NR/NON-3GPP INTEGRATION, INTERWORKING AND AGGREGATION

Motivation for SI

RP-170333

Background (1/3)

3GPP work on LWA

LTE-WLAN Aggregation (LWA) was introduced in Rel-13

- Overall architecture
- Air interface and network protocols
- Measurements
- DL only

Rel-14 Enhanced LWA (eLWA)

- 60GHz/WiGig support
- UL Aggregation
- Mobility enhancements

Background (2/3)

SA2

SA2#117 have approved SI on Unlicensed spectrum offloading system enhancements

Objectives (for LAA and LWA):

- Enable the 3GPP system to identify traffic which was transported over unlicensed access in non-roaming and roaming cases
- Ensure the granularity of data collected for UE data usage over unlicensed access is as required in order to enable its use for the particular operating purpose (e.g., accounting, charging and network planning).

This is likely to have at least RAN3 impact, perhaps also RAN2

Background (3/3)

3GPP/IEEE collaboration

Technical collaboration between 3GPP and IEEE is ongoing via LS exchange

In RAN#73 IEEE requested further collaboration (RP-161804), which was acknowledged by RAN and approved by PCG#37

- As part of this, 3GPP and IEEE are in process of LS exchange on WLAN measurements

IEEE, WBA and other Wi-Fi related fora appear to be interested in working with 3GPP on LWA

It appears to be beneficial to continue the work on LWA, involving IEEE and potentially other fora

Justification for NR study on WLAN

Licensed spectrum remains limited and costly

Data rate requirements are not expected to decrease

Unlicensed spectrum remains important for operators

Cooperation between 3GPP and IEEE is welcome and encouraged

NR study on WLAN

Builds on functionally defined for LTE (LWA, LWIP, etc)

Strives to define a single solution, to avoid market fragmentation

Addresses all the use-cases of LWA and LWIP

Additionally, NR study will evaluate new use-cases:

- Residential deployments
- Enterprise deployments
- Out of cellular coverage

New use-cases will allow operators to expend into new markets

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