Greenhouse / Evaluation?

backhaul

- distance, obstacles
- values are not received?
- reliability
- sensitivity

Raspb. PI

notify
- App
- email
- SMS

eval?

- 1/h?

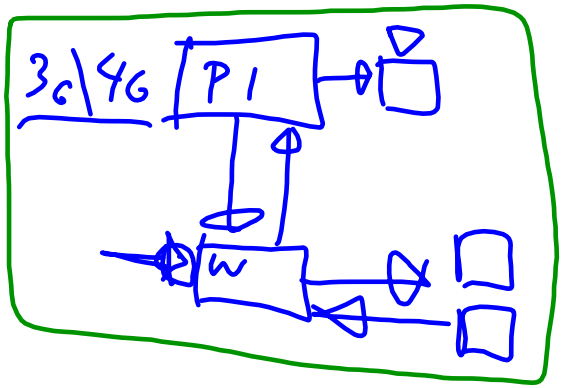
impact on plants

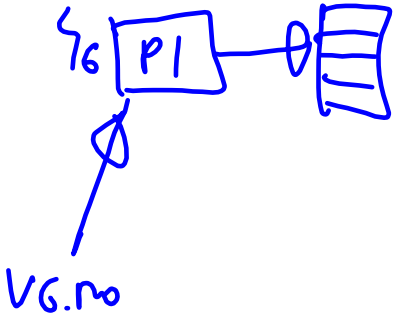
availability 1/h

email?

meas. distance real situation?

Yara
- hum.
- battery
- vent.
- temp





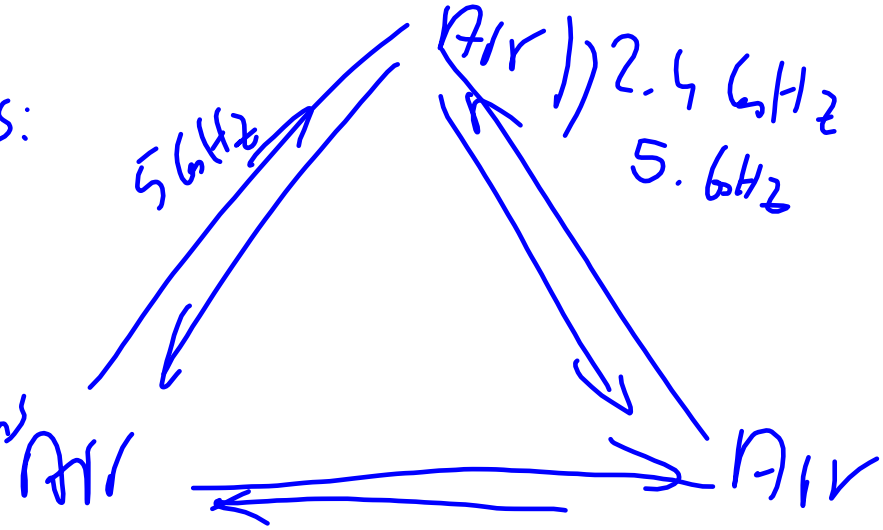
Sec. & Convenience of remote hut

Communication < 4G, NB IoT, Wifi

BW, battery

Wireless Ho

Assumptions:
- range
- throughput
- theories ⟺ meas



AP 4920 wireless backhaul

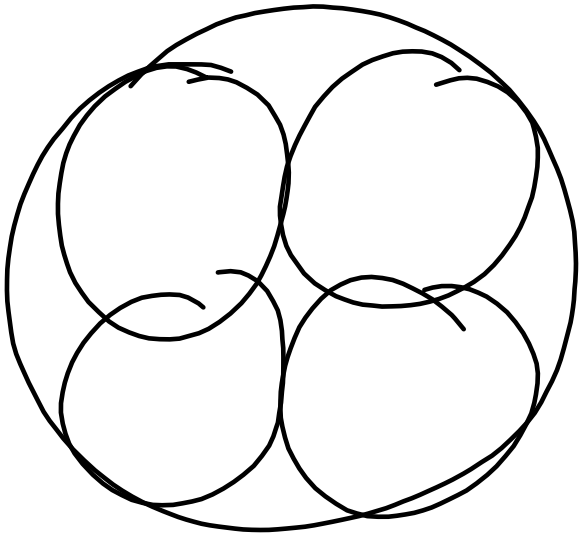
How to measure?
↳ wireless parameters?

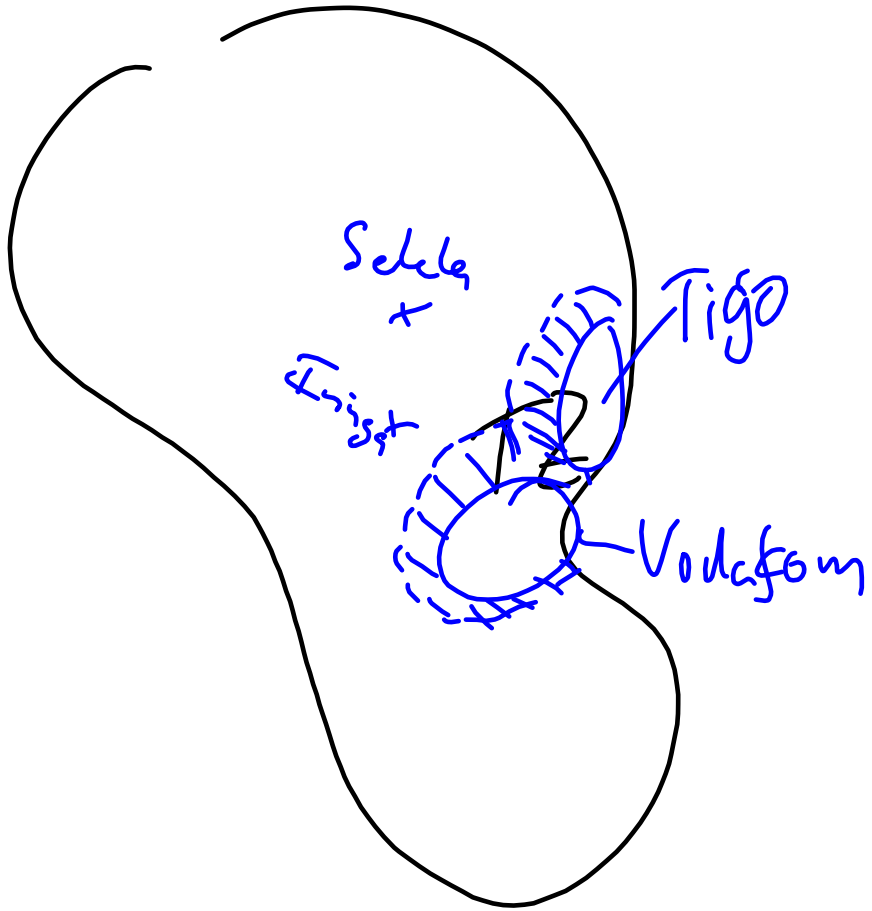
User name/passwd
→ email to
Magh sond

BW

MIMO

S/N → Modulation




Telenor
Tigo
Vodafone

Operational Expenditure (OPEX)

Reach Izazi from Migoli

R: tower height, directive antenna, ...

3G tower (25m high)

A: IP → air 4 Mbps

B: 3G/4G hot spot → 1 GB packet

Vouchers 100 MB, 1 h

(1) 500 – 5000 people

(2) av. 1 USD/month

A, B

(3) duty cycle

(4) max GByte

(5) Throughput (2 Mbit/s)?

(A) 900 € ~ 4 Mbps

(B) 50 € ~ 1 GB

Which vouchers sell? MB & time

how many to sell? Movie

mp3

Digi.BasicInternet_no

TT 1.1 DigI: Calculation_of_

Footer Radio coverage