Sabre Lite board documentation

Distro & Drivers:
- Running **Debian 7 wheezy** (source: https://github.com/boundarydevices/linux-imx6)
- Kernel **3.0.35**
- WiFi drivers: **RTL8192cu** compiled from source for this kernel (warning: changing the kernel will need a new driver compile). The Realtek documentation explains in detail each step that has to be done (and is very easy after getting the right kernel headers) rtl8188C_8192C_usb_linux_v4.0.2_9000.20130911 used
- Kernel & WiFi driver sources (and ready build module 8192cu.ko) are stored in /usr/src
- SSH as usual on port 22

Credentials:
Login: root/root and board/board
AP Authentication: Piston/takemehome

For connecting to a WiFi network (not in AP mode):
- using *wpa_supplicant*
- provide configuration file "wpa_supplicant.conf" as follows:

```
network={
        ssid="YourSSIDNetworkNameHere"
        psk="YourNetworkPasswordHere"
        }
```

- start *wpa_supplicant* by issuing the next two commands (could be bundled in a script):

```
wpa_supplicant -B -iwlan0 -c ./wpa_supplicant.conf -Dwext
dhclient wlan0
```

- logging with the root user to the board, the "wifi_config" folder contains the set up for the connection

For WiFi Access Point:
a) Wireless Accesspoint and Authentication Server
- using *hostadp* for configuring the connection
- *hostadp* has to be compiled for this kernel (stock version not ready for the rtl8192 driver). The sources are included within the Realtek driver archive. Infos on how to compile are in the "Wireless_tools_porting_guide.pdf" from the driver documentation. The documentation contains also an example configuration file.
- *hostadp* config file is stored under /etc/hostadp/hostadp.conf

b) DHCP Server
- using dnsmasq as DHCP server. Configuration file to be found under /etc/dnsmasq.conf (adjust settings at the end of the file). A very good tutorial is here (skipping the "Check WiFi Support Card" section)
- Settings (/etc/dnsmasq.conf):
    - DHCP range set to 11.0.0.3 - 11.0.0.20 with a 12h lease time (there are many open IP addresses used while testing. The number can be reduced to 1 to limit the connected devices)
    - Board has IP 11.0.0.1
- in order for the DHCP to work properly you first have to set the IP address for the on board wlan0 (ifconfig wlan0 11.0.0.1 netmask 255.255.255.0)

- The AP is automatically loaded during boot by the /etc/init.d/ap_init script (here is a good tutorial on how to do this kind of stuff)