



QUALCOMM Incorporated

1730 Pennsylvania Ave., NW ■ Suite 850 ■ Washington, DC 20006 ■ Tel: 202.263.0022 www.qualcomm.com

April 30, 2013

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

**Re: Petition for Rulemaking To Establish A Next Generation Air-Ground Service
On A Secondary Licensed Basis In The 14.0 to 14.5 GHz Band -- RM-11640**

Dear Ms. Dortch:

On April 26, 2013, Dean Brenner and the undersigned of QUALCOMM Incorporated (“Qualcomm”) discussed the above-referenced Petition for Rulemaking with Renee Gregory, Michael Steffen, and Kate Dumouchel, legal advisors to Chairman Genachowski; Commissioner Ajit Pai, his Chief of Staff Matthew Berry, and his wireless legal advisor Courtney Reinhard; and Priscilla Argeris, legal advisor to Commissioner Rosenworcel. Qualcomm presented the material in the attached slides and encouraged the Commission to issue a *Notice of Proposed Rulemaking* at its May 9, 2013 open meeting proposing to establish an Air-Ground Mobile Broadband service on a secondary licensed basis in the 14.0-14.5 GHz band.

Dean Brenner also briefly discussed the Petition for Rulemaking with Louis Peraertz, legal advisor to Commissioner Clyburn, on April 26, 2013, describing the proposal in the Petition and summarizing the benefits set forth in the slides. After this conversation, Mr. Brenner provided Mr. Peraertz with a copy of Qualcomm’s October 30, 2012, and January 18, 2013, filings in RM-11640.

Respectfully submitted,

John W. Kuzin

John W. Kuzin

Senior Director, Government Affairs – Regulatory

Att.

cc w/ Att. Commissioner Ajit Pai
(via email) Matthew Berry
 Courtney Reinhard
 Kate Dumouchel
 Renee Gregory
 Michael Steffen
 Priscilla Argeris
 Louis Peraertz



Next-Generation Air-Ground Communications Service: RM-11640 from Petition for Rulemaking to NPRM

April 26, 2013



The Sky IS THE LIMIT!

AIR - GROUND TECHNOLOGY

- ❑ Next Generation Air-Ground (“Next-Gen AG”) service will enable high-speed airborne broadband access (300 Gb/s on a combined basis) to commercial and private plane passengers
- ❑ The new service will support (via in-cabin Wi-Fi) the same broadband experience available on land, e.g., on-demand video, gaming, music, and other cloud services

Timeline & Summary

Next-Gen AG Petition for Rulemaking

Timeline

- Petition for Rulemaking filed - July 2011
- Comments/Replies filed - Sept/Oct 2011
- Pre- and post-filing outreach to SIA
- Responses to FCC staff questions - Jan 2012
- Second round of comments - July 2012

Summary

- Broad support from major airlines, equipment makers, and current air-ground service provider
- Record demonstrates that the proposed service can operate on a secondary licensed basis in successful coexistence with primary FSS operations and other users of the 14.0 to 14.5 GHz band





FCC's Key Policy Objectives

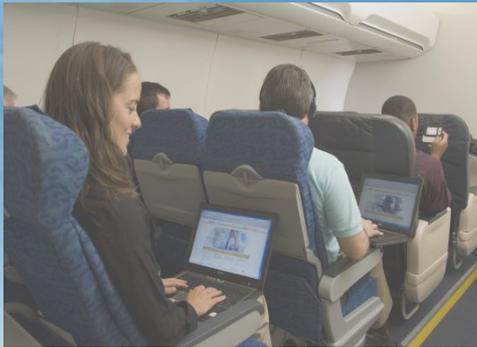
Next-Gen Air-Ground Notice of Proposed Rulemaking

A Next-Gen Air-Ground NPRM would advance the FCC's key policy initiatives

- **Successful spectrum sharing** – Qualcomm's extensive technical submittals show that the 14 GHz spectrum can be shared with primary operations without causing interference; authorizing the proposed Next-Gen AG service on a secondary basis will enable far more efficient use of under-utilized spectrum.
- **In-flight broadband connectivity** – Furthers FCC objective to enable increased support of mobile broadband devices on-board aircraft; Chairman Genachowski formally asked the FAA Administrator to work towards allowing greater use of electronic devices on planes.
- **In-flight broadband service competition** – The FCC recently adopted rules for satellite-based air-ground systems in the 14 GHz band. The proposed terrestrial-based Next-Gen AG system would cost much less than a satellite-based system and deliver superior performance with far less latency. The FCC should treat Qualcomm's proposal with regulatory parity as compared to satellite-based systems and let the free market decide which system or systems will succeed.

Next Gen AG Petition for Rulemaking

The record demonstrates that today's airline passengers expect the same level of service in the air that is available on the ground



24/7 Connectivity

Increasing need for airline travelers to stay connected 24/7 for cloud computing, social networking, and entertainment



High Speed Broadband

Fast connections are key to enabling music and video cloud offerings, content download, gaming and HD video streaming

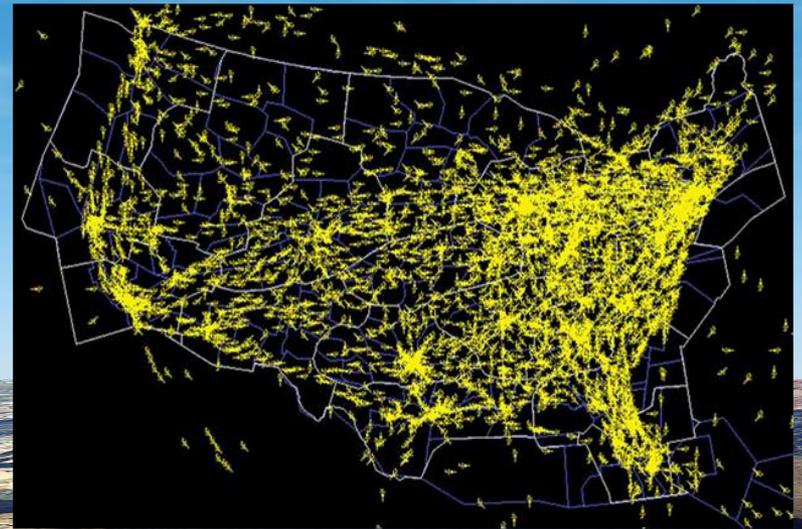
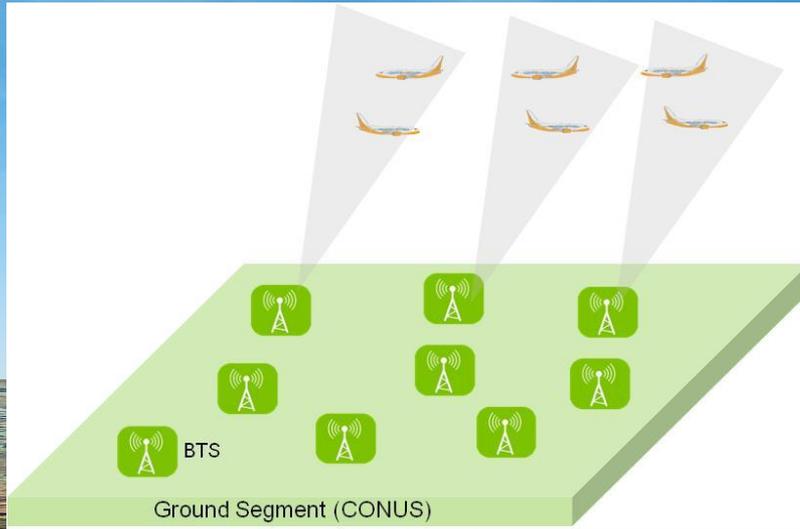


Multimedia Content

Access to the full library of Internet content: TV channels, movies, games, educational content and social media

Next-Gen AG System Design

In-flight Broadband System Operating at 14.0 -14.5 GHz On Secondary Licensed Basis



Key Technology Attributes

- Enables high throughput services such as video streaming, gaming, and other rich multimedia access
- Air-Ground architecture will use several hundred cell sites covering CONUS
- Can support approximately 2 Gb/s throughput per site in existing Ku band FSS uplink spectrum

Co-existence

- Designed to avoid interference with incumbent GSO satellite operations and possible future NGSO satellite services
- Designed to successfully co-exist with other services, including AMSS (now ESAA), TDRSS and radio astronomy