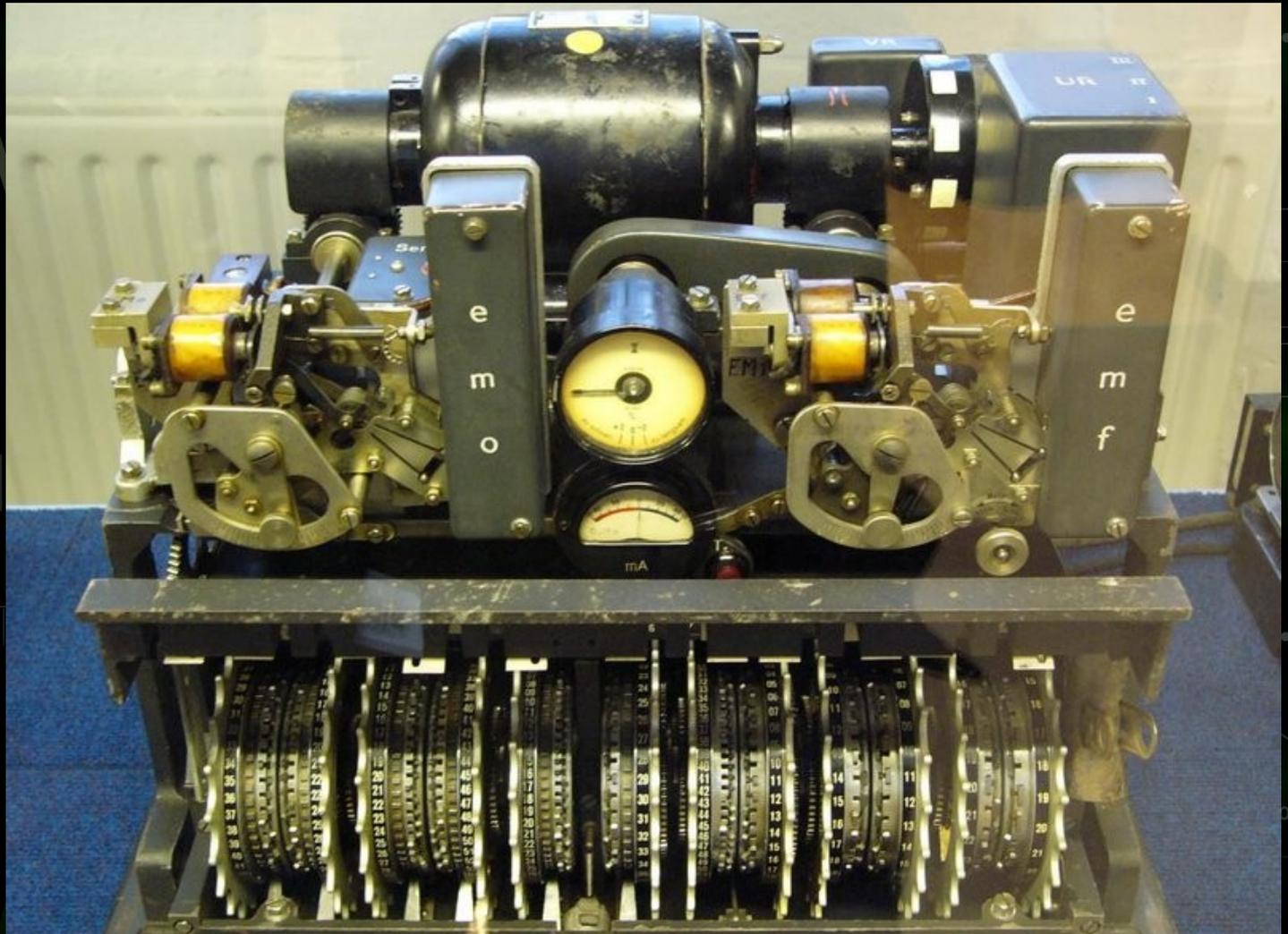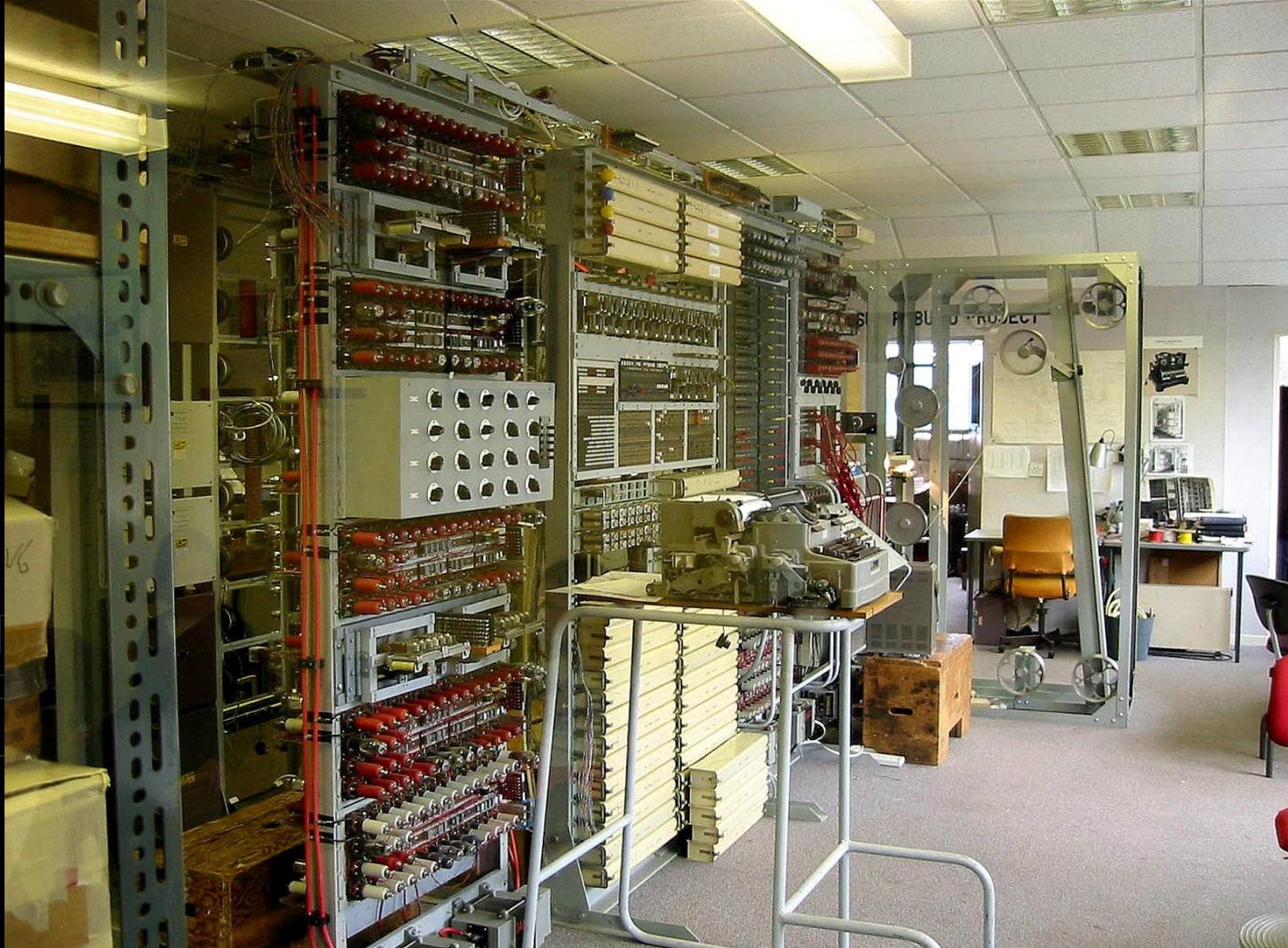# A Colossal Challenge

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What are we planning?

- To transmit by radio teleprinter from the Heinz Nixdorf Museum in Paderborn, Germany a series of secret messages enciphered on a WWII Lorenz SZ42 cipher machine

- To issue a world-wide challenge to anyone to break the cipher settings and decipher these messages before the Rebuild of WWII Colossus Mk 2 in Bletchley Park does it

The SZ42 machine

Colossus Rebuild

Varying difficulty

- Wheel patterns for all 12 wheels and start positions for M and psi wheels – just find chi wheel starts and decipher

- All wheel patterns, no wheel starts

- No chi wheel patterns or starts, other wheel patterns but no starts

- No patterns or starts for any wheels

Timetable

- September 2007 – refurbish the BP Lorenz machine

- October 2007 – test transmissions of cleartexts

- Mid November 2007 – transmission of enciphered texts

- Same as in WWII – multi-tone modulation. Two <u>sets</u> of tones (Baudot mark and space)
  - 3 tones in each set
    - Mark 540, 900, 1260Hz
    - Space 720, 1080, 1440Hz
  - Speed to be determined

Transmissions

- Using RTTY
  - Probably 45.5 or 50 baud
- Subsequently published on the net

Hurdles

- Transmitting ciphertext will require a legal exemption

- Transmitting in a non-approved mode will require a legal exemption

- Getting the SZ42 to Paderborn may be difficult

More Information

- Will appear at

  - www.ccht.co.uk

  - www.codesandciphers.org.uk