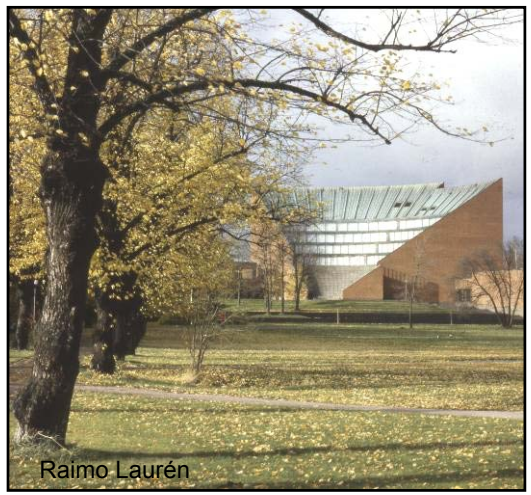
Nature of the Engineer's Collections

Experiences of the HUT 100 scientific collections inventory

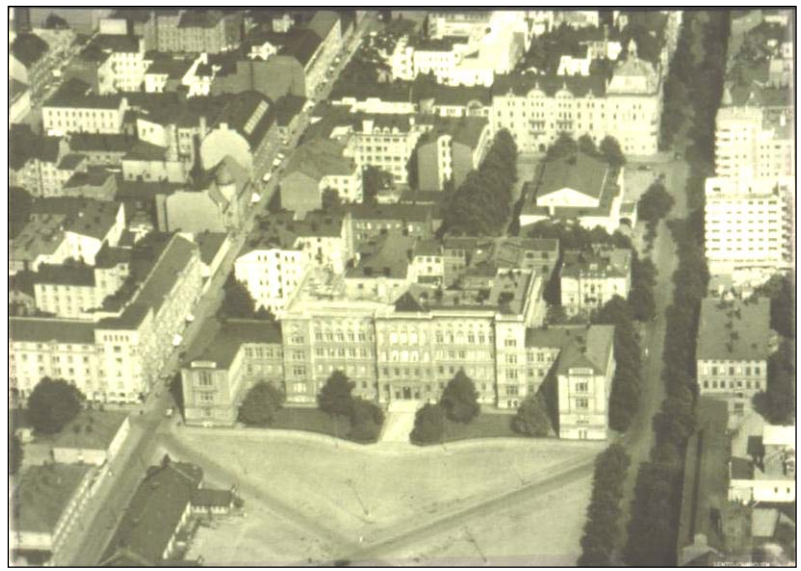


HUT (TKK) 100 history project

- Helsinki University of Technology (TKK) Centennial jubileum 2008
- The history project 2003 - 2008
  - Writing the history of technical education
  - Lectures, Articles, Radio programs
- Survey of the historical collections in Otaniemi Campus
  - Rescue, inventory, educating the personnel of the depatments
- Historical exhibitions of 2008

Some special problems

- Identifying the HUT (f. 1849)
  - Engineers idea of the history : “we do not have the past”
- A university from the year 1879 on - an educational institute for the highest level (M.A.Sc) based on the independent research work of its teachers and students.
- History of the name
  - 1879 Polyteknillinen Opisto Polytekniska Institutet
  - 1908 Teknillinen korkeakoulu - Tekniska Högskolan, Techische Hochschule
  - Technical High-School 1920’s (In correspondence with MIT), then in 1930’s Helsinki Insititute of Technology, Technical University
  - University of Technology 1960’s



- To whom the artefacts belongs to
  - The financing often came from the industry
  - Who owns the collections (who leads the research)
  - The copyright problems
  - Independent laboratories and deprtments

Part of the Paris 1900 World Fair presentation

Turning points in the history of scientific and educational collections

- 1849 – 1900 Prehistory of the HUT
- 1900 – 1939 Human size collections
- 1950 – King size collections

The vocational skills

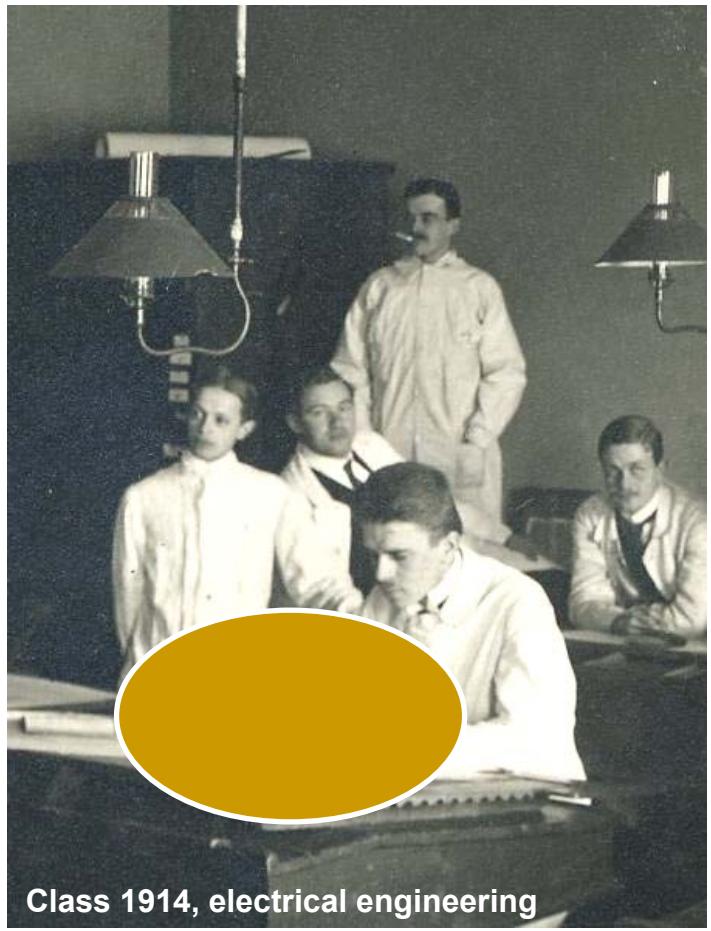
- The Edcucational collections for the becoming industrialists
  - Geological collections
  - Examples of paper products etc.

Prof. Holappa and the 19th Century iron samples

The science of engineering

- Engineering is the brother of mathematics
- The collections of the mathematical device

Eeva Pitkälä


Class 1914, electrical engineering

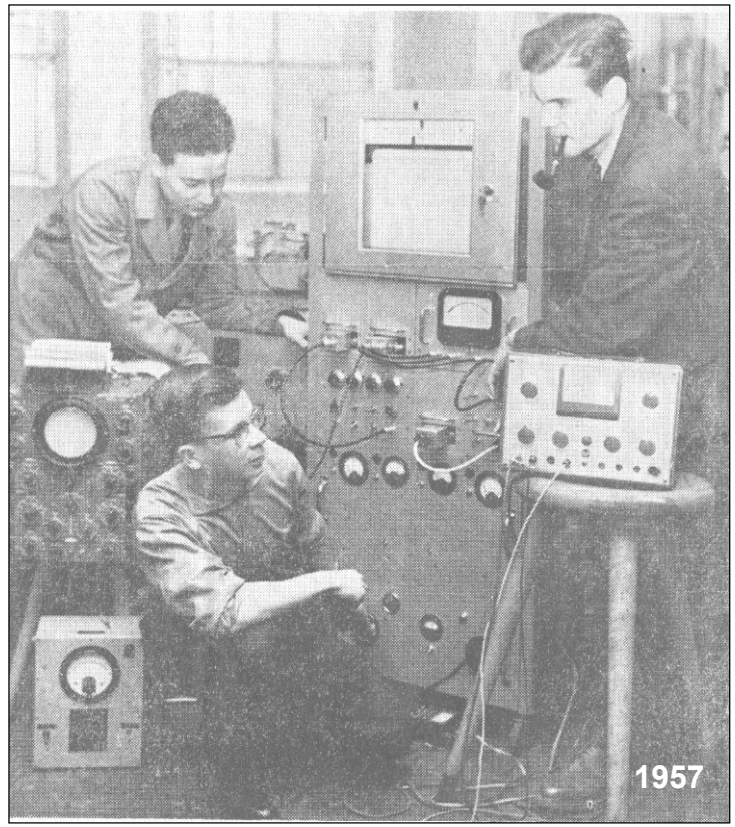
Slide rule's time 1890 - 1975

Human size instruments 1879 - 1939

- Relatively understandible instruments
  - Most often the instrument itself tells the story
- Even “large instruments” were of convenient size

The Big Bang of 1950's – modern electronics

- The equipment needed usually auxiliary written data, so called software.
  - Hardware and sofware belong together, but have separate lifecycle
- The instruments lifetime reduced
- The equipment became so sensitive, that aging of the instrument usually destroys it, and the researchers themselves usually rebuild the instruments several times during their usage.



"The birth of the Nokia". Tuuli, Kohonen & Hellsten in the laboratory of technical physics.

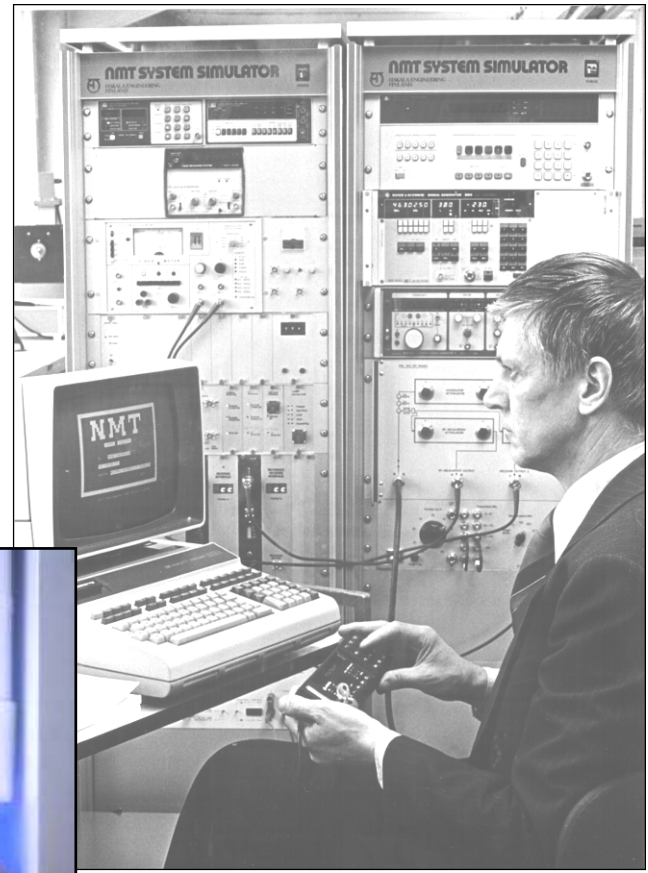
The computer time and the King Size instruments

- Size of the instruments was growing fast during 1950's
  - Can You imagine a modern paper machine (200 meters long)
- Nanotechnology - nanoexplanations

Who ever will explain what happens
here if the documents are lost?

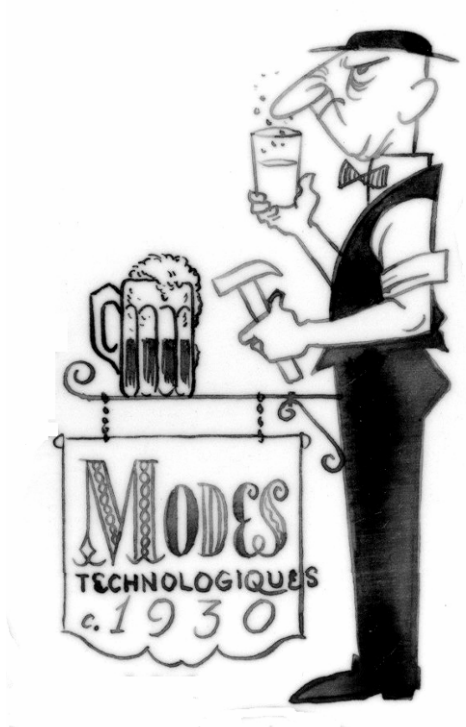
- One scientific instrument might need a building of its own
- A large amount of data is for short time use only
  - Preservation of computer programs
  - Can you read what you wrote 10 years ago?
    - Punched cards
    - Data tapes
    - Data disks

The Neuromag of the cold laboratory



Testing of the first NMT-system early 80's

- The artefact itsef rarely explains anything anymore
- We need co-operation between the library, archives and the collections

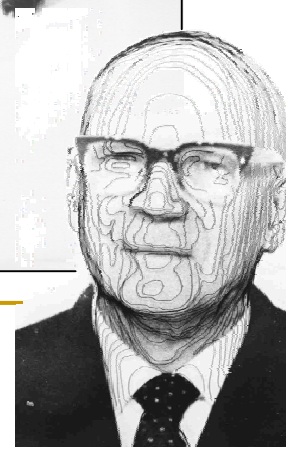


Some things just don't change
The art of the organic chemistry.

Time and understanding

…If the engineers society understands its own past as numbers, short stories and machinery, we can't forget that…

Measuring prince Harald and president Kekkonen Mid 60's



Thank You

- The Students Association TKY
- Archives of TKK