Curating a history of Computer Art: the work of Edward Ihnatowicz

Alex Zivanovic

www.senster.com

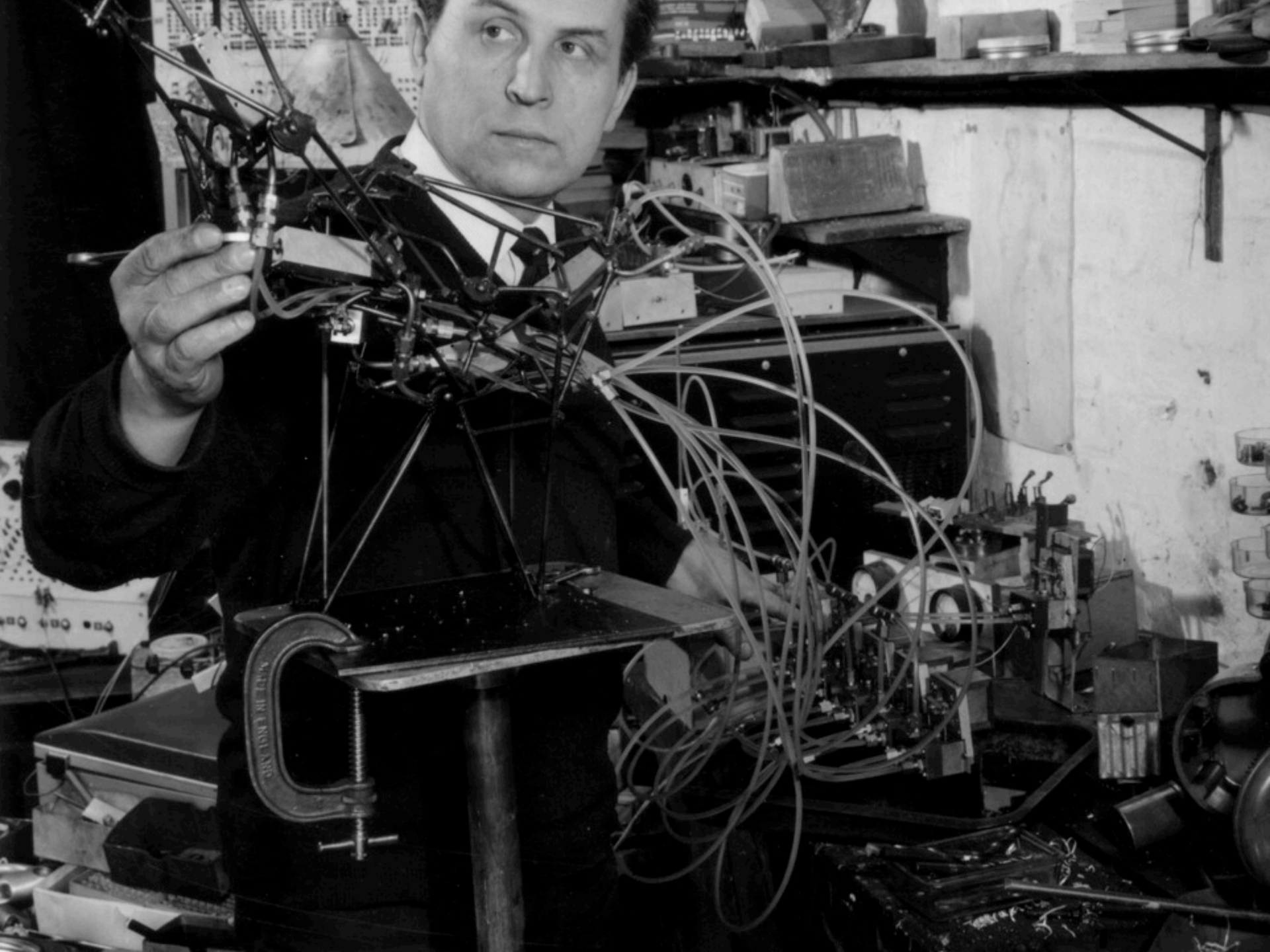
Edward Ihnatowicz

1926-1988

Born in Poland, arrived in Britain in 1943

Studied sculpture at
Ruskin School of Art
1945 to 1949

MYFORD



Sound Activated Mobile (SAM)

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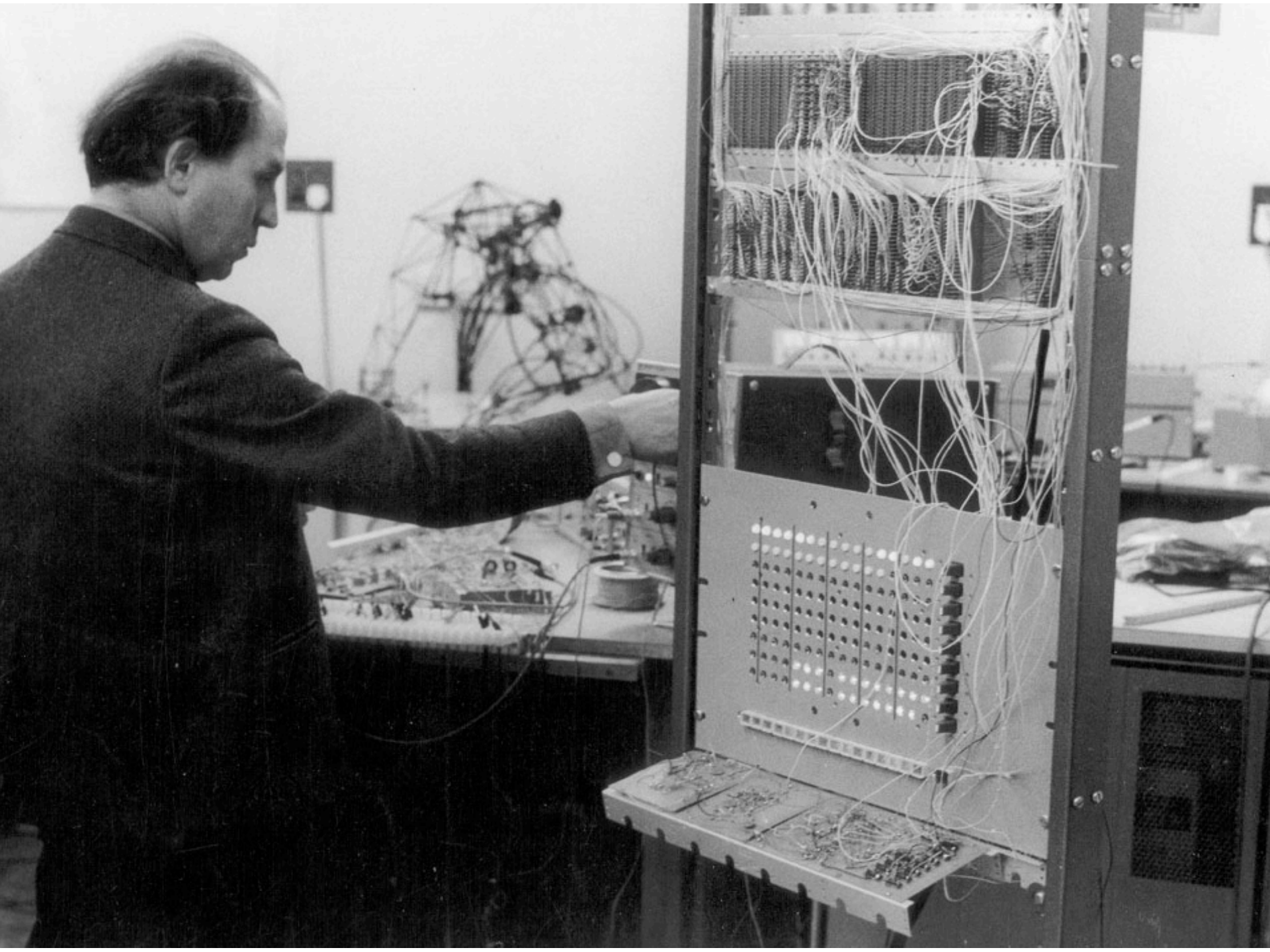
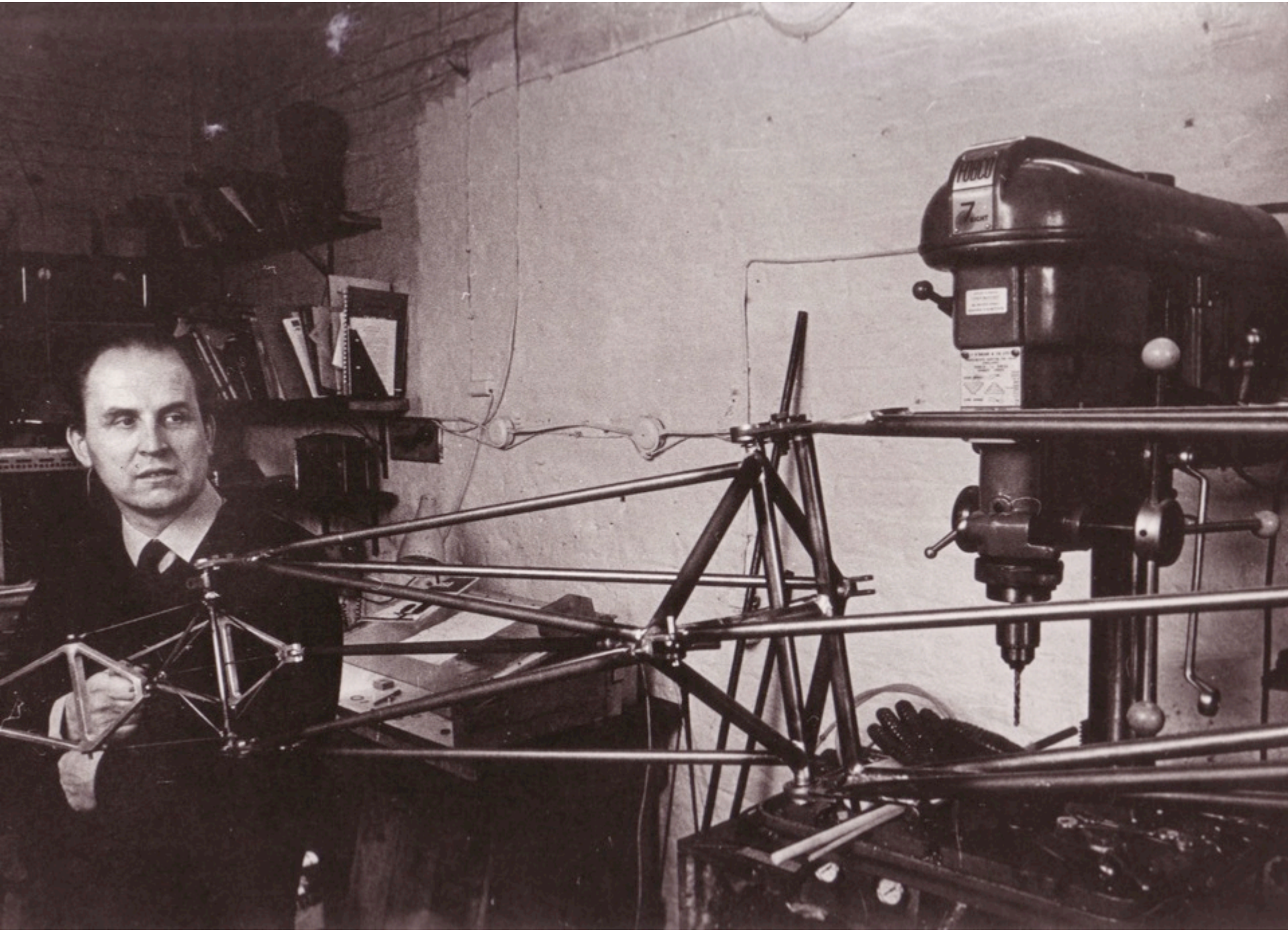
- Exhibited at the 'Cybernetic Serendipity' exhibition held initially at the Institute of Contemporary Art (ICA) in London in 1968 and later toured Canada and the US ending at the Exploratorium in San Fransisco.

SAM
Sound Activated Mobile

The Senster

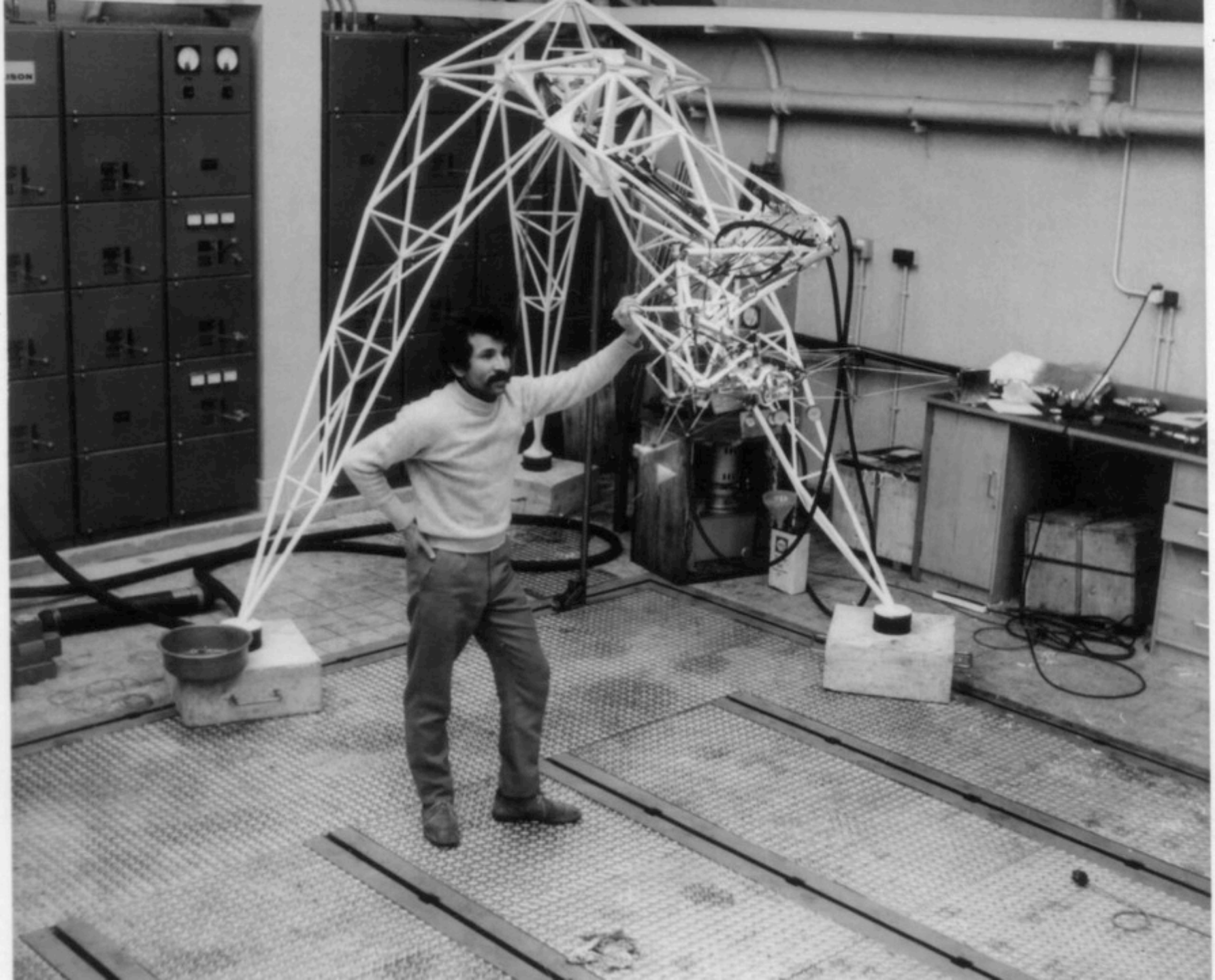
- Commissioned by Philips for the Evoluon in Eindhoven
- Built from May 1968 to September 1970

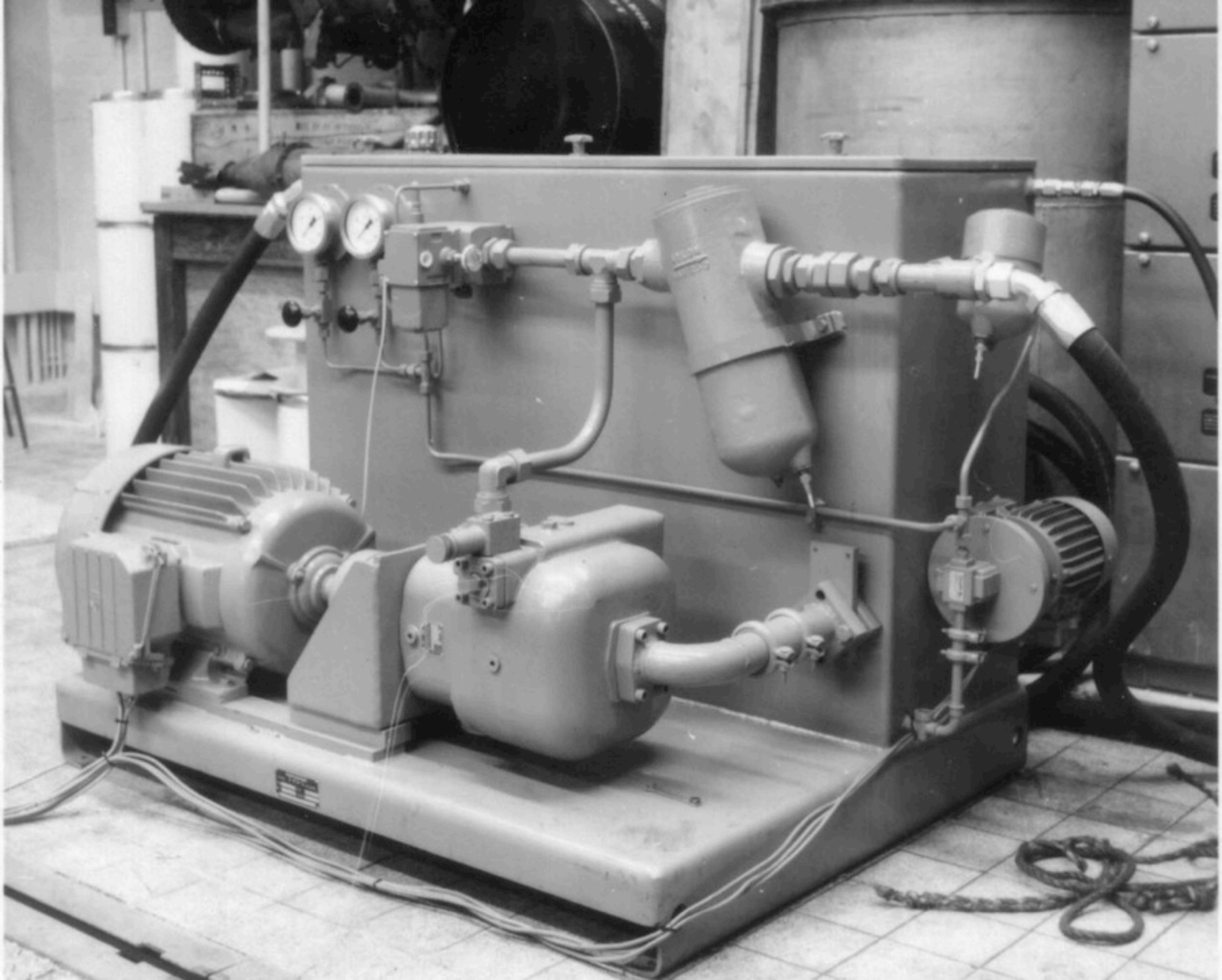




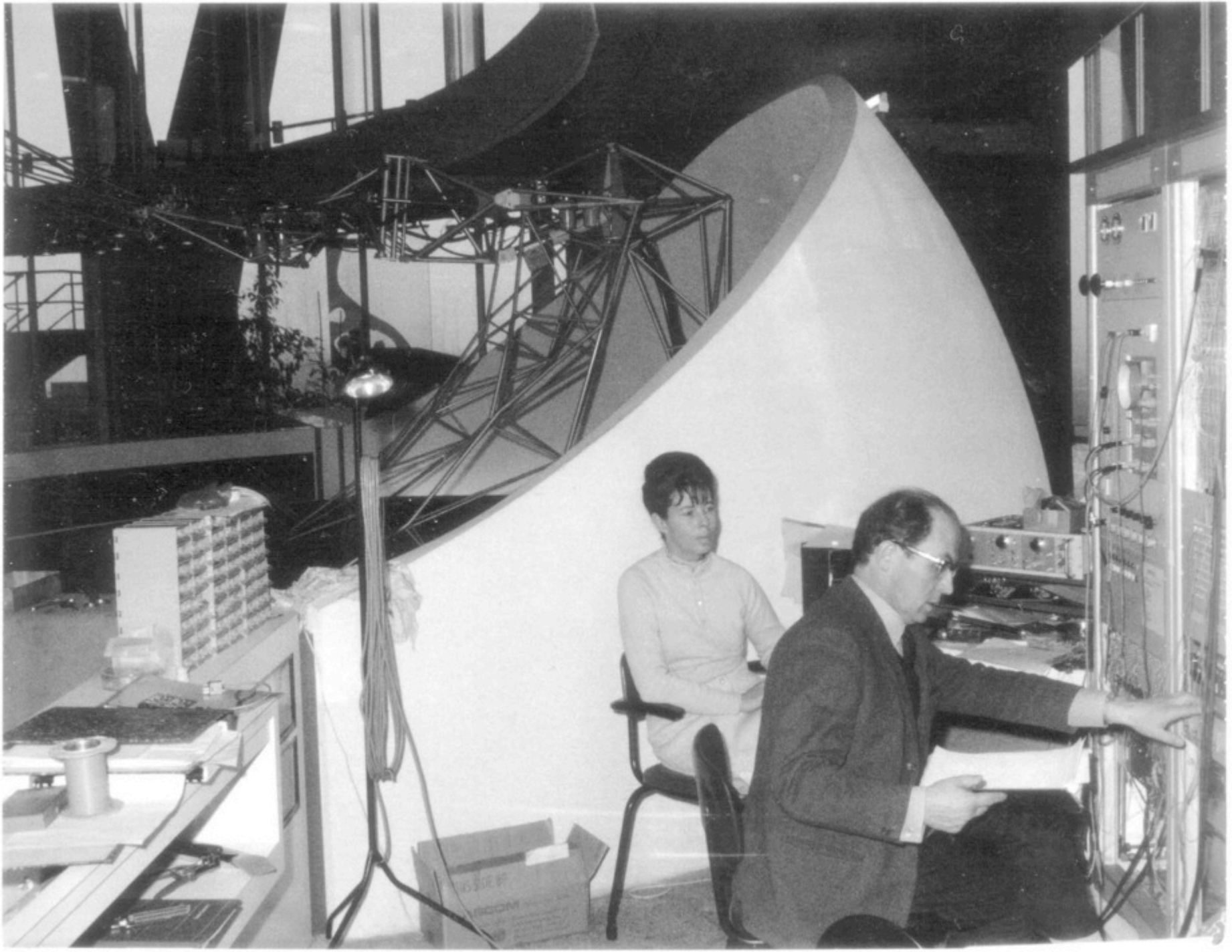
Senster at UCL

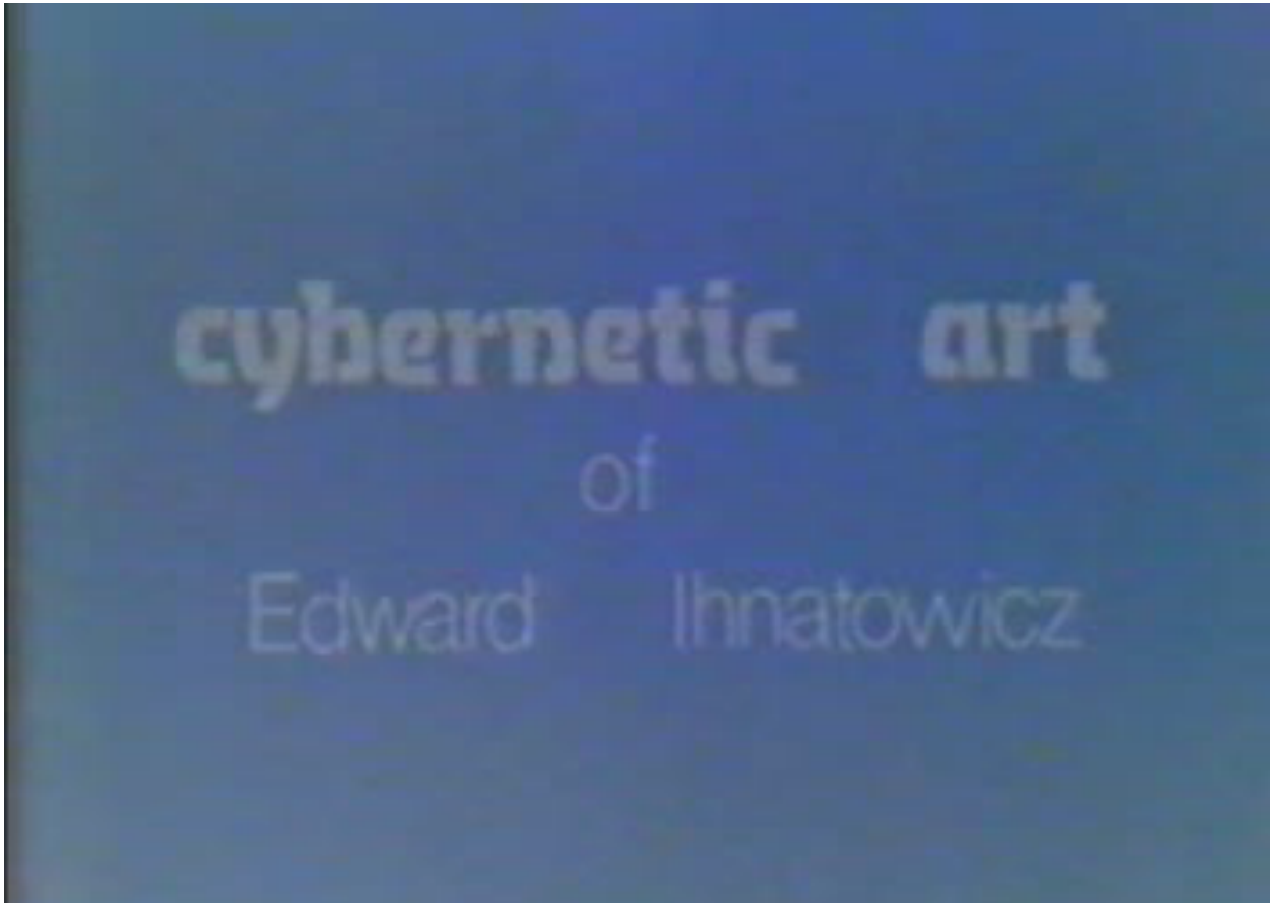
- Established close link with the Mechanical Engineering department at UCL
- Work on the Senster moved there for its last year (July 1969)





- shipped to Eindhoven June 1970
- Unveiled in September 1970




cybernetic art
of
Edward Ihnatowicz

What is the artwork?

- The welded truss structure?
- The hydraulic system?

What is the artwork?

- The computer?
  - No original models left anywhere in the world

Philips P9201 with 8k core memory

P9202 General Purpose Computer

What is the artwork?

- The computer software?
  - Meaningless without the hardware to run it on
  - Is an emulator OK?
  - The expertise to understand it?

```
0009 00006   0 04 00444          STA   IND
0010 00007   0 04 00450          STA   PHASE
0011 00010   54 1500             INA   '1500    READ CONTROL REGISTER
0012 00011   0 01 00334          JMP   INT2     INTERFACE 2 NOT ON
0013 00012   0 04 00447          STA   SAVA
0014 00013   0 03 00527          ANA   ='77     ARE ALL FFS OFF
0015 00014   101040              SNZ
0016 00015   0 01 00022          JMP   LOWP     YES
0017 00016   140040              CRA
0018 00017   0 10 00000          CALL  HOLD     NO - GO RESET
0019 00020   100000              SKP            OK RETURN
0020 00021   0 01 00301          JMP   ERR1     ERROR RETURN
0021 00022   0 02 00447 LOWP     LDA   SAVA
0022 00023   0 03 00526          ANA   ='4000   INTERRUPT STILL ON?
0023 00024   100040              SZE
0024 00025   0 01 00336          JMP   DOWN     STRUCTURE IS DOWN
0025 00026   000401              ENB
0026 00027   54 1012             INA   '1012
0027 00030   0 01 00332          JMP   INT1     INTERFACE 1 NOT ON
0028 00031   0 03 00526          ANA   ='4000   BIG JACK AT ZERO?
0029 00032   100040              SZE
0030 00033   0 01 00432          JMP   J6UP     NO - GO COMPLAIN
0031 00034   0 02 00525          LDA   ='10     OUTPUT REG. TEST.
0032 00035   74 0030             OTA   '30      IF THEY ARE ON THIS
0033 00036   0 01 00035          JMP   *-1      WILL SET BIT 11 IN R'12
0034 00037   0 12 00451          IRS   T
0035 00040   0 01 00037          JMP   *-1
0036 00041   54 1012             INA   '1012
0037 00042   0 01 00041          JMP   *-1      GET R.'12
0038 00043   0 03 00524          ANA   ='40     IS IT SET
0039 00044   100040              SZE
0040 00045   0 12 00444          IRS   IND      YES - SET INDICATOR
0041 00046   140040              CRA            RESET OUTPUTS
0042 00047   74 0022             OTA   '22
0043 00050   0 01 00047          JMP   *-1
0044 00051   74 0060             OTA   '60
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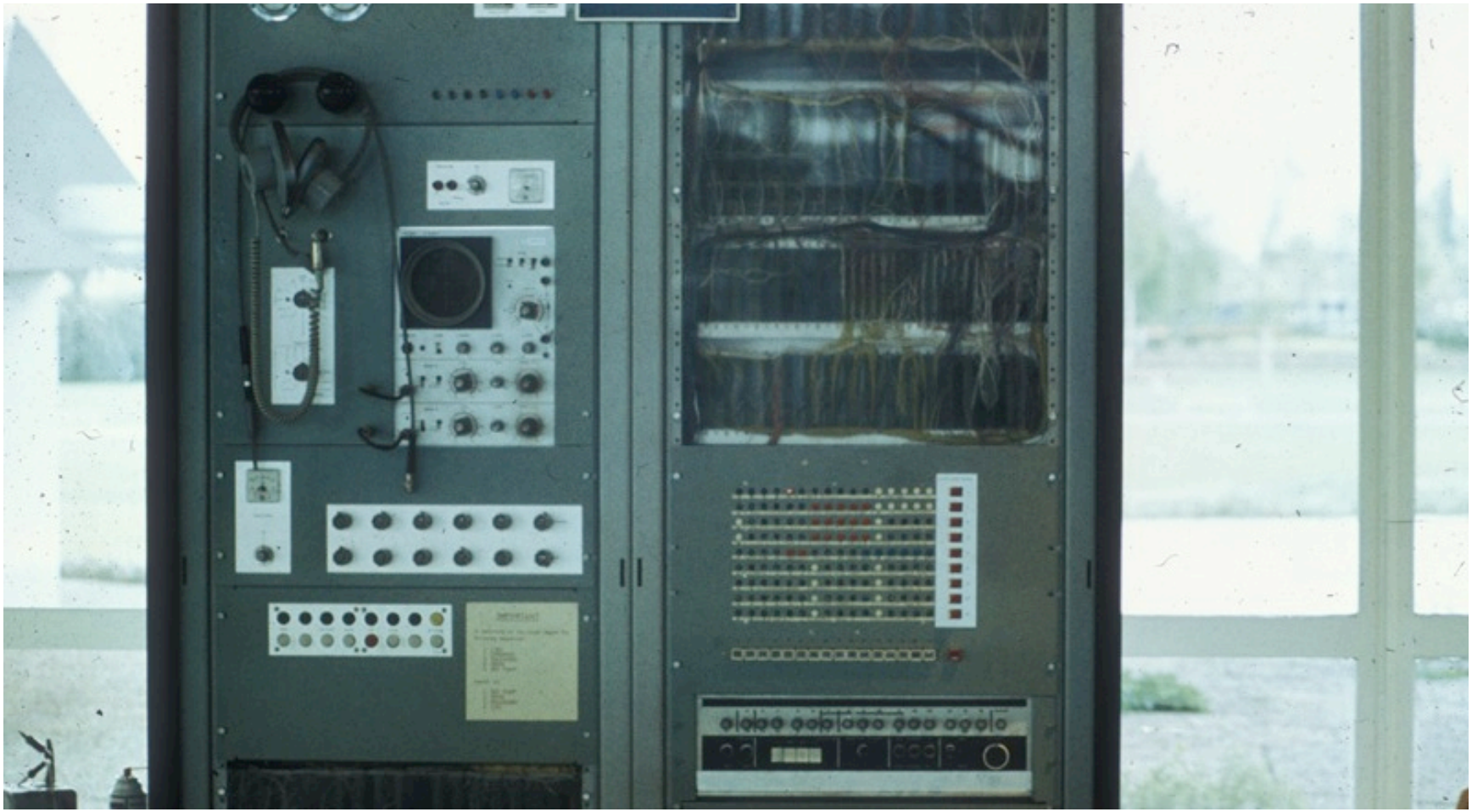
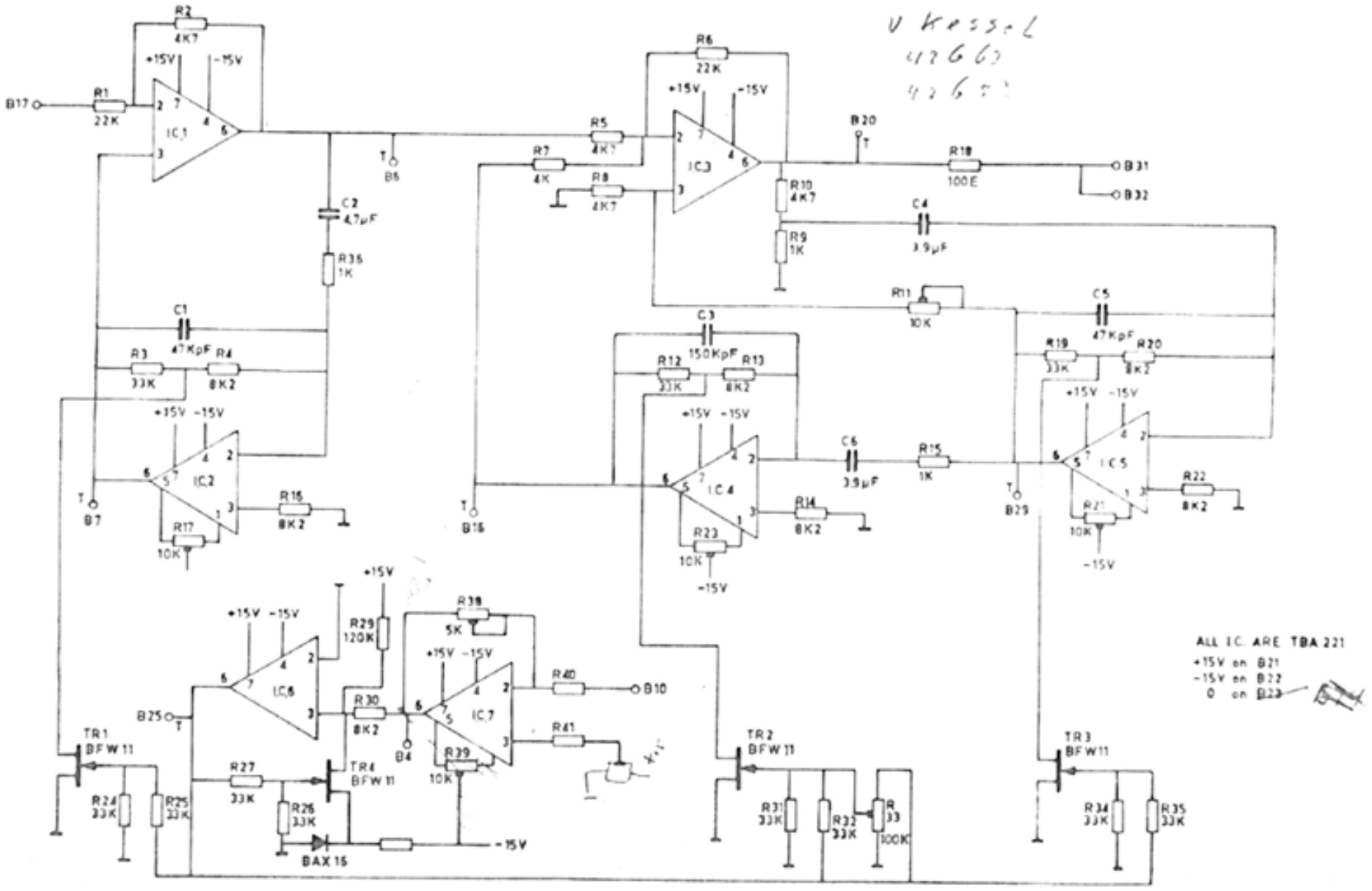
What is the artwork?

- The electronic system?
  - Behaviour depends on characteristics of obsolete components

Digital/Analogue hybrid control





PREDICTOR (not lab)
BOARD No: 1B1-8

SH 37
31-3-71

Recording the work

- The video record
  - 8mm film transferred to VHS then digitised…
- The photographic record
- Paper documentation
- Visitors' memories

Preserving the artifact?

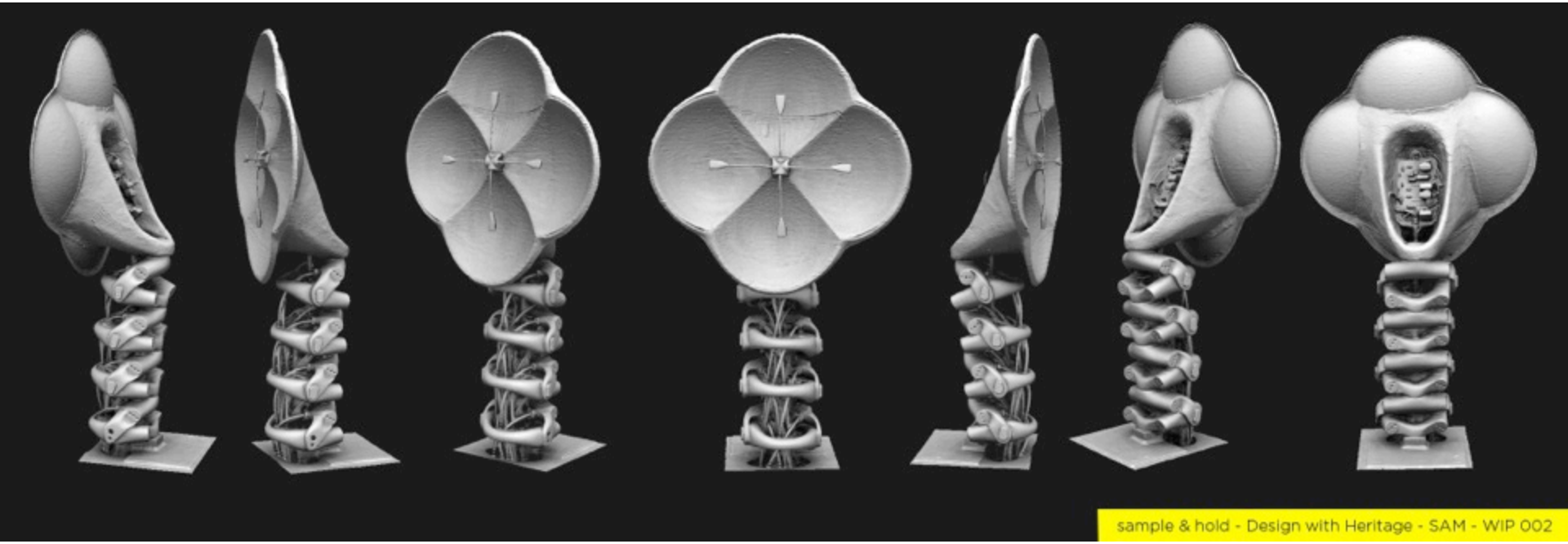
- Does it have to move?
- Do all the parts have to be original?
- Is a copy OK?
- What about obsolete parts?

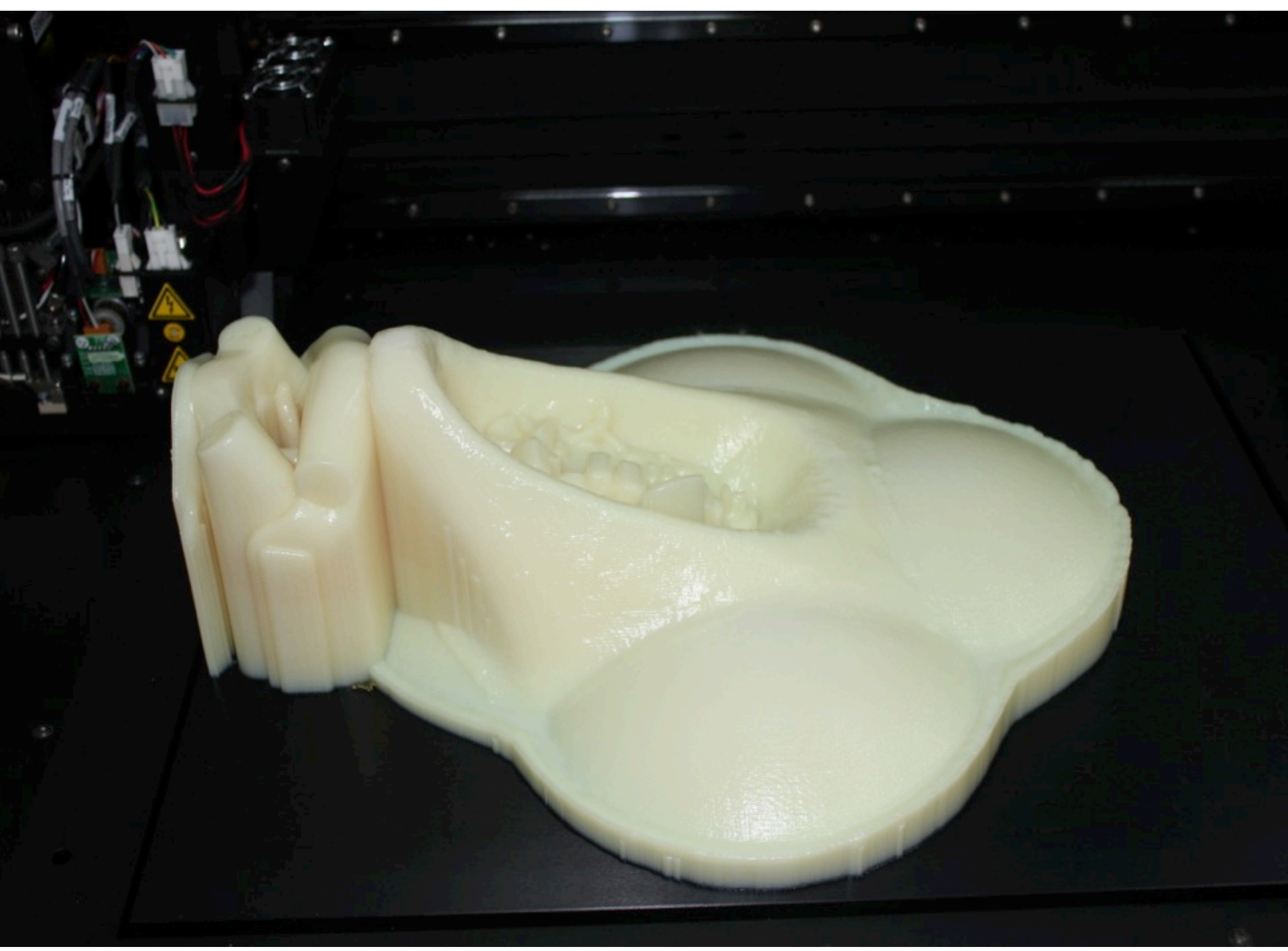
Preserving the artifact

- Compare with industrial heritage preservation
- Every time an engine is run it wears some more
- Is it better to preserve the artifact or show it running?
- Moving systems need maintenance & repairs

“Design with Heritage” project

- 6 month project in 2013
- Partners:
  - Douglas Dodds, V&A, curation
  - Jana Schulze, V&A, curation
  - Mona Hess, UCL, 3D scanning cultural objects
  - “Sample and Hold” 3D scanning company
  - Alex Zivanovic, Middlesex University, engineering


sample & hold - Design with Heritage - SAM - WIP 002



Possible collaboration?

- I've run a website since 1997 about Ihnatowicz's work (www.senster.com)
- A small sub-set of documents and records
- Olga, his widow has a larger collection
- Some scanned for the Cache project but not publically available

Possible collaboration?

- How about an online collection/archive?
- Partnership between experts in curation and experts in engineering