Rouland-Borg partners with Mindmill for Bespoke product development.

Challenges: Responder 4000, a key hospital communication product was developed in VB. Rouland-Borg wished to migrate and develop the product in .NET environment to substantially reduce Total Cost of Ownership by simplifying deployment and maintenance.

Responder 4000 was configured as per the hospital needs, but they did not have solutions where the configurations could be changed instantly either remotely or at the location and the firm ware could be updated instantly. Moreover, 3rd party controls of many devices were stored in different formats, proving migration a challenge.

Solution: Mindmill adopted its tested Development and Migration Framework to ensure best in class quality during the migration of the application. Mindmill developed a configuration program to upload, download and configure system settings to and from a centralized program. An automatic clock synchronizer where the hardware devices send the time to the application from anywhere in the world and the Client side applications talks to the device on the USB port and Ethernet were also developed.

Benefits: Rouland-Borg could sustain its market leadership offer customization remotely or change the configurations as required by their clients. It also gained significantly from reduced total cost of ownership (TCO) by simplifying deployment and maintenance.

Rauland-Borg, established in 1948 by Norm Rauland and George Borg is a pioneer in sound and communications industry. They have designed and developed not only successful commercial and industrial communications components, but are also important military contractor providing such essential products like Navy's Ship-to-Shore radios, airborne radar jammers, walkie-talkies, cryptographic switches, tank radios, etc. The company in 1962 developed Telecentre, a novel communication platform that helps to keep school instructors and staff in touch with each others.

Rauland-Borg has also created several devices for hospitals/ schools and old homes . One of their best known product was "**Responder 4000**" a cost-effective nurse call communication system for both voice and non-voice data inputs.

Responder 4000 streamlines communications between staff and patients by enabling paging, wireless, residents check-ins, MIS software integration, etc. It also allowed a wide range of staff station selection – staff call, duty station, registration, staff assist etc to be seamlessly integrated for various panels including LED corridor lights, pillow speakers, call cords, etc.

Responder 4000 was written in VB, and was configured as per the hospital needs, but they did not have solutions where the configurations could be changed instantly either remotely or at the location and the firm ware could be updated instantly. Moreover, 3rd party controls of many devices were stored in different formats, proving migration a challenge.

The "Responder 4000" software consisted of large lines of code, many classes, and large designers. In addition it had many reports. Rouland-Borg wished to migrate this application to VB .NET in order to take advantage of anticipated performance enhancements on the server side, utilization of web services, better change management vs. COM, and the ability to run multiple copies of code. On the client side, Rouland Borg felt that .NET offered a more stable development environment than ActiveX. These two benefits added would substantially reduce Total Cost of Ownership by simplifying deployment and maintenance.

The challenge for Rouland-Borg was to determine the viability of migrating this strategic application from VB to .NET to take advantage of the technological advantages this platform offers, while retaining the valuable business logic and functionality of the "Responder 4000" software.

Mindmill adopted its tested Development and Migration Framework to ensure best in class quality during the migration of the application. First stage was the identification phase, where all the modules of the application, their dependencies were listed. Next all the component modules were analyzed for redundancies, to reduce duplicities in the system, cut across inefficiencies and build on a robust system. Finally, deployment of the.NET code was followed by thorough testing to ensures that all the defects if any, are caught before the new application was made live.

Mindmill, in consultation with Rouland-Borg, developed a project plan to achieve full functional equivalence of the 4000 software in Visual Studio .NET. The application port was essentially completed with an effort of over 5 man-months of work. In order to optimize performance, VB6 string manipulation functions were converted to their equivalent functions in .NET, and COM interop for User Controls was eliminated.

Responder 4000, a device based application developed in VB with many third-party controls was integrated in .NET. Mindmill adopted indexed-access linkages for efficiency in both space and time to ensure a tight organized storage structure.

Mindmill developed a configuration program to upload, download and configure system settings to and from a centralized program. The application works as Stand alone, Direct RS232 connection and Remote via modem supporting multiple languages. An automatic clock synchronizer where the hardware devices send the time to the application from anywhere in the world and the Client side applications talks to the device on the USB port and Ethernet were also developed. To make the whole application user friendly, a Windows based configuration program was also developed. Finally, a staff management system which configures a Nurse call system and manages the duty/ Patients and details of nurses and they instant calling of patients was also integrated.

About Mindmill

Mindmill Software Ltd established in 1993, is an SEI CMMi Level 3 and ISO 9001 certified product and software solution provider. Mindmill software is a Microsoft Gold Certified Software Solution Provider, offering world class financial/banking and ERP software.

Mindmill with 150 software product and solution specialists, is present in the five continents covering fifteen countries including USA, UK, Canada, Japan, Switzerland, Austria, France, Australia, South Africa, Israel, Ireland, Sudan, Nepal and India. Mindmill software offerings include financial/ERP software, Invoice & Procurement BPO, Outsourced Product Development (OPD), Bespoke Software Projects, and Consulting Services.

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