SolarGrid Energy Solutions

Urban and rural base station communication maintenance

Overview

Aiming at designing an RBS maintenance system, we conceived an environment where a teleoperator could execute a maintenance task remotely. Initially, the.

The first approach to build the RBOT system was based on simulation. Simulation is often used to avoid problems with real robots and to predict behaviors in the.

This section briefly details some issues and challenges throughout the simulation step that can be used as a base for any work that desires to develop a simulated.

The main reasons to resort to a simulation to create the initial prototype for the RBOT maintenance system are (1) it is safer to develop a complex system.

Do aerial base stations provide reliable coverage in far-flung areas?

Contextually, we focus on one of the most promising solutions to provide sufficient and reliable coverage in far-flung areas: aerial base stations (ABSs), which consist of unmanned aerial vehicles (UAVs) carrying cellular BS equipment.

Should mmwaves be deployed in urban areas?

It is difficult for mmWaves to penetrate buildings in urban areas; thus, more BSs must be deployed in areas with densely distributed buildings to achieve satisfactory service coverage. The ultra-dense deployment of 5G BSs in urban outdoor areas requires considerable investments and will greatly increase energy consumption.

Who supports the research in urban land resources monitoring & simulation?

This research was supported by the National Natural Science Foundation of China (Grant No. 41971336), the Open Fund of the Key Laboratory of Urban Land Resources Monitoring and Simulation, Ministry of Natural Resources (Grant No. KF-2018-03-033) and the National key research and development

program (Grant No. 2018YFD1100801).

Are more BSS required in areas with densely distributed buildings?

Another interesting result is that as p increases, more BSs are deployed in the southern and northwestern parts of the study area where buildings are densely distributed. In other words, more BSs are required in areas with densely distributed buildings to improve service coverage.

Are mmwaves a problem in urban areas?

According to Pi and Khan (2011), even for buildings made of common materials such as bricks and concrete, the penetration loss of mmWaves in urban areas is excessively high, which can lead to a significant isolation of indoor and outdoor areas (Palizban, Szyszkowicz, & Yanikomeroglu, 2017).

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Base Stations , RADIX

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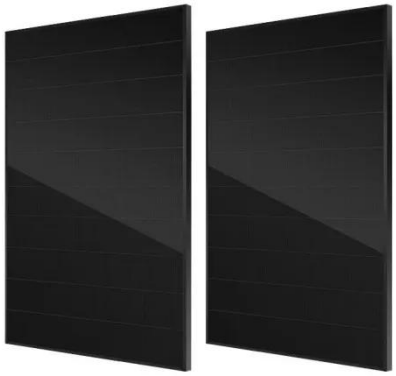

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Base Station Installation & Maintenance

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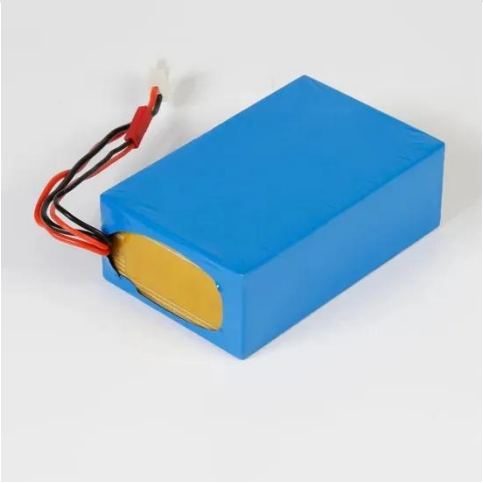

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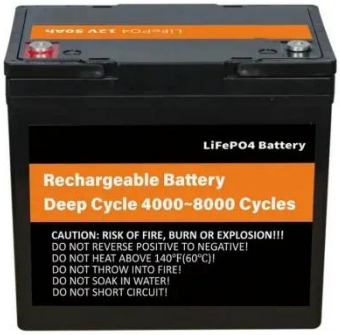

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