FLOWS

What kind of flows do you see?

What is causing these flows?

2.1.1. 5G base station
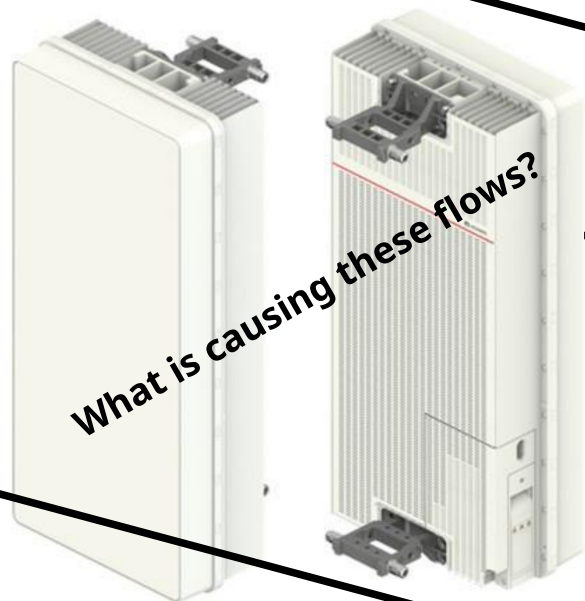
Huawei Active Antenna Unit (AAU) 5613

| Technical standard	3GPP Release 15	
Frequency Band	3400Mhz - 3800Mhz	
TX RX channel	64T64R	
Polarization	+45°, '-45°	
Gain (dBi)	24	

LAYERS
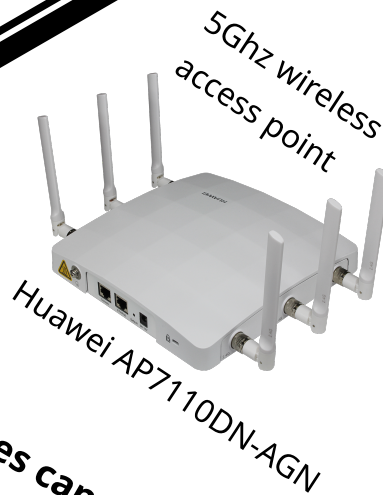
What flow devices can you observe?

What are their functions?

Who is managing these flows and for what purposes?

What protocols and frequencies are used and who allows it?

Who has access to the data?

5Ghz wireless access point

Huawei AP7110DN-AGN

VISIBILITY

How are data flows being communicated?
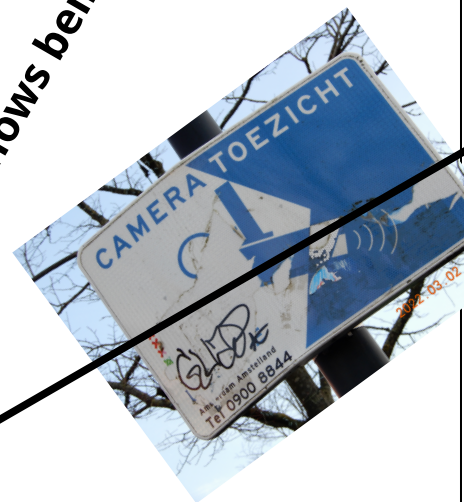
Can you find out more?

How would you show them on a map?

Resources

Smartphone apps:

* WiFi Analyzer — Google

* Architecture of Radio — Google / Apple

Current Dutch frequency map:

https://www.rdi.nl/binaries/rdi/
documenten/brochures/2017/
juli/21/overzicht-van-het-
nederlandse-frequentiespectrum/
Poster+het+Nederlandse+
frequentiespectrum+2024.pdf

Websites:

* Sensoren register Groningen

https://data.groningen.nl/

* Antennekaart

https://antennekaart.nl/

* Antenneregister

https://antenneregister.nl/

Infrastructure Walk

The Infrastructure Walk is brought to you by the **critical infrastructure lab** for the Data in Society source (University of Groningen). We research power and contestation in communication infrastructures. One way of doing this is mapping how the electro-magnetic spectrum is utilised, and asking critical questions such as...

"How is the shaping and usage of the electro-magnetic spectrum, through material technologies, companies, states, and regulations, changing society and everyday life?"

The **critical infrastructure lab** aims to co-develop alternative infrastructural futures that center people and planet over capital and control. We produce research insights, policy recommendations, and build community around three overlapping areas: geopolitics — standards — environment.

Frequencies

4G → 800 + 2600 MHz

5G → 700 MHz 3500 MHz

C2000 → 380 MHz

DECT → 1880-1900 MHz

GSM → 880-960

1710-1780

1805-1875 MHz

WiFi → 2412-2472 MHz

5180-5320 / 5500-5700 MHz

Bluetooth → 2402-2480 MHz

More information about the lab:

https://criticalinfralab.net/

Groningen — Infrastructure walk