

#### **SolarGrid Energy Solutions**

# Communication with base station is abnormal







#### **Overview**

What happens if a base station is faulty?

The faulty base station establishes a radio connection with the user equipment and releases the connection afterward due to the worst channel conditions. Because our reference values come from the worst channel conditions, the optimal thresholds hence ensure fake base station detection with zero false positives under varying network conditions.

What is a false base station?

2.2. Security Threat from a False Base Station A false base station refers to an unauthorized base station capable of launching attacks on User Equipment (UE) or the mobile communication network. These deceptive entities exploit the the common behavior observed in UEs, which is the tendency to connect to stronger wireless signals.

How does blacklisting identify a faulty base station?

Our blacklisting identification focuses on the attacker (fake base station) and not on accidental/unintentional failures (faulty base station). We therefore distinguish between fake and faulty but unintentional, the latter of which can be caused by the lack of connectivity services at the time of the user equipment access.

What is a fake base station attack?

An attacker exploits the cell selection/reselection process (selecting the highest signal power) and cryptographically insecure (without integrity and authentication protection) broadcast system information messages in radio control communication to launch a fake base station attack in LTE [4, 5] and even in 5G-NR [6, 7].

What happens if a base station is fake?

Furthermore, the fake base station cannot proceed with the authentication



request because it does not hold the core network's private key (or, if using 4G, the symmetric key) and cannot generate the correct digital signature; the user equipment can check the legitimacy of the core network/base station and disconnect the NAS/RRC immediately.

Are false base stations a threat?

One persistent concern is the risk of false base station attacks, where malicious actors deploy deceptive base stations that mimic legitimate ones, often with the intention of stealing user information or launching resource depletion attacks such as Denial of Service (DoS).



#### Communication with base station is abnormal



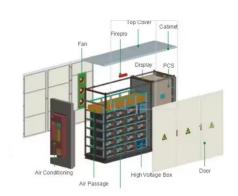
## Mobile station, base station, communication system and abnormal ...

A mobile station, a base station, a communication system and an abnormal power down reporting method thereof are provided. The communication system includes the mobile station and the ...

### ACS and base station abnormal message processing method ...

[0002] Between the ACS and the 5G base station in the current 5G network, due to the backlog of message interaction and abnormal transmission, the abnormal situation of repeated ...





## ROIDMI EVA/EVE USER GROUP, Anyone facing base station communication ...

Anyone facing base station communication is abnormal when return for cleaning? it is kept on happen.



### Communication Base Station Inspection , HuiJue Group E-Site

What if your base stations could selfdiagnose issues before symptoms appear? Leading operators now embed vibration signature analysis modules that detect abnormal resonance ...





### Identifying the Fake Base Station: A Location Based ...

Jan 22, 2023 · Hui-Ming Wang, Senior Member, IEEE Abstract--Fake base station (FBS) attack is a great security challenge to wireless user equipment (UE). During the cell selection stage, ...

### SMDFbs: Specification-Based Misbehavior ...

Nov 29, 2023 · However, the sustainability of such an environment is threatened by false base stations. False base stations execute attacks in the Radio ...



### ACS and base station abnormal message processing method ...

Therefore, there is a need for a TR069





protocol-based ACS and base station abnormal message processing method, which can perform cache optimization and anti-duplication processing on ...

#### US11683777B2

Definitions the inventionrelates to a base station and a data uplink transmission abnormal detection method. More particularly, the invention relates to a base station and a data uplink ...





### Fake Base Station Detection and Link Routing Defense

Sep 1, 2024 · Fake base stations comprise a critical security issue in mobile networking. A fake base station exploits vulnerabilities in the broadcast message announcing a base station's ...

### Fake Base Station Detection and Blacklisting

Jul 31, 2024 · A fake base station is a well-known security issue in mobile



networking. The fake base station exploits the vulnerability in the broadcasting message announcing





#### CN101217799B

The present invention relates to the communications field, relate more specifically to a kind of method and base station of compatible with abnormal terminals.

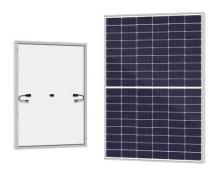
#### Research on Abnormal Energy Consumption Monitoring of Base Station

Oct 22, 2023 · With the large-scale construction of 5G, the operating cost of the communication industry is increasing year by year, and the energy consumption management of wireless base ...



### Simulation and Classification of Mobile Communication Base Station





Dec 16, 2020 · In recent years, with the rapid deployment of fifth-generation base stations, mobile communication signals are becoming more and more complex. How to identify and classify ...

#### ???? ?????????????

?????????????????????????????? ????DOC ...





### Xiaomi vacuum robot users lip lai please

Dec 30, 2016 · Anyway, powering off/on the base station didn't work - I guess it is just reflecting the Wi-Fi status of the robot itself. Took the robot out of the base station and forced shutdown ...

#### CN101217799A

The present invention relates to the communications field, relate more specifically to a kind of method and base



station of compatible with abnormal terminals.



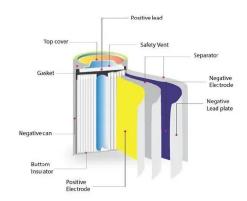


### Design of Wireless Communication Base Station Monitoring ...

Jan 1, 2023 · With the rapid popularization of the network, under the increasingly complex network security situation and the increasingly prominent network security problems, network security ...

### SMDFbs: Specification-Based Misbehavior ...

Nov 29, 2023 · The advancement of cellular communication technology has profoundly transformed human life. People can now watch high-definition ...



#### ?? Base Station ????,???????????





### Predicting malfunction of mobile network base station using ...

Sep 20, 2019 · In order to improve the communication quality of the mobile network, reduce the probability of malfunctions in the network components, reduce the time of service







#### SMDFbs: Specification-Based Misbehavior Detection for False Base Stations

Nov 29, 2023 · The advancement of cellular communication technology has profoundly transformed human life. People can now watch high-definition videos anytime, anywhere, and ...

### **Detection of Rogue Base Station using MATLAB**

Mar 3, 2020  $\cdot$  A. Rogue Base Station Attacks Keywords: MATLAB, Received



Signal Strength (RSS), Rogue Base Station detection and Sensitivity.



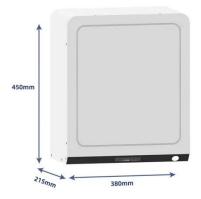


### Predictive Modelling of Base Station Energy ...

Apr 13, 2024 · The increasing demand for wireless communication services has led to a significant growth in the number of base stations, resulting in a substantial increase in energy ...

### ACS and base station abnormal message processing method ...

[0002] Between the ACS and the 5G base station in the current 5 G network, due to the backlog of message interaction and abnormal transmission, the abnormal situation of repeated ...



### How to Configure Yealink W80 DM: Optimizing ...

Dec 13, 2024 · Introduction Setting up a reliable DECT communication system is





crucial for any business, and Yealink's W80DM offers a powerful solution. If ...

### Localization of a high-speed train using a speed model ...

Aug 1, 2018 · The labels of the abnormal base stations and corresponding RRUs obtained from the speed model and the abnormal base station label of the HSR user information are shown ...





### Real-Time Rogue Base Stations Detection System in Cellular ...

Apr 10, 2024 · Recently, rogue base station (RBS) attack is growing common. A RBS attack occurs when an attacker uses a fake base station (FBS) to mimic a legitimate base station, ...

### Active RIS-NOMA-Aided Covert Communication With ...

Sep 26, 2023 · In this letter, we investigate an active reconfigurable



intelligent surface (RIS) and nonorthogonal multiple access (NOMA)-aided covert communication system with hardware ...





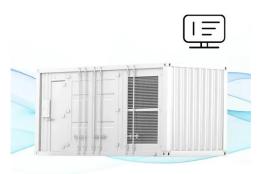
#### US20220124663A1

Definitions the inventionrelates to a base station and a data uplink transmission abnormal detection method. More particularly, the invention relates to a base station and a data uplink ...

## MOBILE STATION, BASE STATION, COMMUNICATION SYSTEM AND ABNORMAL ...

A mobile station, a base station, a communication system and an abnormal power down reporting method thereof are provided. The communication system includes the mobile station and the ...

### FLEXIBLE SETTING OF MULTIPLE WORKING MODES



### Fake Base Station Detection and Link Routing ...

Sep 1, 2024 · Fake base stations



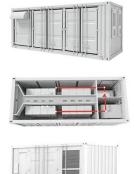


comprise a critical security issue in mobile networking. A fake base station exploits vulnerabilities in the broadcast

#### ???????abnormal

Dec 16, 2014 · ????????abnormalS5700 ??????,????????? abnormal,??????????????????





#### JP3192398B2

Therefore, after providing some guidelines for abnormal base stations, it is necessary to identify the abnormal base station by investigating the radio wave status of each base station that may ...

### A Joint Detection Method for Identifying Pseudo Base Station ...

Apr 10, 2017 · The attack of pseudo base station is one of the security problems



on mobile terminals, which affects normal communications and disguises as legit users for illegal ...





### ACS and base station abnormal message processing method ...

Through the above content, the abnormal problem that repeated transmission is frequently generated between the ACS and the 5G base station, and the problem of communication ...

### Communication Base Station Troubleshooting , HuiJue ...

While global communication base station deployments have surged by 38% since 2021, service interruptions still cost operators \$17 billion annually. What makes base station troubleshooting ...



#### Fake Base Station Threats in 5G Non-Public Networks

Mar 2, 2023 · Abstract With 5G technology, traditional industrial and





business equipment can now be connected wirelessly in a non-public network separated from public mobile services. ...

### Fake Base Station Detection and Blacklisting

Jul 31, 2024 · A fake base station is a well-known security issue in mobile networking. The fake base station exploits the vulnerability in the broadcasting message announcing the base ...



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