



CHAPTER 11

Channel Summary

The **Channel Summary** shows specific levels of RF activity, such as average power and maximum power, and whether or not interferers are present, on a channel-by-channel basis. This information is very helpful in determining whether channel reallocations might improve your network performance.

Figure 11-1 Channel Summary

Channel #	Center Frequency (MHz)	Wi-Fi Present?	Channel Utilization (%)	In-Network AP Max Power (dBm)	Interference (dBm)	SNR (dB)	In-Network APs	Known APs	Unknown APs
1	2412	✓	0	-55.0	-71.0	16.0	11	0	0
2	2417	✓	1	-80.0	-55.0	-25.0	2	0	0
3	2422	✓	1	-85.0	-57.0	-28.0	3	0	0
4	2427	✓	1	-61.0	-51.0	-10.0	1	0	0
5	2432		1	N/A	-47.0	N/A	0	0	0
6	2437	✓	0	-47.0	-65.0	18.0	24	0	0
7	2442		0	N/A	-47.0	N/A	0	0	0
8	2447	✓	0	-70.0	-51.0	-19.0	1	0	0
9	2452		0	N/A	-55.0	N/A	0	0	0

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Working with the Channel Summary

To access the **Channel Summary**, select the **Channel Summary** tab or select **View > Channel Summary**.

Sorting the Display

You can sort the display by any of the columns, simply by clicking on the column heading.

Channel Data

The following data is presented for each channel:

- **Channel**—The channel number. (The display is sorted by channel number by default.)
- **Center Frequency**—The center frequency of the channel, in MHz.

- **Wi-Fi Present?** (Wi-Fi edition only)—A check mark () in this field indicates that Cisco Spectrum Expert Software detected activity by an 802.11 device during the last measurement interval.
- **Channel Utilization (%)**—The current duty cycle of RF activity in that channel. In this case, the percentage of the time that some signal was present in the channel during the last measurement interval.
- **In-Network AP Max Power (dBm)**—The maximum power level (in dBm) of the strongest In-Network Wi-Fi (802.11) device on the channel.
- **Interference (dBm)**—Power level (in dBm) of the maximum interference on the channel (including Wi-Fi interference).
- **SNR (dB)**—The signal to noise ratio's, expressed in dB, for each channel having access points present.
- **In-Network AP(s)**—The number of Wi-Fi ACI's identified as being in the network transmitting on the channel.
- **Known APs**—Network devices (access points) impacting your network, but which are not actually part of your network (For example, access points from neighboring Wi-Fi networks).
- **Unknown APs**—Access points designated as not belonging to the network and not belonging to a nearby network. Unknown access points should be treated as potential rogues.
- **Interferers**—The number of non-Wi-Fi devices transmitting on the channel.
- **Ad hocs**—The number of access points, belonging to a temporary (ad hoc) network, transmitting on your network channel (not displayed by default).
- **AQ Index**—This is a metric to check the goodness of the available spectrum. That is, it is a measurement to check the severity of interference on a specific channel. 100 means there is no interference; 0 means there is complete interference.

Miscellaneous Channel Summary Issues

802.11 Detection Sensitivity

The threshold for Cisco Spectrum Expert Software to detect 802.11 devices is an RF power of approximately -80 dBm. This detection sensitivity is commensurate to that of a reliable 54 Mbps connection, so the detection range is less than 150 ft at 2.4 GHz and less than 100 ft at 5 GHz in an indoor environment. In a large environment users should take detection measurements at several representative locations to cover the entire 802.11 area. See the Cisco Spectrum Expert Software release notes for more information.

802.11 Device Types

When Cisco Spectrum Expert Software indicates that an 802.11 a/b/g signal is present on a channel, this may or may not indicate an access point or network in use. It could also be a zero config client (a station not currently affiliated with a network) which is transmitting probes, as it seeks out a network.