

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

In the Matter of )  
 )  
Expanding Access to Broadband and Encouraging ) GN Docket No. 13-114  
Innovation through Establishment of an Air-Ground ) RM-11640  
Mobile Broadband Secondary Service for Passengers )  
Aboard Aircraft in the 14.0-14.5 GHz Band )

To: The Commission

**REPLY COMMENTS OF THE  
CONSUMER ELECTRONICS ASSOCIATION**

The Consumer Electronics Association (“CEA”)<sup>1</sup> respectfully files these reply comments in support of the Commission’s proposal to increase broadband access onboard aircraft through a new, air-ground mobile broadband service in the 14.0 to 14.5 GHz spectrum band.<sup>2</sup> The Commission’s proposal will facilitate in-flight broadband connectivity, providing passengers new, important opportunities to stay connected, informed, and entertained during flight.

**I. THERE IS STRONG AND GROWING CONSUMER DEMAND FOR AIR-GROUND MOBILE BROADBAND SERVICE**

It is beyond dispute that consumers increasingly are demanding ubiquitous broadband connectivity, even during flight.<sup>3</sup> Growing numbers of air travelers expect to have in-flight

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<sup>1</sup> CEA is the principal U.S. trade association of the consumer electronics and information technologies industries. CEA’s more than 2,000 member companies lead the consumer electronics industry in the development, manufacturing and distribution of audio, video, mobile electronics, communications, information technology, multimedia and accessory products, as well as related services, that are sold through consumer channels. Ranging from giant multi-national corporations to specialty niche companies, CEA members cumulatively generate more than \$203 billion in annual factory sales and employ tens of thousands of people.

<sup>2</sup> *Expanding Access to Broadband and Encouraging Innovation through Establishment of an Air-Ground Mobile Broadband Secondary Service for Passengers Aboard Aircraft in the 14.0-14.5 GHz Band*, 28 FCC Rcd 6765 (2013) (“Notice”).

<sup>3</sup> *Id.*, 28 FCC Rcd at 6771 (citing *Cisco Visual Networking Index: Forecast and Methodology, 2011-2016*, May 30, 2012).

broadband access equivalent to that on the ground, *i.e.*, anywhere/anytime access to the Internet via personal electronic devices (“PEDs”) such as smartphones, tablets, e-readers and laptops.<sup>4</sup> Indeed, current market research demonstrates conclusively that “consumers want increased and constant access to data generally, and specifically for in-flight services.”<sup>5</sup> Consistent with this demand, the number of commercial aircraft offering broadband service is projected to rise from approximately 3,000 aircraft in 2012 to 15,000 by 2021.<sup>6</sup>

The comments filed in this proceeding almost uniformly point to the strong and growing demand for in-flight broadband connectivity.<sup>7</sup> Even parties with some concerns regarding the proposed air-ground mobile broadband service recognize the potential need and benefit of such a service. EchoStar, for instance, does not oppose a secondary use of the 14.0-14.5 GHz band by air-to-ground services, provided that there are sufficient protections for Fixed Satellite Service.<sup>8</sup>

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<sup>4</sup> See Comments of the Information Technology Industry Council at 2 (filed Aug. 26, 2013) (“ITIC Comments”).

<sup>5</sup> Comments of the Telecommunications Industry Association at 1-2 (filed Aug. 26, 2013); *id.*, citing TIA, *TIA’s 2013 ICT Market Review & Forecast*, Section 5-3: In-Flight Broadband Wireless LAN Standards (2013); Global Commercial Aviation in Flight Entertainment & Communications Market (2012 -2017) (Oct. 2012), <http://www.marketsandmarkets.com/Market-Reports/in-flight-entertainment-communications-market-860.html> (last visited August 7, 2013).

<sup>6</sup> *Id.* at 6767 n.2 (citing J. Meyers, *Next in spectrum wars: Broadband for airplanes*, Politico, Jan. 28, 2013, at <http://www.politico.com/story/2013/01/next-in-spectrum-wars-broadband-for-airplanes-86843.html> (visited Mar. 12, 2013)).

<sup>7</sup> See, e.g., Comments of CTIA – The Wireless Association at 2-4 (filed Aug. 26, 2013) (“CTIA Comments”); ITIC Comments at 2; Comments of Delta Air Lines, Inc. at 1-2 (filed Aug. 26, 2013) (noting that its “customers have come to expect access to the Internet on every domestic flight” and that its customers have an “increasing need for mobile broadband connectivity while on-board commercial aircraft.”); Comments of American Airlines at 1 (filed Aug. 26, 2013) (citing “air travelers’ increasing need for mobile broadband connectivity while on-board commercial aircraft.”); Comments of Gogo Inc. at 3 (filed Aug. 26, 2013) (demonstrating that “the need for additional dedicated air-ground spectrum is already well established in the record.”).

<sup>8</sup> See Comments of EchoStar Satellite Operating Corporation and Hughes Network Systems LLC at 1-2 (filed Aug. 26, 2013) (“EchoStar Comments”).

Likewise, the National Association of Broadcasters supports the improvement of broadband connectivity on aircraft.<sup>9</sup>

While the Commission previously has taken some steps to meet this demand, including reconfiguring the Air-Ground Radiotelephone Service<sup>10</sup> and authorizing Earth Stations Aboard Aircraft (“ESAA”) to provide broadband service to passengers on airplanes,<sup>11</sup> airlines nevertheless need greater flexibility to offer significantly upgraded in-flight broadband connectivity. Despite the Commission’s efforts, “current broadband options for aircraft passengers generally carry a premium price and offer substantially lower speeds than terrestrial broadband.”<sup>12</sup> As CTIA points out, the spectrum “currently available for air-ground broadband service . . . is insufficient to meet the growing consumer demand for, and evolving customer usage of, in-flight mobile broadband service. Current in-flight broadband options often offer lower speeds than terrestrial broadband services at a higher cost.”<sup>13</sup>

The Commission’s proposed new air-ground broadband service should help address this market imbalance. Introduction of this service will increase competition, which, in turn, should result in improved quality of service and lower prices for broadband service aboard aircraft overall.<sup>14</sup> Such improved in-flight broadband access would undoubtedly redound to the benefit

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<sup>9</sup> See Comments of the National Association of Broadcasters at 1 (filed Aug. 26, 2013).

<sup>10</sup> See Notice, 28 FCC Rcd at 6771 (citing *Amendment of Part 22 of the Commission’s Rules to Benefit the Consumers of Air-Ground Telecommunications Services*, 20 FCC Rcd 4403 (2005)).

<sup>11</sup> *Id.* (citing *Revisions to Part 2 and 25 of the Commission’s Rules to Govern the Use of Earth Stations Aboard Aircraft Communicating with Fixed-Satellite Service Geostationary-Orbit Space Stations Operating in the 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz and 14.0-14.5 GHz Frequency Bands*, 27 FCC Rcd 16510 (2012)).

<sup>12</sup> *Id.*

<sup>13</sup> CTIA Comments at 3.

<sup>14</sup> Notice, 28 FCC Rcd at 6772.

of business and leisure travelers alike. It also would help promote the Commission’s goal of universal access to broadband, including the “fastest and most extensive wireless networks of any nation.”<sup>15</sup> In addition, the proposal is consistent with the Commission’s ongoing efforts to work with the Federal Aviation Administration to support the expanded use of PEDs on aircraft.<sup>16</sup>

## **II. THE PROPOSED NEW SERVICE AUTHORIZED ON A SECONDARY BASIS CAN SUCCESSFULLY SHARE SPECTRUM WITH EXISTING PRIMARY USES**

Despite the obvious consumer benefits of a new air-ground mobile broadband service, the Commission must exercise care “not to get ahead of [itself],” as Commissioner Pai noted in his statement.<sup>17</sup> The 14.0-14.5 GHz band is “heavily used” for satellite applications and “great caution” must be used to prevent harmful interference from a new service in this band.<sup>18</sup>

However, as the Commission has recognized, Qualcomm has submitted that an air-ground mobile broadband service at 14.0 to 14.5 GHz could successfully co-exist with existing operations in the band through the use of an innovative ground-based network deployment and equipment designed to manage access to the spectrum, and thus could completely avoid harmful interference to incumbent users of the band.<sup>19</sup> The Commission proposed licensing and technical rules for this new service based upon this information,<sup>20</sup> and parties have provided detailed and

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<sup>15</sup> See Federal Communications Commission, *Connecting America: The National Broadband Plan*, at XII (Mar. 16, 2010).

<sup>16</sup> See Letter from FCC Chairman Julius Genachowski to Honorable Michael P. Huerta, Acting Administrator of Federal Aviation Administration (Dec. 6, 2012).

<sup>17</sup> Notice, 28 FCC Rcd at 6821, Statement of Commissioner Ajit Pai.

<sup>18</sup> *Id.* at 6774.

<sup>19</sup> *Id.* at 6773-74; see also Comments of Qualcomm Incorporated at 8-14 (filed Aug. 26, 2013) (“Qualcomm Comments”).

<sup>20</sup> Notice, 28 FCC Rcd at 6782-93.

thoughtful comments upon these proposals.<sup>21</sup> CEA is therefore confident that the Commission now has a record upon which it can craft licensing and technical rules to ensure that the proposed air-ground mobile broadband spectrum at 14.0 to 14.5 GHz will be successfully shared with incumbent operations without causing harmful interference.

Moreover, the Commission should be able to address any concerns by authorizing the proposed air-ground mobile broadband service on a secondary basis with appropriate and necessary interference protections to the primary users in the band.<sup>22</sup> As a secondary service, the new air-ground mobile broadband service “[s]hall not cause harmful interference to stations of primary services” and “[c]annot claim protection from harmful interference from stations of a primary service.”<sup>23</sup> More specifically, the new service would not be permitted to interfere with existing services in the 14.0-14.5 GHz band, and must be prepared to accept any interference from such primary services in the band. CEA also supports the Commission’s proposal to require the new air-ground mobile broadband service in the 14.0-14.5 GHz band to coordinate with secondary and permissive services that operate in segments of this band.<sup>24</sup>

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<sup>21</sup> See Qualcomm Comments at 23-35 (supporting the proposed operating rules); EchoStar Comments at 3-15 (proposing additional protections for satellite services in the 14.0-14.5 GHz band); Comments of the Satellite Industry Association at 7-19 (filed Aug. 26, 2013) (same); Comments of The Boeing Company at 5-7 (filed Aug. 26, 2013).

<sup>22</sup> Notice, 28 FCC Rcd at 6774.

<sup>23</sup> 47 C.F.R. § 2.104(d)(3)(i) and (ii).

<sup>24</sup> *Id.* at 6775.

