FTMRS SOLAR

Outdoor placement of base stations

Overview

Why do we need additional base stations?

Hence, additional base stations (BSs) may be needed to satisfy the new demand. This case addresses the application of dynamic permanent demand for service such as establishing a new residential area over several time periods where new demand clusters are created in each time period as the residential area expands.

Should mmwaves be deployed in urban areas?

It is difficult for mmWaves to penetrate buildings in urban areas; thus, more BSs must be deployed in areas with densely distributed buildings to achieve satisfactory service coverage. The ultra-dense deployment of 5G BSs in urban outdoor areas requires considerable investments and will greatly increase energy consumption.

Are more BSS required in areas with densely distributed buildings?

Another interesting result is that as p increases, more BSs are deployed in the southern and northwestern parts of the study area where buildings are densely distributed. In other words, more BSs are required in areas with densely distributed buildings to improve service coverage.

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