



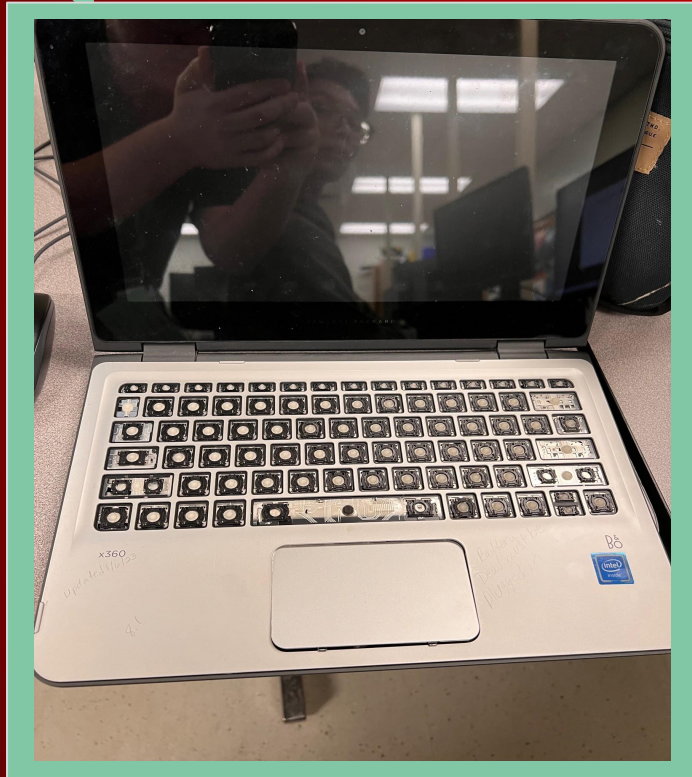
Team 18865A

**Reverse Engineering
Challenge**

Done by Vinh and Parker

Location: Slidell High, Louisiana

Item Being Examined



The item that our team has chosen to disassemble and study is a decommissioned HP x360 310 G2 laptop keyboard. Given its current state, it would prove to be the perfect article for our study, as the battery had died prior to our study.

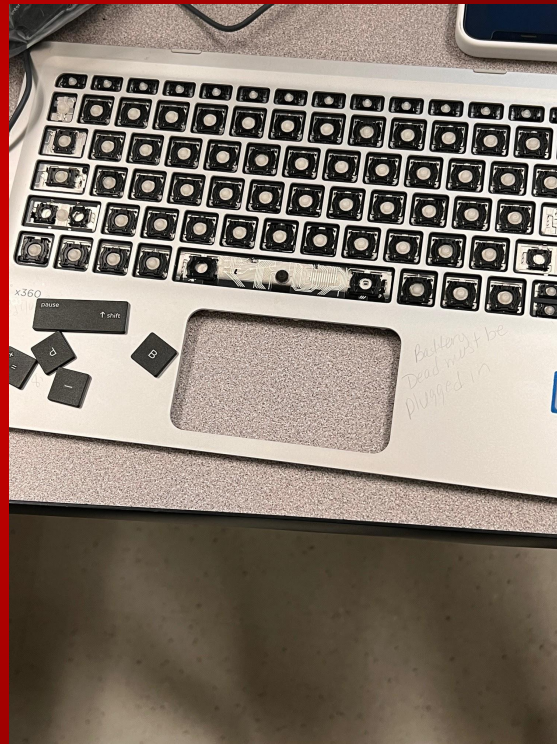
Process



First and foremost, in order to examine the underside of the keyboard itself, we had to remove it from the laptop. We accomplished this through pinpoint force, and precise leveraging, with the assistance of tools.

Item - Laptop Keycaps

After unclipping the keyboard from the laptop's main body, we meticulously removed every key cap with a flathead screwdriver and found more pieces underneath

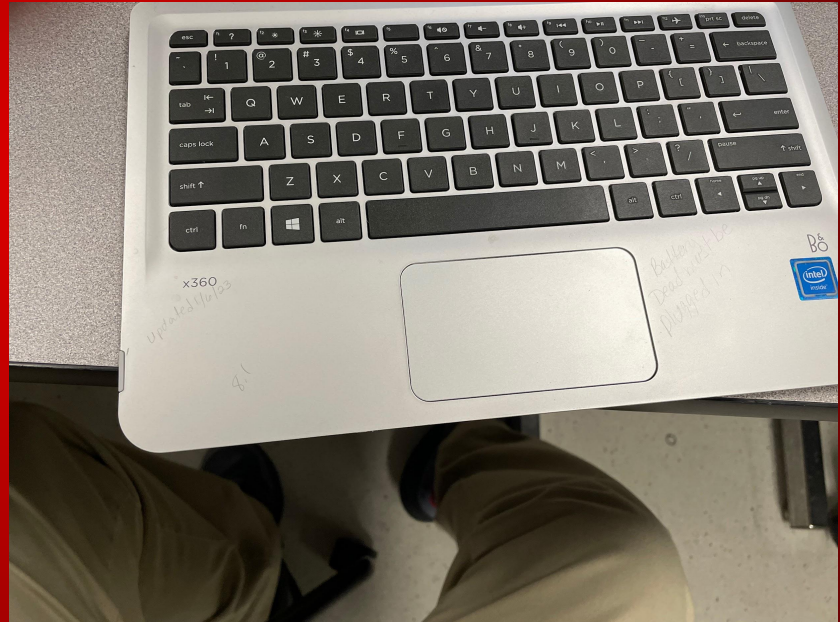




Item - Laptop Keycaps

- The keycaps, being commonly made of two different types of plastic, serve as a means to make keys more recognizable
- In order to fix the keycap to the keyboard, every keycap has a plastic hinge underneath them.
- In between the hinge, there are rubber cups that serve to restore the key to its original position after being hit, let you know the key has been hit, and helps the computer register the keys have been hit.
- Some keys have metal wire called stabilizers underneath them. These are present in order to help the keys register hits from anywhere across the keys.

Item - Laptop Keycaps

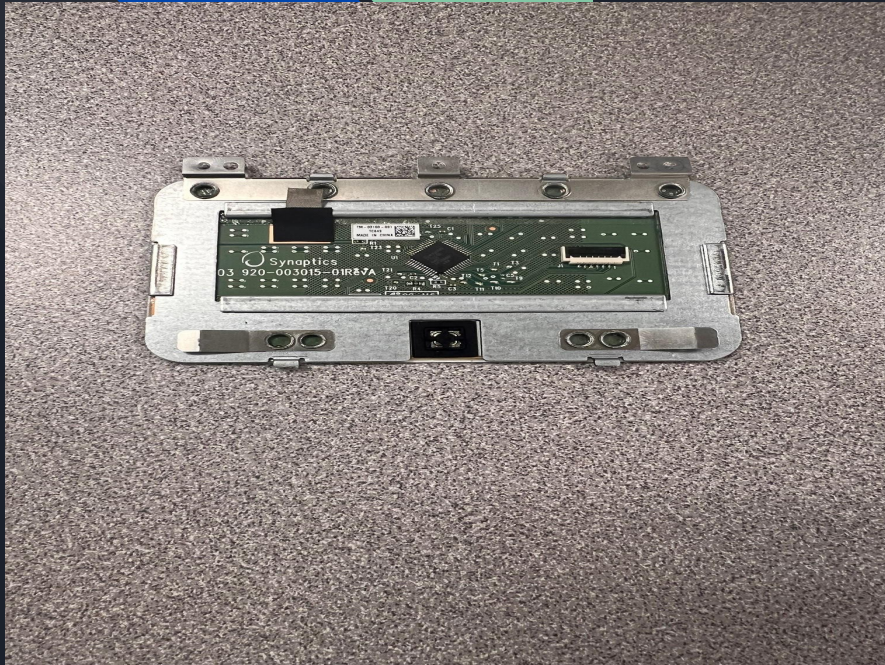


Item-Keyboard Touchpad

In order to remove the touchpad from the keyboard, we had to unscrew the touchpad from the keyboard using two different philips head screwdrivers.



Item-Keyboard Touchpad

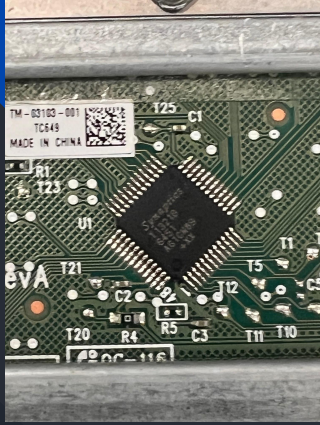


-resistive variety

-uses pressure to detect touch commands

-anti glare top cover

Item- Keyboard Touchpad



IC chip

Capacitor is used to determine whether it is a right or left click. IC chip, otherwise known as an integrated circuit chip, is used as an oscillator to generate and connect electric current.

Capacitor



Lessons Learned

- The inner-workings of older technology can still be as intricate and organized as modern day electronics.
- Screwdriver size is as essential as the type of head the screwdriver has.
- Technology that has grown obsolete and is no longer produced could have astronomical prices.
- Organization and time management are just as important as the study