1st Meeting of WG FM Project Team FM47 **FM47(09)036**
Copenhagen, 26 – 27 March 2009

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Source: **Radio Society of Great Britain (RSGB)**

Status: **for consideration**

Subject: **Comments on Automotive Short Range Radars**

Password protected: **yes** ☐ **no** ☒

Summary:

RSGB and other national Amateur Radio Societies find ETSI TR 102 664 for new unrestricted SRR at 24-29GHz (SRR26G) has the potential for far greater harmful interference to the Primary Allocation of the Amateur and Amateur Satellite Service at 24.0-24.05GHz than the current SRR24G and provide comments to FM47 for Impact Assessments and Compatibility Studies

Proposals:

- Enclosed are our initial inputs for the Impact Assessment options as proposed by the FM47 Chair
- New compatibility studies would be needed for the Protection of the Amateur & Amateur Satellite Primary Allocation at 24.0-24.05 if SRR26G were to use that frequency range, as Report 24 did not study Amateur use (which has expanded significantly since)
- Views the new 450MHz WLAM-SRR option as having significant merit and more spectrally efficient and compatible with current and future usage
- Also still sees merit in a time extension for SRR24G as an alternative

Background

RSGB and other Amateur Societies make active use of the Amateur and Amateur Satellite Service allocation at 24-24.05GHz (centred of activity 24.048GHz).

Comments were provided into the EU Consultation ahead of the WGFM meeting at Cascais.

Additional information is now provided to FM47, particularly in respect of the new information regarding the WLAM option

Comments regarding Impact Assessment and Regulatory Options

Option	Description	RSGB Comments
A	Keep current regulatory framework as it is / no change	Encourages SRR79G and acts as a driver for other general mm-Wave developments which we would welcome
B	SRR systems in the frequency band 24 – 29 GHz (SRR 26G)	High potential of harmful interference in the Amateur 24GHz Primary allocations. Unacceptable in the draft form proposed by ETSI unless actual bandwidth is above 24.05GHz
C	24 GHz narrow-band radar systems (NB-24G) with extended band mode (WLAM)	Has significant merit for eSafety with far few risks of harmful interference to other services including Amateur allocations
D	Timescale extension for SRR in the frequency band 21.65 – 26.65 GHz (SRR 24G)	We do not see why this was 'prematurely' dismissed as penetration levels would still be safe with, for example, a few years extension without undue interference being caused

Any unrestricted use of mass-produced UWB SRR26G will inevitably have far greater impact on services and undermine the previous assumptions and studies used for SRR-24G

Although it overlaps our secondary allocations we see considerable merits in Option-C, the so-called WLAM proposal, (and the thorough market data associated with Valeo inputs). This accomplishes the vast majority of e-Safety aims whilst having minimal impact to other radio services including the Amateur Primary allocation. It is also is supported by more thorough research than that from SARA and other automotive parties, who are essentially customers of and not developers of millimetre wave technology.

Information for Studies

In ECC Report 24 (for SRR24G) no assessment was made for the Primary Allocations of the Amateur Services at 24-24.05GHz. In the event this has been mitigated by the low SRR deployment levels. This would not be the case if unrestricted mass-produced SRR26G, as per the ETSI reference document, is permitted in 24-29GHz.

Amateur Operation is seeing significant growth at 24GHz. Individual stations and omnidirectional unattended propagation beacons are concentrated at and growing in numbers at 24.048GHz within the Amateur Primary allocation across Europe. These systems incorporate sensitive narrowband receivers and work over 100s of km range and are thus vulnerable to significant aggregated interference. Amateur Satellites are under construction (by Amsat-DL in Gerrnany) that incorporate 24.048GHz equipment.

In contrast there is now a very marked decline in use of the Secondary allocation (at 24.192GHz), which is no longer a priority and is shared with ISM. Our frequency move by 144MHz was determined by IF considerations and keeping well away from the passive band edge at 24.0GHz.

In some respects our use of our Primary allocation provides a guard band for the passive services below us, which would be endangered by unrestricted SRR26G. The latter in our view also undermines welcome 79GHz and other mmWave developments.

Further information on usage and stations is provided in the RSGB EU submission or available from RSGB or IARU on request