



Mercedes-Benz

Mercedes-Benz USA, LLC
A Daimler Company

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

In the Matter of)
)
Revision of Part 15 of the Commission's Rules) ET Docket No. 13-49
to Permit Unlicensed National Information)
Infrastructure (U-NII) Devices in the 5 GHz)
Band)

**COMMENTS OF
MERCEDES-BENZ USA, LLC**

Mercedes-Benz USA, LLC ("Mercedes-Benz") on behalf of its parent company, Daimler AG ("Daimler") (hereinafter Mercedes-Benz), respectfully submits these comments in response to the Notice of Proposed Rulemaking ("NPRM") issued by the Federal Communications Commission ("Commission") in the above proceeding¹ regarding the opening of the 5.850 - 5.925 GHz ("5.9 GHz") band for Unlicensed National Information Infrastructure ("U-NII"). Mercedes-Benz is a member of the Alliance of Automobile Manufacturers ("Alliance"), and fully supports the joint comments of the Alliance and Global Automakers ("Global") as well as the comments of SAE International ("SAE") concerning this rulemaking. In submitting these comments to the Commission, Mercedes-Benz would like to take the opportunity to highlight certain aspects of the comments submitted by the Alliance, Global, and SAE which are of specific interest to Mercedes-Benz and Daimler.

In 1999, the Commission allocated the 5.9 GHz band to the non-Federal Mobile Service of Dedicated Short Range Communication ("DSRC") for Intelligent Transportation Systems ("ITS")². Intelligent Transportation Systems utilize DSRC to facilitate wireless communication

¹ Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band, ET Docket No. 13-49, *Notice of Proposed Rulemaking*, 28 FCC Rcd 1769 (2013).

² See Amendment of Parts 2 and 90 of the Commission's Rules to Allocate the 5.850-5925 GHz Band to the Mobile Service for Dedicated Short Range Communications of Intelligent Transportation Services, ET Docket No. 98-95, *Report and Order*, 14 FCC Rcd 18221 (1999).

Mercedes-Benz USA, LLC
One Mercedes Drive
P.O. Box 356
Montvale, NJ 07645-0356
Phone: 201-573-0600
Fax: 201-573-1117
www.MBUSA.com

between vehicles as well as between vehicles and communication infrastructure, thus enabling a host of new technologies that can make future traffic more efficient and safer. The automotive industry and the public sector have undertaken considerable efforts to enable the future large-scale deployment of ITS technology. These efforts include the development of standards, which enable the global interoperability of DSRC devices of different manufacturers, as well as large-scale ITS pilot programs in the U.S., Europe and Japan. The National Highway Transportation Safety Administration ("NHTSA") is currently discussing the mandatory deployment of DSRC devices in new vehicles.

The above captioned NPRM seeks comment on making available for U-NII use of the 5.9 GHz band. As this would require U-NII and DSRC to share the same frequency band, there is the risk of harmful interference to either service. Mercedes-Benz is very concerned that U-NII operations in the 5.9 GHz band will cause harmful interference to DSRC and thus jeopardize the potential benefits offered by ITS.

Current U-NII devices use higher transmitter powers and larger channel bandwidths than DSRC. Furthermore, U-NII devices are currently not capable to sense DSRC signals. Thus, it can be expected the U-NII operations in the 5.9 GHz band will cause harmful interference to DSRC. However, DSRC cannot tolerate any harmful interference, as it is also intended to enable life-saving technologies like road hazard warnings, or crash avoidance systems. Such systems generally rely on the loss-free transmission of radio signals. Every signal loss could render these systems ineffective in the moment when they should protect lives. Drivers in turn would not be able to fully rely on DSRC-based vehicle safety systems, which is why DSRC should receive adequate protection from U-NII operations in the 5.9 GHz band.

As the automotive industry intends to roll out ITS technology on a global level, it has spent considerable efforts to develop standards that ensure the interoperability between DSRC devices of different vehicle manufacturers and across borders. These standards, on which manufacturers of DSRC devices base their development, also specify the use of the 5.9 GHz spectrum. They do not, however, account for unlicensed use of the 5.9 GHz band. If it should turn out that DSRC and U-NII cannot coexist, then the cross-border interoperability of DSRC systems will no longer be viable. This will have a major impact on ITS-related industries by raising development costs and eventually consumer prices.

Conclusions

Mercedes-Benz strongly recommends that the Commission proceed with extreme caution when allowing the use of this band for U-NII. Given the above mentioned technical issues, Mercedes-Benz is very concerned that DSRC and U-NII, in their current form, are not able to coexist in the 5.9 GHz band.

If U-NII operation in the 5.9 GHz band causes harmful interference with DSRC, then this will jeopardize the functionality of ITS, and thus eliminate the potential benefits to road safety and traffic efficiency offered by ITS. This prospect is even more troubling as the NHTSA is

May 28, 2013

Page 3 of 3

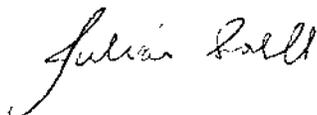
currently discussing the mandatory deployment of DSRC-based ITS technology in all new vehicles. Also, the automotive industry, and particularly Mercedes-Benz, has already invested considerably in the research and development of ITS technology. Aiming at a global deployment of this technology, industry standards have been developed that guarantee the interoperability between DSRC systems of different vehicle manufacturers and across borders. Therefore, Mercedes-Benz urges the Commission to allow U-NII operation in the 5.9 GHz band only under the condition that coexistence with DSRC can be demonstrated. In this respect, it should be noted that the recent National Telecommunications and Information Administration's report on the 5 GHz band concluded that more analysis is needed to determine whether the 5.9 GHz band can accommodate any U-NII operations without causing harmful interference to DSRC operations.³

As always, Mercedes-Benz is ready to work together with whomever to support the Commission's goal in providing additional spectrum to support wireless broadband services. However, Mercedes-Benz believes that it is the U-NII proponents' obligation to devise effective means to minimize the risk of harmful interference with DSRC.

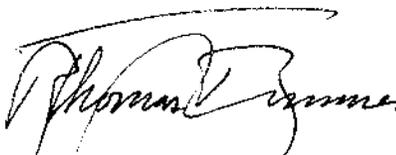
Mercedes-Benz strongly recommends that the Commission encourages all U-NII proponents to engage and consult with all interested parties (e.g., the Alliance, Global, and SAE) in order to develop a technical standards for U-NII that will allow coexistence with DSRC in the 5.9 GHz band. Coexistence would be assured if rigorous bench and field tests for any U-NII uses are shown to protect DSRC from potential interference. Furthermore, based upon the above suggested tests, the Commission should seek public comment before finalizing any rules allowing any U-NII operations in the 5.9 GHz band.

We appreciate this opportunity to comment on this important rulemaking. We will continue to monitor this docket. If you have any questions regarding our response, please contact Dan Selke, of my staff, at 201-573-2616, or Daniel.Selke@mbusa.com.

Respectfully Submitted,



Julian Soell
General Manager
Engineering Services



R-Thomas Brunner
Department Manager
Vehicle Compliance & Analysis

May 28, 2013

³ U.S. Department of Commerce, *Evaluation of the 5350-5470 MHz and 5850-5925 MHz Bands Pursuant to Section 6406(b) of the Middle Class Tax Relief and Job Creation Act of 2012 at 5-13 (2013)*, available at http://www.ntia.doc.gov/files/ntia/publications/ntia_5_ghz_report_01-25-2013.pdf.