Real-Time Tags

Tags, Assets and Templates

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TAT and Real time Elements

Tags, Assets and Templates are not only the start of Tatsoft company name, they are also the core components to the real-time data models and the power of FactoryStudio. The FactoryStudio system has a built-in real- time, event driven, in-memory database, that manages the tags, assets and events in the application.

Real-time Tag Types

A typical HMI-SCADA system has only basic tag types, such as numeric and messages. As FactoryStudio also targets IT and MES systems, it goes far beyond, supporting real- time entities that match all the SQL types and many .NET Framework entities, including Images and a complete DataTable in a single real-time tag.

Dynamic Arrays and References

FactoryStudio was the first, and up to now the only, real-time system with built-in support for tri-dimensional dynamic arrays, lists and type-safe reference tags with dynamic assignments, creating reusable components on displays, symbols, reports, calculation and at any part of your project.

SQL Databases and .NET

The built-in tag types allow direct mapping to any SQL database or .NET variables.

> **About TAT**
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> TAT can stand for Tag, Assets and Templates, but it is also a word from the Sanskrit language, related with the physical reality of the Universe. Visit Tatsoft forums to learn other TAT meanings

Assets and Categories

Organize your project with categories and assets. An asset is composed of tags and other application objects connected to your process hierarchy. FactoryStudio allows implementation of ISA 95 modeling specifications, which can be essential in large systems.

Templates

Templates are user-defined structures, similar to .NET classes, allowing composition and hierarchy. Besides the built-in basic types, real-time tags can be created based on templates that reflect physical assets, which speed up and simplify the application development.

Import and Synchronize

Tags and templates can be imported and automatically synchronized from various data sources including: XML and CSV files, OSIsoftTM PI SystemTM and PI AFTM, RockwellTM ControlLogix program files and OPC servers.

Tag Editing Features:

- Tag based Security
- **Refactoring**, allows renaming any object, anytime. No more need for global search and replace commands
- **Intellisense** shows auto-fill context sensitive information in all fields. No more typing names
- **Cross-reference** is available to all project elements, not only tags!
- **Dynamic validation**: system validates the fields as you type, preventing configuration errors.

Automated Project Definition

Standard Project Configuration

Each FactoryStudio project is stored in its own encrypted SQL database file. This architecture makes it very easy to update to newer versions of FactoryStudio as we may add additional tables or columns to existing tables, which is easier to do than working with proprietary file structures.

External Tag Integration

As of this printing, FactoryStudio can automatically use tags from Rockwell ControlLogix and CompactLogix, OPC Servers, Unity Pro PLCs, Wonderware Intouch projects, Beckhoff TwinCAT, OSIsoft PI Systems, or PI Asset Framework (AF) Servers.

From Excel/CSV to tags and displays

All Tag definition, alarms, communication mapping, historian, even symbols for displays, can be created from a one file CSV import. Create your project specification in Excel, and with click you have your project created.

OSIsoft PI Integration

FactoryStudio includes the ability to import resources such as graphical objects, script code, communication configurations, project components, and to do so directly into any configuration table being used. To take that concept even further, entire project configurations can be managed outside of FactoryStudio, and then imported all at once.

.NET API for project definition

A powerful, yet simple to use, .NET interface, provides the ability to use C# or VB.NET, or any .NET language, to create project configurations from your own code.

FactoryStudio supports native connectivity, to OSIsoft PI Systems, directly accessing PI tags. It also supports native connection for the Asset Framework (AF) and Event Frames (EF). The entire AF data structure can be either imported to FactoryStudio, or accessed directly from the AF server, with no data replication or importing.

Bring legacy HMI/SCADA projects

Use the reporting and export tools from your old HMI and SCADA software, to bring in automatically most of your previous project definition to state-of-the-art FactoryStudio projects.

Object Model configuration

FactoryStudio use of templates, with connected Symbols and properties, cuts the time needed to create your application, while providing easier maintenance and extensibility.