

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

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In the Matter Of)	
)	
High-Cost Universal Service Support)	WC Docket No. 05-337
)	
Federal-State Joint Board on Universal Service)	CC Docket No. 96-45
)	
Lifeline and Link Up)	WC Docket No. 03-109
)	
Universal Service Contribution Methodology)	WC Docket No. 06-122
)	
Numbering Resource Optimization)	CC Docket No. 99-200
)	
Implementation of Local Competition Provisions In Telecommunications Act of 1996)	CC Docket No. 96-98
)	
Developing a Unified Intercarrier Compensation Regime)	CC Docket No. 01-92
)	
Intercarrier Compensation for ISP-Bound Traffic)	CC Docket No. 99-68
)	
IP-Enabled Services)	WC Docket No. 04-36
_____)	

COMMENTS OF QUALCOMM INCORPORATED

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Dated: November 26, 2008

SUMMARY

QUALCOMM Incorporated (“Qualcomm”) hereby submits these comments in response to the Order on Remand and Order and Further Notice of Proposed Rulemaking, FCC 08-262, released November 5, 2008 (“Order & FNPRM”). Qualcomm makes this filing to express its strong support for the proposal in Appendices A and C to the Order & FNPRM to establish a technologically and competitively neutral Broadband Lifeline/Link Up Pilot Program (the “Pilot Program”) to examine how the Lifeline and Link Up universal support mechanism can be used to enhance broadband Internet access services for low-income Americans. The proposed Pilot Program would enable low-income Americans to purchase both 3G-capable devices and access to 3G wireless broadband services—the devices and services that tens of millions of Americans who can afford these services are already using for broadband Internet access today. It is a national imperative to increase broadband penetration in America, and doing so requires that subsidies for 3G wireless broadband devices and services, which are so prevalent today among Americans with higher incomes, be made available for low-income Americans. Qualcomm urges the Commission to adopt the Pilot Program and to fund it, at a minimum, at the levels proposed by TracFone, the original proponent of such a program.

Qualcomm also agrees wholeheartedly with the Commission that the Pilot Program should be technologically and competitively neutral. The Commission has long maintained a policy of technology neutrality in setting policy for wireless, and that policy has been enormously successful in leading to the creation of a robustly competitive wireless market in the US, a market with multiple national and regional state-of-the-art wireless broadband networks on which a plethora of wireless broadband services are sold. The Commission should not favor or disfavor any technology or competitor. Any wireless broadband network which meets the

requirements described in the Order & FNPRM, (and there are many), should be eligible for the Pilot Program. Qualcomm agrees that wireless broadband devices and services are, and should be, one part of the solution to the vexing problem of broadband penetration.

Finally, in discussing the types of devices which would qualify and be well suited for the Pilot Program, Appendices A and C to the Order & FNPRM, at pages A-35, n.187 and C-34, n.179, mention a device developed by Qualcomm. The device is described as a low-cost, low-power device that uses mobile technology to provide wireless Internet access and supports e-mail, social networking, e-commerce, and distance learning applications. Id. On November 12, 2008, Qualcomm formally announced a new low cost PC alternative by the name of “Kayak.” See http://www.qualcomm.com/news/releases/2008/081112_qct_kayak.html, Qualcomm Press Release, dated November 12, 2008. Kayak is not just one device. Rather, Kayak consists of a reference design and recommended software specifications, which will be provided to device manufacturers, who will then design and make a variety of Kayak-based devices.

These Kayak-based devices are designed to fill the niche between desktop computers, which normally require landlines or separate accessories for Internet access, and Internet-capable mobile wireless devices. Kayak-based devices will include embedded wireless broadband capability, a full featured Web 2.0 browser, and access via the browser to Web 2.0 productivity and other applications. In addition, Kayak supports both television sets and computer monitors for displays and/or built-in displays.

In sum, Kayak should make high speed wireless Internet access more widely available and affordable, and Kayak-based devices will be very well-suited for inclusion in the Pilot Program. The Commission should reaffirm that such devices will qualify for the Pilot Program.

For all of these reasons, Qualcomm urges the Commission to adopt a fully-funded Pilot Program, consistent with the original TracFone proposal, initially to cover one million participants all over the United States.

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QUALCOMM Incorporated (“Qualcomm”), by its attorneys, hereby submits these comments in response to the Order on Remand and Order and Further Notice of Proposed Rulemaking, FCC 08-262, released November 5, 2008 (“Order & FNPRM”)

I. Background

A. Qualcomm’s Interest

Qualcomm is a world leader in developing innovative digital wireless communications technologies and enabling products and services based on the digital wireless communications technologies that it develops. Qualcomm is the pioneer of code division multiple access (“CDMA”) technology, which is utilized in the 3G CDMA family of wireless technologies.

These technologies include CDMA2000 and HSPA, which are two technologies used in today's so-called third generation ("3G") wireless networks and devices, which enable tens of millions of Americans now to enjoy advanced, high speed, and ubiquitous wireless broadband services. Qualcomm broadly licenses its technology to over 155 handset and infrastructure manufacturers around the world, who make infrastructure equipment, handsets and other consumer devices, and develop applications, all based on the CDMA2000 and/or HSPA air interfaces.

Qualcomm CDMA Technologies ("QCT"), a division of Qualcomm, is the world's largest provider of wireless chipset technology. Powering the majority of all 3G devices commercially available today, QCT has also helped lead the diversification of wireless into new segments by bringing a legacy of success with mobile Internet connectivity to laptop PCs, consumer electronics, and pocketable computing devices.

B. The Rapid Proliferation of CDMA2000 and HSPA

The CDMA2000 and HSPA technologies continue to proliferate rapidly around the nation and the world. To date, there are 516 wireless carriers in more than 140 countries who have deployed one of the 3G CDMA technologies. Of those 516 carriers around the world, 105 have deployed EV-DO, 48 of whom have deployed EV-DO Revision A. Another 221 of the 516 carriers have deployed HSDPA, 55 of whom have deployed HSUPA. These broad deployments create enormous demand for EV-DO Revision A and HSDPA equipment, thereby creating economies of scale which bring down prices for carriers and ultimately consumers.

Worldwide, there are over 700 million subscribers using a 3G device. By 2012, the number of 3G subscribers is projected to exceed 1.8 billion, and at that time, most 3G subscribers will be using an EV-DO or HSPA-based device. This strong demand creates an ever-expanding market for 3G-based devices, including 3G phones, smartphones, PDAs,

consumer electronics devices, and laptops. These devices include more than 620 EV-DO-based devices (95 of which incorporate EV-DO Revision A) and more than 963 HSDPA-based devices (125 of which incorporate HSUPA). The sheer number and wide variety of these devices is increasing every day.

Here in the United States, there is fierce competition among the carriers in the provision of wireless broadband services, which has gone hand-in-hand with the rapid deployment and expansion of 3G CDMA networks. As a result, American consumers are enjoying the 3G services at ever-increasing data speeds. Moreover, as the Commission found in its most recent annual report on competition in the CMRS marketplace (the "Twelfth Report"), U.S. carriers have deployed competing 3G technologies, which has only intensified the competition as the carriers seek to differentiate their networks by providing what each claims to be the best and most advanced high speed wireless broadband network and by offering the most robust and compelling wireless broadband services to consumers.¹

Accordingly, Verizon Wireless, Sprint, ALLTEL, US Cellular, and Leap Wireless, among other carriers, have deployed the CDMA2000 (EV-DO) high speed wireless technology, and their deployments are expanding. Verizon Wireless has upgraded its entire network to EV-DO Revision A, which supports both high speed downloads and uploads, and Sprint is in the midst of doing so throughout its entire network. On the other hand, AT&T has deployed the competing WCDMA/HSDPA technology, and it is expanding the footprint of its WCDMA/HSDPA network at a very rapid rate. Initially, AT&T deployed the HSDPA technology, and now, AT&T is in the midst of deploying HSUPA, thereby supporting high speed

¹ See Twelfth Report, FCC O8-28, released Feb. 4, 2008 at Pgs. 61-62.

uploads and downloads. For its part, T-Mobile has also begun deploying HSDPA on its AWS-1 spectrum.

All told, the Commission found in the Twelfth Report that approximately 184 million Americans live within a census block in which two carriers provide mobile broadband service via EV-DO or WCDMA/HSPA, and 118 million Americans live within a block in which three carriers offer such service. Twelfth Report at para. 145. These numbers are literally increasing every day as the carriers constantly expand and enhance their mobile broadband networks.

In addition, the number and variety of devices, including handsets, PDAs, smartphones, and other consumer electronic devices, which incorporate CDMA2000 or HSPA is also growing by leaps and bounds every single day. These technologies are now embedded in numerous laptop models sold by the major laptop vendors offering consumers another way to access mobile broadband services. Wireless broadband via CDMA2000 or HSPA is or will soon be available in a whole variety of new consumer electronic devices—personal navigation devices, pocketable computers, mobile computing devices, and the like, all of which could be of tremendous use to public safety agencies and their employees.

C. The Constant Push to Upgrade and Enhance CDMA2000 & HSPA

As operators began deploying EV-DO and HSPA in its initial forms—EV-DO Release 0 and HSDPA—Qualcomm and the ecosystem of vendors who support these technologies were simultaneously working on upgrades to the technologies, and there is a constant and never-ending drive to enhance these technologies which continues to the present and shows no sign of slowing down into the future. The networks rapidly migrated to the first upgrade—EV-DO Revision A and HSUPA. Today, as noted supra, Verizon Wireless and Sprint provide wireless broadband service all over the nation via EV-DO Revision A, which supports peak data speeds

of 3.1 megabits per second (“Mbps”) on the downlink and 1.8 Mbps on the uplink, and AT&T is concluding its network upgrade to HSUPA, which will support peak data speeds of up to 1.8 Mbps to 5.6 Mbps on the uplink. AT&T has also announced that it will upgrade its downlink in the near future to support peak data rates of 7.2 Mbps to 20 Mbps on the downlink.

Thus, the data speeds delivered by today’s EV-DO Revision A and HSPA-based wireless networks are far in excess of those proposed as the minimum for broadband Internet access to qualify for the Pilot Program—download speeds equal to or greater than 786 kilobits per second (“Kbps”) and upload speeds greater than 200 kbps. Order & FNPRM at A-38, C-36. These networks, which are likely to undergo additional upgrades to even more advanced technology over time, should unquestionably be part of the solution to increase broadband penetration in the United States.

D. The Deep CDMA2000 & HSPA Ecosystems

As noted supra, Qualcomm licenses its technology to over 155 companies, who manufacture infrastructure and subscriber devices (phones, smartphones, consumer electronic devices, and the like). These companies span the entire wireless industry. In particular, the number of companies manufacturing devices based on the 3G technologies, including CDMA2000 and HSPA, continues to increase, along with the different types of devices themselves. At last count, 111 companies have manufactured at least one CDMA2000 device, and more than 140 companies have manufactured at least one WCDMA or HSPA device. These devices span all price points—from low end 3G phones to very high end smartphones and other consumer electronics devices.

In particular, eighteen laptop manufacturers now offer at least one laptop model with a form of 3G embedded inside, and more than 100 such laptop models have been brought to

market. It is becoming increasingly common for Americans to access the Internet and a plethora of wireless broadband services through these 3G-embedded laptops or by using a PC cards or USB device with 3G connectivity.

E. Kayak Devices for Low Cost Broadband Internet Access

Appendices A and C of the Order & FNPRM, at pages A-35, n.187 and C-34, n.179, mention a device developed by Qualcomm. The Appendices describe the device as a low-cost, low-power device that uses mobile technology to provide wireless Internet access and supports e-mail, social networking, e-commerce, and distance learning applications. Id. On November 12, 2008, Qualcomm formally announced a new low cost PC alternative by the name of “Kayak.” See Qualcomm Press Release, dated November 12, 2008, http://www.qualcomm.com/news/releases/2008/081112_qct_kayak.html. Kayak is not a single device. Rather, Kayak consists of a reference design and recommended software specifications, which will be made available to device manufacturers, who will then, in turn, bring to market a variety of Kayak-based devices.

These Kayak-based devices will be designed to fill the niche between desktop computers, which normally require landlines or separate accessories for Internet access, and Internet-capable mobile wireless devices. Kayak-based devices will include embedded wireless broadband capability, a full featured Web 2.0 browser, and access via the browser to Web 2.0 productivity and other applications. In addition, Kayak supports both television sets and computer monitors for displays and/or built-in displays. Kayak-based devices will be compatible with a standard keyboard and a mouse for input, and they will include a music player and/or 3D gaming console functionality.

The Kayak reference design uses a Qualcomm Mobile Station Modem which will enable the user to access the Internet by using a standardized web browser running at desktop resolutions and wireless networks which employ either 1x EV-DO Revision A or HSPA.² Thus, Kayak-based devices will use built-in cellular connectivity and an inherently low cost platform based on high-volume wireless chipsets. Kayak-based devices will enable affordable broadband Internet access. These devices will be tailor-made for inclusion in the Pilot Program.

II. The Commission Should Establish a Fully-Funded Pilot Program

Qualcomm supports the proposal to establish a technologically and competitively neutral Pilot Program to examine how the Lifeline and Link Up universal support mechanism can be used to enhance broadband Internet access services for low-income Americans. Increasing broadband penetration is a key driver of economic and social progress for America. As stated in Appendices A and C to the Order & Further Notice, broadband Internet access has evolved into a critical service for American consumers, particularly for education, public health, and public safety. Appendix A at A-34, Appendix C at C-33. It is imperative that low-income Americans not be left unable to access the Internet on an affordable basis. But, as the Appendices state and as the Pew Internet & American Life Project has found, the fact is that only 25 percent of households with annual income below \$20,000 have broadband service. Id. Without broadband service, it will become increasingly difficult for low-income Americans to access schools, teachers, hospitals, doctors, and so on. It is entirely appropriate and necessary for the

² This pleading may reference 1X EV-DO parts whose manufacture, use, sale, offer for sale, or importation into the United States is limited or prohibited by certain injunctions against Qualcomm. The reference to such 1X EV-DO parts herein is not an offer to sell such parts and should not be misconstrued as assistance in the making, using, selling, offering to sell, or importation of such parts into the United States. Any device utilizing 1X EV-DO parts that are intended for sale to wireless carriers (other than Verizon Wireless) in United States markets must also utilize Qualcomm's hybrid mode alternative solution.

Commission to seek to solve this deeply troublesome situation as much as possible and as soon as possible.

For these reasons, Qualcomm supports the proposed Pilot Program, but suggests that it be funded at the highest level originally proposed by TracFone, which would initially cover one million participants all over the United States. Qualcomm agrees, of course, that this program should extend beyond three states and the District of Columbia. This is a national problem requiring a national solution.

Moreover, the Pilot Program should be technologically and competitively neutral as proposed in the Appendices. The Commission should not favor or disfavor any technology or network, as long as the data rates set forth in the Appendices can be delivered. Such an approach would be fully consistent with the Commission's longstanding policy of technology neutrality in wireless a policy which has been a great success for the American public.

III. Conclusion

Wherefore, Qualcomm respectfully requests that the Commission adopt a fully funded Pilot Program rules consistent with the comments set forth herein.

Respectfully submitted,

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