



Henry Lowengard
(10-2018)
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I am interested in designing and writing mobile iOS apps, HTML5 powered web sites and web applications, the infrastructure to run these systems, and tools to build and test these systems. I'm especially interested in mobile adaptive technology.

I've worked in Corporate environments (Cisco, Information Builders, Medidata Solutions) and startups (SWN, ErgoTech/G2X, CityMaps), and as an independent contractor (Brand Expression, eSommelier, Verna Gillis).

I also do a few iOS projects on the side, and help design and maintain a few websites pro bono.

New protocols and APIs are coming out all the time, and I'm a fast and resourceful learner who can build them into something useful.

There's lots more about me and my work (and art and music) on my website, <https://jhhhl.net>

EXPERIENCE

Memorial University, St. John's Newfoundland, Canada

(April 2018 -2018)

Designed and wrote AUMI Sings, a musical app that uses video tracking to provide a singing voice so that voiceless people can participate in vocal music. This is an ongoing project! Here are a bunch of videos I made explaining AUMI Sings: <https://www.youtube.com/channel/UCSwpML9jyYfQMeRdwh-4qqw>

Verna Gillis

(January 2017 - June 2018)

Designed and wrote Verna, a utility that helps organize information about your friends' food preferences and allergies. The app is no longer in the app store, but this article (<https://jhhl.net/Resumes/Images/VernaAppArticle.jpg>) can tell you about it.

Stationhead, Inc.

(February 2016-July 2016)

Stationhead makes an iOS app that imitates radio streams. It plays music from Spotify playlists which you can talk over like a broadcast radio DJ can. I was one of the iOS programmers, developing and maintaining the code, did some internal design, testing, and wrote some small external servers.

<http://stationhead.com>

Exago, Inc.

(January 2015-November 2015)

Exago is a Kingston, NY based Business Intelligence company, which provides a customizable solution for people who want to add interactive reporting and charting via website for their own or their customers' data. I maintained parts of the product, as well as adding features relating to date functions and Dashboards.

<https://exagobi.com>

Deep Listening Institute, LLC / Rensselaer Polytechnic Institute

(January 2012-)

Develop, write, and maintain AUMI, an iOS app which uses video tracking to allow people with very limited voluntary movement to participate in music improvisation. The app went live in June 2013. I'm still very much involved with this project. <http://www.aumiapp.com>

Medidata Solutions, LLC

(March 2012-April 2014)

Medidata Solutions (recently (2020) acquired by Dassault Systems, <https://www.3ds.com>) is a leader in data management of clinical drug and medical device trials.

When they started getting into providing patient reported diaries on mobile devices, I was their first hire exclusively for mobile programming. Medidata is a BDD/TDD Agile shop, and applied that philosophy to mobile development in a way that fits in with the rest of the testing and validation systems they were using. "Patient Cloud" is now used in a number of studies, which at the time I was there was a new territory for Medidata to connect with: the world outside the clinic.

I did a lot of re-engineering on the app, which changed its UX/UI philosophy a few times over its development history. I also helped to come up with the scheme for testing the app using scenarios and feature files, by using an external server to mock all the API transactions.

Read about Patient Cloud in the app store here:

<https://apps.apple.com/us/app/patient-cloud/id1361329140>

Self-Employed Consultant

(2008 - Present)

- As an iPhone app consultant, I did work for CityMaps, which is now part of TripAdvisor. I refactored code, fixed issues, gave advice.
- I designed and wrote many iPhone and iPad applications currently in the Apple iPhone App Store, related to music, sound experimentation, and art. My website gives details, but in short, many of them have innovative interfaces to support the rather hard to describe music they create. See this webpage for more info: <http://www.jhhl.net/iPhone>
- I wrote and am still updating the iOS version of AUMI, the Adaptive User Musical Instrument, for Pauline Oliveros' Deep Listening Institute, which is now part of Rensselaer Polytechnic Institute. AUMI is an app that helps severely disabled (and "temporarily abled") users play improvised music by tracking a video image. <http://aumiapp.com>
- The online web-apps "Tone Spiral" (<https://jhhl.net/tonespiral.html>) and "The Lost Chord" (<https://jhhl.net/lostchord.html>) are microtonal music educational tools. The Lost Chord was recently featured in an online Opera, "The

Dimbola Mikado", by Ergo Phizmiz. ([https://
thedimbolamikado.blogspot.com](https://thedimbolamikado.blogspot.com))

- More iOS apps are on the way, for me and other clients.
- Programming in PHP, Javascript, Python, Drupal, C, Objective C, C#, Java, Processing, MySQL, SQLite3, CSS, HTML, Wordpress, Squarespace, and bespoke Web design.
- Converted a proprietary server from using MYSQL to SQLite
- Built Web interface for MySQL database using Ajax
- Created a self-contained promotional app for iPod Touches with content (video, PDFs) customized for each recipient.
- Converted a Dreamweaver website to Drupal, with PHP extensions.
- Designed and coded an XML-based API regression test system (in Python)
- Helped put WFMU on the Internet, wrote many of its original web features like the Marathon pages, picture-of-the-day scheduler, quizzes, surveys, the WFMU Catalog, The Internet Museum of Flexi/Cardboard/Oddity Recordings, and DJ web pages and playlists. I also wrote their first iPhone apps. See their website at: <http://www.wfmu.org>

Station Manager Ken Freedman mentions me in this article: <http://therumpus.net/2017/01/sound-vision-28-ken-freedman/>

Clients: Brand Expression, eSommelier, WFMU-FM, Game Face Web Design, Sustainable Hudson Valley, Ignite Sales, Black Coffee, CityMaps, Deep Listening Institute

Send Word Now Communications, Inc.
Senior Programmer (2006-2008)

Send Word Now (now part of OnSolve, [https://
www.onsolve.com/capabilities/critical-communications-and-
alerting/](https://www.onsolve.com/capabilities/critical-communications-and-alerting/)) 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 web services processing the requests and message I/O. This service provides the email infrastructure of many mission-critical systems, including, for a long time, "Notify NYC": <https://a858-nycnotify.nyc.gov/notifynyc/>

The following work was done in C#, Java, PHP, and Python:

- 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. Wrote test procedures that simulated the triggering of these events. SWN called this feature "Weather Blast." <https://www.onsolve.com/blog/case-study-how-sears-uses-send-word-nows-weatherblast-to-protect-staff-and-customers/>
- Designed and developed the UI interface that allows all the message transmission history of every message to be traced. SWN called this feature "Alert Tracer."
- Designed the web service client that transmits messages via Blackberry PIN.
- Designed and implemented a Windows service which updates batches of contacts via XML files, and the test programs to create various kinds of batches.
- Re-engineered the email subsystem to add mail bounce processing and be able to be run on several servers. It also has a custom mail retry system that I designed.
- Wrote a custom SMTP server that could produce SMTP errors and delays on demand, while not actually delivering messages, in order to test the system.

Cisco Systems (acquisition)

Weblin Communications (acquisition)

Ergotech/G2X

Senior Programmer

(1997-2003)

- Designed and wrote an email processing server that was integrated into a customer contact system. The email processor used a web interface with a custom written server-side template engine. It transcoded incoming messages, and processed them through a rules engine, which could, 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 used HTML and a dedicated HTML server to create the agent's interface, the administration interface, writing and editing the email rules engine rules, configuring the users and groups, and many, many other things. Internally, I wrote not only the rules engine, but a logging system, and HTML template engine, and the database access API, all running server-side. At the time, most programs were using native interfaces.
- This system was so interesting it was acquired (along with support staff) by Weblin Communications in July of 1999, which in turn was acquired by Cisco Systems in November 1999. Renamed "Cisco ICM Enterprise Edition, E-Mail Manager Option," the system was also internationalized, and could identify and 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 communicated with a suite of Java

programs which acted 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 the following copy of a White Paper will give you an idea of the scope of this product:

http://www.jhhl.net/Resumes/CEM_E-Mail_WP.html

NOTE! While I wrote and designed a large part this part of this system, I am in no way a Cisco engineer anymore, and have no experience with any of their current products.

Self-Employed Consultant: Dot-Com era
(1993-1997)

- 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.

Information Builders, Inc.

Programmer/Senior Programmer (1980-1993)

<https://www.ibi.com>

Designed and maintained parts of the business oriented "fourth generation" language FOCUS, including :

- graphics on many devices
- the form entry system, (FIDEL)
- the database maintenance language (MODIFY)
- the third party API (HLI)

- the ability to simultaneously access and modify the database (HLI-SU and MODIFY-SU)
- I also was on the team that ported FOCUS to the Macintosh, which never was released.

EDUCATION

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

SKILLS

C, C#, Objective C, Swift, Java, PHP, Perl, Python and many other languages on Mac OS, iPhone/iPad, Windows 2000/XP/10, POSIX operating systems, IBM MVS and CMS, and other hardware and operating systems; "little languages," graphics, animation, audio, DSP, email, internationalization, custom servers, web services and web site design.

VOLUNTEER ACTIVITIES

I am the president of the board of trustees at the Century House Historical Society, an educational and arts not for profit 501(c)(3) corporation.

I do programming and web site development for numerous nonprofits and individual artists, including:

- Adaptive Use Musical Instrument (aumiapp.com)
- Century House Historical Society (www.centuryhouse.org)
- History Alliance of Kingston (historyallianceofkingston.com)

- Unitarian Universalist Congregation of the Catskills (uucatskills.org),
- Mamalama (musical group) (www.mamalamaband.com)
- WFMU-FM, freeform radio station (www.wfmufm.org)
- Sustainable Hudson Valley (www.sustainhv.org)

REFERENCES

Eric Grimmelmann, Chairman, Board of Directors, New York Technology Council, egrimmelmann@kosmosys.com, (212) 579-8990 (former CTO of Send Word Now)

Drew Allison, President, Brand Expression, drew@drew-allison.com, (617) 926-6478

Bill Malizia, former Medidata Product Manager for "Patient Cloud", wgmaliza@gmail.com, (215) 514-0576

INTERESTS

Electronic music composition, music performance (hammered dulcimer, autoharp, melodica, gamelan instruments), 2-D animation, sustainability, adaptive use, Mid-Hudson Valley, origami, history, unschooling.