

Project Note

Web solution cuts costs of environmental data collection

Mobile and stationary measuring stations collect a variety of environmental data in Switzerland. Zühlke developed a new, scalable data acquisition system that is easy to operate and that deposits the data in a database via a Web Service.

Task

inNET operates measuring stations for the Swiss federal government, the cantons and companies to record various types of environmental data. The previously used software solution was suitable for wide use but was highly complex. Expensive external specialists had to be brought in to set the parameters of new measuring stations and integrate new measuring devices. There was an equally complicated procedure in place for passing data in text files to database applications where the information was managed.

In response to the growing number of measuring tasks and to cope with customer requirements demanding ever more flexibility, inNET decided to build a new data acquisition system. The goal was to create a more efficient platform that also satisfied the technical aspects involved.

Implementation

In joint workshops, inNET and Zühlke defined functional and non-functional requirements for "DAISY", the new measured data acquisition system. The team developed a software architecture which allows to forward the measured values via a Web Service to the data management system. Windows XP Embedded was selected as the platform of choice for this purpose. Thanks to the iterative approach, the implementation phase was efficient and easy to monitor for inNET and Zühlke. The new data acquisition system covers the following requirements:

- Minimal hardware and software maintenance
- Parameterisation and backup of the configuration via Internet
- Direct data communication between DAISY and the database application via Web Service
- Operation does not require IT experts.



Customer benefits

- inNET obtained a turnkey system from Zühlke. The standardised, iterative process allowed inNET to monitor and control the system design with ease.
- Thanks to experience in technology and development, Zühlke summarised the requirements to be met by the new system in a highly concentrated manner. The solution fulfils the requirements.
- inNET benefited from Zühlke's interdisciplinary knowledge and obtained a lean system at minimal effort and expense on its part.

inNET

Technical Data

- Microsoft Visual Studio 2005 Team Suite
- Microsoft Team Foundation Server
- SQL Server 2005 Express Edition
- Microsoft Enterprise Library 3.0
- AJAX Control Toolkit
- Microsoft Windows XP Embedded SP2 Feature Pack 2007
- Rational Unified Process (RUP)

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