

Reverse Engineering: Unbranded Wireless Mouse

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Team #: 76700A

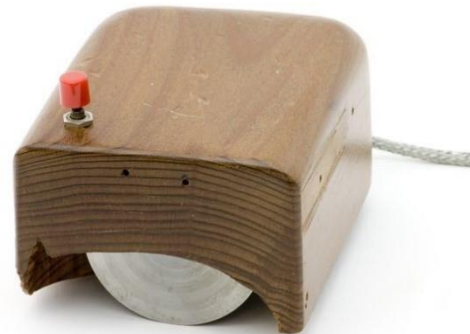
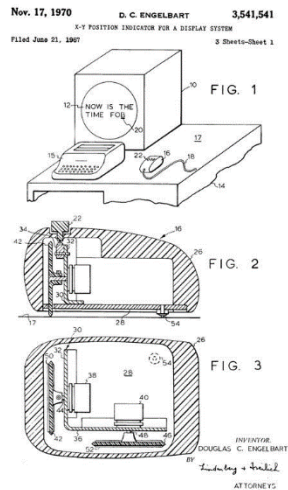
Location: Miami, FL

After choosing to participate in the Reverse Engineering challenge, we then chose a wireless mouse as our designated device. We chose a mouse because the device is quite used everywhere by anyone. It could be seen in numerous places such as offices, schools, and even at home. It is such a useful invention and the world would be vastly different without its presence. Our group wanted to know more about its origin and what exactly is on the inside that makes it function. To dissect the parts and gain the knowledge of each piece would be extremely helpful and a major insight into how electronics are made. Not only that, the journey of how it came to be is also interesting.

To begin, its creator, Doug Engelbart, conceived the idea of the invention in a lecture in 1961 and began sculpting several designs. In 1963, Doug used rolling wheels inspired by planimeters that were invented in the 1800s. Many inventors followed in his footsteps and made their own recreations around the 1960s. Additionally, the invention was named the mouse because of its resemblance to an animal mouse with its tail. In the picture below is Doug's patented mouse drawings and a replica of the prototype.

In conclusion, this project has enlightened our knowledge on the topic of engineering and deconstruction with a purpose. Our members all came closer together to tackle our responsibility and the product of our fruitions were perfect teamwork. Not

only that, we were required to communicate everything clearly and we had to adjust to one another to be successful.

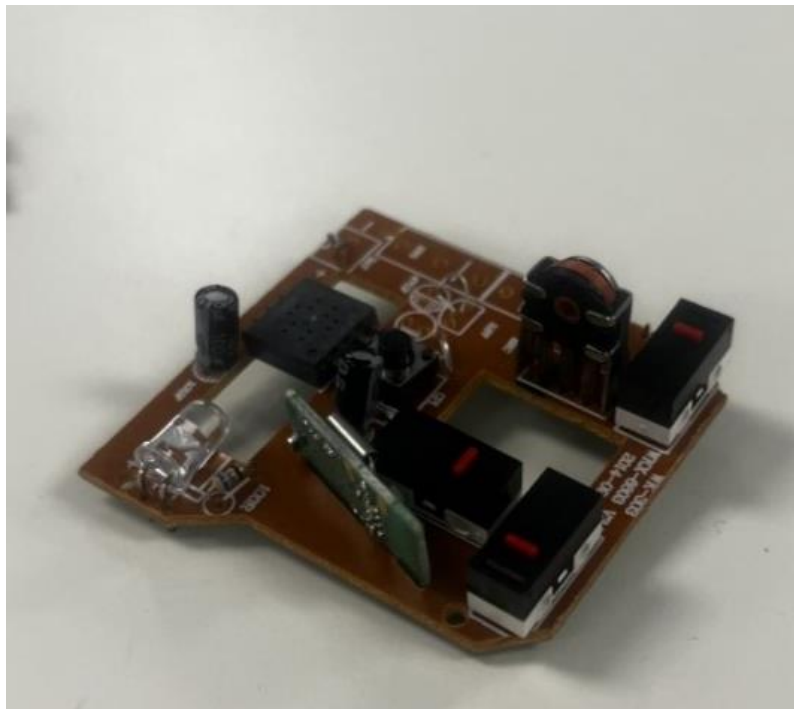


After taking apart this mouse there are several key components. We have found including the circuit board, the top shell, the USB connection, and the scroll wheel.

The purpose of the scroll wheel is that it will allow you to scroll up or down the screen depending which way you scroll it. If you press down on the wheel scroll, then it activates a mode when whichever way you move the mouse the screen will follow. So, if you move the mouse up then the screen will move up and vice versa. To turn it off you will do the same and just press the wheel scroll.



The purpose of the circuit board is that it allows signals and power to be routed between physical devices. It takes the movement from the physical mouse, and it sends it to your computer, and it will show the same movement on screen as an arrow or a finger.



Since this is a wireless mouse, it comes with a USB option. The purpose of the USB is that it simply transmits the signal from your mouse to your computer. A USB has a variety of uses stretching across multiple types of devices.



Clear light transmitter- the purpose of this light is what helps the mouse sense the surface it is moving on. This is the little light you see on the bottom of your mouse.



Top Shell Buttons: This is basically what adds all the components together. Not only does this cover all the magic that happens under it, but it is also the piece that allows you to click on things. The shell comes with 2 buttons that when pushed on touches a sensor and clicks on the screen.



Battery Cover- These little plastic covers where the batteries go. Since this is a wireless mouse, it requires batteries to work. Its main purpose is avoiding the batteries from falling out.

