Homework 14

***N.B.*** This is the answer sheet. The questions are in Homework14.pdf.

Question 1 **[1 pt]**

A device was discovered to have the IMEI number: 352030111704822.

1. Model: Samsung Galaxy A70
2. Network bands: 2G, 3G, 4G. Technologies: GSM / HSPA / LTE
3. GNSS: A-GPS, GLONASS, GALILEO, BDS
4. Wi-Fi Frequency Bands: 2.4 GHz and 5 GHz bands (Wi-Fi 802.11 a/b/g/n/ac, dual-band, WiFi Direct, hotspot)

Question 2 **[1 pt]**

The file simple\_scan\_hw14.pcap contains a capture of some GSM data on one downlink frequency. Answer the following questions based on this file.

1. ARFCN: 79
2. Tower 1 (*with ARFCN 978*):

fUL: 890+(0.2\*(978-1024)) = 880.8 MHz

fDL: 880.8 + 45 = 925.8 MHz

Tower 2 (*with ARFCN discovered in a)*):

fUL: 890+(0.2\*79) = 905.8 MHz

fDL: 905.8 + 45 = 950.8 MHz

Tower 1 Operator: Elisa Eesti

1. Tower 2 Operator: Telia Eesti
2. Tower 1:

LAC: 0x0029 (41) CID: 0xcc4d (52301)

Tower 2:

LAC: 0x0005 (5) CID: 0x1a1a (6682)

Question 3 **[1 pt]**

The file sim\_card\_scan.json contains the file system information for a SIM card. Answer the

following questions based on this file.

1. Subscriber ID: 248022189047146
2. Provider: Elisa
3. Number: +37258917840
4. Key: cda981530fbe78fa