



5G Initiative – “5G Roadmap” Working Group

5G Antennas and Propagation Challenges

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5G Antennas and Propagation Challenges

- **Topic Field** (eg device, wireless, core, application)
 - Smart antenna design
 - Antenna and base-station placement
 - Proper electromagnetic treatment of radiation in near field
 - Accurate propagation modeling
 - Proper use of capacity
 - Default antenna system for base stations when catastrophes take down existing 5G network
- **Relation to SDOs and other**
 - TBD
- **Impact Horizon** (short, medium, long)
 - TBD

5G Antennas and Propagation Challenges

- **Place antenna on base station near ground (~ 2m) and pointing slightly up**
 - Reduces power to antenna and cost of base station significantly with equally good performance compared to traditional base station configurations