Industry - Scientific Instruments
Solution - Data Cleansing

preludesys
IMPLICIT KNOWLEDGE

The Customer

The customer is a leading provider of advanced technology solutions for chromatographic techniques in sample preparation, high-pressure liquid chromatography and gas chromatography. The customer has offices in 12 countries and sells products and services worldwide through its network of partners and distributors in over 60 countries.

The Problem

To manage and operate its business efficiently, the customer had been building the required software solutions in-house. These solutions evolved over a decade from a simple application using MS Access to a full-scale Customer Relationship Management tool (CRM) and an Order Management System (OMS).

The CRM and OMS applications were used for capturing all of the customer and order data. Over a period of time the size of the data had increased substantially, but there was no method for validating the integrity of the data being collected. As a result, the invalidated customer data increased in size and complexity due to a lack of proper source system controls. One of the most challenging data quality issues was the duplication of the same customer data through multiple entries within the CRM, order entry, and other customer support systems using different customer numbers and profile information. This conflicting data made it difficult to recognize identical customers, especially across thousands of records.

The Solutions

The customer approached PreludeSys seeking a comprehensive solution to its data quality issues across various systems worldwide. Once engaged, PreludeSys worked very closely with Subject Matter Experts to understand the data collection and storage process, business rules, validation and conflict resolution techniques. PreludeSys proposed a Source System Control, called a Black Box, to correct or remove inaccurate data and to ensure that future data would satisfy quality standards. Ideally, this would have been done at the point of data origin, but due to process constraints and the wide distribution of the company, the use of the Black Box for data qualification became essential.

As the proposed solution needed to support various source systems worldwide, PreludeSys recommended a highly configurable solution that could interface with multiple data sources and provide graphic and wizard-based features. Additionally, the Black Box could configure business and data validation rules and provide data conflict resolution capability. Finally, PreludeSys designed and developed an easy-to-use intuitive interface which allows non-technical users to easily define the validation process, business rules and conditions to resolve data conflicts. The solution was designed and developed using Microsoft .NET Framework, SQL Server SSIS, and Windows Workflow Foundation.