

Two users communicate with one base station





Overview

Can a new base station architecture improve multiuser network performance?

This paper proposes a new base station (BS) architecture employing multiple MAs for improving the multiuser network performance. First, the uplink multiple access channel (MAC) is modeled to capture the characteristics of the variation of wireless channels caused by the movement of MAs at the BS.

How does a base station communicate with a client device?

Generally, if client devices wanted to communicate to each other, they would communicate both directly with the base station and do so by routing all traffic through it for transmission to another device. Base stations in cellular telephone networks are more commonly referred to as cell towers.

What is a base station in telecommunications?

In telecommunications, a base station is a fixed transceiver that is the main communication point for one or more wireless mobile client devices. A base station serves as a central connection point for a wireless device to communicate.

What is a wireless base station?

A base station represents an access point for a wireless device to communicate within its coverage area. It usually connects the device to other networks or devices through a dedicated high bandwidth wire or fiber optic connection. Base stations typically have a transceiver, capable of sending and receiving wireless signals;



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How Do Base Stations Communicate with Each Other?

Dec 3, 2025 · Base stations communicate with each other through a wireless communication protocol such as Wi-Fi, Bluetooth, LTE, or other cellular networks. They can also communicate ...

Multiuser Communications with Movable-Antenna Base ...

Aug 26, 2023 · Abstract--Movable antenna (MA) is an emerging technology which enables a local movement of the antenna in the transmitter/receiver region for improving the channel ...



the base station has two receive antennas and two users ...

The base station has two receive antennas, and each of the two users has a single transmit antenna. In this discussion, we will plot the uplink capacity region for the two users.



Multiuser Communications With Movable-Antenna Base Station...

Nov 2, 2024 · Movable antenna (MA) is an innovative technology that facilitates the repositioning of antennas within the transmitter/receiver area to enhance channel



conditions and ...



What is a base station?

Mar 4, 2021 · What is a base station? In telecommunications, a base station is a fixed transceiver that is the main communication point for one or more wireless mobile client devices. A base ...



Handoff in Cellular Telecommunications

Jul 12, 2025 · In cellular telecommunications, the terms handover or handoff refers to the process of transferring an ongoing call or data connectivity from one Base Station to another Base ...



System model where two users communicate with a base station ...

Download scientific diagram , System model where two users communicate with a base station with the help from L relays. II.
DESCRIPTION OF SYSTEM MODEL Consider a uplink ...



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