

Robert Warren

3705 NE 36th St.

OKC, OK 73121

r.warren@wheatbridge.com

www.wheatbridge.com

405.443.4379

Overview

Robert Warren is a software and multimedia developer with extensive experience in systems integration, database management, user interface design, network and IP video, multimedia design, remote telemetry integration, and video production. He began working with industrial control systems on high-seas automated chemical mixing systems for the oil industry in the North Sea (Scotland, Holland, Norway, Denmark) and offshore California in the early 1980s. He followed up with a number of National Science Foundation/IBM/Gates Foundation multimedia educational projects with BSCS at The Colorado College from 1985 through 1990. In the early 1990s he founded Pegasus Learning Company and Pegasus Multimedia Company, which produced textbook, interactive videodisk, CD-ROM, and Internet-based technology programs for major textbook and media publishers. In that capacity he produced over 200 titles that were adopted and used in K-12 science and technology education nationwide. From the late 1990s through today he has consulted on developing software, web interfaces, user interfaces, voice-recognition interfaces, and data management software for automated television broadcasts, commerce websites, hardware command-and-control systems, dynamic message signs, matrix signs, radar sensors, video recognition devices, cameras, matrix switchers, streaming video, SNMP devices, video, and other systems integration tasks.

Project & Software Development Highlights

- Multi-threaded user interface, middleware, command and control software for H.264 video streaming using Impath i5110/i1000VSG/i4200 encoders & decoders, Moxa switches, Summit virtual LAN to control video flooding, Panasonic CS950/CS850 cameras.
- A-Star & Dijkstra matrix pathfinder algorithms for navigating device menus.
- Time-lapse video assembler software using IP cameras, image capture, image storage, and automated assembly of still images into AVI files and automated conversion into Adobe Flash files.
- Web-based and desktop software for SNMP video camera control for Police Departments and Traffic Operations Centers. Also wrote a "Lite" version for camera control from remote laptops that tunnel through firewalls.
- Web-based incident mapper using Police Department/Fire Department CAD systems.
- Freeway/Arterial dynamic message sign quick set programs—set a message using a cell phone, a text (SMS) message, or an e-mail.
- Multithreaded NTCIP DMS controller (SNMP-based) software for composing messages, running services, and controlling ethernet DMS signs; also, a web-based version for running off of remote laptops and web tunneling through port 80.
- Polling software for remote radar sensors and video detection.
- Polling software for network management device detection, configuration files and control.
- Web-streaming video setups using Wowza and Flash media servers, since version 1.0.
- Web-transfer of live data using mutex file monitoring and interception of data, SQL database storage, automated satellite dish setup & signal find, master SQL database management, and end-user web page monitoring of data (Flash).

- Javascript/Flash-based & VB.NET smoothing algorithms for plotting and graphing (big, bad, high-polynomial number Gaussian transforms)
- Software for automated broadcast of switched, live traffic cams, road condition updates, public service announcements.
- Over 200 interactive videodisk, video, and CD-Rom programs for interactive education and training; ranging from K and pre-K reading programs to high school biology, physical science, and earth science.
- Mapping software using coordinate chains, polygon decomposing through winding-number algorithms—and later, much simpler Google mapping API.
- Format conversion programs for SWF, SVG, DXF, PDF, and ESRI applications.

Software Tools/Skills/Languages

- Visual Studio versions 2003 through 2010 (VB.Net, C#, some C++)
- Visual Basic 6
- SNMP “across the wire” protocols, CRC-16, 32, NTCIP/SNMP message composition at the binary level
- Flash versions 4 - 9 (ECMA 262); Javascript (ECMA 262)
- Transact SQL, Microsoft SQL Server versions 6 through 10 (SQL Server 2008), MS Access, MySQL, SQL Lite, etc.
- ASP, ASP.Net, HTML 2 through HTML 5, XST, XML, LOL, etc.
- Most XML editors: XML Spy, MapForce, XML Notepad
- Photoshop versions 1 - 11, Illustrator versions 1 - 12, CorelDraw Versions 2 - 8
- Video editing/composing (e.g., Avid Media Composer)
- Guilloche editors & generators, such as Cerberus (GuardSoft)
- Office Applications, such as Microsoft Office, Open Office, Ventura Publisher, Quark Express, spreadsheet programs, etc.

Employment History

- 1997-current: software developer/consultant, City of Colorado Springs
- 1991-1997: President, Pegasus Learning Company, Pegasus Multimedia Company
- 1990-1991: Managing Editor, Project First Step (National Science Foundation project), US Space Foundation
- 1986-1990: Science Editor & Curriculum Developer for the Biological Sciences Curriculum Study, The Colorado College
- 1975-1985: Various Titles (overseas & domestic operations) Halliburton Company

Legacy Client List

- City of Colorado Springs Transportation Traffic Engineering
- City of Colorado Springs Public Communication
- CDOT
- Vanguard Stimulation Services (Shawnee, OK)
- Harcourt-Brace (Orlando)
- Scott-Foresman (Chicago)
- Holt, Rinehart & Winston (Austin)
- DC Heath & Company (Lexington)
- Junior Achievement (Colorado Springs)
- SVE (Chicago)
- Churchill Media (Los Angeles)