Quick Start Guide for starting Soft-AP mode

(A) How to start Soft-AP mode:

(1) disable network management or other wireless tools, e.g. wpa_supplicant

(2) uncompress the driver and then compile the driver

./make

(3) **insmod 8192cu.ko**

(4) **ifconfig wlan0 up**

(5) **ifconfig wlan0 192.168.0.1** (using the static ip for testing)

(6) compile HOSTAP, unpack wpa_supplicant_hostapd-0.8_rtw_20120803.zip
in the folder (wpa_supplicant_hostapd-0.8\hostapd)

./make

(7) start hostapd daemon:

./hostapd rtl_hostapd.conf -B

(B) Configure file for Soft-AP mode setting:

(1) rtl_hostapd.conf is the configure file for functions setting.

(2) the major variable setting in the rtl_hostapd.conf configure file,

(i) basic configuration

interface=wlan0

ssid=rtwap

# channel 1-14 is 2.4 GHz ; channel 36, 40, 44, 46, 48, 52, 56, 60,
# 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149,
# 153, 157, 161 is 5GHz
# The channels that are available for use in a particular country differ
# according to the regulations of that country.
channel=6

# Operation mode (a = IEEE 802.11a, b = IEEE 802.11b, g = IEEE
# 802.11g, Default: IEEE 802.11b)
hw_mode=g

#If the wireless interface is included in a bridge,
#an additional configuration parameter, bridge, is needed
bridge=br0

(ii) security mode configuration

```
# This field is a bit field that can be used to enable WPA
# (IEEE 802.11i/D3.0)
# and/or WPA2 (full IEEE 802.11i/RSN):
# bit1 = IEEE 802.11i/RSN (WPA2) (dot11RSNAEnabled)
wpa=2

# wpa_passphrase=secret passphrase
wpa_passphrase=87654321

# Set of accepted key management algorithms
# (WPA-PSK, WPA-EAP, or both).
wpa_key_mgmt=WPA-PSK

# Set of accepted cipher suites (encryption algorithms)
# for pairwise keys
wpa_pairwise=CCMP
```

(iii) IEEE 802.11n related configuration

```
# ieee80211n: Whether IEEE 802.11n (HT) is enabled
# 0 = disabled (default)
# 1 = enabled
ieee80211n=1
# ht_capab: HT capabilities (list of flags)
# Supported channel width set: [HT40-] = both 20 MHz and 40 MHz
# with secondary channel below the primary channel;
# [HT40+] = both 20 MHz and 40 MHz with secondary channel upon
# the primary channel
# Note:There are limits on which channels can be used with HT40- and
# HT40+.Following table shows the channels that may be available for
# HT40- and HT40+ use per IEEE 802.11n Annex J:
# freq              HT40-              HT40+
# 2.4 GHz           5-13               1-7 (1-9 in Europe/Japan)
# 5 GHz             40,48,56,64        36,44,52,60
# Short GI for 20 MHz: [SHORT-GI-20] (disabled if not set)
# Short GI for 40 MHz: [SHORT-GI-40] (disabled if not set)
ht_capab=[SHORT-GI-20][SHORT-GI-40][HT40]
```

(iv) Check the station connected to softap using hostapd_cli:

./hostapd_cli all_sta

(v) How to start WPS process as internal registrar?

1. for PIN code = 12345670

./hostapd_cli wps_pin any 12345670

2. for PBC

./hostapd_cli wps_pbc

(C) How to get the best channel?

1. Assume the WLAN interface is wlan0 and the IC is RTL8192DU-VS:

ifconfig wlan0 up

iwlist wlan0 scan

cat /proc/net/rtl819xD/wlan0/best_channel

Notes: If your WLAN interface is not wlan0, please change it to your used interface. (ex: wlan51)

If your driver IC is not RTL8192DU-VS, please change the rtl819xD to your used IC. (ex: rtl819xC, rtl8188eu …etc)