Wireless Mesh Network with Small and Low Cost Devices

The goal of this project is to implement a wireless mesh network that provides connectivity and multimedia services in a geographic area such as a small campus.

- TP-Link MR3020 wireless router.
- USB WLAN adapter based on the Ralink RT5370 chipset.
- Raspberry Pi Model B.

http://downloads.openwrt.org/attitude_adjustment/12.09/ar71xx/generic/openwrt-ar71xx-generic-tl-mr3020-v1-squashfs-factory.bin opkg update opkg install kmod-rt2800-lib kmod-rt2800-usb kmod-rt2x00-lib kmod-rt2x00-usb

root@OpenWrt:/# wifi detect config wifi-device radio2

```
	option type     mac80211
	option channel  11
	option macaddr  00:e0:4c:81:88:8a
	option hwmode   11ng
	option htmode   HT20
	list ht_capab   GF
	list ht_capab   SHORT-GI-20
	list ht_capab   SHORT-GI-40
	list ht_capab   RX-STBC1
	# REMOVE THIS LINE TO ENABLE WIFI:
	option disabled 1
```

config wifi-iface

```
	option device   radio2
	option network  lan
	option mode     ap
	option ssid     OpenWrt
	option encryption none
```

wifi detect > /etc/config/wireless root@OpenWrt:/# vi /etc/config/wireless

config wifi-device radio0

```
	option type     mac80211
	option channel  11
	option macaddr  f8:d1:11:bd:62:ce
	option hwmode   11ng
	option htmode   HT20
	list ht_capab   SHORT-GI-20
	list ht_capab   SHORT-GI-40
	list ht_capab   RX-STBC1
```

```
	list ht_capab	DSSS_CCK-40
```

config wifi-iface

```
	option device	radio0
	option network	lan
	option mode	ap
	option ssid	OpenWrt1
	option encryption none
```

config wifi-device radio1

```
	option type	mac80211
	option channel	11
	option macaddr	00:e0:4c:81:88:8a
	option hwmode	11ng
	option htmode	HT20
	list ht_capab	GF
	list ht_capab	SHORT-GI-20
	list ht_capab	SHORT-GI-40
	list ht_capab	RX-STBC1
```

config wifi-iface

```
	option device	radio1
	option network	lan
	option mode	ap
	option ssid	OpenWrt2
	option encryption none
```

root@OpenWrt:/# wifi up Configuration file: /var/run/hostapd-phy0.conf Using interface wlan0 with hwaddr f8:d1:11:bd:62:ce and ssid “OpenWrt1” Configuration file: /var/run/hostapd-phy1.conf Using interface wlan1 with hwaddr 00:e0:4c:81:88:8a and ssid “OpenWrt2”

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