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solutions

an applied visions company

Software Consulting Services

Software Design Solutions provides consulting services in embedded systems software development, workstation application development, user interface design, and software process improvement.

Companies call on SDS when:

• They need to add experienced software engineers to their software development project and need those engineers to be immediately productive and leverage their current staff's domain expertise.

• They want to outsource a project that is outside their expertise, allowing their own staff time to focus on core development.

• They realize they need to improve their software process and want adopt best practices for software process from an embedded systems and mission critical perspective.

We tend to form long-term relationships with clients over multiple projects. Customers recognize the advantages of staffing with SDS:

• Our engineers have 5-20+ years of experience building embedded systems and mission critical applications.

• Our engineers are full-time SDS staff. When a project's next phase is needed, we can often provide the same engineer that worked on the original.

• When we begin a project where some new technology or domain expertise is needed, the ramp-up time is on our dime.

Embedded Application Software Development

Embedded systems software development presents unique challenges. Size, speed, power consumption, and limited debug visibility add to the already present pressures of reliability, time-to-market, and cost.

Our customers have used **Software Design Solutions'** experience with:

- Texas Instruments 2000/5000/6000 DSP and OMAP
- PowerPC and embedded x86
- 8051, MSP-430, and Arduino microcontrollers
- ARM M0 through A8
- Special purpose devices and FPGAs
- WinCE, embedded Linux and bare-board designs
- In-circuit emulators, cross compilers, and IDEs from various vendors
- Flash programming and bootloaders
- Embedded application tuning for speed, size, and power

SDS works with engineering groups in all phases of development. Our clients have engaged us for processor selection consulting, new application development, application porting, testing, and software safety analysis.

> **"** **Software Design Solutions** provided us with quality software engineering talent in a timely manner. **SDS** was very flexible to work with and we have been pleased with the work they have done. **"**

Mark Duewiger - Engineering Director
Broadband Routing and Switching
Marconi Communications

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Desktop And Web Applications

The team at **Software Design Solutions** has been building mission-critical application software on the desktop for many years.

As more applications become Web enabled and cross-platform, our customers have requested the same level of mission critical expertise on HTML5 web based applications.

Customers come to **SDS** for our experience in:

- Windows .Net (C#, WinForms, WPF)
- Win32 and WinCE (Win32 API, MFC, ActiveX and Embedded Visual Studio)
- HTML5, CSS3, Javascript, jQuery, jQuery Mobile, JSON, SQL, Oracle
- Perl, Python, and Ruby
- Windows, MacOS, and Linux hosted applications

Our clients have tapped **SDS's** resources for:

- GUI design
- Data analysis and visualization
- Graphic design services
- Test automation and GUI test tooling
- PC-to-embedded communication
- Porting and maintenance
- Ground-up development of large systems

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*On a complex project, **Software Design Solutions** did a very good job of understanding our needs, and then delivered a high quality product on time. Their team was a pleasure to work with, and we are very satisfied with the results.*

Gene Hixon - Manager
Production Test Engineering
Vocollect

Process Improvement

Software Process Improvement is the best way to get more from your existing engineering staff while also improving quality. Agile Software Process techniques are more readily accepted by engineering and management than heavyweight software process. Agile techniques show immediate and visible gains in productivity and quality.

Companies come to **Software Design Solutions** for our decades of experience in software process in organizations of every size.

SDS's own engineers enjoy a state-of the-art Agile Development environment for our in-house Windows .NET , HTML5 and embedded application development. The central feature is a Continuous Integration system that *builds and tests all code changes immediately and automatically.*

Engineering managers have leveraged **SDS's** Agile Development expertise to raise the level of their own software process, through our assistance with:

- Agile Software Process consulting
- Continuous Integration and test installation
- Requirements analysis
- Defect tracking system selection and setup
- Automated unit, system, and GUI testing
- Configuration management consulting

Process Improvement consulting can be a distinct engagement, or it may be part of a software development or test development project with a customer. Both methods have been successful.

> **Software Design Solutions** takes a proactive role and looks beyond your specifications to ensure that your final product works on a range of OS platforms and that it interacts with the range of other necessary products and libraries. We got more than we asked for and are very pleased.
>
> **Vladimir Brajovic - CEO
> Intrigue Technologies, Inc.**

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Founded in 2003, **Software Design Solutions, Inc** focuses on consulting for embedded system and mission critical desktop application development and process improvement.

Our staff members are experienced software engineers with extensive experience (5-20+ years) in performing software engineering in a wide range of application domains:

- Medical systems
- Industrial automation and control
- Audio and image signal processing
- Transportation
- Networking
- Defense
- Security
- Software development
- Mobile computing

Our customers have utilized **SDS** in the development of consumer electronics products, medical devices, and defense systems. The product of our expertise can be found in systems that control everything from air conditioners to airplanes.

SDS has consulted on projects of all sizes, from staff-days to staff-years.

Located in Murrysville, PA, **SDS** offers on-site as well as in-house consulting. We offer flexible contract terms and can add value at every phase of project design and development. Our experienced engineers can be immediately productive, building high quality solutions for our clients.

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