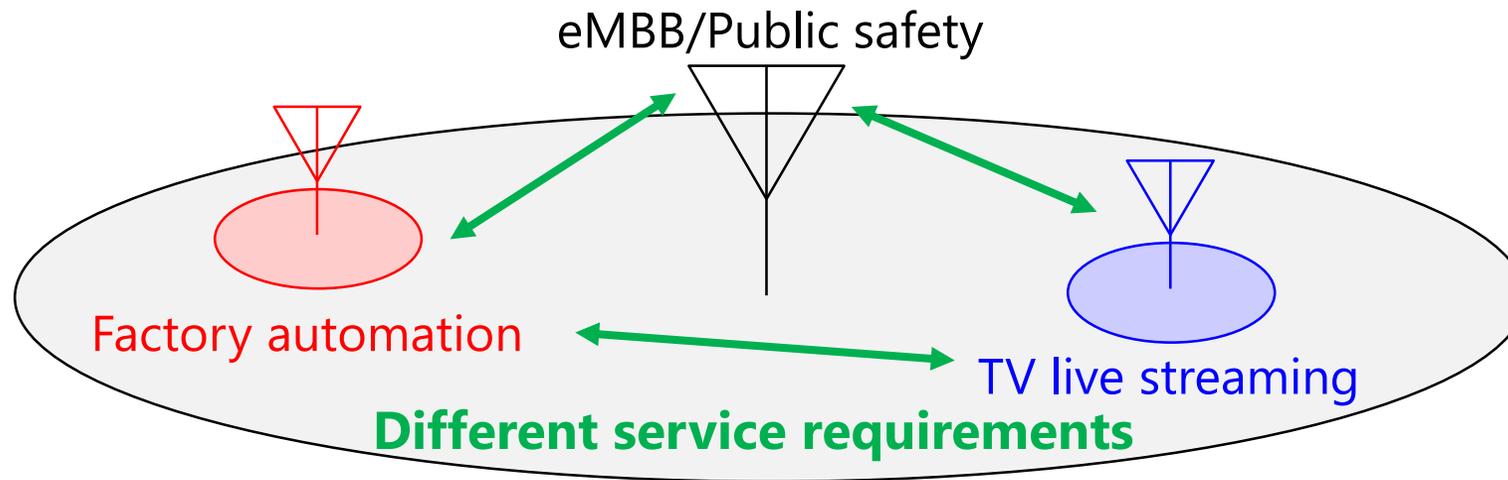


Study on interference management under different service requirements for Rel-17

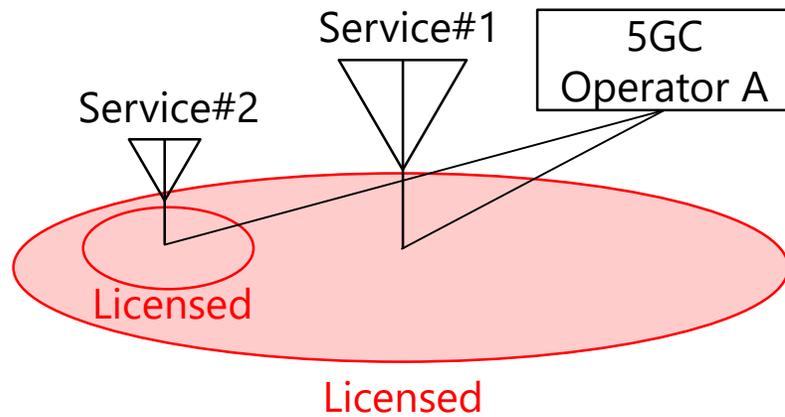
NTT DOCOMO, INC.

- NR is going to be used for industrial/mission critical network for a variety of services
 - e.g. Factory automation, Public Safety, TV live streaming,...
- One possibility for supporting such a variety of services is heterogeneous deployment
 - e.g., Macro/small cells are deployed for supporting specific services

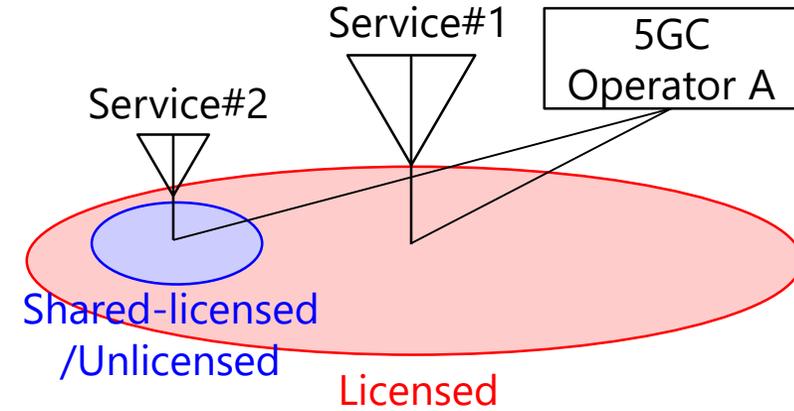


- So far, coexistence among cells with different service requirements has not been studied enough

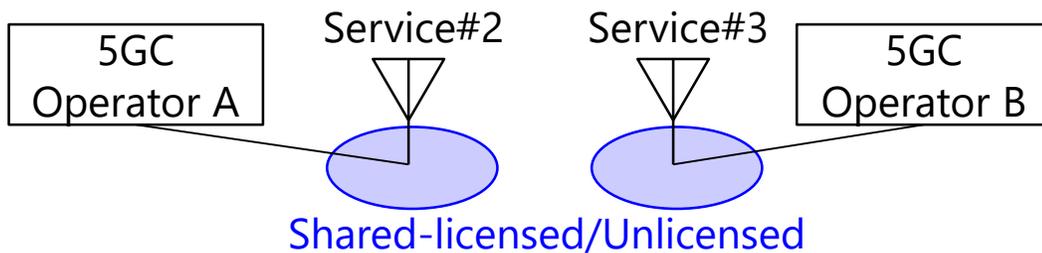
Possible Spectrum / NW architecture



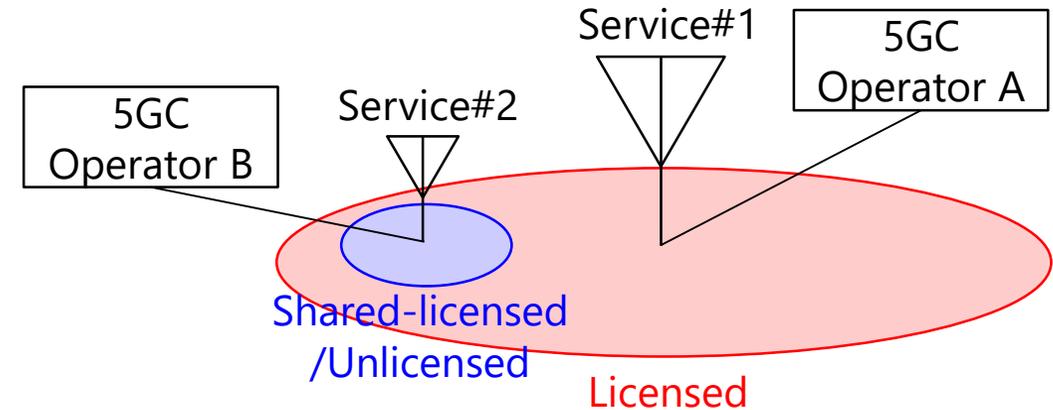
(a) Same spectrum / Same operator
Addressed in this potential SI



(b) Different spectra / Same operator
No interference -> out of scope



(c) Same spectrum / Different operators
Addressed in this potential SI



(d) Different spectra / Different operators
No interference -> out of scope

■ Service requirements should be satisfied even in strong interference environment

• Inter-Cell Interference management

- » Not clear whether implementation-based ICI management is enough
- » Not clear whether Rel-16 semi-static CLI handling is enough
- » Not clear whether Rel-16 NR-U coexistence mechanism is enough

} Addressed in this potential SI

• Signal quality improvement

- » Not clear whether Rel-16 multi-TRP transmission is enough
- » Not clear whether Rel-16 multi-Beam transmission is enough
- » Not clear whether Rel-16 repetition is enough

} Addressed in potential MIMO enhancement

Addressed in potential URLLC/IIoT enhancement

• Data prioritization

- » Not clear whether Rel-16 intra/inter-UE prioritization/multiplexing is enough

Addressed in potential URLLC/IIoT enhancement

• Those enhancements should achieve **good tradeoff between different service requirements**

- » e.g. eMBB support @ outdoor Macro while satisfying URLLC requirement @ indoor industrial

■ Scope for Study Item in Rel-17:

- Performance analysis under different service requirements
 - » Define evaluation methodology, KPIs and service requirements
- Performance enhancements
 - » Interference management among cells with different service requirements
 - » In terms of latency and reliability requirements, good tradeoff between eMBB and URLLC, etc.
 - » focus on the topics not covered by NPN functions in Rel-16

■ Work Area (Primary responsible WG: RAN1)

- Alt.1: Individual SI in Rel-17
 - » “Study on interference management under different service requirements in NR”
- Alt.2: Merged with possible URLLC/IIoT enhancement in Rel-17
 - » Proposed scope should be included in the SI/WI