

Jethro Villegas

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An accomplished Software Developer with over 12 years experience in interactive media for consumer, professional, enterprise and mobile applications. Has extensive experience in the full product life-cycle for several successful commercial applications. Proven ability to design, implement and manage feature-rich, robust and scalable architectures on schedule-driven teams with complex dependency matrices.

- Expertise in Object-Oriented Analysis/Design and Implementation in Java and C++
- Strong practical knowledge of interactive media design and implementation.
- Equally strong ability to design flexible object-oriented frameworks and systems.
- Demonstrated ability to implement designs for performance, size, security and stability.
- Solid management skills, demonstrated proficiency in leading and mentoring individuals and fostering cohesive team environments.
- Analytical thinker that consistently resolves technical and non-technical issues, often called upon to consult on problems that require clever solutions under tight deadlines.

Technical Expertise

Languages: C++, Java, C, XML, ActionScript, JavaScript, HTML, Lingo, PERL, InstallShield, WinHelp, SQL
Fluent writer/speaker in the Philippine (Tagalog) language.

Frameworks: MFC, Win32 API, Win16 API, Macintosh Carbon, Macintosh Toolbox, J2EE, JNI, STL, ActionScript Standard Library

Concepts: Object-Oriented Analysis/Design, Design Patterns, Software Security, Networking, Multi-threading, Globalization, Internationalization, Localization, User Interface design, Programming Language design, Interaction design, Computer Graphics, Sound and Video.

Systems: Win32, Win16, DOS, Mac OSX, Mac OS9, UNIX (Linux and Solaris)

Development Software: MS Visual Studio, XCode, CodeWarrior, Flash, Flex, Dreamweaver, and many others.

Professional Experience

Sr. Engineering Manager, Adobe Systems, Inc.

2006 – Current
Adobe Flash

I manage the complete software design and development of the Flash 9 authoring tool as part of the Adobe Creative Suite 3.

Responsibilities include:

- Overall product development
- Requirements analysis
- Technical direction
- Customer validation
- Development schedule
- Cross-product integration
- User interface and usability

I manage 8 direct reports, all of whom are senior computer scientists and engineers. I regularly presents at various Flash-related conferences as Adobe expert on SWF Authoring and related technologies. I also represent the Flash Authoring team at cross-product development forums.

Principal Software Engineer, Macromedia

1998 – 2005

Macromedia Flash

Designed and implemented key features in the Flash authoring tool and Flash Player over several major releases.

Feature and Expertise Areas include:

- SWF File format
- User Interface
- Object Database and Serialization
- External file import/export
- Library
- Clipboard
- Transaction Model
- Stage Rendering
- Scripting
- ActionScript Compiler
- Player Depth (z-order) management of graphic objects
- ActionScript Standard Library

Designed and implemented the SWC file format, a cross-product file format used in several Macromedia products.

Served as Assistant Engineering Manager, when called upon by Senior management. I facilitated communication among team members from other teams, by reviewing source code submissions, specs, and bug reports.

Consistently maintained one of the highest bug-fix rates on the Flash authoring engineering team. Expert on the Flash object database, SWF file format, and ActionScript runtime implementation. Regularly presents at "Flash School," a training forum for Macromedia employees to demonstrate Flash and other Flash-related product information.

Investigated emerging technologies for the Flash team.

Monitored external activities that affect the Flash team--for example, cross-product planning, network infrastructure planning and new team member hiring.

Served as a design/implementation consultant for other engineers.

Represented the Flash team at Macromedia Security and Code Performance focus groups.

Macromedia Dreamweaver

Designed and implemented the SWC file format used by Dreamweaver "Flashlets."

Designed and implemented a key feature of the Flash video kit for Dreamweaver. The requirement was to detect the native height and width of an unknown video object. The video object may be a local file, a stream transmitted over HTTP, or a proprietary network protocol. The solution had to integrate with an existing scripting environment in a shipping product on Mac and Windows. Also, the work was completed in 5 days.

Macromedia Flex

Designed and implemented the SWC file format used by Flex components.

Macromedia Generator

Used Java and C++ to develop the "Enterprise Edition" of an existing server product. The scalability and stability requirements were very high. MTBF of 2 weeks under constant saturated server load. The work involved identifying and resolving technical issues regarding memory usage, multithreading, and dynamic generation of SWF, GIF, JPEG and PNG files over HTTP. Extensive use of Java, JNI, C++, servlets, and Flash.

Macromedia Director

Designed and implemented the SWC file format used by Director "Flash Components." Prior to joining Macromedia, designed and implemented the LiveVideo XTRA, a plug-in for Director that allowed it to display a live video feed from external video sources. Implemented using QuickTime APIs and serial hardware control. This system was used at the Smithsonian Institution for an interactive kiosk exhibit.

Macromedia Authorware

Helped design the "Knowledge Objects", a component framework and interaction library for rapid development of Authorware 5 learning applications. Produced the multimedia instructional materials that accompanied the Authorware 4 release. Designed the XML parser Xtra, a plug-in for Authorware to parse external XML text files.

Macromedia Extension Manager

Implemented the necessary code to integrate Extension Manager to several Flash releases.

Producer, McGraw-Hill Multimedia

1997

A brief stint at McGraw-Hill managing the development of the CD-ROMs and web sites that accompany college textbooks. The work involved the day-to-day management of third-party developers under contract, on tight deadlines and budgets. The subject matter ranged from foreign languages, economics, to mathematics.

Development Director, Interface International Communications

1995-1996

Interface International was actually just 4 employees (including myself) who did independent contracting work as one business entity. The work here ranged from kiosk applications, small desktop applications, localization and early web pages. The other founders went on to become hermosawave.net, focusing on web site design and hosting. Here are some later works: <http://www.hermosawave.net/web/portfolio.html>

Technical Director, ImageSmith, Inc.

1992 – 1994

ImageSmith was a small company (15 employees) that focused on children's educational and entertainment software products. The success of the company was built on clever, entertaining games that used licensed cartoon characters. I started as a programmer at ImageSmith, where I quickly learned about software development, game design, animation, sound design, licensing, and management. The company was acquired by Philips Media in 1995. I shipped 13 products while at ImageSmith in 6 different languages.

Snoopy's Geography Games of the World

CD-ROM for Macintosh and Windows. This product was designed to teach kid's ages 3 to 10 about Geography with 5 fun educational games and activities. First published in 1994 by Imagesmith, Inc.

Credits: Technical Director, Programming, Graphics, Game Design, Package Design, International Localization

The Flintstones Family Fun Pack

This product was also designed for kid's ages 3 to 10. This product features six different games that help kids in reading, spelling, math, creativity and logic. Published by Imagesmith, Inc.

Credits: Programming, Graphics, Game Design, International Localization

Yearn2Learn Snoopy

CD-ROM for Macintosh and Windows. This product features five different activities that are both fun and educational. It first shipped in November, 1993. Published by Imagesmith, Inc.

Credits: Programming, International Localization

Yearn2Learn Peanuts

CD-ROM for Macintosh and Windows. This product features five different activities that teach Math, Geography, Reading, and Art. It first shipped in November, 1991 on four floppy disks. Published by Imagesmith, Inc. and Philips Media, Inc.

Credits: Programming, International Localization

Master Snoopy's Single-Subject Modules

CD-ROM for Macintosh and Windows. These 4 products: Master Snoopy's Math, Spelling, Geography and Coloring Book were created especially for Wal-Mart, K-Mart and Sears. Published by Imagesmith, Inc.

Credits: Technical Director, Programming, Graphics, Game Design, Package Design, International Localization

The Flintstones Single-Subject Modules

CD-ROM for Macintosh and Windows. These 5 products: Fashion Cave Math, Spellasaurus Quarry, Fossil's Foto Fixer, Tell-A-Tale Library and Bedrock Art Gallery were also created especially for lower-priced consumer markets. Published by Imagesmith, Inc.

Credits: Technical Director, Programming, Graphics, Game Design