

# Resumé of Michael FIG

<http://michael.fig.org/resume/MichaelFIG.tex><sup>1</sup>

## Highlights

Michael is a programmer analyst who specializes in refining and retrofitting existing software to solve new problems. His qualifications include:

- Practical business-driven application software development.
- Extensive involvement in Free Software development on the Internet.
- Web application, systems programming and administration experience, with emphasis on network protocols, network security and software portability.
- Works well with others.

## Personal Information

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Birthdate: September 16, 1975

## Education

### Formal

2005–2009 Project Management Professional, Project Management Institute.  
1992–1993 International Baccalaureate Diploma, 33 out of 42 points.

- Higher level: English, History of the Americas, Biology.
- Subsidiary level: German, General Chemistry, Mathematics.

### Informal

1993–present Learned to program in several computer languages, with a solid understanding of: assembly (Intel i386 (1994)), Bourne shell (1994), C (1994), C# (2004), C++ (1996), Erlang (2006), HTML (1994), Lisp dialects (1994), Perl (1994), PHP (2002), Python (2002), MySQL (2002), Microsoft T-SQL (2002), and Visual Basic 6 (2002).

Learned software development cycle and maintenance techniques for small- to medium-scale projects, including distributed development over the Internet.

Learned how to install, use, and administer several different operating systems, specializing in: MS-DOS, MS-Windows (many flavours), GNU/Linux (Debian, Ubuntu, and Red Hat distributions), and Mac OS X.

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<sup>1</sup>The L<sup>A</sup>T<sub>E</sub>X source code for this resumé is available upon request. Share and enjoy.

## Experience

1998–2002,  
2009–present

**Excel Consulting, Ltd.**    *Consultant*

Worked for diverse clients as a computer consultant:

- Provided user training and application support.
- Installed and configured home PCs, printers, serial terminals, workstations, application servers, network proxies and firewalls, for both Unix-like and Windows operating systems.
- Wrote scripts to assist in system administration.
- Performed PC hardware upgrades and minor repairs.
- Ported a customer's internal Informix application from SCO XENIX to a more recent Informix running on Linux/i386.

July to October  
2009

**Viewpoints Research Institute**    *Consultant*

Performed a short-term COLA programming language research and development contract. Investigated the merger of recursive virtual machines with operating system concepts, now implemented as “COLA kernels.” Wrote a research memo describing the Actor concurrency model as planned for implementation in COLA (published at <http://vpri.org/html/writings.php>).

2002–2009

**MarkeTel Multi-Line Dialing Systems, Ltd.**    *Sr. Developer*

Designed, implemented, and maintained Pursuit Advanced Telephony Server software as a modified Asterisk PBX system (later planned to migrate to FreeSWITCH) managed by a complete Erlang/OTP release under Linux/i386. Wrote Pursuit client/server management software in C#.

Codesigned, coimplemented, and maintained SuperScript, a PHP 4 survey questionnaire web application running on both Microsoft Windows and Linux/i386 platforms. Radically optimized SuperScript performance by changing network server from Apache to Yaws and reimplementing time-critical portions in Erlang.

Designed and implemented Slog 1, an internal TCP/IP client/server punchlock application using Visual Basic 6 and MySQL. Added a PHP 4 web interface to Slog. Codesigned and coimplemented Slog 2 as a TCP/IP and UDP/IP peer-to-peer network application in C#.

Redesigned and retrofitted an internal PHP 4 and MySQL customer relations management (CRM) web application.

Coimplemented and maintained proprietary soft-realtime telemarketing dialer firmware for the MKII dialer hardware using GNU C for the embedded Motorola HC11 chip.

Codesigned and coimplemented the Grand Unified Firmware (GUF), a portable low-level predictive dialer switching software written in C initially targeting the original MKII hardware, the GMD hardware (based on an embedded Motorola MC68020 chip), and also running as a regular application on Linux/i386 using the Intel Dialogic Global Call API.

- Codesigned, coimplemented, and maintained Prospector, a soft-realtime control system for proprietary dialer hardware, written in Visual Basic 6 and Microsoft SQL Server 7. Created custom message queues which enabled asynchronous calls between VB6 apartment threads in order to improve responsiveness.
- 2002–2004      **Follow the System Marketing, Inc.**    *Consultant*
- Codesigned and coimplemented the Online System Manager, a web application suite for home-based business using Perl, mod\_python, and PostgreSQL.
- 1994–2004      **The GNU Project**    *Volunteer Contributor*
- Submitted feature enhancements and bugfixes for several different free software systems, notably: Automake, CVS, Emacs, Fetchmail, FreeBSD, the GIMP, GNU C Library, GNU Mach, Gnus, Hesiod, the Hurd, Kerberos 5, NetBSD, Pliant, RScheme, SANE, Stow, Texinfo, Wget, and Xmorph.
- 2001–2002      **Cluster File Systems, Inc.**    *Consultant*
- Worked with User Mode Linux to test and debug Linux kernel modules for InterMezzo, a free client/server network-distributed filesystem.
- Created RPM packaging for Lustre, another free network-distributed filesystem. Used Tinderbox to manage an automated build and test suite for Lustre.
- 1998–2001      **The GNU Project**    *Consultant*
- Worked for the Free Software Foundation to help develop and distribute the complete GNU operating system, based on the GNU Hurd:
- Comaintainer of the subversions.gnu.org CVS server.
  - Comaintainer of GNU GRUB, a flexible bootloader.
  - Coauthor of the GNU Hurd Reference Manual.
- 2000–2001      **Mountain View Data, Inc.**    *Consultant*
- Designed and implemented a custom source build environment for InterMezzo.
- Codesigned and implemented a Perl Sun RPC module, to replace InterMezzo's original custom network protocol.
- 1996–1999      **The GNU Project**    *Volunteer Maintainer*
- Designed, implemented, and maintained GNU Libtool, a multi-platform shared library creation script.
- 1996–1998      **Mercury Information Technology, Inc.**    *Consultant*
- Designed and implemented a cross-platform TCP/IP client/server remote procedure call system called WebRPC, which uses Java, C, and COBOL stubs to process secure transactions.
- Designed and implemented Internet Banking solutions for two separate province-wide financial institutions using WebRPC.

Helped perform security audits for oil and gas companies in Calgary, and an Israeli financial institution. Responsibilities included:

- Diagramming existing computer network topology, and evaluating for potential weaknesses.
- Performing interviews of company personnel to discover perceived weaknesses and proposed solutions.
- Performing diagnostics of network servers, gateways, and dial-in machines. Writing and extending programs to automate these procedures.
- Documenting findings, determining risks, and recommending corrective measures.

1993–1997

**University of Calgary** *Programmer Analyst II*

Designed and implemented a LAN of over 120 workstations running Red Hat Linux and Windows NT.

Designed and implemented a LAN of 48 Unix-based workstations, shared between undergraduate Electrical Engineering students. These machines ran Red Hat 3.0.3, and 36 of them were able to dual-boot to Windows NT.

Designed, implemented, and helped administer a heterogeneous LAN of over 70 Unix-based workstations, shared between 750 undergraduate Engineering students. About 20 of the machines ran FreeBSD 2.1.5; the others were DECstations running Ultrix 4.2.

Coadministered a small heterogeneous LAN for Civil Engineering. The network included SunOS 4 workstations, a central SunOS server, and several DOS PCs and Macintoshes.

## Hobbies

- Amateur accordionist since 1992
- Fine dining, movies
- Tennis
- Volunteer free software development

## References

Available upon request.