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WOMEN IN COMPUTER SCIENCE

Aix*Marseille
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Initiative d'excellence

History of women in Computer Science

Women in computer science field were among the first programmers in the early 20th century, and contributed substantially to the industry.

History of women in Computer Science

As technology and practices altered, the role of women as programmers has changed, and the recorded history of the field has downplayed their achievements.

Gender gap in computer science

Women pioneers in computing

Nicole-Reine Lepaute

Maria Mitchell

Ada LoveLace

Grace Hopper

Margaret Cushing Whitman

Marissa Mayer

GRACE HOPPER

First Compiler , Cobol Programming Language

HEDY LAMAR

UNITED STATES PATENT OFFICE

This invention relates broadly to secret communication systems involving the use of carrier waves of different frequencies, and is especially useful in the remote control of dirigible craft, such as torpedoes.

An object of the invention is to provide a method of secret communication which is relatively simple and reliable in operation, but at the same time is difficult to discover or decipher.

Briefly, our system as adapted for radio control of a remote craft, employs a pair of synchronous records, one at the transmitting station and one at the receiving station, which change the tuning of the transmitting and receiving apparatus from time to time, so that without knowledge of the records an enemy would be unable to determine at what frequency a controlling impulse would be sent. Furthermore, we contemplate employing records of the type used for many years in player pianos, and which consist of long rolls of paper having perforations variously positioned in a plurality of longitudinal rows along the records. In a conventional player piano record there may be 88 rows of perforations, and in our system such a record would permit the use of 88 different carrier frequencies, from one to another of which both the transmitting and receiving station would be changed at intervals. Furthermore, records of the type described can be made of substantial length and may be driven slow or fast. This makes it possible for a pair of records, one at the transmitting station and one at the receiving station, to run for a length of time ample for the remote control of a device such as a torpedo.

The two records may be synchronized by driv-

Fig. 2 is a schematic diagram of the apparatus at a receiving station;

Fig. 3 is a schematic diagram illustrating a starting circuit for starting the motors at the transmitting and receiving stations simultaneously;

Fig. 4 is a plan view of a section of a record strip that may be employed;

Fig. 5 is a detail cross section through a record-responsive switching mechanism employed in the invention;

Fig. 6 is a sectional view at right angles to the view of Fig. 5 and taken substantially in the plane VI—VI of Fig. 5, but showing the record strip in a different longitudinal position; and

Fig. 7 is a diagram in plan illustrating how the course of a torpedo may be changed in accordance with the invention.

Referring first to Fig. 7, there is disclosed a mother ship 10 which at the beginning of operations occupies the position 10a and at the end of the operations occupies the position 10b. This mother ship discharges a torpedo 11 that travels successively along different paths 12, 13, 14, 15 and 16 to strike an enemy ship 17, which initially occupies the position 17a but which has moved into the position 17b at the time it is struck by the torpedo 11. According to its original course, the enemy ship 17 would have reached the position 17c, but it changed its course following the firing of the torpedo, in an attempt to evade the torpedo.
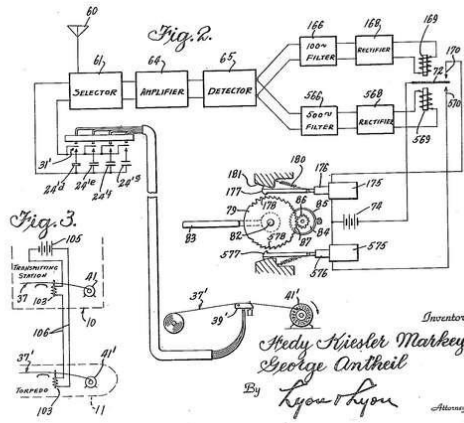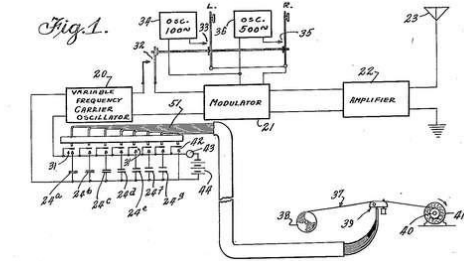
In accordance with the present invention, the torpedo 11 can be steered from the mother ship 10a and its course changed from time to time as necessary to cause it to strike its target. In

Fig.1.

Fig.2.

Fig.3.

Inventors

Hedy Kiesler Markey
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Attorneys

MALGARETTE HAMILTON

- She was born on August 17,1936

- 1954, graduated in high school

- Mathematics in Michigan's University

- Computer Science in MIT

- Weather forecasting programs

- SAGE

- Apollo NASA

CEO of Higher Order Software

Hamilton technologies

FRANCES ALLEN

Frances Elizabeth Allen (August 4, 1932 - August 4, 2020) was an american computer scientist and pioneer in the field of optimizing compilers.
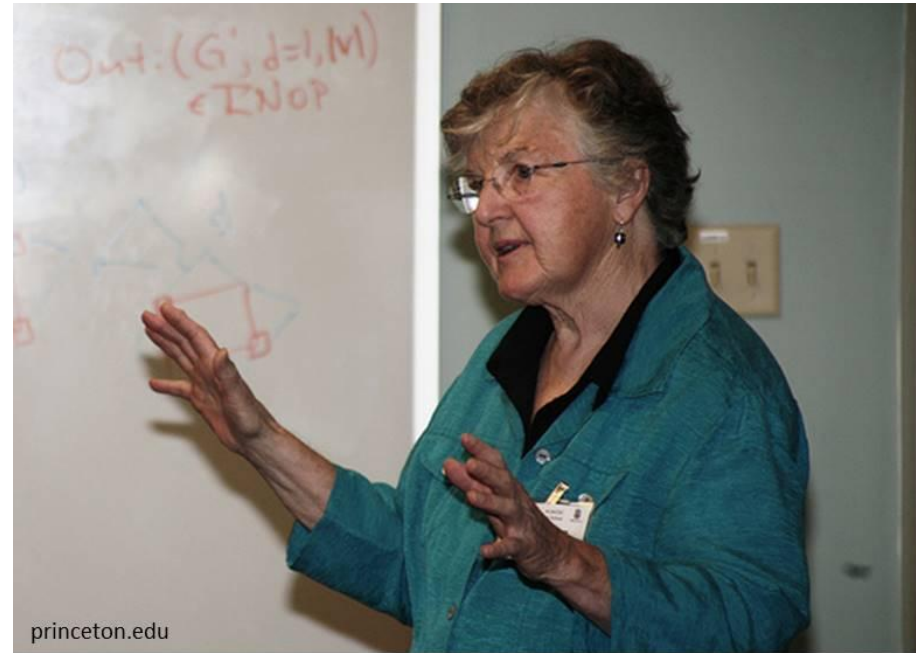
Allen was the first woman to become en IBM and in 2006 the first women to win the turing Award.

Frances Elizabeth Allen

Allen works for the NSA on supercomputers to analyze their eavesdropping.

Frances Allen spent her entire career at IBM (45 years), She was celebrated bay her peers with the receipt of the Turing Prize.

conclusion

Women do a lot for the field of science and computer science , we must encourage them to do more in this area which has a lack of women.