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Base station communication equipment security issues



Overview

Wireless sensor networks that are deployed in applications such as battlefield monitoring and home sentry systems face acute security concerns, including eavesdropping, forgery of sensor data, denial of service attacks, and the physical compromise of sensor nodes. What is a base station monitoring system based on?

Research on Wireless Communication Base Station Monitoring System Based on Artificial Intelligence and Network Security 2.1 Research on Key Technologies of Wireless Communication The communication of network is the fundamental of wireless communication .

Why is network security important in wireless communication base station monitoring?

With the rapid popularization of the network, under the increasingly complex network security situation and the increasingly prominent network security problems, network security occupies an important field in the wireless communication base station monitoring system, and has become a hot research direction.

Can user equipment evade a fake base station attack after detection?

We also implemented and validated link routing to show that the user equipment can evade a fake base station attack after detection. In the implementation, we showed that our scheme reduces the fake base station availability threat impact from an infinite time duration (without our scheme defense) to only 2.93 s (with our scheme defense).

What happens if user equipment connects to a fake base station?

Once the benign user equipment connects to the fake base station at the RRC layer, the adversary can launch a protocol downgrade from 5G/4G to 2G (i.e., bidding down) attack ; user equipment device identification attack ; SMS phishing attack [10, 11]; or an attack that drains the user equipment battery [9, 12].

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With over 7 million communication base stations globally powering our connected world, a critical question emerges: How secure are these critical nodes in our digital infrastructure? Recent ...

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 ...

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 ...

Abstract--False Base Station (FBS) attack has been a severe security problem for the cellular network since 2G era. During handover, the user equipment (UE) periodically ...

Communication about the location of base station antennas or use of mobile phones is sometimes characterised by high levels of concern about the subject and very little ...

A base station is an integral component of wireless communication networks, serving as a central point that manages the ...

Abstract Fake base stations (FBSes) pose a significant security threat by impersonating legitimate base stations (BSes). Though efforts have been made to defeat this ...

To further explore the energy-saving potential of 5 G base stations, this paper proposes an energy-saving operation model for 5 G base stations that incorporates ...

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 ...

2 Base Station Background The intent of this section is to explore the role of base stations in communications systems, and to develop a reference model that can be used to ...

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

A base station (BS) is a key component of modern wireless communication networks,

providing the interface between wireless ...

The evolving landscape of telecommunications security presents unique challenges for operators managing base station networks. From remote locations to urban ...

The malicious or rogue base station has been a well-known security issue in the wireless security community, as described in Section II-D. The malicious base station threats ...

ABSTRACT Various industries have adopted 5G Non-Public Networks to take advantage of improved connectivity while remaining separate from public networks. As these ...

Base stations and cell towers are critical components of cellular communication systems, serving as the infrastructure that supports seamless mobile connectivity. These ...

This paper identifies the security issues and research gaps of flying base stations, focusing on their unique properties, while building on ...

Discover BelFone's advanced radio base stations designed for reliable, scalable, and secure communication. Perfect for public safety, industrial, and enterprise use, BelFone's solutions ...

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Physical Layer Security Communications and Path Planning For UAV Base Stations
Guanchong Niu¹, Qi Cao¹, and Man-On Pun²,+

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