

Wonderware software modules for Oil/Gas applications



Wonderware Russia develops additional software modules to complete the standard Wonderware platforms to cover the special needs in oil-gas applications

Wonderware[®]
Russia

System Platform

Simple method for integration of the industrial automation and IT systems



Wonderware System Platform provides an extensive selection of tools for manufacturing automation and reporting: Industrial **Application Server** for application development and management; **Historian** as high-performance real-time relational database; **Information Server** for information distribution and user interfaces. Ready interface to all major automation vendors' systems and fieldbuses.

System Platform provides the integration of applications, complete set of device connectivity solutions, production data archiving and fast access to archived data, alarm and event handling, security features, centralized system diagnostics and administration, etc. System Platform also allows to make step-by-step and risk-free implementation of solutions to expand the functionality of your existing systems

InTouch

More than 900.000 InTouch workstations are installed in over 600.000 industrial objects around the world. InTouch is designed for interface with all major models of PLC including Rockwell, Siemens, Schneider, Unitronics and others. Also InTouch is used with ABB, Honeywell, Foxboro and other DCS systems – Wonderware is the only standard monitoring and reporting software for all major automation systems.

For more information, please visit our web-site at www.klinkmann.ru

In Klinkmann offices you can order a demo-version and free Wonderware development package for configuring and testing any applications with 30-days electronic licenses.



Wonderware's world-famous, award-winning InTouch® HMI software for Wonderware System Platform enables users to visualize and control industrial processes.

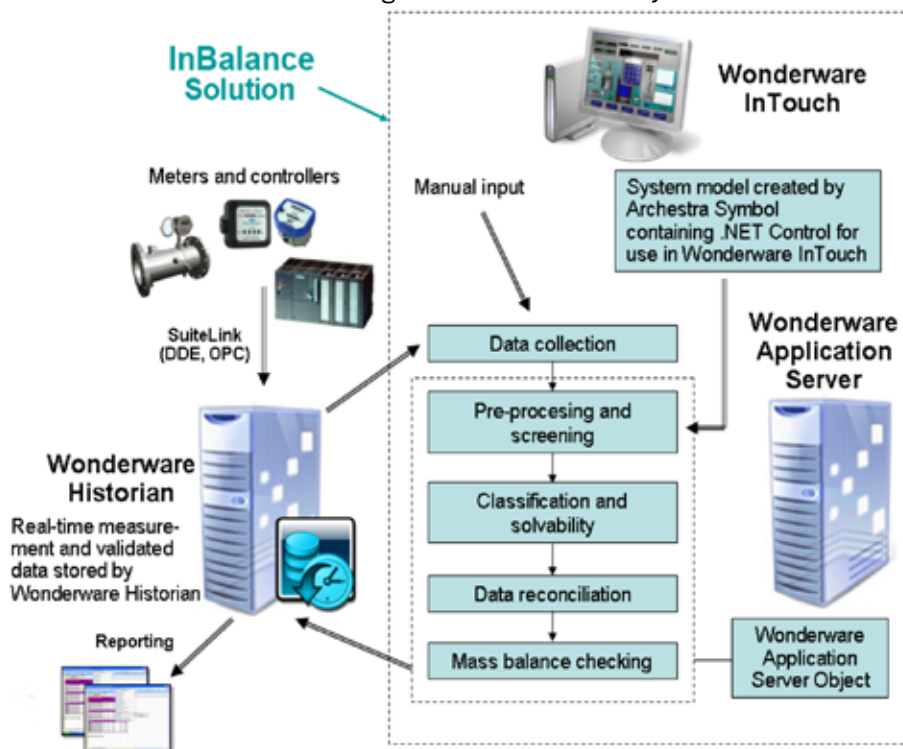
InBalance – Data Validation and Mass Balance Module for Wonderware System Platform

Easy to use, modular and integrated solution for data reconciliation and mass balance calculation. Pipeline and process flow management. Leakage detection.

InBalance solution is integrated in Wonderware System Platform:

The main function of InBalance is to solve basic needs in steady-state and dynamic mass balancing systems where it is necessary to transform raw process data (usually a subject for measurement errors and deviations) to more precise data, calculate unmeasured data wherever it is possible and detect measurement failures, leakages and production losses.

The system model consists of nodes connected by streams of material. Typical nodes are technological facilities, tanks, apparatuses or their parts, connections or disjoints of pipes. Streams are process streams of material, characterized by flow rate.



Continuous flow process management for pipelines like oil/gas/chemical pipelines, central heating pipelines and water pipelines.

Data validation and mass balance calculation simplifies the detection of imbalances, leakages, measuring failures and non-optimal operation in pipeline and process flow management. The production data become more error free and consistent, thus improving the overall production reliability.

		Measured				Reconciled		Deviation between reconciled and measured data			
		Input	Output	Imbalance	Accumulated	Input/Output	accumulation	m3		%	
14	All System	6.28	4.92	0.00	1.75	4.92	1.75	1.88	27.54	0.02	0.44
Nodes:											
17	Pump	6.28	6.32	0.00	6.32	6.32	0.00	0.00	0.00	0.00	0.47
18	Line	6.32	4.92	0.00	1.75	4.92	1.75	0.00	0.00	0.00	0.47
Streams:											
20	S1	6.28				6.32					
21	S2	6.32				6.32					
22	S3		4.92			4.92					
Total mass, kg											
		Input	Output	Imbalance	Accumulated	Reconciled Input/Output	accumulation				
14	All System	9000	3668.67	66.67	1400	3668.67	1386.95				
Nodes:											
17	Pump	9000	6966.67	66.67		6966.67					
18	Line	6966.67	3668.67	0.00	1400	3668.67	1386.95				
Streams:											
20	S1	9000				6966.67					
21	S2		3668.67			3668.67					
22	S3		3668.67			3668.67					



The integration in Wonderware System Platform enables wide selection of measured data sources and interoperability with other Wonderware software for reporting and data export purposes.

MES Light for Wonderware System Platform

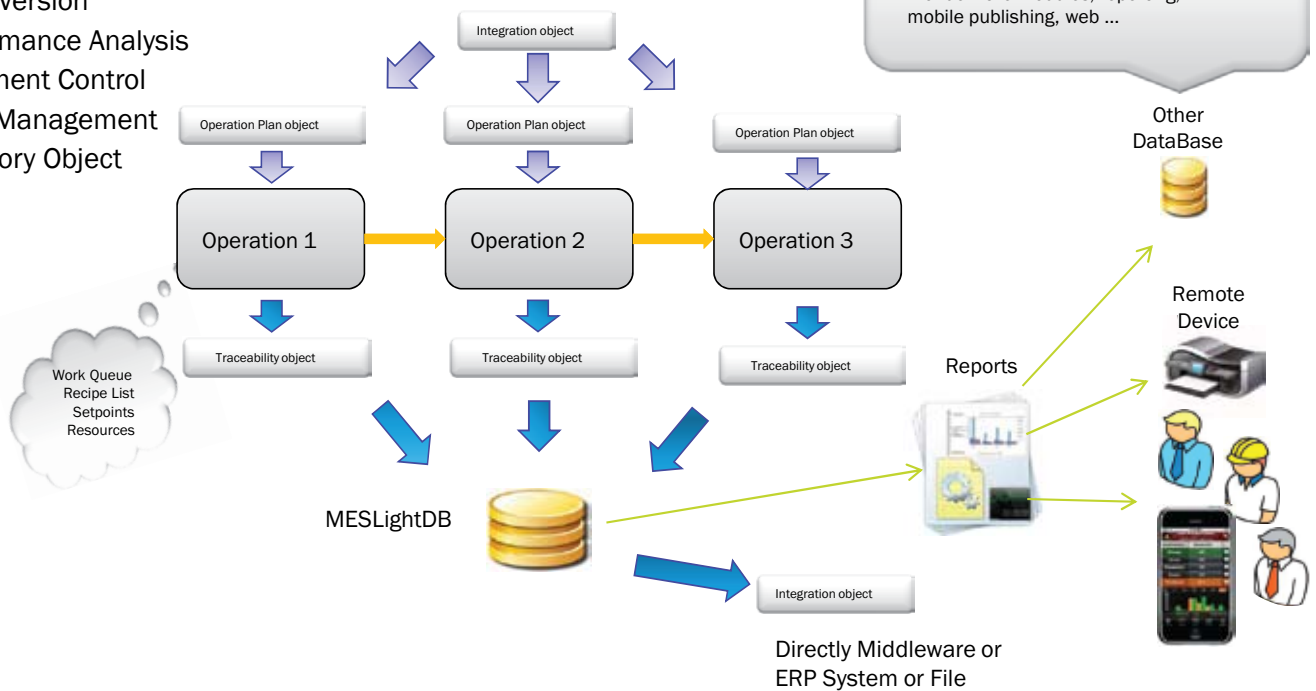
MES Light solution combines into one easy to use object package:

- Light MES functionality (traceability, work order management, specification/recipe management)
- WBF B2MML implementations of ISA95 (ProductionSchedule, ProductionPerformance)
- Wonderware System Platform (object oriented, scalable, distributed, “do once reuse many times” concept)

MES Light Components

- First version
 - Product Tracking & Genealogy
 - Data Collection & Acquisition
 - Built On S95 B2MML
 - Operations / Detailed Sequencing
 - Dispatching Production Unit
 - Process Management
 - Integration Objects
- Future Version
 - Performance Analysis
 - Document Control
 - Tools Management
 - Inventory Object

Production plan, automatically imported or manually entered data



Why MES Light?

MES Light is intended to cover the basic i.e. "Light" MES functionality

MES Light enables MES projects that have fast implementation and limited budget.

MES Light is targeted to provide simplified standard MES functionality in the gap between custom made functions and full MES Module functionality.

MES Light reduces amount of customer specific code needed in the project

MES Light is a very fast to adopt/implement solution:

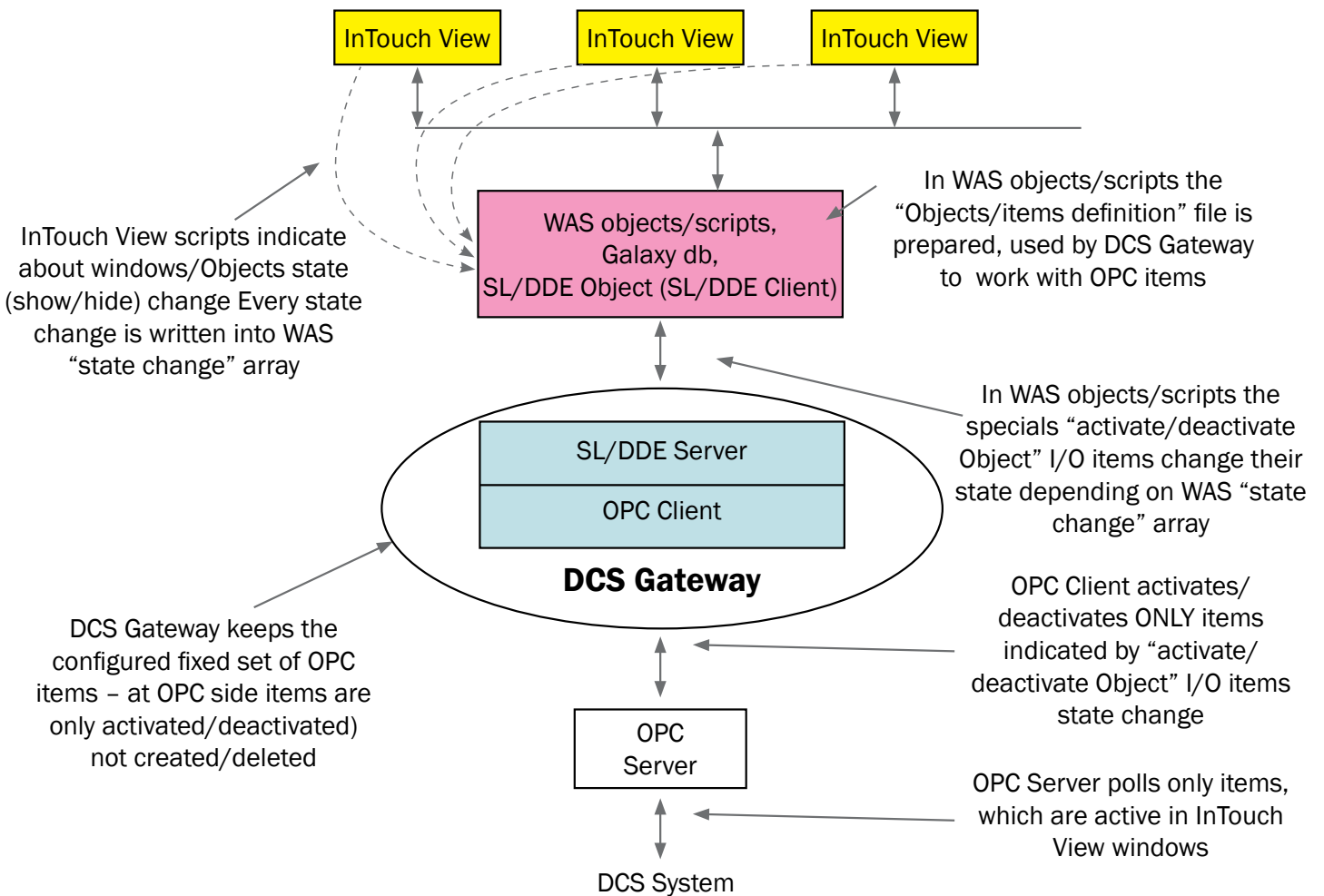
- NO MES model is needed
- NO Big install work
- Easy to add to existing System Platform Solution

DCS Gateway for Wonderware System Platform

DCS Gateway is software application for providing manageable and configurable communication between Wonderware System Platform and Distributed Control Systems (DCS)

The DCS Gateway is primarily intended for use in Wonderware Archedra environment with Wonderware Application Server (WAS) to support configurable communication between Wonderware SuiteLink/DDE Clients and 3rd party DCS OPC Servers, depending on Wonderware InTouch View windows "show/hide" state, including special implementation how OPC items are created, activated and deactivated, in purpose to reduce the OPC Server communication load during OPC items activation/deactivation.

The general layout of system with DCS gateway and Wonderware System Platform environment is following:



DCS gateway consists of two main parts:

- SuiteLink/DDE Server part, providing data for SuiteLink/DDE Clients, e.g. for Wonderware Application Server \$DDESuiteLink Client Object;
- OPC Client part, for connection to DCS OPC Servers.

Alarm Extension Pack for Wonderware

System Platform

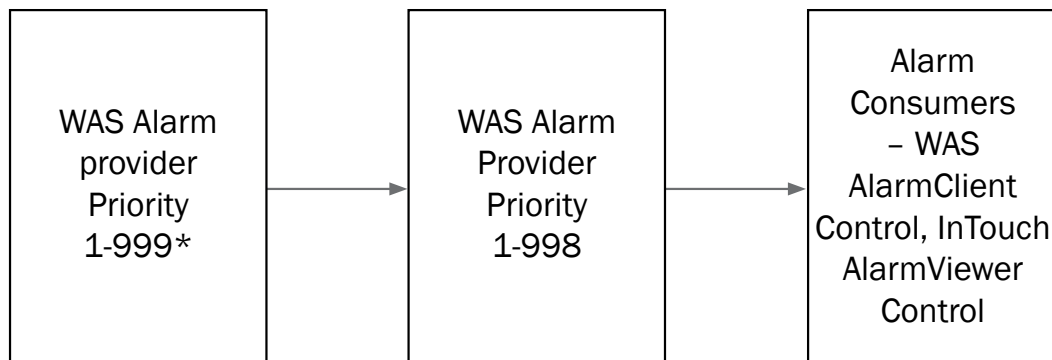
Alarm Extension Pack for Wonderware System Platform is a collection of objects and standalone applications to extend the Wonderware Alarm System with new functions and features

The Alarm Extension Pack is developed to extend the today's existing alarm functions with new features, but still to use the standard Wonderware Alarm System. Suitable for applications that require more functions in the alarm system - large systems or systems with special functionality required.

Main features:

- Advance alarm filtering
- Looping alarms, like opening InTouch windows depending on selected alarm
- User defined fields
- Event priority updates
- Logging alarms/events to different databases
- Alarm reduction, by showing important alarms only in a view, but have all alarm/events if needed

For, example, Alarm Gateway Object provides functionality to create separate configurable Alarm Provider for alarms coming from Wonderware Application Server (WAS) and/or other Alarm Providers:



Since WAS platform Alarm Provider does not provide possibility to configure alarm priorities, in situations when WAS objects generates lot of events with priority 999, the WAS platform alarm buffer can be overloaded with events, so alarms with priority 1-998 could be lost. In this situation The Alarm Gateway Object can be used to store important alarms in its internal Alarm Provider buffer and Alarm Consumers can connect to Alarm Gateway to get alarms that possibly are lost in WAS alarm provider.

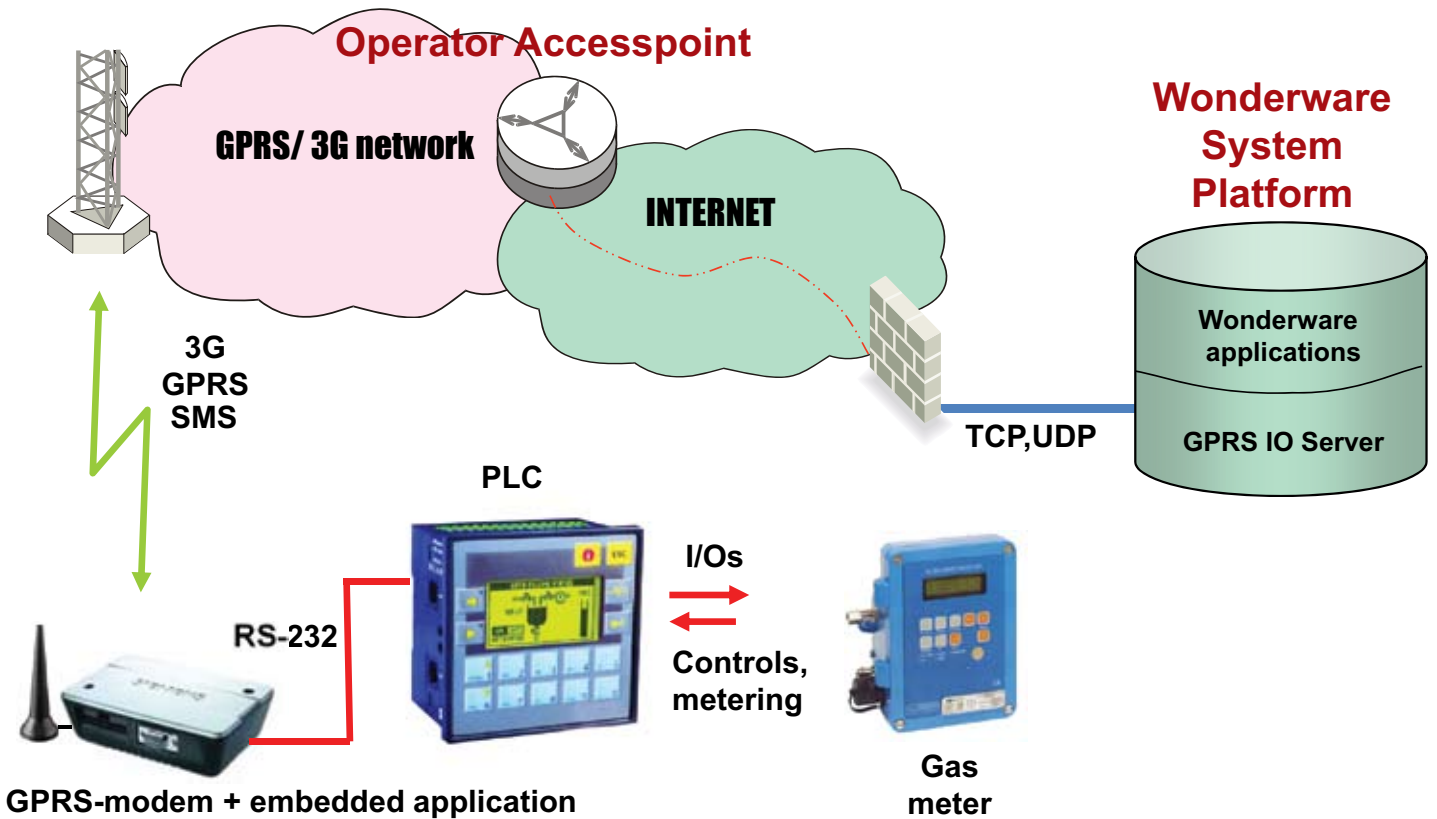
Mobile network software to make Wonderware wireless

3G, GPRS and SMS based wireless data collection from gas meters by using GPRS/GSM-modems and GPRS IO Servers

The GPRS and SMS based gas metering distributed network data collection system solves the following main tasks:

- Data collection from remote substations via embedded applications running on remote GPRS/GSM-modems and special GPRS IO Servers running at Wonderware System Platform level
- Date/time synchronization for all substations
- Substation alarm and security notifications
- Redundancy on all levels:
 - intermediate data storing in PLC, store and late forward
 - alternative server address, load balancing
 - double alarm and values database, cluster system
- Reporting and system diagnostics system

The general layout of GPRS/SMS based wireless data collection system:



Customer and application specific Wonderware functionality

Wonderware Russia developed software brings real additional functions and expands features of standard Wonderware software, which helps you to make more projects with Wonderware

Wonderware Russia develops various supplementary software for Wonderware platforms. The developed software package family includes:

- Automation and communication software for major PLCs (like ABB, Modicon, Omron, Schneider, Siemens, Unitronics, etc.) and fieldbuses (like Ethernet, LON, Profinet, etc.), supporting SuiteLink, OPC and other interfaces for providing data to Wonderware software;
- M2M wireless automation software for 3G/GPRS/GSM/SMS communication with remote devices;
- Software modules completing Wonderware software, like InBalance pipeline management, alarm management solutions, energy metering, etc.



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