Tagwell

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TagWell Functions

TagWell provides an efficient, low cost, and bi-directional pathway to remote systems for applications such as alarming, data acquisition, and control. The TagWell user interface is customer specific web pages that can be viewed on any browser.

- Designed with cellular or other non-wired ethernet communications in mind, TagWell utilizes an efficient and secure protocol for data transfer to/from SoftPLC Remotes, minimizing the bandwidth required.

- Intelligent SoftPLC Remotes can send data to TagWell only upon user-specified conditions or intervals, further minimizing required bandwidth.

- Alarms can be sent via email or text messages to any number of users, including escalating lists if no response is received within user defined time periods.

- Remote nodes can send data to each other via TagWell.

- Aggregate data across any number of remotes into a single Tag Table in the cloud.

Remote System Monitoring

- Monitor status, maintenance item status *(eg: oil levels)*

- Improve security with alarms and priority alerts

- Obtain data logs

Remote System Operation/Maintenance

- Control - change parameters, verify operation, etc.

- Protect assets from theft, spillage, missed maintenance

- Improve machine/device efficiencies via more frequent monitoring/access to control

parameters

Optimize service resources

- Minimize equipment downtime

- Automatically notify service personnel of problems or needed maintenance

- Reduce service costs by optimizing use of personnel and equipment

- Minimize on-site service requirements, both scheduled and emergency

- Save money by reducing travel costs and time.

Remote System Management

- Store/analyze process data from multiple remote systems

- Link and integrate field data to SCADA, logistics or other business systems

- Improve inventory management and reduce logistics costs

- Simplify multiple device management and control

- Easily extend coverage to mobile assets and remote sites

Benefits

It's Easy!

- Rapid installation by eliminating fixed line cabling

- Single login for multiple sites

- No IT expertise or interaction required - The TagWell solution handles the complexities associated with firewalls, VPNs and SIM card management.

Scaleable!

- No limit to the number of SoftPLC Remotes

- No limit to the number of TagWell users

- No limit to the number of tags in any Remote

- Multiple data types supported *(integer, floating point, bits, etc.)*

- Server architecture can dynamically grow with demand

Secure and Reliable!

- Firewall and password protection

- Cloud computing environment for 24-7-365 service & access

- Secure data channels

- Dedicated data center

Configurable Dashboard Interfaces!

- Web browser interface to Remotes through TagWell

- Design new pages from standard templates OR

- SoftPLC can develop custom pages or applications OR

- A SoftPLC Gateway can provide data to your SCADA/HMI system

- Use a web browser to change configuration parameters in the Remote *(eg: reporting frequency, alarm thresholds, machine run-time schedules, etc.)*

Intelligent Remotes!

- Communicate from field installations to the TagWell master as a stand-alone RTU (Remote Terminal Unit) or as a gateway to an existing machine/process

- Include built-in protocols such as Modbus, ModbusTCP, and others to interface directly with common devices *(eg: RTU/PLC, flow meters, drives, etc.)*

- RS-485 serial or wireless interfaces allow connection to devices over long distances - allows for flexible deployment in a wide range of operating conditions, hazardous areas, etc.

- User programmable - logic determines when data transfer is initiated and which data is included - time, event-driven, events within a defined threshold, etc.

- Logic functions for I/O control, data manipulation *(eg: averaging, scaling, etc.)* and more

- Alarm notification via email and/or text messages

- Data Logging - Remote based logs in the event of communications loss, transfer logs to

TagWell and/or email logs as attachments

- Optional embedded web server for local access browser-based operator interface

- Optional embedded firewall for layered remote access security and to provide security for local access

Real-Time Optimized Communications!

- Remotes can immediately report changes to watched points to TagWell

- Report digital status changes and/or analog changes over user-defined alarm bands

- Reporting by exception, minimizes bandwidth requirements

Example Applications

Pump/Lift Stations, Windmills, Oil/Gas Wells

- Instant access to system status & performance data

- Minimize on-site service

- Notify service personnel electronically of problems/maintenance needs

Tank Management

- Monitor inventory status

- Schedule stock refills or pump outs

- Notify service personnel or problems/maintenance needs

Power Generators

- Monitor health/readiness

- Access status *(eg: fuel level, oil pressure, battery voltage)*

- Verify operation remotely

- Minimize site visits

OEM Machine Builders

- Reduce costly site visits

- Provide direct support to your customers

- Maintain regular contact with your equipment

- Demonstrate value to your customers

Process Management

- Store/analyze process data

- Monitor equipment status

- Notify service personnel of problems/maintenance needs

- Streamline inventory/logistics processes

Building Automation

- Schedule HVAC, open/close times, etc

- Reduce energy consumption

- Detect water leaks, security issues, maintenance issues *(eg: light bulb outages)*

- Notify service personnel of problems/maintenance needs

TagWell Services and Related Products

TagWell systems include 2 categories of products:

- **SoftPLC Remotes** - Any SoftPLC Controller or Gateway can be a TagWell remote. These are world class, modern industrial I/O controllers and communication interfaces that enable remote communication between other vendor's controllers or equipment and TagWell, as well as from TagWell to SCADA systems. SoftPLC Remotes can also provide immediate alert notification via Email or SMS text message, and can do data acquisition and logging functions. SoftPLC Remotes can be equipped with cellular modems, and also have serial and ethernet ports to enable other type connections via the internet to TagWell, such as radio modems, satellite, phone lines via dial-up accounts, etc.

- **TagWell Platform, Communications and Engineering Services** - Secure Internet based ("cloud") data center and communications services that provide access to/from SoftPLC Remotes, enable real-time browser-based remote monitoring and control of industrial systems, send Email and text messages *(eg: remote alarms and reports)*, and run customer specific application programs. Included are cloud subscription services, cellular M2M plans, TagWell web page and application development, and logic programming for SoftPLC Remotes.

TagWell Engineering Services

SoftPLC Corporation and TagWell qualified System Integrators provide programming and application engineering services to develop customer specific applications, such as:

- Web Pages compatible with TagWell
- SoftPLC Web Studio Dashboards compatible with TagWell
- Application logic for SoftPLC Remotes

Example TagWell Application Programs

Data sent to TagWell can be accessed by applications running in TagWell or on any computer connected to the internet. For example:

- Data can be aggregated onto a single web page for an overview of all (or groups) of remote sites
- Data can be read from or written to a database or SCADA system
- Multiple transmissions of data from any number of sites can be aggregated to a customer specified format and sent periodically (eg: daily, hourly) as a single file to customer designated locations via customer designated protocols

Contact us to discuss your application requirements. There may already be a TagWell application that meets your needs (or something similar that can be easily modified), or one can be created by SoftPLC or one of our Integrator partners for a very reasonable development cost.

Example TagWell Application

XYZ company sells liquid chemicals to end user companies, including the service to ensure the tanks are always filled. To ensure their customers experience no downtime and to reduce the logistics costs of delivering the chemicals *(fuel, man-hours, etc.)*, XYZ decides to implement a TagWell based remote monitoring system. The system includes:

- a Micro SoftPLC Remote at each tank that monitors the level and system status, sends the information to TagWell once per hour and sends low level alerts via email to XYZ headquarters

- a 1MB/month cellular plan for each Remote

- a TagWell web page that displays the current tank level at each site, any pending delivery status, and alerts

- the TagWell web page allows a driver to update delivery status when en-route and when at the site

- a custom TagWell application that consolidates the information from all sites into a single file and transmits it every 4 hours to a SQL database at XYZ headquarters, where their logistics software determines future delivery schedules based on the reported information

The ROI on the application development of this system was under 2 months, the cost of each Remote *(including Micro SoftPLC, cell modem, I/O, enclosure)* is under $750 and the *annual* TagWell Subscription and Cell Plan is less than the cost of 6 gallons of diesel fuel or 1 hour of labor!

You can see a demo version of this application in the online TagWell demo - contact us for login information.

Resources

Data Sheet

TagWell Product Data Sheet

Presentations

M2M Solutions with TagWell

Example applications for remote system control / monitoring using TagWell and SoftPLC Remote gateways, routers and Programmable Automation Controllers.

IoT Implementation with TagWell

Slide show describing how TagWell makes the Internet of Things (Industrial Internet) easy and affordable for remote systems, including using the Web Studio TagWell driver for remote SCADA applications.

SoftPLC TagWell

Slide show describing TagWell products and services.

Videos

TagWell Platform Detailed Overview

Includes features, communication optimizations, application examples, Web Studio TagWell Driver and more. This video is an excerpt from a longer webinar. Introductory material, including definitions of cloud computing terms and considerations can be found in the "M2M, IoT Technologies" video.

M2M, Internet of Things (IoT) Technologies

Definitions of IoT terminology, benefits and considerations of cloud computing in M2M applications. This video is excerpted from a longer webinar and is an introduction to the "TagWell Platform Detailed Overview" video.

White Papers

TagWell - A Platform for Easy & Inexpensive Remote Systems Management.
Uses application examples to illustrate how the TagWell cloud platform differs from other vendor's M2M/IoT products to provide flexible, lower cost, more easily implemented solutions for remote data acquistion and control.

Manuals

SoftPLC Web HMI Manual
User manual for creating animated web pages for the embedded SoftPLC Web Server and for TagWell pages.

TagWell TLM User Guide

User guide on configuring, using, and troubleshooting the TAGWELL.TLM driver and ladder instruction.