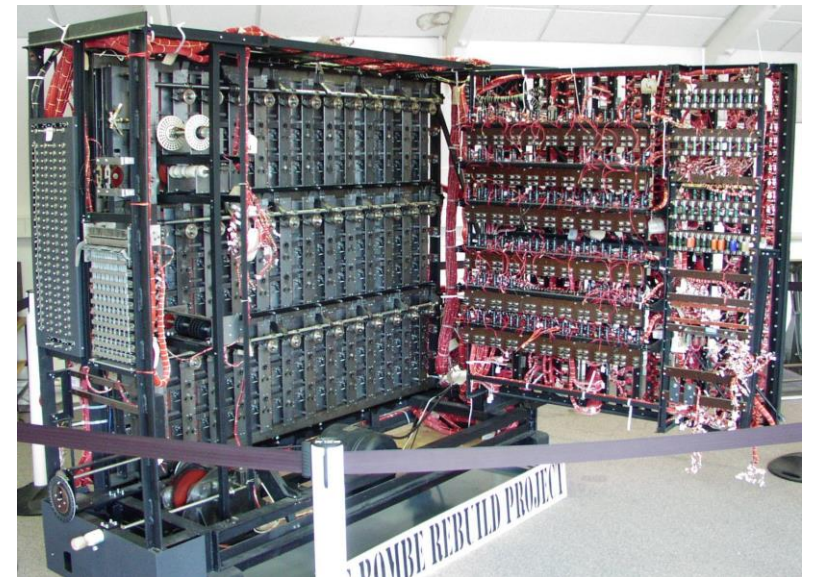
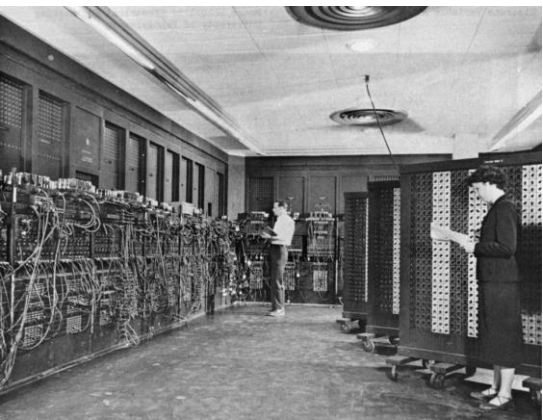


# Computer - Historik

# Before the electronic period

- 1600 PASCAL mechanical machine
- 1800 Punch Card Technology (weavers) – first known sabotage
- 1930 Alan Turing Theoretical Computing (Turing machine)
- 1940 Von Neumann Architecture of Computers
  
- 1944 WWII – England First Computer  
ENIAC – USA



# 1950-1960 : Mathematical + Science + (ADM)

- No OS
- No Language or assembler
- No Net
- Actor: IBM

Denmark: DASK



# 1960-1970 : Science + Administration (transistors)

- OS:  
No OS (CICS - Multitasking)
- Language:  
Assembler/CICS/Fortran/Algol
- Net:  
SNA / (D)Arpa / X.25
- Actor:  
**IBM, Digital, HoneywellBull**

Denmark: Gier / RC4000

Peter Naur – Backus-Naur notation + mem-paging



# 1970-1980 : Administration (IC)

- OS:  
CICS, Unix
- Language:  
CICS , C, Cobol
- Net:  
SNA / X.25(Minitel) / Ethernet  
Internet(ARPA),  
IP(1972/1975),Email(1975/1976)
- Actor:  
IBM, DEC
- Processor  
Intel 8086-80286 (16 bit bus)

Denmark: RC8000, DDE-Supermax, Roving-CR80



# 1980-1990 : Administration + PC

- OS:  
CICS, Unix, DOS('windows'), OS-X
- Language:  
High level – C, C++, Pascal
- Net:  
'internet'-familien
- Actor:  
Microsoft, Compact, HP, SUN, IBM
- Processor  
Intel 80386-80586/pentium (32 bit  
bus x86)

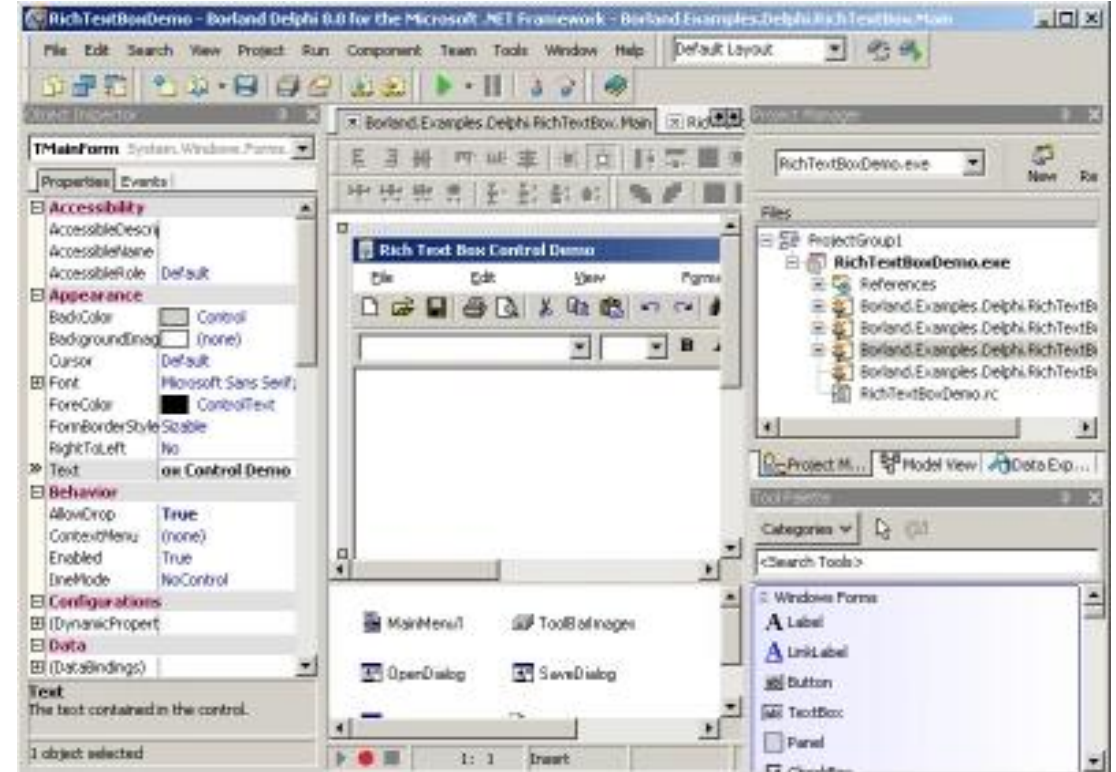
Denmark: Partner/RC900, Piccoline/Piccolo, DDE,  
Rovsing  
Bjarne Staustrop C++



# 1990-2000 : Personal

- OS:  
Windows, Unix/Linux, OS-X  
C++, Java, C#, Delphi
- Net:  
Internet, ADSL
- Actor:  
**Microsoft**
- Processor:  
Intel 80586(Pentium4->) 32 bit (x86)

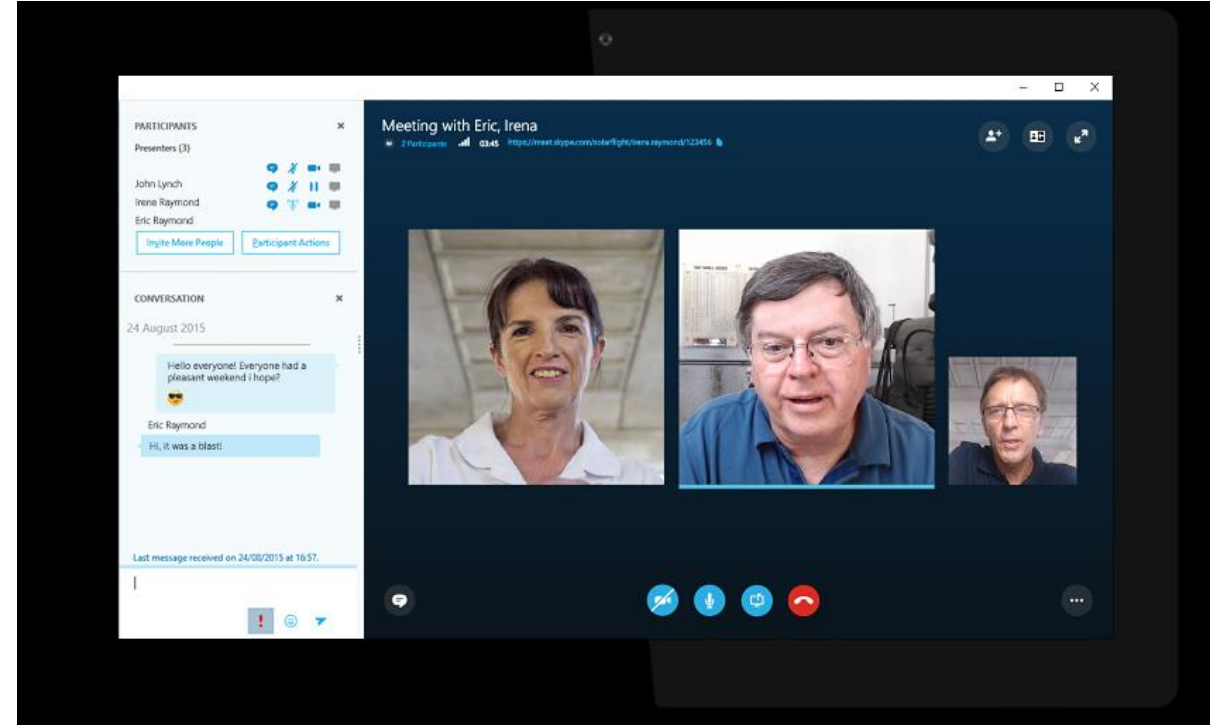
Denmark: Navision (Erik+Preben Damgaard)  
Anders Hejlsberg - IDE



# 2000-2010 : Personal/Net

- OS:  
Windows, Linux, OS-X
- Language:  
Java, C#
- Net:  
Internet, Wifi
- Actor:  
**Microsoft**, Google, Apple
- Processor:  
Intel core 64 bit (x64)

Denmark: Skype  
Janus Friis





# 2010-2020 : Mobile / Cloud

- OS:  
IOS, Android  
Windows, Unix/Linux, OS-X  
Denmark: ....?
- Language:  
C#, Java, Objective-C/Swift, node.JS  
....?
- Net:  
Internet, 4/5G net ....?
- Actor:  
Google, Apple, Microsoft, Facebook,  
Amazon ....?

# History Exercise

- Assume the development within cars have followed computers
- 1982 – The first 'PC' in Denmark
- 1982 – The first VW Polo in Denmark



1982  
Memory in RAM  
CPU frequency  
Disk

2017  
Memory in RAM  
CPU frequency  
Disk



Same progress

1982  
No Of Seats 4  
Top Speed 167 Km/h  
Cargo 400 Kg

2017  
No Of Seats ???  
Top Speed ???  
Cargo ???



