

The purpose of high-altitude installation of communication base station inverters and grid connection

What is a high altitude platform station?

This concept is known under the designation High Altitude Platform Stations (HAPS) as IMT base stations, or HIBS. By using the same spectrum as already identified for IMT and where deployments already exist today, HIBS can extend the operator's coverage area and benefit from the already existing device ecosystem.

What is a high altitude platform station (Hibs)?

High Altitude Platform Station as IMT Base Stations (HIBS) are essentially HAPS platforms (see Figs. 1 & 2), defined and operating within the context of a station in the mobile service (specifically IMT mobile service). This distinction reflects the lens through which the ITU currently views these technologies and the services they may support.

What is high-altitude platform station (Haps)?

Abstract: High-altitude platform station (HAPS) as International Mobile Telecommunications (IMT) base station (HIBS) has been attracting the attention of aerospace and telecommunication companies from many countries in recent years.

Can high-altitude platforms be used for mobile communication?

Mobile communication via high-altitude platforms operating in the stratosphere is an idea that has been on the table for decades. In the past few years, however

Will Hibs be extended to a terrestrial network?

In terrestrial networks, the service level for availability is 99.999% and this requirement will most certainly be extended to HIBS. As an integrated network, failures from any segment of the network will be propagated especially where redundancy cannot be easily achieved.

Are Hibs required to provide carrier-grade availability of 99.999%?

HIBS which are the equivalent of terrestrial towers in the stratosphere may be required to provide carrier-grade availability of 99.999%. The paper explores these concepts and challenges and contributes the following; An analytical approach to examining the problem. Establishing a framework for measuring current HIBS/HAPS capabilities.

This research paper presents the results of the implementation of solar hybrid power supply system at telecommunication base tower to reduce the fuel consumption at rural area. An ...

that high-altitude platform stations (HAPS) as IMT base stations (HIBS) would be used as part of terrestrial IMT networks and may use the same frequency bands as ground-based IMT base ...

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The aerial part of the emergency communication base station consists of a high-altitude carrier carrying the base station equipment, the base station antenna and the air-ground connection ...

In this paper, HIBS is examined from the context of its integration with 5G new radio (NR) as a non-terrestrial network asset. The challenge of HIBS meeting the stringent ...

Large-scale grid-connected photovoltaic power generation systems place "grid-friendly" requirements on inverters, which require rapid control of frequency, voltage, current, phase, ...

A resurgence of interest in providing connectivity using high-altitude platforms started around 2014, mainly driven by the Internet companies Google and Facebook that invested in new ...

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