

**3GPP TSG RAN#93e**

September 13<sup>th</sup> – 17<sup>th</sup>, 2021

**RP-212321**

Agenda Item 9.0.2

# Rel-18 Sidelink Enhancements

MediaTek Inc.

# Sidelink Enhancements

## RAN1-led

Support for Sidelink operation in any spectrum i.e. licensed and unlicensed.  
Performance improvements enabling low-latency 1Gbps.

**Objective I: Support for SL-U sub-7GHz, FR2, SL-U Sub-71GHz [RAN1, 4]**

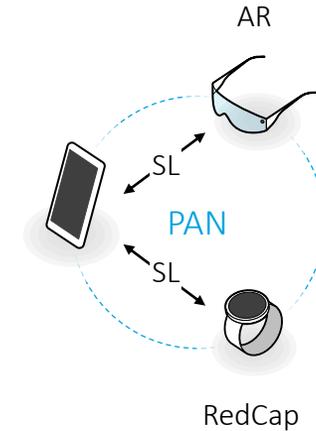
Focus on 5/6GHz unlicensed spectrum leveraging NR-U design.

**Objective II: Enable Low-latency 1Gbps Sidelink [RAN1, 2, 4]**

1. MIMO: a) CSI enhancement (PMI support, CSI reporting) b) >2layers
2. CA support: Sidelink + Sidelink incl. licensed + unlicensed
3. Reduced latency: mode 2d enhancements (UE scheduling UE) without redesign of PHY structure

3GPP TUs (Total w/ 9 meetings)			
RAN1	RAN2	RAN3	RAN4
16-18	10-11	-	6

SA/CT Dependency: No



# Sidelink Enhancements

- Support for SL-U sub-7GHz, FR2, SL-U Sub-71GHz [RAN1, 4]
  - leverage NR-U design for reusing of components/hardware and avoidance of co-existence study of SL-U/WIFI.
  - FR2 such as 60GHz is also preferred if possible for the less interference and high throughput to enable high-end commercial use cases.
- Enable Low-latency 1Gbps Sidelink [RAN1, 2, 4]
  - MIMO enhancement: Enhance the performance to enable high-end commercial use cases.
  - CA support: Higher capacity and performance by increased BW across licensed and/or unlicensed spectrum.
  - Reduced latency: Mode 2d enhancements (UE scheduling UE) with optimized PHY layer procedure and minimized PHY structure changes for lower latency and more efficient scheduling (assisted by BS).
  - Others: SL WUS for enhanced SL power saving.

# Thank You!