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
	)	
Revision of FCC's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems	)	CC Docket No. 94-102
	)	
Section 68.4(a) of the FCC's Rules Governing Hearing Aid-Compatible Phones	)	WT Docket No. 01-309
	)	
Biennial Regulatory Review- Amendment of Parts 1, 22, 23 27, and 90 to Streamline and Harmonize Rules Affecting Wireless Services	)	WT Docket 03-264
	)	
Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses & Revisions to Part 27 of the FCC's Rules	)	WT Docket No. 06-169
	)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band	)	PS Docket No. 06-229
	)	
Development of Operational, Technical & Spectrum Requirements for Meeting Federal, State, & Local Public Safety Communications Requirements Through the Year 2010	)	WT Docket No. 96-86
	)	

REPLY COMMENTS OF QUALCOMM INCORPORATED

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SUMMARY

Cutting through the enormous amount of rhetoric in the large number of comments filed in this proceeding, QUALCOMM submits this reply to make three discrete points.

First, the FCC should reject Google's proposal, originally made in its May 21, 2007 ex parte letter and re-tendered with its comments, that the FCC prohibit all uses of the Channel 56, Lower 700 MHz E Block spectrum, other than what Google calls "interactive, two-way broadband services, connected to the public internet, and used to support innovative software-based applications, services, and devices."[1] Although Google's Comments ask the FCC to adopt a "highly flexible, marketplace-driven spectrum regime," Google's own specific proposal asks the FCC to dictate which services may, and which services may not, be deployed on the Channel 56 E Block, a policy which would be the antithesis of a highly flexible, marketplace-driven regime.[2] In the last 15 years, the FCC has wisely abandoned this command and control approach in favor of flexible allocations, by which it allows licensees to decide which services to offer on a new spectrum band. The market, not the FCC and not Google's advocates before the FCC, should determine the highest and best use for the Channel 56 spectrum. The FCC was dead right in 2002, when it adopted a flexible allocation for the Lower 700 MHz Band, including the Channel 56 spectrum, "to allow service providers to select the technology they wish to use to provide new services the market may demand," and there is absolutely no reason for the FCC to jettison that policy now.[3]

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[1] See Google Ex Parte Letter, dated May 21, 2007, which is Attachment A to Google's Comments (filed May 23, 2007).

[2] Google Comments at Page 3.

[3] In the Matter of Reallocation and Service Rules for the 698-746 MHz Spectrum Band, Report and Order, 17 FCC Rcd 1022, 1023 (2002).

Indeed, the market shows that, contrary to Google's claims, an unpaired block of 6 MHz in the Lower 700 MHz Band, such as the Channel 56 spectrum, can be used to provide the public with a variety of innovative and exciting one-way services. That is precisely what QUALCOMM is doing today with its MediaFLO service on the adjacent Channel 55 spectrum. In that unpaired 6 MHz block, QUALCOMM is providing MediaFLO, a one-way, mobile TV service, bringing news, weather, children's programming, sports, and entertainment to mobile phone subscribers. This service can ultimately consist of numerous real-time video, audio, and data streams. Moreover, there are other competing mobile video technologies which also operate in a 6 MHz unpaired block, such as DVB-H. Thus, Google was simply wrong, to a shocking degree, when it claimed that the Channel 56 spectrum "appears to lack any immediate commercial value, due to the relatively limited bandwidth available and its unpaired nature."[4] For all of these reasons, the Commission should reject Google's proposal that the Commission revisit its 2002 ruling and limit the uses of the Channel 56 spectrum.

Second, the Commission should reject the calls to impose a panoply of new invasive regulations to dictate who may and may not bid for the 700 MHz spectrum to be auctioned, which business model they must adopt, and how their networks are to work. It is difficult, if not impossible, to recognize the American wireless market as described by the parties calling for this new generation of regulation. They describe a stagnant market with a stunning lack of innovation or competition. This is not the American wireless market as it actually exists. In the real American wireless market, exciting new services, new applications, and new devices are brought to market every day—so much so, in fact, that it is difficult to keep track of all the innovation taking place on a daily basis. The Commission should not act based upon an

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[4] See Google Ex Parte Letter, Attachment A to its Comments, at Page 4.

unrealistic or inaccurate depiction of today's American wireless market. The truth is that the market is robustly competitive, as the Commission itself found, and there is no need or basis for the proposed regulations on auction eligibility or post-auction business models or operations.

Third, with respect to the public safety spectrum, there is a misperception about the relative costs of deploying broadband as opposed to the so-called wideband (SAM) technology as a mobile data solution. For a host of reasons, a broadband deployment is certainly not more expensive, and is almost certainly less expensive, than a wideband deployment. There is no ecosystem of vendors offering infrastructure, devices, and applications based on wideband. On the other hand, there is a deep ecosystem of hundreds of competing vendors offering infrastructure, devices, and applications based on 3G CDMA broadband technology, particularly EV-DO. There are no wideband products developed for the private sector, and so there are no economies of scale for the relatively smaller public safety market to leverage in wideband products. By contrast, there are enormous economies of scale to leverage based upon the extensive array of products sold to the commercial market based on commercial 3G technology. The claims of lower cost for wideband appear to be based on the assumption of larger coverage areas for the wideband technology, using wideband radios with higher transmit power than is assumed for broadband radios. But, as QUALCOMM showed in its opening Comments, if the technologies are compared on an equal basis, EV-DO's coverage is better than SAM's, and EV-DO has far more capacity. It is inherently less expensive to operate a wireless broadband system that has far more capacity with greater coverage than a comparable wideband system.

Accordingly, the Commission should not change its tentative conclusion in favor of the provision of broadband, as opposed to wideband, in the 700 MHz public safety band. Contrary to the claims of some, broadband is simply not more expensive than wideband.

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REPLY COMMENTS OF QUALCOMM INCORPORATED

QUALCOMM Incorporated ("QUALCOMM"), by its attorneys and pursuant to the Commission's Further Notice of Proposed Rule Making ("FNPRM") in these proceedings, hereby submits its Reply Comments in these proceedings.[5] In these Reply Comments,

[5] See Report and Order and Further Notice of Proposed Rule Making, FCC 07-22, released April 27, 2007 ("FNPRM"). See also Order, DA 07-2226 (Wireless Telecommunications Bureau), released May 25, 2007.

QUALCOMM makes these points: 1) the Commission should not adopt Google's proposal that the Commission revise its 2002 ruling and prohibit all services from the Lower 700 MHz E Block except for "interactive, two-way broadband services, connected to the public internet, and used to support innovative software-based applications, services, and devices;"[6] 2) the Commission should not adopt regulations to dictate who may and may not bid for the 700 MHz spectrum to be auctioned, which business model they must adopt, and how their networks are to work; and, 3) the Commission should not change its tentative conclusion in favor of the provision of broadband, as opposed to wideband, in the 700 MHz public safety band because, contrary to claims in this proceeding, broadband is simply not more expensive than wideband.

I. The Commission Should Not Adopt Google's Proposal to Revise Its 2002 Ruling and Prohibit All Services from the Lower 700 MHz E Block Except for "Interactive, Two-Way Broadband Services, Connected to the Public Internet, and Used to Support Innovative Software-Based Applications, Services, and Devices

Google's Comments are internally inconsistent. On the one hand, Google states that the federal government "should have in place a highly flexible, marketplace-driven spectrum regime, one responsive to economic signals and the public interest." Google Comments at Page 3. Google also states that "too often, 'command-and-control spectrum policies have an unfortunate tendency to lock in incumbent users and uses, while locking out new entrants and innovative uses of spectrum." Id.

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[6] See Google Ex Parte Letter, dated May 21, 2007, which is Attachment A to Google's Comments (filed May 23, 2007). The Wireless Bureau has sought comment on the multiple proposals in Google's ex parte in a separately issued Public Notice. Comment Sought on Google Proposals Regarding Service Rules, DA 07-2197 (Wireless Telecommunications Bureau), released May 24, 2007. However, Google included its ex parte as Attachment A to the comments it filed in response to the FNPRM, and, therefore, QUALCOMM responds to Google's filings herein.

On the other hand, Google goes on to ask that the Commission rule that the Lower 700 MHz E Block, Channel 56 spectrum may be utilized only for "interactive two-way broadband services, connected to the public internet, and used to support innovative software-based applications, services, and devices." Google Comments at Attachment A, Page 5. In making this request, Google does not cite, much less deal with, the Commission's 2002 ruling, in which the Commission adopted a flexible allocation for the Lower 700 MHz spectrum, including the Channel 56 E Block, permitting licensees "to select the technology they wish to use to provide the services the market may demand."[7] Indeed, the Commission, in justifying its ruling, noted that "flexible allocations can promote efficient spectrum markets, which in turn encourages efficient use of the spectrum."[8]

There is no basis whatsoever for the Commission to reverse its 2002 flexible allocation for the Channel 56 E Block and to adopt Google's proposal. As even Google itself acknowledges in one portion of its Comments, flexible allocations are the soundest policy for new spectrum bands. A flexible allocation allows licensees to use spectrum for the highest and best use, consistent with the market demand as perceived by the licensees who paid to acquire the spectrum licenses, rather than government fiat. Under the approach adopted by the Commission, Google is certainly entitled to step up and bid for the spectrum to deploy interactive two-way broadband services, connected to the public internet, and used to support innovative software-based applications, services, and devices, but others should be equally entitled to bid deploy the services of their choice. The Commission should not dictate the uses of

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[7] In the Matter of Reallocation and Service Rules for the 698-746 MHz Spectrum Band, Report and Order, 17 FCC Rcd at 1023.

[8] Id. at 1029.

the Channel 56 E Block. Rather, consistent with the Commission's 2002 ruling in which the flexible allocation was made, the Commission should auction the Channel 56 E Block and let the market decide what service will be deployed on the spectrum.

Google does make a startling misstatement in its filing, which completely undermines its proposal for the Channel 56 E Block. Google states that this 6 MHz of spectrum "appears to lack any immediate commercial value, due to the relatively limited bandwidth available and its unpaired nature."[9] This statement is just wrong. Contrary to Google's claim, an unpaired block of 6 MHz in the Lower 700 MHz Band, such as the Channel 56 E Block, can be used to provide the public with innovative and exciting one-way services. QUALCOMM is doing that today with its MediaFLO service on the Channel 55 spectrum for which QUALCOMM holds licenses. In that unpaired 6 MHz block, QUALCOMM, through its MediaFLO USA subsidiary, is providing MediaFLO, a one-way, mobile TV service, bringing news, weather, children's programming, sports, and entertainment to mobile phone subscribers. Today, this service is offered to subscribers of Verizon Wireless. By the end of the year, it will also be offered to AT&T Mobility subscribers. In the future, hopefully, it will be offered to subscribers of other carriers. Moreover, this service will ultimately consist of numerous real-time video, audio, and data streams.

Other mobile video technologies, such as DVB-H, also operate in a 6 MHz unpaired block of spectrum. Thus, Google was simply wrong in alleging that the Commission should dictate that the E Block be used for two-way services connected to the public internet for innovative software-based applications, devices, and services because otherwise, the spectrum is of no value and has no long-term commercial value. The truth is that the market has already

[9] Google Ex Parte at Page 4.

proven that a 6 MHz block of unpaired spectrum in the Lower 700 MHz Band has substantial commercial value and has tremendously beneficial uses, which will drive economic growth in this country. For all of these reasons, the Commission should reject Google's proposal that the Commission revisit its 2002 ruling and limit the uses of the Channel 56 E Block spectrum.

II. The Commission Should Not Adopt Regulations to Make Some Companies Ineligible to Bid, to Mandate That Auction Winners Adopt Certain Business Models, or to Mandate How Their Networks Must Work

Several commenters asked the Commission to adopt a new generation of extensive regulations, including eligibility limits, wholesale service mandates, and so-called "open access" requirements. The premise of all of these proposals is that the current wireless market is "becoming increasingly concentrated" and that the concentration is leading to "decreased innovation and consumer choice. . ."[10] This premise is simply not correct. The American wireless market is characterized by tremendous innovation, and this innovation is critical to the continued growth of the American economy.

That is the conclusion that the Commission itself reached in September of last year, in making its annual assessment of the state of competition in the CMRS market. The Commission wrote that despite the consolidation, "the market continues to behave and perform in a competitive manner" and that this competition "continues to yield significant benefits to consumers.[11] Moreover, the Commission found that: mobile voice are "still far less expensive on a per minute basis in the United States than in Western Europe and Japan;" according to one analyst, the average per-minute cost of wireless calling plunged by 72 percent in the past five

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[10] Comments of Frontline Wireless at Page 14.

[11] Eleventh Report, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, 21 FCC Rcd 10947 (2006) "(Eleventh Report") at paras. 2, 5.

years alone; the adoption of mobile data services continues to rise; and, finally, that overall consumer satisfaction with wireless service providers increased significantly from 2005 to 2006.[12]

Simply put, there is no need for the Commission to adopt radical new policies to solve some problem with the American wireless market. Rather, as the Commission itself has found just eight months ago, that market is robustly competitive. The Commission should not "divine" the market; it should not attempt to solve problems that do not exist, and it should not adopt a new generation of regulations that will not take account of the rapid rate of technological change and innovation in this industry. Rather, QUALCOMM respectfully submits that the Commission should simply let the competitive market work its magic—auction the spectrum to all comers and let the American public reap the benefits, both in terms of auction proceeds and enhanced consumer welfare.

III. The Commission Should Not Change its Tentative Conclusion in Favor of the Provision of Broadband, as Opposed to Wideband, in the 700 MHz Public Safety Band Because, Contrary to the Claims of Some, Broadband is Not More Expensive Than Wideband

In the FNPRM, the Commission tentatively concluded to reconfigure the 700 MHz public safety band to enable construction of a nationwide wireless broadband network for public safety and to prohibit the deployment of the lower speed so-called wideband technology on that spectrum.[13] In its Opening Comments, QUALCOMM showed that broadband technology, specifically the so-called EV-DO, Revision A technology, has far more capacity, delivers data at rates that are faster by orders of magnitude, and covers a wider range than the SAM wideband

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[12] Eleventh Report at paras. 5, 150, 162, & 180.

[13] FNPRM at para. 253.

technology. The only real claim in support of wideband is an erroneous one—namely, that wideband is a more cost-effective data solution.[14]

No real support is provided for this erroneous claim. To the contrary, the facts are these. There is no ecosystem of suppliers of infrastructure, devices, or applications for wideband SAM, and there is never likely to be a SAM ecosystem. There are no commercial deployments of the SAM wideband technology—it is a public safety-only solution, and the public safety market is small in comparison to the commercial wireless market.

On the other hand, there is a deep ecosystem of competing suppliers of broadband 3G (particularly EV-DO) infrastructure, devices, and applications because there is a large commercial wireless 3G broadband market. To date, 160 different EV-DO devices, including PDAs, smartphones, laptops with 1xEV-DO embedded inside, and a wide variety of mobile phones, have been brought to market by 25 manufacturers. In 2004, there were 11 million EV-DO devices sold; in 2005, the number jumped to 27 million, and in 2006, the number was over 55 million.

Moreover, as shown in QUALCOMM's Opening Comments, if the technologies are compared on an equal basis, EV-DO's coverage is better than SAM's; EV-DO has far more capacity than SAM; and, EV-DO delivers data rates at speeds faster than SAM by orders of magnitude. It is inherently less expensive to operate a wireless broadband system that has far more capacity with greater coverage than a comparable wideband system.

Consequently, for these reasons, QUALCOMM urges the Commission not to change the tentative conclusion in the FNPRM based upon this erroneous claim that wideband is more cost-effective than broadband for public safety.

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[14] See Comments of Motorola at Pages i, 4, 17, 18.

IV. Conclusion

Wherefore, for the foregoing reasons, QUALCOMM respectfully requests that the Commission: 1) reject Google's proposal that the Commission revise its 2002 ruling and prohibit all services from the Lower 700 MHz E Block except for "interactive, two-way broadband services, connected to the public internet, and used to support innovative software-based applications, services, and devices;" 2) reject proposals for regulations by which the Commission would dictate who may and may not bid for the 700 MHz spectrum to be auctioned, which business model they must adopt, and how their networks are to work; and, 3) not change its tentative conclusion in favor of the provision of broadband, as opposed to wideband, in the 700 MHz public safety band because, contrary to claims made in this proceeding, broadband is simply not more expensive than wideband.

Respectfully submitted,

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