Mindfire Solutions

Case Study

Display Calibration Software

Migration - Windows to Mac OSX

The Problem:

The client firm (an OEM) had a great opportunity to sell 50 medical-grade display panels but its customer used Apple machines (Mac OSX based computers). The display-configuration management software for the panels required Windows OS – there wasn't any Mac version. Fortuitously, the customer willingly allowed a 6-month period for software migration, considering the quality of display panels on offer. Successful migration to Mac OSX thus became crucial to, what could possibly be a half a million-dollar deal. Client didn't have in-house Mac development expertise & six months was too short a time to do head hunting. Established IT vendors showed lack of willingness in taking up such a high-risk project considering strict timelines. Client was in a fix and unable to find way ahead.

Successful migration to Mac OSX could possibly mean a half a million-dollar deal for the client. Client didn't have in-house Mac development expertise & established vendors showed lack of willingness in taking up such a high-risk project considering strict timelines. Client was in a fix.

The Mindfire Solution:

Mindfire offered its services and claimed client's confidence showing expertise in related domain and technical areas, as well as the remote work protocol. Initial discussions included shared development, communication and collaboration plans, prior experience and success commitments/guarantees - integrated change management with risk aversion and mitigation plans. Close coordination ensured the high quality and stability of the Mac software port, comparable to its existing Windows version. We initiated a team of 7 engineers led by a Senior Architect, a Technical Lead, and a Project Manager to quickly study and analyze the existing software and its source code, to come up with the right porting strategy.

Technologies

Mindfire used its existing knowledge and honed it further using the technologies: Mac OSX, Objective-C, C++, CFPlugin, Cocoa Distant Objects, CGDirectDisplay, ColorSync, Core Image, IOGraphicsLib, IOPMLib, IOI2CInterface, Launchd Daemons and Agents, Apple System Logger, Mach Port, Distributed Notifications, AppleScript and OS Script, Microsoft COM, DICOM Gray Scale Display Function, Display Calibration, DDC I2C.

Final Results:

The application for windows added essential functionality to medical imaging display systems in diagnostic and referral settings. Software comprised of the following **services**: *RightLight™*, *Test Patterns, Privilege, Reporting & Enterprise Management*. Porting from Windows to Mac covered the following features:

- Plug-in architecture where each services is installed as a plug-in to the application
- Abstraction layer to allow support for multiple display adaptor types and panels
- Manual DICOM conformance check with selectable number of points
- Support setting tolerance for auto-checking of conformance, with logging and warning capabilities

Customer benefits

Mindfire brought success to the client firm, which was facing a great loss on sale and repute in delivering excellent medical imaging equipment. **The client firm was able to honor their sales commitment** & could leverage Mindfire Solutions' strong Mac OS X expertise and multiple high skill areas, and found a long-term cost-effective outsourcing partner with proven expertise and capabilities.