

# **Home base station communication interception**





## Overview

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Does a fake base station make a connection?

In such attacks, the prerequisite is transmission of the signal at a higher strength than a legitimate base station ; hence, the base station with higher signal strength is always able to lure the user equipment to connect to it. Previous research also specifically studied the threat impacts after a fake base station makes a connection.

Can a fake base station deprive cellular services from a legitimate base station?

Without our defense scheme, the fake base station can deprive the user equipment of cellular services from the legitimate base station for an indefinitely long time, as we describe in Section 4.1. However, with our scheme implemented, the threat impact is significantly less in time duration.

Can mobile networks detect false base stations?

SA3 has described a solid framework based on this information, enabling mobile networks to reliably detect such false base stations. The framework complements other mechanisms introduced in 5G to protect users against false base stations, for example encrypted long-term identifiers and fresh short-term identifiers.

Can a fake base station exploit a randomized selection?

The fake base station cannot exploit the randomized selection to make the user equipment connect to it with 100% 100 % probability. An attacker can attempt to launch a threat beyond just availability and disrupting the connectivity, such as attempting to make the victim user equipment connect to a fake server.



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### [Detecting false base stations in mobile networks](#)

Device-Assisted Network-Based Detection  
Device-Assisted Part  
Network-Based Part  
Experiments in Our Lab  
Road Ahead  
The device-assisted part of the detection framework uses measurement configuration and measurement reporting procedures. The measurement reports from devices are very effective in detecting false base stations, as will be described later. Because the measurement reports already exist in all generations of mobile networks to manage device mobility, See more on [ericsson arXiv \[PDF\]](#)



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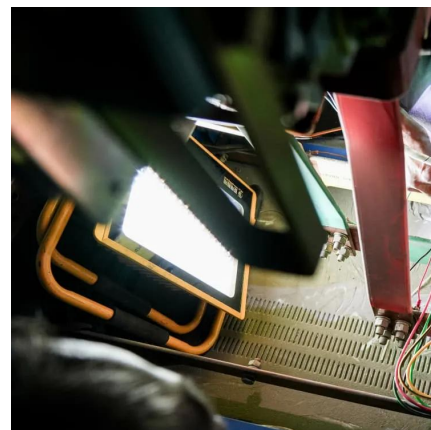


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