1. Objective

This document described about detection of unknown RF at 2.4 GHz and relation between RF with Health, Human Brain Frequency modulation. This unknown RF covered by Wi-Fi Signal which has unique Radio Sound.

2. Devices and Software

Following devices and software used for detections of RF at 2.4 GHz:

RF Meter device

• Cornet ED85EXS with sound signature

Spectrum Analyzer device

• HackRF (Radio Spectrum Analyzer)

Electromagnetic device

• TM-191 (Measure electromagnetic 30-300 Hz)

Wi-Fi Scanner for 2.4 GHz software

- Acrylic Wi-Fi Scanner
- Air Magnet XT (2.4 GHz Spectrum Analyzer)

Spectrum Density and FFT analyzer software

- GNU Radio Spectrum Density software
- GNU Radio FFT spectrum analyzer

Sound Analyzer software

- Sonogram (to view sound waves)
- Spectrum Lab (to view sound waterfall)
- Stereo Tool (to view real time waves form)

3. Device Technical Information

RF Meter device

ED85EXS from www.cornetmicro.com (Power and Electricity field)



Electromagnetic device <u>TM-191</u>

-This meter is applied to measuring electromagnetic fields of **extremely low frequency** (ELF) of 30 to 300Hz.

 It is capable of measuring the electromagnetic field radiation intensity that is produced from <u>electric transmission equipment</u>, <u>power line</u>, <u>air conditioner</u>, <u>refrigerator</u>, <u>computer</u> monitor <u>video/audio device and so forth</u>.
 web site : <u>http://www.tenmars.com/webls-en-us/TM-191.html</u>

Spectrum Analyzer device HackRF spectrum analyzer device

- It is capable of measuring Radio Frequency from 10 MHz-6 GHz

Wi-Fi scanner 2.4 GHz Acrylic and AirMagnet XT

- The software capable to detect Wi-Fi signal with signal strength graph and Wi-Fi networks details

Spectrum Density and FFT analyzer software

- Spectrum Density and FFT analyzer enable to see Radio Waves

4. General Information

This section will cover general information :

- ITU Frequency Band (Section 4.1)
- Brain Specific Frequency (Section 4.2)
- Brain EEG (Section 4.3)
- Electromagnetic Waves (Section 4.4)
- WHO Reference (Section 4.5)
- 2.4 GHz Channel Frequency (Section 4.6)
- 2.4 GHz Channel Distribution (Section 4.7)

4.1 ITU Frequency Band

ITU Frequency Band Nomenclature				
ITU Band	Designation	Frequency	Wavelength	
1	ELF	3 - 30 Hz	100,000 km - 10,000 km	
2	SLF	30 - 300 Hz	10,000 km - 1000 km	
3	ULF	300 - 3000 Hz	1000 km - 100 km	
4	VLF	3 - 30 kHz	100 km - 10 km	
5	LF	30 - 300 kHz	10 km - 1 km	
6	MF	300 - 3000 kHz	1 km - 100 m	
7	HF	3 - 30 MHz	100 m - 10 m	
8	VHF	30 - 300 MHz	10 m - 1 m	
9	UHF	300 - 3000 MHz	1 m - 10 cm	
10	SHF	3 - 30 GHz	10 cm - 1 cm	
11	EHF	30 - 300 GHz	1 cm - 1 mm	

4.2 Brain Specific Frequency

Brain Area	Bioelectric Resonance Frequency	Information Induced Through Modulation
Motor Control Cortex	10 Hz	Motor impulse coordination
Auditory Cortex	15 Hz	Sound which bypasses the ears
Visual Cortex	25 Hz	Images in the brain bypassing the eyes
Somatosensory Cortex	9 Hz	Phantom touch sense
Thought Center	20 Hz	Imposed Subconscious Thoughts

4.3 Brain EEG

TABLE 26.1 Frequency bands of the EEG		
Band	Frequencies (Hz)	
Delta	0-4	
Theta	4–8	
Alpha	8–12	
Beta	12-25	
Gamma	25-100	

Source : A Practical Approach to Neuroanesthesia by Paul Mongon - Page 330 (<u>http://www.lww.co.uk/a-practical-approach-to-neuroanesthesia</u>)

Note :

- 1. During EEG tests some of Brain specific frequency may or may not recorded.
 - e.g. : 1. Background was a well organized, symmetrical responsive posterior dominant alpha rhythm 10 Hz with no abnormal waveforms noted despite activation.
 - 2. Background with alpha rhythm 9 10 Hz, moderate Amplitude.
 - 3. Low voltage with frequency from 10-13 Hz.
- 2. If such brain frequency recorded, that means there is modulation thru radio (may or may not). A neurologist will not have solid answer on why such frequency is recorded (depends on the situations).

See Appendix G for details (Page 52)

4.4 Electromagnetic Waves



Electromagnetic wave consists of Electric Field (Y) and Magnetic Field (Z) and Direction (X). When we purchase a device to measure Electromagnetic Waves, there are 3 axis device and 1 axis device. 3 Axis devices will measure (X, Y, Z) and 1 axis device will measure either Y or Z.

4.5 WHO Reference

Internet web site : http://www.who.int/peh-emf/about/WhatisEMF/en/index3.html

Electric appliance	3 cm distance (µT)	30 cm distance (µT)	1 m distance (μT)
Hair dryer	6 - 2000	0.01 – 7	0.01 - 0.03
Electric shaver	15 – 1500	0.08 – 9	0.01 - 0.03

Typical magnetic field strength of household appliances at various distances

4.6 2.4 GHz Channel Frequency

This unknown RF works at 2.4 GHz which using by Wi-Fi at home and offices. It is better to have understanding on how 2.4 GHz channel frequency allocation. Below is the table of 2.4 GHz Channel Frequency :

CHANNEL NUMBER	LOWER FREQUENCY MHZ	CENTER FREQUENCY MHZ	UPPER FREQUENCY MHZ
1	2401	2412	2423
2	2404	2417	2428
3	2411	2422	2433
4	2416	2427	2438
5	2421	2432	2443
6	2426	2437	2448
7	2431	2442	2453
8	2436	2447	2458
9	2441	2452	2463
10	2451	2457	2468
11	2451	2462	2473
12	2456	2467	2478
13	2461	2472	2483
14	2473	2484	2495

4.7 2.4 GHz Channel Distribution



We can see there are 3 channels not overlapping (1, 6, 11)

5. Appendix

- <u>WaterFall Image</u>
 Please see Appendix A
- Spectrum Density Please see Appendix B
- FFT
 Please see Appendix C
- Image
 Please see Appendix D
- Radio Sound Analysis and Sound WaterFall Please see Appendix E
- Wi-Fi Networks Graphs Comparisons Please see Appendix F
- EEG with Brain Mapping Please see Appendix G
- Wi-Fi Router analysis
 Please see Appendix H
- EEG signal with Neurosky Please see Appendix I
- Video
 Please see Appendix J
- Testing of the Signal on the Flight Please see Appendix K
- Testing of unknown signal at 2.4 GHz near to plantations Please see Appendix L
- Wi-Fi Packets Analysis
 Please see Appendix M

6. Device Measurement Detail and Calculations

6.1 Measurement details from Cornet

- Cornet always showing 20 to -40 dBm (some time fluctuate to -10 dBm to -20 dBm)
- Cornet gives measurement in mW/m2
- Cornet produced sound signature
- The cornet measurement always the same in Singapore and out of Singapore KL, JB, Medan, so the Radio Source comes from Satellite.
- Cornet can measure from 1 MHz 8 GHz which falls under L,S and L Band under Satellite band
- Cornet always gives values V/m (Volt / meter) which always fluctuate from 0.5 to 1.2 (sometimes 1.9 V/m). This indicates there is electricity around body.
- The measurement value -20 to -40 dBm comes under < 1 watt which not detected
- The measurement table (1.1) below shows the power in dBm and watt

Values in dBm	Value in Watt	Values in dBm	Values in Watt
- 20	0.00001	- 10	0.0001
- 21	0.0000079432823472	- 11	0.000079432823472
- 22	0.0000063095734448	- 12	0.000063095734448
- 23	0.0000050118723363	- 13	0.000050118723363
- 24	0.0000039810717055	- 14	0.000039810717055
- 25	0.0000031622776602	- 15	0.000031622776602
- 26	0.0000025118864315	- 16	0.000025118864315
- 27	0.000001995262315	- 17	0.00001995262315
- 28	0.0000015848931925	- 18	0.000015848931925
- 29	0.0000012589254118	- 19	0.000012589254118
- 30	0.000001		
- 31	7.9432823472e-7		
- 32	6.3095734448e-7		
- 33	5.0118723363e-7		
- 34	3.9810717055e-7		
- 35	3.1622776602e-7		
- 36	2.5118864315e-7		
- 37	1.995262315e-7		
- 38	1.5848931925e-7		
- 39	1.2589254118e-7		
- 40	1e-7		

6.2. Human Head electricity

- The power (electricity) on our scalp is $100 \mu V$ ($100 \mu V = 0.0001 V$)
- Please refer following table (1.2) for volts, watt and Ampere (Formula : Volt = Watt / Ampere)

	Volt	Watt	Ampere
2		10	5

0.0001 (100 μV)	0.0001	1
0.1	0.1	1
1	1	1
2	4	2
2	10	5

so, based on above table , we get same value for Volt and Watt

6.3. Arcylic software to detect Wi-Fi signals

- The Acrylic software with my Laptop shows Wi-Fi Network fluctuate at 2.4 GHz
- Wi-FI Channels always fluctuate are 1,5,6,8,9,10,11,13 and Channel 12 slightly fluctuate but not in large degree. (Most affected channels are 6,8,11)
- Wi-Fi Channels at 5 GHz not affected at all
- The fluctuation reach to -10 dBm and at the same time SNR value reach to 100. SNR (Signal to Noise Ratio) value indicates lot of noise and the value back around 4-20.
 Good Wi-Fi signal SNR will not have large degree deviation of SNR value. The SNR should have steady value with little bit deviation.
 - e.g. 1. SNR 100 then SNR 95 (Good SNR)
 - 2. SNR 100 then SNR 15
 - (This is bad value and indicates interference or something else)
- If the SNR is 100 that means the source of Radio Waves is near to you.
- If we near to the source than only we can see the signal strength graph increase to the top and will fall down at steady rate if move far away from the source.

See Appendix D (Image 1) - Page 39:

SSID : Lakes-5GHz

I moved my Laptop near Dlink (besides Dlink router) dual band router then the graph reach to -10 dBm and then I moved Laptop nearly 3 m from router and then reach near to -40 dBm.

Please make a note SNR as well. If the SNR value is 100, means the source of Wi-Fi is near to you. So ,based on graph (Image 1) , sudden fluctuation to -10 dBm and then drop suddenly is really external interference caused such fluctuation.

(Please see more explanation at Image 1)

Note : The logic is + If we near to the RF source, we will receive high power

 If we move away from the RF source, we will receive less power

(Based on above points, the signal strength graph will be generated)

6.4. TM-191

The TM-191 detected EM waves and the value from 0.05 to 0.18 μ T (measured at 10 cm distance from Head and the values are fluctuate) and at 1 m distance there were no electrical equipment or microwave oven or other source that operates within 30-300 Hz. This indicates there are EM waves around you. As comparison, Hair Dryer at 1 m distance will have 0.01 - 0.03 μ T but if there is nothing at 1 m distance and TM - 191 detected 0.05 to 0.18 μ T that means there are EM waves around you. Please see appendix D (Image 5 - Hairdryer Magnetic Field Picture -Page 42)

6.5. WaterFall Image (Appendix A - Page 14) and Sound Signature from Cornet

- WaterFall Image generates Red and Yellow line combination. Sometime single line and sometime solid lines for few seconds (WaterFall Image 6)
- WaterFall Image 1 to 11 are the Image created during strong Interference at 2.4 GHz networks
- Sound signature produced by cornet at time there is solid line like WaterFall Image 6 slightly suppressed and then back to normal sequence sound
- During generation of red line and yellow line on WaterFall Image , Cornet device measure high fluctuation values for units in dbm and V/m
- WaterFall image 12 is for 5 GHz Wi-Fi WaterFall Image (Reference)
- WaterFall image 13 is for FM Radio WaterFall Image (Reference)
- WaterFall image 14 and Acrylic Picture shows fluctuation at channel 6 in which it produced red and yellow line (Interference)
- **WaterFall image 15** shows the waterfall image when there is Bluetooth activity (Device Connected and File Transmission)
- WaterFall image 17 shows the waterfall image of Wi-Fi channel in activity transmitting data, Browsing internets. (This is good reference of Wi-Fi WaterFall Image)
- WaterFall image 18 shows waterfall image of microwave (Reference)
- -Spectrum Density Image 16 (Appendix A Page 30), there are 3 SSID Channels 1,6,12. Channel 1 with -84 dBm with SNR 16 is really far away from me but we can see strong interference at channel 3 which leave noise floor at peak in red color. By right, channel 3 should not have strong activity at all. The same applies at Channel 10. (other channels have same situation which I omitted in this document)

7. Analysis Details

7.1. Information derived

- There is a satellite beam (Microwave modulated low frequency)
- There is a device connected to satellite source and the device can deliver the frequency that works at human brain frequency . the device must be located with premises having satellite link
- The device is operated from remote location by accessing the device thru internet
- The Sound signature is classified as "Hunting Signal" and looks like receiving broadband energy. It's possibly from a variety of RF/EMI sources
- As the Radio Frequency works at Brain Frequency, this will result over activity at brain. As I mentioned above, our Brain produce electricity around 100 μ V and there is voltage around my body > 100 μ V which is really big value as there is no nearby Radio Transmission.

(Please see video from MIT about RF electricity :

http://video.mit.edu/watch/mit-physics-demo- dipole-antenna-3116/)

7.2. Health Analysis

There is a medical term "Melatonin". Melatonin is naturally occurring hormone secreted by the body's pineal gland. Production of melatonin occur at night time when pineal gland senses no light. (This the time when the brain oversees general cellular repair and replacement).

Brain interprets man-mad radio waves as light waves. If TM-191 device sense electromagnetic waves (microwave, radio, etc where at 1 m distance there is no electrical equipment or any microwave transmission such microwave oven) the entire body mechanism will be disturbed and entire health system will be affected. Low production of Melatonin will result in heart complications, and other related disturbance of the immune systems.

Heating effect in humans, when injury from exposure to microwave occurs, it usually results from heating in the body. Exposure to high levels of microwave radiation can produce cataracts by this mechanism, because the microwave heating denatures proteins in the crystalline lens of the eye faster than the lens can be cooled by surrounding structures. The lens and cornea of the eye are especially vulnerable because they contain no blood vessels that can carry away heat.

Exposure to heavy doses of microwave radiation can produce heat damage in other tissues as well, up to and including serious burns which may not be immediately evident because of the tendency for microwaves to heat deeper tissues with higher moisture content.

(source : <u>http://www.cyberphysics.co.uk/topics/waves/mircowaves.htm</u>)

Because of this RF, it creates Non-Ionizing Radiation. Health effects because of nonionizing radiations are plenty which depends on μW/cm2 or μW/m2 and also SAR values.

WHO also have EMF project which contains information about EMF and Health effects. Reference web site :

- Bioinitiative group : <u>http://www.bioinitiative.org/</u>
- WHO : <u>http://www.who.int/peh-about/WhatisEMF/en/index3.html</u>
- ICNIRP : <u>http://www.icnirp.org/</u>

- Using Cornet ED85EXS, detected following values (Random numbers):

Values in mW / m ²	Values in μ W / m ²	Values in μW / cm ²
3.483	3483	0.3483
3.033	3033	0.3033
2.897	2897	0.2897
2.248	2248	0.2248
0.2766	276.6	0.02766
0.1958	195.8	0.01958
0.2581	258.1	0.02581
0.5394	539.4	0.05394
0.2082	208.2	0.02082
Average	1459.9	0.14599

- Based on Building Biology Institute, Germany :

Values in μW / m ²	Description
< 0.1 μ W / m ²	No concerns
0.1 - 10 μW / m ²	Slight concern
10 - 1000 μW / m ²	Severe concern
> 1000 µW / m ²	Extreme concern

source : http://www.baubiologie.de/downloads/building-biology-guidelines-english.pdf

- Based on BioInitiative Report 2007 :

Values in μW / m ²	Description
1000 μW / m ²	For outdoor, cumulative RF exposure
100 μW / m ²	For indoor, cumulative RF exposure

source : http://www.bioinitiative.org/

So, at average 1459.9 μW / m², is

- At the level of Extreme concerns and
- It is not normal value for indoor/outdoor cumulative RF exposure

Other random values (Please see Appendix D , Image 2,3, and 4) The measurement taken using whip antenna 2.4 GHz, which given following value :

- 1. 0.4187 mW / m2 (418.7 μ W / m²)
- 2. 0.5520 mW / m2 (552.0 $\mu \text{W} / \text{m}^2$)
- 3. 15.92 mW / m2 (15920 μ W / m²)
- Reported Biological Effects from Radiofrequency Radiations at Low-Intensity Exposure

(BioInitiativeReport RF Color Charts)

0.38 uW/cm2	RFR affected calcium metabolism in heart cells	Schwartz, 1990
0.8 - 10 uW/cm2	RFR caused emotional behavior changes, free-radical damage by super-weak MWs	Akoev, 2002
0.13 uW/cm2	RFR from 3G cell towers decreased cognition, well-being	Zwamborn, 2003
0.16 uW/cm2	Motor function, memory and attention of school children affected (Latvia)	Kolodynski, 1996

So, at average 0.14599 μ W / cm² is

- decreased cognition well being
- Motor function, memory

Note :

Prolonged exposure to ELF could alter Ca²⁺ levels in neurons and thus induce oxidative stress. This is one of factor that will trigger Neurodegenerative Disease. (WHO Reference)

7.3 Device Analysis Result as Summary

> Analysis of Radio Waves

- Cornet produced -20 to -40 dBm (some time fluctuate to -10 dBm) with different power density values with whip antenna 2.4. GHz
- Cornet produced sound signature which is classified as "Hunting Signal" (see appendix E)
- Cornet produced same value in Singapore (at Home, Bishan Park), Johor Bahru, Kuala Lumpur (KL town, Batang Kali), Medan
- The Acrylic signal strength always fluctuate to -10 dBm at 2.4 GHz in which there are no Dect Phone, Microwave, Bluetooth and neighbourhood Wi-Fi strength < -60 dBm
- Fluctuation till -10 dBm (with Acrylic) detected at Singapore (at Home, Bishan Park, Changi Airport), Medan (few places)
- TM-191 detected EM waves with 0.05 0.18 μT (10 cm from Head)
- Spectrum Analyzer produced waterfall image (Appendix A ,WaterFall Image 1-11) that does not match with 2.4 GHz available waterfall image

> Analysis of EEG and Electric Field

- Our Head EEG is measured with 100 μV
 -- (1)
- Electricity around body is > 0.5 V/m and < 1.2 V/m (RF Electric Field strength) -- (2)</p>
- Point (2) > (1), our body will have heat from external to internal in which doctor will not able to detect or diagnose the root cause of the body heat. This heating comes from microwave heating.

This type of heating is classified as "Inside to outside heating" (Internal Heating and Heat Trapped). This results in boils, drying up of the fluids around eyes, brain , joints, heart, abdomen, etc.

7.4 Conclusion

1.There is microwave modulated low frequency which interferes at Human Brain Frequency. (This Technology known as Remote Brain Mapping). The carrier frequency is **2.4** GHz.

2.RF type : Microwave modulated at low frequency where this type RF can travel from one country to country in which not detected by any country so far (Singapore, KL, JB, Medan).

3.Microwave modulated at low frequency is harmful and any negative impact on any individual is not explainable why people fall sick and other effects.

4. As Radio waves not visible to Human Eyes, the device and values , deliver and described about Radio Waves. Radio sound is one of key to identify what type of Radio Signal. Radio Sound ("Hunting Signal") same everywhere and inside the flight

5. The RF source creates non-ionizing radiation (1459.9 μW / m^2) which is really health hazards at very critical level

6. The RF source (microwave modulated low frequency) works on the flight as well (Batam to Medan, Medan to Singapore). See Appendix K

7. Waterfall Images (Appendix A , Waterfall image 1 to 11) are new type and not match with available waterfall images for 2.4 GHz network

8. Please see Appendix I (Page 57), changes in Human Brainwaves with single Channel

9. This unknown RF at 2.4 GHz covered by Wi-Fi Signal and make it difficult to identify

10. See Appendix L, detection of signal using Spectrum Density in which we can see some noise floor activity at 2.4 GHz. Cornet also fluctuate from -13 dBm to -60 dBm with same sound ("Hunting sound"). Such huge fluctuation of receive power not possible to occur in the area where don't have 2.4 GHz transmission.

Please make a note that one of density value is 0.5034 μ W / m² with power -60.6 dBm. Really this is a strange radio signal with different power level and density value is measured in μ W / m² (very small value).

The detection location near to plantations and there is no transmission at 2.4 GHz but we can noise floor activity , different received power level and same sound signature.

11. See Appendix M, we can see that clearly that SSID = AndoidAP as access point visible in three countries (Indonesia, Malaysia and Singapore), so under probability rule highly impossible to have same SSID all the places and the same time the transmission of the signal from Satellite. Satellite delivers Broadband access. Wi-Fi Signal and packets to make people believe it is Wi-Fi packets and this becomes hole in detection process.

Source of Signal :

1. Satellite SES-7 which covers Indonesia ,Malaysia and Singapore using S-Band located at 108 °E.

The same satellite also have Ku-Band which covers India, Srilanka, Indonesia, Malaysia, Singapore, Philippines, Taiwan

Notes :

 Satellite NSS-11 which covers China, NEAsia, South Asia region using Ku-Band located at 108°E (co-located)

Note : The source may vary from time to time

General Note :

- <u>1.The conclusion is derived based on <u>Information Analysis details</u> with result of Sound Signature, WaterFall Image, Acrylic Software, Power reading from Cornet, EM reading from TM-191</u>
- 2.Radio waves (man mad waves) should not be modulated at low frequency because all other Natural waves Frequency will get disturb including Human Brains Frequency, Schuman Resonance (7.8 Hz) and others.

<u>Appendix A</u>

WaterFall Image 1 :



WaterFall Image 2 :



WaterFall Image 3 :



WaterFall Image 4 :

22	SDR# v1.0.0.1337 - IQ Imbalance: Gain = 1.000 Phase = 0.000*	- 0 ×
	002 415 990 000	
1/		Zann
Hards BF		
▼ ExSt		1.12
ONN MAL OUSE C		
OWW OCO OCV O	Nuv a	112
98	0: 3	0
Filter Backman-Hants 4		Certrast
Bandwidth Order		
1000(\$)	200 2 " all had no with a weather with a third of a with the part of the believe we be a with a lite of the weather the	and an annual
Sould CWSHA	-10 The first sector of the first sector of the sector of	
Sil Street Constant		
Snepto gnt 🖓 Task	2.406.5040 2.410.4160 2.411.5280 2.412.2480 2.413.1520 2.414.0640 2.414.9783 2.416.8880 2.416.8890 2.417.7120	2.4181040
Lock cervier C		678642
And Tables [] See		
V Aucho		a crasse
Samplerate 40000 sampleria		and the second se
legal [MME] Menand	The second se	COLUMN TWO IS NOT
Output (1015) Nerrout	Inn -	Offeet
Latency (ma)		and a state of the local division of the loc
Unity Gain Filter Audio		- 12 OT
► ACC		CALCULATE STATE
 FFT Display 	and the second secon	apartmenter .
Frequency Managar	. Several sector of the sector	
-		MISS & SHOW
		A/30/2011

WaterFall Image 5 :



WaterFall Image 6:

		SOR# v1.0.0.1337 - IQ	imparance: Gain = 13	000 Phase = 0.000*.				- 0
= + +>	- 002.414.8	98.000						
Frequency Manager + Scaron *							hidentified	Ĩ.ee
Finguency Manager n 42 42 44 44 46 47 44 48 470 👧	9 4 5							
Edit Browne Marage	-10							
carner	궴							
Minimum Signal Strength 0.0 Seconds valit for more Statution 5.0 (20	30 40							Curt
Scan A Group State Requested	4							
Select Scen Group								
Scal Thit Bro Thy Lat	-10 -16 -00 2.409.5040 2.419.4180	2.411 168GHz 2.411-79 09dB	0 2413560 2	414.0643 2.412.97	91 2.419.0000 24.19.0000	2.419.000 2.4	177120 2.41	HD40 Rar
Scal Hut Dro Hig Last Traguency Droy ² Frequency 2,414,898,000 ²	-70 -16 -2 4/8 6040 2 410 4180	2411 168GHz 2411 7910048 417 560	0 24131480 2	4140940 2 471 97 9		2411000 22	ar 105) - 241	no40 Ran
Scal Hot Dro Hig Lash Traguency Dray ² Fraguency 2,414,858,000 ² Center 2,413,995,000 ²	-10 -16 -20 2 409 5040 2 410 4190	2.411 168GHz 2.411 - 79 CR.JB 417 740	0 2413/820 2	4140540 2 41497		2411000 24	412 7150 2.41 2.41	References
Scal Hot Bro Hig Look Frequency Drity* Frequency 2,414,898,000 \$ Center 2,413,995,000 \$ * Genere Metics*	-10 -16 -27 -2 409 5040 2 410 4100	2.411 168GHz 2.411-790048 ⁴¹⁻²⁴⁰	0 2411 680 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	41050 2404H		2.419 0000 2.4	a) (15) 241	Rev
Scal Hot Bre Flig Last Trequency Lothy* Trequency Lothy* Treque	-70 -71 -72 -72 -72 -749-5645 -72 -7410-4760 -72 -7410-4760 -72 -7410-4760 -72 -7410-4760 -74 -74 -74 -74 -74 -74 -74 -74 -74 -74	2.411168CHz 2411-780094B	0 243340 2			2 11 1000 2	412 T150 2.411	Re
Scent Held Stor File Levin Preparency Totay - Preparency 2,414,898,000 () Center 2,413,995,000 () Center 2,413,995,000 () Record Nations Start Recording	-70 -71 -71 -72 -72 -72 -749-5045 -72 -7410-4780	2.411 168GHz 241 .7900948 12.240	0 2433480 2			249 000 24		HSED Res
Sam Team Team Team Team Team Team Team Te	-70 -70 -70 -70 -70 -70 -70 -70 -70 -70	2411-79004B	0 2413 550 2					IGE) Ref
Scient Verting Verting Last Trequency Linky * Trequency Linky * Tre	-70 -70 -70 -70 -70 -70 -70 -70 -70 -70	2411-79/004B	0 2411 420 2				12110	Rational Rationa Rational Rational Rationa Rational Rational Rationa Rational Rational Rational Rational Rational Ration
Scen har Bro Hig Lan Treasurey Kitay * Treasurey 2,414,898,000 \$ Center 2,413,995,000 \$ Exerce Motions Macod Minos Start Recording Record this Sealer 0 Processed this Sealer 0 Processed this Sealer 0 Report Metrics Select a report	2.4996043 2.410.4100	2411-79004B	0 2433 550 2			241 000 24	12110 241	Rational Rationa Rational Rational Rationa Rational Rational Rationa Rational Rational Rational Rational Rational Ration
See the the the Last Treasure Lines Treasure 2,414,898,000 Center 2,413,995,000 Center Motions Center Motions Sector Records Sector Process 0 Proceed this Sector 0 Proceed this Sector 0 Proceed this Sector 0 Report Meins Setor 1 report	2.495643 2.410.4100	2411-79004B	0 2/43 550 2				177120 241	riseo Re

WaterFall Image 7 :



WaterFall Image 8 :

2	50R# v1.0.0.1337 - IQ Imbalance: Gain × 1.000 Phase = 0.000*	- 0	9 X
	002 413 000 000		
bellate Cl SeptAD	*	Unidentified	Zuon
¥ Auto	3		
Serplexie 4000 samplexies			
Head (Miller Roman's Source -	30		
Output (HHE) Homan't Source	14		
Latercy (ma) 101 ‡			-
Unity Gain Filter Audo			Cartrast
 No. PER Production 	40 M		
 Frequency Manager - Scanser¹ 	= - pay resumption in the particulation of the state of t	manus demonstration	Arrest in
 Frequency Lotty⁺ 			
 Scanner Metrics* 	-19		
 Zoon ITT* 	2 407 5100 2 408 2220 2 409 1340 2 410 0460 2 410 9660 2 411 8700 2 412 7020 2 413 8810 2 414 88	40 2,416,5170 2,418,4290	Range
 Noise Basker* 	and the state of the second state of the state of the second state of t		
 Digital Noise Technology 			
244	second a second s	Contraction of the second second	-
File Size 0 MB		delination of the later	
Duration 00:00:00		and the second	
Dropped suffers 0	The Party of the American Street and the American Street	Contractor and the second	Officet
Note Sample Formet 16 24 9/14		a sea o canada se a la segura de seren	
Interio Charlest	Riversions of second constance charge and the second second second second second second second second second s	的复数的现在分词进行	
voor 🗌 🛞 tesetiend	the state of the s		
Record		the second s	
 Frequency Manager* 			-
📫 🚞 🙆	C 🐼 🌌 🍏 🔟 📖 📖 📖 📖 🗰 🛼 🕬 🕬		234.PM (30/2015

WaterFall Image 9:

	SDR# v1.0.0.1337 - IQ Imbalance: Gain = 1.000 Phase = 0.000*		- 0
	- 002.413.000.000		
Source		Unidentified	
white w	5		
Tado	10		
NPH CAM CLISE @ USB	-16		
WFW O DEB O DW O FAW	경		
9.8			
er Backman-Hants 4 v	2.410 661GHz		Car
dwidth Order	-so		
5400(#) 500(#)		where and we are the states	Companying 1
100 (A)	400 shifts an analytic submitted by successful a start successful a start successful at the successful at the		
CV SH	and the second second second second and the second	mall the superior and superior	MARAN JANKA
Image: 1 Image: 2 Image: 2 CM Build SH 2 KH 2	ามที่มีมากการที่สารที่สารที่สารที่สารที่มากการที่สารที่สารที่สารที่สารที่สารที่สารที่สารที่สารที่สารที่สารที่ส 	mall the commence of a strack	North Land
Security Conduction 50 (2) 600 (2) 100 Security Security	ามที่มีมาการที่สารทำสารที่สารที่สารทำใหญ่หมายได้รับสู่สมัยสารที่สารไปทางให้สุดไปที่สุดที่สารที่สารไหน่ง 19 19	mall the same in a desired	4.000 9000
Strip Strip Strip Strip Strip Strip Strip Strip Strip Strip Strip Strip	2417 3100 2 400 2220 2 400 1340 2 410 0400 2 410 0400 2 410 1400 2 412 1700 2 412 700 2 412	800 2414.880 2415.970 -2	41444-79484 411-4290 Pa
Serge Constanting	240 3105 2 40 2205 2 40 1143 2 410 0403 2 410 0405 2 411 8105 2 412 100 2 412	100 2414/060 2415.970 27	4444-0944 411-696
Institut CV Seat 9(±) 000 5 100 Tene Sea Sea Sea to get 20 100 1 100 Tene Connect 12 1 100 Tene Sea Sea 14 2	240 300 2 40 200 2 40 140 2 40 140 2 40 040 2 40 040 2 40 100 2 40 2 4	wali wa	414-290 Re
Institut CV Sea 9(2) OV Sea 9	240/3000 2.4022200 2.402/1403 2.400.0400 2.400.0400 2.401.0100 2.402.000 2.402.000 2.402.000 2.402.000 2.402.000	990 244899 24899 248970 2	414-2200 Pa
Single Single Single Oil Set Single Single Single Single Lock Single Acctor Acctor	ан Милиминин Картинин Кайлан Аларий, Картиний Алтарий, Аларий, Алтарий, Алтарий, Аларий, Аларий, Аларий, Аларий 19 2 407 1950 2 400 2250 2 400 1940 2 410 0450 2 410 9460 2 411 9700 2 412 7000 2 412 1 2 407 1950 2 400 2250 2 400 1940 2 410 0450 2 410 9660 2 411 9700 2 412 7000 2 412 1000	Mara (1997) - 2 414 (1990) - 2 415 9770 - 2 1 1930 - 2 414 (1990) - 2 415 9770 - 2 1	
Instance Cor Sect Sign 2 000 2 Fill Source Step Size Sing to got 2 00 4 Inst 2 control 2 00 4 Source Correct Q Annual Sect Annual Source Section	Приминичны и мартиральной КРАнини дляций дляций длягорый длягорый длягорый длягорый длягорый длягорый длягорый 2 407 1000 2 400 2200 2 400 1040 2 410 0400 2 410 0400 2 411 8100 2 412 7000 2 412 1000 2 41000 2 41000 2 41000 2 41000 2 41000 2 41000 2 41000 2 41000 2 41000 2 41000 2 41000 2 41000 2 410000 2 41000 2 410000 2 41000	1990 2 414 1850 2 414 5170 2 4	ALAN TANK III (200)
International Condent State State State State State State State State State State Condent State State State Condent State Stat	прими и и и и и и и и и и и и и и и и и и		
Tenning Cordination Cordinatio Cordinatio Cordination Cordination Cordination Cordination	ани Милич Чейнийн Хайлан Аларийн Хайлан Аларийн Аларийн Алтанийн Алтанийн Алтанийн Алтанийн Хайлан Аларийн Алт 2 407 9100 2 460 2250 2 409 1940 2 410 0400 2 410 0400 2 419 1950 2 412 1700 2 412 1700 2 412 1700 2 412 1700 2 1 407 9100 2 60 2250 2 409 1940 2 410 1940 2 410 1940 2 410 1940 1 2 411 1700 2 412 1700 2 412 1700 2 412 1700 2		
Arcke A			
Arctin Cir See 160 2 10 2000 Se			
Terring Cry Set Set 2 000 2 Th Terring Set 200 2 Th Terring Set 200 2 Terring Cry Set 200 2 Terring Cry Set 200 2 Accord Set 200 2 Accord Set 200 2 Frequency Manager - Scarene * Frequency Set 200 2 Scarene Metics * Zonen HT * Nove Herica *		1930 2 414 1930 2 415 970 2 1930 2 415 970	
Image Image Startin Cri Shit Startin Startin Startin Startin Startin Cameril Q Image Startin Startin Cameril Q Image Startin Image Startin Accia Accia Accia Frequency Manager - Scanner* Frequency Data Scanner Moteca* Zourie FIH* Note Banker* Data Extractions*			

WaterFall Image 10:

85		SDR# v1.0.0.1337 - IQ Imbalance: Gain + 1.000 Phase = 0.000*	- 0 ×
= = + +		002 / 12 000 000	
== • •	9 II.	002.415.000.000	
 Sapor 		Unidentified	2009
Hack RF	÷		
🕈 Eada			
O MA O MAIO	158 @ US8		
OWW Occa O	CW ORWW		
1948	0.0	N	
Filter Backman-Han	14 V		Certras
Bandwidth Dr	der		
3400(\$)	500.\$	- Monard Manuscher and Manuscher and an and a second and a second and the second and the second and the second	when it
Desetth C	V Shift		
914	60.2		
	ep size	300 2.407.3100 2.408.2220 2.409.1340 2.410.0480 2.410.9580 2.411.8700 2.412.7820 2.413.8000 2.414.8050 2.416.5170 2.416.429	
Sustanting (A) [10	1H2 V		Range
1998-partier Ell	Conscille _		
Contraction of the local division of the loc	people Q []		And a local data
> N/C			
HIT Display			STATISTICS IN CONTRACTOR
Frequency Marsage	a - Scene *		All Control of Control
Frequency Intry*	_	An and a second	Cflut
► Scarper Metrics*		and the second	-
► Zouer FFT *		and the state of t	
 None Bankes* 			and the second s
 Digital Noise Ketta 	etion*		1200
► Recording*	-		
Page 201 percent (Property	-0		MASSING STREET
- 12 1	a 📀 🛛	😂 📝 🎢 🗐 👘 🕄 🔤 🖿 🖓	A REAL PROPERTY

WaterFall Image 11 :



WaterFall Image 12:

2	SDR# v1.0.0.1337 - IQ Imbalance: Gain + 1.000 Phase = 0.000*	- 0 1
= • • •	005.184.037.500	
Source HackRP RaSe Racke Racke Recke Frequency Manager - Sceneer* Frequency Intry * Scanner Matex.* Jaser IF* *		Zaon Contrast
Nove Berler* Dighal Hosie Reduction* Reconfing* Frequency Manage* Satellite Frequency LevelMater* Frequency Sciences*	-30 -30 -100 8 179 2000 5 130 2036 5 137 1750 5 181 8500GH2 8 179 2000 5 130 2036 5 137 1750 5 105 800 5 105 4750 5 105 4750 5 105 4750 5 105 4750	0 Rege
		Office
= 🚞 🗿 👳		E LIFFM

Wi-Fi waterfall Image for 5 GHz network

WaterFall Image 13:



WaterFall Image for FM radio



WaterFall Image 14 and Acrylic for Channel 6 (2427 - 2436 GHz) :

WaterFall Image for activity at channel 6. The line in black circle is external interference that caused channel 6 to fluctuate. (See Image below for Wi-Fi signal strength graph in yellow line)

				A	crytic	Wi-Fil	Profess	ional - S	rinivatan	T + Re	maining 305 days	(Friday, March 4	2016				0
e Windo	-	Tools Help									ROOK Name -	Will Guitann Ad	seres Ad	SRWIEZZZ We	sina Network	Adapar - 🛄 🛄	11/5
nu #	Acc	cess Points (Show	eing 25 of 26. Upda	led 16)													
	1.1	\$\$0	Hac Address	Paw	Ser	he *	Wide	802.11	Max Falm	WEP	WPA.	WPA2	MPS .	Paseword	WPS PN	Veidor	Feat Se P
10.1		SINGTEL-EDAE	001241751721801A	7.40	7	1.2	25	8.9.11	144.4		BER-ITKEBICCHB	FOR- ITKEF (CORP.	1000			Astech Electronics Pile Ltd	15.30
(0)		ANAQ1-35Hz	8810213819618610	s -63 -	M	1	20	8.9.0	216.7		HEK-0009	BBR-COMP	1.2			D-Link Votensitional	15.38
A		SINGTEL-4790	00:14:78:21:48:9	1 45	.70	1.1	20	3.9.0	346.4		DOX- (TKIS (CONS)	BEE- (THEE) COMP.	1.1.1			Astech Electronica Pite Ltd	15:30
142		Sright/7003 1EEB	09:26:75(CA:SE)8	a 54 📈	.92	3	20	8,9.0	144.4		BER- (TKLE (COHE)	BRE-ITKERICOMP				Adrech Electronica Pla Ltd	15.38
		HIM;2	40.34-40.0814113	4.38	. 14	3.7	48	5.4.0	308			2010-01203	1.2			ASUST#R COMPUTER INC	15.39
		Segur702-046	00:26:16:20:26:4	4 47 🦽	- Q.	1.1		1.6.6	148.4		PRE-URLE CORE	318-11923 (CON				Advolt Declarace Pla Lial	15.18
-		Snp#70027307	0013417810218817	0.68	17		20	3.9.0	146.6		FER-ITHIF:00G:	POR- (THIP COMP				Adech Dectorics Pie Ltd	15.28
FIGE		ASUS	4018414010614718	E 44 🚮	100	8+12	40.	2.9.0	300			PER-COIF				ASUSTIK COMPUTER INC.	75.38
TLANS		5NGTEL-4292	M12218819918918	1.01	-34	12	25	8.9.6	144.4		BEG- (TATA (COR))	FEE-ITKLFICORE				2Wee	15.39
		MyRepublic3085	20,85.(A9)89(88)2	0.40	17	11	20	8.9.0	144.4			101-030				Audek Conputer Inc.	15.28
		SANGLET DEAD	00:26:75:92:05:9	0.45	12	11	20	8.5.0	146.4		BBK-(2828)COR1	PRE- (TRIE)COM	1.2.2			Attech Electronica Pta Ltd	15.78
		Monkey/Wed	74:00:28:86:87:8	0.45	12	1.11	20	8.0.0	2957			REK-COMP				ASUST#R COMPUTER INC.	15.38
-		OWHISE	09197(00 AE143)A	0 45 M	100	12	20	2.4.0	72.2		DER-TRID	DEE-CORE				TF-UNK TECHNOLOGIES CO.LTD.	15,38
445.1		Nav	2012210818818818	3 64	81	13	20	8.9.0	300		DEN- (2818 (CONS)	SEE- (TELE (CORP.				ASUSTIN COMPUTER INC.	15.38
0.00	_	1089	2012210818218018	9.992	- 20		- 25	8.11	450		PSR+(1KLF)COO)	PDE-LTKIPICCMP				ASUSTIN COMPUTER INC.	15.34
~		ANAGI-55Hz	BH02:18:P4:54:0	a 45 a	77	36	20	11,40	1300.05		868-COIP	958-039	1.1			D-Link International	15:38
#																	
1911				~~	~	~	_	~		~		_					
	1			$\overline{\mathbf{x}}$	A	N	Ã	-	\sim	-	\sim	Ind	E		7	var en	
		ATOC		~	5	-7	~		~~~	1	0.			a		-AA	S.C.
	VE	MV7	VISTO	K		N	F	27	Ty	40	NTY	XX	A	(DO)		Nr Pat	1
MAZI	OR S	And the second sec	the second se										-			000	_
MAZI		15.57.0			T	150.00				15.5	9.00		16:00.00		- W-	16.01.00	_
MARE APILO	-	15.57.0 (075 Status: Off	V		T	5 50 00			-	18.9	9.00		16:00.00		Y	16.01.00	

Acrylic Signal Strength for Channel 6. We can see yellow line which fluctuate ups and down

WaterFall Image 15:



WaterFall Image when Bluetooth connection established



WaterFall image when there is file transfer between Bluetooth device (mobile phone) and Computer



Spectrum Density Image 16 with Acrylic (in Medan):

Acrylic detected 3 Wi-Fi (channels 1,6,12) and we can see the **SSID : BOLT.....** has **SNR 100** which not near me. (The picture taken at Medan). Spectrum Density below show there is strong interference at channel 10. **SSID : ChNmSc** is portable Wi-Fi near to me.

-76 -76 -764 2418.039	2419.639	2428 , 434	2421.238	2422.038	2422.838	2423-638	2424.434	2425.220	2426.01M	2426.838
Center Frequency Center Frequency (H	(z): 2.42283G									
Gain Settings RF Gain (dB): 0		10-								_
IF Gain (dB): 16 BB Gain (dB): 20		_								
Bandwidth Bandwidth (Hz): BM	c.	_								
Sample Rate Sample Rate (Hz): B	м									
File recording File Name: //tmp/na	ime#%7-5%54%	T.cfile								RCC

Please take a look at channel 3 (2411 - 2433). Based on Acrylic scanning, I have 3 SSID (1,6,12) but please take a look red line the fluactuate at channel 3 that indicated strong activity (interefence - noise floor in blue color leave the red at line at peak). In real practical such activity should not occur because Channel 1 has -84 dBm with SNR 16. Channel 1 is really far away from me with weak signal.

WaterFall Image 17 :



	SDR# v1.0.0.1337 - IQ Imbalance: Gain = 1.000 Phase = 0.000*	- 0
== +	-0-002.464.650.989	
¥ Scanner Metrics*	A Understand	Zoor
Record Netros		100
Start Recording	3	18
Records to Process 0 Processed this Section 0		
Report Netrica		0
Select & report		Cartta
Bused Propercise By Court +		- 11
Run Report	2 MEE 19203 2 MEE 19203 2 MEE 19253 2 MEE 1923 2 MEE 1923 2 MEE 1920 2 MEE 19203	
(200 mg		# <i>1</i> 2
Delete All Data		1.1
 Zoon HT * 		Range
 Note liester* 		
 Digital Noise Kethection * 		- (d)
 Recording* 		
 Frequency Manager* 		
 Seletite Tracker* 		
LevelMatas*		Office
► Frepercy Learner*		- 1
► CTCSS Decoder*	tabled and adjusts to reaching on our manifestory between the manifest to device starts and adjusted where the	
▼ Andic Watertal*		
Traffic Location Dation w		
Contrast		100

WaterFall images when there is activity at channel for data transfer, file upload, etc.



WaterFall Image 18 :

WaterFall Image when there is microwave oven nearby that works at 2.4 GHz

✤ <u>Appendix B</u>

Spectrum Image 1:

-18 -29 -38										
50 67 70 31										
-100 2404:34W	2405.148	2485.948	2466.741	2407.541	2498.348	2419.141	2489.948	2418.748	2411.548	2412.34
Center Frequency									and the second	
Center Frequency (H	z): 2.40834G	-			0					
Gain Settings										
RF Gain (dB): 0		0								
IF Gain (dB): 16					()				
BB Gain (dB): 20		-			0	7.1				_
Bandwidth										
Bandwidth (Hz): SM		-		0						
Sample Rate										
Sample Rate (Hz): 8	M									
File recording										
File Name: /tmp/na	me-f%F-s%S-t%	T.cfile								REC

Spectrum Image 2:

4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1										
-100 2411.55W	2412.350	2413.154	2413.998	2414.798	2415.590	2416,399	2417, 194	2417.954	2418.798	2419.598
Center Frequency										
Center Frequency ()	Hz): 2.41559G				-0					-
Gain Settings										
RF Gain (dB): 0		0								
IF Gain (dB): 16		_	_	_	()				
BB Gain (dB): 20		-			-0					
Bandwidth										
Bandwidth (Hz): 88	м									
Sample Rate										
Sample Rate (Hz):	8M									
File recording										
File Name: /tmp/n	ame-f%F-s%S-t%	T.cfile								REC

Spectrum Image 3:

1997-199							a conserved			
-108 2448.55M	2441.35W	2442.158	2442.958	2443.758	2444.558	2445.350	2446.158	2445,951	2447,750	2448.551
Center Frequency		220								_
Center Frequency (Hz):	2.44455G				0					
Gain Settings										
RF Gain (dB): 0		0								
IF Gain (dB): 16					-0	-				_
BB Gain (dB): 20					0					
Bandwidth										
Bandwidth (Hz): 8M										
Sample Rate										
Sample Rate (Hz): 8M										
File recording										
File Name: /bmp/name	e-f%F-s%S-t%	T.cfile								REC

* Appendix C


FFT Image 2:



FFT Image 3:



* Appendix D

Image 1 :

1.1.1.1		Table They		1.01							wind wind .	and Incomentation of	neve nn	SENDERE NN	DEDS (RECIPUS	Nava Curriera	
	Açı	cess Points (Sho	wing 98 of 98, Update	d 2)						10.00						10.17	
	-	550	Mac Address	Heat	24	Chan	Wde	812.11	Max Field	WEP	WFA	WPA2	WP5	Password	WPSPN	Vendor	First 3
111		Qwr.Home	48188100140118184	-00	90	1	20	8.9.1	276.7		NEK-ITATE(CCHE)	BR-(INIP)CON	2			D-Link International	16.2
11		LBAB 0211		-	100	122	- 11	and the second	446.2		ALCO DUCTION OF A		10.01			PURItenzou	40.0
		genns	RELETAT DECENSO	- 41	12		22	0.9.0	216.5			ESE-CLEP				ADDR.	104
6		Lakes	FRIERIDATED LA COL	-30	100		- 22	0.9.0	212.1		GR-(IKLF)CORF	988-(1818)COR				D-Duk Metapora	12.4
		SINGTEL-1200	Technicachecheche		81	1	- 22	0.9.0	2500		sec-intractor	FAR-(INIF)COM	5				100
	-	SINGTEL-2969	16:00:03:51:75:48	104	34		20	0, 5, 8	300		SE- (TELF) CORF	BR- (TRIP)COR	5			and the second second	162
200	-1	dink meda-EPSA	CO:AD:BB:4A:EFISA	-00	- 54	40	60	N, BC	2600.1	22	RK- (INTE) CORE:	Pak- (INIP:CON	a carac			D-Link International	160
FUR		drik-4EBC	4C:19:87:D0:41:8C	40,	20		22	0.9.0	296.7		IRF- (TRIF (COR)	BER- (IRIFICON	1.215			D-Unix International	164
0	-	Jave 05	02:26:75:88:38:57	-85,	15	n.	20	3.0.5	144.4	1	SR- (TRIP) CORP.	Pak- (THIP COM	9 8.0			Adech Electronics Pte Ltd	16,
		SINGTEL-2167	00:26:78:85:21:68	-16.	34		20	0.9.11	544.4	1	SX- (TRIP(CCHP)	BRK- (THIP)COM	\$ (0)D;			Astech Electronics Pie Ltd	162
		AngFanily-2.4	AC:92:17:93:88:90	-55	2	6	20	3.2.0	2%7			PSIX-CENSP	1.1			ASUSTER COMPUTER INC.	.162
		Tohph	\$4:AD:30:84:30:50	-80,	20	6	20	0.9.0	12.2			PSK-CDIP	1.8			ASUST & COMPUTER INC.	162
	Ξ.	SINGTEL-OBCF	00:26:75:86:06:00	-40,2	20	2	20	0.0.1	546.4	21	SE- (TELF) COMP)	PRE- (THIF) CON	1.2.2			Azlech Electronica Pie Ltd	162
8.		OwnHome53	48:XX:0C:40:18:X4	-83,	17	48	- 80	n.ac	1300.05	4	SW- (THIF) COMP:	PER- (TKIP) COR	\$ 4.0			D-Link International	162
9		corf2	00:26:75:42:81:30	-65	79	7	20	3.9.1	300	1	SR- (TRIF) COMP	FRE- (THIF COM	1			Astech Electronics Pie Ltd	163
21		Single/7002-DEIE	00:26:75:82:08:88	-63	82	11	20	b.g.n	144.4		SE- (TRIF COMP)	PER- (THIP) COM	1			Adech Electronics Pie Ltd	162
	Act	lions				-					1		_				
	Act	Sgral Strength	Network Qual		1	2.45%2	Ps Car	rreis	5Ghz /	4Ps Chernels	Networks	Requested (20)	IA			Connectivity	
	Act	KORS. Sgral Steegh	Network Qual		1	24642	Ps Ow	nels	Siltz	IPs Channels	Hetworks	Repuested (DD)	N			Connectivity	~
	Act	Synal Streigh	Netion Qual			24642		reis	Sile	49s Channels	Networks	Recessed (20)		Detailed info		Connectivity	

Note : The logic is + If we near to the RF source, we will receive high power

If we move away from the RF source , we will receive less power
 (Based on above points, the signal strength graph will be generated)

Wi-Fi (2.4 GHz) network always fluctuate to **-10 dBm** and drop suddenly. So, here is the detailed explanations :

 Router Transmit Wi-Fi signal at External Signal transmit a signal at 	Frequency = a MHz with Frequency = a MHz with	Rp = - 60 dBm Rp = + 50 dBm
	===== Total of Receive power (Rp)	= -10 dBm

So, the signal graph with Frequency = a MHz fluctuate to -10 dBm because of external radio signal with Frequency = a MHz with Rp = +50 dBm. (50 dBm = 100 watt).

Image 2 :



 $0.4187 \text{ mW} / \text{m2} = 418.7 \,\mu\text{W} / \text{m2}$

Image 3 :



0.5520 mW / m2 = 552.0 μW / m2

Image 4 :



15.92 mW / m2 = 15920 μW / m2



Magnetic field of a hairdryer. Please refer picture below for significance of color with magnetic flux density in microTesla(μ T)



Scale of magnetic flux density in microtesla (μT).

* <u>Appendix E</u>

1. Cornet ED85EXS produced sound for the waves that I detected at 2.4 Hz.

Sound Track Picture



Sound Wave Picture:



Impression :

The impressions from above data, there is external Radio Interference that works 2.4 GHz in which Wi-Fi sound cannot be heard clearly.

2. Wi-Fi Sound Sound Track Picture



Impression :

The impressions from above data, good Wi-Fi sound <u>Conclusion</u>: There is good Wi-Fi sound

Realtime Sound Waves Picture :

SA Stereo Tool 7.73	by Hans van Zutphen		- 0 ×
Configuration	RESET LOAD SAVE PRESET	ABOUT HELP BYPASS	
License	Input	Input tilt	
CPU & Latency	Input Device ID CABLE Output (VB-Audio Virtual	Correction enabled	
Web interface			
Sound cards	Stream URL	RC DISABLED	
Sample rate		Input & defilted input	
ASIO			
SCA Input	ASIO in L Input channel L X ASIO in R Input channel 2 X		
Normal Output	Low input level correction		
FM Output			
LQ Low Latency	Input gain +0.00 dB (100.0%) Balance +0.00 dB (100.0%)		
FM Transmitter	Synchronize with different output sound card (not ASIO)		
AM Transmitter			
Repair	Synchronize to output		
Processing			
	4096 21-24000 Hz 🔳 NO		
	DC Noise gate Natural Dynamics	PhR AGC Stereo Multiband MB2 BB	5B Clip
Levels		Input & Output	_
	in a propriet and a propriet of a propriet of the second	non manuser conserve a plantation when the physical properties of the	
1 P 🗉) (ĉ 🙍 🗿 🧕 🖉 🦉 🖻	🖡 🖉 🗛 👘 🖉 🖉 👘 🖉 👘 🖉	ENG 11:10 PM 3/11/2015

We can see that there are 2 waves (Wi-Fi and Unknown RF at 2.4 GHz) producing different sound waves. This unknown RF covered by Wi-Fi signal.

3. Wi-Fi Sound WaterFall

Spectrum Lab V2.90	0 b2										-		×
Eile Start/Stop Option	ons Quick Settings	Components	View/Windows	Help									
Freq Time RDF													-20.0 dB
vfo 10 700 000 Hz	W ^{e dische fe den seinen einen einen}	the state and state a	****	PARTIN PROVIDE	hhhhhadaa								-40.0 dB
fc 2.5000 kHz opt					TTTTTTTTY PPP	and an international dates and the	Marca and and			an and the stand of the second	man	******	-80 10 08
sp 5.0000 kHz													- 100 dB
< > • - ^ v	1	00 Hz	1000	1500	(* * * * * * * * *	2000	2500	3000	3500	4000	4500		01
Cursor [N]	111111	ALLA	111111	THE		LILL	III IIIII	IL ILL			1111	1111	LITE
2.871534 kHz -53.639 dB													
08:14:05.0	1												
Color Palette													iti
с													/v
	1												
-100 dB -50 0	-									State of the local dist			
File analysis done							- and the second second						
Capture now													
Time: 11:36:47.3	1												
peak at 205.08 Hz													
Pause	E												
Continue													
Button #6													
Button #7													
Button #8	1												
Button #9													
Button #10													
Button #11													
Button #12	1												
	A	8 6		-						* * 6 0	= =	ENG	7:36 PM
			100	100						112 112		CHO	31/10/2015

4. Unknown RF at 2.4 GHz Sound WaterFall



This sound waterfall indicates combinations of Wi-Fi sound and external RF at 2.4 GHz. Because of external RF, Wi-Fi waterfall image not visible clearly. This waterfall image also indicates how exactly external RF. Two solid lines indicates really strong transmission of external RF.

* Appendix F

1. Good Wi-Fi Signal using Acrylic (Data from Different Country)

SSID	RSSI	SNR	Chan	Width	802.11	Max Rate	WPA	WPA2	WPS	Vendor	First	Last	Туре	
DarkKnight9 [Hidden] Berry Khosasi BOLTI SUPER 4G	-64 a) -91 a -84 a -90 a	80 15 26 16	9 1+5 1+5 11	20 40 40 20	b.g.n b.g.n b.g.n b.g.n	144.4 450 300 144.4	PSK-(TKIPJCCMP) PSK-(TKIPJCCMP) PSK-(TKIPJCCMP)	PSK-(TKIP CCMP) PSK-(TKIP CCMP) PSK-CCMP PSK-(TKIP CCMP)	1.0 1.0	ASUSTek COMPUTER IN PEGATRON CORPORATI TP-LINK TECHNOLOGIE zte corporation	13:24:30 r 13:24:52 (13:25:04 (13:26:11 (10w 00:00:27 ago 00:01:41 ago 00:04:50 ago	Infrastructure Infrastructure Infrastructure	
							×							
Signal Strength		Netwo	rk Quality		L4GHz APs (Channels	5GHz APs Channeli	Networks Re	quested	Detailed info		Connectivity		
GOOD WEAK BAD		Netwo	rk Quality	1	2.4GHz APs (Channels	SGHz APs Channel	Networks Re	quested	Detailed info		Connectivity		0 -10 -20
GOOD WEAK BAD		Netwo	rk Quality		2 4GHz APs (Channels	SGHz APs Crannels	Networks Re	quested	Detailed info		Connectivity		0 -10 -20 -30 -40 -50
Signal Strength GOOD WEAK BAD		Netwo	rk Quality		2.4GHz APs (Charnels	SGHz APs Channeli	Networks Re	quested	Detailed info		Connectivity		0 -10 -20 -30 -50 -50 -60 -70

2. Good Wi-Fi Signal using MetaGeek (Data from US)





3. Bad Wi-Fi Signal using Acrylic (external interference)

4. Bad Wi-Fi Signal using MetaGeek (external interference)



5. Changes in the Power (dBm) and SNR using acrylic

SSID	MAC Address	RSSI	SNR	Chan	Width	802.11	Max Rate	WEP	WPA	WPA2	WPS Password	WPS PIN	Vendor
SINGTEL-CB2F	E0:8E:3C:03:CB:30	-86 _{eff}]	34	3	20	b, g, n	144.4		PSK-(TKIP CCMP)	PSK-(TKIP CCMP)	1.0		Aztech Electro
MonkeyHead	74:D0:2B:85:37:B8	-86 _{dfl}]	34	11	20	b, g, n	216.7			PSK-CCMP	1.0		ASUSTek COM
ANAQI-2GHz	E8:CC:18:F6:56:C8	-78 📶	54	1	20	b, g, n	216.7		PSK-CCMP	PSK-CCMP	1.0		D-Link Interna
ChNmSc	08:57:00:A3:41:AD	-25 "m	100	3	20	b, g, n	72.2		PSK-TKIP	PSK-CCMP			TP-LINK TECH
ASUS	74:D0:2B:67:6D:FE	-95 _{eff}]]	4	2+6	40	b, g, n	300			PSK-CCMP			ASUSTek COM
SINGTEL-0106	98:2C:BE:DF:E1:8E	-88 _{eff}]	18	3	20	b, g, n	144.4		PSK-(TKIP CCMP)	PSK-(TKIP CCMP)			2Wire
WIRE534	00:23:51:57:6B:D9	-87 _{eff}	32	6	20	b, g	54	SharedKey					2Wire
SINGTEL-BDEF	00:26:75:E1:BD:F0	-91 _{eff}]	12	11	20	b, g, n	144.4		PSK-(TKIP CCMP)	PSK-(TKIP CCMP)	1.0		Aztech Electro
penchen8292	08:60:6E:9A:41:70	-86 aff]	34	10	20	b, g, n	144.4			PSK-CCMP			ASUSTek COM
SINGTEL-0135	00:26:75:AA:01:36	-90 _{eff}	14	7	20	b, g, n	144.4		PSK-(TKIP CCMP)	PSK-(TKIP CCMP)			Aztech Electro
hrisfarn:	74:D0:2B:67:4D:72	-85 <u>.</u> [[]]	36	5+9	40	b, g, n	300		PSK-(TKIP CCMP)	PSK-(TKIP CCMP)	1.0		ASUSTek CON
INGTEL-C08B	00:26:75:7B:C0:8C	-89 _{adf}	16	9	20	b, g, n	144.4		PSK-(TKIP CCMP)	PSK-(TKIP CCMP)			Aztech Electro
				~	20		4 4 4 4		DCV (TVIDICCMD)	PSK_(TKIPICCMP)			Zwire
SINGTEL-4043	64:0F:28:50:83:16 00-26-75-F6-97-59 Network Quality	-89 affl 00 - 7 2.40	16 16 3Hz APs	5 7 ; Channels	20 20 3 5G	b, g, n Hz APs Cha	nnels Ne	atworks Requ	Jested Det	ailed info	1.0 Connectivity		Artach Elaster
SINGTEL-4043 SINGTEL 1929 gnal Strength	64:0F:28:50:83:16 00:26:75:F6:07:58 Network Quality	-89 atīl 2.40	16 16 3Hz APs	5 7 3 Channels	20 30 3 5G	b, g, n h a n iHz APs Cha	nnels Ne	etworks Requ	Jested Det	ailed info	* o Connectivity		Astach Elaster
gnal Strength	64:0F:28:50:83:16 00:26:75:56:07:58 Network Quality	-89 adil 2.4(16 1¢ 3Hz APs	5 7 5 Channels	20 30 s 5G	b, g, n h a n iHz APs Cha	nnels Ne	etworks Requ	Jested Det	ailed info	Connectivity		Astach Elaster
gnal Strength	64:07:28:50:83:16 00:26:75:76:07:59 Network Quality	-89 add 2.4(16 16 3Hz APs	5 7 s Channels	20 20 5 5 5 6	b, g, n Hz APs Cha	nnels Ne	etworks Requ	Jested Det	ailed info	Connectivity		Astach Elaster
gnal Strength	64:07:28:50:83:16 00:26:75:76:60:758 Network Quality	-89 and 2.40	16 16 3Hz APs	5 7 s Channels	20 20 5 5 5 6	j, g, n Hz APs Cha	nnels Ne	etworks Requ	Jested Det	alled info	+ n Connectivity		
gnal Strength	64:07:28:50:83:16 00:26:75:76:60:758 Network Quality	-89 and 2.40	16 16 SHz APs	s Channels	20 20 5 5 6	D, g, n	nnels Ne	etworks Requ	Jased Det	ailed info	* ^ Connectivity		
gnal Strength	64:07:28:50:83:16 00:26:75:76:60:758 Network: Quality	-89 and 2.4(16 16 SHz AP:	s Channel	20 30 5 5 6	B, g, n	nnels Ne	etworks Requ	Jested Det	ailed info	Connectivity		
gnal Strength	64:07:28:50:83:16 00:26:75:76:60:758 Network Quality	-89 dll 2.40	16 16 SHz AP:	5 7 s Channel	20 20 5 50	D, g, n		etworks Requ	Jested Det	asiled info	Connectivity		
SINGTEL-4043 gnal Strength OD AK AD	64:07:22:50:83:16 00:26:75:76:86:07:18 Network Quality	-89 dll 2.44	The The SHIZ API	5 7 s Channel	20 20 5 5 6	D, g, n		etworks Requ	Desk (TRIDICCAN)		Connectivity		
singTEL-4043 gral Strength OD AK	64:07:28:50:83:16 00:26:75:76:60:758 Network: Quality	-89 dfl 2.44	The The SHIZ API	s Channel	20 20 s 50	D, g, n	II44.4 IAAA	etworks Requ	per annices a			~	A stack Electer
SINGTEL-4043 gnal Strength OD AAK	64:07:28:50:83:16 00:26:75:76:60:758 Network Quality	-89 ddl 2.44	SHz AP:	s Channel	20 30 s 50	b, g, n Hz APs Cha		etworks Requ		new meniocecum			Astach Electer
op AK D	64:07:22:50:83:16 00:22:72:72:72:80 Network: Quality	-89 dd 2.44	SHZ AP	s Channel	20 20 s 56	b, g, n H a D H z APs Cha			Jack and Del				
SINGTEL-4043 (INCTEL-4043) gral Strength OD (AK AD	64:07:28:50:83:16 00:26:75:76:86:07:58 Network:Quality	-89 ml 2.40	16 16 SHZ API	s Channel	20 30 s 50	B, g, n H 2 APs Cha		etworks Requ	Letted Del	alled info			
INGTEL-4043 incret 1020 gral Strength	64:07:28:50:83:16 00:26:72:56:87:18 Network Quality	-89 dfl 2.44	SHIZ API	s Channel	20 30 5 5 6	D, g, n H z APs Cha	I HA A I	etworks Requ		isiled info	Connectivity		

- Picture of Wi-Fi before changes of power and snr

SSID : benchen8292 Power = -86 dBm ,SNR 34



- Picture of Wi-Fi after changes of power



SSID : benchen8292 , Power = -10 dBm , SNR 100 (At this point, the source should near to me but I don't see the source)

ΞX

=

II 🔳

WPS Password WPS PIN Vendor

Films & TV AirMagnet Spect um XT - Live Capture •••• Find Device Fine Event Log Device: Possible Interferer (Id 1) • Find Detected Time 5/8/2015 3:28:10 PM 5/8/2015 3:27:56 PM 5/8/2015 3:27:54 PM 5/8/2015 3:27:53 PM Ch ver -V Sound -73 90 5/8/2015 3:27:48 PM 8 100 ·100 1.7 01 ce Details 121 Device -120 er (ld 1) Pot 4..14 -85 2.447 -73 -60 Time (Sec) 5/8/2015 3:26:50 PM 5/8/2015 3:28:10 PM De **Possible Interferer** RF Patte Ideal Patt Introduction ven the fact that the WLAN is operating in an environment crowded with numerous ie non-WFi devices are not that easy to tell from one another at the first glance, s itegorize an RF signal it has detected. That's why AirMagnet Spectrum XT uses Pos us non-WiFi de um patterns pplication to reco it is able to dete

6. AirMagnet XT detected interference

Descriptions :

0:49:02

- 1. Affected Channel 4 to 14 (No Wi-Fi device that can affect nearly 10 Channels)
- 2. Center Frequency : 2462

🔳 A 🗆 🤌 🖿 🖨 🌖 🐼 🞬

o x

0.30.48

_



7. AirMagnet XT - Interference details on Spectrogram

Please see black box on Spectrogram image. We can see red line which indicates interference which affected 8 channels and 6 channels. (There are other red lines as well)

* Appendix G

1. First Report	: detected alpha rhythm at 10 Hz. (Malaysia)
2. Second Report	: detected alpha rhythm at <mark>9 Hz, 10 Hz. (Medan)</mark>
3. Third Report	: detected low voltage with alpha rhythm from 10-13 Hz. (Medan)

Overall Picture



Note : Signal source may vary from time to time

Detecting Heat over Head

1. Using EEG Analyzer with output of the signal from NeuroSky.

2. Data plotted (various samples):

1200 to 200	Y-Axis	: increase of brain voltage -200 (Y-Axis) and 200 (Y-Axis)
2100 to 300	Y-Axis	
3100 to 200	Y-Axis	
42000 to 2000	Y-Axis	 : increase of brain voltage -2000 (Y-Axis) and 2000 μV (Y-Axis) => This is really high at lower part and upper part and of course we have excessive heat
5200 to 600	Y-Axis	
6200 to 200	Y-Axis	
7. 0 to 400	Y-Axis	

- Note : Increase of brain electricity will trigger Y-axis value in which graph will be plotted to upward and downward based on value. So at present, I take the value as Y-Axis value as per now.
- 2. The software that runs in device that attached to satellite will have look like image below (impression only)



* Appendix H

Router Signal Analysis and fluctuation

1. General Home Wi-Fi router and Laptop Setup



distance (d)



Laptop with Signal Analyzer (LSa)

Explanation :

Router

1. Home Wi-Fi router will **transmit power (Tp)** with constant power

2. Laptop will **receive power (Rp)** from Router based on **distance(d)**

3. Rp is high if we near to Router and Rp is low if we away from router

e.g. :

Wi-Fi (2.4 GHz) network always fluctuate to **-10 dBm** and drop suddenly. So, here is the detailed explanations :

 Router Transmit Wi-Fi signal at External Signal transmit a signal at 	Frequency = a MHz Frequency = a MHz	with Rp = with Rp =	= - 60 = + 50	dBm dBm
	Total of Possivo power	======= (Pn) -	- 10	dBm
	lotal of Receive power	(KP) =	-10	abn

So, the signal graph with Frequency = a MHz fluctuate to -10 dBm because of external radio signal with Frequency = a MHz with Rp = +50 dBm. (50 dBm = 100 watt)

Note :

a = can be 4 digits number (e.g. : 2412 MHz = 2.412 GHz)

Overall Explanation :

- 1. Router will be located at static place, so transmit power always constant
- 2. The signal strength graph changes only occur if we move near or away from Router
- 3. The fluctuation to 10 dBm because of external radio signal with positive receive power not because of Wi-Fi router

Conclusion :

Home or at different location Wi-Fi at 2.4 GHz networks to fluctuate because of external signal with different positive receive power and with same frequency as 2.4 GHz networks.

Example 1:

¥																	-
			A	crylic '	Wi-Fi P	rofess	onal - S	rinivasan	T - Rei	maining 295 days	(Friday, March 4,	2016	Ľ.				- 0 ×
File Windows	Tools Help									MODE Normal *	Wi-Fi Qualcomm Ath	neros AF	58WB222 Wi	eless Network	Adapter	- 🔟 🗖	1 GPS
Menu « Ad	ccess Points (Shov	ving 31 of 31, Update	d 15)														
	SSID	Mac Address	Rssi	Snr 🔻	Chan	Wide	802.11	Max Rate	WEP	WPA	WPA2	WPS	Password	WPS PIN	Vendor		First Se ^
11. 11	ivoryrebecca - 4G	6A:A0:F6:1E:03:27	-82 .	18	6	20	b.g.n	144.4		PSK-(TKIP)CCMP)	PSK-(TKIP(CCMP)						20:08
(((•))) 🔳	@wifi.id	64:66:B3:A8:E6:0D	-73 .	44	2+6	40	b.g.n	150	Open								20:08
・ 魚 / □	The Coffee Bean	64:66:B3:A8:E6:0C	-72 .	46	2+6	40	b.g.n	150		PSK-(TKIP(CCMP)	PSK-(TKIP CCMP)						20:08
M .	@wifi.id	64:66:B3:FD:31:A9	-69 .	71	11+7	40	b,g.n	150	Open								20:08
	YNWA	5A:1F:28:B2:1C:D6	-80 .	20	11	20	b.g.n	144.4		PSK-(TKIP(CCMP)	PSK-(TKIP(CCMP)						20:08
	EXCELSO@CAMBRID	G 64:66:B3:FD:31:A8	-70 .	50	11+7	40	b.g.n	150		PSK-(TKIP CCMP)	PSK-(TKIP(CCMP)						20:08
	[Hidden]	64:66:B3:FD:31:AA	-72 .	46	11+7	40	b,g,n	150			PSK-(TKIP(CCMP)						20:08
	@wifi.id	A0:E4:CB:44:E6:61	-65	79	11+7	40	b,g,n	300	Open								20:08
A MULING	UH LA LA CAFE	AU:E4:CB:44:E6:60	-12 .	45	11+7	40	b.g.n	300			PSK-(IKIP(CCMP)						20:08
	@whud	C4:6E:1F:0E:6A:81	-64	81	11	20	b.g.n	300	Open								20:08
	Dapok STADBUCKS COSTER	50:3A:AF:26:45:98	-60	65	5	20	b,g,n	200			PAR-COMP						20.08
	STARBOURS COFFEE	T0-01-10-20-30-20	-01	07	2.7	20	b,g,n	300		DEV- (TETD) COMP	PER- (IKIP) (CCMP)	1					20:08
100 March 100 - 100	3C /3	F8:01:13:25:AB:20	-00	0/	3+/	40	b.g.n	270	0	PSK-(IKIP(COMP)	PSK-(IKIP(COMP)						20.09
	AVOVIA PM 1090 5902	20.01.13.25.AB.21	-00	100	3#7	40	0,9,11	72.2	open		DEP-COMD	1.0					20.00
	Swiss Relietel 20 p 21	H 00-02-68-55-84-72	.90	20	1	20	b a	54	Open		a dire comp						20.09
				-	1		0.9		open								20.00 V
677	Signal Strength	Network Quali	ity		2.4Ghz A	APs Char	inels	5Ghz	APs Chann	Networks !	Requested (0/0)		Detailed into		(3)	PS	Conner 1
<u>U;;;</u>					1					112				1			0 -10 -20
NEWS			2	ſ				A						A			0 -10 -20 -30 -40 -50 -60 -70 -80
UFFE	20 09 00			20:1	0.00		Ā	A	20:11;			12:00		A		20.13.00	0 -10 -20 -20 -20 -20 -20 -50 -50 -50 -60 -70 -80 -90 -100
US::	2009.00 GPS Status: Off			20:1	0.00			A	20:11/			12:00	- AA	A		20.13.00	0 -10 -20 -30 -40 -50 -60 -70 -70 -80 -90 -100
UF#	20 09 00 GPS Status: Off			20:1	0.00			A	20:11:		20	12:00		A		2013.00	0 -10 -20 -30 -40 -50 -50 -50 -50 -70 -80 -90 -100 -100 -70 -80 -90 -100 -70 -80 -90 -100 -70 -70 -70 -70 -70 -70 -70 -70 -70 -

Signal Strength graph in black color is one of example that received positive received power from external radio signal.

¥				A	orytic 1	WI-FI P	rofess	ional - S	rinivation	T - Ret	maining 305 days	(Friday, March 4	2016)			-	O X
File Wends	own Tools	Help									MODE Name -	Weits Guationen Ap	erra Af	SRWIEZZZ We	sina Network	Adapar - 🛄 🖸 1	045 5
Menu #	Access P	onts (Show	eing 25 of 26. Update	st 16)												A REAL PROPERTY AND A REAL	
1	550		Hac Address	Paul	Sw	ha +	Wide	802.11	Max Falm	WEP	WPA.	WPA2	WPS	Password	10PS PRV	Veridor	Fitt Se A
11. 11	SNGTE	LEDAS	001261751721801A7	-90	7	1.5	25	h.p.n.	144.4		FOX-ITALE CONF.	FEE- ITKEF (CORP.	COLUMN 2			Attech Declaracs Pie Ltd.	15.30
$((\odot))$	ANAQ5	XHr .	88102138196156108	-53	. 54	1	20	8.9.0	216.7		100-000	888-COM	1.4			D-Link Veenational	15.38
1. W.	SNGTE	1,4190	00104178171148191	45	70	510	20	1.9.0	146.4		DOX- (TKES (CONS)	BRE- (THIE) (COME	11.1			Astech Electronica Pite Ltd	15:30
141	Srgel?	0021669	00:26:75:CA:18:8A	-54	.92	1	20	8,9.0	144.4		BER-(THIS (COHS)	BRE- LIKER LOOME				Adrech Electronica Pha Ltd	15.30
	III ##6,2		40124140104142108	-86	. 14	347	48	3, 9, 0	308			202-01342	1.2			ASUST#R COMPUTER INC	15.39
	Singer 1	現金で4時	00:24176 (20124)44	10.4	- 92		18	1.6.5	148.4		FIRE-LIBER CORE	310-11/21 (024				Advelt Declarace Par Lid	111 3
1 100.00	Sngell	100/30/	00136175-01189:70	-58	17		20	.8.9.0	146.6		REN-ITHIR:COR:	PER- (THIP COMP.				Adech Electronics Phe Ltd	18.38
	ASUS:		40184140106147188	44	100	8+12	40.	2.9.0	300			868-000				ASUSTek COMPUTER INC.	15.38
A PTIL/SS	904078	1.4252	98120188199189182	100.0	- 34	1.182	25	8.9.5	144.4		HIN- (TATA (COR))	REF-IZKIBICORE				2004	15.39
	 MyReput 	ANC3085	20186.05189(88190	-90	1	11	20	8.9.0	144.4			101-000				Asulter, Colgular Inc.	10.28
	Stages	T/0+90	00:26:75:92:00:99	45	18	11	20	5.5.0	146.4		New- (SACE (CORE)	BRE- (TREE)(CORE)	1.4.4			Attech Electorica Pta Ltif	15.8
	Nonemy	read	74:00:28:06:07:80	-00	14		20	8.9.0	2167			SER-CONF				ASUSTIK COMPLITER INC.	10,30
with the	 Overs 	e .	09/87(00(A8)41(A0	-40	100	12	20	2.9.0	12.2		PER-IELP	DEP-CORP				IPUNK TECHNOLOGES COLLID.	10.30
1000	- loss		27-22-08-82-84-84			14	-		- 440		DOD- CHARLESOND	DER THEFT WAS				ADUSTIN COMPUTER INC.	10.10
27	231871.0	ette-	R8-00-18-04-64-05	20.	. 22	1	-		1100.05		200-1002 (COP)	DAR-COND				Click International	15.10
~	- Anna		BE SELLET IT STOLEN		100	1.000	1.1	1,85	1340.05		and other	PRE-CLOP				C-CER FEBRUARIE	1000
	Actions Sign	i Shength	Network Que	iły –	L	24514	Pe Cha	reis	50ke	APs Diam	els Networks i	Requested (0.0)		Detailed into	1	GPS	Core + +
<u>C#</u>																	10 20
i.	~	~	~~~~	~	~	×	~		~	=	~~~	\sim	2	~	7	m	×41 40 41
	A	AF	11-4	E.	5	A	AL	17	~3	AA	AL	~	A	R		JA PA	77 H
UWISAM	N. V	W	the seal			V		and for	0	0	and your		14	- v vi			-100
		15.57.0	0.		15	50.00				15.5	0.00		16:00:00			16.01.00	
26/28.AP(s)	GP5.5b	itus Off															
-			A 6	100	1	1	Sec.						1	0		ALC: N R R R R R R	
				1-14			100						-	0 63 6		2 2 P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	

Example 2:

Signal Strength graph in yellow color is one of example that received negative received power from external radio signal.

The External View illustration



Router always transmit at steady power so sudden power fluctuation at middle will come from external interference.

* Appendix I - EEG with single channel



Frequency domain of the above graph :





Zoom of Frequency domain of the above graph from 0 Hz - 60 Hz:

We can see all waves appeared from 0 - 50 Hz.

By right :

- 1. Delta Waves should not be there (0.5 to 3 Hz)
- 2. Theta Waves should not be there (3 8 Hz)
- 3. Alpha Waves should not be there (8 12 Hz)

4. Beta Waves (12-38 Hz) can be there but the amplitude is really high for situation in watching computer and Gamma Waves (38 - 42 Hz) can be there but still the amplitude is really high.

Conclusions : Because of external RF , it disturbed entire brain waves.

Pulse of Sound in EEG

When the brain is given a stimulus, through the ears, eyes or other senses, it emits an electrical charge in response, called a *Cortical Evoked Response* (shown below). These electrical responses travel throughout the brain to become what you "see and hear". This activity can be measured using sensitive electrodes attached to the scalp.



During EEG scanning, I detected pulse of Sound waves in which Brain not given by any stimulus. Below is the EEG pattern :



Note : Waiting for Experts input on pulse sound EEG.

Frequency of the above EEG :



The EEG - pulse sound in frequency domain (image above), is mapped at 15 Hz with high amplitude.

* Appendix J

(Note : Video Host service will have expire date which control by Video Host service provider)

 FFT at 2.4 GHz (we can see sudden fluctuation and power in db is really high) <u>https://sendvid.com/33f5hpkg</u>
 Detail : On this video, we can see peak hold in green color that leave a trace something comes and go. Peak Hold line in green colors shows external signal interfered at 2.4 GHz

Spectrum Density of RF at 2.4 GHz http://conduid.com/mu0m2iog

http://sendvid.com/mu9m2jeg

Details : I have taken this video at place where there was no devices that operate at 2.4 GHz (near plantations). We can see noise floor in blue color comes and go. This external interference cause Wi-Fi at 2.4 GHz to fluctuate and sudden fluctuate at different power level will increase of SNR of Wi-Fi (signal to noise ratio)

AirMagnet XT

https://sendvid.com/tkg3xz0s

Details : This software one of the best software available in the market for detection interference Wi-Fi at 2.4 GHz with different options. We can see FFT picture at real time in leave suddenly max hold around -10 dBm.

MetaGeek

http://sendvid.com/lfrtg2n7

- Wi-Fi Fluctuations at Siloam Hospital in Medan Indonesia <u>http://sendvid.com/2u2j34m7</u>
- Please see one of the video of Wi-Fi as Good comparison <u>http://sendvid.com/ebcs29ke</u>
- Unknown RF at 2.4 GHz reaction with human body with EEG <u>http://sendvid.com/dofuepqn</u>

Details : This video shows the waterfall images. Each time we see set lines, the individual will feel the reaction to body which not able to show to any other people. Please EEG window at right side at time 6.20 - 6.25, 6.30-6.40, 6.50 - 6.55. The spike on EEG is trigger by external factor and the individual can feel it.

* Appendix K

Detection of unknown RF at 2.4 GHz in Medan - Kualanamu Airport and on the Flight from Medan - Singapore (Jetstar)

 Date and Time
 : 29-7-2015 4.35 - 5.35 (Indonesia Time)

 5.35 - 6.35 (Singapore Time)
 (My laptop set to Singapore Time)

* Acrylic Scanning at Medan - Kualanamu Airport (SSID visible)

Pi	ct	ur	·e	1
			_	



Picture 1 shows that visible SSID and we can see fluctuation till -10 dBm and we can see also SSID : AndroidAP (I have reported this SSID, visible from Malaysia on the way back by Bus from KL to Singapore and I can see in Medan Airport today)

Picture 2

File Window	ws Tools Help									MO	DE Monitor * NDIS #	rterface CommView	v] Atheros	AR56WB222	Wireless Netwo	ork A* 🛄 🛄 12 G	PS 1
Menu «	Access Points (Show	wing 3	8 of 38, Updated 14	1			marro			27/121			-	12 10	-		-
	SSID	#	MAC Address	RSSI	Chan	Wide	802.11	Max Rate	Retries	WEP	WPA	WPA2	WPS	Password	WPS PIN	Vendor	^
11.00	flashzone-seamless		D0:C7:89:28:C5:C0	-73 "	1	20	b.g.n	144,4	44% (196)			NGT-COMP				Cisco	
	E kno-airport@wfi.id	11	D0:C7:89:E8:7A:11	-86	1	20	b,g,n	144.4	8% (30)	Open						Cisco	
· A	flashzone-seamless		D0:C7:85:28:7A:10	Ja	13	20	b,g.n	144.4	30% (142)			HGI-CCMP	-			Cieco	- 1
	Android Ar		00-04-75140-55-4E	-		20	b.g.n	122	20.02	C 111		STR-CORP.	1.0			Cours	
	El kno-arponewn Jo	2	20-07-10-07-41-77	-03 ,		20	o,g.n	72.2	24(/)	upen	DOV- (TOTD) OPHD)	DOV- (TYTE) ON				D Liek International	- 1
	The second secon	13	DO-07-20-T0-64-01	-73 a	-	20	b.g.n	144.4	15 (11)	Onen	PSR- (INIF (CORF)	PDE- (IEIF)COD	w)			Cere reenauria	
f Cleibh	Each to a pone will to	16	DO:07:09:00:04:00	-10 -1		20	b.g.n	144.4	A95 (01)	open		MOT-COMP				Cieco	
e weige	autat GH		00-1E-31-A7:8D:36	36	10	20	ha	54	55.00		PER- (TRUP COMP)					INFOMARK CO LTD	
CH KUDHURS	E DES-KNO	2	64:66:83:D1:83:C8	-59	5+2	40	ban	300	38% (491)			PSK-COMP	3.0			TP-LINK TECHNOLOGIES CO. LT	то
	flashzone-seamless		D0:C7:89:E8:24:00	-71 .	6	20	b.g.n	144.4	50% (32)			MGT-COMP				Cisco	
	E kno-sirport@wfi.id	3	D0:C7:89:E8:D2:D1	-85 ,	1	20	b.g.n	144.4	15% (5)	Open						Cisco	
	Eashzone-seamless		D0:C7:89:E8:D2:D0	-82 .	1	20	b,g,n	144.4	52% (18)			MGT-COMP				Cisco	
Sec.	📃 🗄 kno-airport@wfi.id	16	D0:C7:89:28:A8:41	-56	6	20	b.g.n	144.4	2% (18)	Open						Cieco	
N	lashzone-seamless		D0:C7:89:E8:A8:40	-55	6	20	b,g.n	144.4	52% (707)			MGT-CCHP				Cisco	
\sim	😸 🗄 kno-airport@wfi.id	5	F4:1F:C2:B7:34:21	-89	11	20	b,g.n	144.4	35% (16)	Open						Cieco	
	<																>
	Actions																
	Signal Strength		Network Quality	1	2.4GH	Iz APs CI	tannels	5G	Hz APs Chi	annels	Networks Requested	(177/88)	Detailed	info	Co	nnectivity	
	Requested SSID		# Source MAC Add	ress	Vendor						Finit	Seen Last Seen					
C#	F [Broadcast]		153														
-	1		00:2A:96:89:	C4:70	Apple						17:19	21 00.04:15 apo	1				-
	-		DO:22:8E:24:	33:5E	Semsury	g Electro	Mechanica	co LTD.			17:19	22 00:00.44 ago					
	-		34:BE:00:6A:	C:EC	Samsung	Bectron	ics Co.Ltd				17:19	22 00:00.45 ago	63				
NEWS	-		74:22:55:24:	58:D6	Apple						17:15	23 00:00 17 ago					
and a	-		DC:37:14:EF:	53:CA	Apple, In	1C.					17.19	1.24 00:00.48 ago					_
101105404			24:48:03:9A:	70:8A	Sandung	g Electron	ice Co Utd				17.15	23 00:04 39 age					
	-		90:18:7C:7B:	B5:C1	Samury	g Electro	Mechanica	CO LTD			17.15	23 00:01:41 ago					
			DELAZ ACIESI	40:02	snangna Israile	a Honun (ountrines	son co.ud			17.15	24 00 00 00 ago					-
			40-22-95-12-	80.20	foole						17.13	23 00-02 20 age					-
1			00:24-02-29:	80-69	Anices C	onto ter					17-19	24 00-02-30 and					
OWICAM			10:35-00-89-	07-10	Murata 3	Man fact	ena Ca lta				17.15	24 00-03-10 and					-
UNISAM	-		10:16:43:01-	02:DF	Apple	0.01.01.01.0		10			17:19	24 00.03.42					
			D4-97-08-88-	ET-BA	NACHI	CORPOR	ATION				17.15	24 00:00 27 000	1				

Picture 2 shows that we can see many probe request to SSID=Broadcast (Please see page 7 - Picture 2 for same SSID on the flight).

Cornet Device with 2.4 GHz antenna and Acrylic Wi-Fi (Pictures takes during flight journey)



<u>Picture 1</u>

Picture 2



Picture 3



Picture 4



Density value :

1. 0.1004 mW / m ²	= 100.4 μ W / m ²	= 0.01004 μ W / cm ²
2. 0.2147 mW / m ²	= 214.7 μ W/m ²	= 0.02147 μ W / cm ²
3. 17.45 mW / m ²	= 17450 μW / m ²	= 1.74 μ W / cm ²
4. 26.42 mW / m ²	= 26420 μW / m ²	= 2.640 μ W / cm ²

• Acrylic Wi-Fi Scanning on the flight journey

Picture 1

¥		A	crylic Wi-Fi Profe	ssional - Srinivasan T - ts	svs.lc@gmail.	om Remaini	ng 219 days (Fi	riday, March 4,	2016)				- 6 ×
File Wind	ows Tools Help					MODE Monit	or * NDIS interfac	e [CommView] Athe	eros AR58WB222 V	Vireless Netv	ork A		1 GPS 🛬
Menu «	Stations (Showing 13	of 13. Update	(0 be									-	
	MAC Address	RSSI Sor	Current State	Vendor	Undef Act (0)	Undef Pas (1)	AccessPoint (0)	Connected (0)	Requesting (12)	Wps Info	Retries	Attempts	Notes
11 . 1	8 [Broadcast]	-100 0	UndefinedPassive		NO	YES	NO	NÖ	ND	NO			
$(((\cdot)))$	B0:D0:9C:1A:07:80	-27	ClientRequesting	Samsung Electronics Co Ltd		NO	NO			YES (14)			[cliReg: [Broadcast]
(A)	D 44:D8:84:42:4E:D8	-83, 0	ClientRequesting	Apple	NO	NO	NO	NO	YES (1)	NO			[ciReg: [Broadcast]
A	GB:96:7B:B4:4B:A4	-69 . 0	CientRequesting	Apple	NO	NO	NO	NO	YES (1)	NO			[cliReq: [Broadcast]
	0 34:51:C9:B9:C5:74	-64 0	CientRequesting	Apple	NO	NO	NO	NO	YES (1)	NO			[cliReq: [Broadcast]
	0 F0:25:87:8E:38:3F	-63 0	ClentRequesting	Samsung Electro Mechanics	NO	NO	NO	NO	YES (1)	NO			[cliReq: [Broadcast]
	74:E2:F5:24:5B:D6	-64 0	ClientRequesting	Apple		NO	NO	NO		NO:			[ciReq: [Broadcast]
WIE WIE	34:15:9E:50:DE:AE	-63 0	CientRequesting	Apple	NO	ND	NO	NO	YES (3)	NO			[cliReq: Samly,Sing]
1 100	2 874:E1:B6:7B:CB:62	-69., 0	ClientRequesting	Apple			NO	NO		NO			[ciReq: [Broadcast]
	40:B3:95:AB:B1:87	-67 _ 0	ClientRequesting	Apple	NO	ND	ND	NO		NO			[clReq: [Broadcast]
	DC:98:9C:40:A1:11	-100 0	Client Requesting	Apple	NO.	NO	NÖ	NO	YES (1)	NO			[cliReq: [Broadcast]
	C 7E:38:D8:09:D8:A3	-100 0	ClientRequesting		NO	NO	NO	NO	YES (1)	NO -			[cliReq: [Broadcast]
-	2 96:CD:28:41:17:59	-71 0	Cient Requesting		NO	NO	NO	NO	YES (2)	NO			[cilReq: ELITE.[Broa
and the second	ate												
~	6												
\sim	9												
	< .												>
	Actions												*
	Signal Strength	Network	Quality 2.	4GHz APs Channels	5GHz APs Chann	els Netwo	rks Requested (12/4) Deta	iled info	C	onnectivity	1	
	Requested SSID	# Source	MAC Address Ven	dor			First Seen	Last Seen					
C#	[F] [Bmadcaid]	12											
Uni	IT Samly	1											
	TT Sinn Tel Highspeed WIFI	1											
	IT ELITE	1											
NBWS													
-													
1													
MAZIWO													
UHISAM													
1 0 / 0 AP(s)	GPS Status: Off												
and the second		-								-	-		C.15 D14
			💽 💽 💊	/							# • R	i 🛪 🗍	10 7/20/2015

Picture 1 shows that Acrylic software detected probe packets but not the actual Wi-Fi SSID signal details. Please make a note rssi value. Please see picture below (Picture 2):

Picture 2

l .	on flight pcap	pcap [Wireshark 1.12.4 (v1.12.4-0-gb4861da from master-1.12)]	- 0 ×
jile <u>E</u> dit <u>V</u> iew <u>Go</u> <u>C</u> apture <u>A</u> nalyze <u>S</u> t	tatistics Telephony <u>I</u> ools Internals <u>H</u> elp		
	् 🗢 🔿 🐺 🛓 🔳 🖬 । 🖯	Q.Q. 🔟 😹 🔟 🥵 🎉 💢	
ilten	Y Expression.	Clear Apply Save	
o. Time Source	Destination	Protocol Length Info	
1 0.000000 SamsungE_1a:07:	:80 Broadcast	802.11 250 Probe Request, SN=3167, FN=0, Flags=C, SSID=	Broadcast
2 1.240024 Samsupper 13:07	Broadcast	002.11 230 Trobe Request, DN 3160, FM 9, FlagsC 5510-	Broadcast
3 1,250031 SamsungE_1a:07:	:80 Broadcast	802.11 250 Probe Request, SN=3169, FN=0, Flags=C, SSID=6	Broadcast
4 3.260080 Appre_04.40.44	Decaderat	202 11 162 Droho Boquart, CP 1, CP 9, Flage	adcast
5 3.2800/4 Apple_b4:48:a4	Broadcast	802.11 16/ Probe Request, SN=4, FN=0, Flags=C, SSID=Brok	adcast
6 3.3000/5 Apple_04:48:44	Broadcast	802.11 167 Probe Request, SN=6, FN=0, FTags=C, SSID=Brok	adcast
7 3.3300/7 Appre_42:4e:08	Broadcast	802.11 143 Probe Request, SN=1, FN=0, Flags=C, SSID=BF08	adcast
8 3.370086 Apple_42:4e:d8	Broadcast	802.11 143 Probe Request, SN=2, FN=0, Flags=C, SSID=Broa	adcast
9 3.410118 App1e_42:40:08	Broadcast	802.11 143 Probe Request, SN=3, FN=0, Flags=C, SSID=Broa	adcast
10 6.260189 Apple_b9:05:74	Broadcast	802.11 140 Probe Request, SN=2437, FN=0, Flags=C, SSID=0	broadcast
11 6.300190 Apple_b9:c5:/4	Broadcast	802.11 140 Probe Request, SN-2438, FN-0, FlagsC, SSID-0	sroadcast
12 6.3401/1 Apple_09:C5:74	Broadcast	802.11 140 Probe Request, SN=2439, FN=0, Flags=C, SSID=0	broadcast
13 0.340143 Abbie_ba:c5:/4	Broadcast	802.11 140 Probe Request, SN=2440, FN=0, FTags=C, SSID=0	Broducast
IEEE 802.11 wireless LAN manag	ement frame		
000 00 00 17 00 2f 00 00 00 3 100 18 02 6C 09 90 04 6C 40 0 100 05 06 05 14 67 05 16 C f 000 05 04 00 05 14 67 05 16 C f 040 6C 2d 1a 2C 00 01 ff 00 0 050 00 00 00 00 00 00 00 0	9 da 07 00 00 00 00 00/. 7 00 00 ff ff ff ff ff ff 7 0 0 00 ff ff ff f0 2 15 24 32 04 30 48 60 1 0 00 00 00 00 00 d8 40 00	. 9 8 	
060 50 £2 04 10 45 00 01 10 10	1 23 00 01 00 10 08 00 P 1	10 - 51 - 61 - 62 - 63 - 63 - 63 - 63 - 63 - 63 - 63	

Please take a look circle line, a probe packets to SSID=Broadcast but where is the Access point, where all the devices on the flight journey from Medan - Singapore? Other strange process, there were no probe response back from any Access point back to client.

Strange About this Wi-Fi Packets (SSID = Wi-Fi Access Point):

- **1.** Client (Devices) sent probe requests (Broadcast) but none of Access point send Probe Response.
- 2. There is specific probe request to SSID=Samly, but this SSID not visible on the flight. (where is the SSID?). By right, for SSID=Samly should be a Beacon Frames in which enable Laptop, Phone or other clients can see the Access Point but on our case we dont see Beacon Frames.
- 3. On this pcap file, we can see 14 devices to search for Access Point

Overall, the above Wi-Fi Packets are really strange and should not be there.

Impressions from above Data

1. Density values is too high for 2.4 GHz Networks

2. It is impossible to receive Wi-Fi packets on the flight journey from Medan to Singapore at 32808 ft (approximately) from the sea level.

3. All the SSID (probe requests) and others SSID, just to divert everyone attention it is Wi-Fi signal but it is not Wi-Fi Signal. It is modulated low frequency which carry different density values and of course different RF electric field.

Conclusions :

- 1. Cornet device always detects from (+/-) -20 dBm to (+/-) -40 dBm. This indicates there is transmission at 2.4 GHz around me
- 2. Laptop equipped with internal antenna received Wi-Fi packets at 2.4 GHz, indicated transmission comes from Satellite not from Cell Tower
- 3. The same radio sound detected on the flight as well.

* Appendix L

Detecting unknown Radio Frequency at 2.4 GHz at

Latitude	:	3.504233333333333
Longitude	:	98.6258966666667

View on Google Maps:



This place located at remote place, near plantation and use home Wi-Fi networks not available.





Acrylic view :

Windows Tools Help							1407	Normal -	VAR Commission	A smerth [v	858W8222W	Vision Mature	de Belandar	- 10		1 GP
 Access Points 	(Showing 0 of 0, Update	ed 0)						ard womes	ANAL Transmen	d unique u	COUTFULLE V	Indiasa nyasiwa	ik rudytei			11 11 1941
())) SSID	MAC Address	RSSI	Snr Cha	n Wide	802.11	Max Rate 1	WEP	WPA	WPA2	WPS	Password	WPS PIN	Vendor	First Seen	Туре	
5																
< Actions Signal Street	gth Network G	Quality	2.4Gł	lz APs Chanr	nels	5GHz APs	Channels	Networks F	lequested (0/0)	1	Detailed info	Ĩ	Con	nectivity	T	
< Actions Signal Stren	igth Network (Quality	2.4Gł	fz APs Chanr	nels	5GHz APs	Channels	Networks F	lequested (0/0)		Detailed info		Con	nectivity	1	
Actions Signal Stree	igth Network C	Quality	2.4Gł	Hz APs Chanr	nels	5GHz APs	Channels	Networks F	lequested (0/0)		Detailed info		Con	nectivity	1	
Actions Signal Stren	igth Network C	Quality	2.4Gł	łz APs Chann	nels	5GHz APs	Channels	Networks F	lequested (0.0)		Detailed info		Con	nectivity	1	
AM	igth Network C	Quality	2.4G+	iz APs Charr	nels	SGHz APs	Channels	Networks F	lequested (0.0)		Detailed info		Con	nectivity		
Actions Signal Stree	gth Network C	2uality	2.4GH	42 APs Chanr	nels s: 0 - Spec	5GHz APs	Channels	Networks F	equested (00)		Detailed info		Cons	nectivity	1	

No Wi-Fi networks
Cornet Readings :





Spectrum Density :



Please see the strong noise floor that appeared suddenly. This external interference at 2.4 GHz cause home Wi-Fi networks to fluctuate (At different frequency). This external interference cause additional power at certain Wi-Fi channel and increase of SNR value



Please see the strong noise floor that appeared suddenly. This external interference at 2.4 GHz cause home Wi-Fi networks to fluctuate. (At different frequency). This external interference cause additional power at certain Wi-Fi channel and increase of SNR value

Conclusions :

There is **Unknown RF Transmission at 2.4 GHz** and this radio transmission is not a standard Wi-Fi networks but something else (modulated at low frequency). This Radio Transmission works at 2.4 GHz which is source of fluctuation of home Wi-Fi networks which works at 2.4 GHz.

* <u>Appendix M</u>

Analysis of Wi-Fi Packets in JB

- Amma Restaurant :

Wireshark: WLAN Traffic Statistics: Pcap-Amma-Rest.pcap ٥ × Network Overview BSSID Tp-Link L_Desures Ch. 4 SSID • % Packets Beacons d Data Packets Probe Req Probe Resp Auth Deauth Other Protection 0.20 % ArubaNet 7c:b3:70 1 TM WiFi 189 0 13 15 9 0 1 TM_Broadband56AC 0.01 % Shenzhen_8e:56:ac 2 0 0 1 0 Broadcast cc:b3:55:47:3f:71 tr548044@unifi 1 TROINN 0.03 % 0 0 0 0 0 0 0.55 % 0 WEP 130 1 0 5 0 0 Tp-LinkT_a1:d1:5e 11 Tropical Inn 01 0.84 % 154 51 0 0 0 0.77 % Tp-LinkT_14:9e:f4 11 Tropical Inn 02 111 16 0 61 0 0 0 WEP Tp-LinkT_f6:40:ae . 11 Tropical Inn 03 0.00 % 1 0 0 0 0 0 Tp-LinkT_3b:ee:4f 11 Tropical Inn 11 0.38 % 89 0 4 0 0 0 0 49 0 WEP 0.24 % D-Link_5d:c9:8c 11 Tropical Inn 13 0 0.04 % Broadcast wong 6 ytrug bbbbhb czv 0.01 % 0 0 2 0 0 0 0 SamsungE_0f:76:c1 1.12 % 63 213 0 0 Selected Network ▲ % Packets Address Broadcast Data Sectived Probe Reg Probe Reg Auth Deta H Comment O 0 1 0 0 0 0 0 0 0 0 0 11 0 0 Wisol_61:db:a0 Name resolution Limit to display filter Only show existing networks Help Copy Close へ 🕴 🗈 🬾 🕬 🌹 🚃 ENG 1:03 PM 19/10/201 🔳 A 🗆 🩋 👅 🖨 🌖 🔯 🛷 🖳 💋

1. Please see following screen for SSID = Wireless@SGx

The above Wi-Fi Packets, there was a request sent to Wireless@SGX.

2. Please see following SSID = AndroidAP

	Ch. SSID	▲ % Packets		ts 🌓 Probe Req	Probe Resp	4 Auth	• Deauth	Other	Protectio
adcast	0989BC	0.01 %	0	0	3	0	0	0	0
enPac 2a:51:0a	10 2A510A	0.30 %	67	0	0	7	0	0	0
adcast	3 7A948F-Maxis Fibre Internet	0.01 %	0	0	2	0	0	0	0
enPac 85:6c:14	10 856C14	0.70 %	136	19	0	17	0	0	0 WEP
adcast	5 Alfred's Note 4	0.01 %	0	0	3	0	0	0	0
uiti_57:1e:ce	6 Amansari	0.00 %	1	0	0	0	0	0	0
uiti_57:1c:5b	1 Amansari	0.04 %	10	0	0	0	0	0	0
zhen_ba:ac:a9	6 AMS2333	0.88 %	189	7	0	21	0	0	0 WEP
ungE f1:45:55	6 AndroidAP	0.02 %	3	0	0	3	0	0	0
dcast	7 BBUnet Panti AP1	0.00 %	0	0	1	0	0	0	0
oxD 92:0d:d2	7 Beverly Wilshire Guest	0.01 %	2	0	0	0	0	0	0
oxD 92:0e:22	3 Beverly Wilshire Guest	0.11 %	26	0	0	2	0	0	0
ungE_f1:45:55		100.00 %	0	0	0	3	0	0	0 Base:
ne resolution [] Limit to display filter 🗌 Only show existing	j networks							

On this screen we can see SSID=AndroidAP as base stations

- Near to Barber Shop

1. Please see following SSID = AndroidAP

- o ×

BSSID Ch. 4 SSID	▲ % Packets	Beacons	Data Packets	Probe Re	1 4 Probe Resn	▲ Auth	 Deautil 	h 1 Other	Protection 4
bioadcast UEDSAC	0.00 /0	beacons	Data Fuckets	v	1 in the sector	v	v	v	v
Broadcast 0F260C	0.04 %	(0	6	0	0	0	0
GreenPac_3f:bd:8c 9 3FBD8C	4.82 %	235	3	32	0	95	0	0	0 WEP
GreenPac_3f:c2:30 9 3FC230	1.17 %	144		0	0	17	0	0	0
SamsungE_d3:5d:e9 6 888888888	0.25 %	25		0	0	10	0	0	0
Broadcast 9287E_MaxisBroadban	0.05 %	(0	7	0	0	0	0
Broadcast AIU Wifi	0.06 %	0		0	8	0	0	0	0
Broadcast alhajcurryhouse	0.07 %	(0	10	0	0	0	0
Wisol_59:e3:ac 11 AndroidAP	0.28 %	16		0	2	21	0	0	0
MurataMa_90:8b:94 6 AndroidAP	1.11 %	63		3	0	80	7	0	0
Broadcast AndroidHotspot5886	0.01 %	(0	1	0	0	0	0
D-Link_ff:97:04 11 AVISTA	0.98 %	116	i i	0	8	11	0	0	0
Broadcast BeXtra-1	0.01 %	(0	1	0	0	0	0
leijingX_73:fe:11	13.04 % 8.70 % 26.09 % 13.04 %		0 0 0	0 0 0	0 2 0	3 0 6 3	0 0 0	0 0 0	0 0 0
amsungE 5d:eb:25	4.35 %		0	0	0	1	0	0	0
SamsungE 96:5c:23	8.70 %		0	0	2	0	0	0	0
/ivoMobi_e7:37:c6	13.04 %		0	0	0	3	0	0	0
Visol 1f:17:56	8.70 %		0	0	0	2	0	0	Ō
Wisol 59:e3:ac	91.30 %		0	0	0	21	0	0	0 Base static
Name resolution Limit to display filter 0	ly show existing networks								Class
Help Copy									Close

On this screen, we can see Access Point as AndroidAP as Base station.

2. Please see following SSID = Wireless@SGx

Control Control <t< th=""><th>ceace and set of the set</th><th>SID C</th><th>h. 4 SSID</th><th>% Packets</th><th> Beacons </th><th>Data Packets 🖣 Prol</th><th>be Req 🔩 Prob</th><th>e Resp 🖣 Au</th><th>th 📢 De</th><th>auth 🍨 Ot</th><th>her 🍨 Protectio</th></t<>	ceace and set of the set	SID C	h. 4 SSID	% Packets	 Beacons 	Data Packets 🖣 Prol	be Req 🔩 Prob	e Resp 🖣 Au	th 📢 De	auth 🍨 Ot	her 🍨 Protectio
1 000 0 0 <td>Control Control <t< td=""><td>reenPac 65:b7:d0</td><td>9 T VIRUS</td><td>0.87 %</td><td>78</td><td>15</td><td>0</td><td>27</td><td>0</td><td>0</td><td>0 WEP</td></t<></td>	Control Control <t< td=""><td>reenPac 65:b7:d0</td><td>9 T VIRUS</td><td>0.87 %</td><td>78</td><td>15</td><td>0</td><td>27</td><td>0</td><td>0</td><td>0 WEP</td></t<>	reenPac 65:b7:d0	9 T VIRUS	0.87 %	78	15	0	27	0	0	0 WEP
Impliming Delay 3 TP-LINK, MAS20, 0842F3 O.43 % 40 2 0 <td>up-LinkT_Obs2/13 3 TP-LINK_MS20_0842F3 0.45 % 0 0 4 0 0 0 0 irondcast use43S7.277.275.357.277.275.257.275.275.275.275.275.275.2</td> <td>Iroadcast</td> <td>TMCIO IST FI</td> <td>0.07 %</td> <td></td> <td>0</td> <td>q</td> <td>0</td> <td>ő</td> <td>ő</td> <td>0</td>	up-LinkT_Obs2/13 3 TP-LINK_MS20_0842F3 0.45 % 0 0 4 0 0 0 0 irondcast use43S7.277.275.357.277.275.257.275.275.275.275.275.275.2	Iroadcast	TMCIO IST FI	0.07 %		0	q	0	ő	ő	0
amountary and a print of	products 0<	In-LinkT 0b:42:f3	3 TP-LINK M5250 0B42E3	0.45 %	40	2	0	20	0	0	0 Unknow
GreenPac_62c554 10 Utune 584% 62 240 12 275 0 0 WEP nfomark_g83asaf 11 whatever 240% 66 1 0 283 0 0 0 Unknown nbradcast 1 Wireless@SGN 0.24% 0 0 283 0 0 0 0 hroadcast Worless@SGN 0.22% 4 0 0 266 0 0 0 kroadcast wong 0.03% 0 0 4 0 0 0 0 kroadcast wong 0.01% 382 76 0 590 1 0 60 kroadcast 0.01% 0 0 1 0 0 0 0 isoadcast VER 0.01% 0 0 1 0 0 0 isoadcast 0 0 33 0 0 0 0 ismangE_6cff6c0 15.15% 0 0 33 0 0 0 ismangE_6cff6c0 15.15% 0 0 22 0 0 0 ismangE_6cff6c0 66.07% 0	SireenPac_62:554 10 Utune 9.84% 824 240 12 27 0	Broadcast	user\357\277\275\357\277\275\357\277\275\	0.03 %	0	0	4	0	ő	ő	0
informark_a83asaf 1 Wretess \$\$\$\$ 0 0 263 0 0 0 0 ibadasat 1 Wretess \$\$\$\$ 0.24 % 0 0 33 0 0 0 ibadasat 1 Wretess \$\$\$\$ 0.22 % 4 0 0 26 0 0 ibadasat wong 0.03 % 0 0 4 0 0 0 ibadasat wong 0.03 % 0 0 4 0 0 0 ibadasat wong 0.03 % 0 0 4 0 0 0 ibadasat wong 0.03 % 382 76 0 500 1 0 0 ibadasat Wong Kok 8.07 % 382 76 0 1 0 0 0 ibadasat Yu Earn 0.01 % 0 0 1 0 0 0 ibadasat Yu Earn 0.01 % 0 0 33 0 0 0 ibadasat 100.00 % 0 33 0 0 0 0 ibadsat 100.00 % 0 33 0 0 <td< td=""><td>Impact_d83ast 1 Wretess \$500 0<!--</td--><td>ireenPac 62:c5:94</td><td>10 Utune</td><td>9.84 %</td><td>824</td><td>240</td><td>12</td><td>275</td><td>0</td><td>0</td><td>0 WEP</td></td></td<>	Impact_d83ast 1 Wretess \$500 0 </td <td>ireenPac 62:c5:94</td> <td>10 Utune</td> <td>9.84 %</td> <td>824</td> <td>240</td> <td>12</td> <td>275</td> <td>0</td> <td>0</td> <td>0 WEP</td>	ireenPac 62:c5:94	10 Utune	9.84 %	824	240	12	275	0	0	0 WEP
Bioadcast 1 Wireless@SGx 0.24 % 0 0 33 0 0 0 0 06 19b e000788 7 WiZone_2 0.22 % 4 0	Bioadcast I Wireless@SGx 0.24 % 0 0 33 0 0 0 0 06 19b e000788 7 WiZone_2 0.22 % 4 0	nfomark a8:3a:af	11 whatever	2.40 %	66	1	0	263	0	0	0 Unknow
%61%be00.07:88 7 WiZone_2 0.22 % 4 0 0 0 0 broadcast wong 0.03 % 0 0 4 0 0 0 0 saustekC_4605tb8 6 Wong Kok 8.07 % 382 76 0 590 1 0	M:19be00.07:88 7 WiZone,2 0.22 % 4 0 0 26 0 0 0 Moadcatt wong 0.03 % 30 0 4 0 <	Broadcast	1 Wireless@SGx	0.24 %	0	0	33	0	0	0	0
Broadcast wong 0.03 % 0 0 4 0 0 0 AxustekC_4605b8 6 Wong Kok 8.07 % 382 76 0 590 1 0 60 Unknown MuratAM2_5437.ea 6 XXArchexXx 0.01 % 1 0 0 1 0 0 0 Stoadcast 0.01 % 0 </td <td>Broadcast wong 0.03 % 0 0 4 0 0 0 Axustek (2405b8) 6 Wong Kok 807 % 382 76 0 590 1 0 60 Unkr Murata Ma (25:d7):ea 6 XoArchenXox 0.01 % 1 0 <td< td=""><td>06:19:be:00:07:88</td><td>7 WiZone 2</td><td>0.22 %</td><td>4</td><td>0</td><td>0</td><td>26</td><td>0</td><td>0</td><td>0</td></td<></td>	Broadcast wong 0.03 % 0 0 4 0 0 0 Axustek (2405b8) 6 Wong Kok 807 % 382 76 0 590 1 0 60 Unkr Murata Ma (25:d7):ea 6 XoArchenXox 0.01 % 1 0 <td< td=""><td>06:19:be:00:07:88</td><td>7 WiZone 2</td><td>0.22 %</td><td>4</td><td>0</td><td>0</td><td>26</td><td>0</td><td>0</td><td>0</td></td<>	06:19:be:00:07:88	7 WiZone 2	0.22 %	4	0	0	26	0	0	0
AsustekC_4605b8 6 Wong Kok 8.07 % 382 76 0 590 1 0 60 Unknown MurataMa_25:d7ca 6 xXAArchenXx 0.01 % 1 0 0 1 0 <t< td=""><td>AsustekC_460568 6 Wong Kok 8.07 % 382 76 0 590 1 0 60 Understanding Broadcast Yu Earn 0.01 % 1 0 0 1 0<!--</td--><td>Broadcast</td><td>wong</td><td>0.03 %</td><td>0</td><td>0</td><td>4</td><td>0</td><td>0</td><td>0</td><td>0</td></td></t<>	AsustekC_460568 6 Wong Kok 8.07 % 382 76 0 590 1 0 60 Understanding Broadcast Yu Earn 0.01 % 1 0 0 1 0 </td <td>Broadcast</td> <td>wong</td> <td>0.03 %</td> <td>0</td> <td>0</td> <td>4</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td>	Broadcast	wong	0.03 %	0	0	4	0	0	0	0
MurataMa_25:d7:ea 6 XXAArcherXXx 0.01% 1 0 0 0 0 Broadcast Yu Earn 0.01% 0 0 1 0 0 0 0 stected Network	MurataMa_25:d7:ea 6 XXAAcheexXx 0.01% 1 0 <t< td=""><td>AsustekC_46:05:b8</td><td>6 Wong Kok</td><td>8.07 %</td><td>382</td><td>76</td><td>0</td><td>590</td><td>1</td><td>0</td><td>60 Unknow</td></t<>	AsustekC_46:05:b8	6 Wong Kok	8.07 %	382	76	0	590	1	0	60 Unknow
Broadcast Vu Earn 0.01% 0 1 0	Broadcast Vu Earn 0.01% 0 1 0	MurataMa 25:d7:ea	6 xXxArchenxXx	0.01 %	1	0	0	1	0	0	0
Insurging Robust Visol 7 cre3rd0 Oto 8 creation Probe Req Probe R	Intervention Intervention<		N. F.			0	1	0	0	0	0
Viso[7ce9:40 0 0 22 0 0 0 0	Visol 7 ce940 66.67 % 0 0 22 0 0 0 0	Iroadcast Iected Network ddress Iroadcast Iroadcast	vu sam	0.01%	Data Sent	Data Received	Probe Req P 33 5	robe Resp 4 0 0	Auth 4	Deauth 4	Other Com O O O O O O O O
SamsungE_6ctfic0 15.15% 0 0 5 0 0 0 SamsungE_802e21 18.18% 0 0 6 0 0 0 Wiso[7ce9:d0 66.07% 0 0 22 0 0 0	SamsungE_56cf6c0 15.15 % 0 0 5 0 0 0 SamsungE_502xE21 18.18 % 0 0 6 0 0 0 WisoL7ce9:d0 66.67 % 0 0 0 0 0 0 0	Broadcast elected Network Address	Yu carn	0.01 %	0	Data Received 4	Probe Reg 4 P	robe Resp 4	Auth 1	Deauth 4	Other 4 Com
Mitol Treesd0 66.67% 0 0 22 0		elected Network Address Broadcast	vu sam	0.01 %	Data Sent +	Data Received 4	Probe Req P	robe Resp 4	Auth 4	Deauth 4	Other Com O O
		elected Network Address Broadcast SamsungE_6c:f6:c0	 % Packets 	100.00 % 15,15 % 19,19 %	Data Sent *	Data Received •	Probe Req 4 P 33 5	robe Resp 4 0 0	Auth 4	Deauth 4	Other Com
		Broadcast elected Network Address Broadcast SamsungE_6c:f6:c0 SamsungE_80:2e:21 Wisol_7c:e9:d0	Recets	100.00 % 15.15 % 18.18 % 66.67 %	Data Sent ·	Data Received	Probe Req 4 P 33 5 6 22	robe Resp 4 0 0 0 0	Auth 4 0 0 0 0	Deauth 4	Other Com O O O O O O O O O O O O O O O O O O O
	Non-methics - United data data data and a state	Iroadcast Jected Network ddress Iroadcast amsungE_6crf6c0 amsungE_80:2e21 Visol_7cce3:d0	* % Packets	0.01 % 100.00 % 15.15 % 18.18 % 66.67 %	Data Sent :	0 0 4 a Received ↓ 0 0 0 0 0 0 0 0 0 0	Probe Req • P 33 5 6 22	robe Resp 4 0 0 0 0 0	Auth 4 0 0 0 0 0 0	Deauth 4 0 0 0 0 0 0 0 0	Other • Com 0 0 0 0 0 0 0 0 0 0 0 0
	Name resolutioninite to display interOnly show existing networks	roadcast ddress oradcast amsungE_6c:f6cc0 amsungE_80:2e21 Visool_7c:e9:d0	YU Lain A % Packets	0.01 %	Obta Sent :	I Data Received 4 0 0 0 0 0 0 0 0 0 0 0 0	Probe Req 4 P 33 5 6 22	robe Resp • 0 0 0 0	Auth 4 0	Deauth 4 0 0 0 0 0 0 0 0 0 0	Other Com O O O O O O O O O O O O O O O O O O O

On this screen , we can see there were probe request sent to get information about SSID=Wireless@SGX

- Inside JB Train Station to Woodlands



2. Please see following SSID = Lenovo A328, A850, A889

twork Overview										
SID	Ch. SSID	▲ % Packets	▲ Beacons ▲ Data	Packets Probe	Req 4 Probe	Resp 4 Auth	n ◀ Dea	uth 4 Othe	er 🖣 Pro	tection <
-cinkin_outeratio		4,40 %	100	0			v.	v.	v.	
amsungE_80:2a:b8	11 kokchoon	0.03 %	1	U	U	U	U	U	U	
e:07:e4:7e:8c:22	6 Lenovo A328	4.05 %	16/	U	0	U	0	0	0	
a:ff:d0:93:68:76	1 Lenovo A369i	4.48 %	161	0	0	0	0	0	0	
2:72:0d:37:f2:aa	1 Lenovo A850	0.03 %	1	0	0	0	0	0	0	
e:5f:1c:ef:43:c9	1 Lenovo A889	4.26 %	153	0	0	0	0	0	0	
luaweiTe_48:94:bc	3 lia_mn711	0.03 %	1	0	0	0	0	0	0	
6:04:2b:4f:5f:68	6 Lim99	4.62 %	166	0	0	0	0	0	0	
luaweiTe_e5:03:ec	11 MAJU-JNX5558	0.11 %	4	0	0	0	0	0	0	
ltaiTec_00:07:88	7 MAJU-JNX5558	0.75 %	27	0	0	0	0	0	0	
p-LinkT_e8:51:78	11 MAJU-JNX5558	1.78 %	64	0	0	0	0	0	0	
amsungE_1e:9e:87	11 Manto	0.06 %	2	0	0	0	0	0	0	
henzhen_c8:bf:1d		0.03 %	1							
roadcast	0.0	1%	0	0	0	0	0	0	0	
roadcast	0.0)%		0	0	0	0	0	0	P
roadcast	0.0	<u>) %</u>	0	0	0	0	0 0	0 0	0	Base stat
roadcast henzhen_c8:bf:1d	0.0	0 % 1 %	0	0 0	0	0	0	0	0	Base stat
kroadcast	0.0 0.04	0 %) %	0	0 0	0	0	0	0	0	Base stat
inenzhen_c8:bf:1d	0.0 0.0	0%)%	0	0	0	0	0	0	0	Base stat
henzhen_c8:bf:1d	0.0 0.0	0 % 9 %	0	0	0	0	0	0	0	Base stat
henzhen_c8:bf:1d	0.0 0.0	0 %	00000	0	0	0	0	0	0	Base sta
henzhen_c&bf:1d	0.0 0.0	0 %	0000	0	0	0	0	0	0	Base sta
henzhen_c8:bf:1d	0.0 0.0	0 %	00000	0	0	0	0	0	0	Base sta
iroadcast	0.0	0 %		0	0	0	0	0	0	Base str
inoadcast	0.0 0.0	0 %	0	0	0	0	0	0	0	Base sta
henzhen_c&bfild	0.0	0 %	0 0	0	0	0	0	0	0	Base st
Name resolution _ Lim	0.0 0.0	0 %	0 0	0	0	0	0	0	0	Base st
Name resolution Lim	0.0 0.0	0 %		0	0	0	0	0	0	Base sta

- Please see following screen shot on the way from KL to Singapore by Bus (3/3/2015)

File Windows Tools	Help					Acrylic Wi-Fi - N	ot for comme	ercial us	e.	Wi-Fi Qualco	mm Athenos AR5BWB222 Wireless Ne	twork Adapter	Ŧ	_ 🗇
SSID AndroidAP AndroidAP Lenovo A889 A2205	Mac Address C0:BD:D1:2E:01:3B C4:50:06:51:BD:8E AE:38:70:67:44:F9 20:02:AF:CF:DC:CF 02:1E:AD:9D:06:83 28:FB:D3:96:61:47 C4:0A:CB:5C:E1:F0	Rssi Chan -81 6 -79 11 -87 1 -95 6 -65 6 -82 6 -50	802.11 b.g.n b.g.n b.g.n b.g.n b.g.n b.g.n b.g.n	Max Speed 144.4 Mbps 72.2 Mbps 72.2 Mbps 72.2 Mbps 72.2 Mbps 300 Mbps	WEP	WPA WPA	WPA2 PSK-CCMP PSK-CCMP PSK-CCMP PSK-CCMP PSK-CCMP PSK-CCMP PSK-CCMP	WPS 1.0 1.0	Password	WPS PIN	International Analysis VIII 222 Windows Vendor Samsung Bectro Mechanics co. LTD Samsung Bectronics Co.Ltd Murata Manufactuaring Co.Ltd. Ragentek Technology Group CISCO SYSTEMS. INC.	Work Adapter First Seen L 14:02:51 00; 14:03:33 00; 14:03:51 00; 14:03:57 00; 14:03:57 00; 14:03:57 00; 14:04:09 nov	ast Seen 7 :01:19 ago 1 :00:37 ago 1 :00:19 ago 1 :00:19 ago 1 :00:13 ago 1 :00:13 ago 1 :00:13 ago 1 :00:13 ago 1 :00:13 ago 1 :00:13 ago 1 :00:14 ago 1 :00:	Type nfrastructure nfrastructure nfrastructure nfrastructure nfrastructure nfrastructure nfrastructure
Home Radar Ne History and Networks History St Layout * Networks	etworks Quality Test Connection Test Tests	Refresh Now Stop Polling	Settings Export Net Setting	vorks s H	s Guide ary t elp						XIRR Wi-Fi Inspe	US [®] ector		
Adapter Name A SSID > Adapter Name: 0 MY201203A05	Signal (dBm) Ne Qualcomm Atheros ARSBWE -5080	Total SSII Total BSSI etwork Mode 8222 Wireless Ne 2.11n	Ds: 1 IDs: 1 Default E twork Adapt AES-CCM	ncryp [er > V	Default Auth VPA2/P5K	Vendor Cisco	BSSID C4:0A:CB:54	C:E1:F0 1	Channel	Freque 2412, 2	Right click on St ncy Network Type G 432 Access Point	SID name to Loc raph		0-10
														-30 -40 -50 -60 -70 -80 -80
7 / 7 AP(s)	14:00:00	6		14:01	:00		14:02:1	00			14:03:00		14:	-10 04:00 2:04 Pl

You can see SSID : AndroidAP, Lenovo A889

Menu «	Access Points (Show	ng 27 of 27, Update	d 18)														_		
	SSID	Mac Address	Rssi	Snr	ha 🕶	Wide	802.11	Max Rate	WEP	WPA	WPA2	WPS	Password	WPS PIN	Vendor			First Se	^
$((\ldots))$	VLCN virus	CO:BD:D1:27:34:67	-95	2	6	20	b.g.n	144.4		DATE (THETE COMPLEX	PSK-CCMP							19:37	
(CM)	BS1G Consels Instan Buffild	DO: 7A: B5:AL: FF: DO	-/8 .	34	1+5	40	p.g.n	270	Once	P2K-(IKIP(CCMP)	PSK-(IKIP(COMP)							19:37	2
A	JCO Hotepot	00-23-69-11-00-25	. 00-	14	6	20	ba	54	open	DRE-TETD		1.0						19.37	
	ard cambridge	3C:5E:C3:6F:C8:80	.77	36	149	20	an	300			PSK-CCMP							19:37	
	[Hidden]	64:66:B3:A8:E6:0E	-81 .	19	8+4	40	b, q, n	150			PSK- (TKIP (CCMP)							19:37	
	The Coffee Bean	64:66:B3:A8:E6:0C	.77 .	36	8+4	40	b.g.n	150		PSK- (TKIP (CCMP)	PSK- (THIP (CCMP)							19:37	
WIFI B	@wfi.id	64:66:83:A8:E6:0D	-84 .	16	8+4	40	b.g.n	150	Open									19:37	
T MULTING	grd_cambridge	3C:5E:C3:73:D3:10	-62	83	1	20	b.g.n	144,4			PSK-CCMP							19:37	
	The Jittlada	D8:5D:4C:B4:70:BB	-87	13	11	20	b.g	54		PSK-TKIP								19:37	
	THEATRIC	64:66:B3:FE:CB:14	-79.1	32	4+8	40	b, g, n	150		PSK-(TKIP(CCMP)	PSK-(TKIP(CCMP)							19:37	1
	[Hodden]	DO: 74:85:41:55:D2	-80.	20	1+5	40	b.g.n	2/0	Conn	MGI-CCMP	MGI-CCMP							19:37	1
States.	oracie	14:D6:4D:73:93:7C	-90	7	11+7	40	bon	150	open	PSE- (TEIP(CCMP)	PSK- (TKIP (CCMP)							19:37	1
			.97 .1	13	11	20	b.a.n	72.2			PSK-CCMP							19.37	1
N.	Android AP																		
<pre>X</pre>	AndroidAP knightfrank < Actions Signal Strength	00:02:F4:FD:03:06	-85 . ity	15	6+10 2.4Ghz A	40 VPs Chan	b, g, n nels	300 5Ghz	: APs Channe	els Networks i	PSK-CCMP Requested (0/0)		Detailed info	1	GF	25	1	19:37	×
C#	Android AP Knightfrank K Actions Signal Strength	00:02:14:10 00:02:14:10 Network Qual	-85 . ity	15	6+10 2.4Ghz /	40 4Ps Chan	b.g.n nels	300 5Ghz	: APs Chann	els Networks l	PSK-CCMP Requested (0/0)	1	Detailed info	ľ	GF	25	1	19:37 > Conne 0 -1 -2	× 10 20
C#	Andread AP Instantial I	Network Qual	-85 . ity	15	6+10 2.4Ghz /	40 APs Chan	b, g, n nels	300 5Gha	: APs Chann	els Networks	PSR-OCMP		Detailed info		GF	25	1	19:37	* • • • • • • • • • • • • • • • • • • •
C#	Android // knydriank Signal Strength	Donal (Clover K4 et al. 00:02:14:170:03:04 Network Clust	-85 .		6+10 2.4Ghz /	40	b, g, n	300 5Ghu	: APs Channe	ala Networks I	Requested (0/0)		Detailed info		GF	P5		19:37	* 10 10 20 30 40 50 50 80 80 80 90

- Please see following SSID = AndroidAP in Medan - Indonesia

- Wi-Fi Fluctuation at Amma Restaturant

1. Picture of SSID = Tropical Inn 01 with dBm = -87 SNR = 13

2210	MAC Address	ISS -	SNR	Chan	Width	802.11	Max Rate	WEP	WPA	WPA2	WPS Password	WPS PIN	Vendor
MGR 1001	E8:CC:18:4A:9C:97	-38	100	1	20	b, g, n	300		PSK-(TKIP CCMP)	PSK-(TKIP/CCMP)	1.0		D-Link Internatio
KRISHNAJOTHI	CC:B3:55:A5:80:B1	-6.5	71	1	20	b, g	54	SharedKey					
nhonors-public	24:C9:A1:1E:AD:E8	-74 .	42	6	20	b, g, n	216.7	Open					Ruckus Wireless
fropical Inn 02	00:27:19:14:9E:F4	-89 📶	11	11	20	b, g	54	SharedKey					TP-LINK TECHNO
Hidden]	00:22:75:25:47:97	-75	40	6	20	b, g, n	144.4		PSK-TKIP		1.0		Belkin Internatio
nhonors-public	24:C9:A1:1D:32:18	-71	48	1	20	b, g, n	216.7	Open					Ruckus Wireless
Tropical Inn 11	64:70:02:3B:EE:4F	-86 _{att}	14	11	20	b, g	54	SharedKey			1.0		TP-LINK TECHNO
ROINN	CC:B3:55:47:3F:71	-77 .	36	1	20	b, g	54	SharedKey					
AMS2333	2C:AB:25:BA:AC:A9	-75	40	6	20	b, g	54	SharedKey					Shenzhen Gongj
PibcaJB	94:FB:B2:C2:71:C3	-79 📶	32	6	20	b, g	54		PSK-TKIP				Shenzhen Gongji
honors	24:C9:A1:5E:AD:E8	-71 -11	48	6	20	b.a.n	216.7	Open					Ruckus Wireless
Tropical Inn 01	64:70:02:A1:D1:5E	-87 🚮	13	11	20	b, g	54	SharedKey					TP-LINK TECHNO
[Hidden]	00:19:3B:92:0E:20	-76 📶	38	3+7	40	b, g, n	300			PSK-(TKIP CCMP)	1000		Wilibox Deliberar
0400	82.CE.E1.OR.98.E3	75 1	10	1	20	h n.n.	77.7			DEN COND	1.0		
Signal Strength	Network Quality	2.4	GHz AF	s Channe	is 5	GHz APs Ch	annels	Networks Red	juested	Detailed info	Connectivity		

2. Picture of SSID = Tropical Inn 01 with dBm = -10 SNR = 100

WGR 1001 E8:CCC18:44:95:297 -36, ml 100 1 20 b, g, n 300 PSK-(TKIP[CCMP) 1.0 D-Link Internation (RISHNA)0THI GRISHNAJOTHI CC:33:55:85:90:B1 -6.7 ml 1 20 b, g, n 54 SharedKey Ruckus Wireless For point (RISHNA)0THI CC:33:55:R5:90:B1 -6.7 ml Ruckus Wireless Ruckus Wireless For point (RISHNA)0THI	SSID	MAC Address	ISS -	SNR	Chan	Width	802.11	Max Rate	WEP	WPA	WPA2	WPS I	Password WPS PI	N Vendor
KRISHNAJOTHI CC:B3:55:A5:80:B1 -CH ² / ₂ 75 1 20 b.g.n 54 SharedKey iropical inn 02 01:271:19:11:81:DE: B-1:dl 10 6 20 b.g.n 216:7 Open Ruckus Wireless indonors-public 01:271:19:11:81:DE: B-1:dl 10 6 20 b.g.n 14:4.4 PSK-TKIP 1.0 Belkin Internativ indonors-public 21:05:11:03:21:8-71:rdl 48 1 20 b.g.n 12:67 Open Ruckus Wireless indonors-public 21:05:21:67:71:rdl 48 1 20 b.g.n 12:67 Open Ruckus Wireless Konors-public 21:05:21:67:71:rdl 46 1 20 b.g.n 54 SharedKey 1.0 PLINK TECHN KOINN Cc:B3:55:18:A1:61:9 -07.rdl 36 20 b.g.n 54 SharedKey SharedKey SharedKey Sharehous Sharehous Sharehous Sharehous Sharehous Sharehous Sharehous Sharehous Sharehous </td <td>MGR 1001</td> <td>E8:CC:18:4A:9C:97</td> <td>-36.11</td> <td>100</td> <td>1</td> <td>20</td> <td>b, g, n</td> <td>300</td> <td></td> <td>PSK-(TKIP CCMP)</td> <td>PSK-(TKIP CCMP)</td> <td>1.0</td> <td></td> <td>D-Link Internatio</td>	MGR 1001	E8:CC:18:4A:9C:97	-36.11	100	1	20	b, g, n	300		PSK-(TKIP CCMP)	PSK-(TKIP CCMP)	1.0		D-Link Internatio
hthonors.public 24:109:X1:1E:XD:2E -01 ad 19 6 20 b.g.n. 216.7 Open Ruckus Wireless indiden 00:22:175:25:47:97 -95.ad 2 11 20 b.g.n. 144.4 PSK-TKIP 1.0 Beldin International Mireless indiden 00:22:175:25:47:97 -84.41 16 6 20 b.g.n. 216.7 Open TP-LINK TECHN inhoners.public 24:05:X1:10:32:16 -71.41 48 1 20 b.g.n. 216.7 Open Ruckus Wireless ripoical Inn 11 61:70:02:175:12:571 -77.41 48 1 20 b.g. 54 SharedKey 1.0 TP-LINK TECHN ROINN C0:38:155:147:1877.1 -77.41 36 1 20 b.g 54 SharedKey SharedKey Sharethe Gong MS2333 20:X8:125:EA:X6:149 87.41 13 6 20 b.g 54 SharedKey Sharethe Gong hthonors 21:05:14:15:EA:01:18 -01.41 10 b.g 54 SharedKey Sharethe Gong Sharethe Gong </td <td>KRISHNAJOTHI</td> <td>CC:B3:55:A5:80:B1</td> <td>-613</td> <td>75</td> <td>1</td> <td>20</td> <td>b, g</td> <td>54</td> <td>SharedKey</td> <td></td> <td></td> <td></td> <td></td> <td></td>	KRISHNAJOTHI	CC:B3:55:A5:80:B1	-613	75	1	20	b, g	54	SharedKey					
Into 0 00:271:52:52:57:97 9.5_ml 2 11 20 b.g 54 SharedKey TP-LINK TECHN Hidden 00:22:75:52:57:97 44.d 16 6 20 b.g.n 144.4 PSK-TKIP 1.0 BakeIn International State information 24:05:A1:1D:32:18 -71 aff 48 1 20 b.g.n 216.7 Open Ruckus Wireless ROINN 6:111 20 b.g 54 SharedKey 1.0 TP-LINK TECHN MX52333 20:AB:25:BA:AC:A8 -87 aff 13 6 20 b.g 54 SharedKey Sharethere Sharethere MX52333 20:AB:25:BA:AC:A8 -87 aff 13 6 20 b.g 54 SharedKey Sharethere	hhonors-public	24:C9:A1:1E:AD:E8	-81	19	6	20	b. g. n	216.7	Open					Ruckus Wireless
Hidden 00:22:75:25:47:97 -84 clif 16 6 20 b, g, n 144.4 PSK-TKIP 1,0 Bekin Internation honors-public 24:C9:X1:10:32:18 -71 clif 6 1 20 b, g, n 216.7 Open Ruckus Wireless ropical In1 61:70:02:38:E2:47 -71 clif 6 11 20 b, g 54 SharedKey 1.0 Ruckus Wireless ROINN CC:83:55:47:32:71 -77 clif 36 1 20 b, g 54 SharedKey 1.0 TP-LINK TECHN MXS2333 21:28:15:171:3 -77 clif 36 1 20 b, g 54 SharedKey Sharebeckey Sharebeckey WS2333 21:28:17:11:155 -71 clif 6 20 b, g 54 SharedKey Sharebeckey Sharebeckey <td< td=""><td>Tropical Inn 02</td><td>00:27:19:14:9E:F4</td><td>-95 dfl</td><td>2</td><td>11</td><td>20</td><td>b, g</td><td>54</td><td>SharedKey</td><td></td><td></td><td></td><td></td><td>TP-LINK TECHN</td></td<>	Tropical Inn 02	00:27:19:14:9E:F4	-95 dfl	2	11	20	b, g	54	SharedKey					TP-LINK TECHN
htporpsubile 24:109:32:110:32:12 -71 -48 1 20 b, g 5.4 SharedKey 1.0 TP-LINK TECHN ropical Inn 1 61:17:01:21:51:51:51:71 -71 -61 1 20 b, g 5.4 SharedKey 1.0 TP-LINK TECHN ROINN CC:B3:55:47:35:71 -71 -61 1 20 b, g 5.4 SharedKey 1.0 TP-LINK TECHN MS2333 20:AB1:25:BA1:AC:A9 -67 -71 3 6 20 b, g 5.4 SharedKey SharedKey SharethKey MS2333 20:AB1:25:BA1:AC:A9 -67 -71 3 6 20 b, g 5.4 PSK-TKIP SharethKey SharethKey htpons 24:09:A1:10:15E -01 1 0 b, g 5.4 SharedKey SharethKey SharethKey htpons 24:09:A1:10:15E -01 1 20 b, g 5.4 SharetKey PSK-TKIP SharethKey Hidden 00:19:38:92:00:20 -76 3 3+7 40 b, g 30 PSK-TKIP/CCMP PSK-TKIP/CCMP VPA ************************************	[Hidden]	00:22:75:25:47:97	-84 .	16	6	20	b, g, n	144.4		PSK-TKIP		1.0		Belkin Internatio
Image: Implication 11 64:170:02:38:2E:14F -91 all 6 11 20 b, g 54 SharedKey 1.0 TP-LINK TECHN ROINN CC:38:55:47:35:71 -77 all 36 1 20 b, g 54 SharedKey 1.0 TP-LINK TECHN MSQ333 21:38:25:48:1AC:1A8 -77 all 36 1 20 b, g 54 SharedKey SharedKey <td>hhonors-public</td> <td>24:C9:A1:1D:32:18</td> <td>-71 -11</td> <td>48</td> <td>1</td> <td>20</td> <td>b, g, n</td> <td>216.7</td> <td>Open</td> <td></td> <td></td> <td></td> <td></td> <td>Ruckus Wireless</td>	hhonors-public	24:C9:A1:1D:32:18	-71 -11	48	1	20	b, g, n	216.7	Open					Ruckus Wireless
ROINN CC:B3:55:47:35:71 -77 Ja 6 1 20 b, g 54 SharedKey MMS2333 2C:A3:25:B3:AC:A9 -87 -87 -1 6 20 b, g 54 SharedKey SharedKey MMS2333 2C:A3:25:B3:AC:A9 -87 -87 -1 6 20 b, g 54 SharedKey SharedKey SharedKey Mbca/B 94:15:B2:C2:11:C3 -79 -13 6 20 b, g 54 PSK-TKIP SharedKey SharedKey hthonors 24:C9:X1:D5:E3 -01 1 0 b, g 54 SharedKey FUNK TECHN Ruckus Wireless Hidden] 00:19:35:92:02:-76 -0 1 20 b, g 320 PSK-(TKIP CCMP) Willbox Delibers MY00 er.rcs:r1:n8:ss:r2 75 40 1 20 b, a 72 nf# APS Networks Requested Detailed info Connectivity	Tropical Inn 11	64:70:02:3B:EE:4F	-91 .dll	6	11	20	b, g	54	SharedKey			1.0		TP-LINK TECHNO
MMS2333 20:14b:251BA:AC:A9 -67_{cdl} 13 6 20 b, g 54 SharedKey SharedKey Sharehan Gong bloal8 91:FFB:32:C2:11:C3 -7, 9-dl 32 6 20 b, g 54 PSK-TKIP Sharehan Gong sharehan 24:C9:N1:E5:N1:E5:N1:E5 -61:dl 19 6 20 b, g, n 216:7 Open Ruckus Wireless ropical Inn 01 64:70:02:X1:ED:X55 -10_{cdl} 37.7 40 b, g, n 300 PSK-TKIP Wilbox Delibers Meden efficience 73.7 300 PSK-CTKIPICCMP) Wilbox Delibers Meden efficience 73.7 300 PSK-CTKIPICCMP) Wilbox Delibers Meden Network Quality 2.4GH2 APs Channels 5GH2 APs Channels Networks Requested Detailed info Connectivity	TROINN	CC:B3:55:47:3F:71	-77 at	36	1	20	b, g	54	SharedKey					
94:EF3:B2:C2:71:C3 -79.dl 32 6 20 b, g 54 PSK-TKIP Shenzhen Gong Ruckus Wireless shonors 24:C9:A1:5E:AD:E8 -81.dl 19 6 20 b, g 54 PSK-TKIP Ruckus Wireless phonors 24:C9:A1:5E:AD:E8 -81.dl 19 6 20 b, g 54 SharedKey Ruckus Wireless Hidden 06:19:3B:92:0E:20 -76.dl 38 3+7 40 b, g 54 SharedKey PSK-(TKIP]/CCMP) Wilbox Deliberz Hidden 00:19:3B:92:0E:20 -76.dl 38 3+7 40 b, g, n 300 PSK-(TKIP]/CCMP) Wilbox Deliberz Maps #Fr.FS.10B:S2:FS 75 d 10 1 20 b, g, n 300 PSK-(TKIP]/CCMP) Wilbox Deliberz Signal Strength Network Quality 2.4GHz APs Channels SGHz APs Channels Networks Requested Detailed info Connectivity	AMS2333	2C:AB:25:BA:AC:A9	-87 mil	13	6	20	b, g	54	SharedKey					Shenzhen Gong
Abenors 24:09:31:55:30:268 -8:1_rdl 19 6 20 b, g, n 216.7 Open Ruckus Wreless ropical inn 01 61:79:02:141:01:55 -10. uni 100 11 20 b, g, n 300 TP-UNK TECHNO view PSK-TKIPICCMP Views reserve -72.0 300 PSK-TKIPICCMP Views reserve view PSK-TKIPICCMP 10 1 20 b, g, n 300 PSK-TKIPICCMP Views reserve view PSK-TKIPICCMP 10 1 20 b, g, n 300 PSK-TKIPICCMP Views reserve view PSK-TKIPICCMP 10 1 20 b, g, n 300 PSK-TKIPICCMP Views reserve view PSK-TRIPIC CMP 1 10 b, g, n 70.2 10 <td< td=""><td>PibcaJB</td><td>94:FB:B2:C2:71:C3</td><td>-79 .11</td><td>32</td><td>6</td><td>20</td><td>b, g</td><td>54</td><td></td><td>PSK-TKIP</td><td></td><td></td><td></td><td>Shenzhen Gong</td></td<>	PibcaJB	94:FB:B2:C2:71:C3	-79 .11	32	6	20	b, g	54		PSK-TKIP				Shenzhen Gong
Index Index <th< td=""><td>hhonors</td><td>24:C9:A1:5E:AD:E8</td><td>-81 .ml</td><td>19</td><td>6</td><td>20</td><td>b. g. n</td><td>216.7</td><td>Open</td><td></td><td></td><td></td><td></td><td>Ruckus Wireless</td></th<>	hhonors	24:C9:A1:5E:AD:E8	-81 .ml	19	6	20	b. g. n	216.7	Open					Ruckus Wireless
Hidden] 00:19:39:92:07:20 -76 cill 38 3+7 40 b.g.n 300 PSK-(TKIP)(CMP) Wildow Delibera over ex.cs.r1.os.ss.r2 75 40 1 30 b.g.n 300 PSK-(TKIP)(CMP) Wildow Delibera biggnal Strength Network Quality 2.4GHz APs Channels 5GHz APs Channels Networks Requested Detailed info Connectivity	Tropical Inn 01	64:70:02:A1:D1:5E	-10	100	11	20	b, g	54	SharedKey					TP-LINK TECHN
Date PE-CE-F1 + DE-SE-FE 7E A 1 20 5 72.3 DEV.CCM.P 1.0 signal Strength Network Quality 2.4GHz APs Channels SGHz APs Channels Networks Requested Detailed info Connectivity	[Hidden]	00:19:3B:92:0E:20	-76	38	3+7	40	b, g, n	300			PSK-(TKIP CCMP)			Wilibox Delibera
Signal Strength Network Quality 2.4GHz APs Channels 5GHz APs Channels Networks Requested Detailed info Connectivity	0.000	85.CE.E1.08.38.E3	75.0	10	1	20	hinor	77.7			DEV. COMP	1.0		
	Signal Strength	Network Quality	2.	4GHz AF	Ps Channe	is i	5GHz APs Ch	annels 1	Networks Rec	quested E	letailed info	Cor	nectivity	
	/EAK													
IEAK	AD													

Please see following calculations :

- 1. Wireless Power at -87 dBm with SNR 13
- 2. Changes Power to -10 dBm with SNR 100

Difference = 77 dBm (50118 watt) with SNR 87

We have to come to realization that there is no home based or office based Wi-Fi device can transmit such huge power and then drop immediately.



- Cornet Measuremant at JB Tran Station to Singapore

Conclusion :

1. Wi-Fi at Amma Restaurant

Directed probe packets SSID=Wireless@SGX.

We can see SSID=AndroiAP as base station of transmission at Amma Restaurant and Barber Shop as well.

In the probability rule, highly impossible to have two same SSID as base stations at two different locations.

2. <u>We can see SSID=AndroidAP as Access Point</u>, everyhere in JB (Amma restaurant , near Barber Shop, inside JB train to Singapore), from KL-to-Singapore by bus and Medan - Indonesia.

What is the probability that we can see same SSID everywhere ? The probability is 0 which means not possible to occur. We can say for sure that there is transmission which send Wi-Fi Packets but in actual fact it is different signal and transmission using Satellite.

3. <u>We can see SSID = Lenovo A328,A850,A889 as Access Point</u> in JB and we can see same SSID=Lenovo A889 on 3/3/2015 (on the way from KL to Singapore by bus). This clearly send a message :

- The Wi-Fi packets does not come from Land Based device but from Satellite

- It is highly impossible to detect the SSID on the way from KL-to-Singapore by bus

4. <u>Wi-Fi power Difference = 77 dBm</u> (50118 watt) with SNR 87

We have to come to realization that there is no home based or office based Wi-Fi device can transmit such huge power and then drop immediately. When the power reach to -10 dBm, we should see the device in front of us but in our case we dont see the device. This is universal rule that everyone knows about this.

5. <u>Cornet measured at around = -36.2 dBm</u> using 2.4 GHz antenna. This indicate there is transmission that has power -36.2 dBm and for sure not coming from Wi-Fi device. This device produced radio sound which not classified as standard radio sound that available and not matched with Wi-Fi sound

Final Conclusion :

There is Radio Signal that interfered at 2.4 GHz and the source comes from Satellite. This signal is modulated at low frequency (30 - 100 Hz) and it delivers Wi-Fi packets from time to time with wrong order to make people believe it is Wi-Fi Packets.