Wireless Troubleshooting

Sebastian Büttrich, NSRC/ITU/wire.less.dk

edit: xxxx 2010

What is different from wired?

- Interfaces/Users not coupled to physical location
- Connections can be more than just

  0 (down) or 1 (up) … they can be …

  … a little bit up :)
- In general, the physical layer matters more …

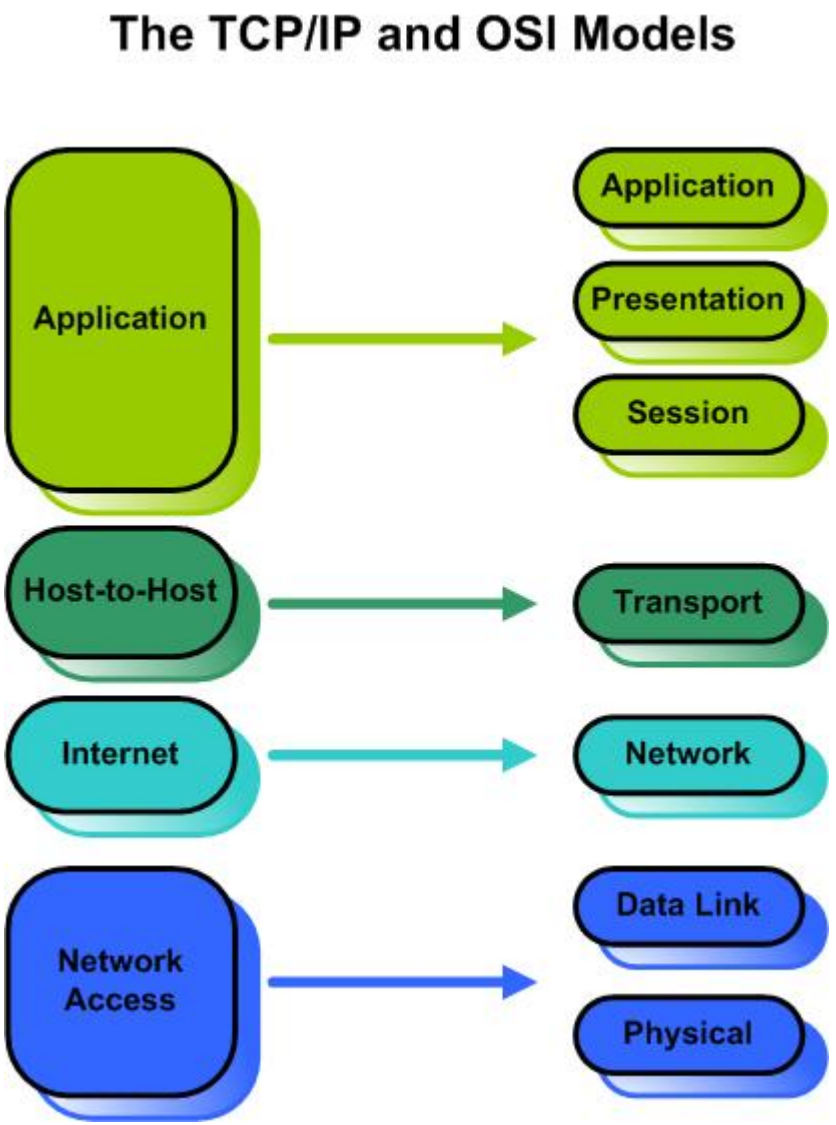
  … weather, traffic

The most important principle

- **Always think in layers**
- **Not so important what layer model you use (OSI 7 layer, TCP/IP 4 layer, 5 layers)**
- **Just be aware where you are**

The most important principle

- **Always think in layers**



You may start with ping, but …

- **Ping will not tell you about the radio signal - ping is layer ….. ,**

  radio signal is layer ….
- **You may see a radio signal, but you still cannot associate with access point – because …. (?)**
- **Ping might work, but you still can not reach a URL – why? …..**

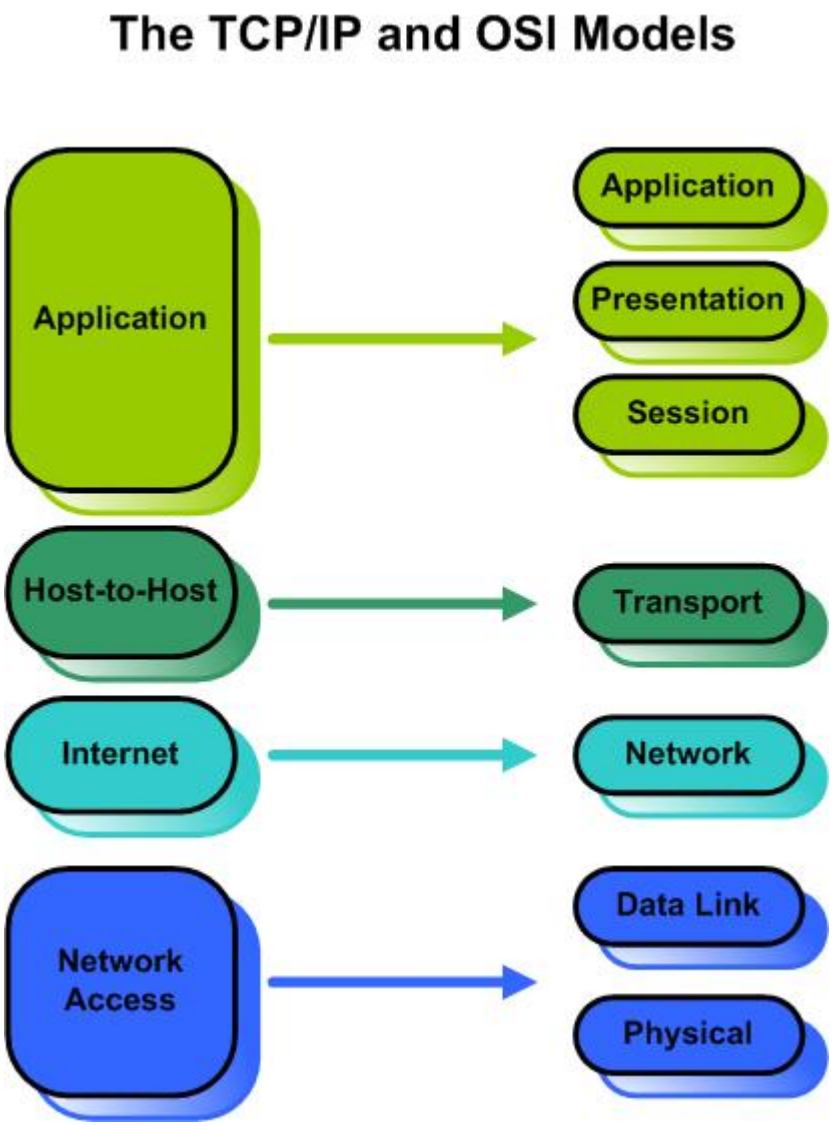
Some must-have tools

- **ping, traceroute, route, ip, ifconfig .... etc**
- **iwconfig**
- **mtr**
- **ipcalc, sipcalc, ipv6calc**
- **kismet, netstumbler**
- **AirView or WiSpy, spectools**
- **nmap, zenmap**
- **wireshark**
- **etherape**

What to use for what?

- **To check radio signal, use ....**
- **To check a certain 802.11 SSID, use ....**
- **To check an internet uplink, use ....**
- **To check if a mail server is up, use ....**

And I ll say it again :)



That was it ...

Thank you!

sebastian@less.dk
http://wire.less.dk

Sebastian Büttrich, wire.less.dk

edit: March 2010