

Application development for total organic carbon management

The Client

The company is a leading manufacturer of instruments for chemical analysis in food and beverages, pharmaceutical, and petrochemical industries. Customer's analytical instruments are used for sample preparation, detection, and measurement of chemical compounds.

The Challenge

The project is related to customer's product line for analyzing varied aqueous and solid samples. The objective was to have a common high-level architecture and implementation platform consistent across product lines resulting into economy of scale. The further goal was to generate reusable software resource pool reducing the development time and minimizing development related risks.

The Solution

Our team presented a completely redesigned system some of the features include:

- Configuring and storing the data
- Setting up various parametric data for the sampler, and detectors operations and storing the data
- Regulating the operations via Core and State Machine that in turn uses Modbus / RS-485 to peek and poke a Programmable Interrupt Controller
- Monitoring the real time status of the ongoing operations interacting with the Core and presenting the information both graphically, textually, through online printing, and also exported, preformatted text files
- Providing a host of Diagnostic functions for regulating or monitoring the state of the system and peripheral instruments like Auto-samplers (ASX 510 XYZ, Rotary, At-Line)
- Logging all functions performed and the results both locally into serialized file system and also on a centralized MS-Access database
- Generating reports from the stored data offline on a PC through a full-blown report generator to create user-definable reports and also help maneuvering data offline
- All operations are regulated by the administration of a stringent Security and Audit Trail system through either functions integrated with the device version of the s/w or using a standalone, PC-based application named S&A
- Additionally, the application allows exporting to and importing data from external databanks like Laboratory Instrument Management Systems (LIMS)

The Benefits

The Technology

