

# COMPUTER HISTORY

## Birth of a Computer

Group Number 6

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### ABSTRACT

*Computers have changed the world. With information on any topic at the tip of our fingers, technology has boomed exponentially. We are in the Information Era.*

### 1. INTRODUCTION

The birth of the computer, is absolutely fascinating. The computer makes human calculation speeds absolute. Expediting the engineering process. Humans can now plan tenfold as fast. After World War II the arms/space race had begun. The race to get man in space, during this time we didn't have the luxury of computers but we are on the cusp. We had human computers who would calculate by hand. Absolute geniuses, brains of the century. After we got man into space is when we first started getting to the use of computers. The once brains of the century are no obsolete and out of jobs. That one phrase shows the ability of computers. Now computers are in everyone's home and everyone has little computers in their pockets. We are in the Information Era.

### 2. TIME PERIOD

As the demand for high amounts of computation rise, prototypes of machines that could make these automatically surface. However, science has always struggled without to make any significant progress without money, but one avenue that as consistently made funds available has been war. Some of the earliest computers were employed of the battlefields of World War II, often used to help coordinate the massive number of troops involved in the struggles and keep these movements a secret from the enemy. Germany developed "Enigma Machines" (See Figure 1) to create ciphers that made intercepted messages almost impossible to decipher by

hand, so to decipher these messages other countries made their own machines. With this many prototypes and more being created, each with similar purposes but different methods of fulfilling that purpose, the foundation for the creation for computers was laid.

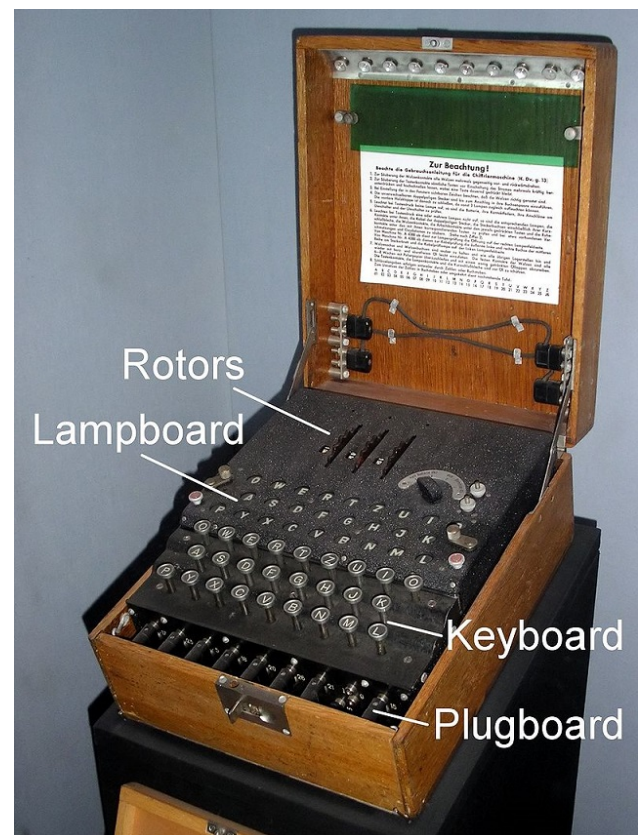


Figure 1: A Recreated Enigma Machine

### 3. COMPUTER HARDWARE

The history of computer hardware started in the 1960. The focalpoint was the vacuum tubes turned to solid-state devices such as the transistor and later the integrated circuit. By 1959 discrete transistors were considered sufficient, reliable, and economical that they made further vacuum tubes obsolete and uncompetitive. Computer memory slowly moved away from magnetic core memory devices to solidstate static and dynamic semiconductor and memory, which greatly reduced the cost, size and power usage of computers.Colossus was the world's first electronic digital programmable computer. It used a large number vacuum tubes. It had papertape input and was capable of being configured to perform a variety of boolean logical operations on its data. However, it was not Turing complete.TRADIC was the first transistor computer. TRADIC known as Transistor DIgital Computer or TRansistorized Airborne DIgital Computer was an all transistorized computer. It was the US that completed it in 1954. The computer was built by Jean Howard Felker of Bell Labs for the United States Air Force.

### 4. COMPUTER SOFTWARE

Since the requirements of these early computers were awfully specific, they did not have software developed for them, and the instructions that a computer would follow was purely dependent on its mechanical features. This changed with Manchester Mark I, which featured the very first stored program, giving rise to the development of software. By creating instructions in the form of computer memory, multiple processes could be performed by a single computer, and those processes could become even more complex with a fraction of the setup time.

### 5. CONCLUSION

In conclusion, the invention of the computer was to make computations faster. Before computers, people had to do calculations using punch-cards and calculators. This process was long and tiring so innovators around the world looked for ways to make computations easier. During World War II, the demand and desperation for faster easier computations increased. This gave incentive for increasing funding and research into making calculating faster, which eventually led to the birth of the computer. Without the birth of the computer, technology would not be as advanced as it is today. It made lives easier and helped science and technology grow exponentially.

### REFERENCES

References.

- [1] Figure 1 image sourced from Wikipedia
- [2] Martin Campbell-Kelly, John Gustafson, Brian Randall, Horst Zuse, (2011, January), Revolution [Online]. Available E-Mail: For E-mail, see <https://computerhistory.org/contact-us/>.