Notes on Dahlmann, Parkvall, Skold's "5G NR" Chapter 3 – "Spectrum for 5G"

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Global spectrum situation for 5G

- ▶ Spectrum of interest can be divided into low, medium and high frequencies.
- ▶ Low – Below 2 GHz – coverage layer. Small bandwidths (20 MHz). 3GPP NR n71 and n28
- ▶ Medium – 3 - 6 GHz – coverage, capacity and high data rates through wider bandwidth (100 MHz). n77 and n78
- ▶ High – above 24 GHz – hotspot coverage with locally very high capacity. Bandwidths up to 400 MHz (more is possible with carrier aggregation). n257 and n258

Frequency bands for NR

- ▶ Frequency bands within Release 15 are divided in: Frequency range 1 (FR1) for bands below 6 GHz, Frequency range 2 (FR2) for bands in 24.25-52.6 GHz.
- ▶ NR will support both TDD and FDD, and some bands will be intended to supplementary downlink (SDL) and supplementary uplink (SUL)