

MODE 4201

Lab 1

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Mobile Development Topic: Mobile Networking

History of the Network

The first cellular network (1G) was launched in Tokyo, Japan in 1979 by Nippon Telegraph and Telephone. Within 5 years the network had expanded so that all of Japan had cellular coverage (Wikipedia, 2022). In 1983 a company named Ameritech brought 1G over to the United States and soon after Canada saw coverage as well (Galazzo, 2020). A prototype cellphone was first made in 1973 but the network did not exist to support it. In 1983 Motorola manufactured the first commercially available cellphone the DynaTAC (Galazzo, 2020).



Figure 1 - Motorola DynaTAC

The Mobile network has continued to make strides in performance over the years. Today we run on a 5G network but obviously there was other generations of the network over the decades. In 1991 the first 2G network was launched in Finland providing significant advancements in call quality and call encryption (Galazzo, 2020).

The first 3G network began in the same place mobile networks started, Japan 2001. 3G significantly increased data speeds as well as introduced emails as another standard form of communication available to mobile devices. 3G also saw the most significant change to cellular devices to date. During the lifespan of 3G popular new smartphones began to emerge by Blackberry and later in the life cycle Apple's iPhone which would go on to dominate the market (Galazzo, 2020).



Figure 2 - Apple iPhone

In 2009 Norway, we made the jump to 4G which is the standard offered by most services today. 4G gave access to high quality video streaming/chatting, online gaming, and significant increases in data transfer rates. The marketplaces for devices during this time massively shifted to near dominance by both Samsung and Apple smartphones (Galazzo, 2020). In March of 2019 South Korea introduced the first 5G network with speeds averaging 20 times faster than that of 4G. In Canada the average 5G speed is 205% faster than 4G (Galazzo, 2020).

The mobile network started out to solve the problem of communication while travelling but has grown massively today. In today's day and age society relies heavily on this network to stay connected and most businesses require it to run. It is hard to imagine what the world would look like today without the mobile network.

Mobile Manufacturer

My Device: Samsung Galaxy Note 10+



Figure 3 - My Phone

Specifications

Parts	My Device Specs
Manufacturer	Samsung
Price	999.99
Release Date	August 2019
OS	Android 9.0
Chipset	Qualcomm SM8150 Snapdragon
Processor	Octa-core (1x2.84 GHz Kryo 485 & 3x2.42 GHz Kryo 485 & 4x1.78 GHz Kryo 485)
Memory (RAM)	8GB
Storage	256 GB
Display	6.3" Screen Dynamic AMOLED, HDR10+
Camera (Front)	10 MP, f/2.2, 26mm (wide), 1/3", 1.22µm, Dual Pixel PDAF Video: 4K@30/60fps, 1080p@30fps
Camera (Rear)	Triple Lens: 12 MP, f/1.5-2.4, 27mm (wide), 1/2.55", 1.4µm, Dual Pixel PDAF, OIS 12 MP, f/2.1, 52mm (telephoto), 1/3.6", 1.0µm,

	PDAF, OIS, 2x optical zoom 16 MP, f/2.2, 12mm (ultrawide), 1/3.1", 1.0µm, Super Steady video Video: 4K@30/60fps, 1080p@30/60/240fps, 720p@960fps, HDR10+, stereo sound rec., gyro- EIS & OIS
GPS	Yes, with A-GPS, GLONASS, BDS, GALILEO
Battery	3500mAh
Network	GSM / CDMA / HSPA / EVDO / LTE
Synchronization	Yes
Voice Enabled	Google Assistant, Bixby
Browser	Yes, Various
S-Pen	For drawing, not taking and taking pictures
Bluetooth	5.0, A2DP, LE, aptX

Mobile Plans

My Mobile Plan

Provider	Bell Mobility
Plan	Unlimited Nationwide Talk, Text and Data
Calls	Unlimited Nationwide (Canada)
Data	10GB High Speed slows down after (unlimited)
Messaging	Unlimited Nationwide (Canada)
Global Texting	Fees Apply
Voicemail	Included + Custom Voicemail Recording
Call Features	Call Waiting, 3 Way Call
Fees	\$55/month
Usage Policy	Yes (Bell Mobility Terms and Conditions)

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