Timothy J. Sayre

San Diego, California
(858) 663-4063
sayretj@gmail.com

Hardworking, cost conscious, common sense software engineer able to apply over fifteen years in-depth experience working in C/C++ and Java. Capable of software design, development and consulting with extensive experience in digital media, biotech, manufacturing engineering, home loan industry software and project management. Development experience ranges from client side applications to highly scalable enterprise solutions.

Process/Methodology/CASE:

Object Oriented Analysis and Design, Agile methodology, SCRUM, Contextual Design, UML, GOF Design Patterns, Rational Unified Process, Use Case, Visual Paradigm, Visio, Together/J

Languages:

Typescript, NodeJS, C/C++, Java, C#, Mongo, SQL, JSON, XML/XSL,   HTML, CSS

Software/Architecture:

DirectShow, AVI, MPEG, H.264, QuickTime, MFC, COM, DCOM, STL, ATL, Qt, J2SE, J2EE, Servlets, XML/XSLT, LAMP, Drupal, JDBC, JMS, HTML, EJB, ASP, CORBA, TCP/IP, VisualStudio (6.0, 2003, 2005), ECLISPE, Jira, SVN, CVS, SourceSafe

Platforms:

Linux, Mac, Windows, Embedded, Full Stack

Experience:

4/2008 – Present	Digital Force Technologies, Inc.	San Diego, CA

Senior Software Engineer
Responsible for rapid system development of multiple multimedia streaming, multiple format, capturing system operating on custom hardware system running windows embedded platform.   System used DirectShow architecture with custom source, transform and rendering filters.

5/2003 – 4/2008	DivX, Inc.	San Diego, CA

Senior Software Engineer/Technical Lead
Team Lead responsible for DivX Converter and Dr. DivX development initiatives. These products permitted users of average computer experience to transcode video from any format into DivX/MPEG 4 compliant video for dvd backup as well as playback on the desktop as well as disconnected DivX certified devices.

- Lead a team of six developers using an incremental and iterative development process to create two first generation video transcoding applications and service. These applications have generated several million dollars as well as propagated the user generated content eco-system.
- Key contributor and developer to the patent pending DivX Media file format.

- Directly responsible for integrating many base technologies into a complex system of video and audio processing while maintaining a simplified graphical user interface. Used C++, QT, Direct Show, MFC and ATL.

- Designed and built dynamic and customized direct show graphs and proprietary direct show and DMO filters.

- Created transcoding libraries used for content uploading for Stage6.com, DivX's Top 100 Alexa rated website.

- Performed elaboration, collaboration, estimation, development and documentation of the high definition software development kit packaged and distributed in CE certification kits and SDKs.

4/2002 – 5/2003 **Accelrys Inc.** **San Diego, CA**

Senior Software Consultant
Member of the team that developed Discovery Studio™. Discovery Studio™ is a complete range of life science applications spanning scientific disciplines within a single unified platform. It enabled discovery scientists to capture, manage, analyze, and use biological and chemical data and information within an integrated system. This system strived to provide a flexible technology platform to support pharmaceutical discovery and chemical development in a faster cycle time. Used C++, MFC, XML, XSL and Oracle.

- Designed and developed the macro-molecular X-Ray crystallography module, which is used to investigate and manage the diffraction maps of protein molecules.

- Designed and developed the analysis module that is used to investigate atomic trajectories with in molecular energy minimization experiments.

- Designed and developed the XML/XSL/SVG graphing capability within the life sciences modules of Discovery Studio.

- Modified and enhanced the COM/ATL based framework used to encapsulate the specialized modules of Discovery Studio. Provided generalized control features that are used to optimized rendering of the molecules and molecular surfaces.

- Modified and enhanced the Del Phi potential/Force Field Module. Added the capability for a molecule to be cleaned and typed prior to running energy minimization simulation.

11/2000 – 12/2001 **Akamai Technologies/Intervu** **San Diego, CA**

Senior Software Engineer
Member of the Conference Team that designed, developed and maintained the Conference 5 and Conference 2 product lines. This technology is a web based teleconferencing broadcast system. This is the system that allows such clients as FirstCall corporate earnings conference calls and Major League Baseball to broadcast on the Internet. Used Java, SQL, JDBC, XML, FTP and HTTP protocols to store and gather the information. Used XML, XSL and JavaScript to generate the appropriate web pages and metafiles.

- Created and maintained the Conference 5 security authentication features.

- Helped develop and maintain the Conference 5 automatic file and image generation.

- Part of a group that reviewed and recommended software for development and release processes.

- Helped develop and maintain the third party API.

- Assisted in the development and maintenance of the Conference 2 monitoring system. Based on a proprietary JMS implementation.

- Implemented and tested a majority of the Conference 2 web user experience.

- Assisted in the deployment of the Conference 2 application on Sun and Apache Web Servers.

3/1997 – 11/2000	Cotelligent Inc./Enable Inc.	San Diego, CA

Senior Software Engineer
Core member of a design and development team who's primary responsibilities included implementation of information solutions on a contract basis.

INTERVU - Conference 2 Internet conferencing system. – Senior Developer
EPIC Solutions – Alcatraz law enforcement detainee tracking system – Senior Developer
First American Real Estate Investment – RAPID loan origination system – Senior Developer

Designed and developed highly customizable, feature rich, and intuitive user interfaces intermixing and integrating Visual Basic, MFC, COM/DCOM, ActiveX components and containers in an n-tiered system.

- Designed and developed MFC GUI framework used to host Visual Basic COM/DCOM components on the Alcatraz Jail Management System. Thorough knowledge of all MFC COM wrapper classes. Used Rational Rose modeling, OOAD and Contextual Analysis.

- Implemented several components used to trap Windows OS alerts and messages seamlessly overcoming various Windows specific paint and alert challenges.

- Responsible for all user interface design and implementation of the RAPID system.   This product integrated five core competencies of First American into an MFC/C++; Windows based system for deployment on a Citrix system. Integration included the primary components for the loan origination process, flood certification, credit reporting, tax line management, title search and appraisal. Fully developed using round trip engineering with Rational Rose. Used MFC/C++, STL, SQL, Object/Relational mapping, ActiveX.

10/1996 – 3/1997	avio.com	San Diego, CA

Software Engineer
MFC/C++, ActiveX, Windows based interactive application used to track performance and report statistics of personal fitness equipment. Responsible for interacting with proprietary embedded hardware through TCP/IP and serial communications. Developed a highly functional and elegant user interface.

7/1996 – 2/1997 - Software Engineer	Open Systems Technology, Inc.	San Diego, CA
4/1993 – 7/1996 – Owner/Manager	Natural Surfaces Care	San Diego, CA
5/1989 – 4/1993 – Process Engineer	General Dynamics Space Systems	San Diego, CA
9/1986 – 5/1989 – Design Engineer	TRW Engine Components	Cleveland, OH

Education:

University of California, San Diego - MS Windows, C/C++ Programming Sequence
University of California, San Diego – Leadership and Management for Scientists and Engineers - Graduated with honors
The Ohio State University - Bachelor of Science in Welding Engineering – Graduated 1986

Professional Memberships and Associations:

Leukemia Society Team in Training – Triathlon Team
California State Licensed Contractor - 676440
Ohio State University and University California San Diego Alumni Associations