Aerohive Planning Report

Introduction

Thank you for using the Aerohive Planning Tool. This tool is designed to help scope and plan a WiFi Deployment to determine the number of APs required to achieve an intended coverage, AP placement and datarates. This tool calculates the loss in signal strength as it passes through open air and various materials to show predicted coverage.

RF Prediction with Optional Site Survey

An RF prediction is an estimate of WLAN performance and coverage. It uses intelligent algorithms to examine AP behavior based upon an imported floor plan with assigned building characteristics. The accuracy of an RF prediction is dependent upon the confidence level with which the building's RF characteristics are assigned, and the accuracy of AP placement. It is ideal for typical office environments with uniform wall types. In addition RF itself can be unpredictable, due to the difficulty of characterizing the behavior of RF when interacting with various materials.

Complex environments should be verified with a survey to verify the assumptions used in an RF prediction.

Assumptions

The guidelines in this document are based on the following conditions and assumptions:

- Client Data Terminal Transmit (Tx) Power: >=15 dBm.
- Client Data Terminal Antenna Gain: >=0 dBi.
- The map environment type (e.g. Warehouse, Office) relates to an average density which is quantified as a path loss exponent value. It estimates how quickly an RF signal attenuates with distance.
- The indicated wall path-through loss number (e.g. 12dB for a concrete wall) is the attenuation of an RF signal as it travels through the wall under a right angle. For any other angle, the loss will be higher.
- The EIRP (Effective Isotropic Radiated Power) of an AP's radio is determined by the Tx power setting, the antenna gain and cable losses. The antenna gain is an average gain obtained through measurements for the different AP types.
- Data rates are based on receive sensitivity numbers obtained through measurements for the different AP types, and a fade margin which is user configurable.

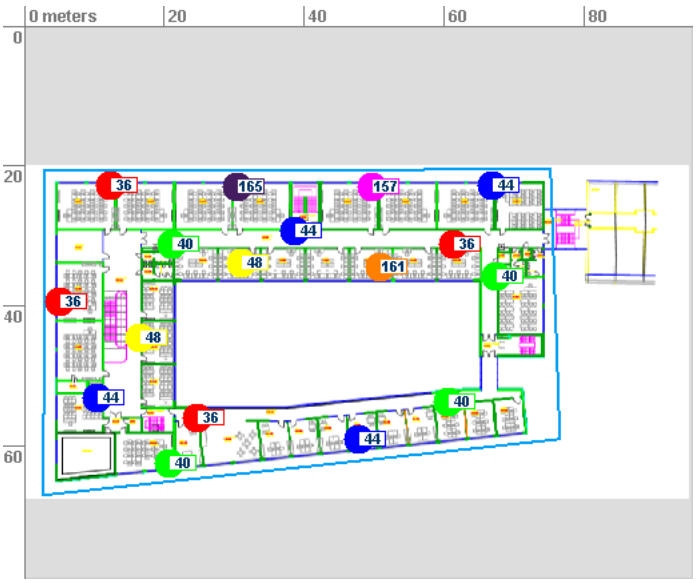
Note: These assumptions are typical for available 802.11 client Data Terminals and typical cubicle densities.

1. FH II

Device Total For FH II

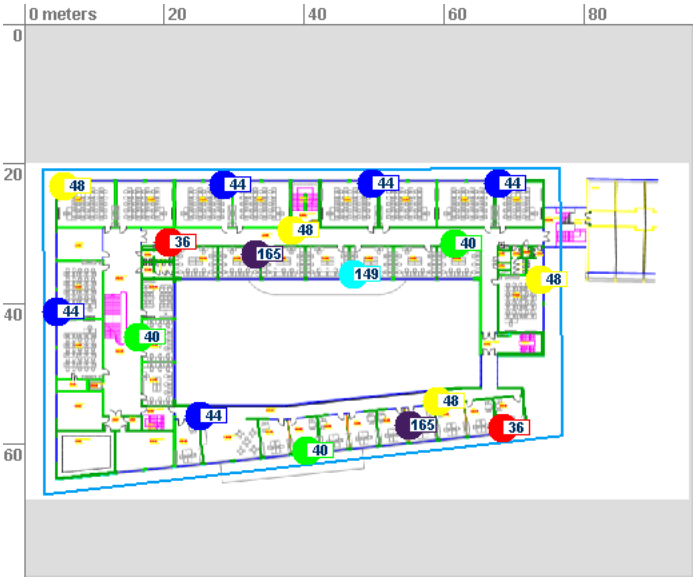
Model	Part number	Total
AP250	AH-AP-250-AC-W	1
AP230	AH-AP-230-N-W	10
AP330	AH-AP-330-N-W	43

1.0 Building view



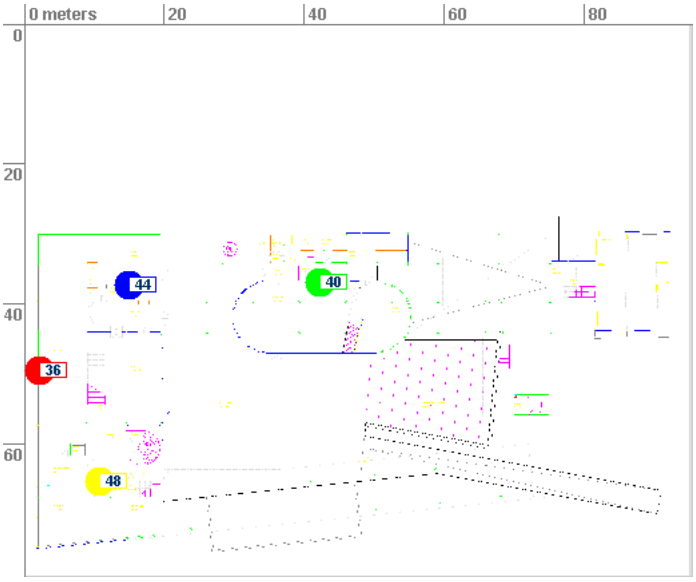
FH2_Ebene4_2OG

Number of APs	17
Service Area	3098.79 sq m
Average Area per AP	182.28 sq m
Floor Alignment	
X: 0.00 meters	
Y: 20.00 meters	



FH2_Ebene3_1OG

Number of APs	17
Service Area	3125.70 sq m
Average Area per AP	183.86 sq m
Floor Alignment	
X: 0.00 meters	
Y: 20.00 meters	

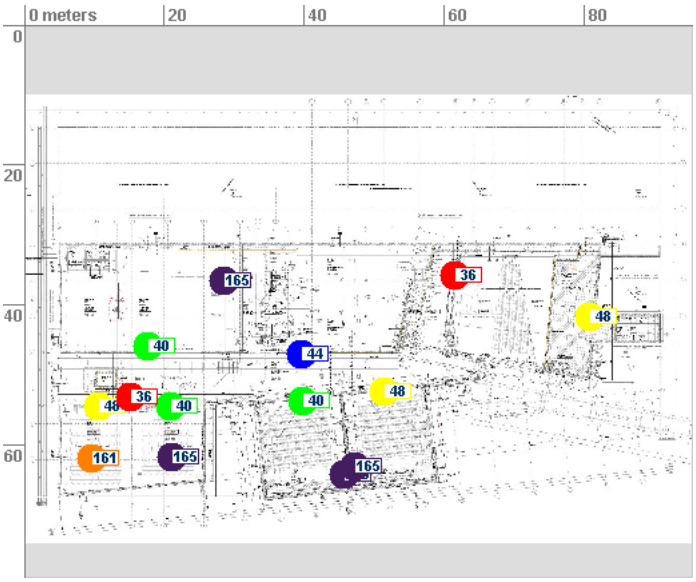


FH2_Ebene2_EG

Number of APs	4
Service Area	n/a (no perimeter(s) defined)
Floor Alignment	
X: 0.00 meters	
Y: 0.00 meters	

FH2_Ebene1_1UG

Number of APs	2
Service Area	n/a (no perimeter(s) defined)
Floor Alignment	
X: 0.00 meters	
Y: 15.00 meters	



FH2_Ebene0_2UG

Number of APs	14
Service Area	n/a (no perimeter(s) defined)
Floor Alignment	
X: 0.00 meters	
Y: 10.00 meters	

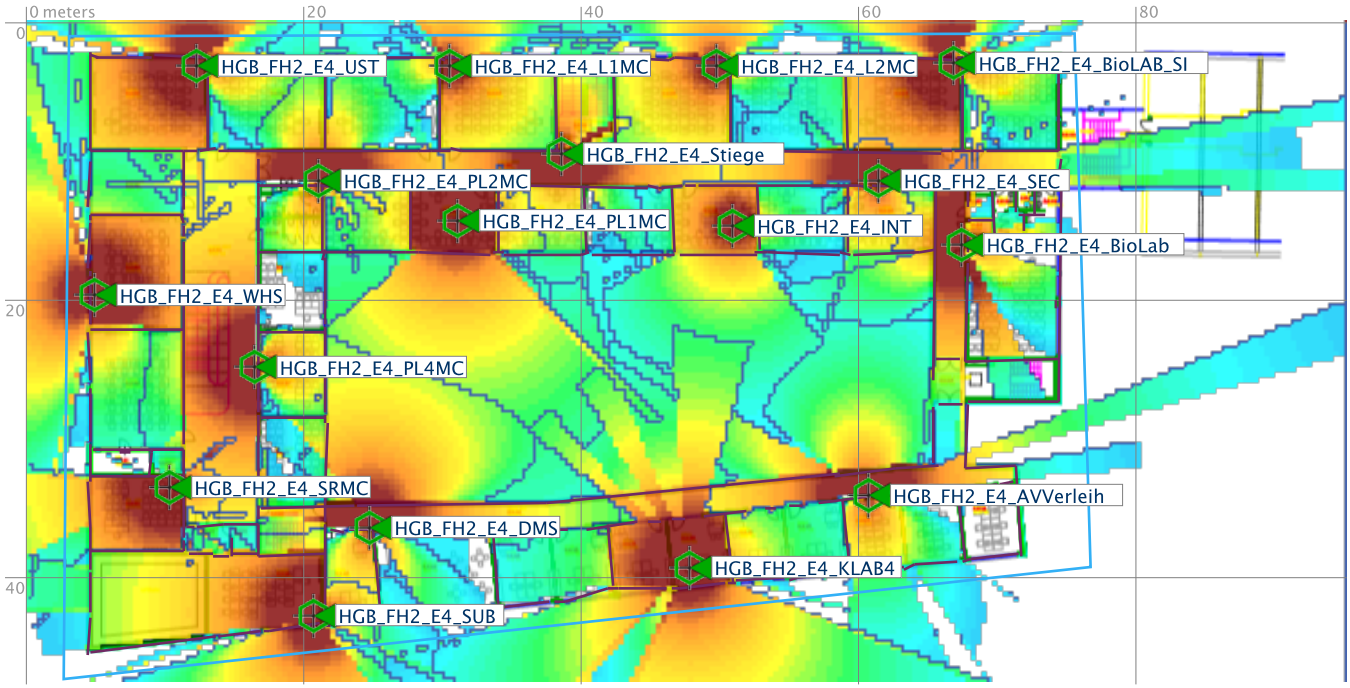
1.1 FH2_Ebene4_2OG

Summary

Number of Devices assigned to FH2_Ebene4_2OG

- 17 APs

Devices on FH2_Ebene4_2OG (5 GHz, RSSI View: -35 -70dBm)



Device Details

Name	Model	Type	wifi 0		wifi 1		Description
			Channel	Power	Channel	Power	
HGB_FH2_E4_L2MC	AP230	802.11ac	-	-	Auto(157)	Auto(10 dBm)	
HGB_FH2_E4_SUB	AP330	802.11n	Auto(5)	Auto(18 dBm)	Auto(40)	Auto(20 dBm)	
HGB_FH2_E4_BioLAB_SI	AP330	802.11n	Auto(9)	Auto(20 dBm)	Auto(44)	Auto(20 dBm)	
HGB_FH2_E4_INT	AP230	802.11ac	Auto(1)	Auto(6 dBm)	Auto(161)	Auto(10 dBm)	
HGB_FH2_E4_PL4MC	AP330	802.11n	Auto(9)	Auto(11 dBm)	Auto(48)	Auto(20 dBm)	
HGB_FH2_E4_UST	AP330	802.11n	Auto(13)	Auto(20 dBm)	Auto(36)	Auto(20 dBm)	
HGB_FH2_E4_L1MC	AP230	802.11ac	-	-	Auto(165)	Auto(10 dBm)	
HGB_FH2_E4_PL1MC	AP330	802.11n	Auto(1)	Auto(20 dBm)	Auto(48)	Auto(20 dBm)	
HGB_FH2_E4_WHS	AP330	802.11n	Auto(13)	Auto(11 dBm)	Auto(36)	Auto(20 dBm)	

Name	Model	Type	wifi 0		wifi 1		Description
			Channel	Power	Channel	Power	
HGB_FH2_E4_DMS	AP330	802.11n	Auto(13)	Auto(20 dBm)	Auto(36)	Auto(20 dBm)	
HGB_FH2_E4_SEC	AP330	802.11n	Auto(13)	Auto(20 dBm)	Auto(36)	Auto(20 dBm)	
HGB_FH2_E4_KLAB4	AP330	802.11n	Auto(1)	Auto(17 dBm)	Auto(44)	Auto(20 dBm)	
HGB_FH2_E4_SRMC	AP330	802.11n	Auto(1)	Auto(20 dBm)	Auto(44)	Auto(20 dBm)	
HGB_FH2_E4_AVVerleih	AP330	802.11n	Auto(9)	Auto(11 dBm)	Auto(40)	Auto(20 dBm)	
HGB_FH2_E4_Stiege	AP330	802.11n	Auto(1)	-	Auto(44)	Auto(20 dBm)	
HGB_FH2_E4_BioLab	AP330	802.11n	Auto(1)	Auto(11 dBm)	Auto(40)	Auto(20 dBm)	
HGB_FH2_E4_PL2MC	AP330	802.11n	Auto(9)	Auto(11 dBm)	Auto(40)	Auto(20 dBm)	

Device Total For FH2_Ebene4_2OG

Model	Part number	Total
AP330	AH-AP-330-N-W	14
AP230	AH-AP-230-N-W	3

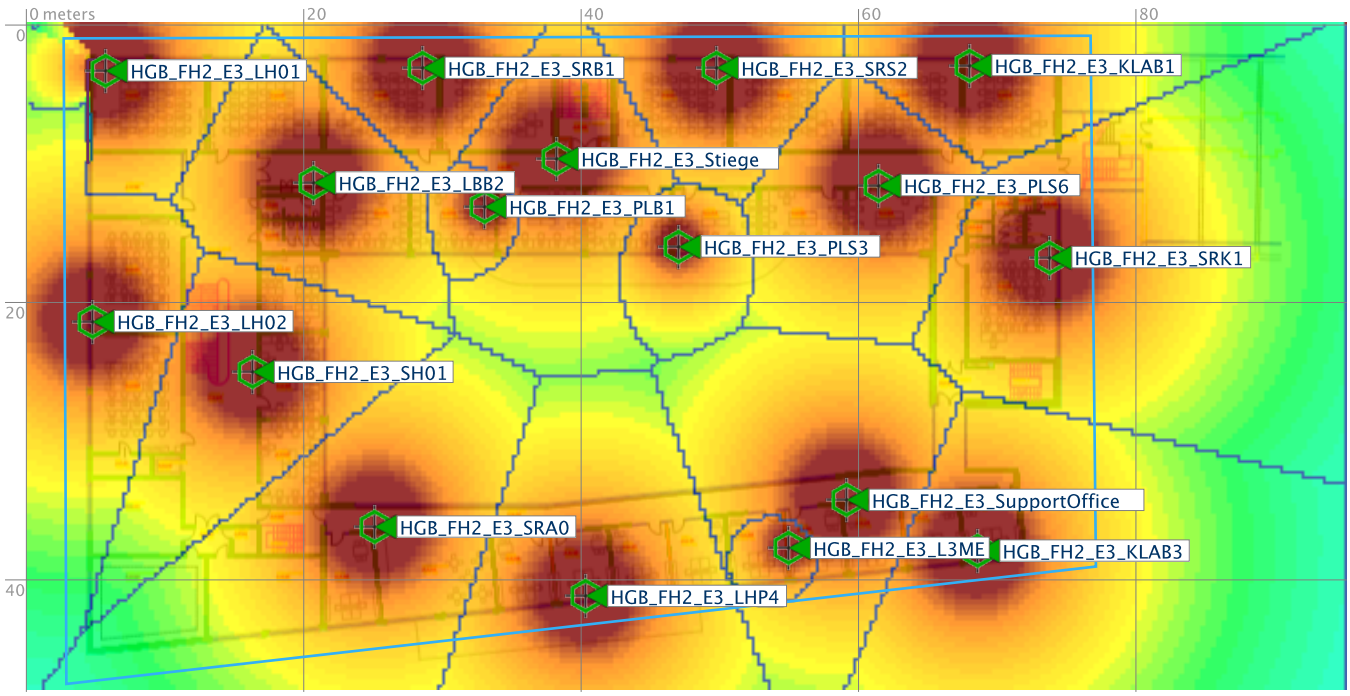
1.2 FH2_Ebene3_1OG

Summary

Number of Devices assigned to FH2_Ebene3_1OG

- 17 APs

Devices on FH2_Ebene3_1OG (5 GHz, RSSI View: -35  -70dBm)



Device Details

Name	Model	Type	wifi 0		wifi 1		Description
			Channel	Power	Channel	Power	
HGB_FH2_E3_PLS3	AP230	802.11ac	-	-	Auto(149)	Auto(10 dBm)	
HGB_FH2_E3_SRK1	AP330	802.11n	9	Auto(11 dBm)	Auto(48)	Auto(20 dBm)	
HGB_FH2_E3_SupportOffice	AP330	802.11n	5	Auto(11 dBm)	Auto(48)	Auto(20 dBm)	
HGB_FH2_E3_PLB1	AP230	802.11ac	13	Auto(16 dBm)	Auto(165)	Auto(10 dBm)	
HGB_FH2_E3_SH01	AP330	802.11n	5	20 dBm	Auto(40)	Auto(20 dBm)	
HGB_FH2_E3_SRA0	AP330	802.11n	9	Auto(11 dBm)	Auto(44)	Auto(20 dBm)	
HGB_FH2_E3_Stiege	AP330	802.11n	Auto(1)	-	Auto(48)	Auto(20 dBm)	
HGB_FH2_E3_LH01	AP330	802.11n	1	Auto(11 dBm)	Auto(48)	Auto(20 dBm)	
HGB_FH2_E3_LBB2	AP330	802.11n	Auto(1)	-	Auto(36)	Auto(20 dBm)	
HGB_FH2_E3_LH02	AP330	802.11n	13	-	Auto(44)	Auto(20 dBm)	
HGB_FH2_E3_SRB1	AP330	802.11n	5	Auto(11 dBm)	Auto(44)	Auto(20 dBm)	
HGB_FH2_E3_KLAB1	AP330	802.11n	1	Auto(11 dBm)	Auto(44)	Auto(20 dBm)	
HGB_FH2_E3_KLAB3	AP330	802.11n	1	Auto(20 dBm)	Auto(36)	Auto(20 dBm)	
HGB_FH2_E3_SRS2	AP330	802.11n	9	Auto(20 dBm)	Auto(44)	Auto(20 dBm)	
HGB_FH2_E3_L3ME	AP250	802.11ac	Auto(13)	Auto(15 dBm)	Auto(165)	Auto(10 dBm)	
HGB_FH2_E3_PLS6	AP330	802.11n	5	Auto(11 dBm)	Auto(40)	Auto(20 dBm)	

Name	Model	Type	wifi 0		wifi 1		Description
			Channel	Power	Channel	Power	
HGB_FH2_E3_LHP4	AP330	802.11n	1	Auto(11 dBm)	Auto(40)	Auto(20 dBm)	

Device Total For FH2_Ebene3_1OG

Model	Part number	Total
AP250	AH-AP-250-AC-W	1
AP230	AH-AP-230-N-W	2
AP330	AH-AP-330-N-W	14

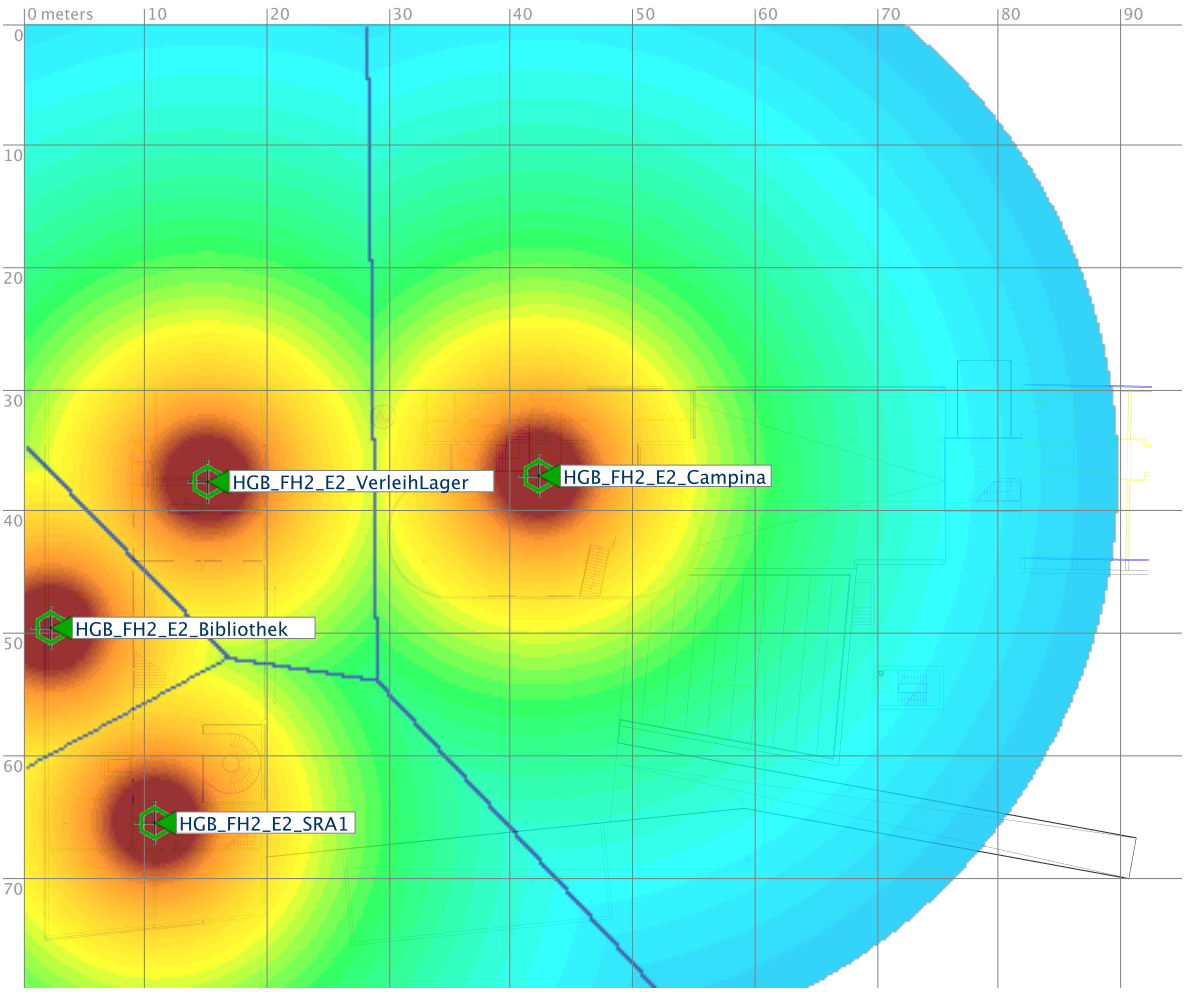
1.3 FH2_Ebene2_EG

Summary

Number of Devices assigned to FH2_Ebene2_EG

- 4 APs

Devices on FH2_Ebene2_EG (5 GHz, RSSI View: -35 -70dBm)



Device Details

Name	Model	Type	wifi 0		wifi 1		Description
			Channel	Power	Channel	Power	
HGB_FH2_E2_Bibliothek	AP330	802.11n	9	Auto(11 dBm)	Auto(36)	Auto(20 dBm)	
HGB_FH2_E2_VerleihLager	AP330	802.11n	1	Auto(20 dBm)	Auto(44)	Auto(20 dBm)	
HGB_FH2_E2_Campina	AP330	802.11n	5	Auto(14 dBm)	Auto(40)	Auto(20 dBm)	
HGB_FH2_E2_SRA1	AP330	802.11n	5	Auto(11 dBm)	Auto(48)	Auto(20 dBm)	

Device Total For FH2_Ebene2_EG

Model	Part number	Total
AP330	AH-AP-330-N-W	4

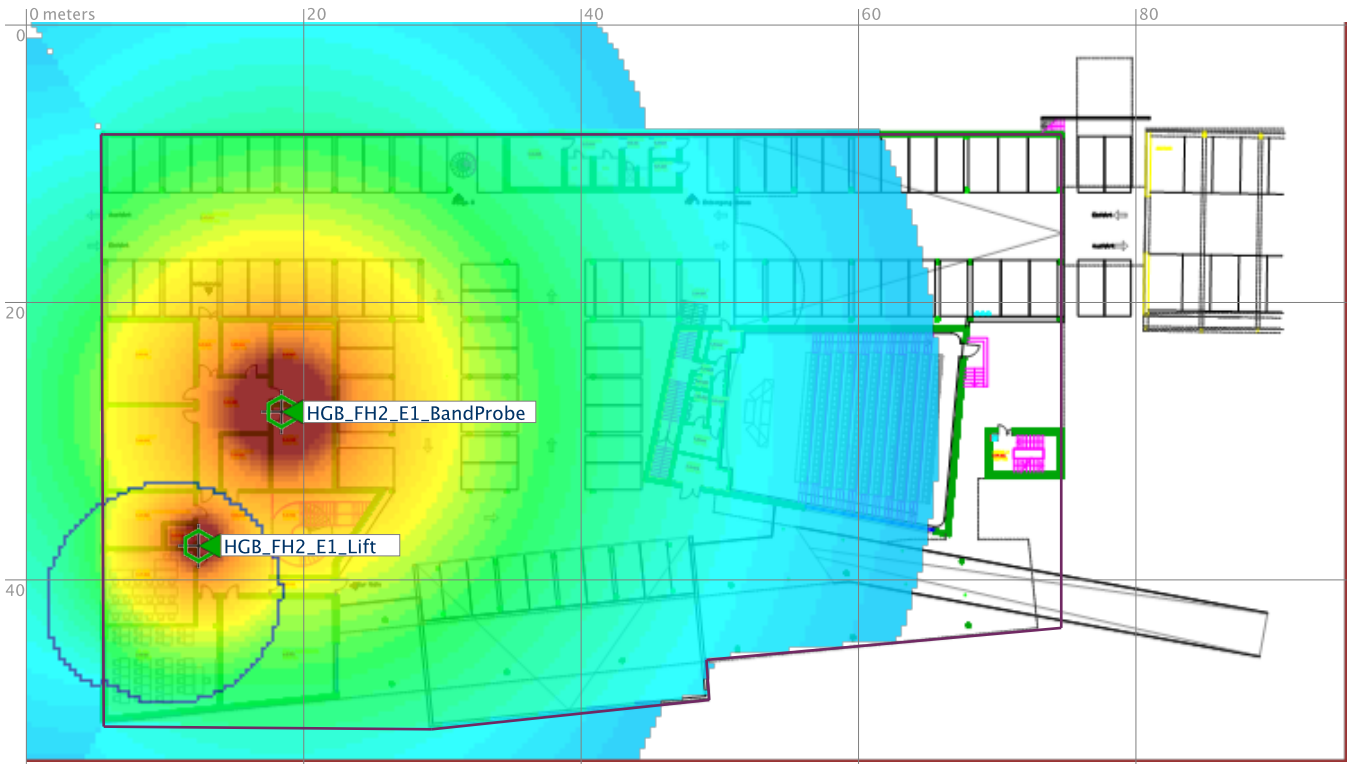
1.4 FH2_Ebene1_1UG

Summary

Number of Devices assigned to FH2_Ebene1_1UG

- 2 APs

Devices on FH2_Ebene1_1UG (5 GHz, RSSI View: -35  -70dBm)



Device Details

Name	Model	Type	wifi 0		wifi 1		Description
			Channel	Power	Channel	Power	
HGB_FH2_E1_BandProbe	AP330	802.11n	5	Auto(11 dBm)	36	Auto(20 dBm)	
HGB_FH2_E1_Lift	AP330	802.11n	9	Auto(11 dBm)	Auto(36)	Auto(11 dBm)	

Device Total For FH2_Ebene1_1UG

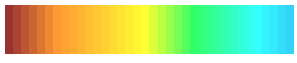
Model	Part number	Total
AP330	AH-AP-330-N-W	2

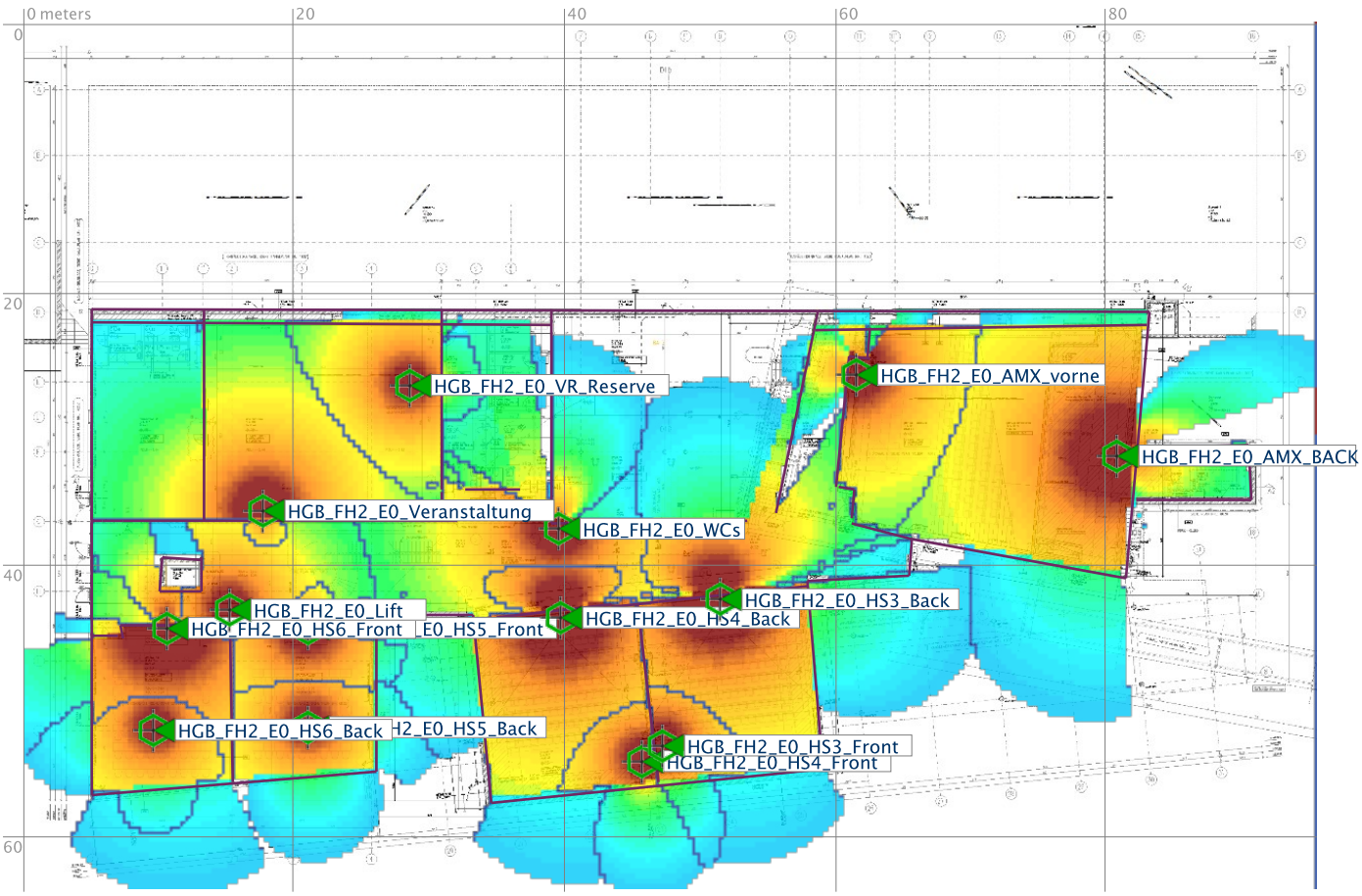
1.5 FH2_Ebene0_2UG

Summary

Number of Devices assigned to FH2_Ebene0_2UG

- 14 APs

Devices on FH2_Ebene0_2UG (5 GHz, RSSI View: -35  -70dBm)



Device Details

Name	Model	Type	wifi 0		wifi 1		Description
			Channel	Power	Channel	Power	
HGB_FH2_E0_AMX_vorne	AP330	802.11n	Auto(1)	-	36	15 dBm	
HGB_FH2_E0_HS5_Front	AP330	802.11n	Auto(1)	-	Auto(40)	14 dBm	
HGB_FH2_E0_HS5_Back	AP230	802.11ac	13	Auto(14 dBm)	Auto(165)	Auto(10 dBm)	
HGB_FH2_E0_HS4_Front	AP230	802.11ac	Auto(13)	Auto(16 dBm)	Auto(165)	Auto(10 dBm)	
HGB_FH2_E0_HS4_Back	AP330	802.11n	Auto(1)	-	Auto(40)	Auto(20 dBm)	
HGB_FH2_E0_HS3_Front	AP230	802.11ac	Auto(5)	Auto(16 dBm)	Auto(165)	Auto(10 dBm)	
HGB_FH2_E0_HS6_Back	AP230	802.11ac	Auto(5)	Auto(10 dBm)	Auto(161)	Auto(10 dBm)	
HGB_FH2_E0_HS6_Front	AP330	802.11n	Auto(1)	-	Auto(48)	Auto(20 dBm)	
HGB_FH2_E0_WCs	AP330	802.11n	1	Auto(20 dBm)	44	15 dBm	
HGB_FH2_E0_HS3_Back	AP330	802.11n	Auto(1)	-	Auto(48)	Auto(20 dBm)	
HGB_FH2_E0_VR_Reserve	AP230	802.11ac	13	Auto(14 dBm)	Auto(165)	Auto(10 dBm)	
HGB_FH2_E0_Lift	AP330	802.11n	Auto(1)	-	Auto(36)	Auto(11 dBm)	

Name	Model	Type	wifi 0		wifi 1		Description
			Channel	Power	Channel	Power	
HGB_FH2_E0_Veranstaltung	AP330	802.11n	Auto(1)	-	Auto(40)	15 dBm	
HGB_FH2_E0_AMX_BACK	AP330	802.11n	13	Auto(20 dBm)	Auto(48)	Auto(20 dBm)	

Device Total For FH2_Ebene0_2UG

Model	Part number	Total
AP230	AH-AP-230-N-W	5
AP330	AH-AP-330-N-W	9