Problems with MAC randomization

1/2

This Wiki page isn't complete yet. If you know how to disable MAC randomization for operating systems which are not listed here, please tell us how via helpdesk@fem.tu-ilmenau.de so we can improve this wiki page. Thank you for your help!

What is the problem?

MAC randomization is a new technology used in many mobile devices to prevent you from being tracked by your MAC address when searching for Wi-Fi networks. Hence, the feature contributes to privacy and protection against tracing. A MAC address is randomly determined and used when searching for and connecting to networks.

However, in FeM-Net, devices are identified by their MAC address. So, if MAC randomization is activated, the device tries to connect via a MAC address that does not match the one in our database, which is why the connection fails.

You can recognize MAC randomization when you see a different MAC address on our MyInfo page in the FeM_Welcome Wi-Fi than the one in the settings of the affected device, for example.

How do I disable that?

This varies for each operating system, but there is usually the option of deactivating the feature only for individual Wi-Fi networks, which ensures privacy.

Android

Android supports MAC randomization from Android 10. This feature is therefore not available on older systems.

For deactivation:

- Open settings > Network & Internet > Wi-Fi
- For our Wi-Fi networks (e.g. "FeM.PSK" and "FeM.1X") open the settings by pressing and holding down the respective Wi-Fi network > Modify network
- In the advanced options, there should now be a corresponding privacy setting that allows to switch off MAC randomization or set the MAC address type to the phone's original MAC address ("phone MAC").

iOS

Apple Support offers a guide for iOS 14: https://support.apple.com/en-us/HT211227

Windows

In the Wi-Fi settings (Start menu -> Settings -> network and internet -> Wi-Fi) there is a section called "Random hardware addresses". The switch "Use random hardware addresses" must be deactivated. This should deactivate MAC randomization for Wi-Fi.

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