

# Joseph M. Gaffney

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🌐 <https://www.gaffney-household.com>

## Interests

<b>Intelligent Automation</b>	<b>Self-Hosting</b>
<b>Federation</b>	<b>Virtualization</b>
<b>Mesh Networking</b>	<b>Low Power WAN</b>
<b>Free/Libre Open Source Software</b>	<b>Cycling</b>

## Skills / Certifications

### CAD

AutoCAD, Revit, FreeCAD

### Network Engineering

#### Linux

Debian, Fedora, RHEL, Oracle, Slackware, Arch, and many others.

### Virtualization/Containerization

VMWare ESXI/VSphere, Proxmox, Docker, LXC, LXD/Incus, Hyper-V

### Control Programming

Crestron, QSC Q-SYS, Zoom, Extron, Lightware LW2/LW3/LARA

### DSP Programming

QSC Q-SYS, Extron, Crestron, Biamp, Symetrix, Bose

### Intelligent Automation, Monitoring, and Control

ScienceLogic SL1, Prometheus, Splunk, Datadog

### Data Visualization

Grafana, SQL, PowerBI, Excel, Apache Superset

### Programming Languages

C#, Pascal, Swift, Dart/Flutter, Unity, OpenCV

Scripting: Python, Lua, JavaScript, Bash, PowerShell. AutoHotKey, SQL

Markup: HTML, XML, LaTeX, Markdown, YAML

Version Control: Git, SVN

CI/CD: Jenkins, CodePipeline, Ansible, GH Actions

### Amazon

EC2, Lightsail, S3, IAM, Lambda

### Microsoft / Azure

O365 Administration, AzureAD/AD Sync, Azure ML, Graph, VM/Compute, IoT Devices

## Summary

With an initial start as an IT Consultant for small businesses followed by becoming the Technology Director of a millwork firm, since joining the AV industry in 2005 I have been involved in a variety of projects including educational, corporate, retail, public institution, gaming, transportation, and more. In addition, I maintain a strong knowledge of PC-based and network technologies, both through acting as a Subject Matter Expert at TAD as well as a continually developing home lab environment to test, integrate, and evaluate systems from both the AV and IT worlds.

## Experience

### TAD Associates

June 2014 - Present

Subject Matter Expert

🌐 <https://www.technologyarchitecturedesign.com>

As a multi-disciplinary SME, I act as a resource providing general audiovisual design expertise across all project teams and clients. Aside from my regular activities as SME, I also:

- Implementation and continuous development, support, and expansion of TAD.monitor, an AV/IT infrastructure monitoring solution providing intelligent systems management. Develop dynamic applications to interface with AV devices. Provide product demos for sales, proposals, as well as training for end users, managers, and system designers.
- Network design documentation, from out-of-band systems to full AV-dedicated building-wide network stacks, with security compliance to meet financial services company requirements.
- Facilities services, IWMS, and UC integration solutions for a seamless user experience, including in cross-platform environments.
- Provide specialist support to meet client requirements, from review services to complete programming/development efforts. Includes programming specifications, review, design, as well as programming.
- Notable unique project efforts include:
  - Review global network infrastructure and cross-platform UC systems to provide a network video review & optimization, uncovering control and audio DSP programming problems, DNS issues, and ISPs not meeting contract speed and latency requirements. The resulting documentation resulted in a new global standards development effort, and a rework to implement the recommended improvements globally.
  - Coordinate content and real-world activity for multiple clients, to provide live and interactive generative content display, including API integrations to everything from weather systems to financial services, as well as a 7-PC computer-vision system in support of 20 depth-sensing cameras, fully managed with remote support solutions.

### Shen, Milsom & Wilke

March, 2005 - May, 2014

Senior Consultant

🌐 <http://www.smwllc.com>

Audiovisual and telecommunications consultant to architectural firms. Reviews clients needs for videoconferencing, audio conferencing, information display, background music and paging systems, etc. Designs low voltage electrical systems, drafts a corresponding budget, designs systems layout, and submits supporting CAD drawings, specifications, and other supporting documentation. Management of project from initial pre-contract client meetings through final installation of supporting systems.

- Specializing in the design, coordination, and management of education (including specialty groups, as the NYC SCA), legal, and gaming market projects
- Provide on an ongoing basis cross-disciplinary support to leverage structured cabling system designs for data, video, and security while maintaining QoS requirements.
- Specializing in network-based video and technologies

### Brook Custom Cabinetry

February 2001 - March 2005

Technology Director

Supervise and control the daily network and CAD operations, including maintenance & support. Roles included sales support, accounting system management, production technology management, reporting directly to and working closely with the CEO.

- Implemented a tailored CAD solution, training all employees on use
- Created and implemented an automated ordering and factory production documentation system
- Designed, implemented, and managed a job costing system
- Policy and system changes generated a 20% increase in annual sales, reduced costs by 10-15% per contract, and reduced manufacturing error to 2.5% of overall sales from 8%.