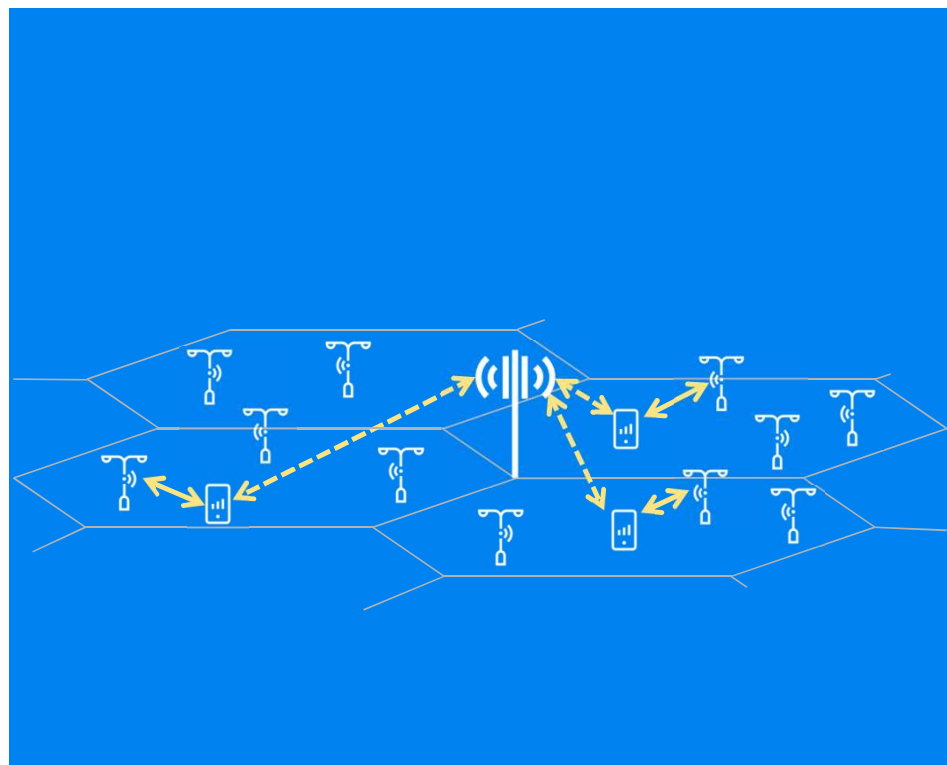# RP-191060

Views on Rel-17 NR operation in the 5 and 6 GHz unlicensed bands

3GPP TSG RAN Meeting #84
Newport Beach, CA, USA
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Agenda Item: 8
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Background

— Unlicensed spectrum as a complementary tool to augment operation and service offering has become an increasingly important toolkit for service operators
  — via licensed spectrum assistance, or purely based on unlicensed spectrum without associated licensed spectrum

Rel-16 NR-U WI
Essential functionalities

— Channel access mechanism
— Support of standalone, carrier aggregation and dual connectivity modes to address wide range of deployment and application cases
— Initial and random access adaptation to accommodate unlicensed band operation uncertainty
— Resource allocation to support reliable and efficient UL data and control information transmission
— Band definitions for the 5 and 6 GHz frequency ranges
    — Bands and channel rasters defined for <u>both</u> 5 and 6 GHz
    — gNB and UE RF core requirements for at least one band / band combination
    — RRM/RLM core requirements

Further development of NR features for 5 and 6 GHz unlicensed band operations beyond Rel-16

— Essential functionalities for operation in unlicensed spectrum planned in Rel-16 NR-U WI
  — Applicable to wide range of NR Rel-15 and 16 features

— Future evolution of 5 and 6 GHz NR-U capabilities for different use cases beyond Rel-16 can be naturally integrated in relevant feature WIs/SIs
  — Respective feature WI/SI should
    — reuse existing mechanism as much as possible and
    — only consider changes that are absolutely necessary for the feature's operation in unlicensed bands
  — Minimize NR-U specific changes by maximizing synergies with NR in licensed bands

— Dedicated Rel-17 NR-U WI can be considered, if needed, for only essential functionalities for basic NR-U operations that are not completed in Rel-16 NR-U WI

Summary

— Future evolution of 5 and 6 GHz NR-U capabilities beyond Rel-16 can be naturally integrated in relevant feature WIs/SIs

— Dedicated Rel-17 NR-U WI can be considered, if needed, for only essential functionalities for basic NR-U operations that are not completed in Rel-16 NR-U WI