3GPP TSG RAN Rel-18 workshop

June 28 – July 02, 2021

Agenda: 4.2 Non-eMBB-driven Functional Evolution

TDOC: RWS-210247

For: discussion

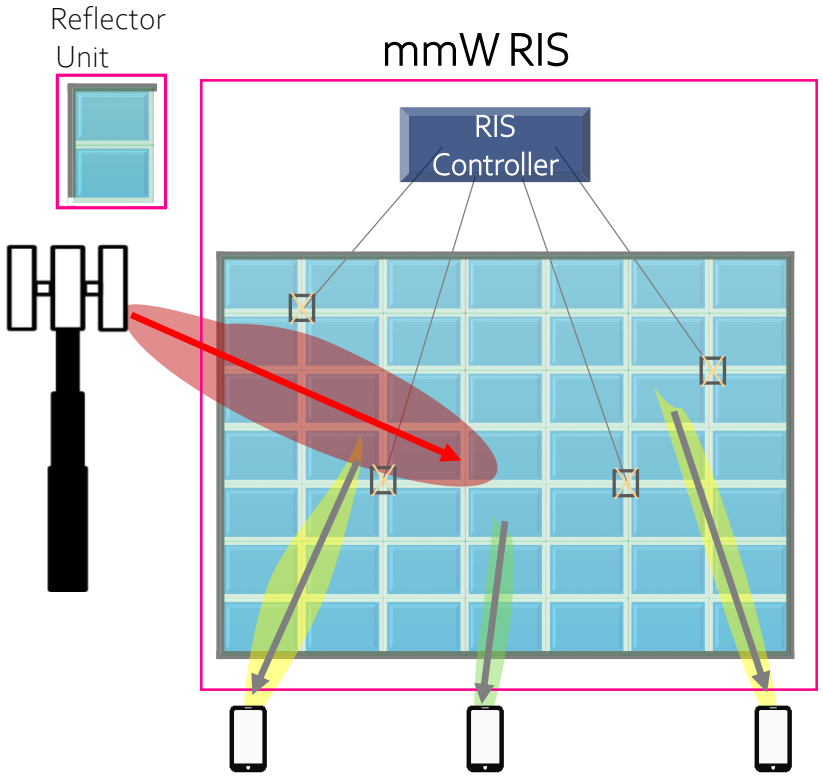
Reconfigurable Intelligent Surface

Source: Rakuten Mobile

Rakuten Mobile

Reconfigureable Intelligent Surface (RIS)

- RIS are surfaces that are capable of reconfiguring the wireless propagation environment by carefully tuning the phase shifts of a large number of low-cost passive reflecting elements.
- In a typical scenario envisioned for their operation, the optimal reflection coefficients of the RIS are calculated at the BS, and then sent to the RIS's controller through a dedicated feedback link.
- RIS is beneficial for extending the cell coverage in deployment scenarios, e.g. indoor, outdoor.



Proposal for Rel-18:

We propose a RAN1 Study Item to work on the following objectives:

- Channel Modeling along with Interference suppression mechanisms
- Investigate Use case and deployment scenarios (Indoor , Urban)
- RIS Components discussion (Active, Passive, Reflective Pattern)
- RIS Beam management, CSI-Feedback and demodulation
- Performance and Conformance aspect, if needed