

Why PrivateWave does not connect, even if I have strong signal?

Question: my device report network connectivity and strong signal, why PrivateWave does not connect?

Answer: phones report signal power, but this is not a good indicator of network quality. The best indicators are Signal/Noise ratio or, even better, Bit Error Rate. When you are in crowd places (airports, city centre, expos) a lot of radio cells and devices are transmitting, generating a lot of electromagnetic noise, which disturbs network communications, despite every single device uses high power. You can experience the same phenomenon in a stadium: your friend shouts to your ears, but you cannot understand what he says because the noise around you is too much high and covers the high "signal power" used by your friend. In crowd places the electromagnetic noise overrides the signal power and can corrupt communication, leading to errors in data messages. Network protocols have re-transmissions mechanisms to cope with errors, but when Bit Error Rate is too high, communication can become very low and unreliable or even impossible.