

Pulp & Paper



Using PI to Create Real Time Ability for a Pulp and Paper Supplier to Monitor Costs

Background

The consumer packaging division of a major pulp and paper manufacturer needed help capturing data from five local mills, transforming the data to be consistent across each of the mills, and then pulling the data into a corporate grade costing application. Grade costing allows the manufacturer to benchmark mills and make valuable business decisions around production that will in turn promote cost efficiencies. The client's objective was to obtain an accurate assessment of the real-time costs at each facility and have the ability to compare mills and individual machines. To meet this need, the consultants from Avid Solutions were tasked with obtaining, transforming, and moving data from the client's local mill historians to the corporate servers, so that accurate grade costing information could be supplied on a consistent basis. While the client already had physical historians and a network in place, the company lacked the domain knowledge needed to collect, transform, and pull the required data from each of the five local mills into the corporate system. Therefore, they requested the assistance of Avid's consultants with these OSI PI applications.

Approach

The consultants from Avid met with each of the five mill managers at the different locations and accessed the specific recipes to determine what information was required. Avid's consultants then worked with the local mill engineering teams to determine any additional data requirements and create OSI PI performance equation tags to pull information from the local historians into the corporate server at regular intervals and also on demand when necessary.

Results

The experienced integrators from Avid Solutions successfully met the customer's needs by giving the client the ability to benchmark real-time cost by grade and thus allowing the appropriate business decisions to be made based on the resulting information.

Additional Information

The capabilities of the integrators from Avid Solution go well beyond the basic PI configuration and equation tags.

Avid is also capable of the following:

- Providing a turnkey PI infrastructure installation including:
 - o System specification, sizing and purchasing
 - o Network design and configuration
 - o Network security and disaster recovery
 - o Virtualization
 - o Software installation and configuration
 - o Coordinate physical installation and network configuration
- Historizing data from a variety of sources
 - o PLC/DCS
 - o IT equipment (UPS, computers)
 - o 3rd party systems and devices
 - o BMS (Energy/Environmental monitoring)
 - o LIMS
- PI Process Book Displays
 - o Creating control system "mimic" displays to allow viewing the process outside the control system network
 - o Custom KPI dashboards
- Customer web-based applications
- PI real-time SQC/SPC configuration
- Asset Framework Analytics configuration
- Providing the capability to alert the appropriate personnel via email, text or voice phone call when PI data indicates an alarm or specific situation, such as:
 - o Process value excursions
 - o Condition based PM required due to runtime/temperature/total flow/vibration
- Interfacing with higher level systems to report batch material usage.

Applications

- Dashboarding
- Historian
- MES (Manufacturing Execution Systems)
- Network Integration
- OEE (Overall Equipment Effectiveness)
- Paper Machine
- Real-Time Grade Costing
- Serialization

Technology

- DCS/PLC
- DCS/PLC Integration
- OSI Batch
- OSI Performance Equations
- OSI PI
- Virtualization

Avid Solutions collaborates with clients to identify and select best-in-class control system automation platforms, design and implement systems such as the OSIsoft PI system historian, and provide verification and validation documentation and services. The combination of domain expertise and adoption of new innovative technologies helps to make Avid a top leader in the market.