

C3-TREK Transient Recording System Project

C3-ilex, LLC has been awarded a contract from a European Electric Utility for replacement of the GETARS (General Electric Transient Analysis & Recording System) at their Nuclear Station. The replacement solution is based on the use of the C3-ilex C3-TREK (Transient Recording & Event Knowledge), C3-ilex DASie (Data Acquisition System importer/exporter) and OSIsoft Corporation PI products.

C3-TREK is a high performance Transient Recording and Event Knowledge solution developed by C3-ilex. C3-TREK processes and archives high-speed real-time and event data from multiple data acquisition sources using OSIsoft Corporation's powerful ECHO historian to archive large amounts of high speed data, C3-TREK continuously monitors critical plant parameters, generates event reports and exchanges data with an OSIsoft Corporation PI Server for further analysis. Data visualization and analysis is accomplished using OSIsoft Corporation's standard set of PI tools.

The DASie is a data integrator capable of collecting, synchronizing, time stamping, collating and buffering high speed event data (with 1 millisecond resolution) from a variety of plant monitoring or data acquisition system devices. The DASie consists of one or more input/output cards installed in a rack-mountable chassis that can accept network, serial, fiber or RS-485 device inputs and translate the data streams to one that can be accessed by network addressable computers.

Project Background

The Utility's Nuclear Station is a GE 1165 MWe BWR that started commercial operation in 1984. It has subsequently received an unlimited operating license pending periodic safety reviews and approvals by its Regulatory Agency and is expected to operate for at least 60 years to 2045. The existing GETARS was developed by General Electric in the 1980's and has been in operational use since 1984. It serves as a recording and analysis tool during system malfunctions and transients. In addition, the system is used periodically to verify compliance with the required control-rod insertion times. The existing GETARS is a DEC-VAX based system running application software in FORTRAN code and acquiring data via a GEDAC Analogic Formatter. These components are currently obsolete, no longer supported and have become a maintenance problem. Hence the need for replacement with current technology components.

About C3-ilex

C3-ilex specializes in the delivery of high quality products and services for the power generation, power transmission and distribution, and process industries. C3-ilex develops, manufactures, and markets state-of-the-art, real-time monitoring and control products and systems for industrial, commercial and government applications. C3-ilex also provides a wide range of complementary engineering and consulting services.