The Enigma Machine, Bletchley Park and the Battle of the Atlantic by Dr Mark Baldwin.

Dr Mark Baldwin gave an extremely interesting and informative PowerPoint presentation on "'The Enigma Machine', Bletchley Park and the Battle of the Atlantic."

During the course of the presentation, which was illustrated with original and archive photographs and documents, he explained the history of the standard 3-Rotor 'Enigma Machine', tracing it back to the First World War and charting its significance at a time when standard communication relied on insecure methods such as semaphore, flags, pigeons, dogs and megaphones, which could all be intercepted. This machine heralded a new era of wireless disguised, encrypted, encoded and scrambled messaging, signifying universal security.

Dr Mark Baldwin and his original Enigma machine.

Arthur Scherbius 1878 – 1929, a German electrical engineer, patented the rotor-substitution cypher machine, initially for industrial and commercial use, on 23 February 1918. The machine used a German keyboard and Dr Baldwin explained the differences between an English and German keyboard. He also explained the history of substitution cyphers, going back to the Roman times. The machines were comprised of rotors, lampboards, two sets of keyboards and plugs.

From this introduction to the Enigma machine, Dr Baldwin went on to give the Group some calculations of permutations to allow the cyphers to be decoded. These numbers were unimaginably high and the Group found it incredible that with these permutations any decoding was managed, especially as the codes were changed daily.

Dr Baldwin briefly mentioned the work of three Polish mathematicians, who, having been given an old 3-Rotor machine, worked for three years to understand and break the enigma codes, prior to the Second World War. With Germany's invasion of Poland imminent, this information was passed to the British and French Intelligence.

The history of Bletchley Park was then introduced. Bought by the Government in 1938 as an 'out of town' decoding centre, during the course of WW2 it employed many thousands of people, working round-the-clock and in the utmost secrecy. The work done there almost certainly reduced the War by two years and had a considerable effect on the Allies' involvement and successes in the Battle of the Atlantic. Of course, no mention of Bletchley Park would be complete without reference to 'The Huts', 'The Bombe' or Alan Turing.

After the fascinating and comprehensive talk, Members were delighted to be able to touch an original Enigma machine themselves and to talk to our Guest Speaker further on this absorbing topic.

Heidy Hague