

# Multicians Website

[www.multicians.org](http://www.multicians.org)

THVV 01/14/2025 v23

# multicians.org Home page

Drop down Menus

Google Search



Sliding pictures with computed counts from DB

Recent changes list generated from database

RSS feed generated

mail link

Computed counts in text

Clicks on sliding pictures lead to other site features.

Combines pictures into one JPG for CSS sprites, speeds loading.

# Site Contents (Jan 2025)

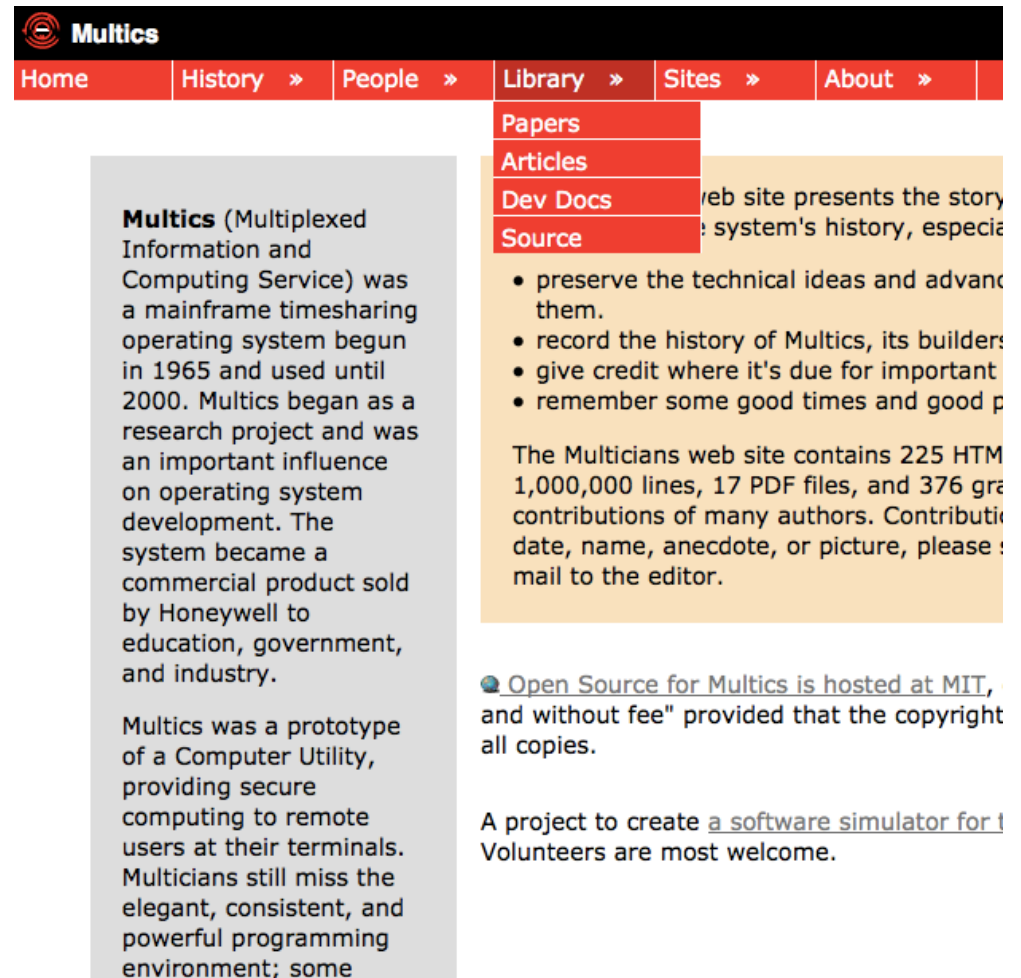
- 0.5 sec to become interactive (Google Lighthouse)
- 487 HTML pages
- 670 images
- over 540K lines of HTML
- Multicians: 2047 names, 742 mail addresses
- Glossary: 843 entries, 27 web pages
- 87 Multics Stories by 41 authors
- 30 Articles about Multics
- 46 Published papers (35 on site)
- 1795 PDF documents (e.g. MSPM, MCBs, MTBs, MSBs, MCRs, MOSNs)
- (15 SQL tables used in generation)
- Bibliography: 5063 entries (links to 3160 online)

# Popularity

- Millions of hits per year
- Most popular:
  - main Multics page
  - Multicians list
  - History and General Information
  - Myths about Multics
  - Chronology
  - Multics Humor
  - Cookie Monster story
  - History of Multics PL/I Compiler
  - Glossary

# Navigation menus

- Drop down JavaScript menu using jQuery
- Multiple modern browsers
- Works with tablets and mobile phones
- Generated from SQL table
- Identical menus on all pages



The screenshot shows the Multics website. At the top is a black header with the Multics logo and name. Below it is a red navigation bar with links: Home, History, People, Library, Sites, and About. A dropdown menu is open under 'Library', showing links to Papers, Articles, Dev Docs, and Source. The main content area has a grey sidebar on the left and a white main area on the right. The sidebar contains a paragraph about Multics and a link to the Open Source for Multics project. The main area contains a list of bullet points and a paragraph about the Multicians web site.

**Multics** (Multiplexed Information and Computing Service) was a mainframe timesharing operating system begun in 1965 and used until 2000. Multics began as a research project and was an important influence on operating system development. The system became a commercial product sold by Honeywell to education, government, and industry.

Multics was a prototype of a Computer Utility, providing secure computing to remote users at their terminals. Multicians still miss the elegant, consistent, and powerful programming environment; some

- preserve the technical ideas and advance them.
- record the history of Multics, its builders
- give credit where it's due for important
- remember some good times and good p

The Multicians web site contains 225 HTML files, 1,000,000 lines of code, 17 PDF files, and 376 graphics. Contributions of many authors. Contributions of date, name, anecdote, or picture, please email to the editor.

[Open Source for Multics](#) is hosted at MIT, and without fee" provided that the copyright remains with all copies.

A project to create [a software simulator for Multics](#). Volunteers are most welcome.

# Modern Design

- Valid HTML5.
- CSS table-free liquid layout. Mobile friendly.
- Uses JavaScript, works without it.
- No ActiveX, Flash, or Java.
- Cross browser design, minimum of hacks.
- Static pages; minimum of server-side support.
  - Site can be served by an FTP host and viewed offline.
- Site design documents set standards and explain rationale and implementation.

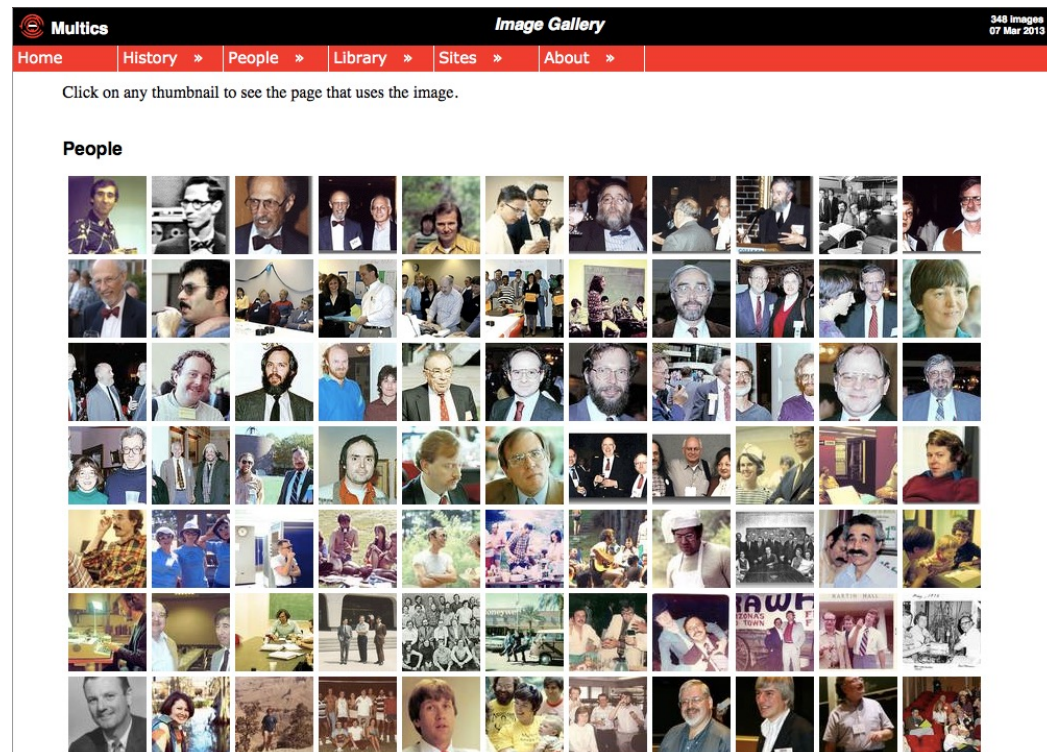
See <https://multicians.org/m-webguide.html>.

# Search function

- Uses Google Custom Search.
- Files indexed by Google:
  - HTML pages at `multicians.org`.
  - source of Multics at `web.mit.edu`.
  - `www.bitsavers.org/pdf/honeywell/multics`
  - PDF files with OCR text.

# Image Gallery page

- Links to pages containing graphics
- Generated from template and SQL table
  - 133 lines of template source expand to 3061 lines of HTML
- Generates combined JPGs for CSS sprites
  - saves 667 file requests and loads much faster





# Multicians Listing

- Contributors to Multics
- Name, what they did, protected email link
- Generated from SQL tables
- Counts of publications by type
- Awards

**Coppola, Richard L.**

Field Engineering (PMDC): benchmarks, SysMaint, 870-M, Flower. [1 MTB] [mail](#)

**Corbató, Fernando J.**

Administration (MIT); Designer. {Story: [Corby](#).} [6 interviews, 6 MDNs, 6 MSPM sections, 1 MTB, 14 papers, 8 repository docs, 1 TR, 5 videos, 3 web pages] [IEEE-Fellow](#) [ACM-Fellow](#) [McDowell](#) [NAE](#) [NEC](#) [Pioneer](#) [Turing](#) [AAAS](#) [ACM-Lec](#) [AmAcadAS](#) [CHM-Fellow](#) [Goode](#) (deceased)

**Coren, Robert S.**

System (CISL): IO daemon, TTY DIM. [58 MCRs, 1 MDD, 3 MOSNs, 4 MSBs, 15 MTBs] [mail](#)

**Corney, David**

User (Avon): wrote enhanced FAST subsystem, 1979.

**Corsi, A. J.**

Engineering (HIS): performance measurement.

**Cote, Gil**

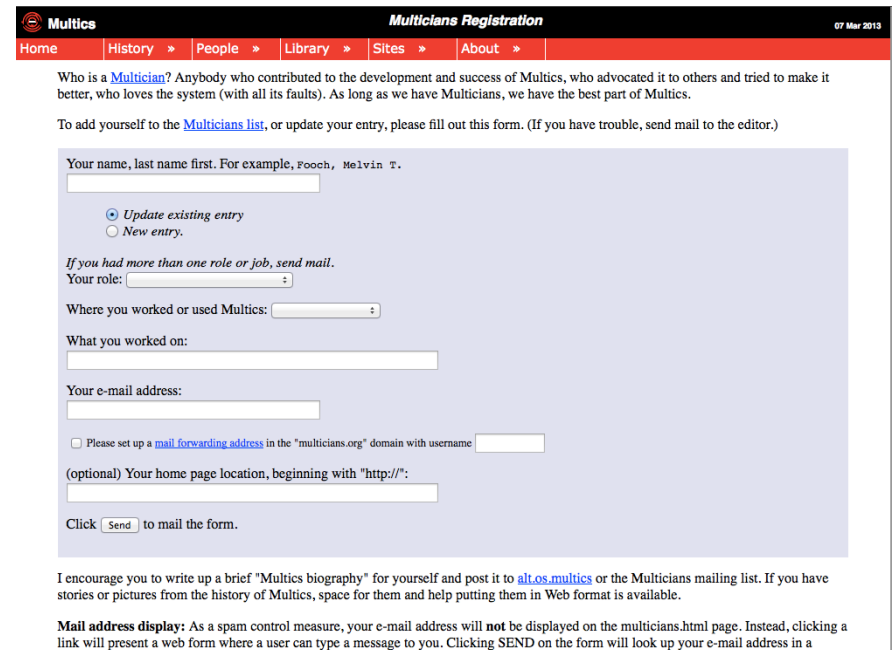
System (NWGS): Applications (NWGS). [mail](#)

**Couleur, John F.**

Designer (GE): 645 CPU architecture. [1 MDN, 6 papers, 1 repository doc] [mail?](#)

# Signup form

- Displayed by CGI program
- User enters (partial) name, looked up via AJAX
- Ambiguous names replaced by SELECT picklist.
- Form is filled in for existing users.
- Thanks page generated on the fly when submitted.



The screenshot shows the 'Multicians Registration' page. At the top, there's a navigation bar with links: Home, History, People, Library, Sites, About. The page title is 'Multicians Registration' and the date '07 Mar 2013' is in the top right. The main content area explains who a 'Multician' is and asks users to fill out the form to add themselves to the 'Multicians list'. The form fields include: 'Your name, last name first. For example, Fooch, Melvin T.' (text input), 'Update existing entry' (selected radio button) and 'New entry.' (radio button), 'Your role:' (dropdown menu), 'Where you worked or used Multics:' (dropdown menu), 'What you worked on:' (text input), 'Your e-mail address:' (text input), and an optional field for 'Your home page location, beginning with "http://"'. A 'Send' button is at the bottom of the form. Below the form, there's a paragraph encouraging users to write a 'Multics biography' and post it to 'alt.os.multics' or the Multicians mailing list. A 'Mail address display' note states that the user's e-mail address will not be displayed on the 'multicians.html' page and that clicking a link will present a web form where a user can type a message to you.

# Mail to Multicians or editor

- Mail addresses hidden from web crawlers, looked up in online database.
- Mail form page generated on the fly.
- Human Interaction Proof: user must answer a text question.
- Checks to prevent spamming.
- Thanks page generated on the fly.
- Optional return address cookie.

**Multics** **Compose Mail** 10 Mar 2013

To send mail to **editor**, enter your message and click **Send**. Use of this facility for junk email (spam) or other unsolicited commercial use is prohibited. The editor tries to respond promptly to all requests by mail.

Your e-mail return address (check this carefully):

Remember this return address in your web browser: ☐

Mail a copy to yourself: ☐

Your real name:

Subject:

Message:

Enter the fifth word of this sentence.  (spam excluder)

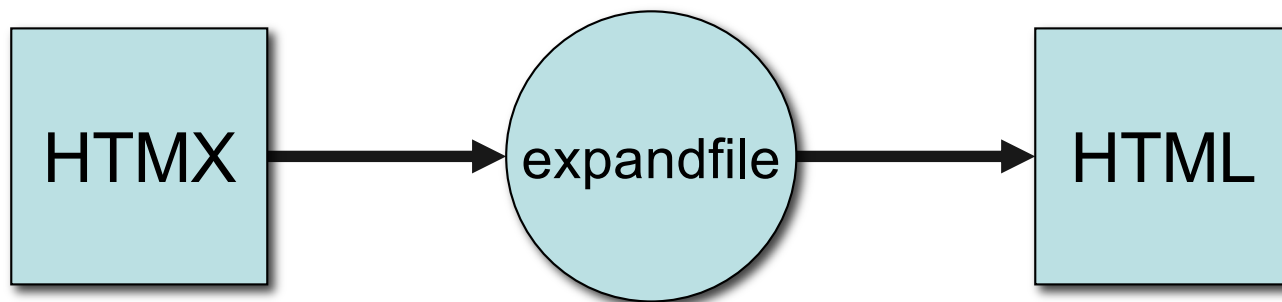
Privacy notice: From, To and Subject lines are logged briefly by the editor to aid in spam detection. Message content is not logged.

[Back](#)  
[Home](#) | [History](#) | [People](#) | [Library](#) | [Sites](#) | [About](#) | [Site Map](#) | [Changes](#)

*human interaction proof*

# Generated HTML Pages

- Templates for standard look and feel.
- Source language HTMX expands into HTML.
- Macros simplify source and prevent error.
- Sizes, dates modified, user counts, etc. determined at generation time.
- Navigation aids, menus, and indexes generated automatically.



See <https://multicians.org/thvv/htmx/expandfile.html>.

# References between pages

- Special syntax in HTMX source, e.g. glossary reference:  

```
{{GIOC Generalized I/O Controller}}
```
- Generated by looking up key in SQL table.
- TITLE attribute comes from database, displays in a tooltip on cursor hover.
- Consistent format.
- Syntax for
  - Glossary reference
  - Multicians list reference
  - Off-site link
  - Intra-site link

# Pages generated from SQL tables

- Main page (sliding pictures, recent changes)
- Bibliography
- Multicians list
- Change history listings
- Site map, Google crawl advice
- Image thumbnails and gallery pages
- Glossary pages
- Sites listing and timeline chart
- menus

`expandfile` expands a template for each row returned from a SQL query.

# Graphical Charts generated using JavaScript and HTML

- Site timeline bar chart (SQL+HTML)
- Count of sites by year bar chart (SQL+HTML)
- Count of sites by country pie chart (SQL+JavaScript)
- History timelines (JavaScript)
- MSPM Authors bar chart (SQL+HTML)
- Changes by year (SQL+HTML)

# Other Tables and lists generated using `*sqlloop`

- `dates`                      list: events in Multics history by year
- `articles`                    list: articles by date
- `multics-stories`            lists: stories by date, author, site
- `source-index`              list: counts by library



# Macros

- Generate code for images, external links, etc.
- Examples:
  - `%[*callv, getimgdiv, =t.jpg, =xt.jpg, =alt, =ttl, =st, =caption]%`
    - Generates a DIV wrapping `t.jpg` with CSS style `st`, and given caption. If `xt.jpg` is specified, creates a link to it. Supports **-2x** version of graphic if found with SRCSET.
  - `%[*callv, mitsourcearc, ="sss", ="t.alm", ="pxss source"]%`
    - Generates a link to `t.alm` in library `sss` at MIT with anchor text `pxss source`.
- Additional macros
  - Links to Multics files at `bitsavers.org` and `mit.edu`
  - Image displays with generated popup.
  - Galleries of images.

# Automated Site Installation

- Generate and upload only the new pages necessary using **make** and **rsync**
- Automatic update when needed of
  - site map
  - RSS feed
  - **procmail** mail forwarding commands
  - **tar** file generator
- Automatic creation of Google crawl advice **sitemap.xml.gz**

# Mobile Device Support

- Mobile usability advice from Google tools
- Menus simplified for small screens
- Set viewport and size
- CSS sprites speed graphic loading

Ease of use

Speed

Affects site ranking in Google

# High DPI Displays

- Old pictures look unsharp on displays with > 96 pixels/inch.
  - smartphones and Retina displays
  - HD and 4K monitors
- Create **-2x** versions of images if possible and specify SRCSET attribute in IMG tag.
- Browser chooses best version to show, depending on display.
- Recompile source with new HTMX macros.
- JavaScript functions adapt to display pixel ratio.
- Macros create **-2x** thumbnails and show in **-1x** space.