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Fraunhofer Institute for Integrated Circuits,
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Agenda Item: 9.1.2.5 Additional RAN2-led Topics

Views on 5G Advanced Rel-19 Sidelink Relaying

RAN#102, 11-15 Dec 2023, Edinburgh, Scotland

Rel-19 Sidelink Relaying

Motivations

SL Relaying

- Public safety use case, i.e., for firefighters
 - U2N relay with vehicle mounted relay
 - U2U relay for mission critical communication
- Increased coverage in cell-edge environments
 - Also consider harsh environments, i.e., mining industries
 - Power saving gain due to reduced TX power or remote UE
- QoS handling for latency and throughput
 - Congestion control for multi-hop (MH) relaying
- Multi-path relaying with more than one indirect path
 - For increased reliability and throughput

Potential Objectives

SL Relaying

- Specify multi-hop (MH) SL U2N relaying
 - Specify relay- and route-discovery and –selection
 - Consider QoS requirements and path properties for path selection
 - Consider congestion control on MH paths
- Specify multi-path relaying
 - Including multiple indirect paths
 - Including carrier aggregation on the indirect path
 - Consider QoS requirements
- Enhance multi-path relaying for increased throughput
 - Using a split-bearer without duplication
 - Configuring thresholds/ratios for the remote UE data streams