GPN21

ch(ea|i)p alternatives

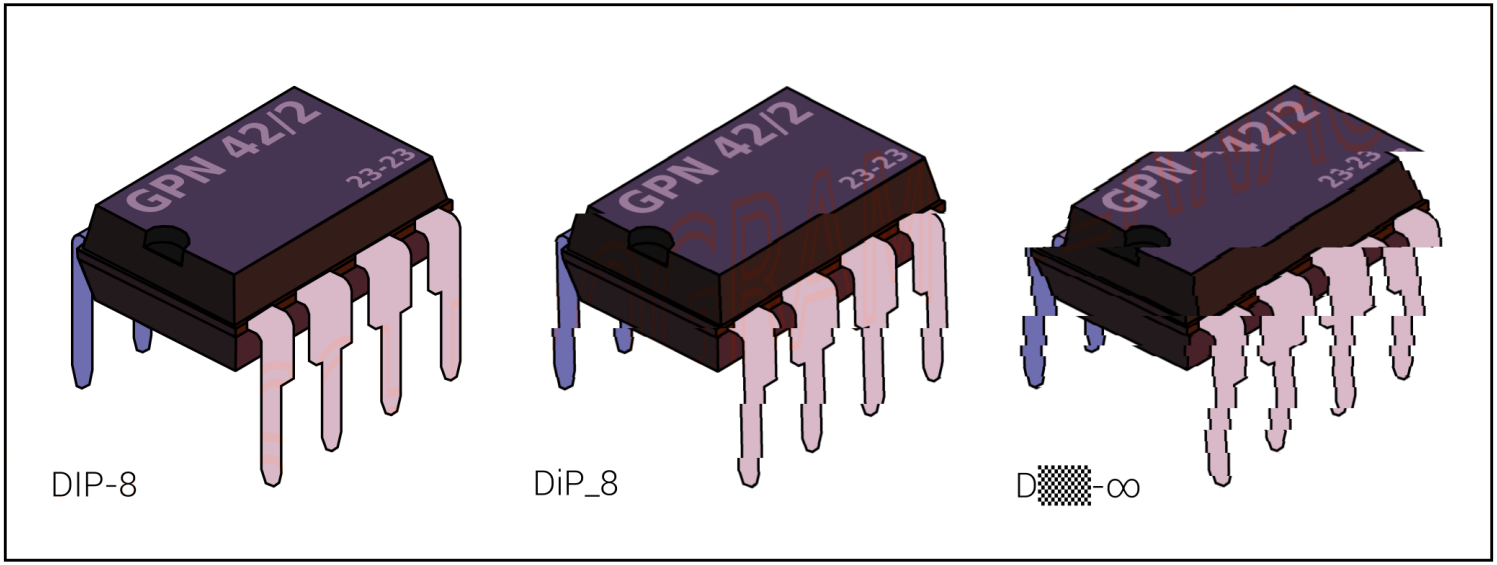
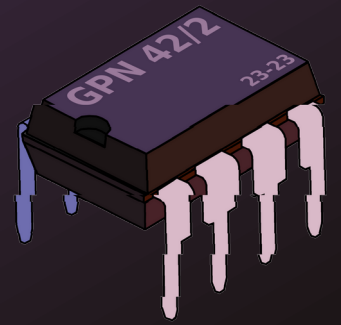


Figure 1: Packages

Kinder,
es tut mir
unendlich leid ...



#gpn20

@LEYRER [@chaos.social]
https://martin.leyrer.priv.at




Manner
WIEN
FAIRTRADE
COCOA
ORIGINAL
Neapolitaner



Follow

Felix Kazuya
@felixkazuya Follows you

https://twitter.com/felixkazuya/photo

Nach 2038 kommt 1901 und weitere Software-Kuriositäten

.ical

06-08, 22:25–22:55 (Europe/Berlin), Media Theater
Language: Deutsch

Maschinen und Programme, die Daten verarbeiten, unterliegen verschiedensten Einschränkungen und Architektur-Annahmen.
Im besten Fall bemerken wir nichts davon, in vielen Fällen treten allerdings unerwartete Verhaltensweisen, bekannt als Glitches und Bugs, auf.
Diese können amüsant werden und für ein Schmunzeln sorgen, aber genauso gefährlich und teuer sein.
Dieser Talk befasst sich mit (historischen) Beispielen von besonderem und auf Irrwegen befindlichem Verhalten von Software und erklärt auf Basis von Computerarchitektur, wie es zu solchen Kuriositäten kommt.
Besonders geeignet für alle, die nicht oder noch nicht lange selbst Software bauen und einen ersten Blick unter die Haube gewinnen wollen.

Content Notes –
Unfälle mit Verlust von Hardware/Maschinen

Lea Rain

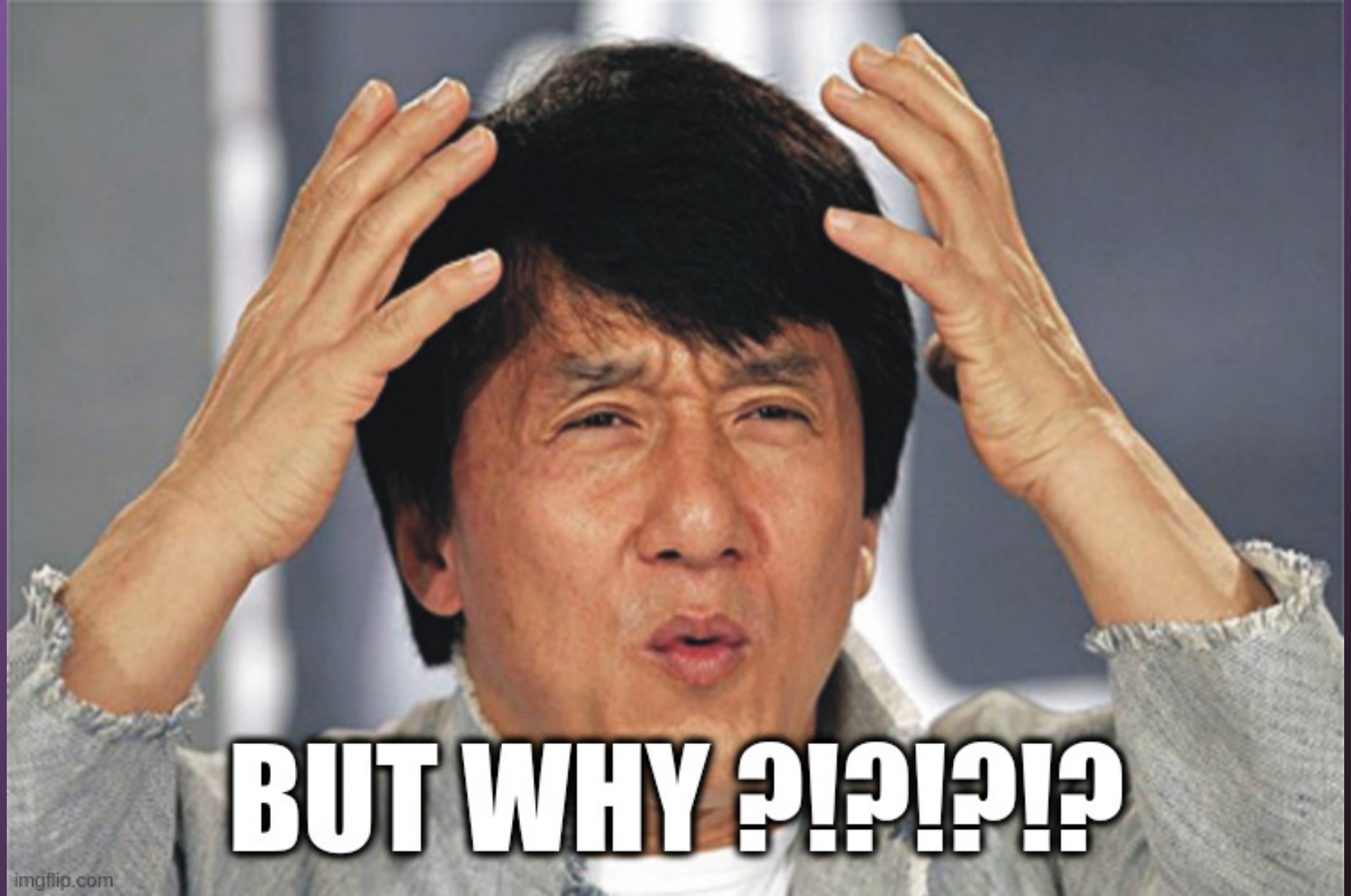
Koffeinabhängige ITlerin mit fragwürdigem Humor, bekannt als blue1337blood(@social.netz.org) (oder auf der Vogelseite), Binary Kitchen Regensburg


THAT MOMENT
YOUR DAD STARTS TAKING ABOUT YOU
imgflip.com


10:04 am 50%
Chronicle
Online
26 November 2003
Checkliste für Universaldilettanten
https://media.ccc.de/v/froscon2022-2791-checkliste_fur_universaldilettanten
Falls dir fad ist ... ;)
11:42 am
27 November 2022
Chronicle
Talk war sehr cool, gute memes am anfang. Wirkte fast so als ob du nicht über 40 bist 😉
11:42 am

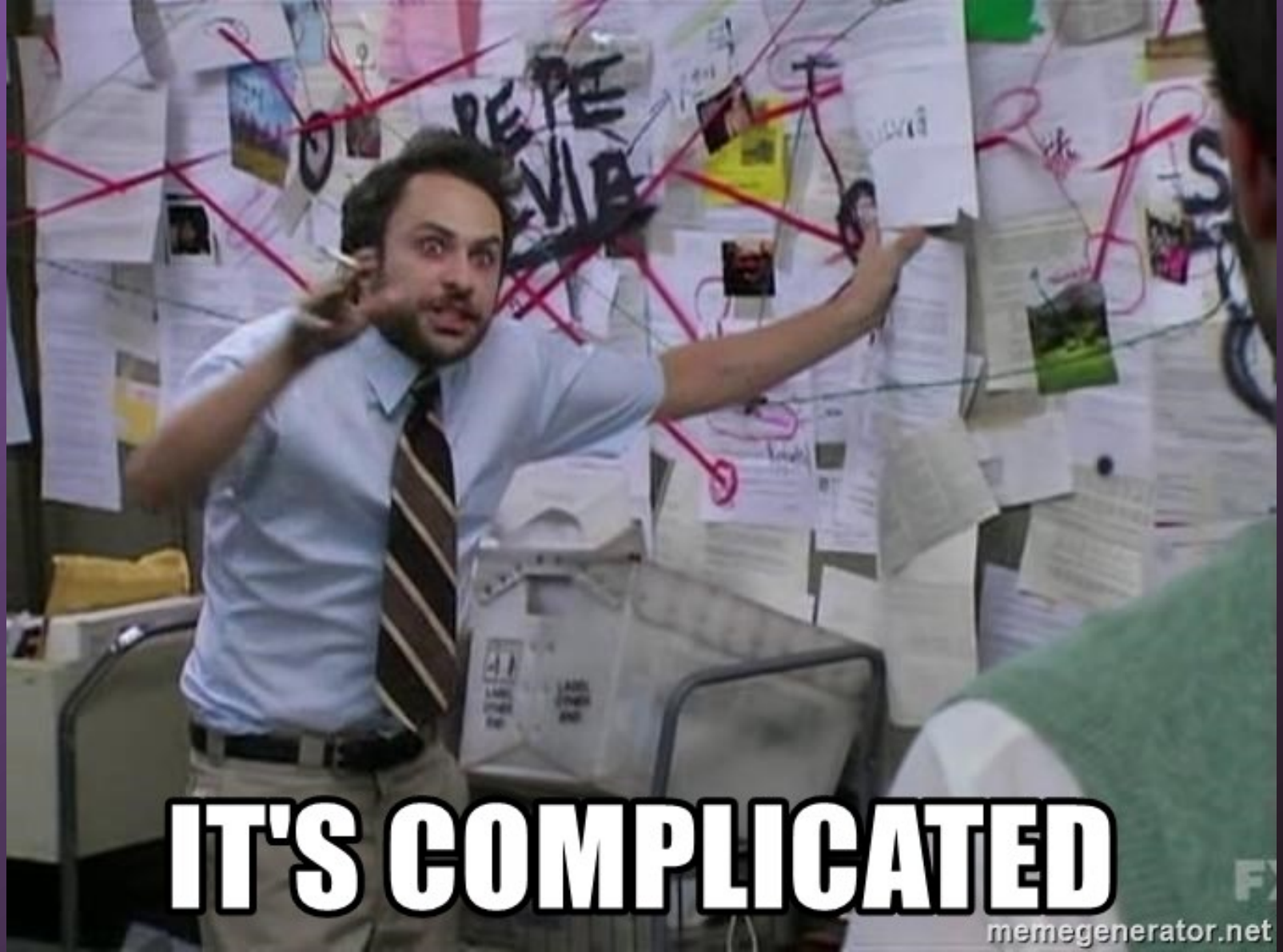

TU
WIEN


Cyber Security Team
FH Campus Wien
KALI LINUX
REVEALED


BUT WHY ?!?!?!?
imgflip.com

VATER !!!

Warum kann ich keinen Ordern “CON” anlegen?


IT'S COMPLICATED
memegenerator.net

Es ist nicht nur “CON”

- CON
- PRN
- AUX
- NUL

- COM1, COM2, COM3, COM4, COM5, COM6, COM7, COM8, COM9
- LPT1, LPT2, LPT3, LPT4, LPT5, LPT6, LPT7, LPT8, and LPT9


MS
DOS


CP/M
PLUS
Copyright 1982,1983 Digital Research Inc.
Licensed to Tandy Corporation
Unbanked BIOS Copyright 1983 Tandy Corporation
Radio Shack Version 01.00.00 -- Serial Number 808F-000481
ENTER DATE (MM/DD/YY):

PIP allows reference to physical and logical devices that are attached to the CP/M svstem. The device names are the same as given under the STAT command, along with a number of specially named devices. The following is a list of logical devices given in the STAT command

CON: (console)
RDR: (reader)
PUN: (punch)
LST: (list)

while the physical devices are

TTY: (console , reader, punch, or list)
CRT: (console, or list), UC1: (console)
PTR: (reader), URI: (reader), UR2: (reader)
PTP: (punch), UPI: (punch), UP2: (punch)
LPT: (list), ULI: (list)

The BAT: physical device is not included, because this assignment is used only to indicate that

```
SCP 8086 Monitor 1.5
>B
☺
86-DOS version 1.00
Copyright 1980,81 Seattle Computer Products, Inc.
Enter today's date (m-d-y): 01-01-80

COMMAND v. 1.00

A:chkdsk a:
          19 disk files
      245760 bytes total disk space
      146944 bytes remain available

           0 bytes total system RAM
     1036448 bytes free

A:edlin news.doc

EDLIN  version 1.00
End of input file
*_
```

SCP 86-DOS™

A single-user disk operating system for the 8086

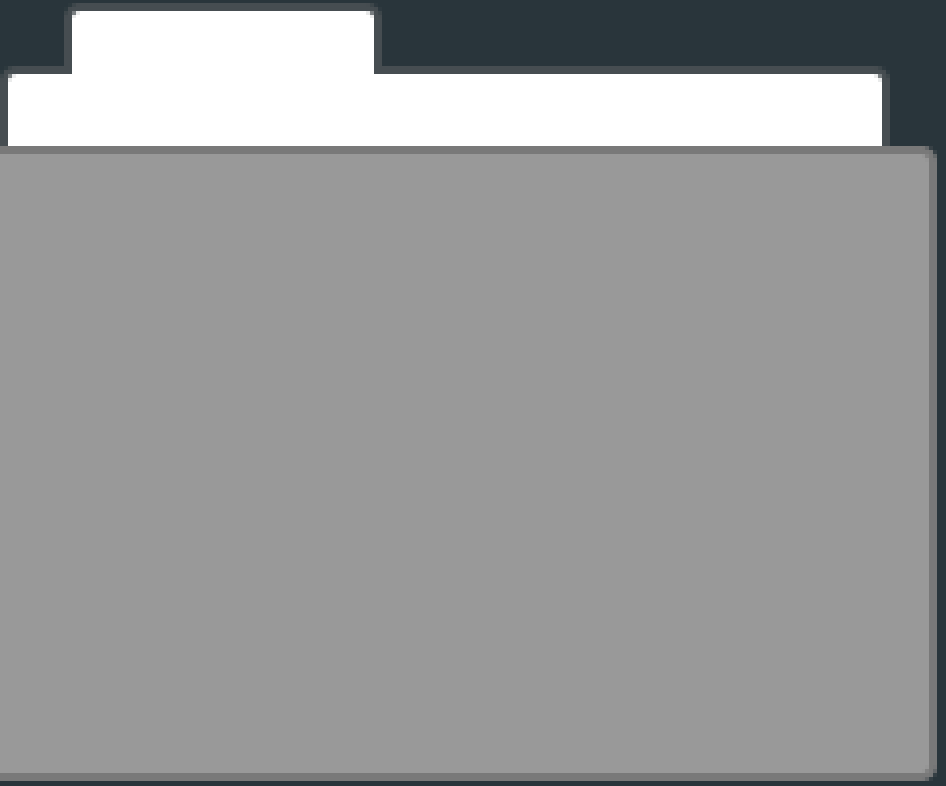
Introduction

86-DOS provides the tools needed to develop programs for the 8086, as well as a hardware-independent environment in which to run these programs. It is a very modular system. At its core is the disk file manager and I/O device handler, and everything else is considered a "user program". This allows the system to be easily tailored to any custom requirements.

The disk file manager allows programs to create and access disk files by name. Files may be read or written sequentially or randomly, any number of records at a time. File space on the disk is allocated dynamically, so that no "compaction" phase is ever required.

A program called COMMAND provides the interface between the user at the console and the file manager. COMMAND allows the user to display the disk directory, rename, destroy, or copy files, and execute other programs, such as the assembler, editor, or source code translator.

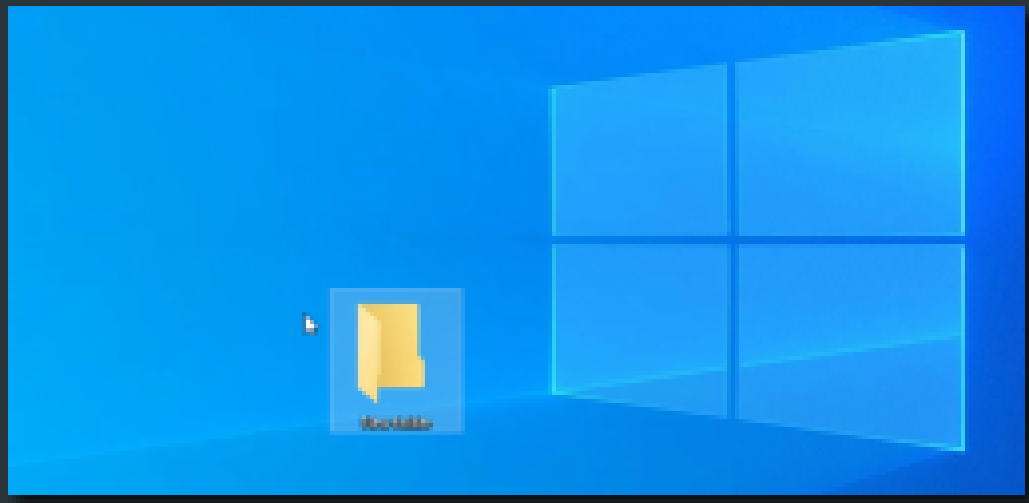

ALBUQUERQUE N MEX
APD 105 519
12 13 77



CON

0 items

2023-06-06 20:59:55



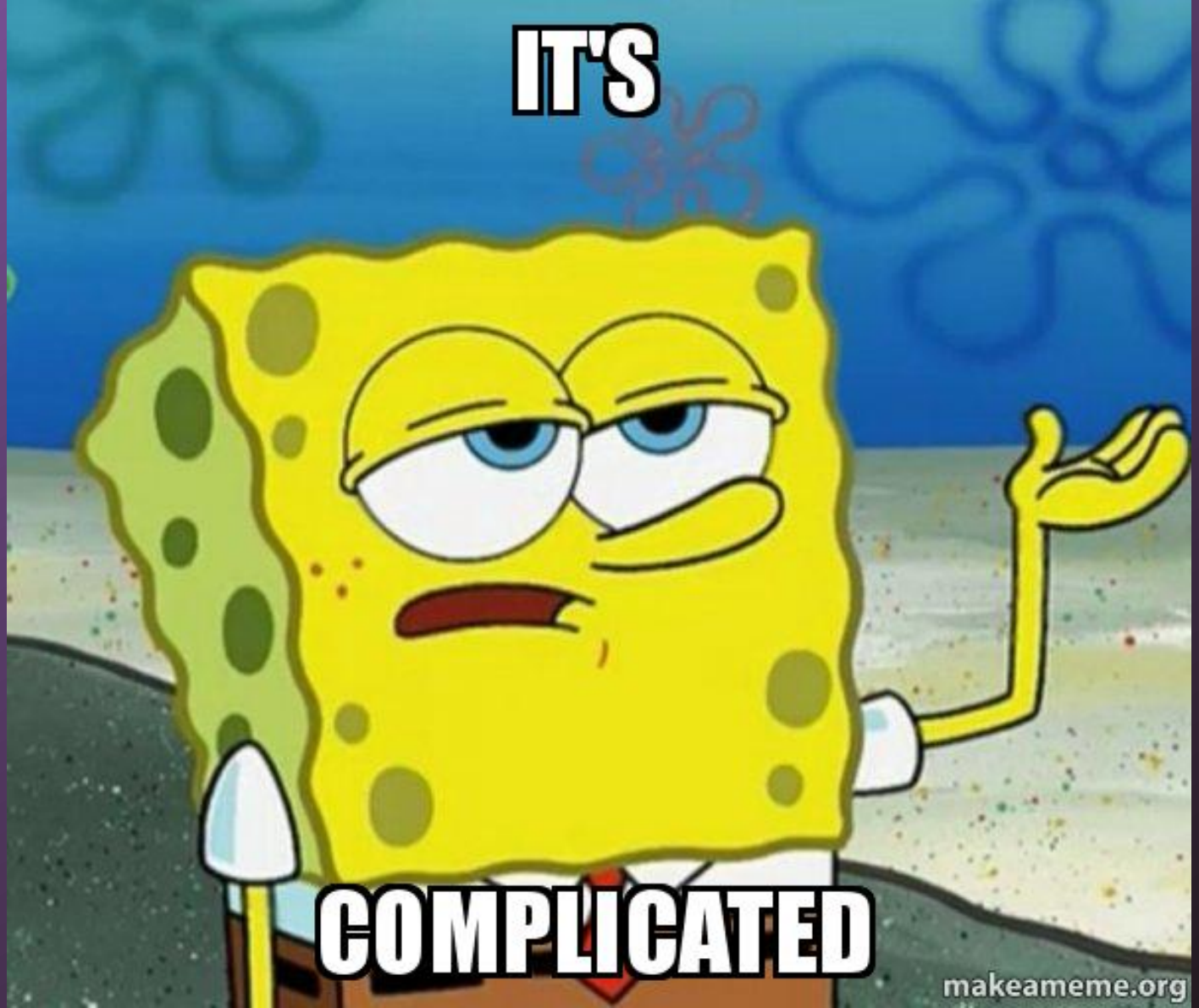
con.mp4

1,1 MB

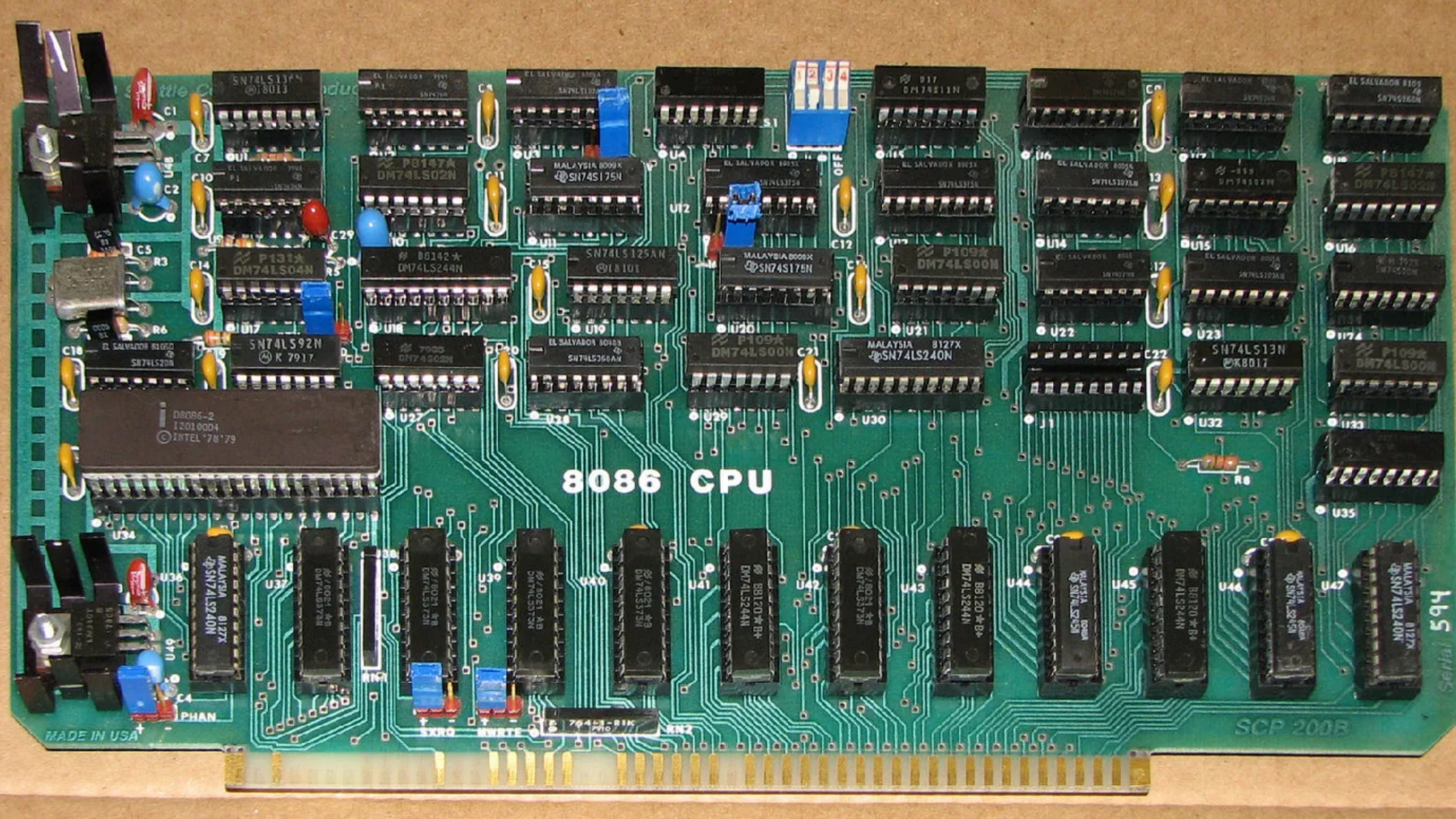
2023-06-06 20:37:47

VATER !!!


SO I PUT UNDERSCORES INSTEAD OF SPACES IN ALL MY MP3S
WHICH_WAS_THE_STYLE_AT_THE_TIME.MP3


IT'S
COMPLICATED
makeameme.org


ALTAIR 8800 COMPUTER


8086 CPU
D8086-2
I2010004
©INTEL '78'79
SCP 200B
MADE IN USA
PHAN
SXRQ
MWRTE
Serial 594



Microsoft Store applications



When using the File Picker, **files with a trailing non-ASCII whitespace character do not appear.**

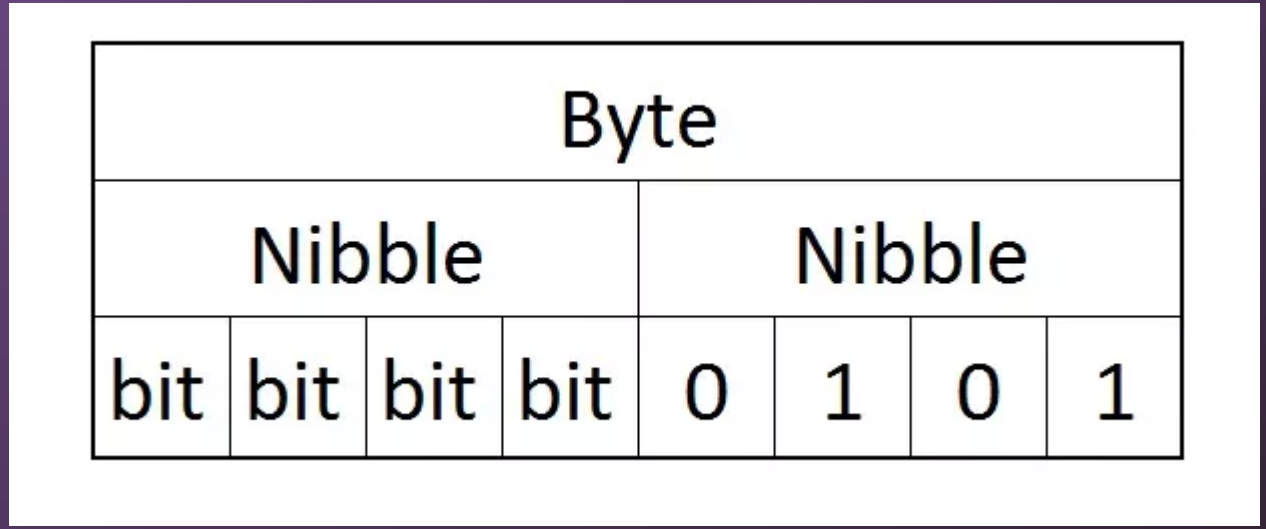
Article: 04/29/2023

https://learn.microsoft.com/en-us/troubleshoot/windows-client/shell-experience/file-folder-name-whitespace-characters

VATER !!!

- ich würde gerne die existenz des nibbles anzweifeln im talk
- was soll das für ein witz sein
- sag doch 4 bits


COMEDY CENTRAL
IT'S COMPLICATED


Byte
Nibble
Nibble
bit
bit
bit
bit
0
1
0
1

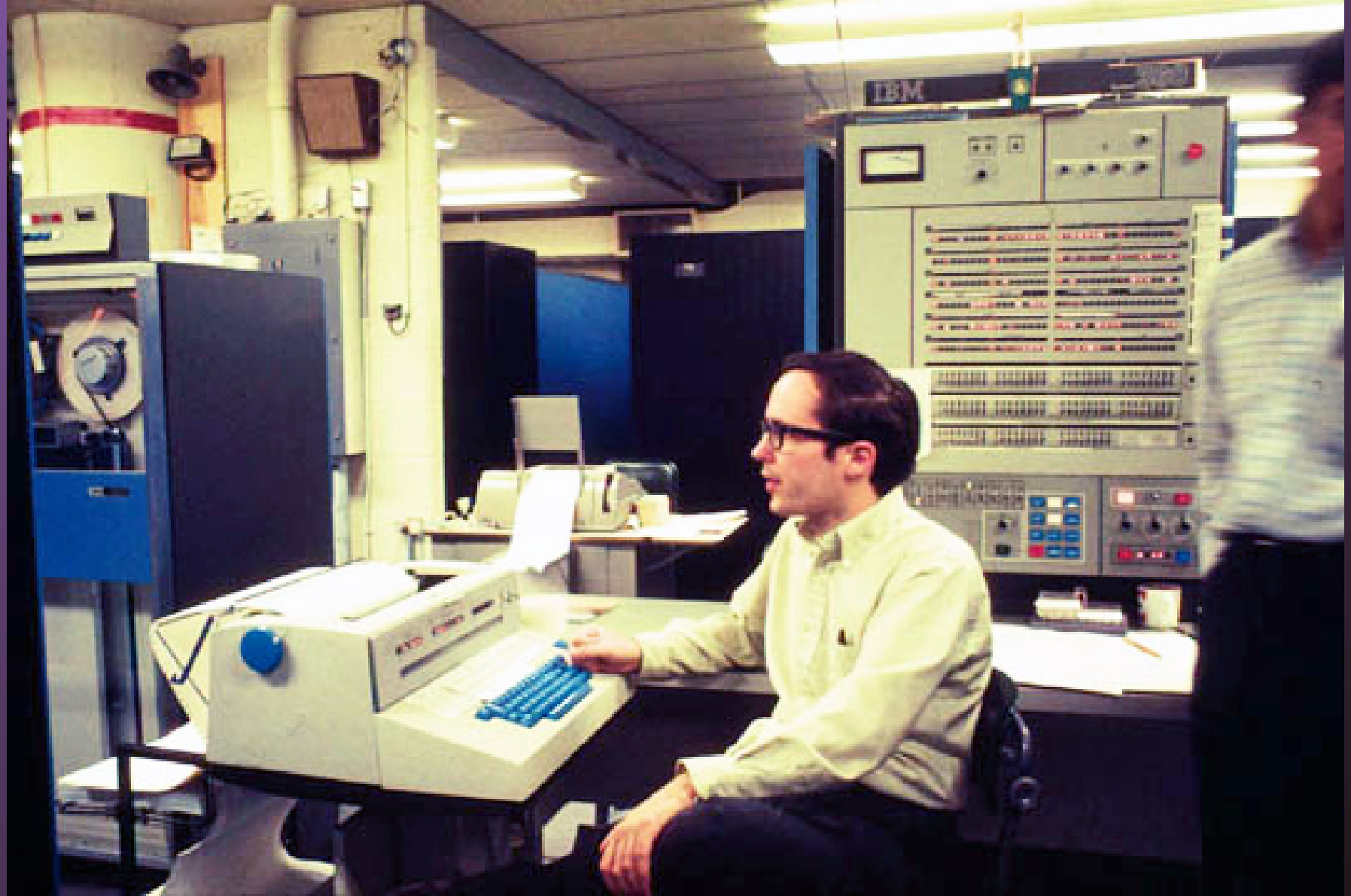
Packed Binary-Coded Decimal (BCD)

Decimal: 9 1

Binary : 1001 0001

Decimal: 0 1 2 3 4 5

Binary : 0000 0001 0010 0011 0100 0101


IBM

4-bit computing



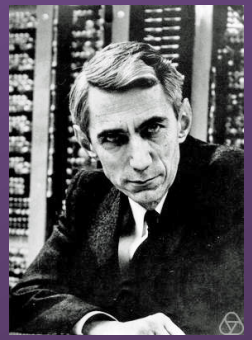
- Intel 4004
- 1971 - Erster kommerzieller Microprozessor
- binary-coded decimal
- Taschenrechner-Lösungen
- 4-bit word length, 8-bit instructions, 12-bit addresses

Nibble



- "half a byte"
- ”byte” homophone mit “bite”
- Kleiner Bissen: “nibble”

Bit, Byte



Claude Shannon, 1948: “A Mathematical Theory of Communication”

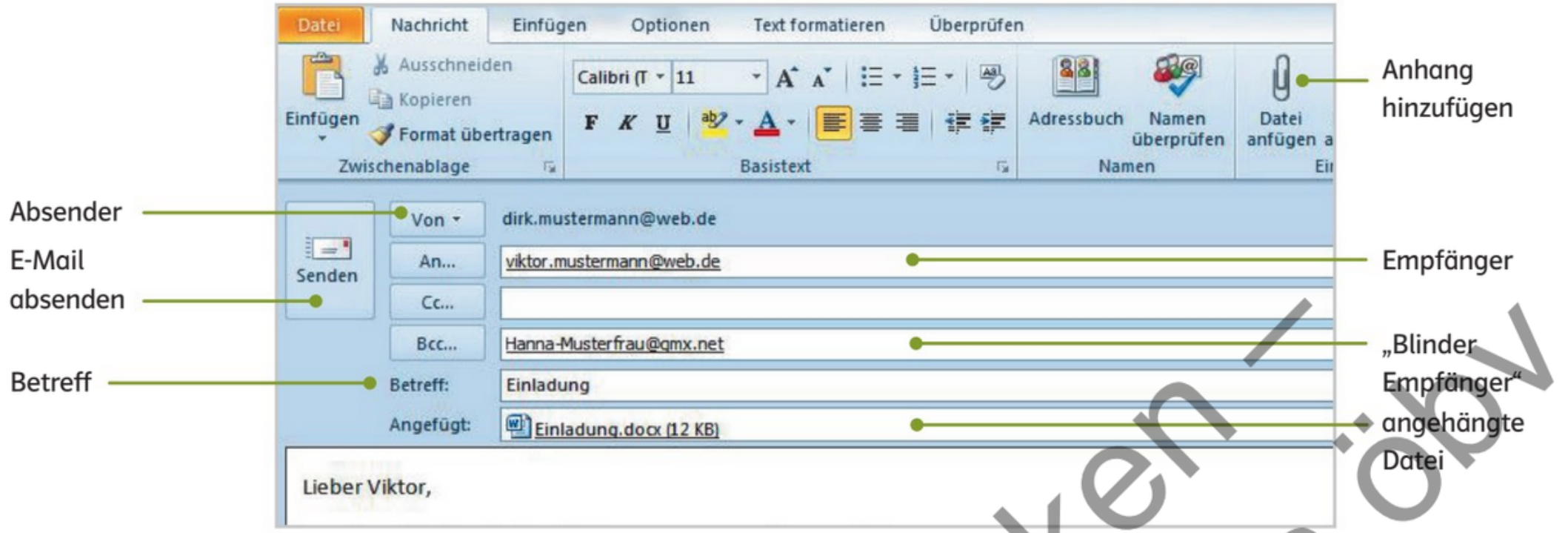


- Werner Buchholz, June 1956: during the early design phase for the IBM 7030 Stretch

VATER !!!

Warum kann ich “CC” Adressen bei Email angeben?

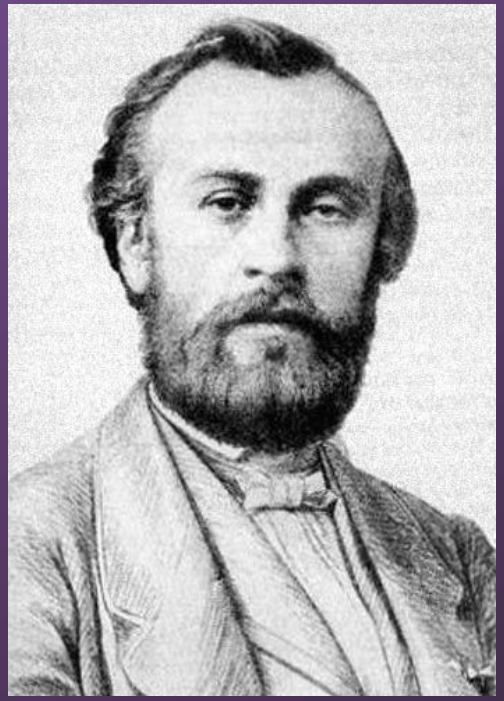

IT'S... COMPLICATED
NETFLIX



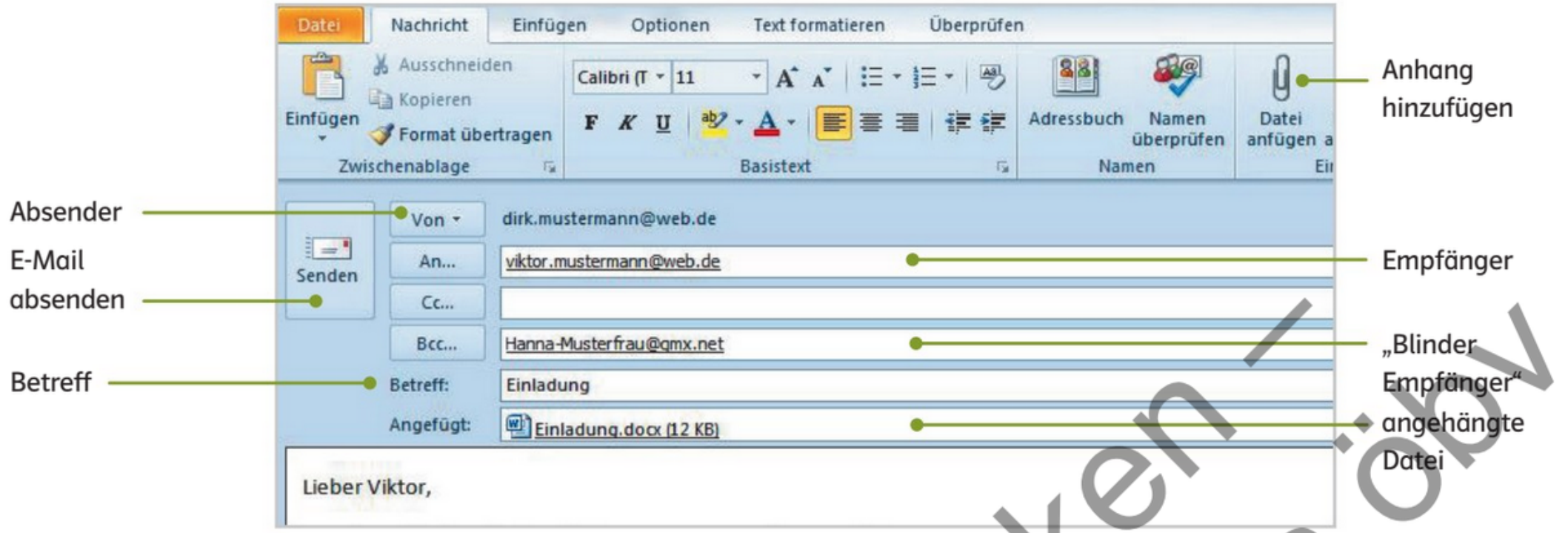
https://www.oebv.at/produkte/vernetzt-schulbuch-mit-e-book-digitale-grundbildung


karboupapper
karboupapper

Pellegrino Turri



- italienischer Erfinder
- 1808 erste Schreibmaschine
- Kohlepapier, kein Farbband



https://www.oebv.at/produkte/vernetzt-schulbuch-mit-e-book-digitale-grundbildung

VATER !!!

Zeilen in Textfiles enden doch immer mit “LF” (0x0A), ODER?


I'M SORRY
I'M SO, SO SORRY

XML 1.1, 2006

2.11 End-of-Line Handling

XML parsed entities are often stored in computer files which, for editing convenience, are organized into lines. These lines are typically separated by some combination of the characters CARRIAGE RETURN (#xD) and LINE FEED (#xA).

To simplify the tasks of applications, the XML processor MUST behave as if it normalized all line breaks in external parsed entities (including the document entity) on input, before parsing, by translating all of the following to a single #xA character:

1. the two-character sequence #xD #xA
2. the two-character sequence #xD #x85
3. the single character #x85
4. the single character #x2028
5. any #xD character that is not immediately followed by #xA or #x85.

ASCII und EBCDIC

Betriebssystem	Zeichensatz	Abkürzung	Code Hex	Code Dezimal	Escape-Sequenz
Unix (BSD, macOS), Linux (Android), AmigaOS, weitere	ASCII	LF	0A	10	\n
Windows, DOS, OS/2, CP/M, TOS (Atari)		CR LF	0D 0A	13 10	\r\n
Mac OS Classic, Apple II, C64		CR	0D	13	\r
AIX OS & OS/390	EBCDIC	NL	15	21	\025

Unicode

Abkürzung	englische Bezeichnung	deutsche Bezeichnung	Codepoint
FF	Form Feed	Seitenvorschub (mit zwangsläufigem Umbruch der Zeile)	U+000C
NEL	Next Line	Nächste Zeile	U+0085
LS	Line Separator	Zeilentrenner	U+2028
PS	Paragraph Separator	Absatztrenner	U+2029

derit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum. Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupi-

giat nulla pariatur. Excepteur sint occaecat cupidatat
proident, sunt in culpa qui officia deserunt mollit anim
laborum.
iese Zeile ist ein Schusterjunge, aber es kommt noch

42

eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Diese Zeile ist ein Schusterjunge, aber es kommt noch

schlimmer: Diese ist ein Hurenkind.

Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis

schlimmer: Diese ist ein Hurenkind.

Ut enim ad minim veniam, quis nostrud exercitation ul-

Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehen-

VATER !!!

Die IT-Industrie hat doch aus Y2K gelernt, oder?


NOT REALLY

Y2K



- Jahr-2000-Problem aka. Millennium-Bug
- Ursache: Verwendung der letzten beiden Ziffern (Jahr und Jahrzehnt) für Datumswerte



Folgen/Probleme

- Falsche Sortierungen gewesen:
  - (20)00 ganz vorne, ..., (19)98, (19)99 ganz hinten.
- Zeitdauer/Differenz zwischen zwei Zeitangaben:
  - Altersberechnung mit '−40 Jahre' (= Jahr_heute (00 ...) minus Geburtsjahr (40)



Folgen/Probleme

- Echtzeituhr in älteren PCs und Embedded Systems konnte nicht automatisch das Jahrhundert umschalten
  - BIOS, MS-DOS oder Windows 95/98 konnten nicht korrigieren

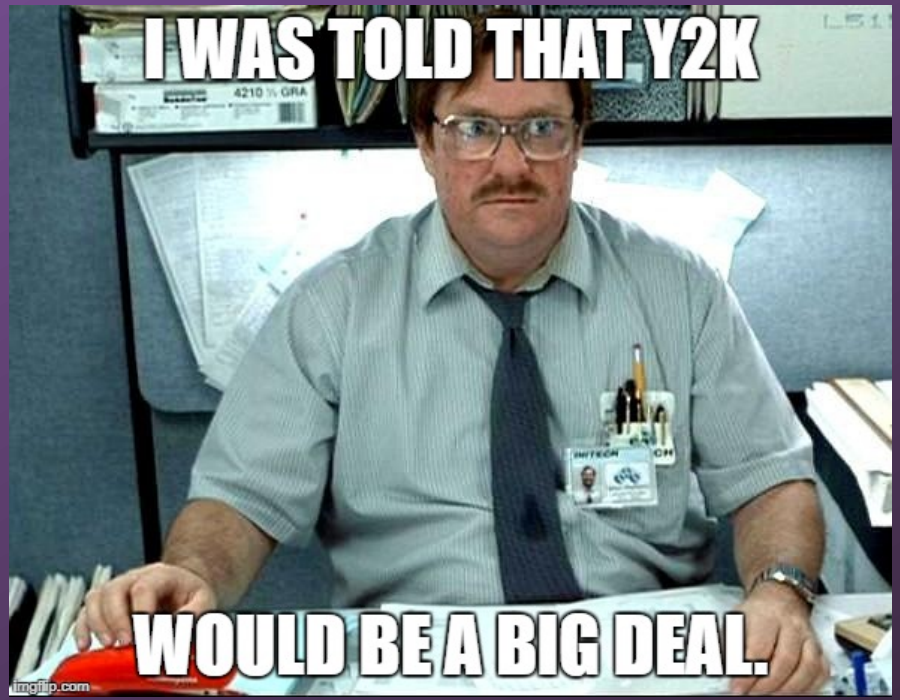


Folgen/Probleme

- Ersetzen von vorhandenen oder ungültige Dateninhalten mit der Zahl bzw. Ziffernkombination 00
- Fehlerhafte Erzeugung von Texten:
  - „1901“ oder „19101“ für das Jahr 2001



Y2K



"The Y2K problem is the electronic equivalent of the El Niño and there will be nasty surprises around the globe."

John Hamre, United States Deputy Secretary of Defense

Year 2038 problem

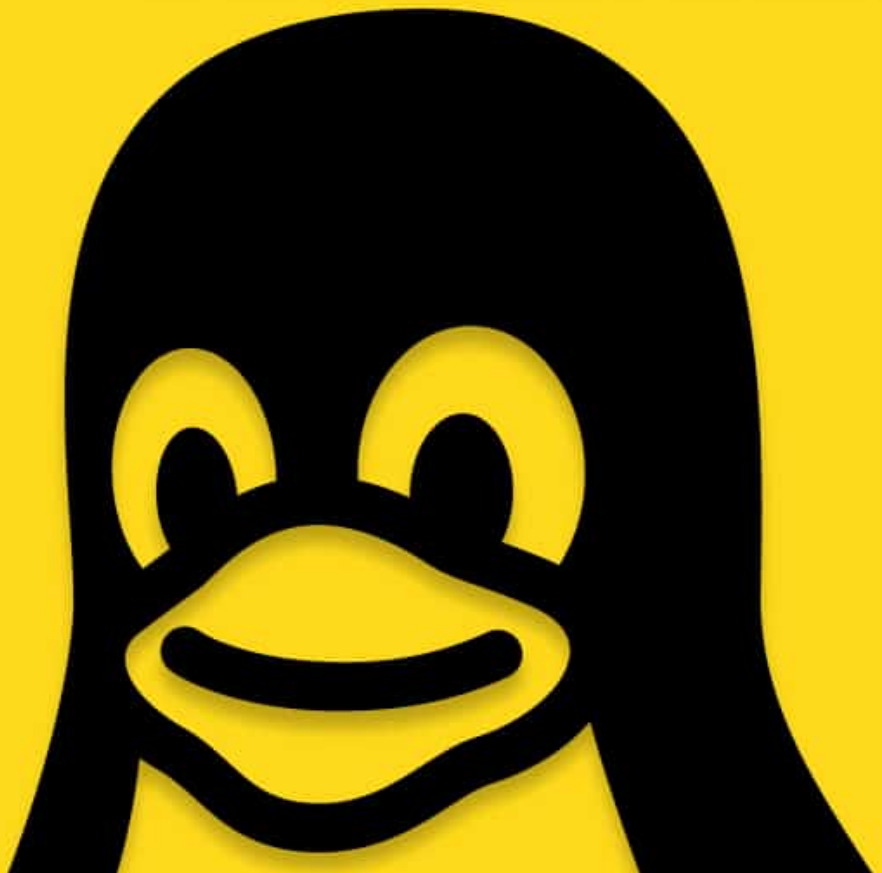
Binary : 01111111 11111111 11111111 11110000

Decimal : 2147483632

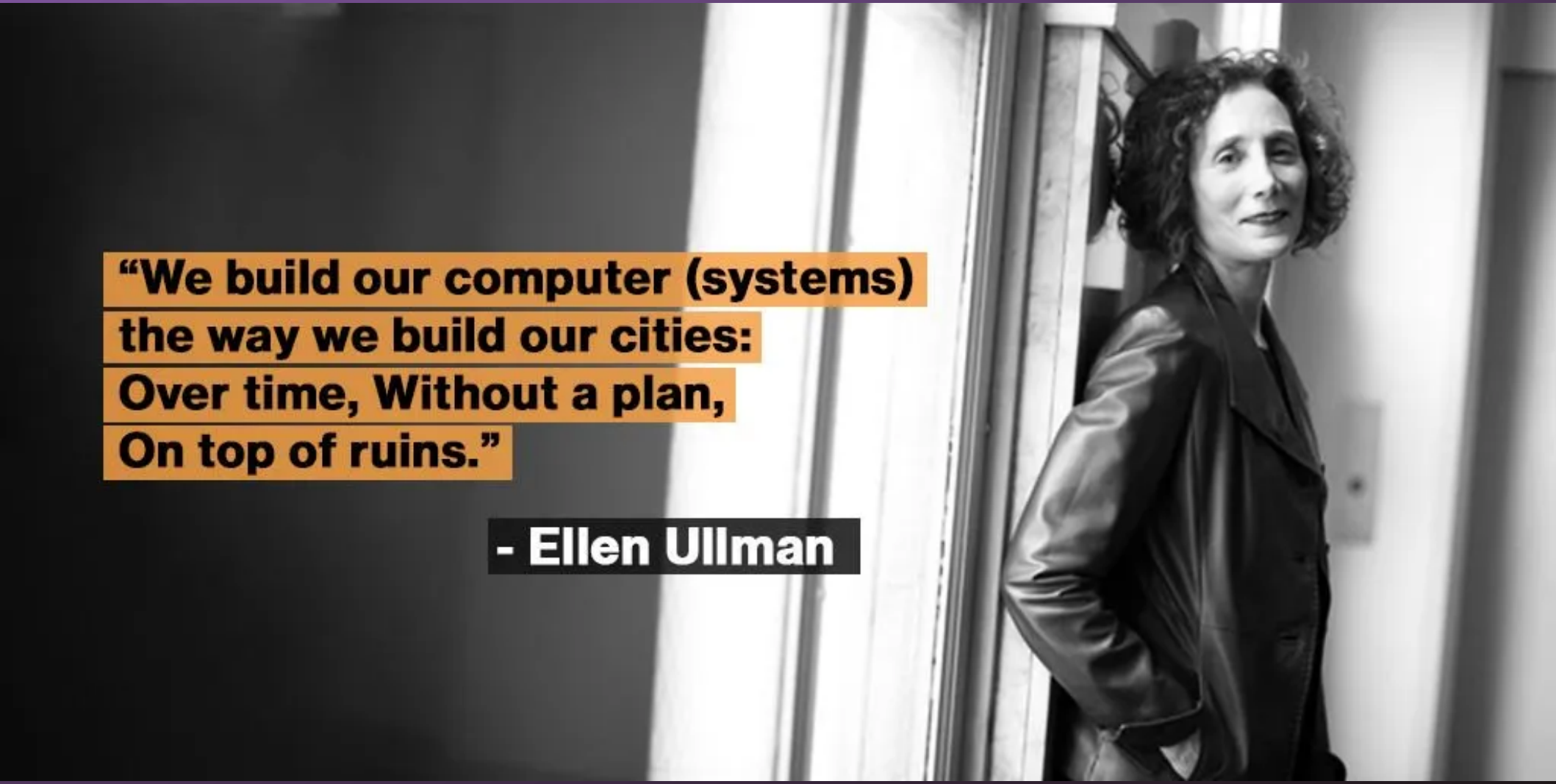
Date : 2038-01-19 03:13:52 (UTC)

Date : 2038-01-19 03:13:52 (UTC)

Update 32-bit system beyond 2038



YEAR 2038
PROBLEM


“We build our computer (systems)
the way we build our cities:
Over time, Without a plan,
On top of ruins.”
- Ellen Ullman


38

Fragen? Was hab ich vergessen?

Martin Leyrer

https://martin.leyrer.priv.at

@leyrer@chaos.social

