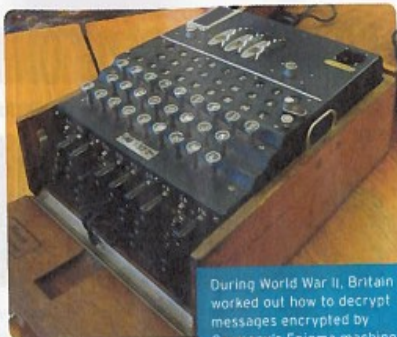


WWII Enigma messages to be digitised

Jeremy Kirk visits Bletchley Park, where an archive project is gearing up to preserve the library of German Enigma messages intercepted during World War II



During World War II, Britain worked out how to decrypt messages encrypted by Germany's Enigma machine

During World War II, Britain's brightest minds routinely decoded encrypted German military messages. Their efforts are believed to have significantly shortened the war and saved the UK from further devastation.

The mathematicians and cryptography experts at Bletchley Park broke the code used by the Enigma machine, a complex encryption device used across the German military. By January 1940, Britain was decoding the majority of the Enigma-encrypted radio messages intercepted by its intelligence stations.

Since then, buildings on the 25-acre Bletchley Park estate have fallen into disrepair: at one stage the site was close to being demolished to make way for a supermarket and housing, and efforts to raise money to preserve it have struggled.

Funds have been consumed by emergency infrastructure repairs, such as preventing the roofs caving in, said Simon Greenish, director and CEO of Bletchley Park Trust. Preserving

the intercepted messages - the core of Bletchley Park's heritage - was a long way down the list of priorities, he said.

“By digitising the decoded messages you can start to do research and connect up names, places and phrases”

Those messages are still in the building's archive after more than six decades, neatly typed on trimmed slips of paper and glued into fragile, decaying books. Also in the archive are drawers full of maps and a system of index cards used to classify messages by subject.

With the archive building's roof among those that needed fixing earlier this year, the flimsy documents stored there "really ought to be properly dealt with", Greenish said.

That process is starting to happen, with the launch of a project to digitise the documents held in the archive and make them accessible to the public.

Archiving the messages

HP has donated servers, storage and five of its latest enterprise-level Scanjet scanners to get the project going, said Laura Seymour, marketing manager for HP's LaserJet and enterprise solutions. The company has also assigned consultants to help train volunteers and Bletchley Park staff to use the equipment.

Once the cryptanalysts had decoded a message, a summary of it would be written on an index card and filed under a subject heading to make it easy to find groups of related messages. The cards, of which there are tens of thousands, are handwritten in cursive script, often on both sides. Volunteers will use HP's Scanjet 7000 to scan the index cards used to classify messages.

The Scanjet 7000 will scan both sides of the cards in batches, and can detect when a card has been incorrectly fed or two are stuck together. A larger flatbed scanner, such as HP's N9120, will be used for the books containing the original messages. The pages of those books will have to be manually turned as they are too fragile for automated page-turning scanners.

Another technology will help compensate if text written on an index card is fading. HP's Kofax Virtual Rescan software adjusts its brightness and contrast for clarity to make faded text easier to read, said Mander Thiara, a specialist with HP's imaging and printing group.

Archivists are still deciding exactly how the digital archive will be structured. Once that's determined, volunteers will be recruited and trained to use the scanners and software. Thiara said they will use



a touchscreen menu on HP's Scanjet 7000n to classify the material and ensure it goes into the proper place in the digital archive.

In addition to HP's software, the project will also use software from Digital Workplace, a company that specialises in large-scale document management software, Seymour said.

“Messages show how the Germans were duped into believing the Allies were going to land somewhere other than Normandy”

Aiding researchers

Eventually, the typed transcripts of the decoded messages will also be indexed using optical character recognition technology. This means the messages will be searchable by keyword. That will be a boon for historians, who will not only have access for the first time to reams of messages, but will also be able to quickly search them.

"You can start to do research and connect up names, places and phrases. These messages never tell you a whole story, they just tell you a bit of a story," Greenish said.

Among the messages are ones showing how the Germans were duped into believing the Allies were going to land somewhere other than Normandy in June 1944, and the transmissions of British double agent Eddie Chapman.

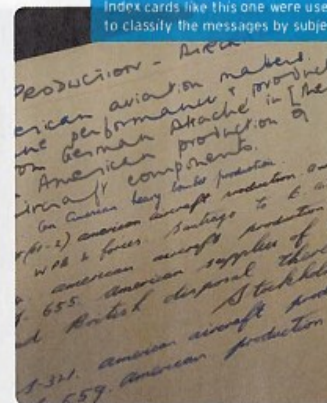
Chapman was a womanising safecracker who was imprisoned on the Channel Islands during the war. He volunteered to work as a spy for the Germans in order to get home. Once back on British soil, he agreed to work for Britain as a double agent.

Mander Thiara, a specialist with HP's imaging and printing group, demonstrates how the books will be scanned using equipment such as the HP N9120 flatbed scanner

When he transmitted messages to the Germans, Chapman - whose German codename was Little Fritz - was supposed to include five Fs in a row to indicate he hadn't been discovered by the British. In one message, Chapman forgot to include the Fs. But he then quickly sent another message, which was intercepted and decoded at Bletchley, where it is now glued in a book: "Sorry. Drunk over Xmas. Forgot FFFFF in last message. Fritz."

"You want stories, we've got stories," said Peter Wescombe, a volunteer archivist and one of the founders of the Bletchley Park Trust. "This is the kind of stuff we'll be able to keep for posterity."

Index cards like this one were used to classify the messages by subject



The messages were glued into books that are now deteriorating. Simon Greenish, director and CEO of Bletchley Park Trust, shows an archive room where the messages are stored

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