Crushing A Nokia

2022-2023 6th grade

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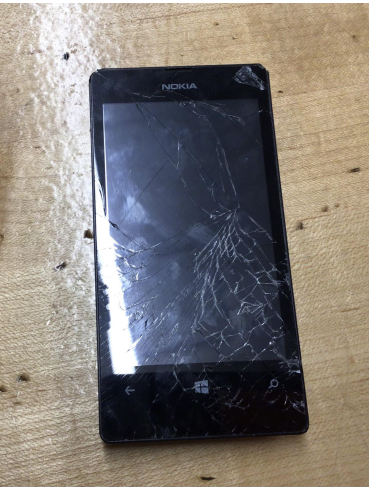
Introduction

The device we decided to pick was a Nokia Lumia 637. We picked this because it was easy to access and would be a slight challenge for us to disassemble. We didn't want to do anything too hard, but not anything too easy so this device is right in the middle. The Nokia is not too heavy so it's just perfect making it not impossible to break unlike their flip phones. This phone met our requirements and we decided to go with it.

Parts of the phone

4.5 inch screen (480 x 854 pixels)



The screen of the phone is used for consumers to interact with the phone by giving it touch demands. Another feature is that the screen has a touchscreen that works with the touchscreen controller to be able to react to touch commands.

Li-Ion 1830 mAh, removable battery (BL-5H)

This battery first came out in 2013 a year before this Nokia 638 came out. It contains energy to spread around the entire device and give it charge.

Parts of the phone

Back cover

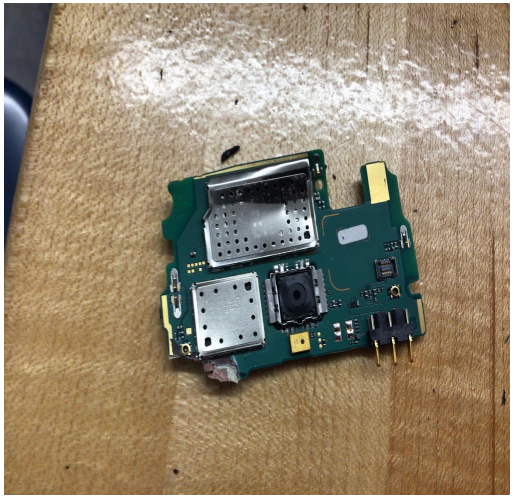
The back cover protects the whole phone from damage such as scratches. It may not seem that important but you may not know how many phones were saved with this back cover!

microSDXC Nokia Sim card

This new SIM card provides faster speeds for processing images and videos as well as the phone. This SIM card was released in 2014 with the Nokia to make the phone have faster speed for touch ability.

Parts of the phone

Half of the motherboard



(A piece of the motherboard broke off) The motherboard is the central circuit that connects all of the components and allows them to communicate with each other. Wires are soldered onto the motherboard so that all the individual components are connected to each other. With all of these different parts, the capability of the circuit board is expanded.

5 MP, 1/4.0", AF Panorama camera

As a team, we decided to deconstruct the Nokia Lumia 637. It would allow us to explore the inner workings of a smartphone, an essential to have in the modern world. When we opened up the phone, we found a multitude of components ranging from the motherboard to a storage chip.

Although we found many parts of different sizes, we observed that every part played a vital role in the semi-smooth functioning of the smartphone. However, the main components of the Nokia Lumia 637 are the motherboard, the battery, the screen, the touchscreen controller, and the storage chip. The motherboard connects most of the components, making it the foundation of the phone. The battery is the main power source of the device which then distributes energy to other components by power management systems. These components then amplify power throughout the phone. The screen is the output of the phone which is controlled by the touchscreen controller. The screen gives contact with the user to interact with every application available on the phone. The storage chip stores images, videos, apps, and other files on the device. Without a storage chip, it would be difficult to make good use of the device.

From the components that allow us to take pictures and call others, we uncovered parts that allow the system inside to function. Working as a team not only helped us learn about the world of technology and electronics, but also the importance of effective teamwork and collaboration skills. We will be able to apply the skills we gained while reverse engineering an electronic device in our lives.

Acknowledgments

Gsmarena.com

Techrepublic.com

Lesterchan.net

Amazon.com

Nokia.com

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