

**Before The  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In The Matter Of	)	
	)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands	)	WT Docket No. 06-150
	)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band	)	PS Docket No. 06-229
	)	
	)	
	)	

**REPLY COMMENTS OF QUALCOMM INCORPORATED**

Dean R. Brenner  
Vice President, Government Affairs  
QUALCOMM Incorporated  
2001 Pennsylvania Ave., N.W.  
Suite 650  
Washington, D.C. 20006  
(202) 263-0020

Dated: November 12, 2008

## SUMMARY

QUALCOMM Incorporated (“QUALCOMM”) hereby submits these Reply Comments on the Third Further Notice of Proposed Rule Making (the “Third FNPRM”) in these proceedings.

In its Opening Comments, QUALCOMM showed that the proposal in the Third NPRM to mandate that the licensees deploy only LTE or WiMAX on the D Block spectrum if it is licensed regionally lacks any basis in policy or in fact. This proposed technology mandate is a sharp departure from long-established Commission and US government-wide policy, and yet the rationale for this policy change set forth in the Third NPRM is erroneous. Prior to issuance of the Third NPRM, the record did not contain any justification for mandating WiMAX and LTE. To the contrary, the record showed that there are tremendous economies of scale that could be leveraged if EV-DO or HSPA, which are both currently used by public safety agencies for wireless broadband services, could also be deployed on the D Block. Now that the initial comments on the Third NPRM have been filed, this conclusion remains the same—there is no basis for the Commission to mandate WiMAX or LTE and to forbid EV-DO or HSPA.

Several commenters provided support for QUALCOMM’s position, including a coalition of five major national public safety organizations (including the International Association of Fire Chiefs), wireless industry analyst Andrew Seybold, and the CDMA Development Group (an international trade association of over 100 companies). These commenters agree that the Commission should not impose a WiMAX/LTE mandate and, instead, should adhere to technology neutrality even if the D Block is licensed on a regional basis. Even APCO, which believes that the D Block network should be based on WiMAX or LTE, recognized that LTE/WiMAX may not be ready to roll out on a nationwide basis for several years, and,

therefore, APCO stated that it may be necessary to leverage existing EV-DO and HSPA networks and technology to provide immediate wireless broadband for public safety. APCO Comments at Page 12. APCO's position completely undermines the rationale for the proposed LTE/WiMAX mandate.

On the other hand, no commenter provided any valid justification for the WiMAX/LTE mandate. Motorola and Ericsson both support the mandate. Ericsson argues that the mandate is necessary because there needs to be a common air interface on the D Block, ignoring the fact that the Commission could simply require that the regional licensees use a common air interface without mandating that the regional D Block licensees can only deploy WiMAX or LTE. Ericsson Comments at Pages 6 to 7. Motorola supports the technology mandate because Motorola claims that the mandate will give first responders access to WiMAX or LTE as quickly as possible. Motorola Comments at Page 6. Motorola also says that they believe that LTE will prove most appropriate for the D Block. *Id.* at Pages 6 to 7. These comments do not justify the extraordinary technology mandate under consideration. The issue is whether the Commission should cast aside decades of policy to forbid the D Block licensees from deploying EV-DO or HSPA if they choose. Motorola's comments provide no basis for the Commission to narrow the technology selection down to two options when in all other circumstances, government policy would give the licensees the freedom to select from all technologies on an unrestricted basis.

As a result, QUALCOMM respectfully requests that the Commission follow the policy which has allowed the US wireless marketplace to thrive and allow the regional D Block licensees to decide which air interface they want to deploy, if the spectrum is licensed on a regional basis.

**TABLE OF CONTENTS**

Summary ..... i

I.    **The Record Supports QUALCOMM’s Position that the Commission  
Should Not Mandate or Forbid Technologies from  
Being Deployed on the D Block if It Is Licensed Regionally .....1**

II.   **The Record Does Not Contain Any Persuasive Rationale for  
the Third NPRM’s Proposed Technology Mandate ..... 3**

III.   **Conclusion ..... 7**

**Before The  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

_____	)	
In The Matter Of	)	
	)	
Service Rules for the 698-746, 747-762 and	)	WT Docket No. 06-150
777-792 MHz Bands	)	
	)	
Implementing a Nationwide, Broadband,	)	PS Docket No. 06-229
Interoperable Public Safety Network in the	)	
700 MHz Band	)	
_____	)	

**REPLY COMMENTS OF QUALCOMM INCORPORATED**

QUALCOMM Incorporated (“Qualcomm”), by its attorneys, hereby submits its Reply Comments in response to the Third FNPRM, which the Commission released in the above-captioned proceedings on September 25, 2008.<sup>1</sup>

**I. The Record Supports QUALCOMM’s Position that the Commission Should Not Mandate or Forbid Technologies from Being Deployed on the D Block if It Is Licensed Regionally**

A number of commenters in this proceeding support QUALCOMM’s position that the Commission should not abandon its longstanding policy of technology neutrality by mandating that only WiMAX or LTE can be deployed on the D Block if it is licensed on a regional basis. The Joint Comments of the International Association of Fire Chiefs, the International Municipal Signal Association, the Forestry Conservation Communications Association, the American Association of State Highway and Transportation Officials, the Congressional Fire Services Institute (“Joint Public Safety Comments”) state as follows:

“While the JPSC agrees that a common air interface is critical, it believes that the D Block license winners (if the licenses are issued on a regional basis) should have the flexibility to depart from LTE or WiMAX technology, upon agreement among the D Block licensees

<sup>1</sup> Third Further Notice of Proposed Rule Making, FCC 08-230, released September 25, 2008.

and the PSBL. It is possible that there may be only several D Block winners who could easily agree to choose another air interface. It is contrary to Commission policy to impose technological requirements on licensees.”

Joint Public Safety Comments at Pages 10 to 11.

Similarly, wireless industry analyst Andrew Seybold wrote:

“I disagree that the FCC should mandate the use of one of two specific technologies (LTE or WiMAX) ofr the regional spectrum auctions. Historically, the FCC has remained technology neutral and it has been proven, over and over again, that the market forces should determine the technology of choice. Further, to require the public safety community to use technologies that are not mainstream or for which standards are not yet complete is not in the best interests of either the public community or the commercial wireless community that is expected to fund the network. . . .

By requiring that these two auctions be tied to next-generation Technologies, I believe the FCC is doing the first responder community a disservice. The outcome of the bids, even if successful, could mean that the network is never completed and that the fundamental reason for the public/private partnership is never realized.”

Seybold Comments on Pages 2, 10

The CDMA Development Group’s (“CDG’s”) Comments contain this:

“The concept of technology neutrality has been a long-standing public policy principle. The FCC has been a proponent of technology neutrality in the past and, with respect to the 700 MHz band and its subsequent auction, it determined that an open access provision should apply to the C Block, which is in essence a call for technology neutrality. In stark constrast, the FCC is now going so far as to mandate specific air interfaces which, while evolving, have not yet demonstrated the reliability and performance to serve as the technological foundation for the (regional) licenses in awarding the D block for provision of public safety communications.

The CDG strongly believes that the FCC should not be dictating any specific technology for the development of (regional) licenses in awarding the D block and instead should embrace the long-held concept of technology neutrality and allow the public safety

community to determine which technology will best suit its needs.”

CDG Comments at Page 6.

QUALCOMM wholeheartedly agrees with the foregoing comments. The record now contains substantial opposition to the Commission’s proposed WiMAX/LTE mandate. As these other comments state, the Commission should not impose this proposed technology mandate and should instead allow the regional D Block licensees to select the technology they deploy.

**II. The Record Does Not Contain Any Persuasive Rationale for the Third NPRM’s Proposed Technology Mandate**

The record of these proceedings does not contain any persuasive rationale for why the Commission would mandate the deployment of WiMAX and LTE and forbid the deployment of EV-DO or HSPA if the D Block spectrum is licensed regionally. The comments of the WiMAX Forum, the world’s leading organization promoting WiMAX, state that there is currently no profile for the deployment of WiMAX in the 700 MHz band. Comments of WiMAX Forum at Page 2. The WiMAX Forum’s Comments do not even say whether WiMAX meets the detailed requirements for the D Block network(s) set forth in the Third NPRM. That omission is quite important. For example, the WiMAX Forum’s comments do not address the Third NPRM’s requirements for push-to-talk. There is certainly no WiMAX push-to-talk service deployed anywhere in the world or even under consideration for deployment, in contrast to Sprint’s deployment of push-to-talk over high speed EV-DO Rev A in 66 major markets across the United States. The Commission should not mandate WiMAX technology without even any assurance that it will meet the requirements of the Third NPRM or when it might do so.

The WiMAX Forum does state candidly that WiMAX networks are in the initial phases of deployment, in contrast to the hundreds of EV-DO and HSPA networks which have provided high speed wireless broadband service for much of this decade. The WiMAX Forum provides a

projection—that by 2012, there will be more than 500 WiMAX operators serving over 133 million users. WiMAX Forum Comments at Page 3. By contrast, there are already over 700 million people worldwide using a 3G device on over 500 3G networks. An independent firm, Wireless Intelligence, projects that by 2012, there will be over 1.1 billion people using EV-DO or HSPA. In other words, according to the estimates of the WiMAX Forum and Wireless Intelligence, in 2012, WiMAX will have just one-ninth the number of subscribers as EV-DO and HSPA.

These figures demonstrate that there is no reason whatsoever why the Commission would mandate deployment of WiMAX on the D Block. The fact that there will be far fewer people using WiMAX than EV-DO or HSPA means that there will be far fewer economies of scale for public safety to leverage from a WiMAX deployment on the D Block as compared to either EV-DO or HSPA. In sum, the Commission should not mandate deployment of an untested technology, one that has not even been shown to meet the Commission's own requirements, particularly in light of the fact that it will be many years before the adoption is sufficient to create any economies of scale.

Ericsson argues in favor of the proposed WiMAX/LTE mandate by emphasizing the importance of adoption of a common air interface on the D Block if it is licensed regionally. Ericsson Comments at Pages ii, 6 to 7. Once again, as QUALCOMM maintained in its initial comments, the Commission need not mandate WiMAX or LTE just to ensure that there is a common air interface on the D Block. Rather, the Commission should just require that the D Block licensees use a common air interface and leave it up to the licensees and the PSST to decide what that interface should be. The Commission could impose sanctions up to the ultimate sanction—license revocation—for failure to deploy a common air interface. Ericsson does not

offer any reason why the Commission should substitute its technical judgment for that of the licensees, who, after all, will be paying many millions, if not billions, of dollars for their licenses.

Ericsson also contends disingenuously that the Commission's proposed approach is consistent with technology neutrality because it allows those who will be deploying the network to determine the air interface. Id. at Pages ii, 9. What Ericsson omits is that under the Commission's proposal, anyone seeking a regional D Block license would have two and only two technology choices-- WiMAX or LTE. That is the antithesis of technology neutrality. The FCC, not the licensees, would be dictating the technology choices. It simply does not pass a straight face test to say, as Ericsson does, that it is technology neutral for the FCC to mandate that the network use WiMAX or LTE and to forbid the use of any other technology.

Motorola argues that the Commission's proposal provides the correct balance between of technology neutrality versus certainty that an appropriate 4G technology will be deployed, and Motorola goes on to endorse LTE as most appropriate for the D Block deployment. Motorola Comments at Pages 6 to 7. Once again, these comments miss the mark because they simply do not provide any justification for the Commission to dictate that only LTE and WiMAX can be deployed and to forbid the deployment of all other technologies on the D Block if licensed regionally. Motorola assumes that the Commission should dictate that what Motorola regards as a 4G technology should be deployed, but does not explain why WiMAX should be considered a 4G technology by the FCC when it is treated by the ITU as a 3G technology or why the Commission should not allow deployment of EV-DO and HSPA, the technologies which public safety use today for wireless broadband.

Motorola does say that the Commission's rules should be based on technology at the beginning of its commercial deployment cycle rather than one at its sunset. Motorola Comments

at Page 6. This argument fails for several reasons. First, Motorola's argument completely ignores the constant upgrading of EV-DO and HSPA technology. Those technologies are here to stay. Moreover, Motorola's argument fails because it ignores the relative cost to deploy a mature technology such as EV-DO or HSPA versus a technology still on the drawing board such as WiMAX or LTE. That relative cost differential is enormous. Finally, the argument ignores the fact that EV-DO and HSPA are proven technologies which can be deployed today. WiMAX and LTE are still under development. It simply makes no sense for the Commission to mandate that licensees who are required to serve public safety deploy technologies which are still being refined and which, in the case of WiMAX, may never meet the Commission's requirements, and to forbid the licensees from deploying the technology which is completely proven and reliable.

Finally, neither Motorola nor Ericsson deals with the risk of delay associated with the continued development of LTE and WiMAX or the need for licensees to have the ability to choose different technologies over time. The government should not limit licensees to a choice once and for all of only two unproven technologies. For all of these reasons, the Commission should not mandate deployment of WiMAX and LTE and forbid deployment of EV-DO and HSPA.

### **III. Conclusion**

Wherefore, QUALCOMM respectfully requests that the Commission modify the proposal in the Third NPRM and allow the licensees of the D Block, if it is licensed regionally, to deploy the technology of their choice.

Respectfully submitted,

By: /s/Dean R. Brenner  
Dean R. Brenner  
Vice President, Government Affairs  
QUALCOMM Incorporated  
2001 Pennsylvania Ave., N.W.  
Suite 650  
Washington, D.C. 20006  
(202) 263-0020  
Attorney for QUALCOMM Incorporated

Dated: November 12, 2008