CASE STUDIES OF MAPUSOFT SOLUTIONS

Medical

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CASE STUDY 1 | Moog, US

BACKGROUND

Moog Inc is a worldwide designer, manufacturer, and integrator of precision motion control products and systems. Moog's high-performance systems control military and commercial aircraft, satellites and space vehicles, launch vehicles, missiles, industrial machinery, wind energy, marine applications, and medical equipment.

PROJECT

For the next generation medical infusion pumps, Moog was looking for a suitable COTS abstraction solution that offers advanced real-time performance and mission critical features and allow the software to run across multiple OS platforms while supporting a host based development environment. The abstraction solution was required in order to protect the software investment while extending the product life cycle which will survive OS version upgrades and even changing operating systems if necessary. Further, the Infusion pump system is running under multi-OS and multi-processor environment and as such Moog wants to stream-line the development using a common OS interface APIs and IDE across multiple OS environment. In order to stream-line the development, Moog partnered with an Indian service company for manpower and technical consultancy and MapuSoft for their OS abstraction solution and on-site training.

PRODUCT

Cross-OS® Development Platform

Cross-OS Development Platform with OS Abstractor & POSIX development interfaces

SOLUTION

After a long search and several product evaluations, both Moog and the consultant company selected Mapusoft's flagship AppCOE product with OS Abstractor and POSIX interfaces to develop their next generation product line. This way Moog can launch their next generation medical product line quickly and still continue to use their tested code.

CASE STUDY 2

Analogic Corporation, US

BACKGROUND

For over 40 years Analogic has created markets by anticipating and solving some of the world's most complex medical and engineering challenges. Their specific areas of expertise include developing enabling technologies used in computed tomography (CT), ultrasound, digital mammography (DM), and magnetic resonance imaging (MRI). They also develop state-of-the-art threat detection systems for airport checked-baggage screening as well as motion controls.

PROJECT

Analogic was looking for a way to port their legacy A3 Patient Monitor application running on pSOS to the Nucleus operating system while upgrading their hardware.

PRODUCT

OS CHANGER®

pSOS OS Changer Porting Kit for Nucleus Target

SOLUTION

Analogic was able to successfully port their pSOS application to Nucleus within one week's time.

Here is a quote from the customer:
“OS Changer works great. I really didn’t have to ‘convert’ any code from pSOS to Nucleus. I just had to integrate OS Changer into the combination of pSOS and Nucleus tasks that we ported from two previous projects. It took about a week. I had to integrate maybe 75 KLOC, about a hundred pSOS calls.”

CASE STUDY 3

GE Healthcare, US

BACKGROUND

GE Healthcare (GE) is a subsidiary of the General Electric Corporation, provides transformational medical technologies and services that are shaping a new age of patient care. GE offers a wide range of medical equipment and diagnostic products including medical imaging systems, medical diagnostics and patient monitoring. GE Healthcare is headquartered in Chicago Illinois.

GE's OEC C-Arm is a radiological image processing and image-intensified fluoroscopic X-ray system used during diagnostics, surgical and interventional procedures, such as orthopedic, cardiac, critical-care, and emergency room procedures and other imaging applications.

C-Arm products are a completely different family of products when compared to handheld low end to high definition high ends like 9800 series, 9900 elite series, 6800 MiniView series etc. Each of these products was running on different hardware and software platforms. Even though the systems are hardware and software specific, the basic functionality is similar.

PROJECT

Maintain a single code base for multiple Operating Systems to operate GE's OEC C-arm surgical navigation and visualization low-end and a high-end products.

PRODUCT

Cross-OS®
Development Platform

Cross-OS Development Platform with OS Abstractor for Linux and ThreadX target OS platforms.

SOLUTION

MapuSoft's Cross-OS Development Platform enabled GE to enhance their OEC- C-arm surgical navigation products so they will run on both a Linux and ThreadX target OS platforms. Having a single code base for multiple platforms simplifies GE's product smaintenance and provides an easier upgrade path in the future.