Smooth IT

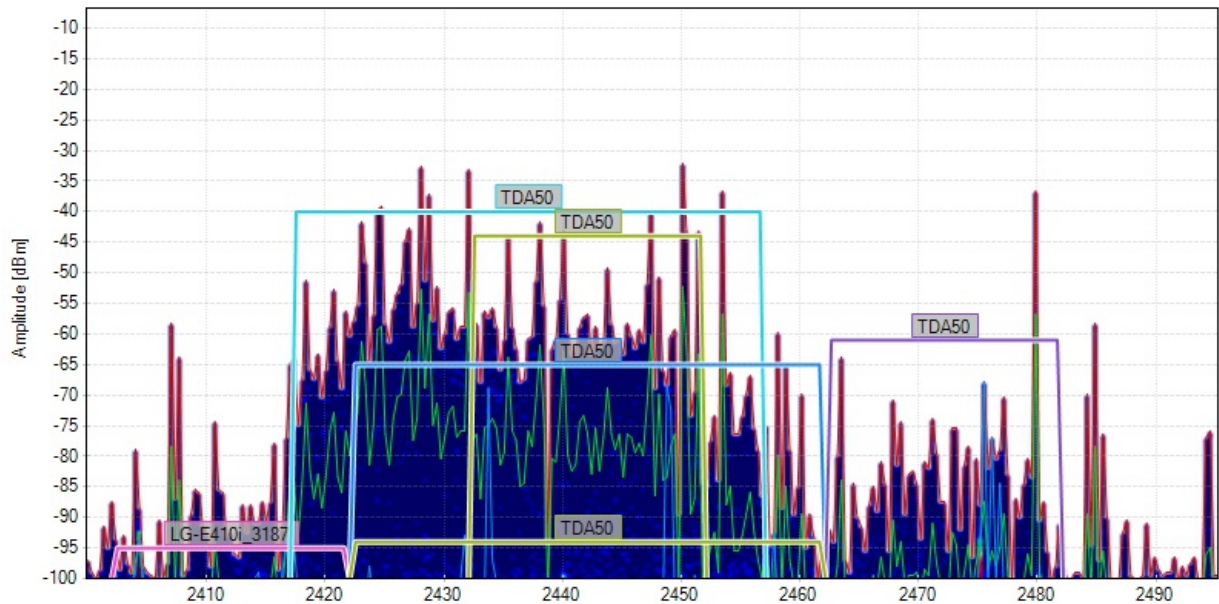Date: **27/08/2015 13:55:52**

Density

The **Density View** maps and displays what is currently happening in the spectrum, so you can identify devices, see how loud they are, and see how often they are transmitting.

With **Color by Utilization** enabled, the height of the graph shows how loud devices are (amplitude), and the intensity of the color shows how often signals are occurring. The more intense the color, the more often the frequency is in use. This is called **utilization**, which is similar to **duty cycle** and **airtime usage**. For example, if a frequency has 40 percent utilization, it is only free for use by other transmitters for 60 percent of the time.

A blue spike or shape indicates a short signal, like a clap. A red spike or shape indicates a long, continuous signal, like an air horn.
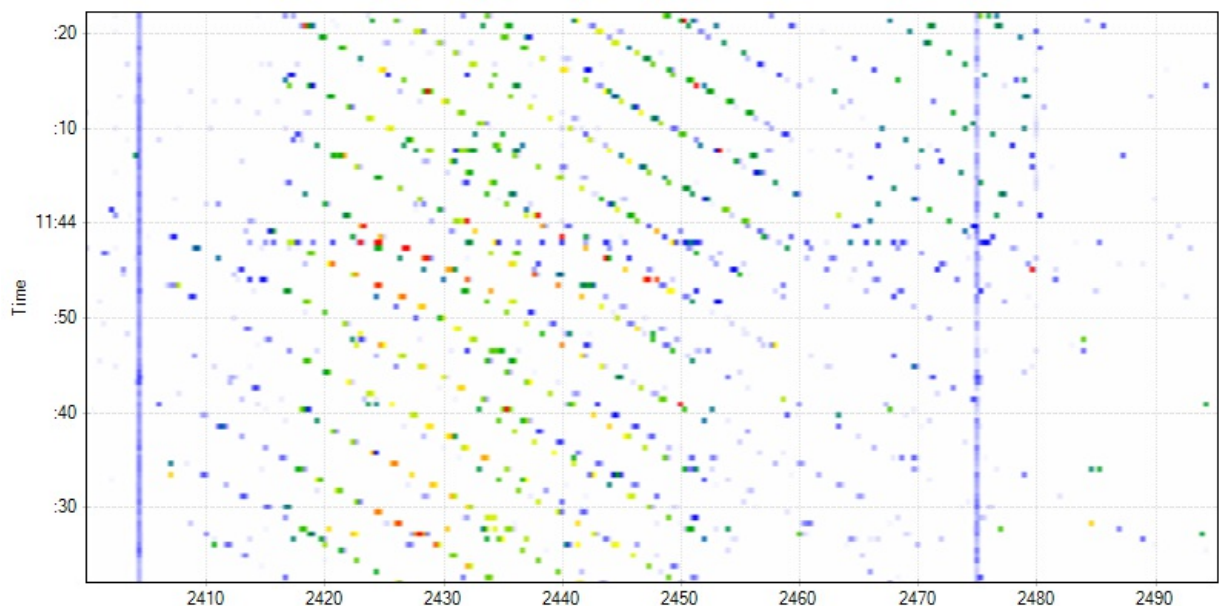
Blue - Less than 10 percent utilization

Green - 20 percent utilization

Yellow - 40 percent utilization

**Red** - Over 50 percent utilization

Waterfall

The **Waterfall View** graphs amplitude over time for all frequencies in the selected band, much like a seismometer graphs earthquakes. This view is useful for watching the spectrum over time.

Unlike the Density View which uses Color by Utilization, the intensity of the color in the Waterfall View indicates amplitude. Blue indicates low-amplitude signals, while red indicates high-amplitude signals.

Utilization
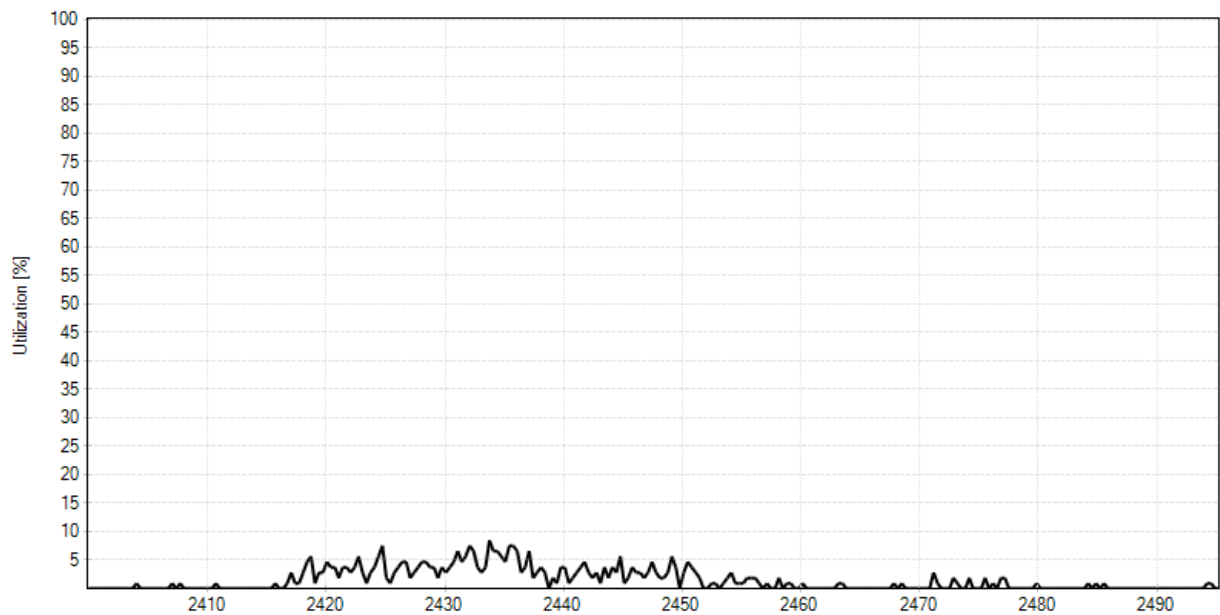
Utilization measures the percentage of activity above a defined amplitude threshold. Utilization is similar to **airtime usage** and **duty cycle**. The **Utilization Graph** gives more exact representations of utilization in the spectrum than the Density View's approximations.

Channels Table

| Channel	Grade	Utilization	Average (dBm)	Current (dBm)	Max (dBm)	Noise Floor (dBm)	Access Points
1	98.3	1.0%	-83.0	-101	-64.0	-103.0	1
2	96.5	1.7%	-71.0	-102	-52.0	-103.0	0
3	94.3	2.7%	-66.0	-101	-46.0	-102.5	0
4	92.1	3.8%	-65.5	-87	-46.0	-102.0	1
5	91.8	3.9%	-65.5	-87	-45.5	-102.0	0
6	92.1	3.7%	-66.0	-87	-46.0	-102.0	0
7	93.0	3.4%	-66.5	-83	-46.5	-102.0	1
8	95.0	2.3%	-67.5	-85	-47.5	-102.5	0
9	96.3	1.7%	-68.0	-85	-48.0	-102.5	2
10	97.7	1.1%	-68.0	-85	-48.0	-103.0	0
11	98.9	0.5%	-74.0	-102	-54.0	-103.5	0
12	99.1	0.4%	-93.0	-85	-74.0	-103.0	0
13	99.1	0.3%	-75.0	-85	-55.0	-103.0	1
14	99.4	0.2%	-75.0	-85	-55.0	-103.0	0

The **Channels Table** grades each Wi-Fi channel based on the RF activity within the defined time span. This table is useful for making channel deployment decisions, because it considers all activity in each channel, and gives each one a relative grade of usability.

Networks Table

SSID	Channel	Signal Strength	Security	MAC Address	Max Rate	Vendor	802.11
LG-E410i_3187	1	-95	WPA2-Personal	58:A2:B5:94:92:FF	72.2	LG Electronics	b, g, n
TDA50	4 + 8	-40	WPA2-Personal	00:0F:61:BB:D1:31	300	Hewlett-Packard Company	b, g, n
TDA50	7	-44	WPA2-Personal	00:0F:61:53:3D:E1	54	Hewlett-Packard Company	b, g
TDA50	9 + 5	-65	WPA2-Personal	00:0F:61:88:0D:D1	300	Hewlett-Packard Company	b, g, n
TDA50	13	-61	WPA2-Personal	00:0F:61:87:01:41	54	Hewlett-Packard Company	b, g
TDA50	9 + 5	-94	WPA2-Personal	00:0F:61:BD:55:51	300	Hewlett-Packard Company	b, g, n

The **Networks Table** displays a snapshot of Wi-Fi access points that were visible from the computer's Wi-Fi card during the selected time period.

Networks Graph
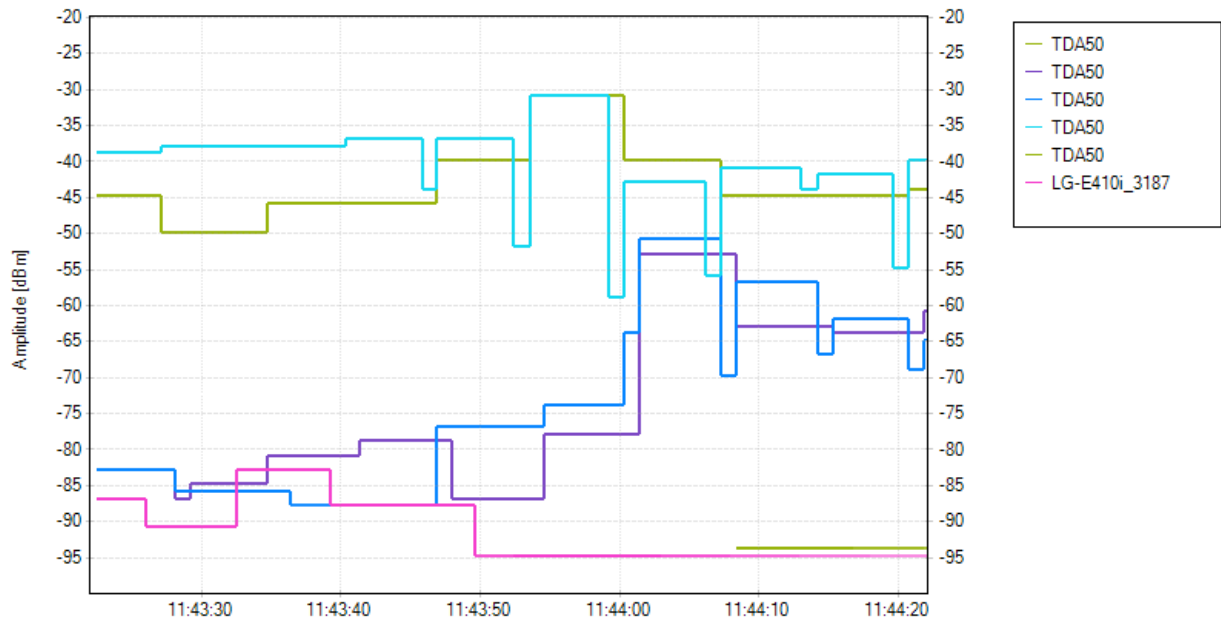
The **Networks Graph** represents Wi-Fi signal strength over time, using data collected from the computer's Wi-Fi card. The signal strength represents amplitude levels of transmit beacons that were received by the card. Drops in signal strength indicate poor coverage, and can be referenced against the Density and Waterfall views to determine if interference is the problem.