

- **CHM physical artifact categories: Revision proposal 9/10/03**

- *Note: This document must be displayed and printed in “outline” view.*
- *You can double-click on the “+ signs to expand and contract the tree*

- **Guidelines used to establish the categories**

- The guiding principle is to create a useful tool for searching and tabulating the collection, not to create either a complete taxonomy of computing systems or a method for arranging the object in the warehouses.
- The tree is at most 3 levels deep, and is mostly 2 levels deep.
- The list at each level has no more than 12 categories.
- Every list ends with an “other” category for objects not otherwise covered.
- Any category which has very few such objects is a candidate to be removed, with those few objects moved into “other” instead.
- Conversely, when the “other” category has many objects, we should consider adding additional named categories.
- Some compound categories have been removed for simplification. A “mini-supercomputer” is thus a kind of supercomputer, and a “super-minicomputer” is a kind of minicomputer.
- Every category in the existing FileMaker list has a clear mapping into the new category list. The table below contains the old-to-new correspondences that can be used to automatically convert the database.
- Proper names specific to standards or products were avoided (eg Token Ring, flexowriter, Unibus) because they change too quickly over the decades.
- Categories are consistently in the singular case, hence “ephemeron”.
- Nothing is capitalized except acronyms (eg CRT)
- Words without content (eg “device”) have been removed in the interest of brevity, despite the grammatical awkwardness resulting from the nounification of adjectives
- This does not cover archival material: documents, books, photos, films, etc.
- The “software” category has not yet been refined. We don’t know if it should be divided by medium (cards, tape, disk), by content (compiler, game), by representation (source code, executable), or by something else.
- The resulting simplification is a reduction from 146 categories to 93.

- **Guidelines for using the categories**

- When an object seems to fit in more than one category, use the most specific. For example, an industrial robot is “robot”, not “special purpose digital computer : industrial”.
- Component parts of a larger device are classified with that device. Example: a golf ball print head is under “I/O: printer”.

- **Example tough cases**

- The ENIGMA is a “pre-computer : cryptographic”. So is Colossus, the Bombe, and decoder rings
- The IBM 604 is “pre-computer : calculator : electrical”.
- ENIAC could either be “calculator : electronic” or “digital computer : mainframe”, depending on your definition of a computer. I’d choose the latter because of public perception even though it wasn’t a stored-program device.
- The Kitchen Computer is a “fixed-application digital computer : home appliance”
- Do you have other tough cases to test the taxonomy against?

CHM physical artifact categories

pre-computer

abacus / soroban

cryptographic

punched card

sector

slide rule

other

calculator

electromechanical

electronic

mechanical

programmable

other

analog computer

digital computer

supercomputer

mainframe

minicomputer

workstation

desktop

portable / luggable

laptop

handheld

development system

other

fixed-application digital computer

educational

entertainment
home appliance
industrial
medical
military / aerospace
other
game
robot
I/O
analog interface
camera / video
console / panel
display
CRT
LCD
plasma
other
keyboard
paper tape
plotter
pointing
mouse
joystick
lightpen
tablet
other
printer
punched card
scanner

sound and speech

terminal / Teletype

other

memory

connector / plugboard

core

delay line

disk

drum

electrostatic

optical

semiconductor

tape

other

interconnect

backplane

I/O bus

network

component / hub

switch / router / firewall

modem

other

other

component

cabinet

cable / connector

circuit board / module

cooling

diode

docking station

IC

power supply / battery

relay

transistor

vacuum tube

other

software

test equipment

ephemeron

badge/button

clothing

mug / glass

pencil / pen

plaque / paperweight

poster

other

miscellaneous

carrying case

furniture

other

Conversion table from old to new categories

OLD CATEGORY	NEW CATEGORY	COMMENT
Analog computer	analog computer	
Analog computer: hybrid	analog computer	analog-ness is distinguishing
Carrying case	miscellaneous : carrying case	
Calculator: abacus / soroban	pre-computer : abacus / soroban	
Calculator: electric	calculator : electromechanical	
Calculator: electronic	calculator : electronic	
Calculator: mechanical	calculator : mechanical	
Calculator: electromechanical	calculator : electromechanical	
Calculator: mathematical tables	pre-computer : other	
Chip set	component : IC	
Component: vacuum tube	component : vacuum tube	
Component: transistor	component : transistor	
Component: transformer	component : other	
Component: core	memory : core	
Component: diode	component : diode	
Component: IC (non-uP)	component : IC	
Component: IC: special-purpose	component : IC	
Component: microprocessor	component : IC	
Component: printed circuit board (PCB)	component : circuit board / module	
Component: silicon wafer	component : IC	
Component: relay	component : relay	
Component: special-purpose	component : other	some might be more specific
Computer game	game	
Digital Computer: homebrew	digital computer : desktop	some might be other
Digital Computer: laptop	digital computer : laptop	
Digital Computer: mainframe	digital computer : mainframe	
Digital Computer: microcomputer	digital computer : desktop	
Digital Computer: minicomputer	digital computer : minicomputer	
Digital Computer: minisupercomputer	digital computer : supercomputer	
Digital Computer: neural net	digital computer : other	
Digital Computer: PDA	digital computer : handheld	
Digital Computer: palmtop	digital computer : handheld	
Digital Computer: portable	digital computer : portable / luggable	
Digital Computer: personal	digital computer : desktop	
Digital Computer: single-board	digital computer : other	
Digital Computer: supercomputer	digital computer : supercomputer	
Digital Computer: superminicomputer	digital computer : minicomputer	
Digital Computer: workstation	digital computer : workstation	
Digital Computer: development system	digital computer : development system	
Digital Computer: special-purpose	fixed-application digital computer : other	some might be more specific
Digital differential analyzer	analog computer	
Docking Port	component : docking station	
Ephemera	ephemeron : other	
Ephemera: Textile	ephemeron: clothing	
Links & switches: backplane	interconnect : backplane	
Links & switches: bus	interconnect : I/O bus	
Links & switches: connector	component : cable / connector	
Links & switches: Unibus	interconnect : I/O bus	
Links & switches: multiplexer	interconnect : other	
Links & switches: cable	component : cable /connector	
Links & switches: Ethernet device	interconnect : network : component / hub	
Links & switches: Special purpose	interconnect : other	

Links & switches: Token Ring device	interconnect : network: component / hub	
Links & switches: network device	interconnect : network : other	some might be more specific
Logic module	component : circuit board / module	
Mechanical device: special-purpose	calculator : mechanical	some might be other
Media: Special Case: See Comments	miscellaneous : other	what was this?
Memory: bubble	memory : other	
Memory: capacitor	memory : other	
Memory: CD-ROM	memory : disk	
Memory: core	memory : core	
Memory: data cell	memory : other	
Memory: delay line: acoustic	memory : delay line	
Memory: delay line: magnetostrictive	memory : delay line	
Memory: disk	memory : disk	
Memory: disk: floppy	memory : disk	
Memory: disk drive	memory : disk	
Memory: disk pack	memory : disk	
Memory: drum	memory : drum	
Memory: electron beam	memory : electrostatic	
Memory: electrostatic tube	memory : electrostatic	
Memory: magnetic film	memory : other	
Memory: magnetic tape	memory : tape	
Memory: magnetic tape drive	memory : tape	
Memory: magneto-optical	memory : optical	
Memory: optical	memory : optical	
Memory: paper tape	I/O : paper tape	
Memory: photo-digital store	memory : optical	
Memory: plasma cell	memory : other	
Memory: plated wire	memory : other	
Memory: punch card	I/O : punched card	
Memory: RAM	memory : semiconductor	some might be other
Memory: ROM	memory : semiconductor	some might be other
Memory: rope	memory : other	
Memory: semiconductor	memory : semiconductor	
Memory: sense amplifier	memory : other	
Memory: special-purpose	memory : other	
Memory: tape cartridge	memory : tape	
Memory: thin film	memory : other	
Memory: tunnel diode	memory: semiconductor	
Memory: Williams tube	memory : electrostatic	
Memory: woven plated wire	memory : other	
Microprocessor:	component : IC	
Microprocessor-based device:	fixed-application digital computer : other	some might be more specific
Microprocessor-based game:	game	
Microprocessor-based toy:	fixed-application digital computer : entertainment	
Mixed Lot (see Description field)	miscellaneous : other	some might be more specific
Robot:	fixed-application digital computer : robot	
Slide rule: circular	pre-computer : slide rule	
Slide rule: cylindrical	pre-computer : slide rule	
Slide rule: linear	pre-computer : slide rule	
Software	software	
Spare Parts	component : other	
Special furniture	miscellaneous : furniture	
Test Equipment	test equipment	
Transducer: analog-to-digital converter	I/O : analog interface	
Transducer: digital-to-analog converter	I/O : analog interface	
Transducer: cathode ray tube	I/O : display : CRT	

Transducer: Charge Coupled Device (CCD)	memory : semiconductor	or memory: other
Transducer: Console	I/O : console / panel	
Transducer: control panel	I/O : console / panel	
Transducer: digitizing tablet	I/O : pointing : tablet	
Transducer: flexowriter	I/O : terminal / teletype	
Transducer: Front Panel	I/O : console / panel	
Transducer: Head Disk Assembly (HDA)	memory : disk	
Transducer: plotter	I/O : plotter	
Transducer: graphics terminal	I/O : display : CRT	
Transducer: keyboard	I/O : keyboard	
Transducer: light pen	I/O : pointing : lightpen	
Transducer: light gun	I/O : pointing : lightpen	
Transducer: MODEM	interconnect : network : modem	
Transducer: mouse	I/O : pointing : mouse	
Transducer: oscilloscope	test equipment	
Transducer: plasma display	I/O : display : plasma	
Transducer: power supply	component : power supply / battery	
Transducer: printer	I/O : printer	
Transducer: print head: daisy wheel	I/O : printer	
Transducer: print head: dot matrix	I/O : printer	
Transducer: print head: golf ball	I/O : printer	
Transducer: print head: inkjet	I/O : printer	
Transducer: print head: laser engine	I/O : printer	
Transducer: print head: chain	I/O : printer	
Transducer: punch card punch	I/O : punched card	
Transducer: punch card reader	I/O : punched card	
Transducer: paper tape reader	I/O : paper tape	
Transducer: special-purpose	I/O : other	some might be more specific
Transducer: terminal: portable	I/O : terminal / teletype	
Transducer: unit record equipment	I/O : punched card	
Transducer: video terminal	I/O : display : CRT	
Transducer: Teletype	I/O : terminal / teletype	
Transducer: test equipment	test equipment	
Transducer: terminal	I/O : terminal / teletype	
Transducer: monitor	I/O : display : CRT	
Typewriter	pre-computer : other	
Unknown	miscellaneous : other	
Video game	game	