

Henry Lowengard
110 Fair Street
Kingston, NY 12401-4802
(845) 338-8234
<http://www.echonyc.com/~jhhl/>
<http://www.jhhl.net/>
jhhl@panix.com

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Henry Lowengard has been designing Internet applications and online media since the beginnings of the publicly accessible Internet in 1991. I have been programming since 1969.

I specialize in working with "little languages", graphics, animation, audio, email, internationalization, custom servers, web services and web site design. I write in C, C#, Objective C, Java, PHP, Perl, Python and many other languages on Mac OS X, iPhone, Windows 2000/XP, POSIX operating systems, IBM MVS and CMS, and other hardware and operating systems. I also work with my own custom written programs to create 2-D animation and music.

Computer Programming Experience:

2009: Consulting

- WFMU-FM: WFMU's iPhone Radio App
- eSommelier.com: XML based API regression test system (in Python)
- Lake Piano iPhone App: <http://www.jhhl.net/iPhone/LakePiano/> musical instrument
- Droneo iPhone App: <http://www.jhhl.net/iPhone/Droneo/> musical instrument
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2008: Consulting

- Game Face Web Design : Drupal programming and consulting
- eSommelier.com: PHP, Ajax interface to MySQL database

2008: iPhone Apps

- SrutiBox: iPhone drone musical instrument. In the iPhone App Store now, with many appreciative comments.
See: <http://www.jhhl.net/iPhone/SrutiBox/>
- Wind Chimes: iPhone Wind Chimes musical instrument.
See: <http://www.jhhl.net/iPhone/Chimes/>

2006-2008 Send Word Now Communications, Inc.

Send Word Now (<http://www.sendwordnow.com>) writes and maintains an online application that sends message as quickly and simultaneously as possible to a predetermined contact list via a number of media: voice, email and text messaging. The infrastructure is built on MSSQL, with a large number of Windows services and webservices processing the requests and message I/O.

- I designed and wrote Windows services to process incoming events (specified as XML files) and turn them into messages on phone, email and SMS platforms using SendWordNow's internals. I also wrote test procedures that simulated the triggering of these events. SWN calls this feature "Weather Blast"
- I designed and developed the UI interface that allows all the message transmission history of every message to be traced. SWN calls this feature "Alert Tracer".
- I designed the web service client that transmits messages via Blackberry PIN.
- I designed and implemented a Windows service which updates batches of contacts via XML files, and the test programs to create various kinds of batches.
- I re-engineered the email subsystem to add mail bounce processing and be able to be run on several servers. To test the email system, I wrote a custom SMTP server that can produce SMTP errors and delays on demand, while not actually delivering any messages whatsoever.

This work was done in C#, Java, PHP and Python.

1999-2003 Cisco Systems (acquisition)

1999-1999 Weblin Communications (acquisition)

1997-1999 Ergotech/G2X

I designed and wrote an email processing server that was integrated into a Customer Contact system. The email processor has a web interface with a custom server-side template engine. It transcodes incoming messages, and processes it through a rules engine, which can, among other things, feed the message into a group queue for an agent to respond to, automatically respond to the message, assign priorities, escalate priorities, and assign tracking numbers. The same program uses a web interface for acting as the agent's interface, acting as the administration interface, writing and editing the rule set, configuring the users and groups and many, many other things. This system was so interesting it was acquired (along with support staff) by Webline Communications in July of 1999, which in turn was acquired by Cisco Systems in November 1999.

The system, then called "Cisco ICM Enterprise Edition, E-Mail Manager Option," was also internationalized and can process international character sets in the incoming and outgoing messages. The interface supported English, French, Italian, Spanish, German, and Japanese.

The server which I designed, wrote and maintained was a C-based back end that communicates with a suite of Java programs which act as wrappers to the mail server, database servers, and other parts of the total customer support system. All programming was developed in accordance to Cisco's ISO 9001 standards.

This product is no longer being sold by Cisco, but you can read about it here:

http://www.cisco.com/en/US/products/sw/custcosw/ps840/tsd_products_support_eol_series_home.html

This PDF of one of the manuals will give you an idea of the scope of this product:

http://www.cisco.com/en/US/docs/voice_ip_comm/cust_contact/contact_center/web_collaboration_option/email_manager_option/cem_50/user/guide/agent.pdf

1993-1997 Various Consultant projects:

I created Internet software for STIM, WFMU, Information Builders, Taejon (Korea) Science Expo, and others. These projects involved interactive VRML modeling, animation, web-enabled Fax processing and distribution, catalog systems and other CGI processing.

1980-1993 Information Builders, Inc.

<http://www.informationbuilders.com>

Information Builders is one of the oldest privately held business oriented software companies. Its products run on a large number of platforms and operating systems. I worked primarily on the IBM Mainframe version, in CMS and MVS, and on the Apple Macintoshes of that time.

I wrote and maintained parts of the business oriented "fourth generation" language FOCUS. I wrote, extended and maintained:

- FOCUS Graphics, adding support for ASCII serial devices such as the HP7721 plotter, writing a serial line monitor to help set up the EBCDIC-ASCII translation tables, and GDDM Mainframe graphics support.
- FIDEL, the 3270 terminal Form Entry system, which I enhanced as the terminals got more sophisticated.
- FOCEXEC scripting language, to which I added a number of capabilities such as list processing, subroutines, and form interface.
- Window Interface for IBM terminals, allowing products to port from the PC's interactive, ASCII character-oriented I/O to the Mainframe terminal's EBCDIC transaction oriented I/O.
- MODIFY, the database modification language: I added major features such as subroutines, multiple record processing, tighter interfacing with FIDEL.
- HLI (High Level Interface), which is a programming interface for FOCUS databases. I maintained HLI and added the Simultaneous Usage feature, which is a mutex locked client-server technology for interprocess communication, shipping arguments and results back and forth. I used a programmable state table internally and this made it extremely easy to configure .
- MODIFY SU, added the Simultaneous Usage feature to MODIFY, allowing transactions and limited reporting between many FOCUS clients and FOCUS database server.
- Internal re-factoring: For a year, I and another programmer reconfigured and optimized the FOCUS internals so as to be able to fit in a 1 megabyte address space.
- Macintosh port: I worked on porting the original FORTRAN code base to Pascal and later C, adding a graphic user interface to the character oriented FOCUS code, HLI for Macintosh, Hypercard XCMD HLI for Macintosh, and interfacing a third party graphics library to our own graphics. I also became the build administrator and installer coder. This was for Mac OS System 6 and 7.

1980 B.A. in Computer Science/English , Trinity College, Hartford, CT.

Internet Experience:

Many projects are linked from <http://www.echonyc.com/~jhhl/>
Newer artistic projects are visible on <http://www.jhhl.net/>

Web mastering and gopher mastering:

Sustainable Hudson Valley (www.sustainhv.org)

I rebuilt the existing website from a Dreamworks based implementation to a Drupal one.

WFMU.org

WFMU is a world famous freeform not-for-profit radio station based in Jersey City, New Jersey.

I had been putting up WFMU information (schedules, events, other information) on the gopher of [echonyc.com](http://www.echonyc.com) before there was a World Wide Web to speak of. Later, I was one of the original team to put WFMU on the web, and still help build features and clear up problems with the website.

1995-present Webmaster, www.WFMU.org

I wrote many of the cgi-bin routines, including the original WFMU Catalog maintenance software, and I maintained about a dozen of the playlists before they were finally automated.

1997-present designer/maintainer The Internet Museum of Flexi/Cardboard/Oddity Disks.

to be seen at <http://www.wfmu.org/MACrec/>

[echonyc.com](http://www.echonyc.com)

I put up websites/gopherspace for the following arts and music organizations before they learned how to take over these efforts for themselves:

Experimental Musical Instruments Magazine
Experimental Intermedia Foundation
American Festival of Microtonal Music
Wreck This Mess (a radio program)
Elodie Lauten (a New York composer)
Harvestworks gopher site (public access multimedia studios)
WFMU-FM
PS122
The Whitney Museum
PEN American Center
National Museum of the American Indian
The Unterberg Poetry Center
BMT magazine
High Times Magazine

Interesting Internet programming:

STIM.com

I wrote a special CGI feature for STIM, an online magazine, in 1997, called "Fax-Bomb".

Faxes sent to a special phone number would be reformatted and converted into web pages.

France Telecom:

The STIM Fax program was enhanced and joined with a database so faxes could be distributed within a company without the need to duplicate them or file them.

The Internet Synthesizer:

I wrote the first web-enabled Internet Music Synthesis program, "sinth", the Internet Synthesizer. It's still running at <http://www.wfmu.org/~jhhl/sinth.html>

1992-5 Gophermaster, ECHONYC.COM

ECHO is a large community of online friends, originally a dial-up BBS, which later moved to the Internet. Gopher was an Internet file transfer protocol that predated HTTP/HTML.

References:

Jeremy Sterns, CTO, SendWordNow Communications, Inc., jsterns@sendwordnow.com (212) 379-4900

Jeff Pascal, formerly Development Manager at SendWordNow, jpascal100@comcast.net

Hugh Crawford, Programmer, formerly Cisco Systems and SendWordNow, (718) 788-3486

Peter Mittelman, V.P. Information Builders, Inc. (212) 736-4433

Ken Freedman, Station Manager, WFMU-FM (201) 521-1416