



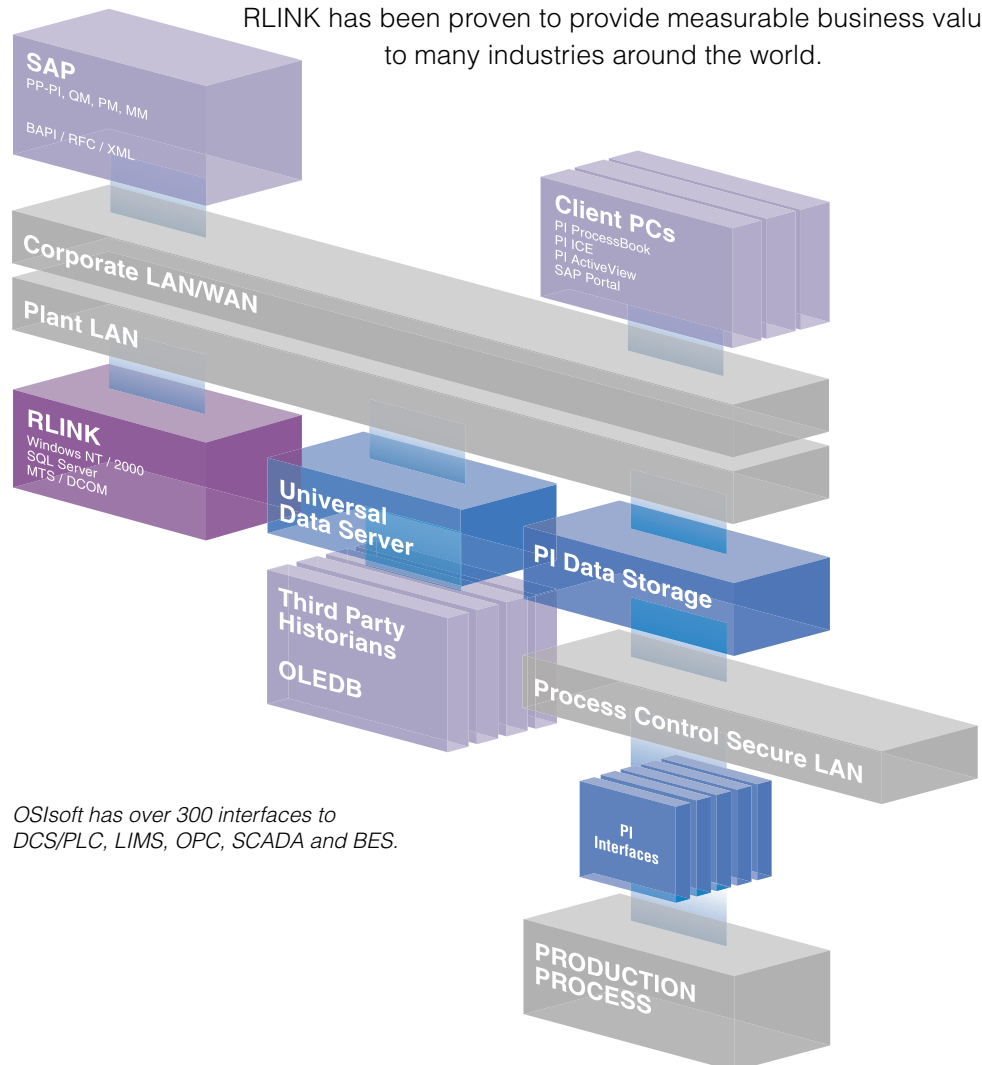
Real-time infrastructure for your e-business strategy

Many major corporations have implemented SAP's R/3 for their enterprise resource planning (ERP) System. To get the maximum benefit from SAP, manufacturing companies need to close the loop between the operating decisions made using SAP R/3 and the actual plant floor operation. Plants need to deliver timely process data and process events to business applications, and they must also obtain information from business systems. The boundary between real-time systems and transaction processing systems is complex, and communication between them is difficult.

“SAP R/3 and OSIsoft’s PI System are technology tools that provide significant productivity improvement opportunities on their own, but are not the complete solution. The real breakthrough for us came when we implemented OSIsoft’s RLINK product. RLINK gave us the integration that resulted from the seamless flow of information from the process unit to business management.”

Carlo Volpones
Polimeri

Many of these issues have been resolved by RLINK, OSIsoft’s easy-to-implement, bi-directional link between the production floor and SAP business applications. RLINK has been proven to provide measurable business value to many industries around the world.



OSIsoft has over 300 interfaces to DCS/PLC, LIMS, OPC, SCADA and BES.



Companies use RLINK to:

- *Improve asset utilization*
- *Provide actual production information to SAP*
- *Implement condition-based maintenance*
- *Link quality data with production and maintenance information*

RLINK is certified by SAP for interface to the PP-PI (Production Planning - Process Industries), PM (Plant Maintenance), and QM (Quality Management) R/3 modules. RLINK also includes components that allow access to and from various other SAP modules. It supports material movement transactions in the MM module, the BAPI's for repetitive manufacturing and planned orders in the PP module, and portions of the Sales and Distribution (SD) module for vendor managed inventory.

To ensure long-term supportability, OSIsoft developed the RLINK gateway with tools supported by SAP and products provided by Microsoft. RLINK runs on Microsoft Windows NT and 2000 and uses Microsoft SQL Server. It is built using RFC's (Remote Function Calls) and BAPI's from SAP. Our commitment to Microsoft and SAP standards ensures that RLINK will continue to perform even as individual components in your system are upgraded or replaced.

The PI System boosts RLINK's power to provide optimal precision and performance throughout the enterprise

Using RLINK in conjunction with other OSIsoft products provides additional opportunities to leverage your information for increased profitability.

- PI Interfaces collect data for the Universal Data Server (UDS) to route in real-time or to be archived online for years.
- PI ProcessBook is a user-friendly graphical package, familiar to plant floor personnel, which can be used as a window into SAP.
- PI Advanced Computing Engine (ACE) can be used to develop validated production calculations and logic for maintenance reasoning and text codes based on sensor values.
- Sigmafine, OSIsoft's yield accounting and data reconciliation engine, can be used to validate and reconcile data prior to sending to SAP and for identification of sensor malfunction for plant maintenance.
- RLINK and PI web parts integrate with SAP portals to provide a single view into business and manufacturing systems. These web parts are developed in the PI Interactive Configurable Environment (PI ICE).

RLINK enables critical production data to interconnect with SAP

RLINK interfaces to SAP R/3 modules PP-PI, PM and QM. PP-PI is used for production information, PM is the Plant Maintenance Module and QM is used for Quality Management. RLINK goes beyond data transfer between the plant and the business systems. It includes numerous functions designed to make the interface robust and reliable, with traceability and useful features designed especially for engineers and managers who make process-related business decisions.

Interface to SAP R/3 PP-PI (Production Planning - Process Industries)

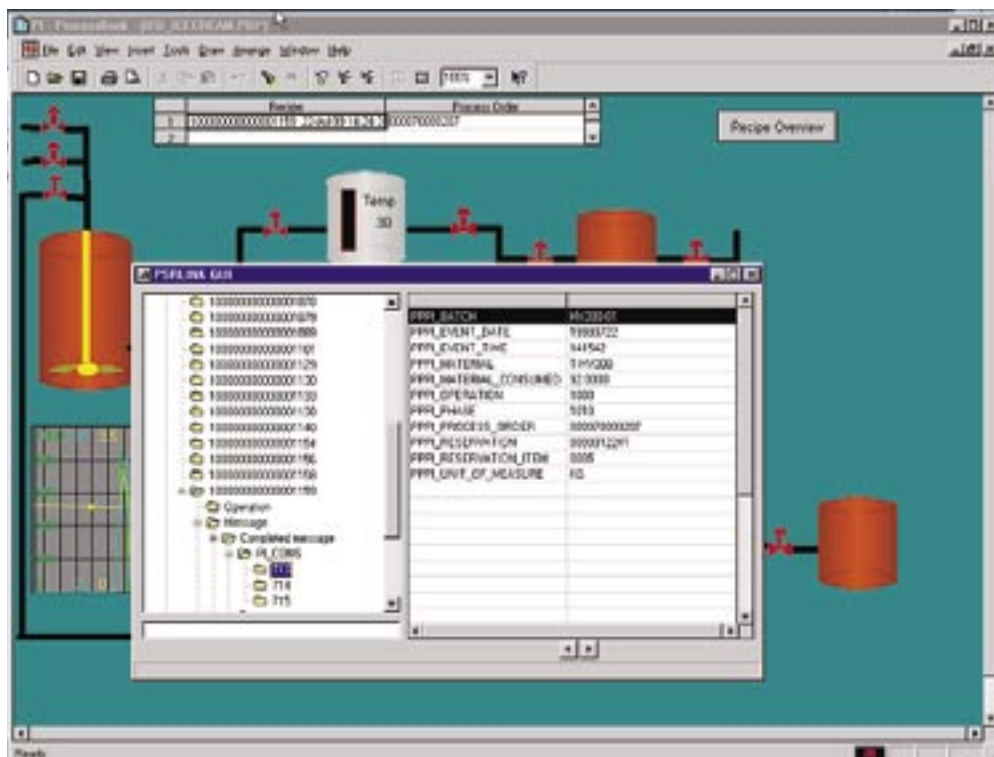
The SAP PP-PI module feeds data to SAP for production orders and costing based on material consumption and production. It provides the planned orders back to the plant floor for execution. OSIsoft's gateway to PP-PI provides the following capabilities:

- Supports all standard SAP instructions
- Displays recipe and operational information in PI ProcessBook graphics environment
- Extensive error checking
- Integrates with batch execution systems
- Pull and push of recipes from SAP
- Alias for SAP instructions
- Extendable with ad-hoc messages and general SAP transaction support
- Interfaces via PI-PCS (Process Instruction - Process Control System) RFC and BAPI Library



“I’ve looked at how many SAP process orders are created in a week and the number of transactions that take place. I generated some numbers and found that RLINK saved us over \$650,000 in labor costs for operators’ time that was no longer spent manually entering the data (into SAP).”

Kris Zywicki
Dow Corning Corporation



PI ProcessBook can be used with RLINK to display recipes and operational data received from SAP PP-PI together with summary production data transferred from the plant to SAP R/3.

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PM

“We estimate a ten percent savings on maintenance costs and are using the RLINK PM module as a key ingredient in our overall equipment effectiveness program.”

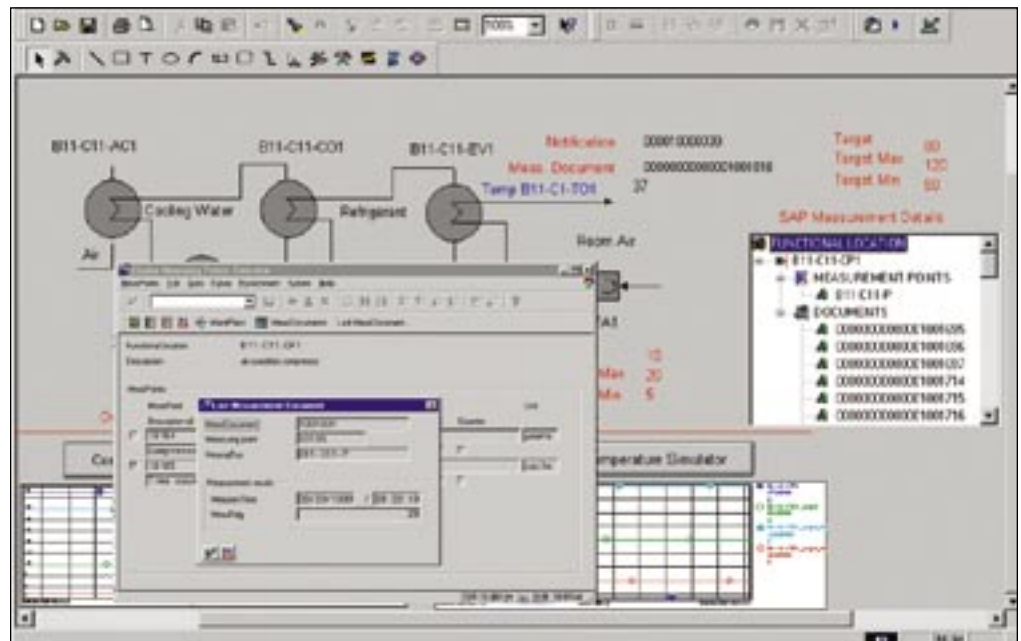
Bryan Sower

Dow Corning Corporation

Interface to SAP R/3 PM (Plant Maintenance)

The SAP PM (Plant Maintenance) module tracks maintenance history and schedules maintenance activities. Critical information required to determine the status of equipment comes from the plant floor. These measurement points and counters are stored in SAP on an exception basis. This exception-based data is used to schedule maintenance. OSIsoft's PM interface provides the following capabilities:

- Single user view with point and click access to SAP equipment objects via PI ProcessBook
- Support of alarm detection
- Measurement points/counters by functional location and equipment
- Equipment aliasing between systems
- SAP R/3 notification generation
- Interfaces via PM-PCS (Plant Maintenance - Process Control System) RFC Library

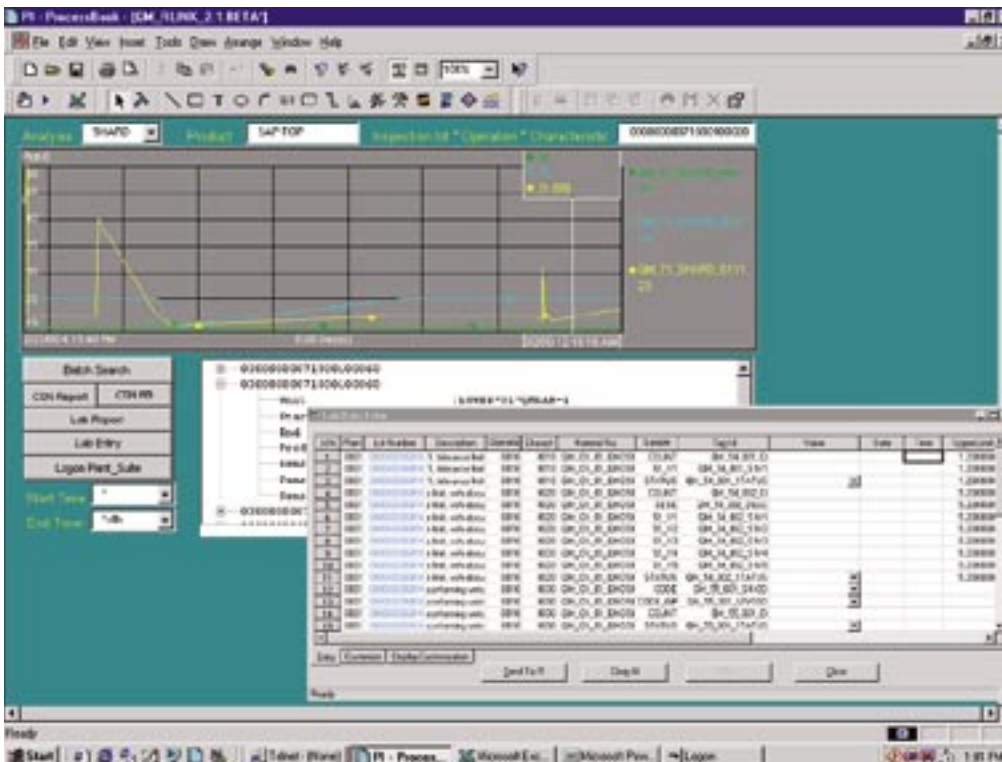


OSIsoft's interface to the plant maintenance (PM) module converts data as monitored by the control and maintenance system into data that can be recognized by SAP R/3. For example, measurement points and counters for functional or equipment locations can be captured and a maintenance program can be set up based on this information.

Interface to SAP R/3 QM (Quality Management)

The SAP QM module is responsible for setting standard testing procedures and quality specifications. It stores quality related data in conjunction with finished goods and receipts and process quality measurements. SAP generates the worklist for quality samples to be taken and recorded. The PI System collects data at the source, automatically using interfaces to laboratory systems and on-stream analyzers. Data is also collected using the PI ManualLogger and hand-held terminals. Collecting and storing quality data, in addition to process data, provides mechanisms for improving the process through data correlation and detection of processing problems caused by quality upsets. OSIsoft's QM interface provides the following capabilities:

- PI ProcessBook for data analysis
- PI Batch to track sample lots
- PI ManualLogger for hand held terminals or manual data entry
- Interfaced via QM-IDI (Quality Management - Inspection Data Interface) RFC Library



RLINK to the QM module enables results of product quality testing to be compared to product specifications and correlated with actual process conditions.

integrated

THE PI SYSTEM: **RLINK**

OSIsoft™

“We have a critical need for instant and accurate data. Attempting to implement electronic available-to-promise delivery without consistent inventory systems was impossible. RLINK provides the real-time and historical process condition information that we needed in order to meet our deadlines.”

Bill Wight

Eastman Chemical Company

Business goals achieved using RLINK

Analysis: Capture actual costs of operation. Correlate production data with process orders to determine why one order costs more or took longer to produce. Use the results to modify processes/equipment to eliminate waste and increase production or efficiency.

Asset efficiency: Optimize asset utilization by performing condition-based maintenance using actual runtime and operating parameters to automatically trigger timely maintenance. This provides measurable savings in labor and parts costs over a traditional calendar-based maintenance philosophy.

Increased profits: Maximize and optimize asset utilization by obtaining actual costs of operation.

Available-to-promise: Provide a reliable delivery date to your customer — when the order is taken — based on real-time view of finished goods inventory, production plan, raw materials and other considerations.

Eliminate manual data entry: Eliminate or simplify manual entry and associated errors by providing automatic data transfer, which can result in significant savings in labor costs.

Maintenance troubleshooting: Solve recurring problems by correlating plant data to PM notifications to determine and resolve root causes.

Increased quality: Integrate QM inspection lots and process data to compare results across the organization and target areas for improvement.

Discover how you can use RLINK to improve your enterprise information

For additional information on RLINK, OSIsoft and the PI System products, please visit us at www.osisoft.com or email rlink@osisoft.com.

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