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| **Radiocommunication Study Groups** |  |
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| **4 June 2018** |
| **English only** |
| Annex 32 to Working Party 5A Chairman’s Report |
| Element of the text on best practice and experiences on the usage of the bands between ITS and other applications / services |
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[Editor’s note: The following text has not been agreed in SWG-ITS.]

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## 7.5 Best practice and experiences on the usage of the bands between ITS and other applications / services

### 7.5.1 CEPT: ITS Deployment parameters and numbers compared with CEPT ECC Report 101 [1] and current available products

During its work on harmonization for ITS, CEPT studied the situation with other users in the band 5 855 MHz to 5 925 MHz. The attachment is a comparison between the assumptions made for ECC Report 101 [1] as published in 2007 and the current and planned usage of ITS in the band.

It arrives at the following conclusions:

– The assumption taken in ECC Report 101 [1] can be seen as worst case assumption taking into account the relevant ETSI ITS set of specifications and the planned deployments scenarios in Europe. Some of the assumption concerning the TX power and the maximum average duty cycle were significantly overestimated and will lead to an additional protection margin.

– Under the review assumption even a 100% penetration with ITS devices based on IEEE 802.11p technology (i.e., ETSI ITS-G5 [12]) will not lead to an increase of the noise floor by more than 1%.

– The review on the assumptions of ECC Report 101 revealed that the taken conclusions are still valid.

### 7.5.2 China: Coexistence study between LTE based V2X and Fixed-Satellite Service

[Editor´s note: Referenced study needed for Annex or hyperlink.]

[Editor´s note: Summary of the CCSA study will be discussed offline LUX, INTELSAT, China.]

[China] CCSA initiated ITS frequency requirement and coexistence study since 2015, which includes the coexistence issue between LTE based V2X and the FSS[[1]](#footnote-1). The study report had been published in SR239-2018[[2]](#footnote-2) in April, 2018. The coexistence part of the study is translated in the attachment 2. It shows that the LTE based V2X system and the FSS may be co-existed in 5.9 GHz frequency band under the assumed conditions in the report, noting the satellite system parameters and scenario parameters may need further investigation, which include the aggregate interference from all LTE based V2X transmissions in the satellite system uplink service area, the vehicle activate factor, FSS earth station transmitting e.i.r.p. and the polarization discrimination, etc. In 2017, Telematics Industry Application Alliance (TIAA) organized LTE based V2X experiments at 5.9 GHz frequency band. There are four vendors participated this trial and provided LTE based V2X experimental equipment, the experiment included lab testing and fields testing.

In lab testing, RF performance, communication performance, and anti-interference performance were tested. In field testing, urban scenario and highway scenario were experimented. The urban scenario includes LOS and NLOS (cross and bend road), similarly highway scenario includes LOS and NLOS (bend road).

The experiment results show RF performance and general performance of LTS based V2X system could be met by the requirement of 3GPP specifications (36.101, 36.885 and 22.885), and the LTE-V2X being deployed at 5.9 GHz band may be feasible, noting aggregate interference from LTE based V2X to satellite system space station in FSS was not develop.[China]

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1. CCSA, “Frequency requirement and coexistence study on intelligent transportation system V2V/V2I active safety application”, 2015B60, 2016. [↑](#footnote-ref-1)
2. SR239-2018, <http://www.ptsn.net.cn/article_new/show_article.php?categories_id=6f022632-d21e-d744-3572-44b1be26e595&article_id=sr_6365e0c6-6b08-1527-cc0d-5acb083d7494>. [↑](#footnote-ref-2)