
SysBas
Javascript
Teensy
SuperCollider
Max

Huisregels

We beoordelen geen opdrachten per mail

Altijd 3 weken de tijd per opdracht

Anders in de herkansingsweek (januari - juni)

Huisregels

Geen laptop tijdens theorie

Geen telefoons tijdens theorie

Huisregels

Vraag alles wat je wil vragen

Laat weten als je vastloopt

Gebruik onze hulpbronnen - Syllabus!

Huisregels

AI

promptvermelding

fraude / plagiaat

SysBas 1A

Computerhistorie

Computergebruik

Programmeerbasis

SysBas 1A

Computerhistorie

Waar komt de computer vandaan?

Hoe is de computer geëvolueerd

Hoe werkt de computer?

SysBas 1A

Computergebruik

Hoe beheer je jouw computer?

Hoe werk je snel met jouw computer?

Hoe blijf je de baas over jouw computer

SysBas 1A

Programmeerbasis

Syntax

Logica

Inzicht

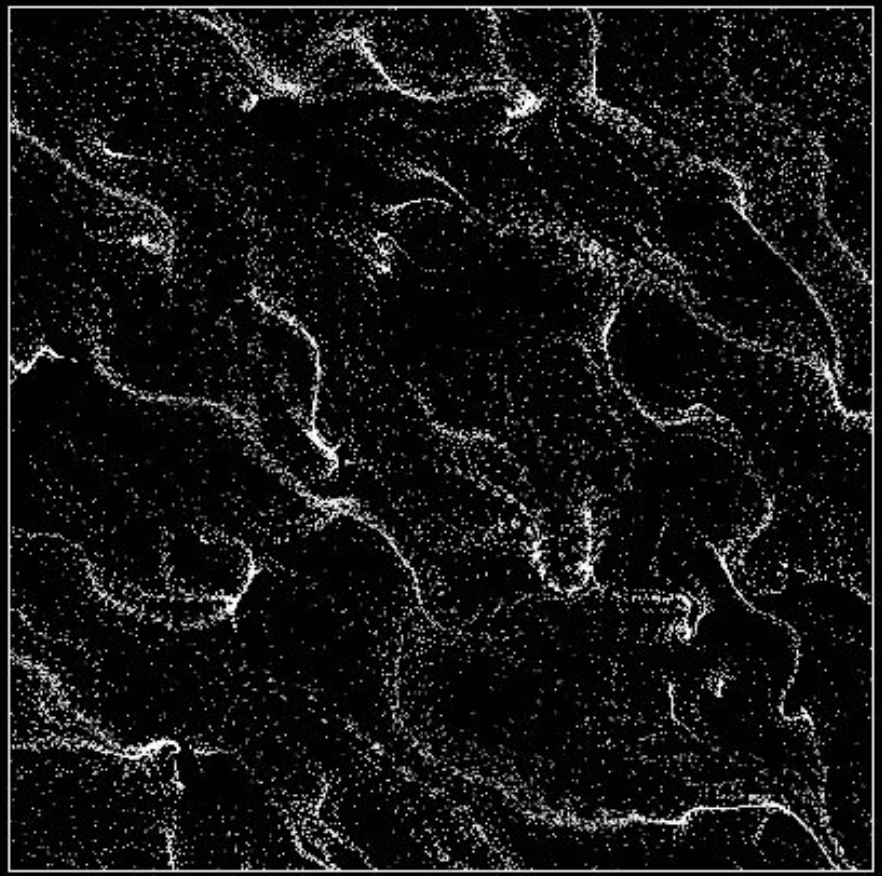
SysBas 1A

Programmeerbasis

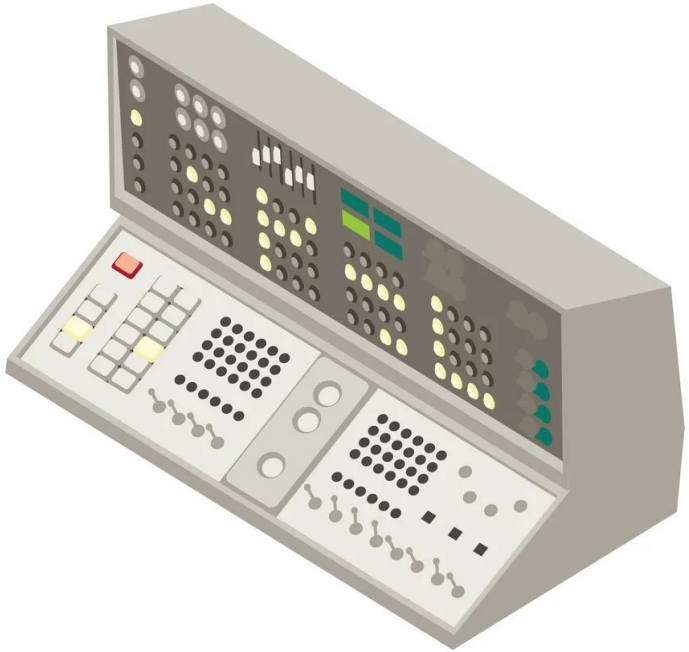
Algoritmische compositie

Visuele feedback

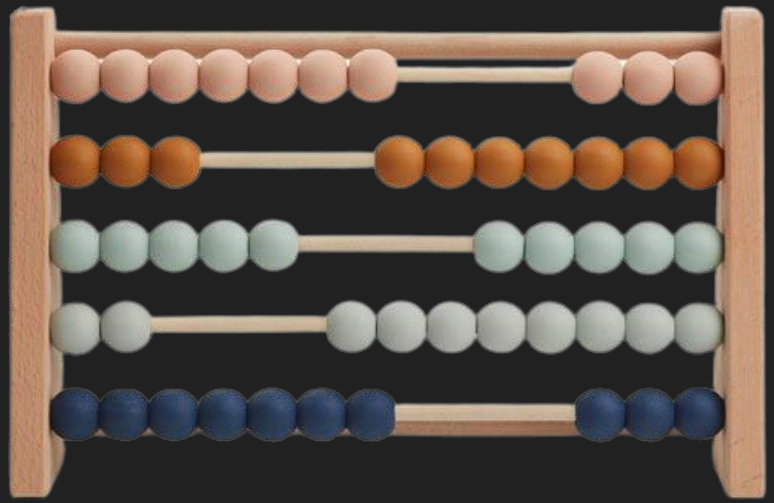
Geluid



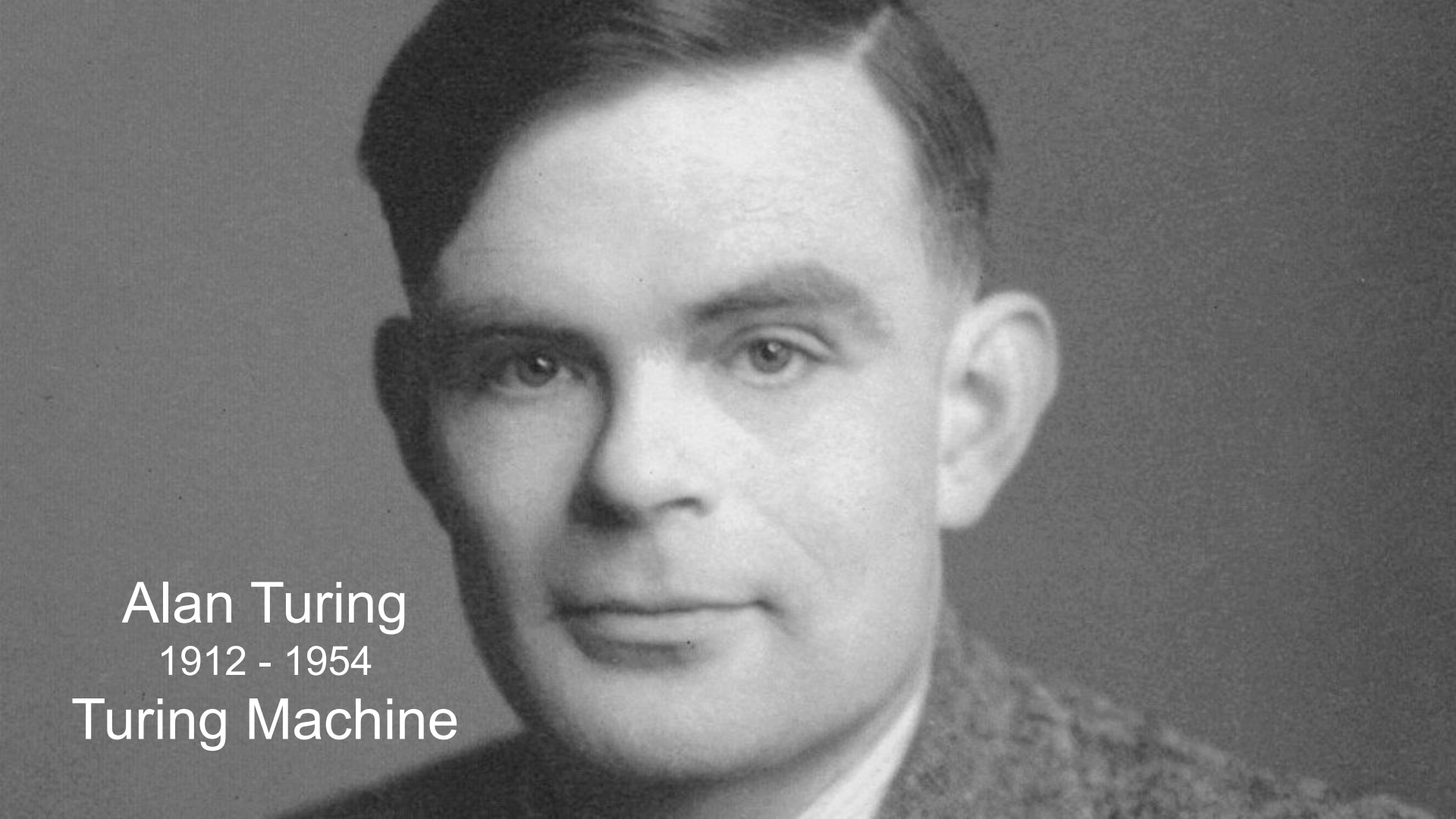
Computerhistorie

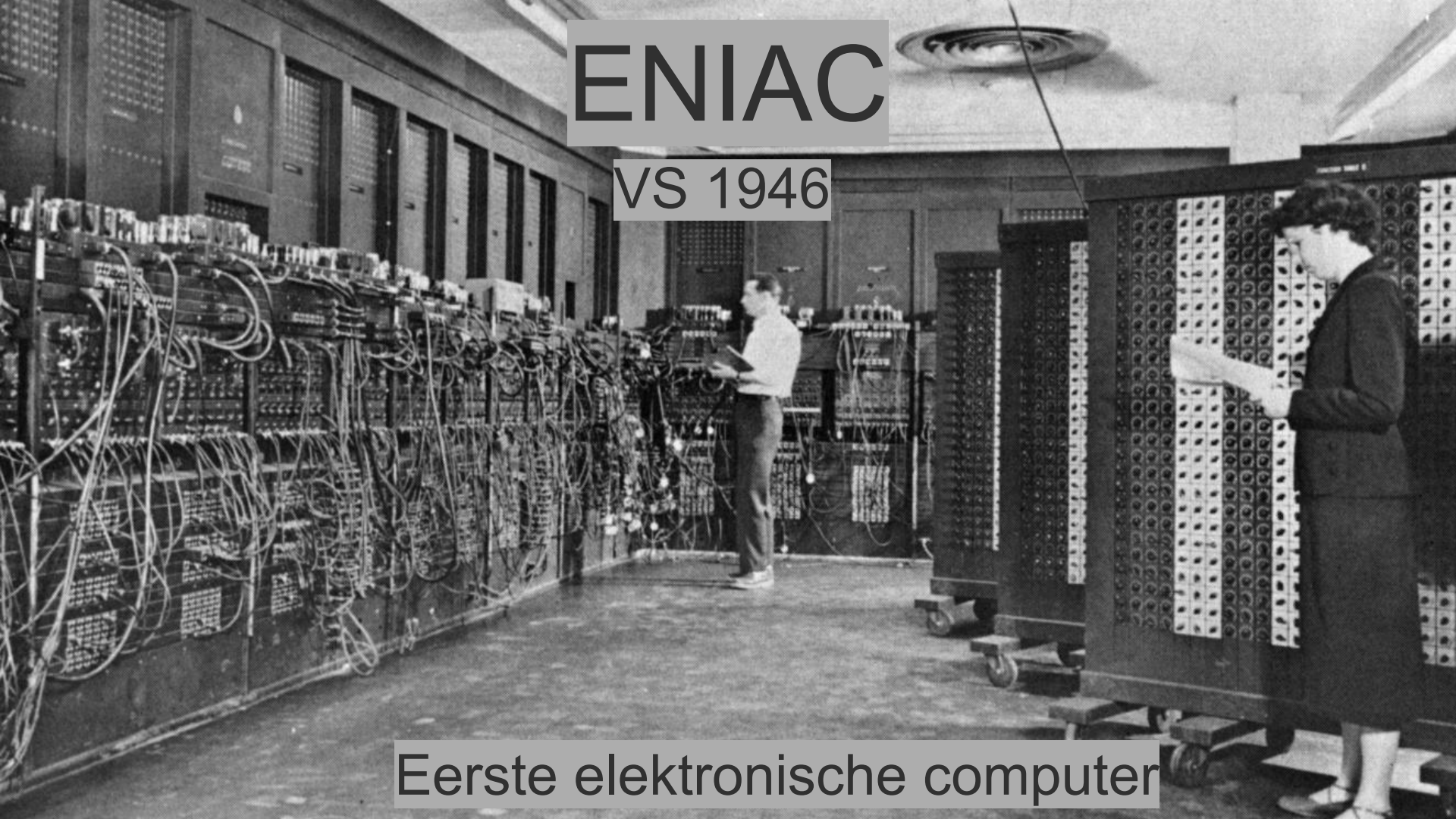


Computer = rekenaar



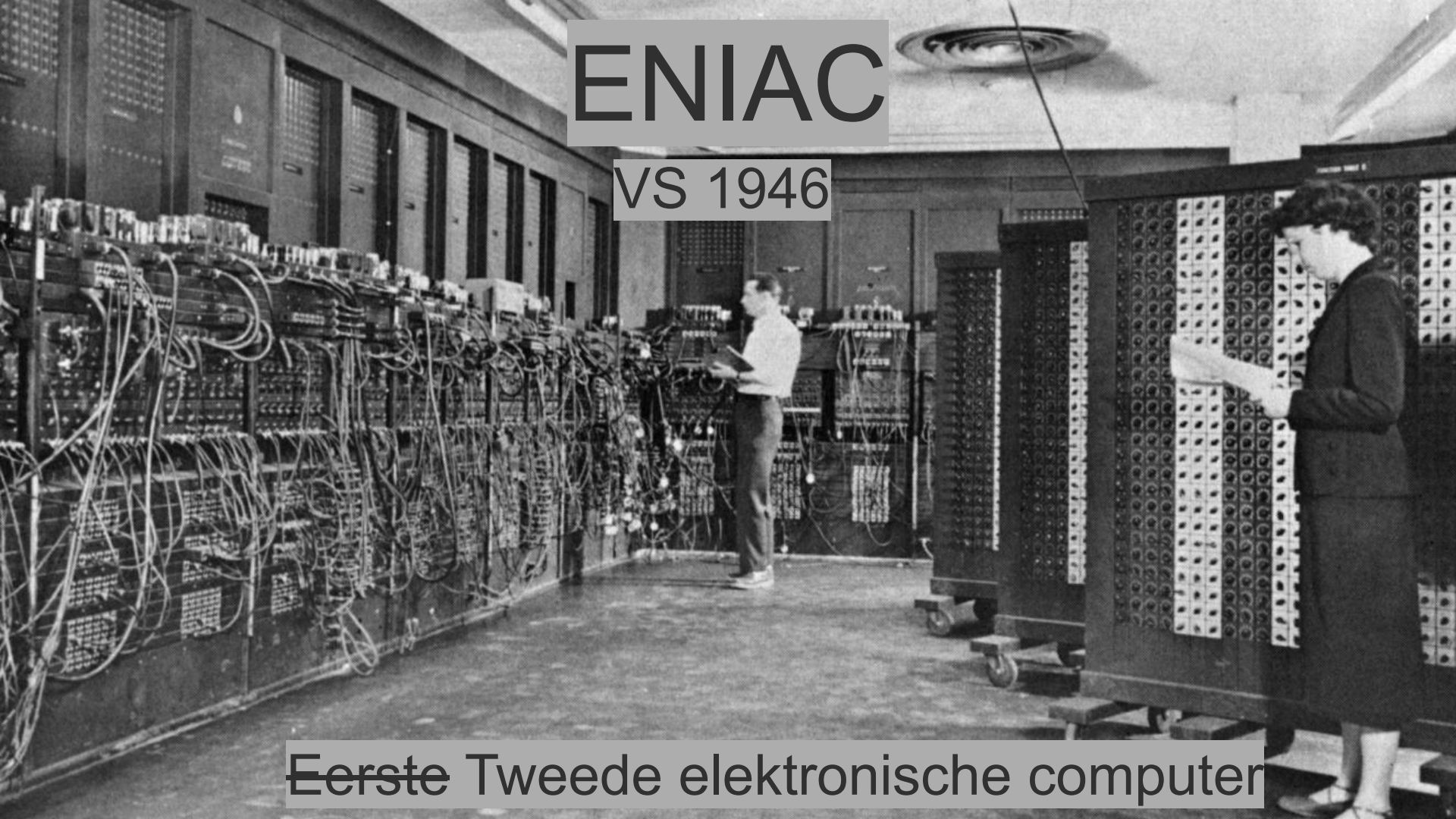

Katherine Johnson
1918 - 2020
NASA Computer


Alan Turing
1912 - 1954
Turing Machine


ENIAC
VS 1946
Eerste elektronische computer

ENIAC

Eerste elektronische computer



ENIAC

VS 1946

~~Eerste~~ Tweede elektronische computer


Colossus
VK 1943
Eerste elektronische computer


CSIRAC
1949
eerste computer die muziek speelde

CSIRAC

eerste computer die muziek speelde


Daphne Oram
Oramics
1959

Oramics

1959


THE C64
Commodore 64
1982
“a true music synthesizer”

Commodore 64

Laurie Spiegel
Music Mouse

1986

Laurie Spiegel

Music Mouse

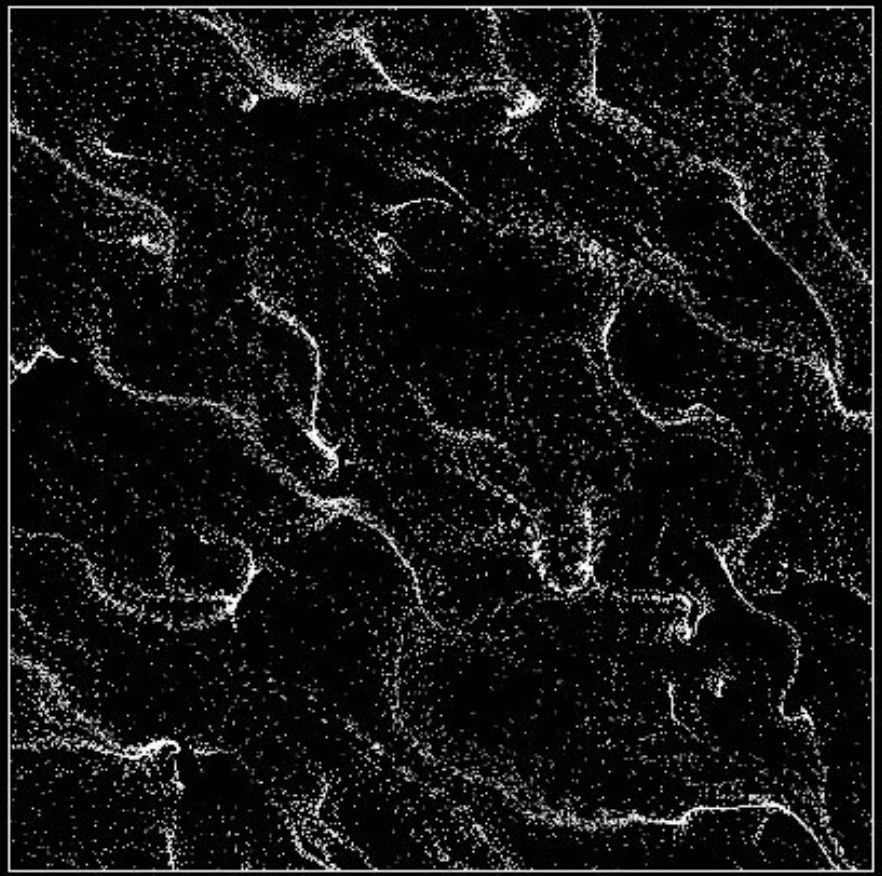
Rekenkracht

Een gemiddelde smartphone heeft zo’n 1,048,576x meer RAM geheugen dan de Apollo boordcomputer

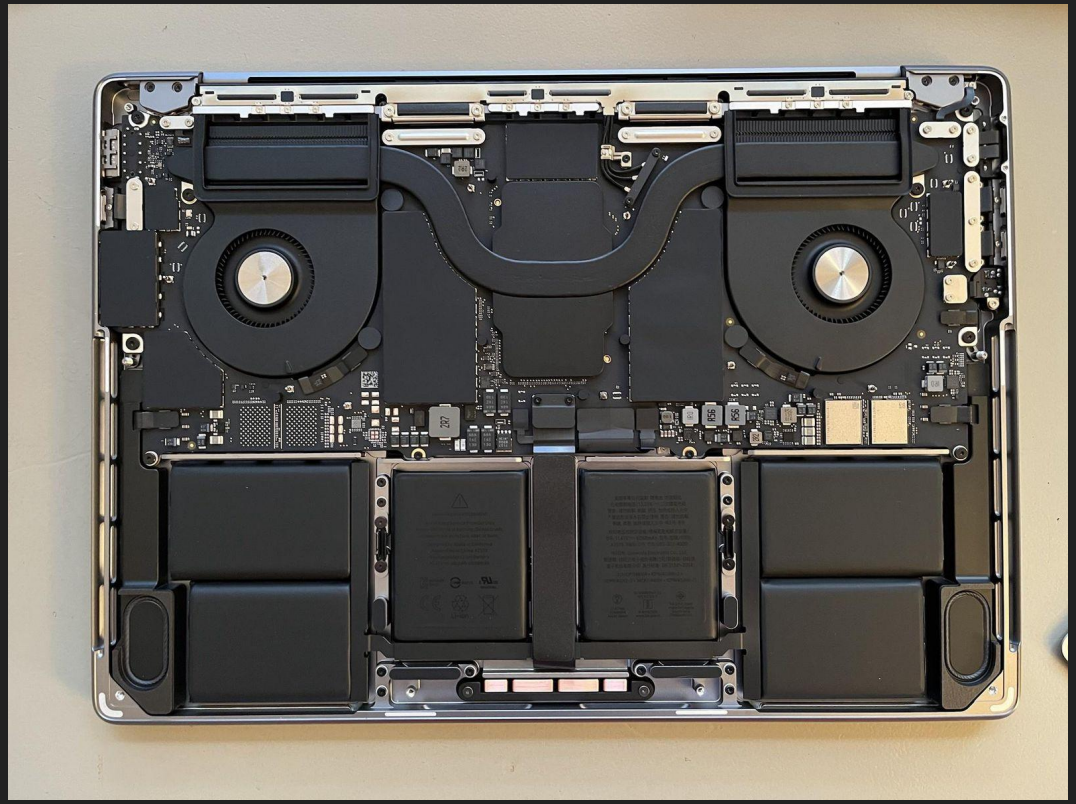
Practicum

Terminal gebruiken

korte toelichting



Wat zit er in een computer?



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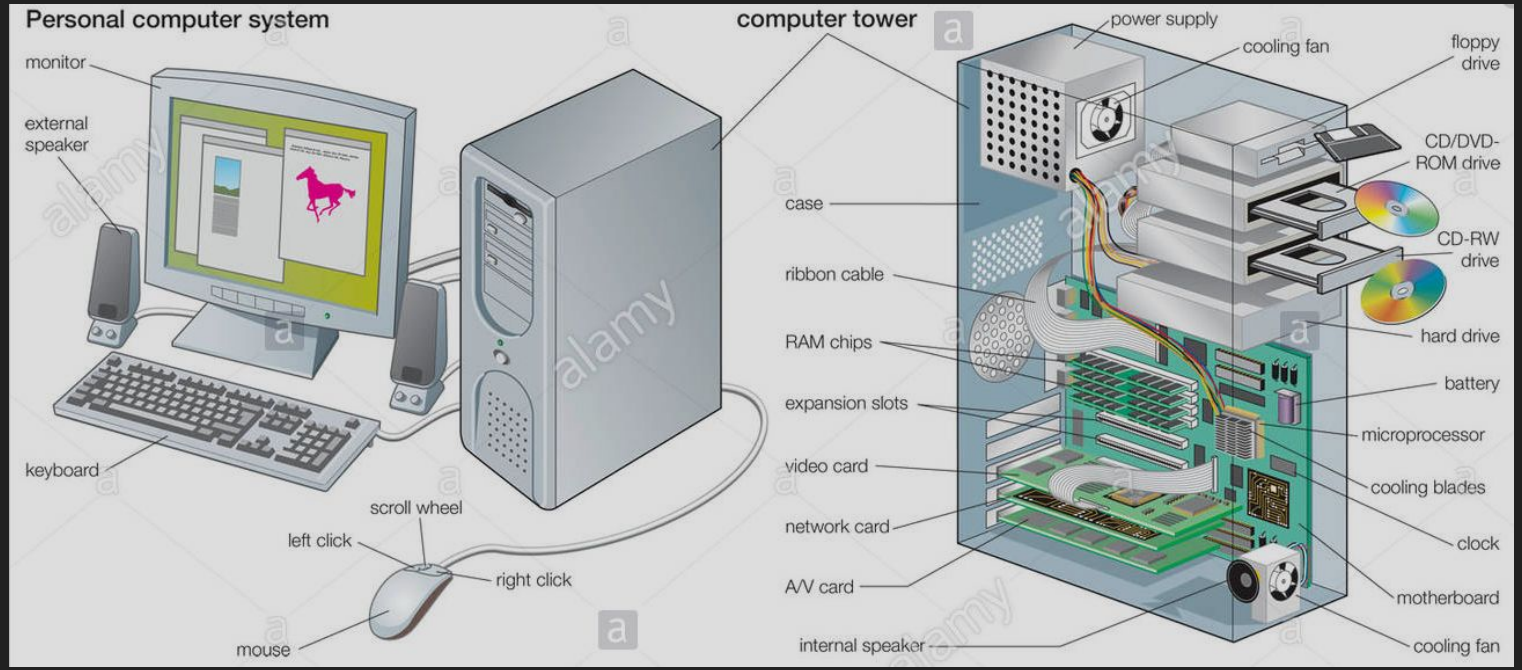
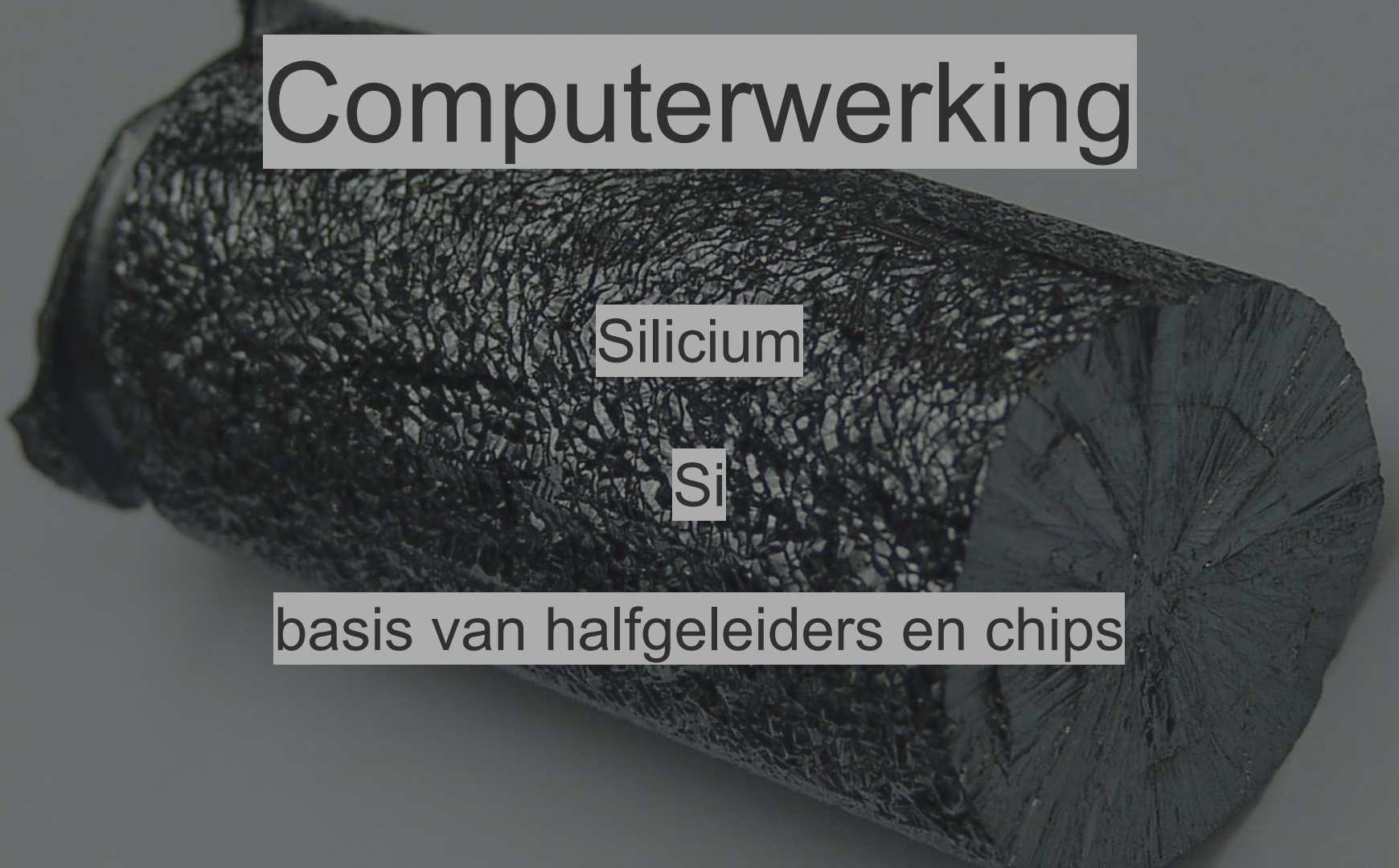


Computerwerking



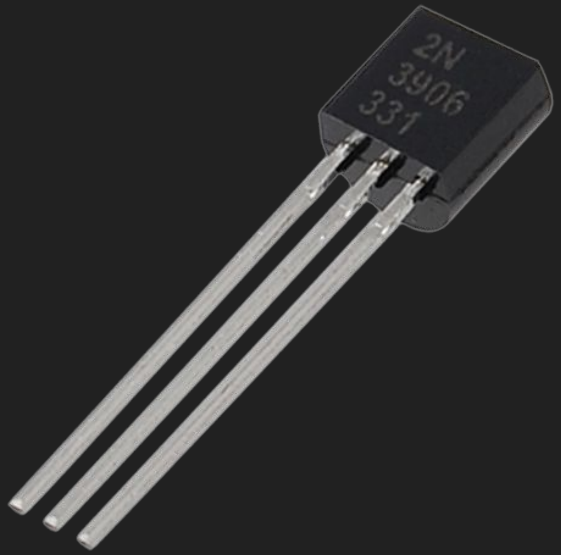
Silicium

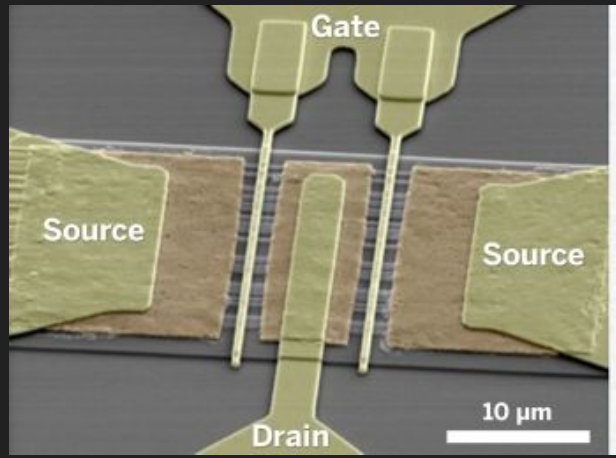
Si

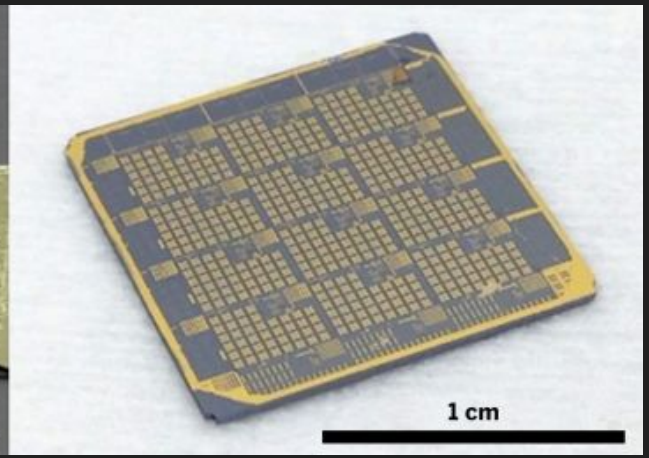
basis van halfgeleiders en chips

Transistor

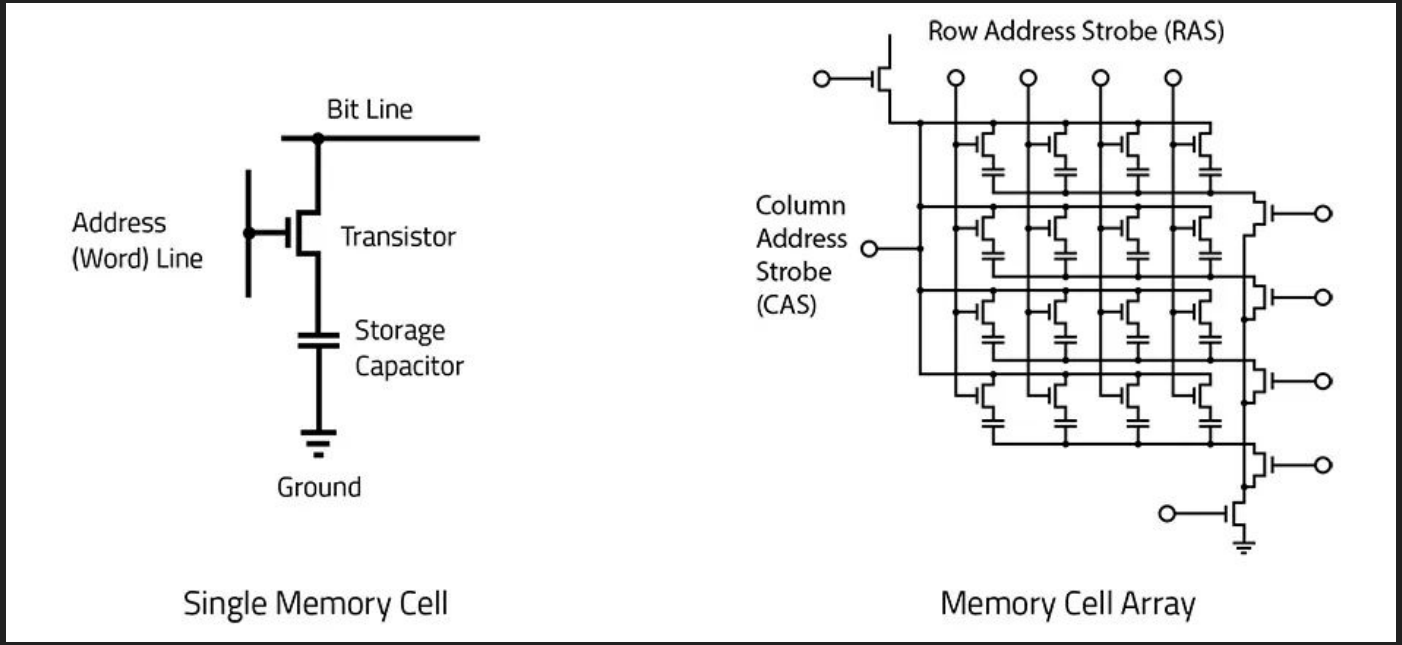
Schakelaar / versterker





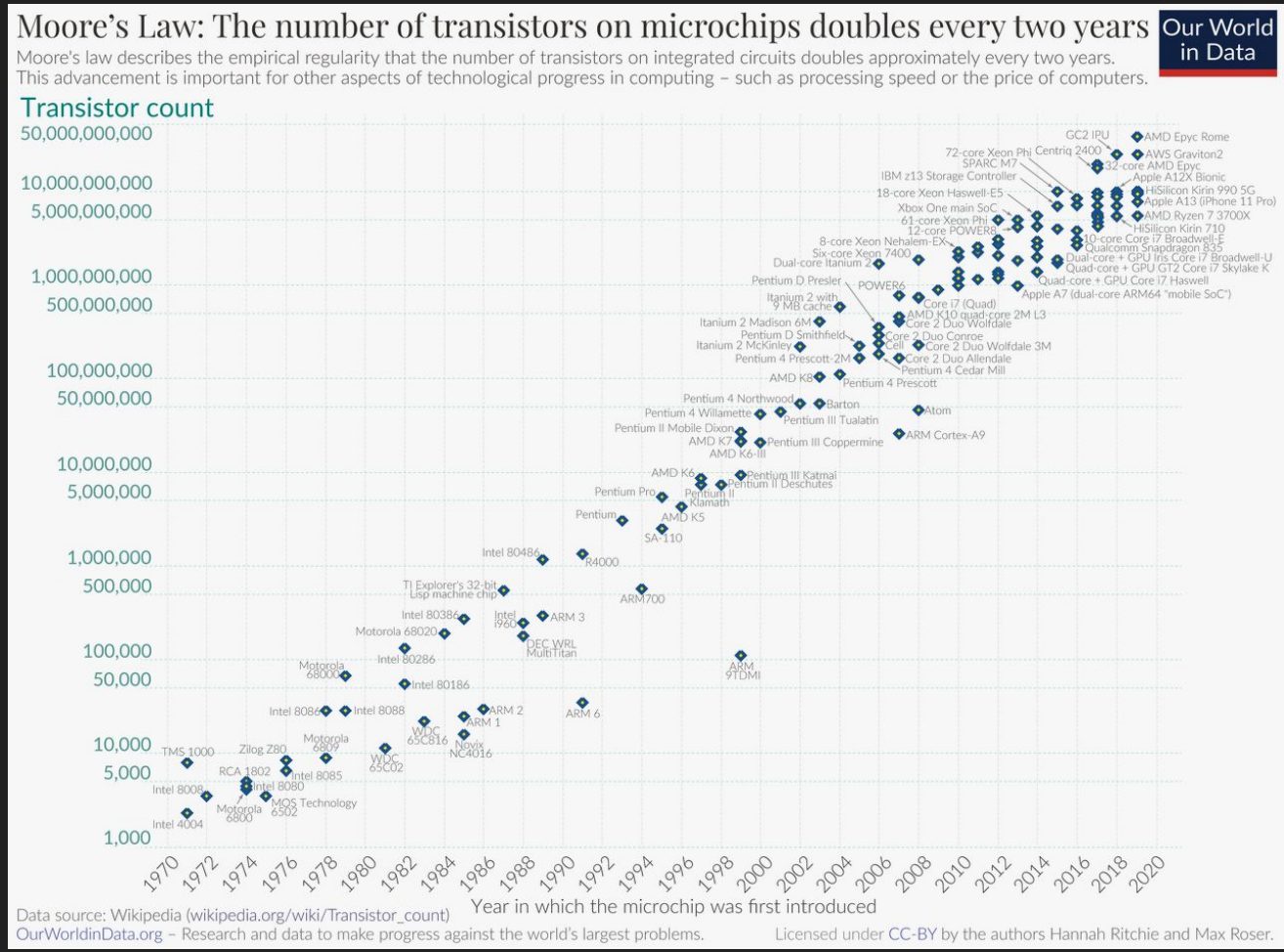


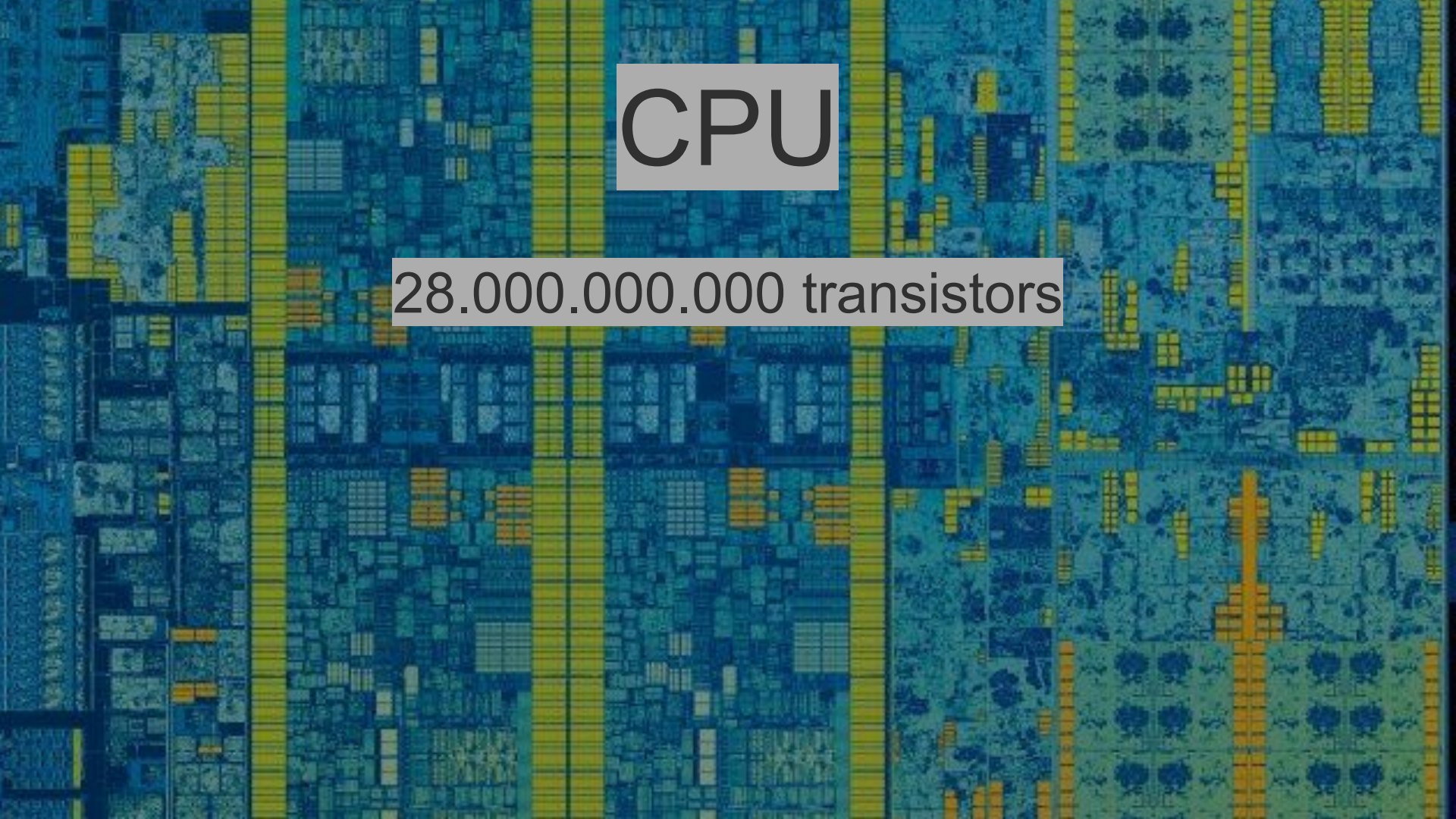
Transistor

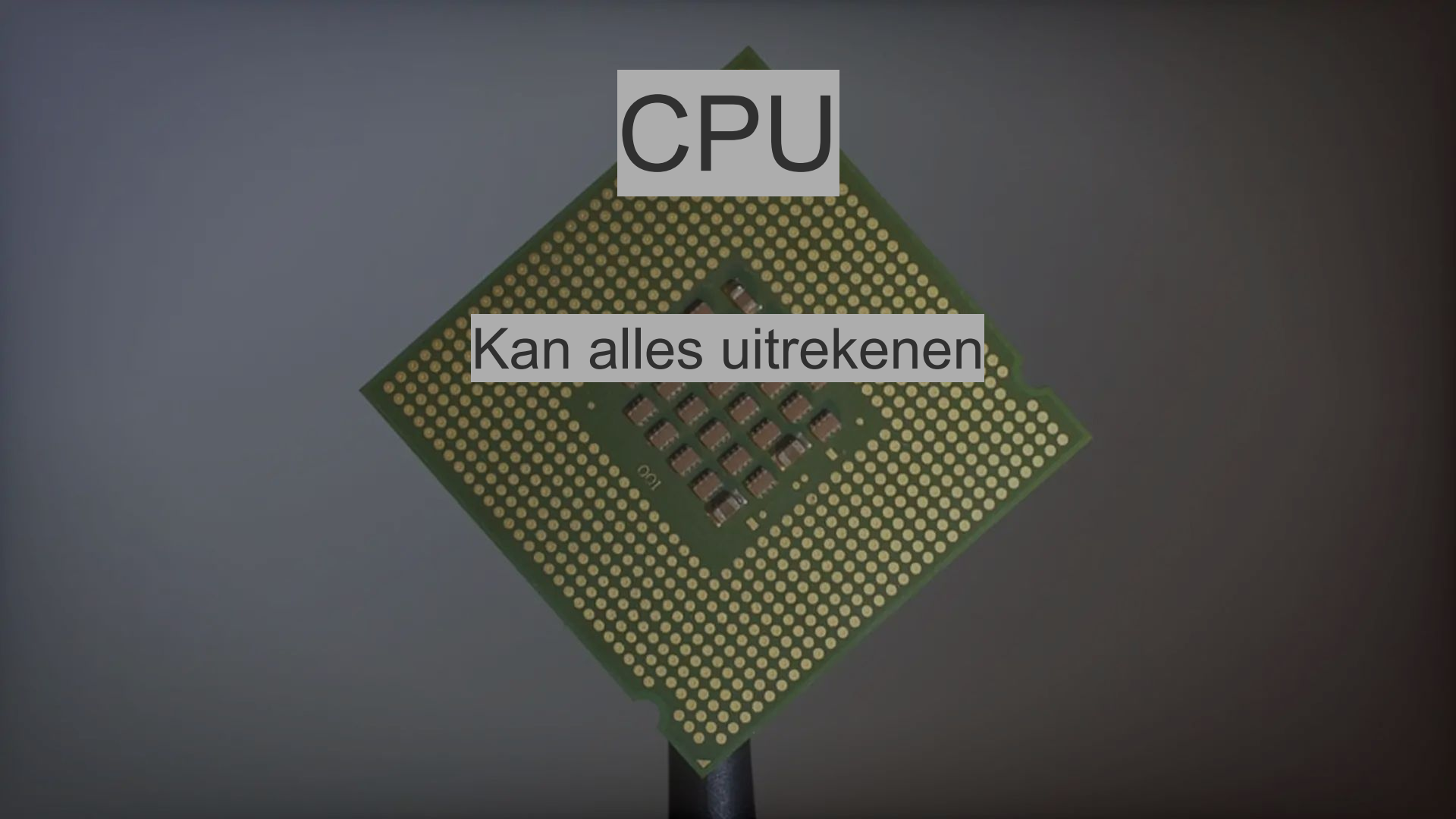

Bit Line
Address
(Word) Line
Transistor
Storage
Capacitor
Ground
Single Memory Cell
Row Address Strobe (RAS)
Column
Address
Strobe
(CAS)
Memory Cell Array

Gordon Moore
1929 - 2023

Moore’s Law

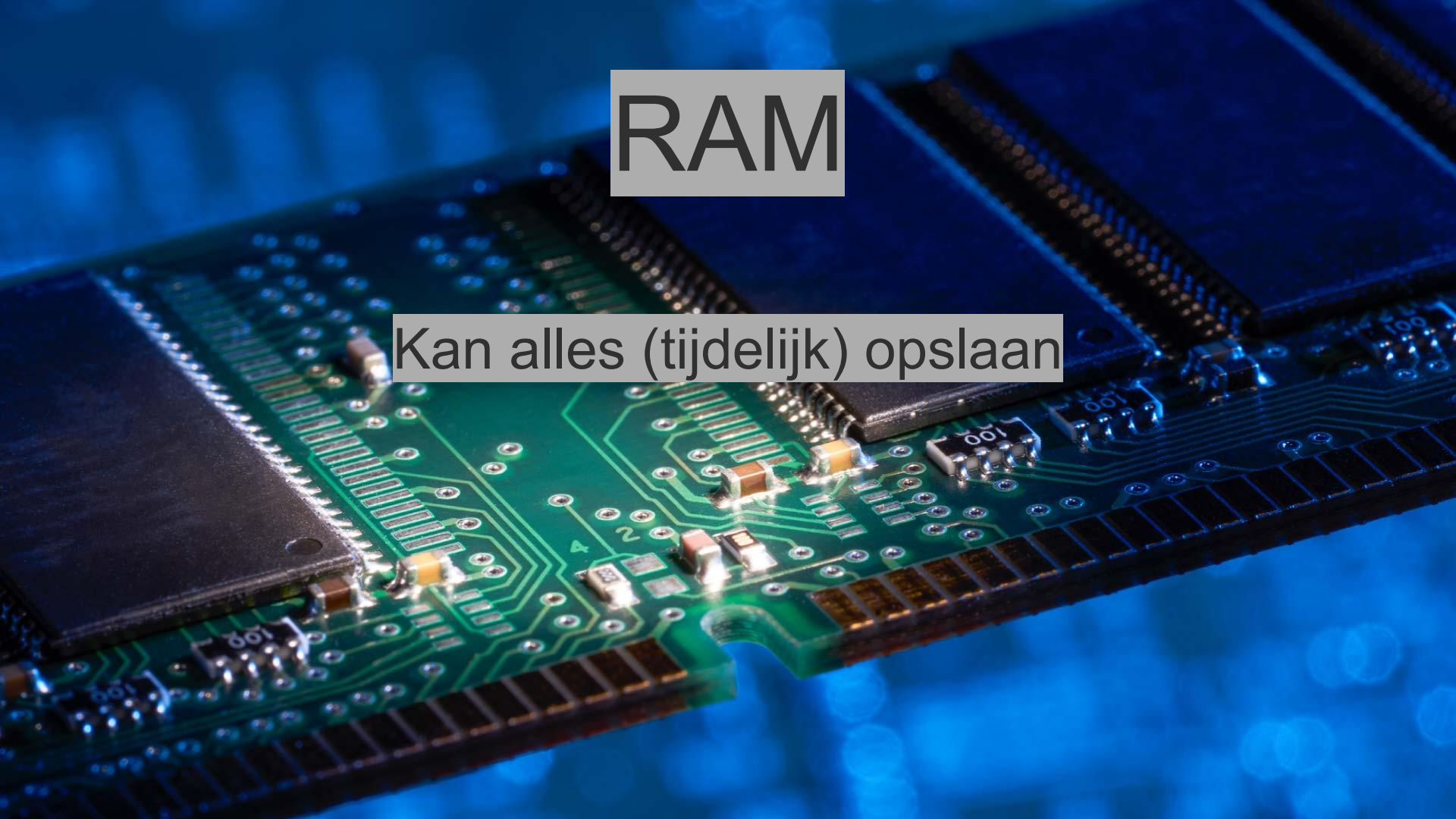



CPU
28.000.000.000 transistors


CPU
Kan alles uitrekenen

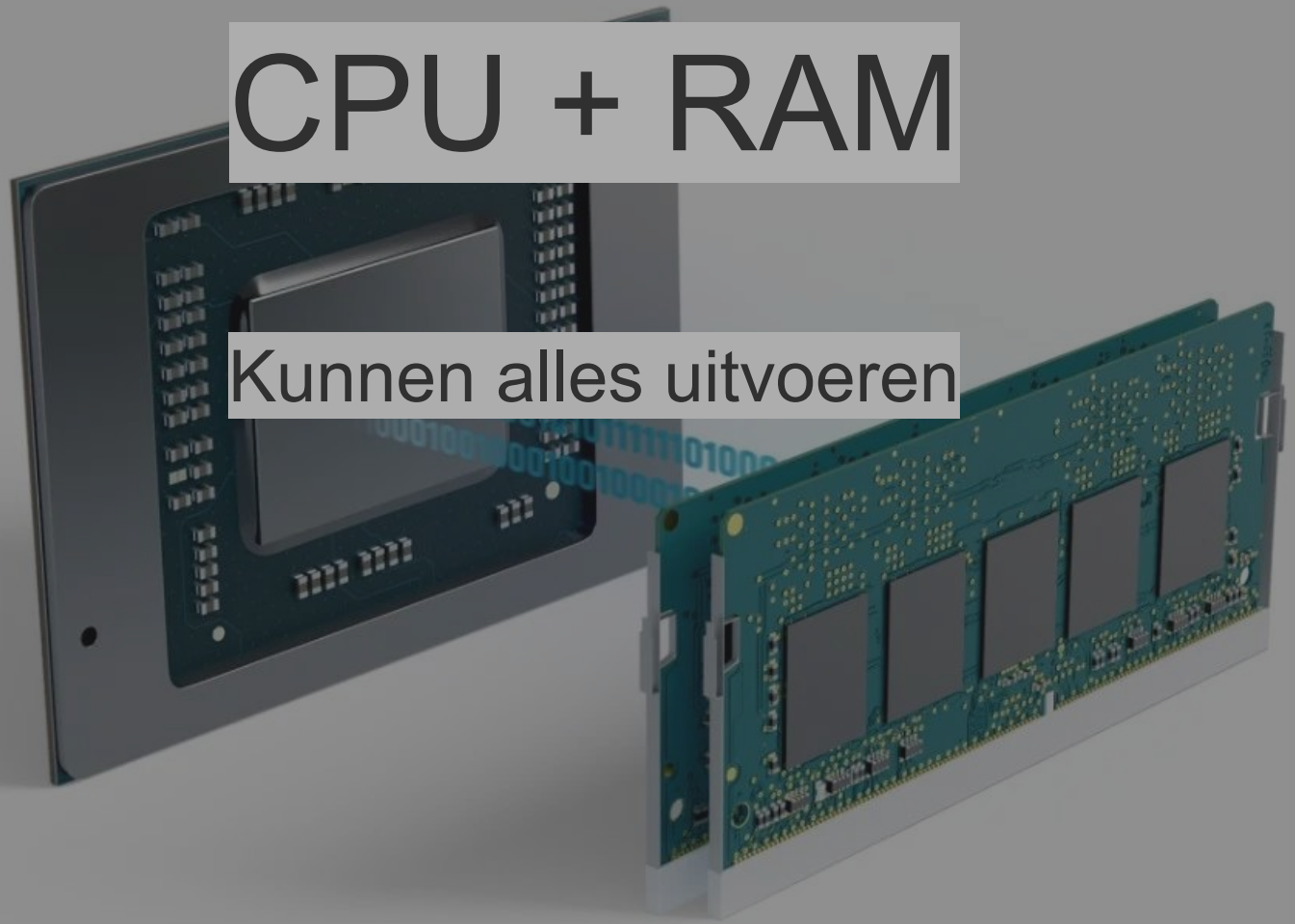
RAM

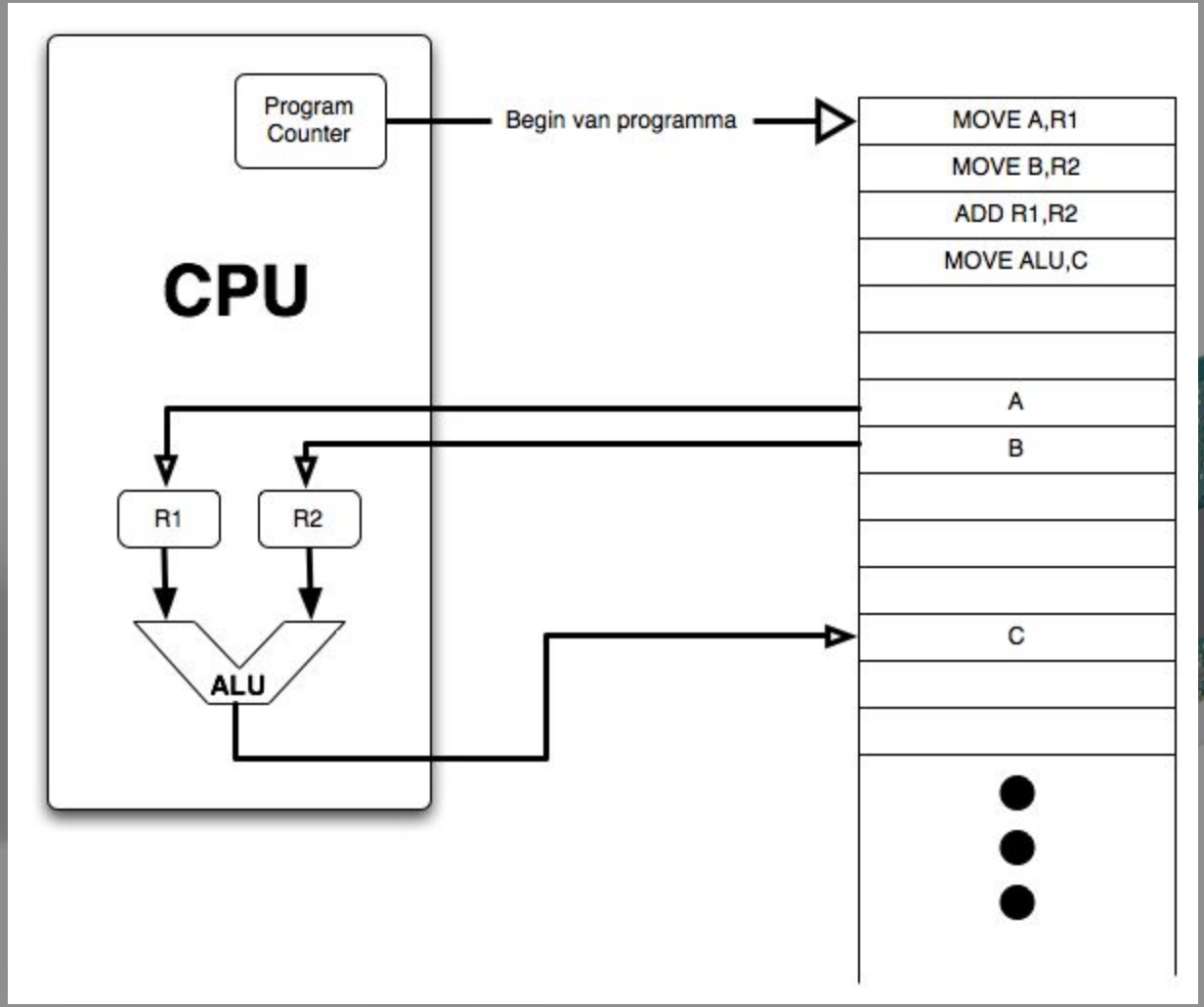
Kan alles (tijdelijk) opslaan

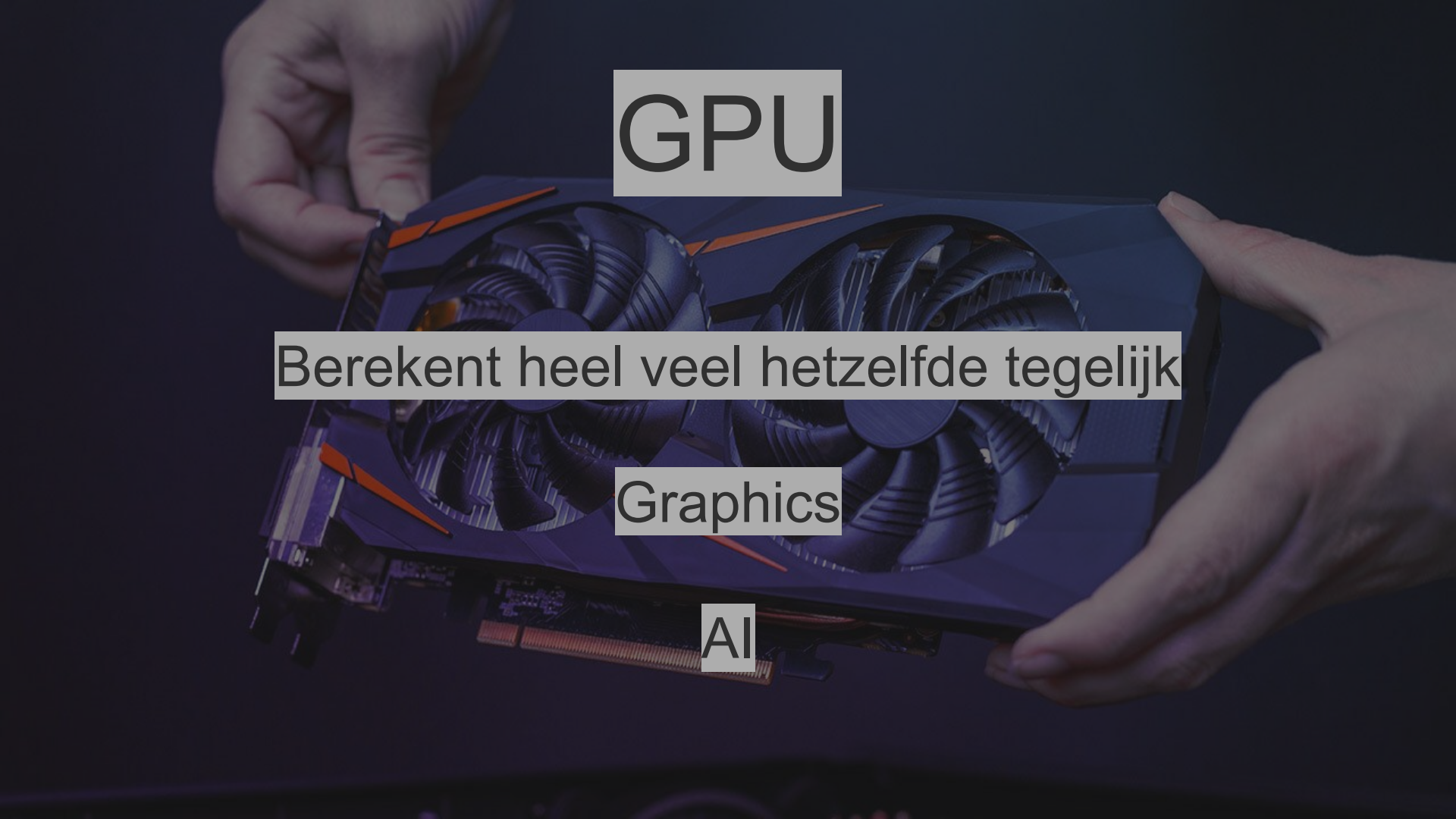


CPU + RAM

Kunnen alles uitvoeren




Program Counter
Begin van programma
CPU
MOVE A,R1
MOVE B,R2
ADD R1,R2
MOVE ALU,C
A
B
R1
R2
ALU
C



GPU

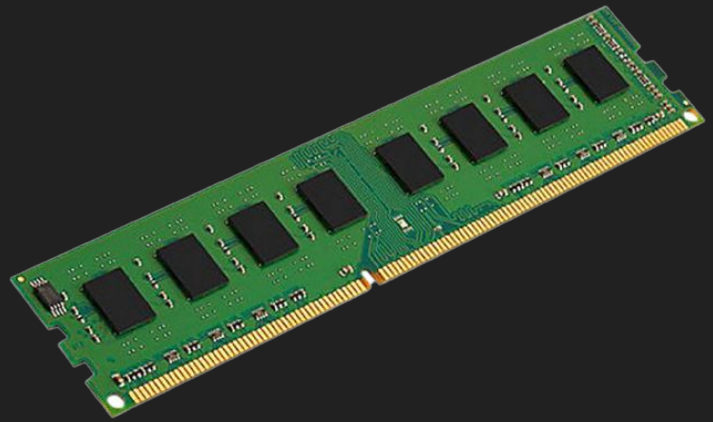
Berekent heel veel hetzelfde tegelijk

Graphics

AI

Geheugen en Opslag

Geheugen	vs.	opslag
RAM	vs.	opslaggeheugen
Tijdelijk	vs.	permanent



Practicum

P5.js voorbeelden

csdosc gebruiken