Multicians Website

www.multicians.org

THVV 12/10/23 v21

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 (Dec 2023)

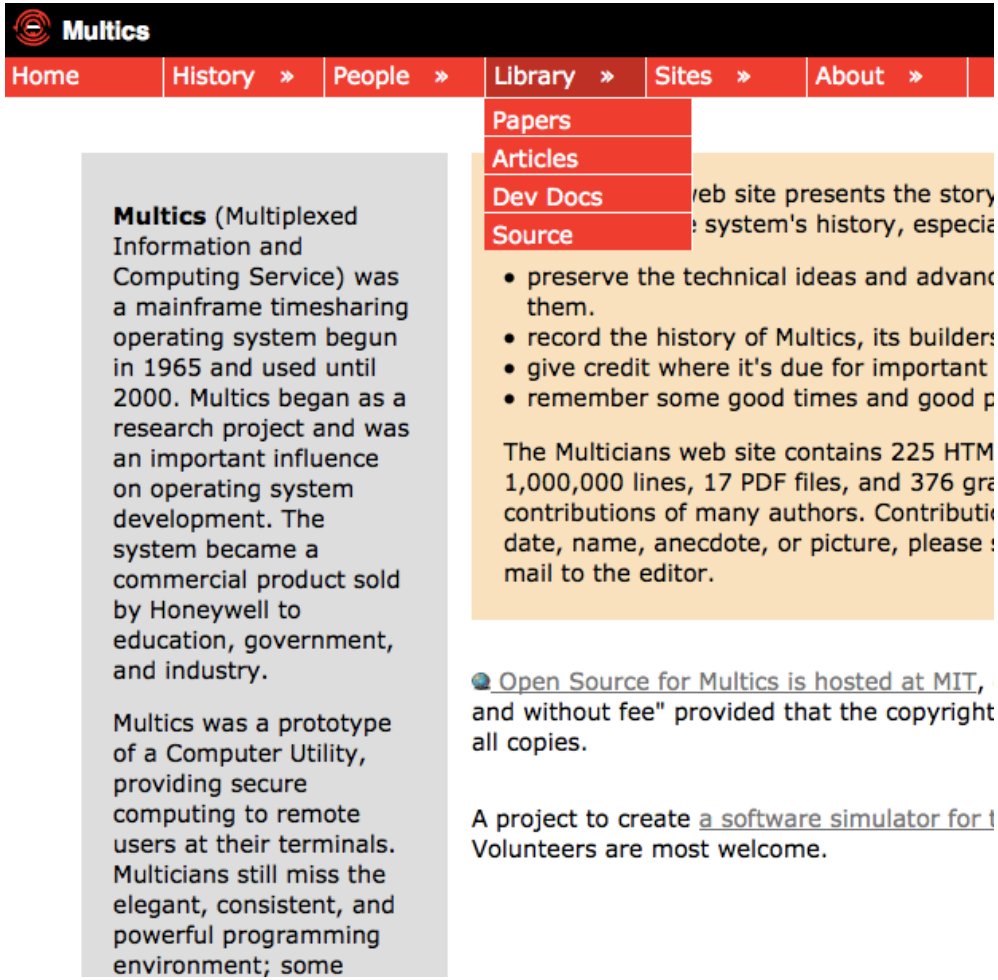
- 0.5 sec to become interactive (Google Lighthouse)
- 486 HTML pages
- 663 images
- over 540K lines of HTML
- Multicians: 2046 names, 746 mail addresses
- Glossary: 843 entries, 27 web pages
- 87 Multics Stories by 41 authors
- 30 Articles about Multics
- 46 Published papers (35 on site)
- 1794 PDF documents (e.g. MSPM, MCBs, MTBs, MSBs, MCRs, MOSNs)
- (15 SQL tables used in generation)
- Bibliography: 5054 entries (links to 3612 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



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.

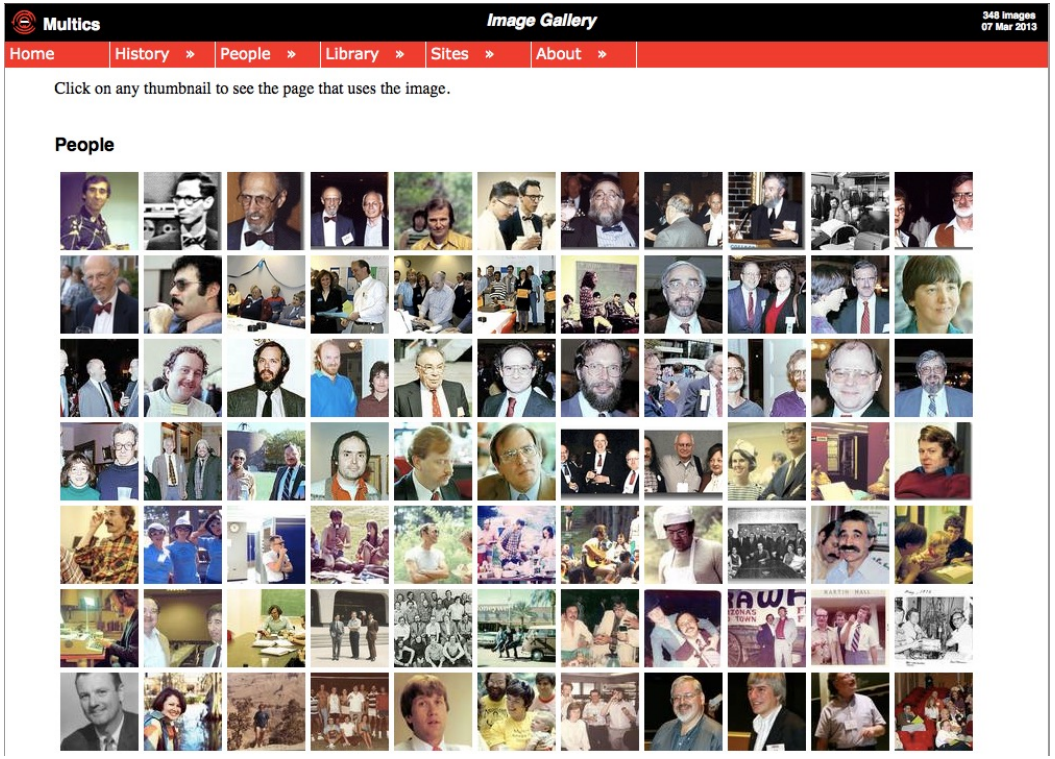
See **`https://multicians.org/m-webguide.html`**.

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 3028 lines of HTML
- Generates combined JPGs for CSS sprites
  - saves 662 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.

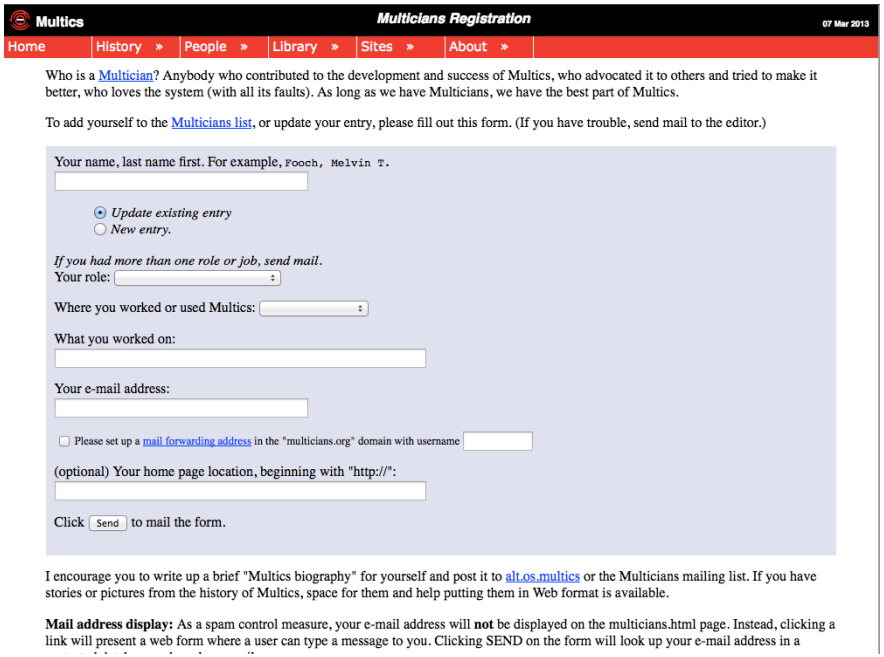
Corsi, A. J.
Engineering (HIS): performance measurement.

Cote, Gil
System (NWGS): Applications (NWGS). mail

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

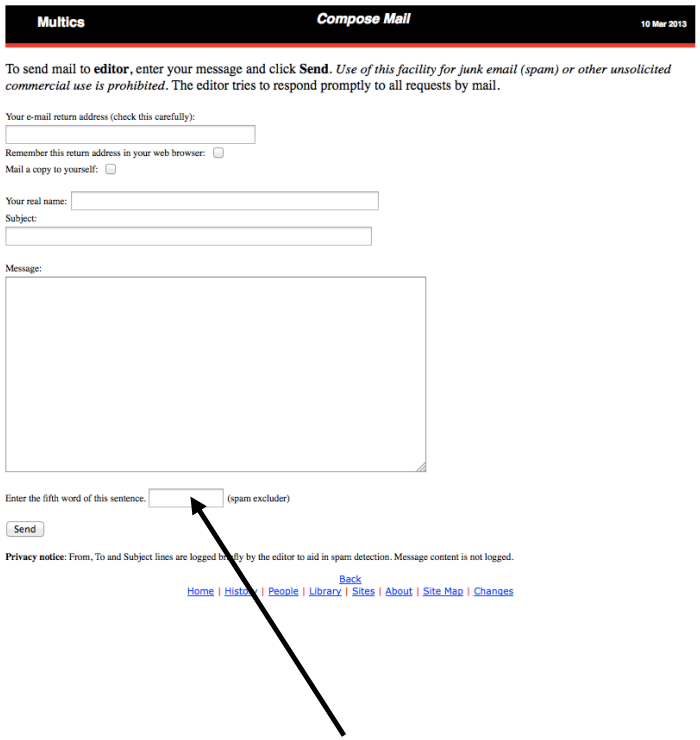
Signup form

- 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.



Mail to Multicians or editor

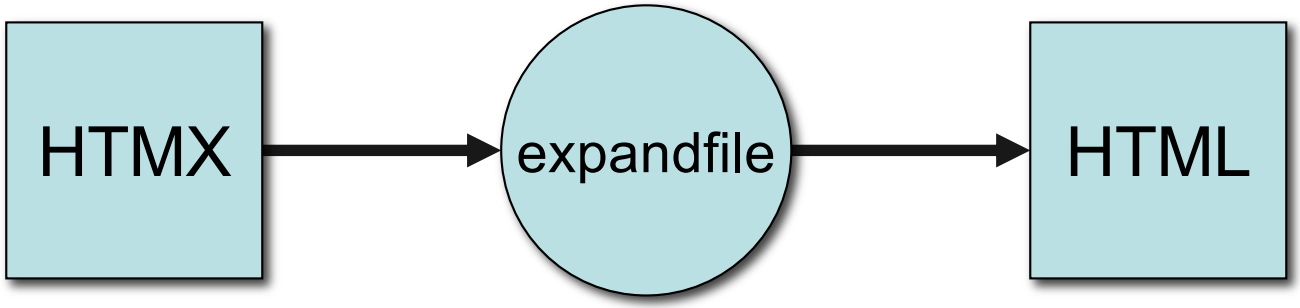
- Mail addresses hidden from web crawlers, looked up in online database.
- Mail form page generated on the fly.
- Human Interaction Proof: user must answer a text question.
- Checks to prevent spamming.
- Thanks page generated on the fly.
- Optional return address cookie.



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.