
Indoor base station outdoor received information

Can 5G signal base station be used for indoor positioning?

As commercial 5G systems rapidly expand, indoor positioning using 5G signals holds great potential for serving a large number of users. In this paper, an effective fingerprint solution is proposed for indoor positioning with 5G signal base station by exploring the multi-beam property.

Is UWB a good option for indoor applications?

As positioning technology advances, the popularity of Ultra-Wideband (UWB) positioning in indoor applications continues to grow. However, UWB faces many challenges in outdoor environments, such as issues with base station deployment, as well as the impact of ping-pong effects and multipath effects in indoor-outdoor transition zones.

How many 5G base stations can a GNB receive?

However, 5G technology primarily serves communication purposes. Therefore, in common urban indoor scenarios, the number of 5G base stations, known as gNBs, that can simultaneously receive signals is usually limited to 1 or 2. This limitation makes it challenging to achieve effective positioning in real-world applications (Liu et al., n.d.).

Why is GNB so difficult to use indoors for 5G positioning?

One particular challenge arises from the fact that in numerous indoor scenarios, there is only one base station (called gNB) heard from the receiver. This limitation makes the traditional geometric methods difficult to be applied indoors for 5G positioning.

Abstract As commercial 5G systems rapidly expand, indoor positioning using 5G signals holds great potential for serving a large number of users. In this paper, an effective ...

In the substation environment of the power system, accurate positioning technology is of great significance for ensuring personnel safety, improving operation and ...

In particular, this research only uses the multibeam reference signal received power as data source, which is derived from a single commercially deployed base station (BS) ...

In the context of 5th-generation (5G) mobile communication technology, deploying indoor small-cell base stations (SBS) to serve visitors has become co...

The TETRA integrated Base Station (iBS) is a base station suitable for outdoor and indoor operation. Thanks to its small size and lightweight, the TETRA iBS is easily transported, flexibly mounted, and quickly deployed, ...

Fifth-generation (5G) networks have been deployed to serve a massive number of users. The new properties of 5G, such as large bandwidth, high data rates, and extensive ...

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