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Wireless Site Survey Report

Figura 1.1.1: Rapporto segnale/rumore (2.4GHz, 5GHz)

Figura 1.1.4: Livello segnale (2.4GHz, 5GHz)

Figura 1.1.7: Rapporto segnale/interferenza (2.4GHz, 5GHz)

Figura 1.1.10: Frequenze e copertura

Figura 1.1.13: Protocolli (a/b/g/n/ac/ax)

Figura 1.1.16: Analisi canali sovrapposti (SIR)

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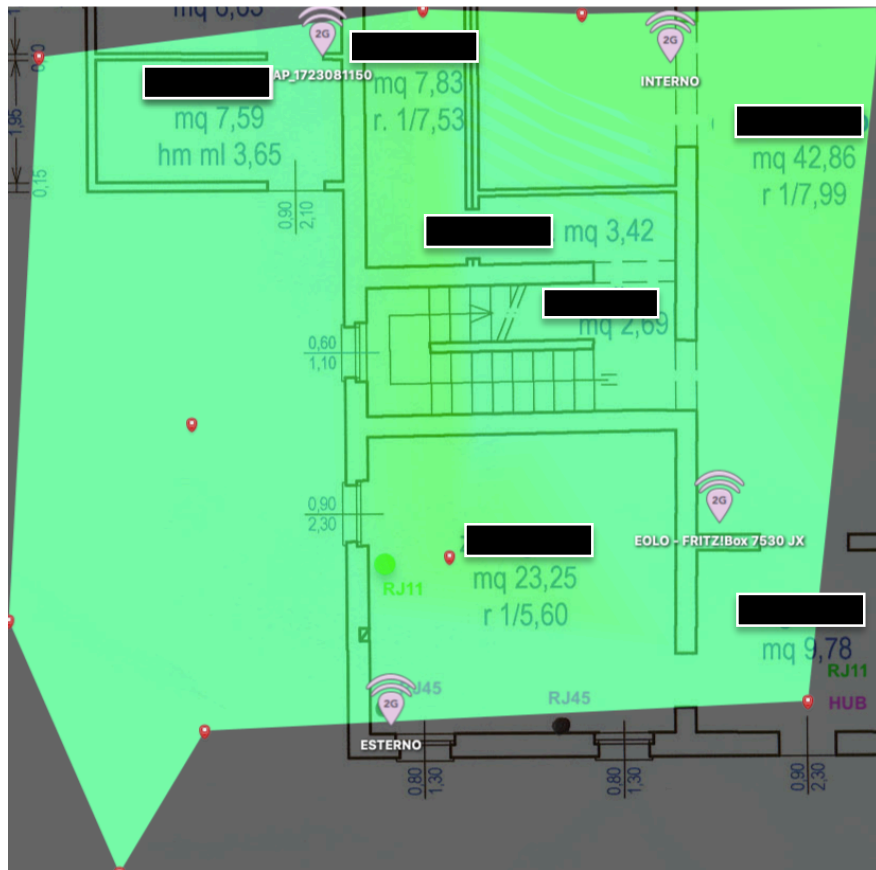
Visualization #1.1.1: Signal-to-noise ratio

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Min signal-to-noise ratio
Max signal-to-noise ratio

0dB
86dB



Requirements:  0dB  43dB  86dB

Figure 1.1.1: Piano Terra > #1 1 Sep 2022 > Signal-to-noise ratio

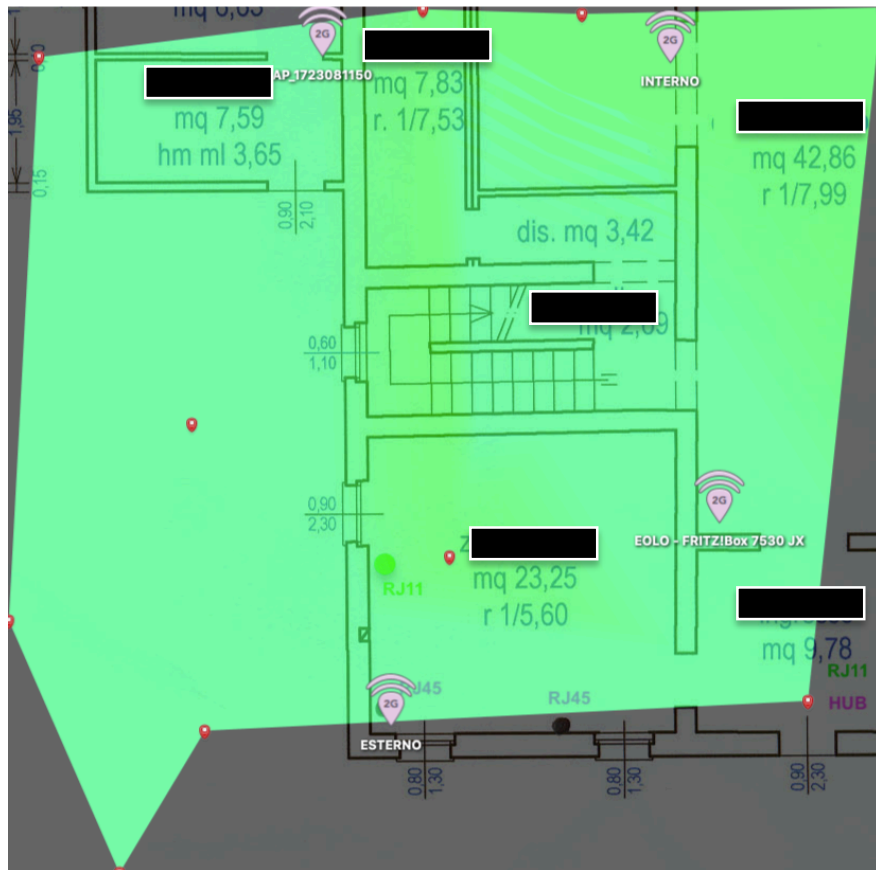
Visualization #1.1.2: Signal-to-noise ratio 2.4GHz

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Min signal-to-noise ratio
Max signal-to-noise ratio

0dB
86dB



Requirements:



Figure 1.1.2: Piano Terra > #1 1 Sep 2022 > Signal-to-noise ratio 2.4GHz

Visualization #1.1.3: Signal-to-noise ratio 5GHz

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Min signal-to-noise ratio	0dB
Max signal-to-noise ratio	86dB

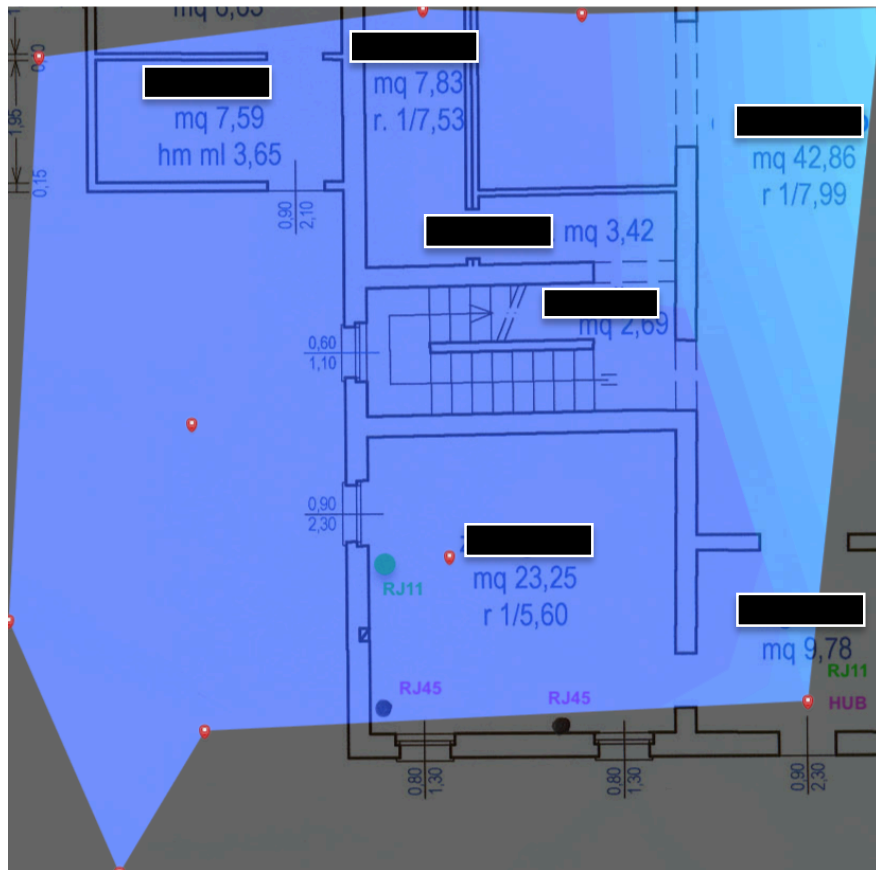


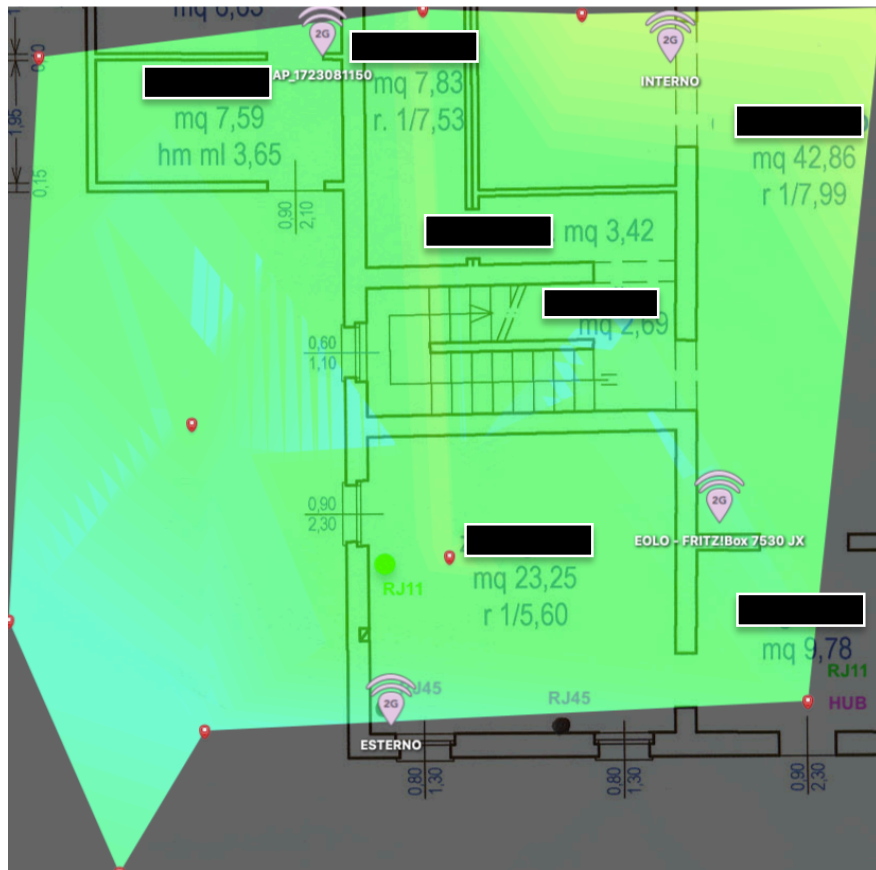
Figure 1.1.3: Piano Terra > #1 1 Sep 2022 > Signal-to-noise ratio 5GHz

Visualization #1.1.4: Signal level

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Min signal level -96dBm
Max signal level -10dBm



Requirements:  **-96dBm**  **-53dBm**  **-10dBm** 

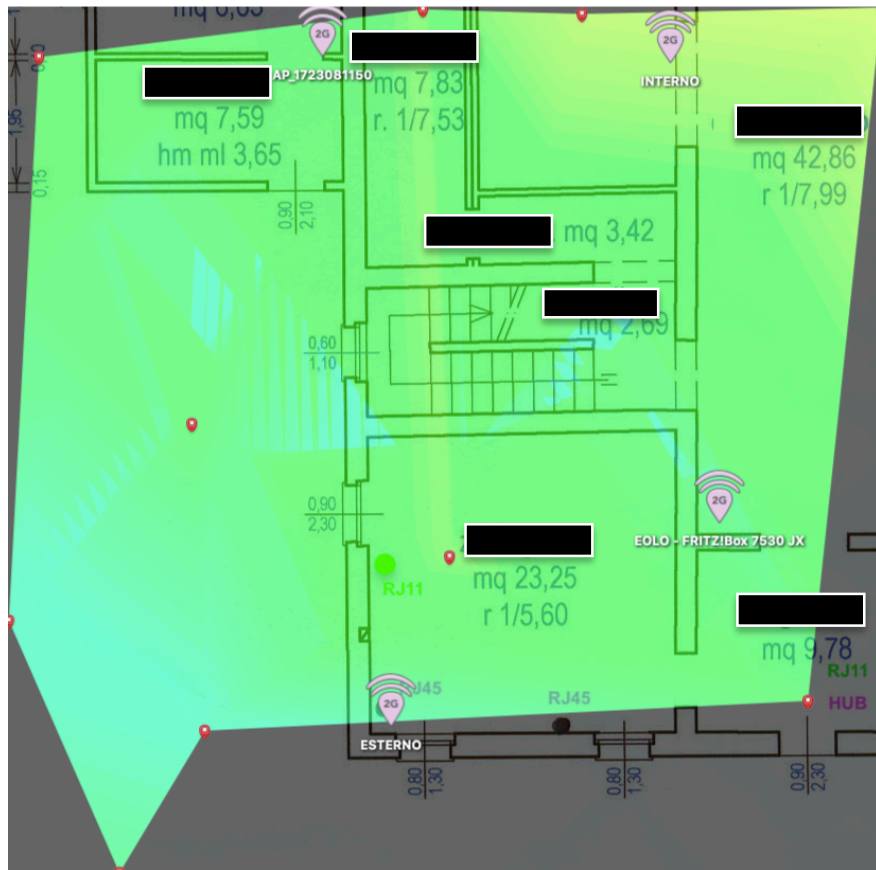
Figure 1.1.4: Piano Terra > #1 1 Sep 2022 > Signal level

Visualization #1.1.5: Signal level 2.4GHz

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Min signal level -96dBm
Max signal level -10dBm



Requirements: -96dBm -53dBm -10dBm

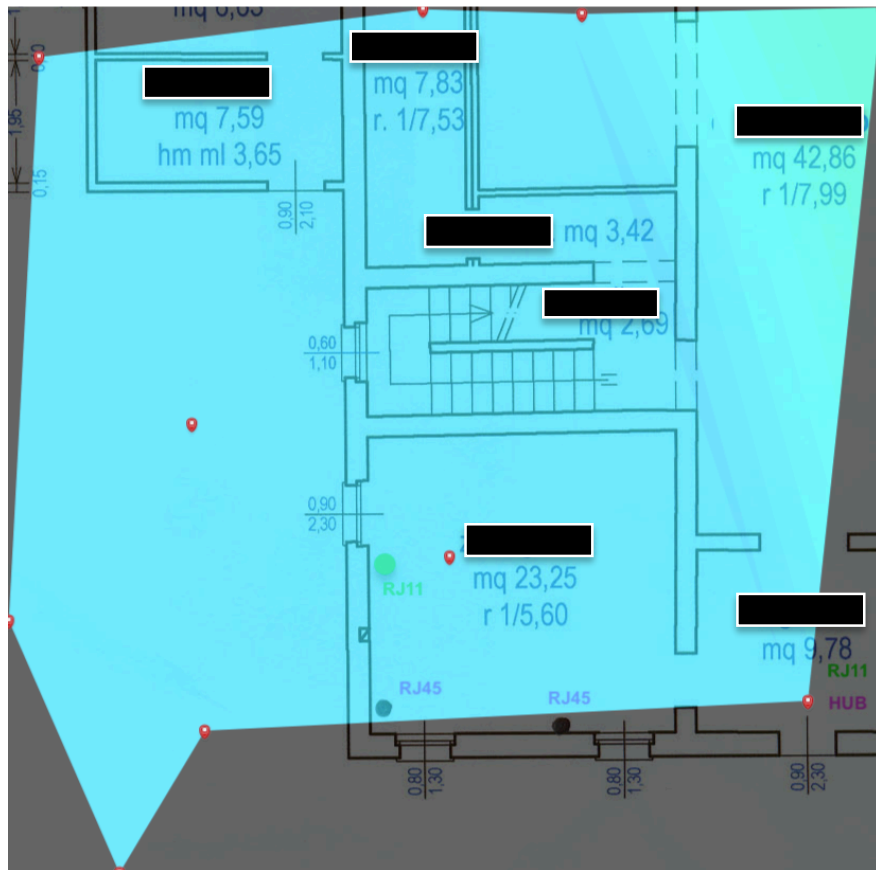
Figure 1.1.5: Piano Terra > #1 1 Sep 2022 > Signal level 2.4GHz

Visualization #1.1.6: Signal level 5GHz

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Min signal level -96dBm
Max signal level -10dBm



Requirements: -96dBm -53dBm -10dBm

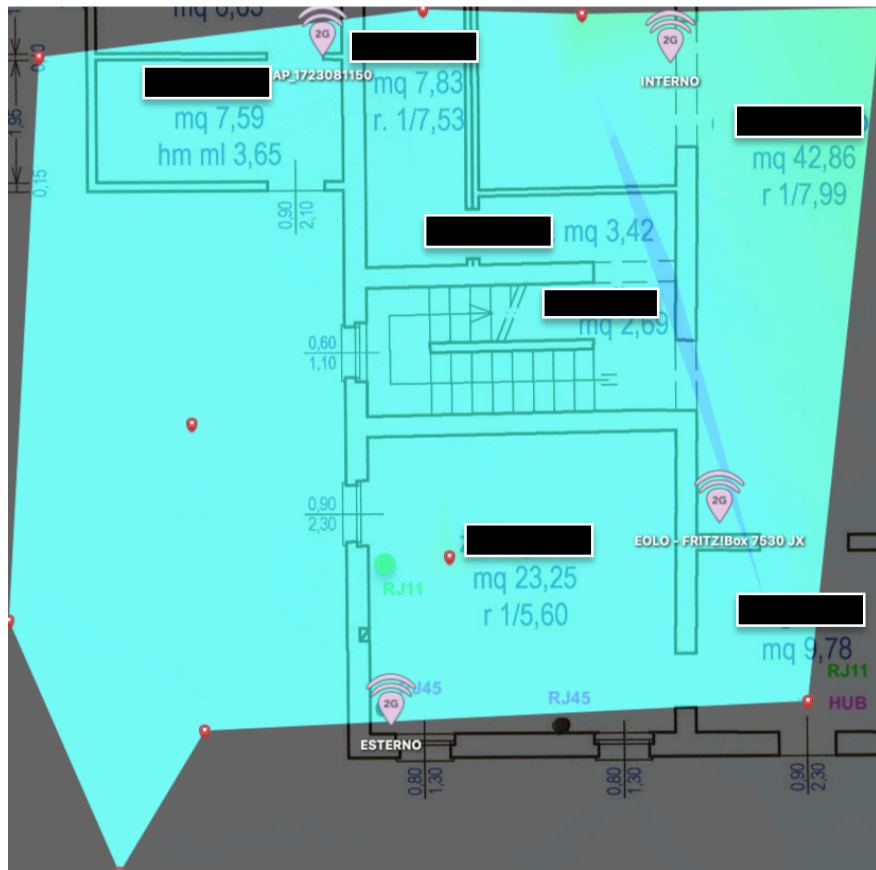
Figure 1.1.6: Piano Terra > #1 1 Sep 2022 > Signal level 5GHz

Visualization #1.1.7: Signal-to-interference ratio

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Min signal-to-interference ratio	0dB
Max signal-to-interference ratio	86dB



Requirements:  0dB  43dB  86dB

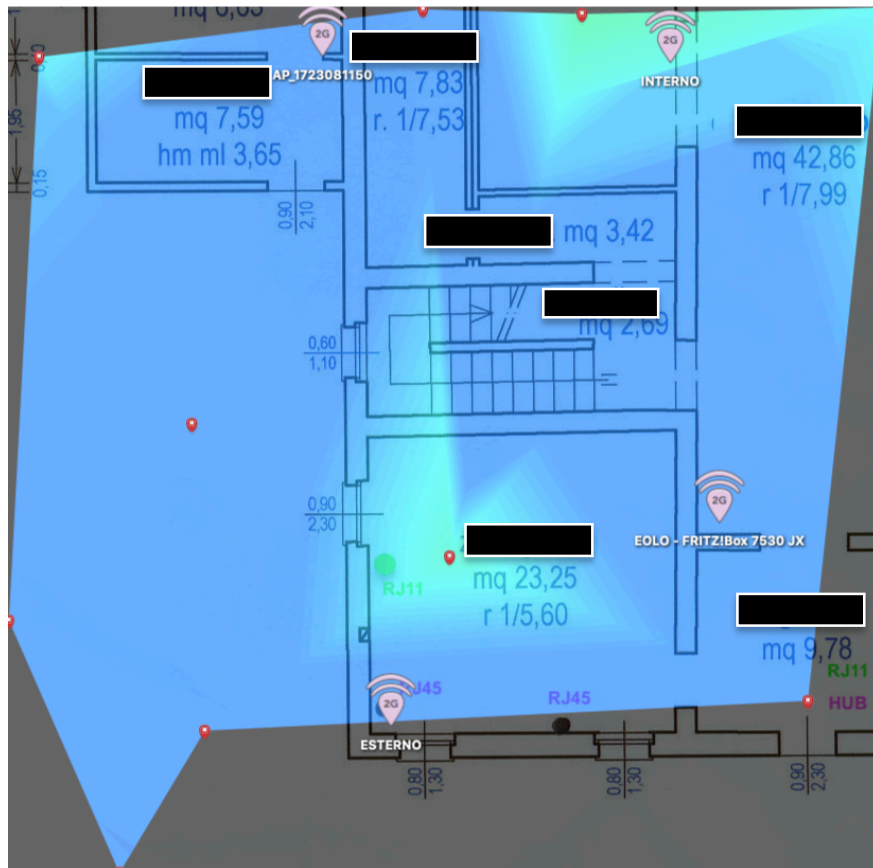
Figure 1.1.7: Piano Terra > #1 1 Sep 2022 > Signal-to-interference ratio

Visualization #1.1.8: Signal-to-interference ratio 2.4GHz

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Min signal-to-interference ratio	0dB
Max signal-to-interference ratio	86dB



Requirements: 0dB 43dB 86dB

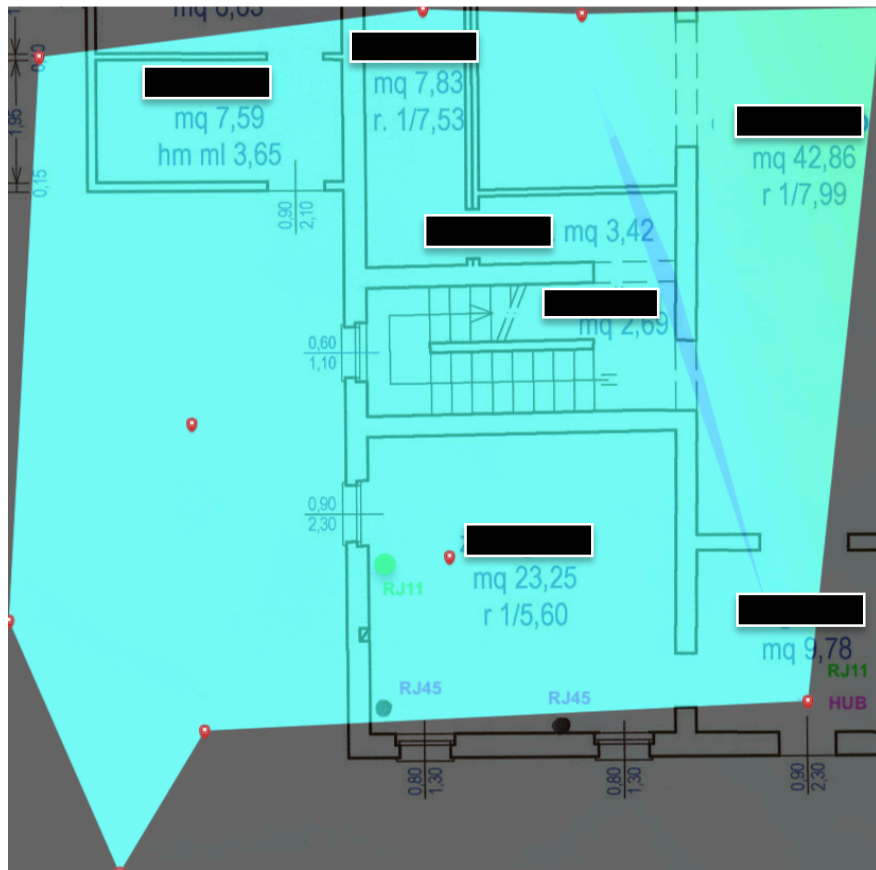
Figure 1.1.8: Piano Terra > #1 1 Sep 2022 > Signal-to-interference ratio 2.4GHz

Visualization #1.1.9: Signal-to-interference ratio 5GHz

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Min signal-to-interference ratio 0dB
Max signal-to-interference ratio 86dB



Requirements:  0dB  43dB  86dB

Figure 1.1.9: Piano Terra > #1 1 Sep 2022 > Signal-to-interference ratio 5GHz

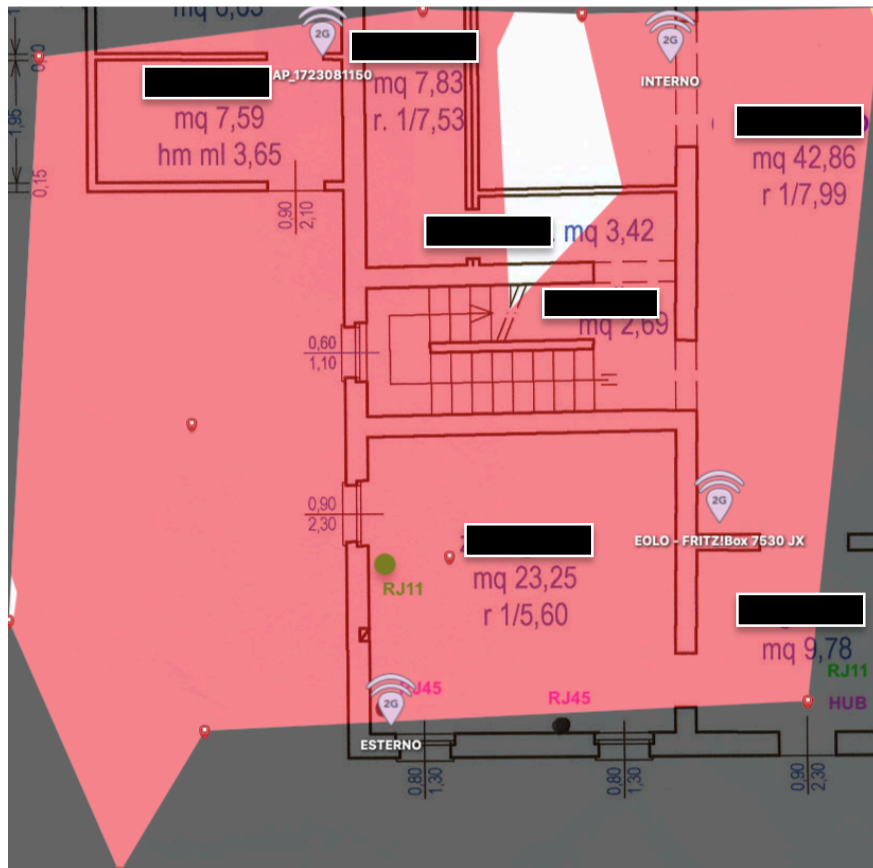
Visualization #1.1.10: Frequency band coverage

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Frequency coverage signal level

-70dBm



Requirements:

2.4GHz

mixed

5GHz

Figure 1.1.10: Piano Terra > #1 1 Sep 2022 > Frequency band coverage

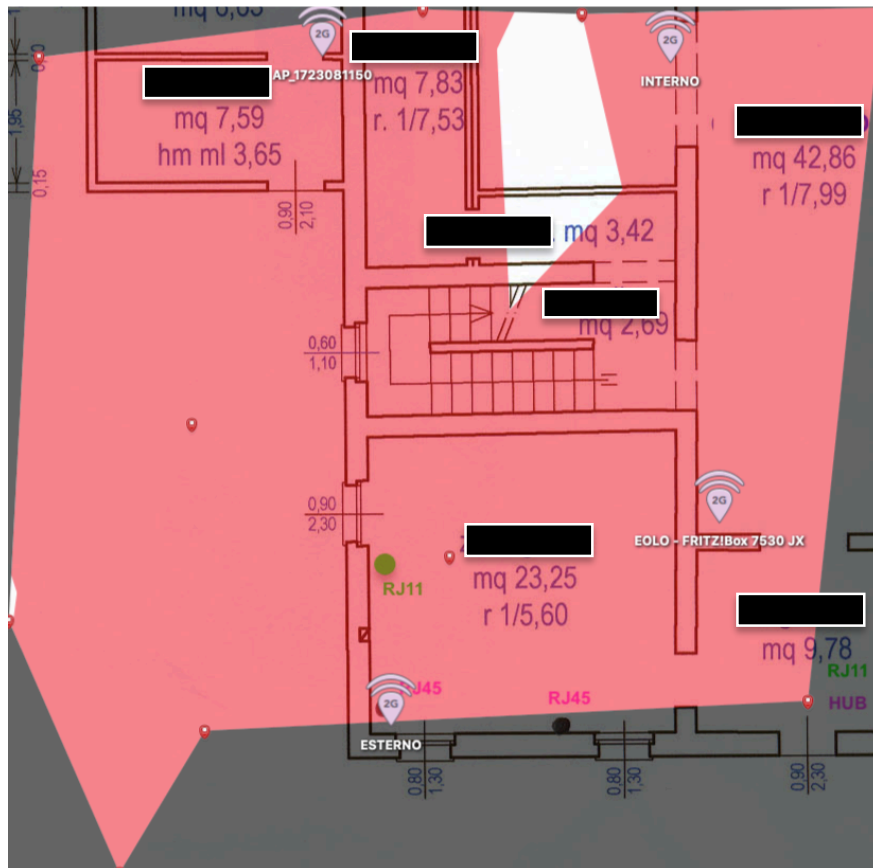
Visualization #1.1.11: Frequency band coverage 2.4GHz

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Frequency coverage signal level

-70dBm



Requirements:

2.4GHz

mixed

5GHz

Figure 1.1.11: Piano Terra > #1 1 Sep 2022 > Frequency band coverage 2.4GHz

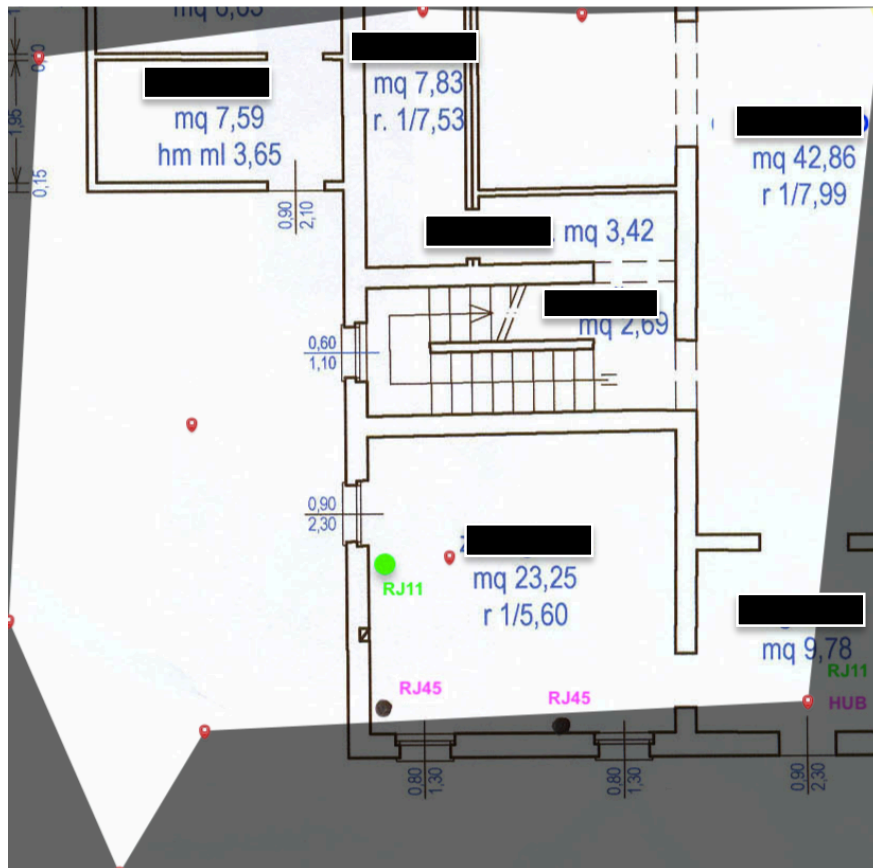
Visualization #1.1.12: Frequency band coverage 5GHz

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Frequency coverage signal level

-70dBm



Requirements:

2.4GHz

mixed

5GHz

Figure 1.1.12: Piano Terra > #1 1 Sep 2022 > Frequency band coverage 5GHz

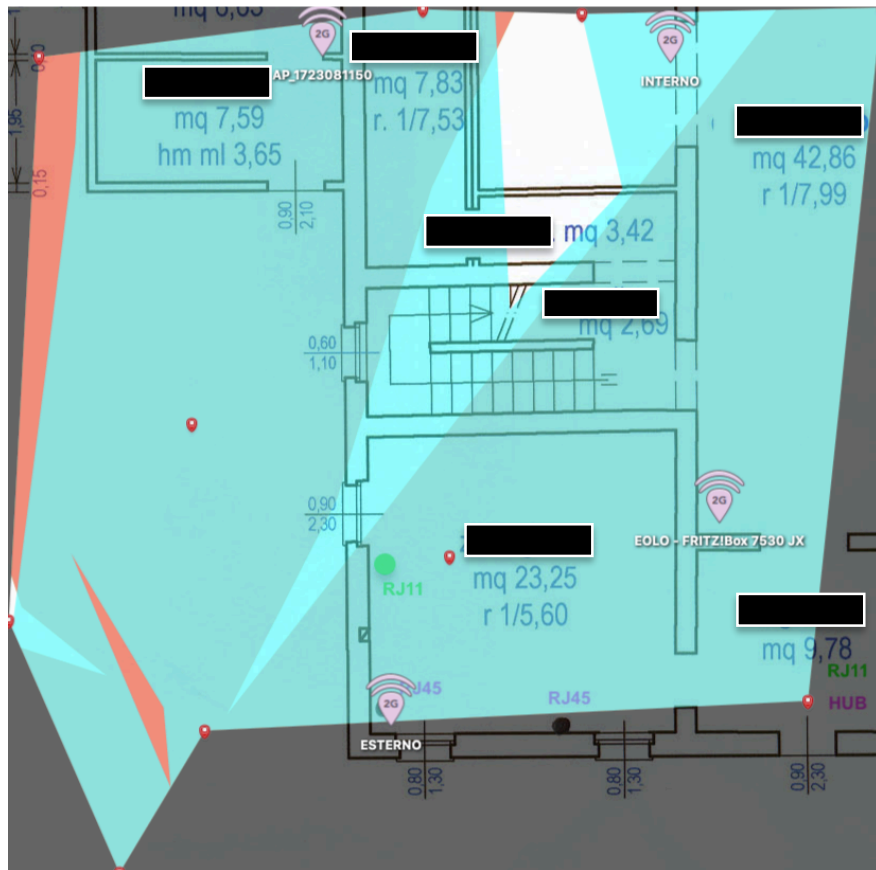
Visualization #1.1.13: PHY mode (a/b/g/n/ac/ax) coverage

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Mode PHY coverage signal level

-70dBm



Requirements:



Figure 1.1.13: Piano Terra > #1 1 Sep 2022 > PHY mode (a/b/g/n/ac/ax) coverage

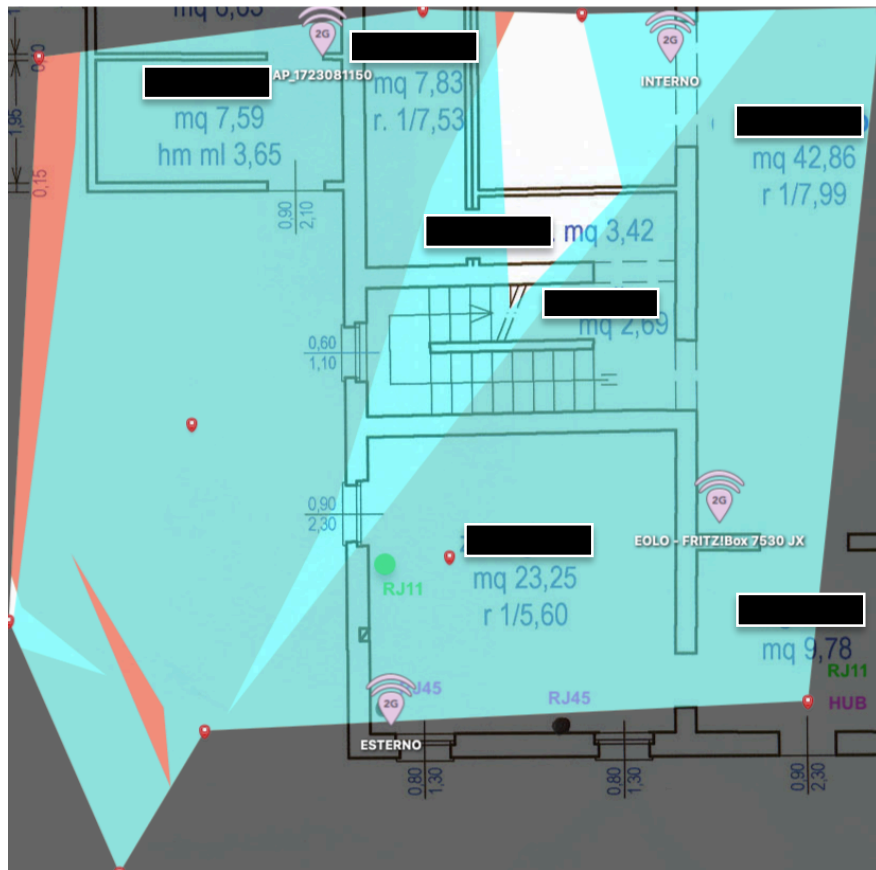
Visualization #1.1.14: PHY mode (a/b/g/n/ac/ax) coverage 2.4GHz

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Mode PHY coverage signal level

-70dBm



Requirements:



Figure 1.1.14: Piano Terra > #1 1 Sep 2022 > PHY mode (a/b/g/n/ac/ax) coverage 2.4GHz

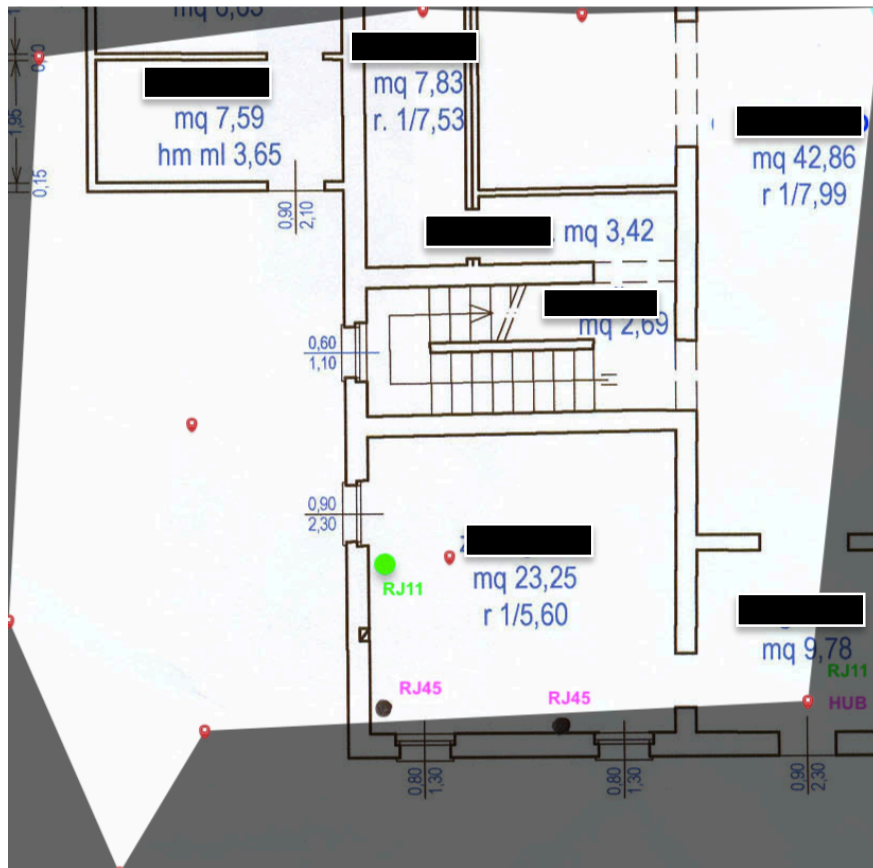
Visualization #1.1.15: PHY mode (a/b/g/n/ac/ax) coverage 5GHz

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Mode PHY coverage signal level

-70dBm



Requirements:



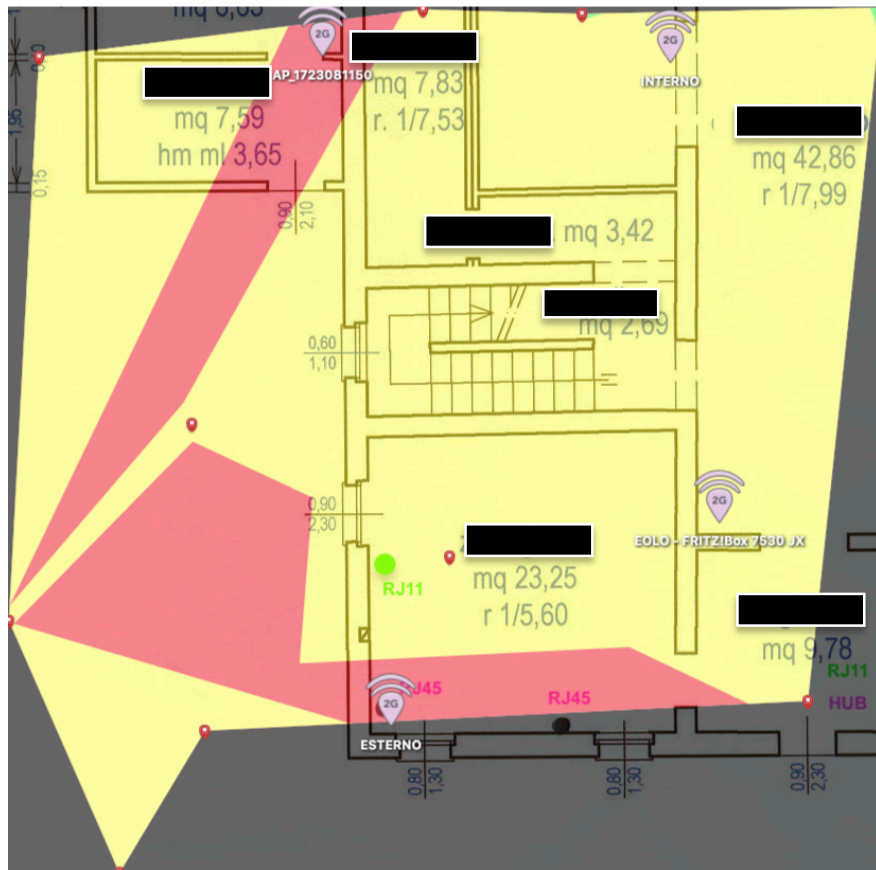
Figure 1.1.15: Piano Terra > #1 1 Sep 2022 > PHY mode (a/b/g/n/ac/ax) coverage 5GHz

Visualization #1.1.16: Troubleshooting (Overlapping channels (SIR))

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Acceptable SIR	30dB
Critical SIR	10dB



Requirements:

OK

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!!!

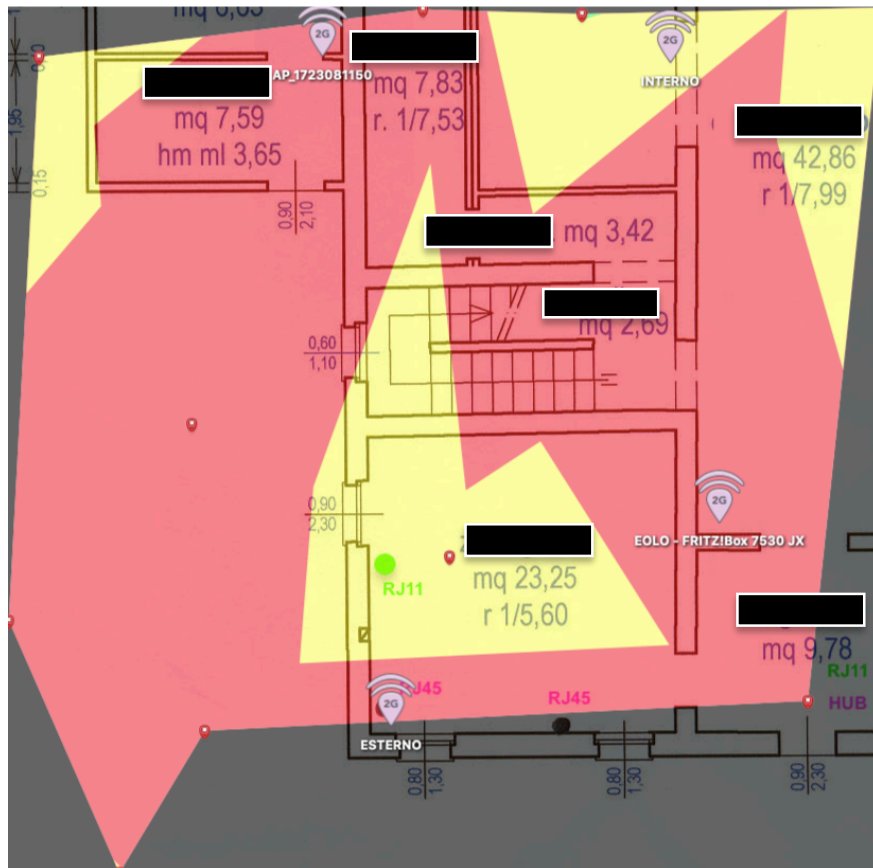
Figure 1.1.16: Piano Terra > #1 1 Sep 2022 > Troubleshooting (Overlapping channels (SIR))

Visualization #1.1.17: Troubleshooting (Overlapping channels (SIR)) 2.4GHz

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Acceptable SIR	30dB
Critical SIR	10dB



Requirements:

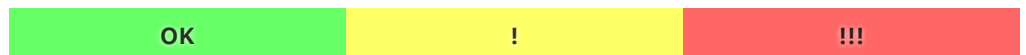


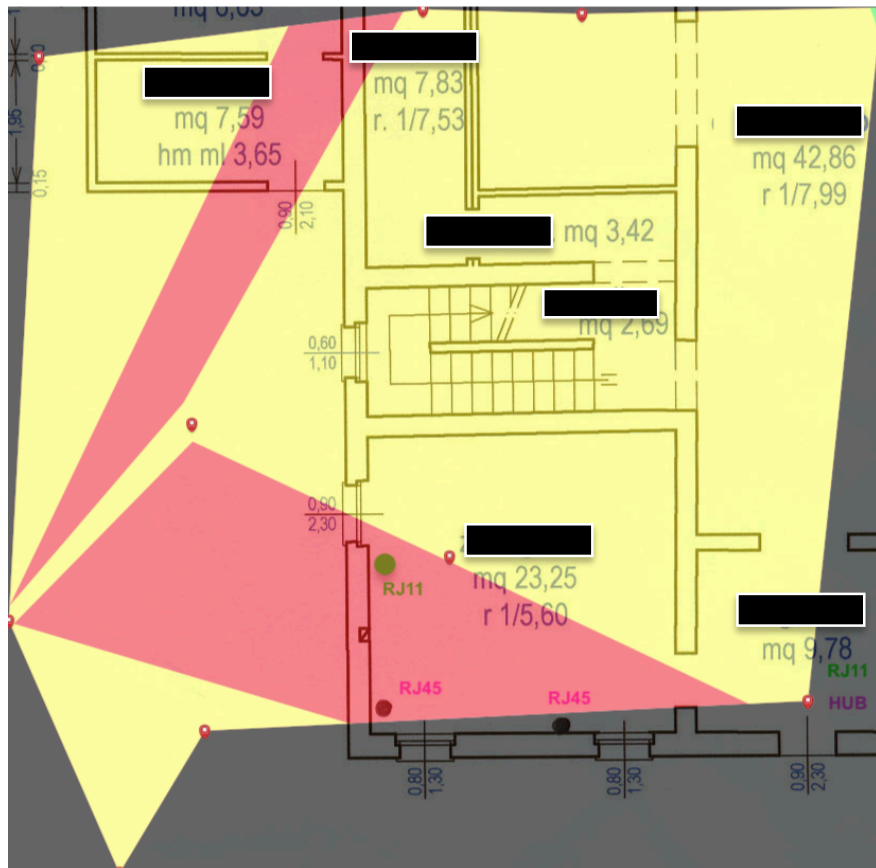
Figure 1.1.17: Piano Terra > #1 1 Sep 2022 > Troubleshooting (Overlapping channels (SIR)) 2.4GHz

Visualization #1.1.18: Troubleshooting (Overlapping channels (SIR)) 5GHz

Zone and snapshot:
Piano Terra
#1 1 Sep 2022

Visualization settings:

Acceptable SIR	30dB
Critical SIR	10dB



Requirements:

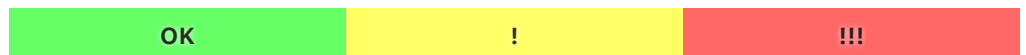


Figure 1.1.18: Piano Terra > #1 1 Sep 2022 > Troubleshooting (Overlapping channels (SIR)) 5GHz



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Risoluzione dei problemi di (canali sovrapposti) overlapping channels (SIR)

- Modifica la selezione del canale. Gli AP che lavorano nelle immediate vicinanze non dovrebbero mai utilizzare canali sovrapposti. Considera il classico posizionamento AP "a nido d'ape", se possibile. Si noti che in alcune apparecchiature 802.11n, la posizione del canale secondario (sotto o sopra quello primario) è un'opzione configurabile dall'utente, che offre un ulteriore grado di libertà.
- Se riscontri valori SIR bassi nella banda a 2,4 GHz, considera di cambiare i tuoi AP alla banda a 5 GHz, dove ci sono più canali non sovrapposti tra cui scegliere. Se utilizzi un AP 802.11n con larghezza di banda di 40 MHz nella banda di 2,4 GHz, non hai praticamente modo di evitare le interferenze. Se non viene utilizzato il channel bonding (ad esempio, un singolo canale a 20 MHz), nell'immagine sopra hai solo tre canali non sovrapposti tra cui scegliere: 1, 6 e 11.
- Nel caso in cui la tua rete abbia più di un Access Point, potrebbe essere necessario ridurre le capacità dei trasmettitori per mantenere le interferenze a un livello accettabile. Questa è una situazione in cui una maggiore capacità non significa una migliore connessione. Di solito, la capacità di trasmissione AP ottimale è di 5-10 dBm. Ciò garantirà la migliore densità di AP installati, minimizzerà il carico su ciascuno degli AP e minimizzerà l'interferenza tra hotspot vicini che potrebbero condividere lo stesso canale. Ciò non significa che un potente AP sia dannoso, ma diversi potenti AP vicini l'uno all'altro interferiranno l'uno con l'altro. Ecco perché le loro capacità devono essere ridotte.
- Assicurati che i tuoi utenti non abusino della tua rete con potenti adattatori Wi-Fi client, poiché l'interferenza potrebbe anche essere provocata da più di uno di questi adattatori attivi nella stessa posizione. Non è necessario che l'adattatore client trasmetta a 50 mW, quando l'AP trasmette a soli 5 mW.

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