

Computer History Museum

Collections & Exhibitions Dept.

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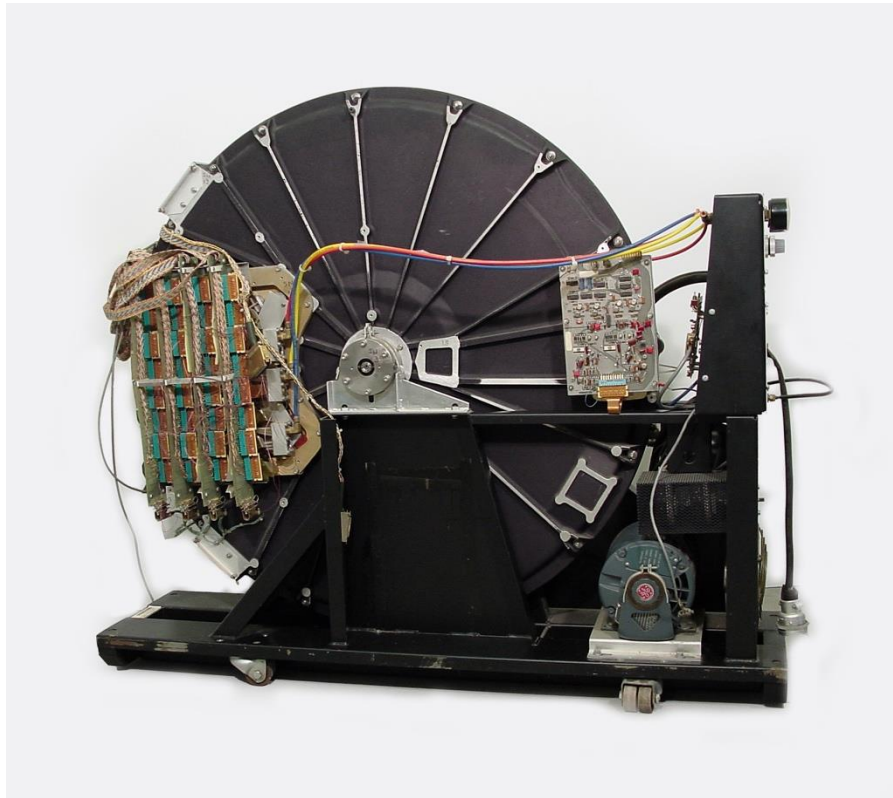
Director of Collections & Exhibitions

A View into the Collection:



CHM is the world's largest collection of computing artifacts. With over 25 years of collecting efforts, the Museum has established five separate collections: Hardware, Software, Documentation, Ephemera and Media.

Hardware:



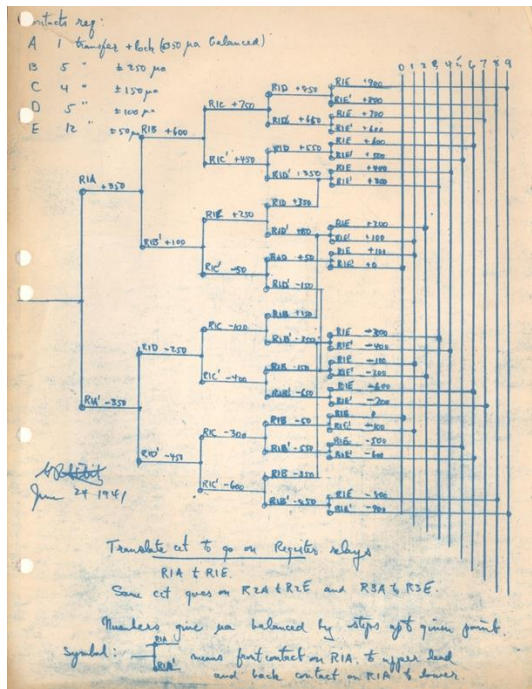
Four thousand individual objects, including electronic computer systems (processors, memory/storage, peripherals and underlying technology).

Software:



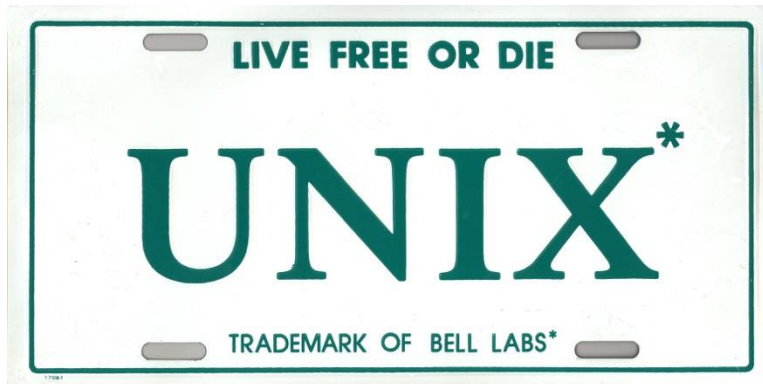
Several terabytes (that's 1,000,000,000,000 bytes!) of historical software, including code, seminal programs, operating systems, programming languages, and development tools in almost every medium imaginable.

Documentation:



Twelve million pages of documentation including personal papers, manuals, user guides, programmer's references, schematic diagrams, flowcharts, blueprints, and standard reference texts and journals in the field.

Ephemera:



Thousands of individual objects including marketing materials, brochures, coffee mugs, T-shirts, pens and other unique items.

Media:



Thousands of historical films, videotapes, and tens of thousands of historical photographs.

Samples by Type:

- Operating Systems: Multics, IBM OS/360, DOS, Windows (various vers.), Mac OS (various vers.), Pick, OS/2, Solaris, Free BSD, VMS, NextStep.
- Applications: PC and Mac office productivity apps, Apple II, Xerox Alto, CP/M apps, PC, Mac, Atari, Amiga, games, VisiCalc v.1 Beta, SpaceWar! Lotus 1-2-3 v.1.0, Internet Worm (Morris) source code.
- Tools: LISP, TX-0, PDP-X, C, FORTRAN, COBOL compilers for assorted mainframes and minis.

Samples by Media:

- 400 reels of 9-T tape (mainframe + mini) [60GB]
- 400,000 punch cards [75MB]
- 3,000 5 ¼" floppy disks (PC software) [750MB]
- 500 spools of paper tape (TX-0, Whirlwind, DEC) [10MB]
- 10,000 pages of source code listings [10MB]
- 400 boxes of early PC/Mac software [200GB]
- **total: 275GB**

Collecting Criteria

- Is it a “first”? Was this technology the first of its kind or the first of an important subgroup? Did it influence anyone? Did it make a difference?
- Is it a “classic” or a “standard”? Did this technology become the *de facto* standard for the period of time? Was it a model imitated by many?
- Is it a “representative sample”? Does this technology illuminate the diversity of approaches in a particular period?

Collecting Criteria

- Is it part of a “complete set”? Do the objects compose a complete collection relating to a specific class of computers (e.g. supercomputers), a person (e.g. Zuse), or organization (e.g. Manchester University)?
- Is it a “dead end”? Was the item a failure either because of faulty technology or poor marketing? Was it the product of considerable expense, effort and research that eventually or unexpectedly failed?

Physical Collection Taxonomy

- *pre-computer*
- *calculator*
- *analog computer*
- *digital computer*
- *fixed-application digital computer*
- *game*
- *robot*
- *I/O*
- *memory*
- *interconnect*
- *component*
- *software*
- *test equipment*
- *ephemeron*
- *miscellaneous*

Describing Items in the Collection

- Record the minimum amount of information necessary to uniquely identify an item and make it retrievable
- Use one set of metadata elements to describe all type of items in the collection: hardware, software, documentation, ephemera, and medias
- Use a standard set of elements to facilitate collaborative sharing among members of the research community, e.g. Dublin Core Metadata Element Set www.dublincore.org

Sample Dublin Core Metadata:

Title

Creator

Subject

Description

Publisher

Contributor

Date

Resource Type

Format

Identifier

Source

Language

Relation

Coverage

Rights

- Each is a repeating field
- Only use those that are relevant
- Use controlled vocabulary
- Add fields as needed

Data Standards

Metadata:

Title

Creator

Subject

Description

Publisher

Contributor

Date

Resource Type

Format

Identifier

Source

Language

Relation

Coverage

Rights

Author, Designer, Photographer,
Artist, Architect, etc.

Publisher, Manufacturer, etc.

Controlled Vocabulary

- Text
- Physical Object
- Image
- **Software**
- Sound
- Dataset
- Interactive
- Service
- Collection

Electronic Resources:

Title

Creator

Subject

Description

Publisher

Contributor

Date

Resource Type

Format

Identifier

Source

Language

Relation

Coverage

Rights

Software System Requirements

- Make and model of the computer(s) on which resource is designed to run
- Amount of memory required
- Name of operating system
- Software requirements (including programming language)
- Kind and characteristics of any required or recommended peripherals
- Type of any required or recommended hardware modifications

Example

486/33MHz PC, Macintosh, or Power Macintosh; 8MB RAM; Windows 3.1 (or higher) or System 7.0.1 (or higher); Java-capable Web browser; VGA monitor

Preservation Steps

Rescue

Software Committee determines wish list and goes after it

Passivate

CHM receives and stores in accepted way, e.g. climate controlled

Conserve

Repair deficiencies in media, e.g. broken tape

Transcode

Pull bits off original medium

Archive

Receive files, assign metadata and store