

Homework 8

Since some of you may not have Bluetooth enabled on your device or may have issues with importing the module to VirtualBox, the questions will be based on a pcap file.

While sniffing on the Bluetooth interface with Wireshark, the command `hcitool scan` was executed followed by `sdptool browse`. Devices were connected to the host computer and media was then transferred between connected devices. The results were saved in `homework_scan.pcap`. Use this file to answer the following questions.

Question 1 [0.5 pts]

A device with the class code 0x0a041c was discovered.

- a) What is its major device class?
- b) What is its minor device class?
- c) What are its major service classes?

Resource: <https://www.bluetooth.com/specifications/assigned-numbers/> (Assigned Numbers Document pdf – Section 2.8)

Question 2 [0.75 pts]

Several different devices were discovered during the scan.

- a) How many unique devices were discovered with the command `hcitool scan` (the first inquiry section starting at packet 22 – *Extended Inquiry Result*)?
- b) After the Inquiry process, the scanning device requested more information from the scanned devices. One of the devices supports encryption as a feature (as seen in the *Remote Host Supported Features Notification*). Which device, give the Bluetooth address, supports encryption?
- c) What is the service class UUID (e.g. 0x111f) for the service provided by the device with the name 'C1'?

Question 3 [1.75 pt]

Media was transferred from the host device over Bluetooth during the scan.

- a) What are the Bluetooth addresses of the devices that were connected to the computer?
- b) What were the PIN code values used to authenticate all the connections in the scan?
- c) What are the link keys for all the connections?
- d) What are the titles and artists of the songs that were sent over the Bluetooth connection?

Due Date: Check Moodle for date

Late Submission Deadline: Check Moodle for date (usually 1 week after due date)

Submission Files: a *file with the answers* to questions 1 to 3

Location: Moodle Homework8 link