Reuse of base station communication equipment

How do cellular base stations work?

Each cellular base station is allocated a group of radio channels or Frequency sub-bands to be used within a small geographic area known as a cell. The shape of the cell is Hexagonal. The process of selecting and allocating the frequency sub-bands for all of the cellular base stations within a system is called Frequency reuse or Frequency Planning.

What equipment does a micro base station use?

The AAU of the micro base station adopts the Remote Radio Unit(RRU) and antennas (Simic,2007). Equipment parameters vary by manufacturers (Yu et al.,2021). Data from four manufacturers (see Table S2) were collected to measure their uncertainty through Monte Carlo simulation.

What is the main mode of transport of base station equipment?

The road transportation modeis the main mode of transporting the base station equipment. The main energy consumption is related to fuel usage.

How does frequency reuse affect network performance?

Increased Interference: Frequency reuse can result in increased interference,particularly in areas where cells are closely spaced. This can reduce the quality of service and network capacity. Implementation Complexity: Frequency reuse requires careful planning to ensure that cells are appropriately spaced and that interference is minimized.

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