

Interesting features

by Martin Krug



POWER Redundancy

3G MODEM

SPECIAL LOGIN

PROBLEM ON THE SITE

- There was a lighting storm and most of the sites broke down or are without power and some power supplies burned out
- Some new RouterBoards have redundant power options RB4xx RB7xx, RB9xx, RB2011x

You can see voltage

The screenshot shows the MikroTik WinBox interface. On the left, the 'System' menu item is highlighted with a red rectangle. A secondary menu is open, and the 'Health' option is highlighted with a red rectangle. On the right, the 'System Health' window is open, displaying various system metrics. The 'Voltage' field is highlighted with a red rectangle and shows a value of 23.3 V. Other visible metrics include Temperature at 37 C, Current at 210 mA, and Power Consumption at 4.8 W.

System Health
Fan Mode: auto
Use Fan: main
Active Fan:
Voltage: 23.3 V
Temperature: 37 C
Current: 210 mA
Power Consumption: 4.8 W

Redundant RB

- Router will use port with higher voltage
- When one power input will fail then RB will automatically use secondary input

Problem solution - 1

- I'm on MUM so it is looking that it is a Mission Impossible to connect SERIAL cable to brooken SWITCH and do it only with a Phone
- First I need internet connection – I will use USB dongle and RB756 – configuration trough WEB-FIG

Compatible USB dongle





WEB-FIG FULL config

9

-61 Orange 2 12.3 - 0:09 - 59MB 78 %

MikroTik - Quick Set at admin@192.168.88.1 - ...

192.168.88.1/webfig/ Vyhl'adat'

Quick Set WebFig v6.0rc1.2 AP Quick Set

Wireless

Wireless Protocol: 802.11 n/streme Mode: Router Bridge

SSID: MikroTik

Frequency: 2412 MHz

Band: 2GHz-B/G/N

Channel Width: 20/40MHz HT Above

Country: no_country_set

MAC Address: D4:CA:6D:68:8D:7F

Use Access List(ACL):

Security: WPA WPA2

Configuration

Address Acquisition: Static DHCP PPPOE

WLAN IP Address: 0.0.0.0/0 DHCP Release DHCP Renew

Gateway: 0.0.0.0

MAC Address: D4:CA:6D:68:8D:7A

LAN/WLAN

LAN IP Address: 192.168.88.1/24

DHCP Server

NAT: ☒

Wireless Clients

MAC Address	In ACL	Last IP	Uptime	Signal Strength
0C:77:1A:DF:9E:18	yes		00:00:04	-44

Router Identity: MikroTik

Password:

Confirm Password:

Apply Configuration

Reset Configuration

Signal Strength cur: avg: max:

Remove From ACL

Copy To ACL

-61 Orange -31 12.3 - 0:16 - 60MB

New Terminal

IPv6

MetaROUTER

Partition

Make Supout.tif

Undo

Redo

Hide Menu

Hide Passwords

Safe Mode

Design Skin

Manual

WinBox

Graphs

End-User License

Logout

Use Access List(ACL)

Security: WPA WPA2

Wireless Clients

MAC Address	In ACL	Last IP	Uptime	Signal Strength
0C:77:1A:DF:9E:18	yes		00:00:04	-44

Signal Strength

cur: -44 dB avg: -43 dB max: -39 dB

Remove From ACL

Copy To ACL

USB dongle

The screenshot displays the Mikrotik WinBox interface configuration for a PPP Client. The main window is titled "Interface <ppp-out1>" and shows the "General" tab. The configuration fields are as follows:

- Name: ppp-out1
- Type: PPP Client
- Port: usb1
- APN: internet
- PIN: (empty)

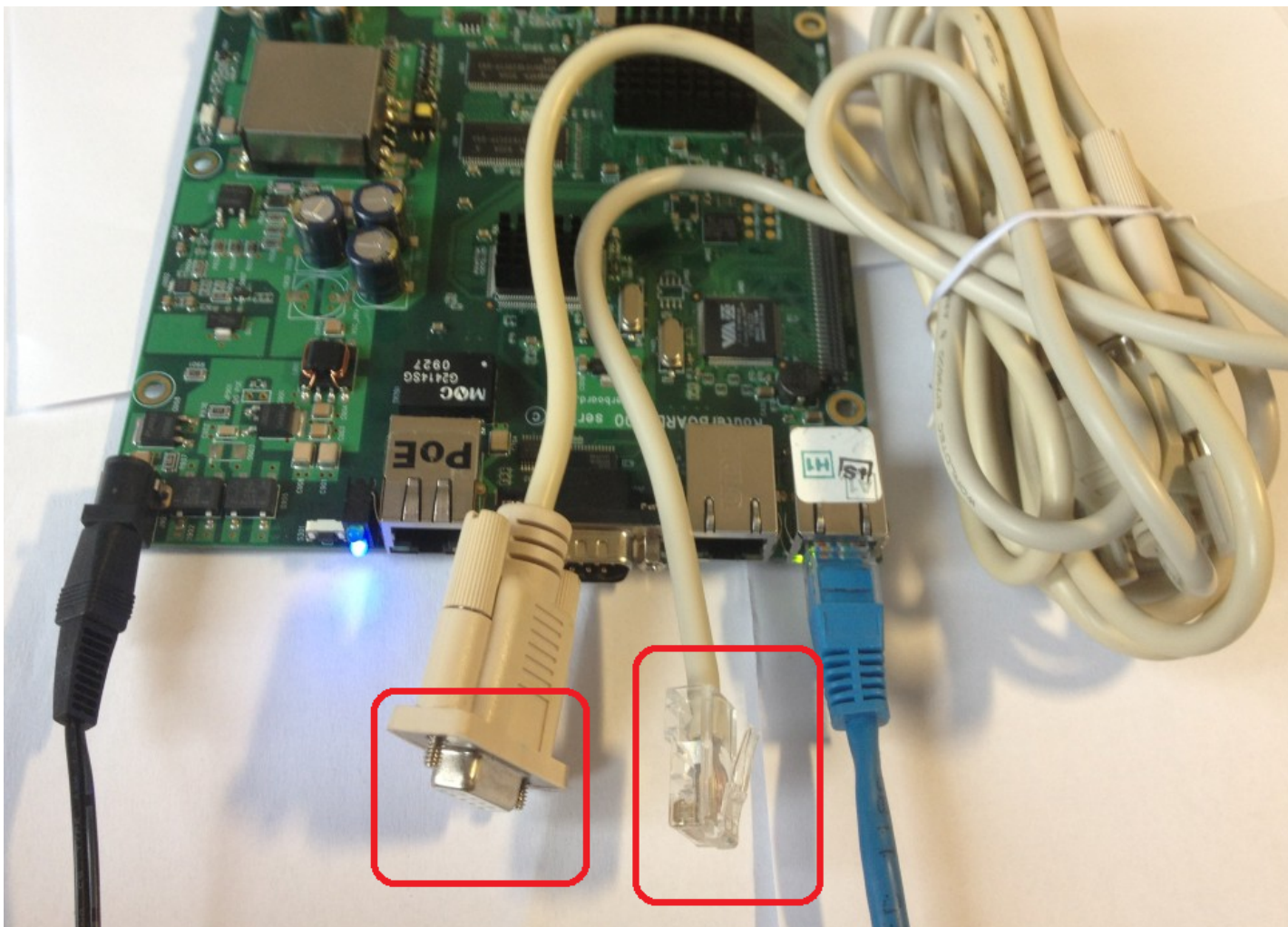
A "USB" selection window is open, showing a list of USB devices. The selected device is "HUAWEI Technol..." with Device ID "1:7" and Vendor "HUAWEI Technol...".

The "Console" window at the bottom shows the interface status: "enabled", "running", "slave", and "Status: waiting for packets...".

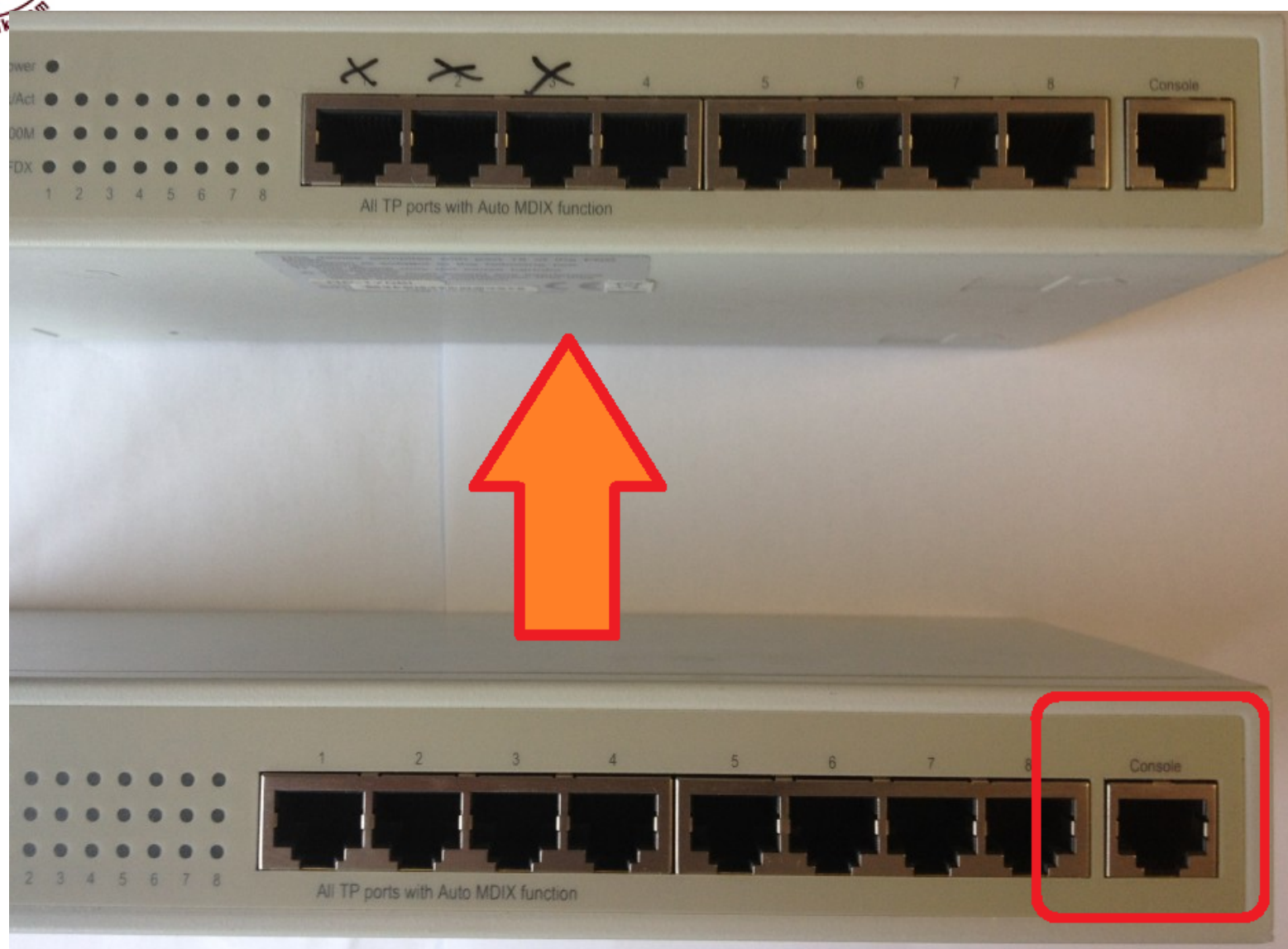
Problem solution - 2

- On far side we have backup line connected to RB with a serial port connected through null-modem cable to a MAIN-Switch

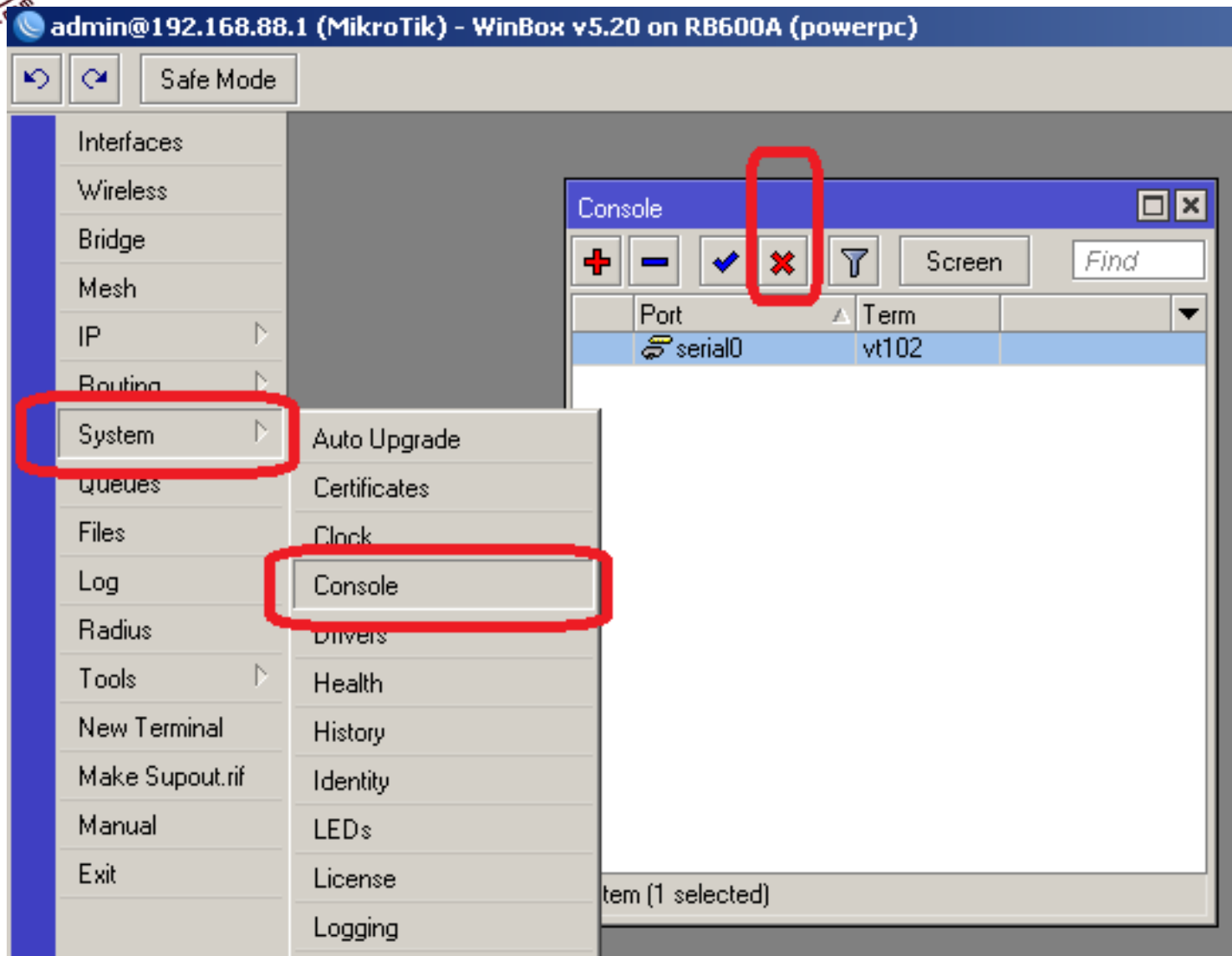
RB with serial and cable



Burned Ports on the switch



SERIAL port config



SPECIAL Login config

The screenshot shows the MikroTik WinBox interface with the following elements highlighted by red boxes:

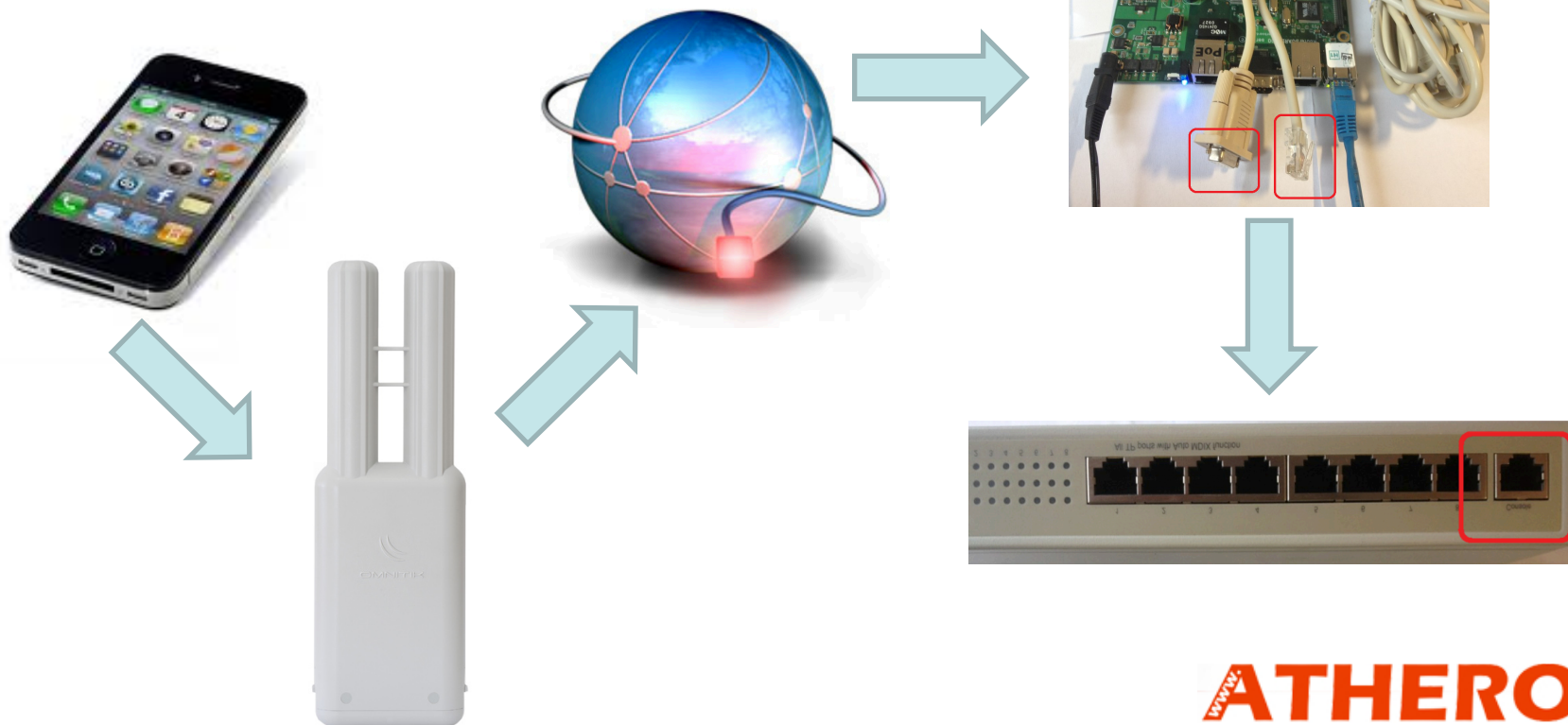
- System Menu:** The 'System' menu item in the left sidebar is highlighted.
- User List:** The 'User List' window is open, showing a table with the following data:

Name	Group	Allowed Address
;;; system default user		
admin	Full	
serial	read	
- Special Login List:** The 'Special Login List' window is open, showing a table with the following data:

User	Port
serial	serial0
- Special Login Button:** The 'Special Login' button in the bottom left of the main window is highlighted.

Serial login trough telnet

- I will use phone and integrated telnet to configure remote switch trough Internet





```
[admin@MikroTik] > system
[admin@MikroTik] /system> serial-terminal
port: serial0
```

[Ctrl-A is the prefix key]

[Q - quit connection] [B - send break]
 [A - send Ctrl-A prefix] [R - autoconfigure rate]

```
trying rate 19200
timeout trying rate
```

```
trying rate 38400
rate detected
Username:mato
Password:
```

```
8-Port Switch>show port
```

```
[Port Configuration]
```

Port Name	Status	Disable	Auto.	Speed	Duplex	Flow Control
1 WAN	DOWN	NO	ON	10	Half	OFF
2 10/100M base-T	DOWN	NO	ON	10	Half	OFF

.....



RB750UP and OmniTIK UPA-5HnD PoE injector

RB750UP monitor

- To power other devices with PoE (non 802.3af) max 30V and 500mA per port – using the same PSU (from RouterOS v5.20)

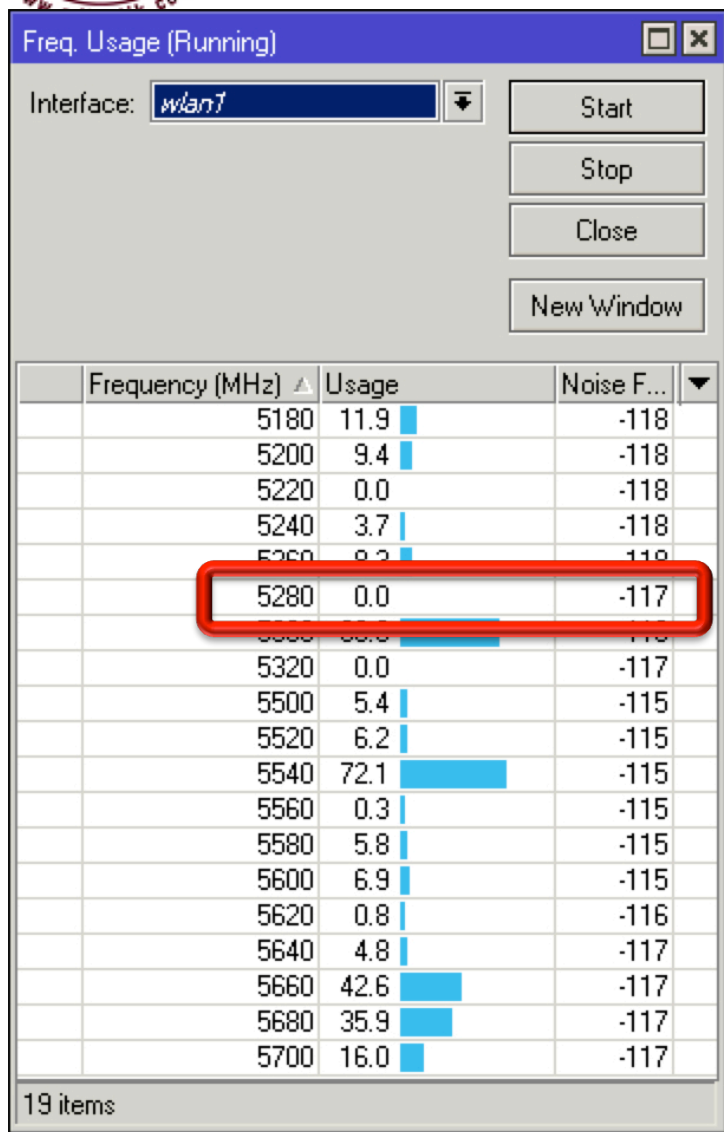
```
[Mikrotik RB750UP-1G] > /interface ethernet poe monitor ether5
name: ether5
poe-out-voltage: 23.4V
poe-out-current: 128mA
poe-out-power: 2.9W
- [Q quit|D dump|C-z pause]
```

RB750 PoE out

The screenshot shows the MikroTik WinBox interface. On the left is a sidebar menu with options: Interfaces, Bridge, PPP, Switch, Mesh, IP, IPv6, MPLS, Routing, System, Queues, Files, Log, Radius, Tools, New Terminal, MetaROUTER, Make Supout.rif, Manual, and Exit. The 'Interfaces' menu is expanded, showing a list of interfaces: ether1, ether2, ether3, ether4, and ether5. The 'ether5' interface is selected. The main window displays the configuration for 'Interface <ether5>'. The 'PoE' tab is active, showing the following settings: PoE Out: forced on, PoE Priority: 10, and PoE Out Current: 208 mA. On the right side of the configuration window, there are several buttons: OK, Cancel, Apply, Disable, Comment, Torch, Blink, Reset MAC Address, and Reset Counters.

Wireless debugging TOOLS

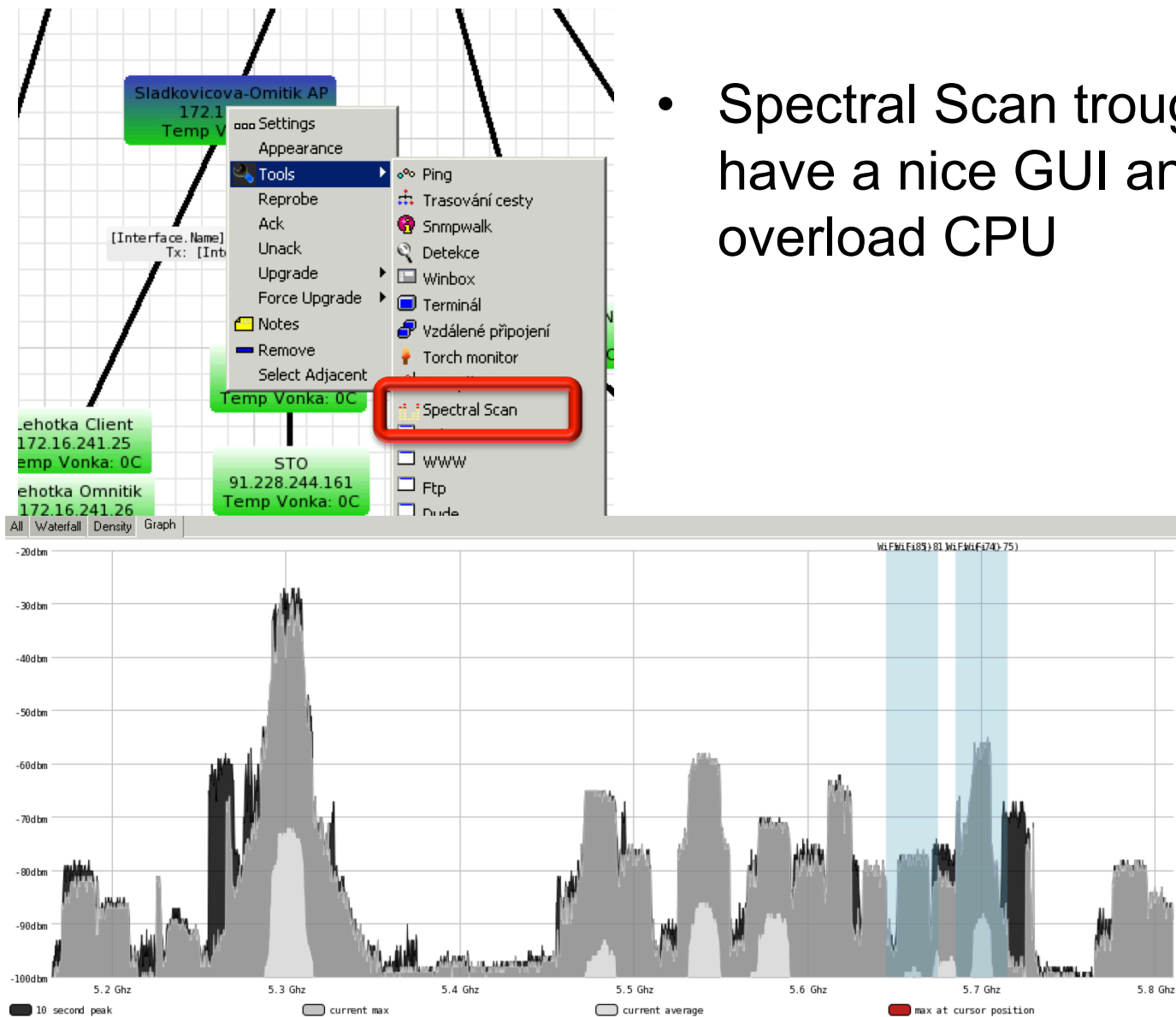
Problem with a link



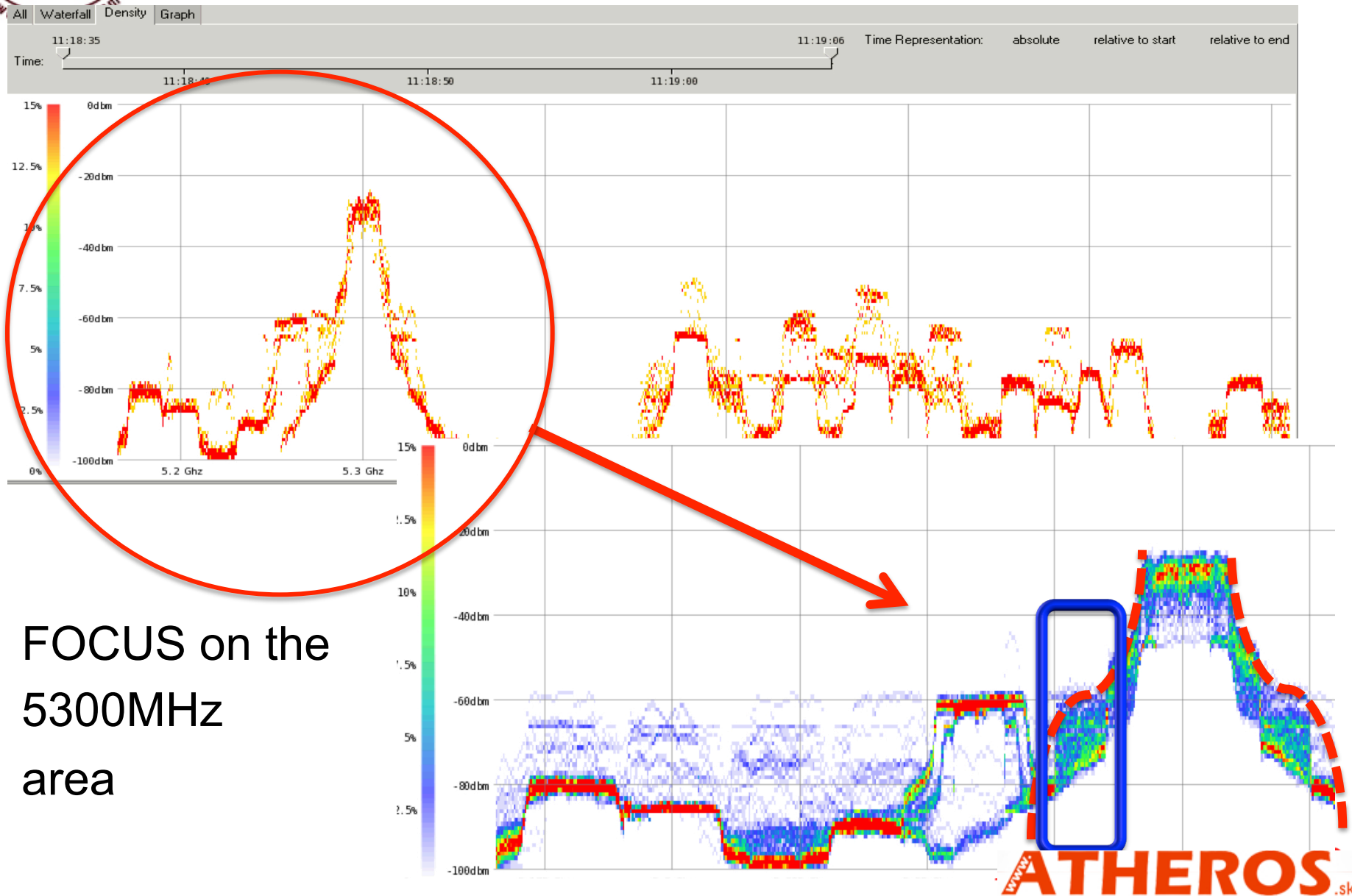
- I do have a problems with link failing transmit data
- The link is in the 5280HMz
- On first look with a standard Frequency Scan there is a free chanel
- Why is our link keeping failing ?

Dude – spectral scan

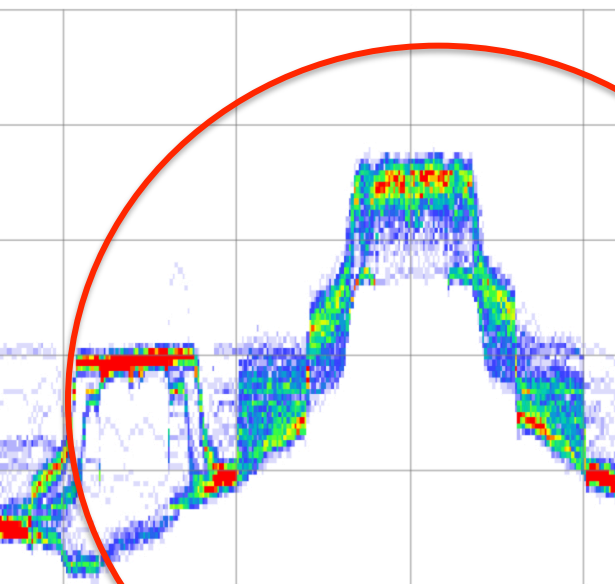
- Spectral Scan through the Dude has a nice GUI and will not overload CPU



spectral scan focus



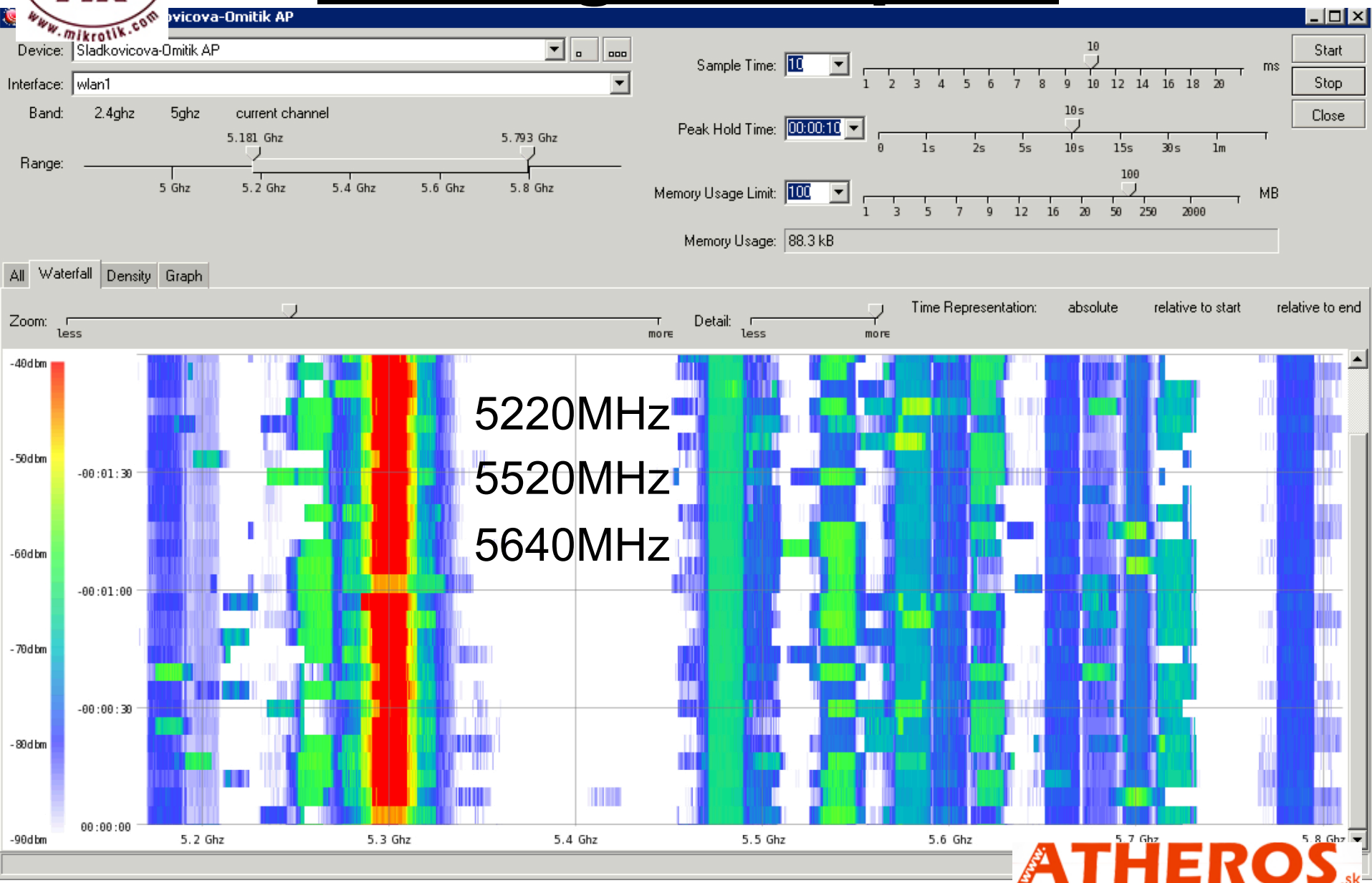
spectral scan focus



High Throughput
in the 5300MHz

		5300		00:0C:42:6B:90:83		-43	58.8		89.2	28.1 Mbps		
		5300		00:0C:42:6B:90:6A		-72	4.1		6.2	147.0 kbps		
		5300		00:0C:42:CD:3F:95		-54	0.0		0.0	0 bps		
		5300		00:0C:42:C2:2A:65		-54	0.0		0.0	0 bps		
		5300	5GHz-N				65.8			28.3 Mbps	1	5
		5300	5GHz-N	00:15:6D:A0:B6:95	Podvrsky		1.3		2.0	72.3 kbps		1
N		5300		00:15:6D:A0:B6:95	Podvrsky	-80	1.3		2.0	72.3 kbps		

Finding free space



Others gadgets

SMB server

File Sharing in the House

SMB Settings

☒ Enabled

Domain: MSHOME

Comment: MikrotikSMB

☒ Allow Guests

Interfaces: all

OK Cancel Apply Shares Users

Shares

Name	Directory	Max Sessions
;; default share		
* pub	/pub	10
windows	/usb	10

2 items (1 selected)

SMB Share <windows>

Name: windows

Directory: /usb

Max Sessions: 10

OK Cancel Apply Disable Comment Copy Remove

enabled

Users

Name	Password	Read Only
* guest		yes
martin	test	no

SMB User <martin>

Name: martin

Password: test

☐ Read Only

OK Cancel Apply Disable Copy Remove

enabled

Easy to setup
Home sharing
with USB HDD



I hope You did found that nugget in this presentation.