ZigBee tools

- Z-Stack™: is TI's ZigBee compliant protocol stack for a growing portfolio of IEEE 802.15.4 products and platforms.
- IAR: is a development tools for testing and compiling Z-Stack based applications.
  - It incorporates IAR C/C++ Compiler for ARM Cortex-M3, assembler, linker, librarian, text editor, project manager, and debugger.
- SmartRF™ Studio: is a Windows application that can be used to evaluate and configure Low Power RF-ICs from Texas Instruments.
Practical part

- Zigbee boards:
  - Chipcon SmartRF04EB Evaluation Board with CC2430EM
Practical part
Practical part

- Zigbee boards:
  - Chipcon CC2430DB Development Board
Open example

- Open GenericApp example (Zstack & IRA tools) from example folder as shown below:
  
  - C:\texasInstrument\Zstack-1.4.2.1.1.0\project\Zstack\samples\GenericApp\CC2430DB\GenericApp
Practical part

- Choose Coordinator or End device based on your board type (ED, DB) and ZigBee role (ZC, ZR, ZED)
Practical part

- then
  - Project-> buildall
  - Project->Debug

( for configuration)

Reset zigBee kit from its switch.
- S300 for EB
- S2 for DB

- Repeat these steps to configure other devices
Practical part

- SmartRF tool
  - IEEE address 8 bytes (static)
1. Read
2. Change IEEE
3. Write
RF sniffing

Connected Device

SoC/Transceiver
Data Buffer

USB controller
Data Buffer

PC

Abstraction layer
8 kB buffer

Temporary
Disk file

Cache buffer
In RAM

Screen/GUI
RF sniffing
RF sniffing
RF sniffing

Figure 12: Packet sniffer screenshot from the IEEE802.15.4/ZigBee protocols
Any questions?