

Case Study: Microsulis

Microsulis

Incorporated in 1995, Microsulis is a pioneer and technology leader in the healthcare industry specializing in dielectric ablation. Through its proprietary knowledge of the delivery of precise therapeutic microwave energy, it creates products to treat acute and chronic medical conditions. The company's primary focus is in developing products for the oncology, gynaecology, urology, vascular surgery, neurology and cardiology medical fields.

Microsulis has an unrivalled research capability in the field of dielectric ablation and therapeutic microwave energy. In addition to its core scientific team based in Edinburgh Scotland, it has an exclusive and proprietary relationship with the University of Bath where Professor Nigel Cronin, a world recognized thought leader in this field, heads the research effort as Microsulis's Chief Scientific Officer.



Medical device software

The challenge

Microsulis is a provider of high tech medical devices to the healthcare industry based upon a microwave technology platform. Microwave based techniques offer physicians the capability of performing safe and effective treatments that are minimally invasive to their patients.

The first product, the Microwave Endometrial Ablation (MEA) System is a device that can be used by physicians to treat women experiencing heavy menstrual bleeding (menorrhagia). This product was successfully CE certified in Europe and the device has subsequently received regulatory body approvals in the United States, Canada, and Australia.

As part of the regulatory body approval process, Microsulis required software enhancements that would improve the performance of the product and secure the required product approvals in the U.S. and Canada. As a result of this need, IPL was selected because of their ability to implement and perfect software enhancements while complying with industry, international, and regulatory body standards for developing and testing software solutions.

The solution

Using IPL's extensive experience a development, validation and testing strategy was defined to meet the needs of Microsulis. IPL produced an associated automated testing infrastructure to verify software in accordance with the defined strategy. As part of this work IPL developed the necessary tools, including a hardware simulator to support fully automated unit testing and semi-automatic integration testing of the software.

IPL quickly and successfully implemented the planned product enhancements using the testing infrastructure. The whole development was completed within the customer's timescales and under budget.

The product successfully achieved regulatory body approvals in both the U.S. and Canada, and. Microsulis is now rapidly expanding the commercial distribution of the MEA System within the North America, Europe and Asia.

The highlights

IPL's experience and know how in the development of software solutions directly assisted Microsulis in the development of the MEA System. The investment in an automated testing infrastructure has provided Microsulis with the ability to rapidly respond to the changing market demands while providing and maintaining the highest quality standards.

Based upon the success achieved, IPL and Microsulis continue to work closely and IPL is currently assisting Microsulis with:

- the development of software for new medical devices; and
- the maintenance and enhancement of the software for existing Microsulis devices in commercial distribution.

About IPL

Founded in 1979, IPL has a long history of successfully delivering excellent value consultancy and end-to-end solutions to both the public and private sectors.

IPL's consultancy is renowned for its quality and value. Our consultants are talented and independent-minded individuals with extensive industry experience. We consistently exceed our clients' expectations through a combination of imaginative thinking, managerial and technical expertise and many years of systems engineering experience.

IPL's track record in end-to-end solutions development is exceptional. Our proven development methodology allows us to cut through technical complexity, manage risk and completely focus on delivery. We consistently deliver reliable, efficient and accurate systems to a precise schedule.

IPL is an ISO9001:2000/TickIT registered company having a permanent workforce of 240, revenues of ca. £21M p.a. and 40,000 sq ft of secure office space in central Bath.



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IPL - Industry (Microsulis Case Study 3.0)
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