



Automotive Safety Council

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April 2, 2015

FCC Commission Secretary
FCC Headquarters
445 12th St., SW
Room TW-A325
Washington, DC 20554

Re:

ET Docket No. 15-26 Amendment of Parts 1, 2, 15, 90 and 95 of the Commission's Rules to Permit Radar Services in the 76-81 GHz Band

RM-11666 Amendment of Part 15 of the Commission's Rules to Permit the Operation of Vehicular Radar Services in the 77-78 GHz Band

ET Docket No. 11-90 RM-11555 Amendment of Sections 15.35 and 15.253 of the Commission's Rules Regarding Operation of Radar Systems in the 76-77 GHz Band.

ET Docket No. 10-28 Amendment of Section 15.253 of the Commission's Rules to Permit Fixed Use of Radar in the 76-77 GHz Band.

ET Docket No. 11-202 Amendment of the Commission's Rules to Permit Radiolocation Operations in the 78-81 GHz

Notice of Proposed Rule Making and Reconsideration

The Automotive Safety Council (ASC), formerly known as the Automotive Occupant Restraints Council, is an industry association of 40 of the world's leading suppliers of Active, Passive, Interior, Pedestrian and Child Safety Systems to the automobile industry. The mission of the ASC is to reduce highway casualties and injuries by providing the motoring public with reliable

and effective safety systems, components and services, and to promote public education on the proper use and benefits of their restraint systems. ASC has been in the forefront of auto safety as an advocate for frontal air bags; other passive safety technologies such as side and rollover protection, inflatable knee bolsters, advanced energy absorbing steering wheels, weight sensing for out of position injury prevention, child and small occupant injury reduction, inflatable seat belts and various seat belt load limiting and energy management systems; and active safety products including Electronic Stability Control, Advanced Cruise Control, Emergency Brake Assist, Lane Departure Warning, Lane Keeping, Night Vision, Road Curvature Following, Advanced Head Light Control and Improved Rear Backup Warning. ASC is committed to providing the latest safety technology information so the related regulations, legislation and consumer rating tests can be developed in a confident and expedient manner.

Please find our comments below:

1. Proposal to expand the frequency band for vehicular radar usage from 76 -77GHz to 76-81GHz

The ASC supports the proposal to extend the frequency band available for vehicular radar usage. As noted, this will support wider sweep bandwidth needed for certain high resolution radars for short range applications, which is a key enabler for some advanced safety features (such as pedestrian detection / protection). As always, the ASC strongly recommends harmonizing with the global effort to utilize this band for vehicular radar applications, as this facilitates more rapid implementation of active safety systems (i.e., faster time to market and broader availability) and reduces the cost impact to the consumer by building on technology and capability that is already being developed.

The ASC does not see any significant issues with the NSF study performed on the potential interference impact with radio astronomy installations. However, it is clear that several factors will serve to further mitigate the distance at which interference might occur. As the study mentions, terrain shielding, low probability of line of sight interference and the attenuation of the fascia surface behind which vehicular radars are mounted will all serve to reduce the probability of potential interference and the range at which that could occur. Additionally, the fact that the wider bandwidth will be largely utilized by Short Range Radars (by definition shorter range than already approved LRR applications) should mitigate any increase in potential interference caused by opening up the band to broader usage.

With regard to potential conflicts with fixed installation radars, the ASC recommends that the FCC not allow any new fixed services in the 76-81GHz band before confirming that such devices will not interfere with vehicular radars.

- i. The Commission proposes to allow fixed infrastructure radar to operate in a one gigahertz band in the 76-81 GHz band and to allocate the 76-77 GHz band for its use (reference NPRM ¶ 55).
- ii. However, multiple groups have indicated that fixed infrastructure radar poses a significant threat of interference to vehicular radar.

1. Numerous parties have warned that fixed infrastructure radar can interfere with vehicular radar in a way that would create serious safety concerns for motorists, (e.g., Alliance of Automobile Manufacturers, Inc., Opposition, ET Docket Nos. 11-90 and 10-28, RM-11555 - filed Dec. 3, 2012; Comments of Toyota, ET Docket Nos. 11-90 and 10-68, RM-11555, at 6-9 - filed July 18, 2011).

2. As the Commission acknowledges, the ongoing More Safety for All by Radar Interference Mitigation (“MOSARIM”) study suggests that vehicular radars and fixed infrastructure radars are incompatible.

iii. The Commission should decline to allow fixed infrastructure radars to operate in the 76-81 GHz band until further testing is conducted.

3. Testing is already underway in Europe that should resolve some of the uncertainty surrounding this issue.

4. For example, the European Electronic Communications Committee’s (ECC SE, PTSE24) Working Group on Spectrum Engineering is preparing theoretical studies and a measurement campaign to assess the potential for coexistence between fixed and vehicular radars. See, e.g., SE24, Outcome of the 80th Meeting of SE24 (Dec. 10, 2014, 5:00 p.m.), <http://www.cept.org/ecc/groups/ecc/wg-se/se-24/page/outcome-of-the-80th-meeting-of-se24>. The results will be published in a publicly available ECC report.

5. It is unclear whether a new fixed radar allocation in the 76-81 GHz band is needed.

With regard to emissions levels, the ASC supports the proposal to maintain emissions levels at the current requirement.

2. Proposal to modify the 77.5 – 78GHz usage (formerly amateur radio/satellite) to include vehicular radar

The ASC supports the proposal to update the usage for the 77.5 – 78.0GHz band to include vehicular radar applications.

3. Proposal to move all vehicular radar from Part 15 to Part 95

The ASC supports the proposal to move only vehicular radar to Part 95 licensing by rules.

4. Proposal to consolidate vehicular radar applications into the 76 – 81GHz band

While the comments made in the NPRM appear to be targeted at 24GHz UWB applications, the language can be interpreted to indicate that any future 24GHz short range devices would be

impacted. Limiting new radar applications to the 76-81GHz band will likely have the negative effect of impairing the adoption of active safety solutions in vehicle applications where 24GHz solutions can sometimes provide lower cost alternatives to vehicle OEMs. The ASC supports policies that encourage early adoption of active safety features. Eliminating the option to utilize 24GHz radar technology going forward is not consistent with maximizing the adoption of active safety solutions in the market.

We are always available for follow up meetings to discuss these matters further

Respectfully submitted,

Douglas P. Campbell

A handwritten signature in black ink, appearing to read "D.P. Campbell". The signature is written in a cursive, somewhat stylized font.

President
Automotive Safety Council