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 diagramsVideo 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!

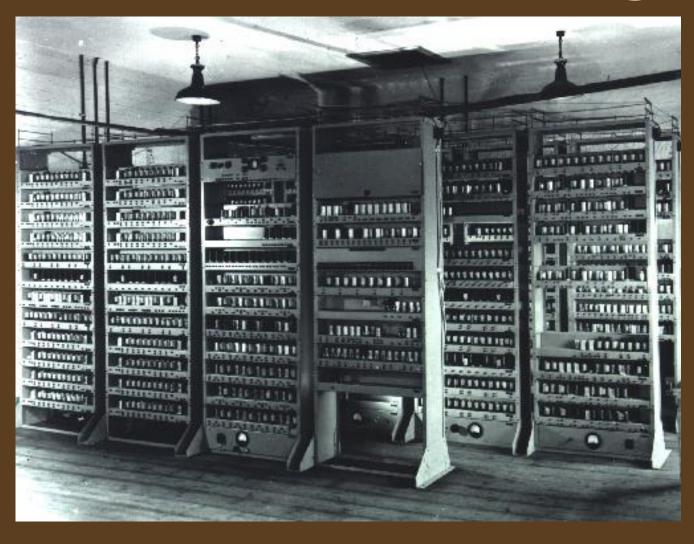
# Remaining Artifacts



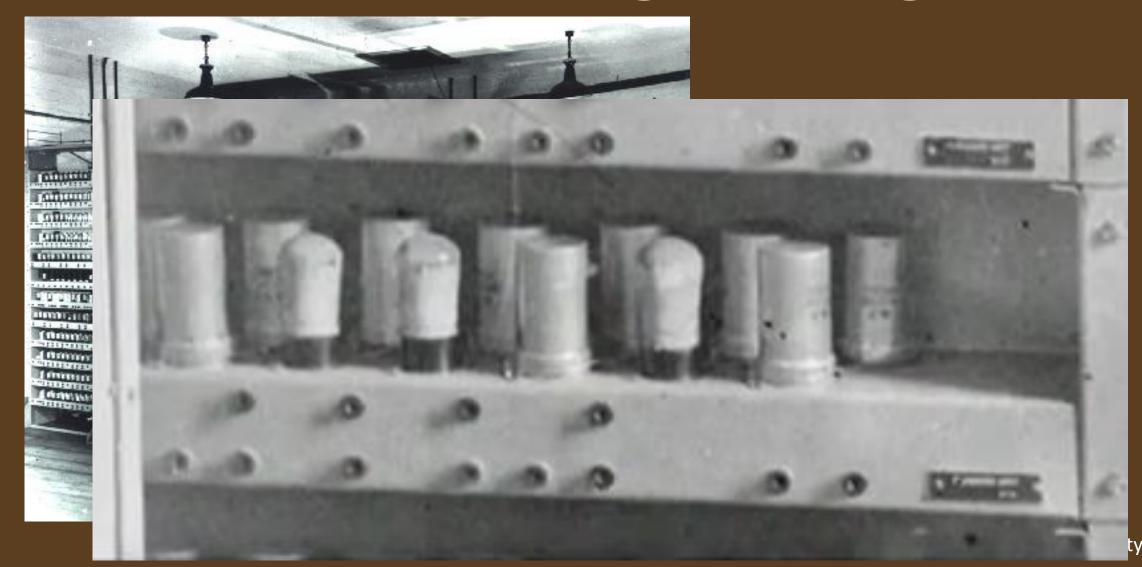
# Remaining Artifacts



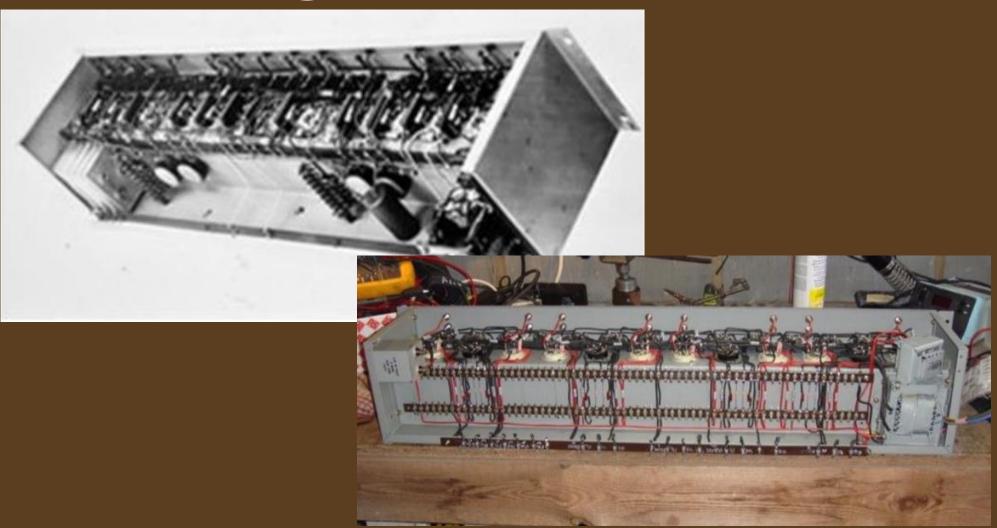
## Information from Original Images



# Information from Original Images



# 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 Hooper CBE, FRS, FREng, FIET
- Dr Andrew Herbert OBE, FREng, FBCS
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- Kevin Murrell
  - The Howard Wolowitz of the EDSAC board!

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- Kevin Murrell FBCS

#### More Information

- www.tnmoc.org/special-projects/edsac
  - Project news
  - Videos
  - Current Status
- Computer Conservation Society
  - www.computerconservationsociety.org
  - All CCS Projects
  - Membership