IEEE P802.15  
Wireless Personal Area Networks

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TG3mb Coexistence Assurance Document | | | | |
| Date: 2022-09-08 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | Email |
| Thomas Kürner | TU Braunschweig | Inst. f. Nachrichtentechnik, Schleinitzstr. 22, 38092 Braunschweig | +49 531 391 2416 | t.kuerner@tu-bs.de |

Abstract

This serves as the Coexistence Assurance (CA) document for TG3mb as required by the CSD.

# Introduction

This document addresses the coexistence of IEEE P802.15.3 Rev. B [1] as required by the CSD [2]. The IEEE 802 process requires that new wireless standards and amendments developed under IEEE 802 be accompanied by a Coexistence Assurance document. IEEE P802.15.3 Rev. B is based on IEEE Std 802.15.3-2016 and it’s amendments IEEE Std 802.15.3e-2017, IEEE Std 802.15.3d-2017 and IEEE Std 802.15.3f-2017. For the base stand and all amendments a Coexistence Aussurnace document has been provided [3,4,5,6].

IEEE P802.15.3 Rev. B adds new frequency bands between 325 and 450 GHz. This is the first IEEE 802 standard that is using this frequency range. Therefore no co-existence assurance to any other IEEE 802 standard is required at this time. In terms of other future IEEE 802 standards, which might be defined in the same frequency range, it is worth mentioning, that IEEE 802.15.3 provides listen-before-talk mechanisms during the Content Access Period, which is beneficial for coexistence.

However the frequency band 325 to 450 GHz is partly shared with other passive radio systems such as radio astronomy (RA) and earth exploration satellite services (EESS). In the Radio Regulations [7] fixed and mobile services have an allocation in the frequency band 252-275 GHz. In the frequency band beyond 275 GHz no dedicated allocation to any radio service is made. The use of this frequency band is regulated by footnotes 5.565 and 5.564A of the Radio Regulations, which identifies the use of certain frequency bands for THz communciations and specifies where passive services must be protected from harmful interference. In order to reduce the probability of interference with passive services IEEE P802.15.3mb follows the measures already described in [6].

# References

[1] Draft P802.15.3mb V1.0

[2] https://mentor.ieee.org/802.15/dcn/21/15-21-0477-04-03ma-draft-csd-15-3ma.docx

[3] https://mentor.ieee.org/802.15/dcn/09/15-09-0022-09-003c-coexistence-assurance.pdf

[4] https://mentor.ieee.org/802.15/dcn/16/15-16-0118-02-003e-802-15-3e-coexistence-assurance.doc

[5] https://mentor.ieee.org/802.15/dcn/17/15-17-0267-00-003f-amendment-802-15-3f-coexistence-assurance-document.pdf

[6] https://mentor.ieee.org/802.15/dcn/17/15-17-0004-03-003d-tg3d-coexistence-assurance-document.docx

[7] Radio Regulations 2020; <http://www.itu.int/pub/R-REG-RR-2020>