

# Leading Vinyl Compound Producer Leverages Wonderware® MES

A major vinyl compound manufacturer had been relying on a legacy Wonderware InTouch HMI application to store data relating to finished goods production and raw material consumption. Control recipes were manually entered into the Recipe Manager of InTouch. They needed a better solution.

## Objective

MAVERICK partnered with a major vinyl compound manufacturer to develop a manufacturing execution system (MES) based on Wonderware MES which retrieves process order data and returns finished goods, raw material consumption and downtime to the SAP® enterprise system.



## Results

The final system developed by the MAVERICK team was a system based on Wonderware MES, System Platform, SAP and a customer-supplied line recipe manager (LRM) application, which renders their core manufacturing operations management system paperless. The MAVERICK team reused functionality from the SAP, LRM and Wonderware systems, which allowed for development of a system that had a minimal learning curve.

## Solution

The SCADA requirements were met by leveraging Wonderware System Platform. The team utilized the following modules: Industrial Application Server, InTouch and Wonderware Historian. The MES functionality is handled by Wonderware MES.

Process order data from SAP is converted into Wonderware MES work orders, jobs, job BOMs and routes. Item data is transferred from SAP Wonderware MES on an as-needed basis.

Integration between SAP and the Wonderware system is accomplished primarily with ArcestrA® Client Control technology. The control integrates intrinsically with both Microsoft® SQL Server and the ArcestrA runtime.

The ArcestrA client control facilitates work order generation, control system downloads, parameter downloads and work order stop and start. The ArcestrA client control was developed in Microsoft Visual Studio and leverages .NET libraries and runtime. This allows for the use of Excel-looking data grids, data-aware context menus, toolbars and status controls, thus rendering a user interface familiar to most Microsoft Windows users.

The application includes Microsoft SQL Reporting Services hosted within Wonderware InTouch. The report can be sent to the printer or exported to PDF, Microsoft Word or Microsoft Excel.

Downtime events are captured leveraging the ArcestrA Utilization Capabilities Object. This object's behavior is purely configuration-based (no scripting). The events are transferred from Wonderware MES to SAP by the ArcestrA client control with the assistance of the user.

Finished goods production data is captured leveraging the ArcestrA Production Capabilities Object. The object's behavior is purely configuration-based (no scripting). Finished goods data is transferred from Wonderware MES to SAP by the ArcestrA client control with the assistance of the user.

Raw material consumption data is captured leveraging the ArcestrA Production Capabilities Object. The object's behavior is purely configuration-based (no scripting). Consumption data is transferred from Wonderware MES to SAP via a .NET CLR stored procedure which gets executed through a SQL Server job.

In addition to communicating the operations data to SAP, standard Wonderware MES reports are delivered via the Wonderware Information Server. Downtime, production and consumption reports can be viewed throughout the organization with a web browser.

### The MAVERICK Difference

MAVERICK pinpointed the ArcestrA Client Control capabilities within Wonderware System Platform and Wonderware MES in tandem to integrate three SQL server-based systems with their SCADA runtime.



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