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Abstract: This documents provides information on regulatory issues with relevance to THz Communciations

Purpose: Information of the IG THz

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Regulatory Information in THz Communications

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Outline

- Status on WRC 2019 Preparation
- FCC NPRM

Status on WRC 2019 Preparation

Frequency Band 275 to 450 GHz for use with mobile and fixed services is subject to WRC 2019 AI 1.15

- WRC 2015 agreed in resolution 767:
 - to have an agenda item for WRC 2019 to consider **identification of spectrum for land-mobile and fixed active services in the range of 275 GHz to 450 GHz** while maintaining protection of the passive services identified in the existing footnote 5.565.
 - ITU-R is invited to
 - identify technical and operational characteristics (WP 5A and 5C for the new active services, WP 7C and 7D for existing passive services)
 - study spectrum needs (WP 5A and 5C)
 - develop propagation models (SG 3)
 - conduct sharing studies with the passive services (WP 1A)
 - identify candidate frequency bands (WP 1A)
 - ITU-R WP1A is leading the preparation of AI 1.15 and conducting the sharing studies.

Current status of the preparatory work of AI 1.15 WRC 2019 (1/2)

- The supporting Working Parties (WPs 5A, 5C, 7C, 7D and SG3) have finished their tasks.
- Regarding the new active services the reports ITU-R F.2416 and ITU-R M.2417 have been published. The applications are **Close Proximity/Kiosk Downloading, Intra-Device Communications and additional wireless links in data centers (land mobile) and wireless front-/backhaul links (fixed services)**.
- The frequency bands of interest are
 - between 275 to 450 GHz for land mobile applications.
 - especially, 275-325 GHz and 380-445 GHz for fixed service applications (maybe another band is possible in between).

Current status of the preparatory work of AI 1.15 WRC 2019 (2/2)

- WP 1A is conducting sharing studies and preliminary study results are available.
 - For instances in the band 275 to 296 GHz coexistence with the passive services seems to be possible. This provides a continues bandwidth of 44 GHz with the existing bands from 252-275 GHz.
 - Other bands are under consideration.
 - Next and final meeting of WP 1A is in June 2018.

IEEE 802 Positions to WRC 2019

- An update on IEEE 802's position on WRC AI 1.15 as discussed in IEEE 802.18 is available on mentor:
<https://mentor.ieee.org/802.18/dcn/17/18-17-0073-07-0000-ieee-802-viewpoints-on-wrc-19-agenda-items.pptx>

FCC NOTICE OF PROPOSED RULEMAKING AND ORDER (NPRM)

Status on NPRM

- On February 2018 FCC has released an NPRM wrt a plan to make the spectrum above 95 GHz more readily accessible for new innovative services and technologies: <https://mentor.ieee.org/802.18/dcn/18/18-18-0022-01-0000-fcc-18-17-nprm-for-95-3000-ghz-et-18-21-spec-horz.pdf>
- The comment period ended on May 2, 2018.
- IEEE 802.18 has discussed the document and prepared comments, which have been send to the FCC on May 2, 2018:
<https://mentor.ieee.org/802.18/dcn/18/18-18-0039-04-0000-ieee-802-comments-fcc-et-18-21-spectrum-horizons-to-3-thz.pdf>