

Lab 1 Report

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Mobile Development – Mobile Phone History

In this day and age, everyone has a mobile phone and has had years using them and integrating it into their everyday life. However, a lot has changed since the first mobile phone was invented 50 years ago. This section of the report is going to go over the past, present and future of mobile devices to see how far we have come and where we could take our current mobile technology.

Past

In 1973, Martin Cooper, an executive at Motorola made the first ever mobile phone call using a device that was shaped like a brick and weighed roughly 2.4 pounds (figure 1). This phone call proved that phones did not have to be connected to wires to function, but this phone was no where near as powerful as our modern phones. Comparing battery alone, this phone only had 30 minutes of use time after 10 hours of charging but at this time, that was still ground-breaking. This phone, however, was still in development for another 10 years and didn't become commercially available until 1983. This phone retailed for roughly \$4,000 and was still just as large and heavy as the one Martin Cooper used, however in 1989 Motorola released a second



Figure 1 - Martin Cooper making the first ever mobile phone call

version of this device which was a flip phone that featured a significant reduction in size so it could fit inside a shirt pocket. At the start of the 2000's, Nokia brought their phones to the scene which featured robust rectangular shaped phones that could fit in the palm of your hand and was set to be more affordable to the consumers and allowed them to browse the web. At this point, mobile phone



Figure 2 - David Beckham promoting the Razr

manufacturers were in full swing with innovations to try and capture the market, in 2002, Sprint released a \$400 camera phone that allowed their customers to take 640x480px photographs. In 2004, Razr burst onto the scene with their slim and sleek designs, a color screen and it came in a few colors such as silver, pink, black, and blue which made mobile phones a fashion statement along with them being widely functional (figure 2). 2007 had one of the biggest innovations in the mobile phone industry when Apple released the first ever iPhone which featured touchscreen functions, internet access through Safari, a virtual keyboard, and full rich-text email access which were all new in terms

of mobile phone functions. One year after this release, Apple launched the App Store with 500 apps. Over 10 million applications were downloaded the first week which started the age of mobile applications and development. In 2010, the iPhone 4 made its debut. It was a slim, futuristic-looking phone with a battery life that could keep up with the demand of users everywhere. In just a year, they improved upon the iPhone 4, with the iPhone 4S adding the first personal assistant

Present

Today we have mobile phones that are made from the most durable and beautiful glass, designed for our everyday lives where we carry them around with us everywhere we go. It's water resistant and has wireless charging features so that we never have to go without a phone. Apple also released the iPhone X which had face recognition as one of its main features and selling points.

Future

Mobile phones have become an extension of ourselves and have changed our lives forever. 80% of the world's population has a cell phone and over a billion of these are smartphones. We look at our phones an average of 150 times a day, and some people become extremely anxious if they forget to bring their phone with them. The future can be hard to predict and the same goes for the future generation of mobile devices as technology develops and enhances. We could see some crazy advances in the future so here are a few things that we could potentially see for our mobile phones in the future. Smartphones could develop holographic displays which could render 3D images or videos that would float above the device and be viewed from any angle. Another possible feature for future mobile devices would be solar powered or other alternative power sourced devices that can naturally keep themselves charged without the use of a cable or charging dock which would also create the first completely port-less phone.

Mobile Manufacturer

Manufacturer	Apple
Model	iPhone 11 Pro
Picture	
Price	\$1,244.00
Release date	September 2019
Operating System	ios
Chipset	A13
Processor	A13 Bionic Chip
RAM	4GB
Internal Storage	256GB
External Storage	10GB iCloud (Ranges on if you want to pay for more)
Display	5.8-inch Super Retina XDR OLED display
Front Camera	12 megapixel
Rear Camera	Triple 12MP Ultra Wide, Wide and Telephoto cameras
GPS	Built-in GPS/GNSS, Cellular, Digital compass, iBeacon micro-location, Wi-Fi

Battery	3046mAh
Battery (Talk Time)	Up to 65 hours
Battery (standby)	Not measured anymore but 65+ hours
Network	<p>FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 29, 30, 66, 71)</p> <p>TD-LTE (Bands 34, 38, 39, 40, 41, 42, 46, 48)</p> <p>CDMA EV-DO Rev. A (800, 1900 MHz)</p> <p>UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)</p> <p>GSM/EDGE (850, 900, 1800, 1900 MHz)</p> <p>Gigabit-class LTE with 4x4 MIMO and LAA⁷</p> <p>802.11ax Wi-Fi 6 with 2x2 MIMO</p> <p>Bluetooth 5.0 wireless technology</p> <p>Ultra Wideband chip for spatial awareness¹⁷</p> <p>NFC with reader mode</p> <p>Express Cards with Power Reserve</p>
Synchronization with computer	Backups with iCloud
Voice Enabled	Yes (SIRI)
Browser	Safari (default), all other browser apps
Splash, Water, and Dust Resistant	Rated IP68 (maximum depth of 4 metres up to 30 minutes) under IEC standard 60529
Sensors	<p>Accelerometer</p> <p>Ambient light sensor</p> <p>Barometer</p> <p>Face ID</p> <p>Proximity sensor</p> <p>Three-axis gyro</p>

Service Provider

Service Provider	Rogers
Plan	Rogers Infinite Family Plan
Calls	Unlimited Canada wide
Data	Unlimited
Messaging	Unlimited Canada-wide send and receive text, pictures, and videos
Global Texting	no
Voice Mail	yes

Call Features	Call display and name display, 2500 call forwarding minutes, conference calling, call waiting
Service Credits	2 year phone upgrade plan
Fees	\$85/month + \$65/month/addition phone
Usage Policy	https://www.rogers.com/support/terms
Coverage	Canada wide

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