part 90. This is appropriate to ensure that D-Block and existing public safety broadband spectrum benefit from a common set of rules. Ericsson cautions, as the Commission considers transitioning D-Block service rules to Part 90, that it

³ See Public Safety and Homeland Security Bureau Seeks Comment on Transition Process for 700 MHz Public Safety Broadband Waiver Recipients, PS Docket No. 12-94, *Comments of Ericsson*, filed April 20, 2012.

⁴ See Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, PS Docket No. 06-229, WP Docket No. 07-100, *Comments of Ericsson*, at 1, filed April 11, 2011.

maintain a key guiding principle of the current rules: namely, the ability for public safety to utilize commercial off-the-shelf technologies. Such rule changes should also not add additional costs or complexity to building the nationwide PSBN by introducing proprietary or non-standardized solutions for public safety.

1. Technical Service Rules for the PSBN

As the Commission notes, certain technical service rules contained in Part 27 were developed under the assumption that there would be a specific public-private partnership model utilized for operation of the PSBN.⁵ Because the reallocation of the D-Block rendered that instantiation obsolete, and with the emergence of LTE as the technology that will form the basis for the PSBN, these rules should be modified as Ericsson details below.

2. Power Limits

Ericsson supports bringing the D block frequencies under the purview of Section 90.542(a) and to delete as redundant the parallel provisions of Section 27.50(b). The Commission's current rules in both sections establish 3-watt effective radiated power (ERP) limits for portable stations,⁶ while ongoing work in 3GPP would establish a limit of 2 watts of transmitter power. According to 3GPP, the High Power User Equipment in 3GPP has been specified as 31 dBm nominal power and tolerance of +2/-3dB based on co-existence studies. The 31dBm 3GPP Power Class 1 has the same spectral emission mask requirements as the 23dBm Power Class 3, which mitigates interference to neighboring LTE and Public Safety bands.

⁵ See Notice at ¶ 18.

⁶ See *id.* at ¶ 20.

Therefore, Ericsson supports maintaining the ERP limits for mobile stations and portable stations at 30 Watts ERP and 3 Watts ERP respectively.

3. Emission Limits

With regard to potential emission from public safety users into GPS spectrum located in the 1559-1610 MHz band, the Commission notes that while the identical limit is specific in rules in both Parts 27 and 90, only the Part 90 provision specifically applies to emissions “including harmonics.”⁷ The current wording in Section 27.53 indicates that the requirement of -70dBW/MHz or -80dBW/MHz applies to emissions including harmonics and therefore explicit wording is not necessary. Changes to Section 90.543(f) should be revised to include D-block frequencies or operations in the 758–775 MHz and 788–805 MHz bands.

4. Field Strength Limits

The Commission’s rules in both Parts 27 and 90 do not specify field strength limits for public safety broadband operations. However, commercial users of the 700 MHz band *are* subject to a 40 dBuV/m limit. In addition, Section 6302(e) of the Act would allow for more than one radio access network in the band – the existence of which would logically demand some form of field strength limit in order to limit interference between the PSBN and potential statewide networks. Such limits are designed to mitigate the potential for harmful interference with geographically adjacent operations in the same frequency band. However, it is expected that FirstNet, as the license holder, will work in a cooperative way to ensure that harmful interference is not an issue through coordination and site engineering. Therefore, additional regulations regarding field strength limits are not necessary.

⁷ See *id.* at ¶ 24.

5. Interference Coordination

Interference coordination, both in advance of deployment and after a network enters service, is an important tool for ensuring that geographically and spectrally adjacent operations can coexist without causing interference to each other. The Commission is wise to consider coordinating interference issues between incumbent narrowband public safety operations in spectrum to be occupied by the nationwide PSBN.⁸ Ericsson posits that narrowband public safety operators and FirstNet are highly motivated to coordinate interference mitigation during the period before narrowband operations are relocated out of the existing public safety broadband spectrum to be occupied by FirstNet. Therefore, interference coordination requirements should not be necessary.

6. International Considerations

Ericsson supports the Commission's proposal to remove the D-Block from Section 27.57(b) and include it instead within the frequencies governed by Section 90.533 of the Commission's rules.⁹ Ericsson further supports ongoing U.S. government efforts to negotiate agreements that take into account the 2007 re-organization of the 700 MHz band and minimize the changes to 47 C.F.R. §§ 90.533, 27.57(b).

7. 700 MHz Public Safety Guard Band

The Act directs the Commission to license to FirstNet the D-Block and the "existing public safety broadband spectrum," the latter of which Congress defined to include the 700 MHz

⁸ *See id.* at ¶ 27.

⁹ *See id.* at ¶ 29.

public safety guard band (768-769/798-799 MHz).¹⁰ The guard band is not designated for an operational use, but was previously entrusted to the Public Safety Broadband Licensee (PSBL) to serve “as a buffer between surrounding broadband and narrowband operations.” Ericsson supports allowing FirstNet discretion on its use as long as these bands function as guard bands to protect narrowband operations.

8. Equipment Certification

The current state of the public safety equipment regime is in flux given the changes to the D-block and the Waiver Order.¹¹ While Ericsson appreciates the need for certainty in this area, we are nonetheless concerned with the directive that the Office of Engineering and Technology cease accepting and processing *any* new public safety equipment authorizations in the 700 MHz band.¹² Given the importance to the Nation of an interoperable public safety broadband communications network, and the existence of state networks already being deployed, delays in certifying equipment hampers the access to new and potentially life-saving technologies by the public safety community. Ericsson urges the Commission to act quickly in this regard to ensure that the new rules are readily integrated and that there is minimal delay in the certification of equipment based on the new rules.

Ericsson also supports the proposal to delete the certification requirement contained in Section 90.203(p) relating to required LTE interfaces. As noted, because the underlying rule provisions requiring Public Safety Broadband Network Operators to implement those interfaces has been deleted, the rule no longer has a leg to stand on. In addition, Ericsson notes that beyond

¹⁰ *See id.* at ¶ 31.

¹¹ Requests for Waiver of Various Petitioners to Allow the Establishment of 700 MHz Interoperable Public Safety Wireless Broadband Networks, PS Docket 06-229, *Order*, 25 FCC Rcd 5145 (2010) (“Waiver Order”);

¹² *See* Notice at ¶ 33.

the deletion of the underlying rules, public safety equipment is already subject to interoperability testing, and therefore rules regarding the need to support LTE interfaces are not necessary.

9. Further Rule Provisions to Implement the Public Safety Spectrum Act

Ericsson supports the Commission's proposal to eliminate references to the PSBL, given the statutory creation of FirstNet.¹³ With particular regard to the reference to the PSBL in Section 2.103(c), Ericsson not only supports revision of the rule to refer to FirstNet, but we also wish to state our support for Federal users having the ability to use the band with the prior approval of FirstNet. Making efficient use of public safety spectrum through mechanisms that would allow other uses of the spectrum when not required by the public safety community, should be an important goal for FirstNet.

10. FirstNet License Renewal and Interference Management

FirstNet, like commercial operators that are awarded spectrum licenses at auction, requires enough certainty to address the need for investment and innovation in the band. Ericsson urges the Commission to offer an expectation of renewal to FirstNet provided it demonstrates that it has demonstrated it is meeting the duties and obligations set forth in the Act.

CONCLUSION

For the foregoing reasons, Ericsson recommends that the Commission harmonize its D-Block and public safety spectrum rules. We also urge the Commission to remain committed to

¹³ See *id.* at ¶ 36.

using standardized products in order to ensure interoperability and the economic benefits of economies of scale.

Respectfully submitted,

ERICSSON

By: /s/ Mark Racek

Mark Racek
Director, Spectrum Policy

Ericsson
1634 I St., NW, Suite 600
Washington, DC 20006

Telephone: (202) 824-0110
Fax: (202) 783-2206
Email: mark.racek@ericsson.com

By: /s/ Jared M. Carlson

Jared M. Carlson
Director, Government and
Industry Relations

Ericsson
1634 I St., NW, Suite 600
Washington, DC 20006

Telephone: (202) 824-0112
Fax: (202) 783-2206
Email: jared.carlson@ericsson.com

May 24, 2013