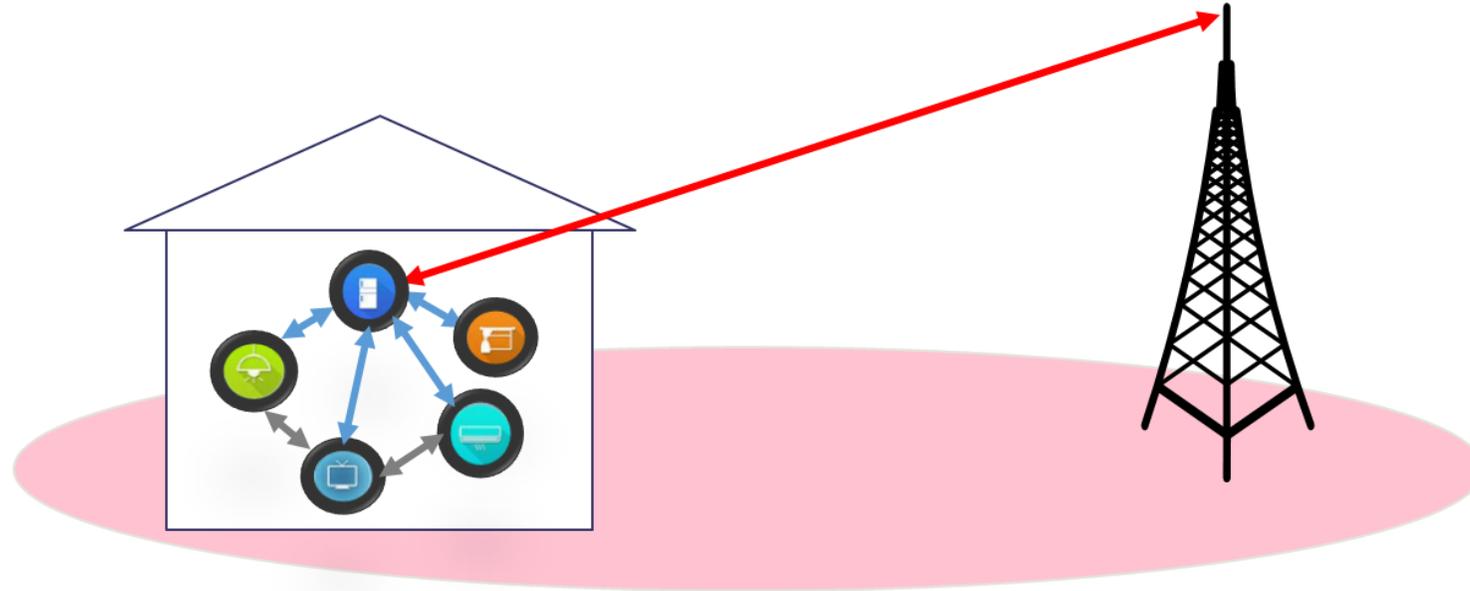




Motivation for new SID on NR sidelink for home IoT

Scenario for Home IoT



- Compared to MTC/NB-IOT, sidelink enables direct communication, which is more resource and energy efficient and less cost of remote UE for the home IoT devices.
- Sidelink relay could help for coverage enhancement to reduce the operator's investment.



Challenges of NR for Home IoT

- Direct NR communication increases the cost of the communication module, consumes more power and depends good coverage, Influencing the large-scale market applications
- Power consumption for device depending battery while supporting video burst is very challenging, demanding a suitable solution.
- Use case for direct communication among home IoT devices is unneglectable and with latency advantages.
- Home IoT appliances are in variety, some big appliance is suitable for relay UE and wideband, however, other small devices are suitable for narrow band remote UE .

Potential objective



- Study the feasibility for low cost for home IoT
 - Support of sidelink transmission and reception in narrow band.
 - Low RF complexity
- Study on UE-to-Network and UE-to-UE relay for sidelink communication in NR
- Study on sidelink power saving mechanism
 - DRX enhancement for NR sidelink



Thanks