
Mobile LTE base station communication principle

How does a mobile phone communicate with a base station?

The same mobile phone will be connected to several surrounding base stations, sending MR data to the communication network at a frequency of 480ms each time, including signal strength, quality, and TA (Time Advanced) information. The TA indicates the actual time when the mobile phone signal reaches the base station.

How does LTE mobile work?

LTE Mobile communicates with just one base station and one cell at a time and there are following two main functions supported by eNB: The eNB sends and receives radio transmissions to all the mobiles using the analogue and digital signal processing functions of the LTE air interface.

Why are base stations important in cellular communication?

Base stations are important in the cellular communication as it facilitates seamless communication between mobile devices and the network communication. The demand for efficient data transmission is increased as we are advancing towards new technologies such as 5G and other data intensive applications.

Is mobile communication quality related to network evolution?

Therefore, its quality is closely related to the network evolution. This chapter introduced the mobile communication principle, including the architecture and core technology of 4G-LTE mobile communication, the generation principle of mobile phone signaling data, and the parameters of communication base station.

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Explore the essential role of base stations in mobile communications. Understand their design, technology, and the shift to 5G ?. Discover the future impact and sustainability ...

Conclusion LTE base stations are the backbone of modern mobile communication, enabling efficient and reliable data transfer over LTE networks. By understanding how LTE ...

Learn how mobile communication works, from cell towers to 5G, with this complete technical guide. In the modern world, mobile ...

This 4G tutorial delves into LTE's basic principles, network architecture, channels, frequency bands, QoS, protocol stack, comparison with 2G/3G, ...

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Conclusion Understanding how cellular LTE networks work can seem complex, but it's fascinating to see the technology that enables our daily communications. From the basic ...

The present-day tele-space is incomplete without the base stations as these constitute an important part of the modern-day scheme ...

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Introduction to Base Transceiver Station (BTS) in Computer Science Context A base transceiver station (BTS) is a critical network component that serves as the primary hardware interface ...

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