

ELECTRONIC DELAY STORAGE AUTOMATIC CALCULATOR

**EDSAC**



Replica Project

# EDSAC Replica Project

- Why?
  - To understand the state of the art in 1949
  - To understand the development of the machine over its ten years of operation
  - To document the innovative software developed on the machine
  - To complete the record
- What?
  - EDSAC was developed over ten years – which version to replicate?
- Where?
  - Space, power and accessibility
- How?
  - Searching the archives
  - Raising funds
  - Sourcing components
  - Building the project team
  - Training new volunteers

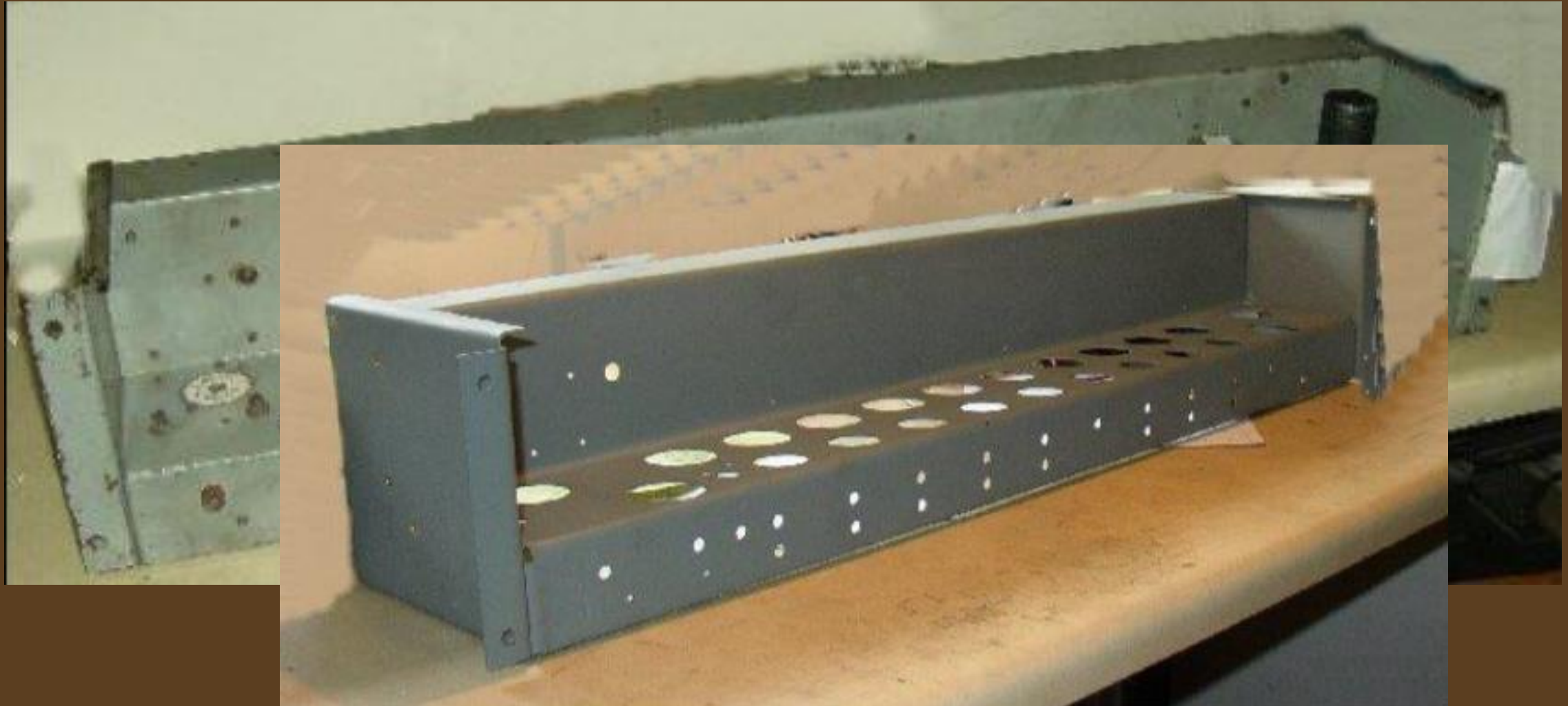
# Running the Project

- Leadership
  - Andrew Herbert
- Reference experts
  - Chris Burton, Bill Purvis, & Martin Campbell-Kelly
- Documentation
  - Circuit diagrams Video recordings
- Stores
  - Finding components, commissioning new devices
- Accounting
  - Me - knowing little on workings, but knowing the cost of everything and the difference between a balance sheet and a profile & loss account!

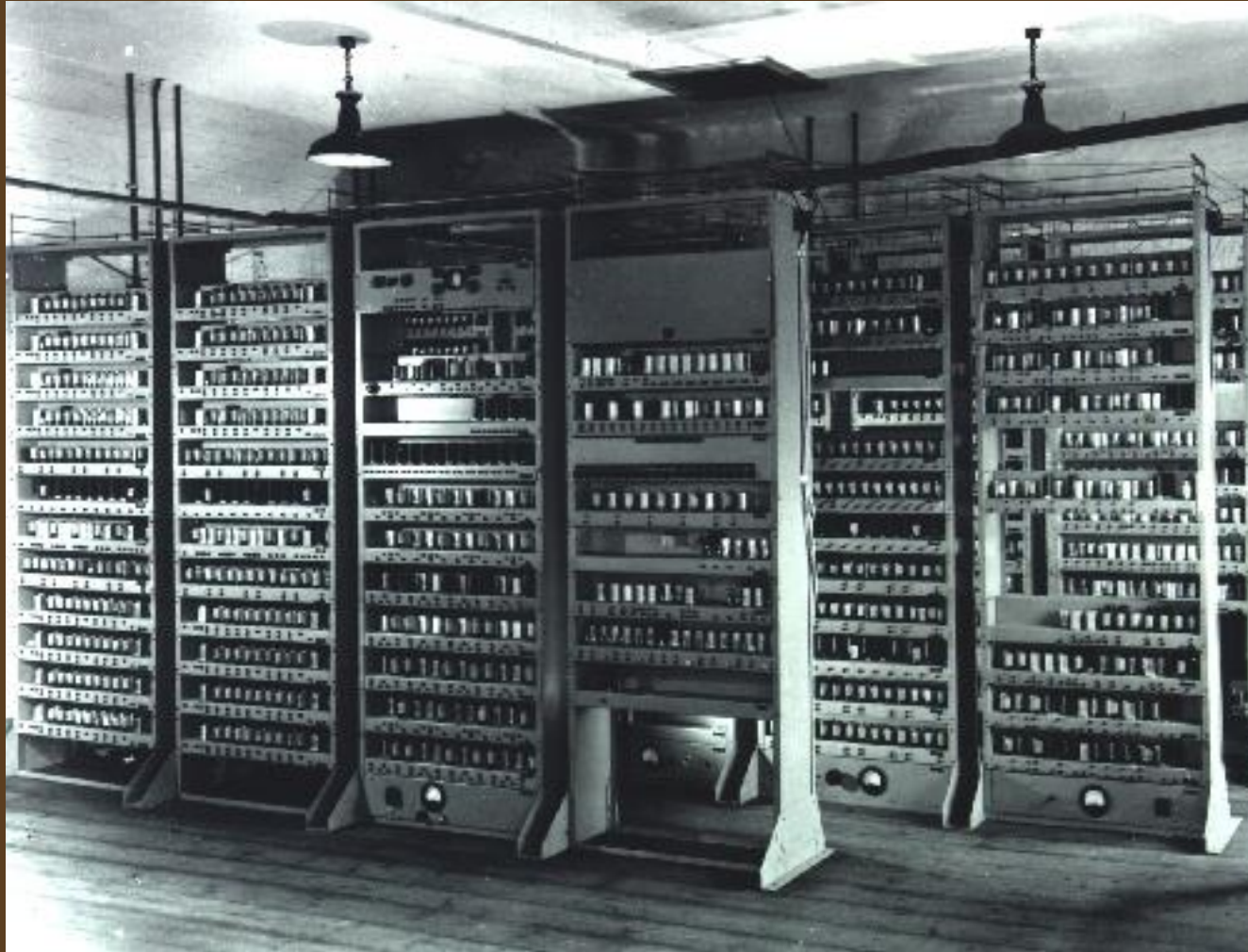
# Remaining Artifacts



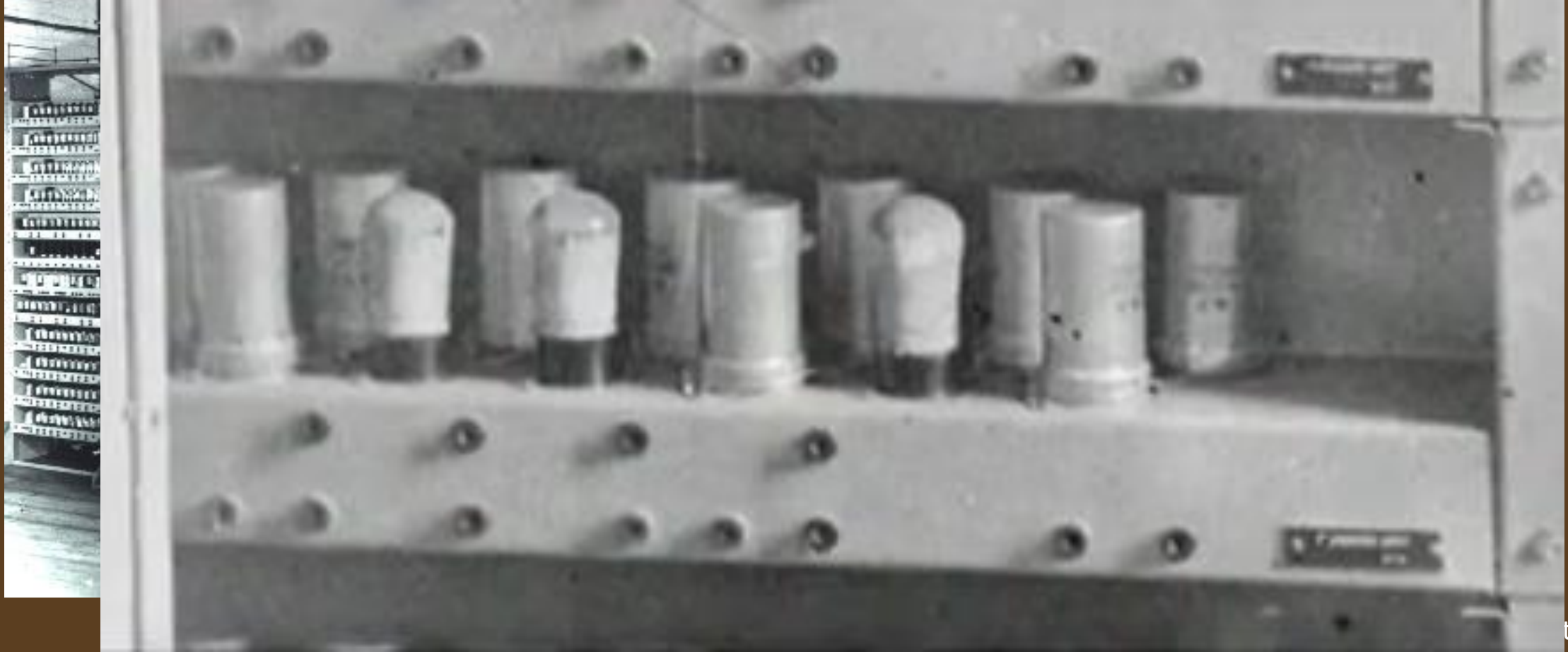
# Remaining Artifacts



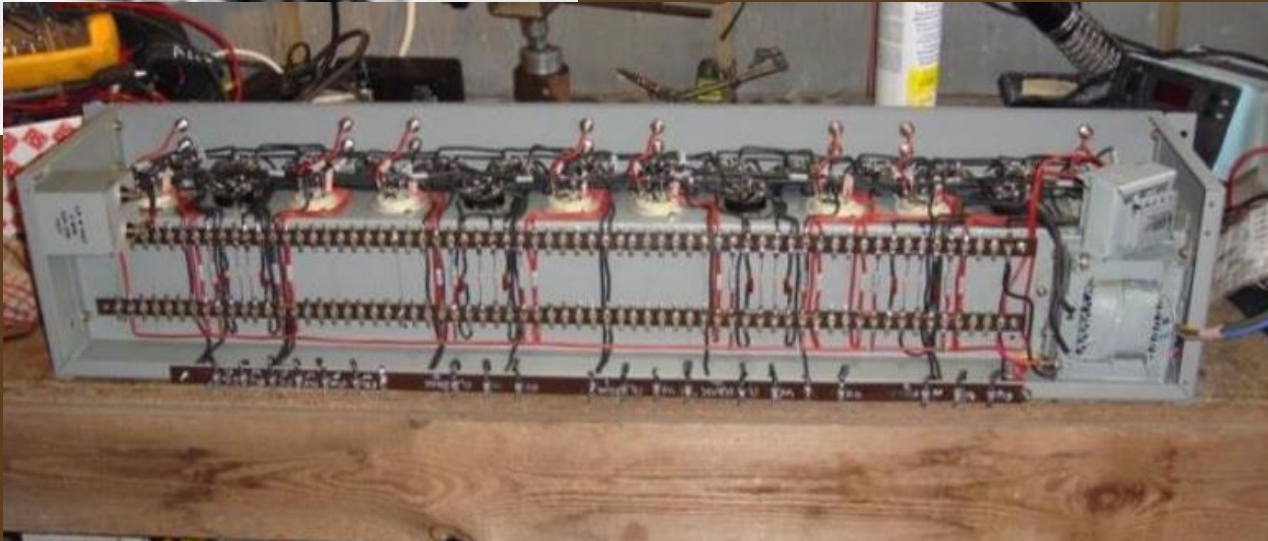
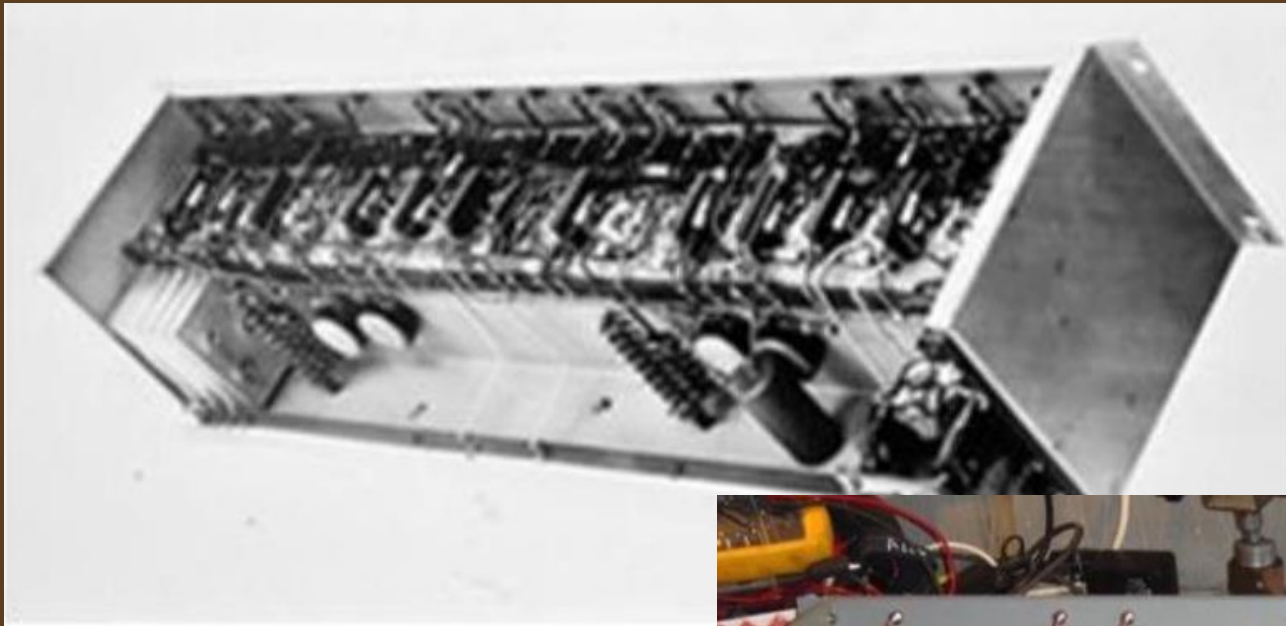
# Information from Original Images



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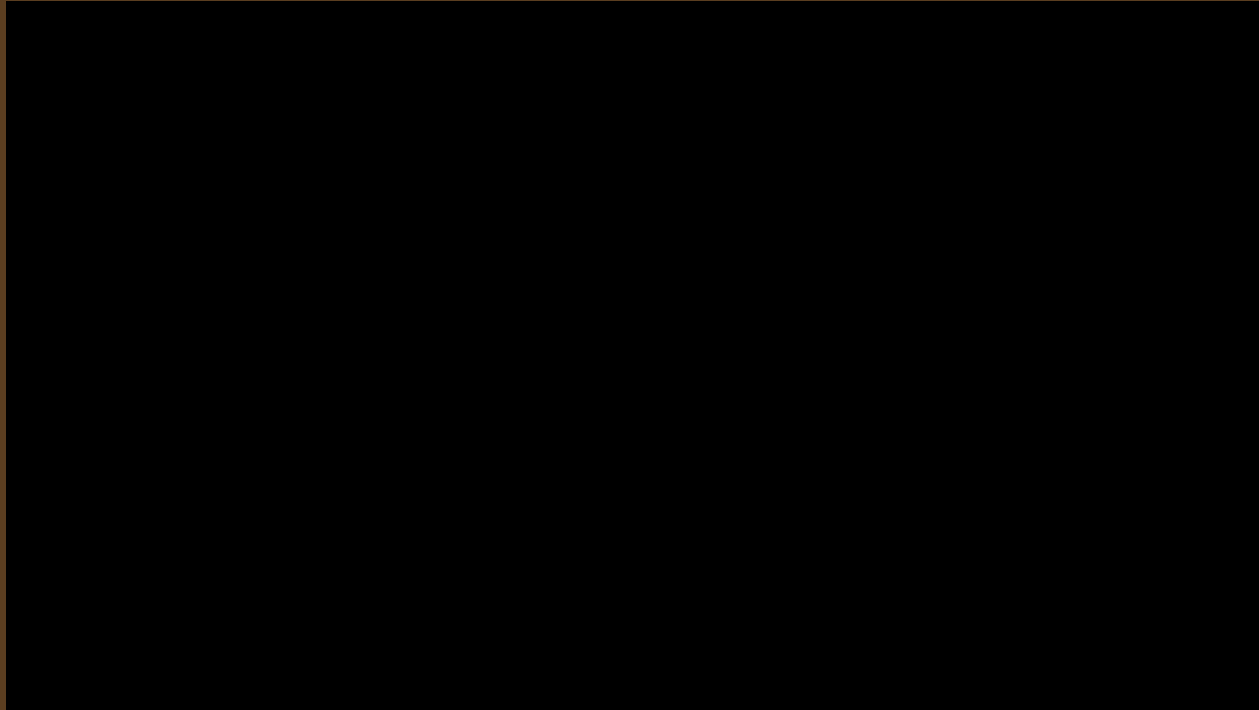


# Remaining Artifacts





# Building the display screens



# Current Status of Project

- Construction
  - Fetch and Decode instruction from store ✓
  - Execute instructions ✓
  - On target to be able to operate the machine by the end of 2017 as it was in May 1949 by running the table of squares and prime numbers
- Gallery and Display
  - Supporting material, leaflets and book
- Archives and Documentation
  - New book on EDSAC and the reconstruction
  - Online archive of all original and new information

# EDSAC Veterans

- Miss Joyce Blacker
- Cambridge Research Student from 1955
  - Internal structure of stars
  - Was trusted to use EDSAC overnight, while it was working
  - On site help from EDSAC expert, Dr David Wheeler
- Married in 1957 and became Dr Joyce Wheeler



# The EDSAC Board

- Sir Hermann Hauser KBE, FRS, FREng, FInstP, CPhys
- Prof Peter Robinson FBCS, CEng
- Dr David Hartley FBCS, CEng
- Prof Andy Hopper CBE, FRS, FREng, FIET
- Dr Andrew Herbert OBE, FREng, FBCS
- Kevin Murrell

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- Kevin Murrell
  - The Howard Wolowitz of the EDSAC board!

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- Dr Andrew Herbert OBE, FREng, FBCS
- Kevin Murrell **FBCS**

# More Information

- [www.tnmoc.org/special-projects/edsac](http://www.tnmoc.org/special-projects/edsac)
  - Project news
  - Videos
  - Current Status
- Computer Conservation Society
  - [www.computerconservationsociety.org](http://www.computerconservationsociety.org)
  - All CCS Projects
  - Membership