# Fake solar base station

# Overview

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Are fake base stations a security threat?

Fake base stations (FBSes) pose a significant security threat by impersonating legitimate base stations (BSes).

What is a fake base station?

A malicious or fake base station is a well-known security issue in mobile networking. For example, there are open-source tools and tutorials for setting up fake base stations, e.g., Refs. [1, 2]. The fake base station exploits the radio signal-based base station selection process and the vulnerability in the broadcasting SIB and RRC messages.
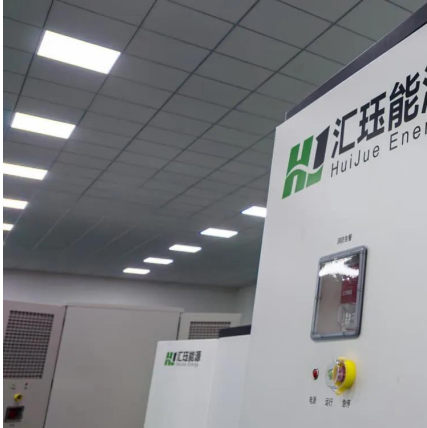
Can fake base station attacks be detected?

For the first time, we systematically study fake base station attacks and their main influencing factors. We use a specification-conform simulation model that lets us analyze fake base station attacks on a large scale, and test detection mechanisms on the generated data.

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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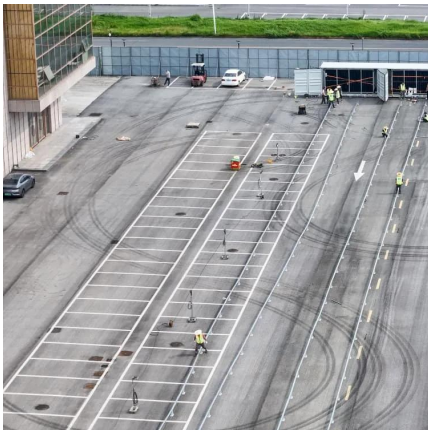


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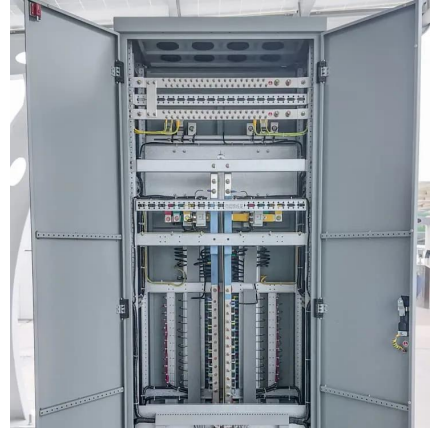


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