

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act)	GN Docket No. 09-47
)	
A National Broadband Plan for our Future)	GN Docket No. 09-51
)	
Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act)	GN Docket No. 09-137
)	

REPLY COMMENTS OF NEW DBSD SATELLITE SERVICES, G.P.

New DBSD Satellite Services, G.P.¹ (“DBSD”) files these Reply Comments in response to the Federal Communications Commission’s (“Commission”) September 29, 2009 Public Notice (“*Notice*”) in the above-referenced proceeding on the sufficiency of current spectrum allocations for wireless broadband.² DBSD here reiterates comments in these proceedings emphasizing that any meaningful evaluation of the “wireless ecosystem” must also account for the dynamic innovation and investment occurring in satellite operations, services, and

¹ DBSD was formerly known as New ICO Satellite Services, G.P.. DBSD was authorized in 2005 to provide Mobile Satellite Service (“MSS”) using a geostationary-orbit satellite. *ICO Satellite Services G.P.*, 20 FCC Rcd 9797, ¶ 1 (IB 2005). In January 2009, DBSD received approval from the Commission to operate dual mode mobile earth terminals (“METs”) and Ancillary Terrestrial Component (“ATC”) facilities. *New ICO Satellite Services G.P.*, 24 FCC Rcd 171 at ¶¶ 33-34, 68-69 (2009).

² *Comment Sought on Spectrum for Broadband – NBP Public Notice #6*, GN Docket Nos. 09-47, 09-51, 09-137, Public Notice, DA 09-2100 (rel. Sept. 23, 2009) (“*Notice*”).

technologies,³ particularly in the mobile satellite service (“MSS”). In assessing the ability of current spectrum allocations to support next-generation build-outs, the Commission must consider the role of MSS in ensuring full deployment of next-generation applications, devices and services, including for remote and public safety users.

DBSD’s development of advanced antenna technology, satellite beam forming technology, and its ancillary terrestrial component (“ATC”) platform has enabled the more intensive and efficient use of spectrum the Commission seeks to encourage.⁴ The phased-array antenna on its MSS satellite, combined with the first commercially deployed two-way ground based beam forming (“GBBF”) system, enables the DBSD system to redistribute transmit and receive capacity on a real-time basis. This powerful new capability allows the DBSD space system to be adapted to changing service needs and to support dynamic interaction with complementary terrestrial systems. In addition, the DBSD system can simultaneously support different protocols and air interfaces, which enables the simultaneous provision of a variety of services using multiple technology platforms. This flexibility allows the system to be reconfigured as user demand or other market forces dictate, so that next-generation applications can be made available on the existing satellite infrastructure as they are developed.

For example, DBSD trials of its hybrid MSS/ATC system and dual-mode mobile devices, using the Geo Mobile Radio 1 (“GMR1”) air interface and the Digital Video Broadcast – Satellite Handheld (“DVB-SH”) standard, have validated hybrid satellite/terrestrial architectures and coverage models while also demonstrating the differentiated service capabilities of MSS/ATC systems beyond traditional MSS voice and data. DBSD also launched efforts to ensure that the capabilities of its MSS/ATC network can be integrated seamlessly and at low cost

³ See Satellite Industry Association (“SIA”) Comments at 1.

⁴ *Innovation NOI* at ¶ 20.

into next-generation user devices, thus providing end users with ubiquitous access to advanced communications services. DBSD joined with Qualcomm and other MSS operators, TerreStar and Skyterra, to commercialize the Geo Mobile Satellite Air-interface (Satellite-EVDO) “GMSA” protocol. This group is creating a common platform that will integrate satellite and cellular communication technology in select multi-mode mobile baseband chips. Qualcomm will sell and support its hybrid MSS/terrestrial chipsets to mobile device vendors in the same manner it does with its terrestrial wireless chipsets today, ultimately enabling a full range of handhelds and mobile computing devices capable of terrestrial connectivity with 3GPP and 3GPP2 technologies a wide range of existing mobile terrestrial bands.

While these developments will enable new services to millions of small devices, MSS operators will need operational flexibility and adequate spectrum to foster continued innovation. The expansion of satellite availability to small next-generation devices was made possible when the Commission permitted MSS operators to fully use MSS spectrum to integrate terrestrial systems into their networks. To ensure that MSS/ATC service offerings continue to develop consistent with other next-generation broadband services, however, the Commission should encourage greater operational flexibility in spectrum used for MSS/ATC operations. Such flexibility would clearly signal the Commission’s commitment to developing parallel broadband capabilities in MSS/ATC systems, helping to spur continued innovation and attract additional investment to an essential component of the communications infrastructure. Similarly, a continuing commitment to devote adequate spectrum resources to MSS spectrum capacity will help ensure proper interference management, promote development of innovative new applications, and provide a secure base for additional investment.

The Commission should reject suggestions by a couple of commenters to reduce or ‘repurpose’ 2 GHz spectrum allocated to MSS in order to increase spectrum for terrestrial mobile uses. First, the terrestrial mobile uses for which the commenters seek spectrum are already available in the 2 GHz MSS. Each of the 2 GHz MSS licensees is deploying ATC that will re-use the spectrum terrestrially.⁵ ATC systems enable 2 GHz systems to ensure ubiquitous nationwide coverage, to use the spectrum as efficiently and intensely as possible, and to offer the same types of next-generation applications available in spectrum allocated to terrestrial wireless services.

Second, these proposals run counter to other Commission policy imperatives for broadband services. MSS operations can reach rural and remote areas that may never be served by terrestrial-based wireless systems, and are an essential component of public safety infrastructure for first responders. MSS is the only infrastructure that offers the necessary technology and cost structure to provide next generation mobile services to remote and urban areas alike.⁶ The fastest way to ensure that the 2 GHz MSS band is optimized for broadband

⁵ One of the 2 GHz MSS licenses recently announced a deal with a leading commercial wireless provider to market its services using the latest terrestrial technology, a smartphone, as part of an integrated satellite/terrestrial service offering in 2 GHz MSS spectrum. *See* Press Release, TerreStar, TerreStar Announces Distribution Agreement with AT&T; *First Satellite Cellular Smartphone to Offer Integrated Service* (September 30, 2009), available at <http://www.terrestar.com/press/20090930.html>.

⁶ MetroPCS continues to suggest that MSS operations can be reallocated and shifted to other frequency bands. *See, e.g., Fostering Innovation and Investment in the Wireless Communications Market (GN Docket No. 09-157) and A National Broadband Plan for Our Future (GN Docket No. 51)*, Comments of MetroPCS (filed Sept. 30, 2009) at 14; *Spectrum for Broadband, NBP Public Notice #6*, GN Docket Nos. 09-47, 09-51, 09-137, Comments of MetroPCS (filed Oct. 23, 2009) at 11-12. This is not true. Satellites, including MSS spacecraft, are constructed using hardware built to use only a defined set of radio frequencies for the life of the spacecraft. Alternate frequencies cannot be made available to an on-orbit satellite, which can have a useful life of more than 15 years. In this case, 2 GHz MSS satellites have been constructed and launched at a cost of hundreds of millions of dollars.

services would be to support MSS/ATC operations by providing operational flexibility in spectrum used for MSS/ATC operations. Commission policies that facilitate commercial deployments and strategic relationships will enable 2 GHz MSS operators to more quickly deploy integrated MSS/ATC systems that provide next-generation services to both urban and rural consumers.

Third, reducing spectrum available to 2 GHz operators would strand billions of dollars in investment and thwart innovation in the mobile wireless industry. As detailed above, MSS operators in 2 GHz and L-band spectrum are cooperating in technology development to bring satellite capability to mass-market mobile wireless devices at nominal incremental cost. DBSD made the first North American satellite mobile video broadcast based on the DVB-SH standard, and has demonstrated the advanced capabilities of this technology in trials of its integrated MSS/ATC system in conjunction with the GMR-1 air interface in dual-mode devices. Further innovation and integration of satellite capabilities into mass-market devices would be stymied if MSS spectrum were reduced or reallocated, particularly in light of evidence in the record that broadband applications will demand wider bandwidths to deliver next generation IP-based services.

Sprint's proposals for spectrum reallocation are at once incoherent and self-serving, and should be rejected. Sprint Nextel urges the Commission to repurpose MSS spectrum to enable terrestrial wireless operators to provide new broadband services, applications, and devices.

While the record in this proceeding indicates that MSS operators have invested billions of dollars and launched systems that can support next-generation capabilities, there is nothing in the record of this or any other proceeding to indicate that Sprint is using or plans to use nationwide licenses that it has held since 2005 for spectrum at 1990-1995 MHz, immediately adjacent to the AWS

and PCS spectrum band. By contrast, MSS operators have developed technologies to provide precisely the type of next-generation services, applications, and devices for which this proceeding seeks spectrum resources, and only MSS networks can make these services available through their ubiquitous reach to remote areas that terrestrial wireless networks cannot serve.

The Commission should also reject Sprint's comments in this proceeding as simply one more call for the Commission to rescue Sprint from the consequences of its own inertia in accessing its fully licensed 2 GHz spectrum. Sprint Nextel has attempted to derail 2 GHz MSS progress in any available forum: in unrelated Commission licensing proceedings;⁷ in federal district courts;⁸ and in bankruptcy court.⁹ Ironically, the inability of MSS operators to introduce service in 2 GHz spectrum until mid-2009, over a year after DBSD's satellite launch, is directly related to a more than two-year delay in Sprint's completion of relocation of incumbents in the 2 GHz MSS uplink band. Incredibly and notwithstanding this delay, Sprint suggests that the Commission assign 2 GHz MSS spectrum to yet another MSS operator, an operator that has no available 2 GHz satellite infrastructure.¹⁰ Sprint's lack of impetus to access 2 GHz spectrum, evident in its own failure to roll-out service in its fully licensed nationwide 2 GHz spectrum,

⁷ Sprint Application for Review, IBFS File No. SES-LIC-20071203-01646, SES-AMD-20080118-00075, SES-AMD-20080219-00172 (filed Feb. 17, 2008); Sprint Petition to Deny, File No. ISP-PDR-20080229-00004 (filed April 10, 2008) (petition to deny TerreStar petition for declaratory ruling on foreign ownership); Sprint Petition to Deny, SES-LIC- 20061206-02 100 ;SES-AMD 20070723-00978 SES-AMD 20070907-01253 SES-AMD 20080229-002 17 (filed April 25, 2008) (petition to deny TerreStar application for ancillary terrestrial component authorization).

⁸ Sprint Nextel has pursued claims against 2 GHz licensees in the Federal District Court for the Eastern District of Virginia and the Federal District Court for the Southern District of New York. *See, e.g., Sprint Nextel Corporation v. New ICO Satellite Services G.P. and Terrestar Networks, Inc.*, Case No. 08-cv-651 (E.D.Va.).

⁹ *See* Motion of Sprint Nextel Corporation for Withdrawal of Reference, dated August 11, 2009, filed in the DBSD bankruptcy proceeding. *In re DBSD North America, Inc.*, Case No 09-13061 (S.D.N.Y.)

¹⁰ Sprint NBP #6 Comments at 12.

believes any professed urgency on its part to put this spectrum in use for broadband or any other services. Repurposing the spectrum to terrestrial-only services, however, would place Sprint's own unused nationwide chunk of spectrum squarely within any reconfigured broadband spectrum block. The Commission should reject Sprint's call to thwart the development of ubiquitous next-generation MSS, put forward merely to press Sprint's self-interest. The Commission should take into account the broad capabilities of, and significant investment to date in, next-generation 2 GHz MSS systems in assessing the ability of current spectrum allocations to support next-generation build-outs. These 2 GHz MSS systems will play a significant role in ensuring full deployment of next-generation applications, devices and services, including for remote and public safety users.

CONCLUSION

DBSD requests that the Commission consider these comments in the above-captioned proceeding regarding the sufficiency of current spectrum allocations for wireless broadband.

Respectfully submitted,

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