Three-dimensional communication base station

How are base stations based on ray-tracing based channel modeling?

Additionally,at their new locations,these behaviors are adjusted to facilitate accurate coverage estimation from the base stations they serve. In the deployment optimization of UAVs,the placement of base stations is determined using received signal strength dataobtained through the ray-tracing-based channel modeling technique.

Can a fixed base station deliver a high-reliable and low-latency communication capacity?

However,achieving the ultra-reliable and low-latency communication capacity promised by 6G is not possiblewith fixed base stations alone. In particular,environments such as densely populated areas,disaster areas,rural areas,and hard-to-reach areas are among the scenarios where fixed infrastructures are inadequate.

Will drone base station technology play a significant role in mobile communication networks?

All these studies indicate that drone base station technology will play a significant rolein the future of mobile communication networks. Therefore,research activities in this area continue to increase. 2. Technical Background of UAV Deployment Optimization and Base Station Communication 2.1. General Structure of UAVs

Can UAVs be used as dynamic base stations?

The use of UAVs as dynamic base stationsin 6G-based mobile communication infrastructures has been the subject of increasing research interest in recent years. In this context,computational models developed to optimize both the mission load and the three-dimensional routes of UAVs offer solutions integrated with mobile edge computing.

Recently, unmanned aerial vehicles (UAVs) have been reported a lot as aerial base stations (BSs) to assist wireless communication in Internet of Things (IoT). However, most results for UAV deployment ...

Based on the proposed channel model, we formulate the joint optimization problem of UAV three-dimensional (3-D) positioning and resource allocation, by power allocation, user ...

N recent years, unmanned aerial vehicle (UAV)-assisted communication systems have at-tracted increasing attention for supporting the seamless coverage in the beyond fifth-generation (B5G) and sixth ...

This article investigates a communication system assisted by multiple UAV-mounted base stations (BSs), aiming to minimize the number of required UAVs and to improve the coverage rate by ...

We propose a novel systematic approach for the deployment optimization of unmanned aerial vehicles (UAVs). In this context, this study focuses on enhancing the coverage of UAV ...

It is shown in Figure 1 that, for a two-dimensional (2D) location system, the coordinates of an undetermined target can be determined by using three or more communication base stations.

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Abstract: Aiming at the problem that the indoor three-dimensional positioning algorithm is complex and the accuracy is not high, this paper proposes a three-dimensional wireless positioning method ...

With the rapid advancement of unmanned aerial vehicle (UAV) technologies in communication, logistics, and surveillance, UAV aerial base stations (UAV-BSs) are emerging as critical nodes in future ...

To extend the coverage of traditional terrestrial communication networks and serve more diverse application scenarios, employing unmanned aerial vehicles (UAV) as aerial base stations has emerged as a ...

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