



Does your system performance support processing and integration of high speed real-time data from multiple sources?

Can it deliver high resolution historical data to end users for analysis?

If not, your system may be compromising plant operation and costing you money.

C3-TREK can solve your problem.

C3-TREK is a high performance Transient Recording and Event Knowledge solution developed by **C3-ilex**. **C3-TREK** interfaces with high speed data acquisition systems, uses OSIsoft Corporation's powerful ECHO historian to archive large amounts of high speed data, continuously monitors critical plant parameters, generates event reports and imports data from / exports data to other plant computer systems for further analysis. The basic **C3-TREK** system supports the following functionality.

- **Data Acquisition Interface (DAI)** - Scans DAS hardware devices and inserts the resulting high-speed data streams into **C3-TREK** data historians.
- **Event Monitor** - Checks for event occurrences via analog or digital triggers and collects and archives designated points within a specified time window surrounding the event.
- **Immediate Change Report (ICR)** – Generates trip reports for operator displays and printer logs. This sequence of events function integrates both analog and digital point triggers and data.
- **ECHO Data Historians** – Embedded historians archive large amounts of time tagged data and keep continuous records of events as they occur in real time.
- **PI Universal Data Server Interface** - Provides access to high speed C3-TREK data archives using standard OSIsoft PI applications such as PI ProcessBook and PI BatchView.
- **Time Synchronization** – Synchronizes **C3-TREK** to the DAS equipment or to the same time source synchronizing the DAS equipment.
- **Graphical User Interface (GUI)** – **C3-TREK** Server and Client software configures data acquisition input/output from DAS controllers and presents ICR & Event Monitor data to the user via **C3-ilex's** TrekListView and TrekExplorer applications.

C3-TREK provides a cost effective, state-of-the-art solution for Transient Recording and Analysis applications. It is a dependable resource for capturing and archiving large amounts of high speed data essential for event detection, compliance reporting and plant operational analysis. Additionally, **C3-TREK's** flexible design and expandability provide an affordable migration path for obsolete plant process computer systems.

System Expansion Options

The **C3-TREK** System is easily configured or expanded to accommodate additional functionality and/ or exchange of data with other plant systems. Available options include the following.

PPCS Data Acquisition Interface (DAI-PPC) - High speed (1 millisecond resolution files) and/or low speed (1 second) data interface(s) with existing Plant Process Computer Systems (PPCS), allowing two way data sharing between **C3-TREK** and an existing PPCS and/or other software systems or hardware devices.

TRA Importer - Archive Exporter / Importer provides the capability to import historical transient archive or tape back-up data from other systems to the **C3-TREK** ECHO Historian for subsequent use with OSIsoft PI's analytical tool kit.

Data Acquisition System Importer / Exporter (DASie) - Provides the capability to interface legacy or high speed data acquisition systems to **C3-TREK**. The **C3-ilex** DASie uses a modern, commercial electronics platform to integrate high speed or legacy data streams, allowing all monitored plant data points to be provided directly to **C3-TREK** with common time synchronization.

Operator Alarm Function (ALD) - Incorporates an alarm processing application within the **C3-TREK** platform. This application provides alarm log and display functionality on the **C3-TREK** similar to that currently performed by the PPCS.

Technical Features

Performance:

- Data Archive/Retrieval - 800,000+ transactions per second
- Data Resolution - 1 millisecond
- Data Storage - Up to 1 million data streams with minimal storage space
- Data Access Time - 10 microsecond average

Immediate Change Report:

- Any analog or digital point may be designated as an ICR point
- 1 millisecond time resolution, dependant on data sources
- ICR log generation and operator display within 5 seconds

Event Monitoring :

- Any analog or digital point (up to 500 maximum) definable as an event trigger
- Analog triggers on high, low with definable deadbands, and / or rate of change limits
- Scalable pre & post event data collection periods, limited only by disk space allocations

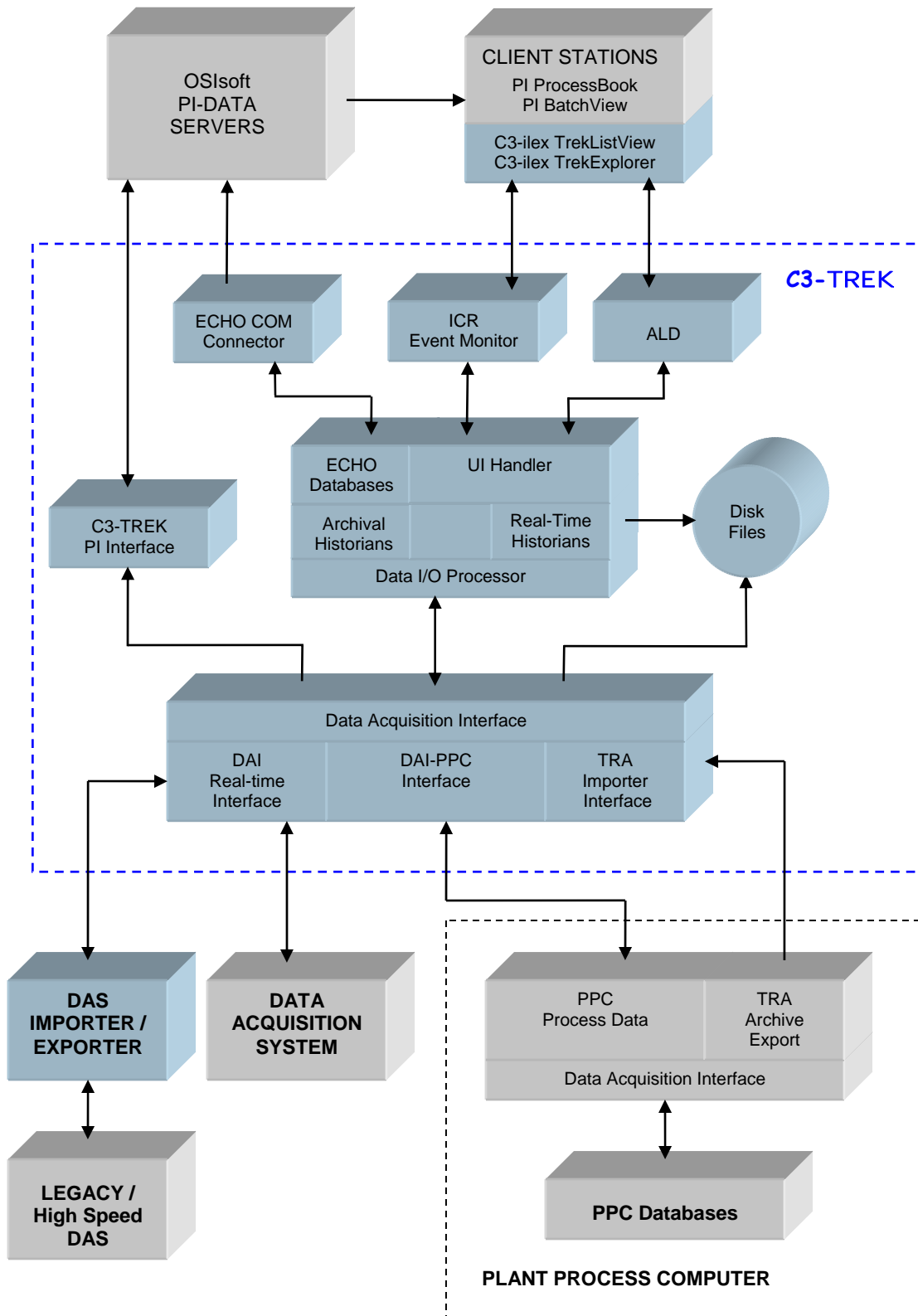
Interfaces:

- PI Servers – C3-ilex PI API, Standard PI-ECHO COM Connector
- DAS - Direct network interface to high speed DAS devices employing standard TCP/IP protocols or proprietary protocols and interfaces through the DASie option
- IRG-B input for time synchronization with external DAS

Platform minimum requirement:

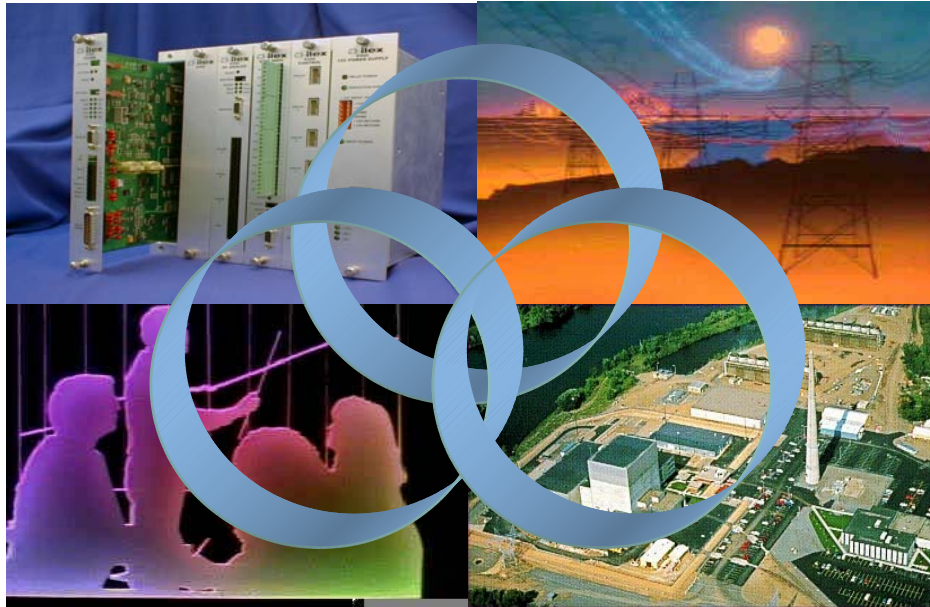
Pentium PC running Windows 2000 or XP with a minimum 2GHz processor, 512MB of memory, 400 GB hard drive, 100/1000 BaseT network card(s), and a DVD+RW for backup.

System Block Diagram



Your Real-time Monitoring and Control Company

Control



Consulting

Custom Projects

C3-ilex provides high-quality products and services for the real time monitoring and control marketplace. Our employees are highly skilled in a variety of technologies and applications. Our products span from data collection and control to end user applications for system management. We also offer numerous services to help integrate legacy systems with new technologies. We welcome the opportunity to learn about your technology needs and to create cost effective solutions to achieve your goals.

For more information on [C3-ilex](http://www.c3ilex.com) products and services, please find us on the web at www.c3ilex.com or contact us at:

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