DATA SHEET

Paper Manufacturing Solutions

Pulp and Paper is a demanding 24/7 operation where art meets science and dataPARC delivers to this industry better than anyone.

The Pulp and Paper Industry Faces Several Challenges Related to Data Analysis

1. **Production Of Multiple Grades –** Filtering data based on the Grade and applying the proper limit for quality parameters (i.e. Basis Weight) and process settings (HPD/T) often requires a custom exports into Excel

2. **Data Silos –** Making multiple sources (Historians, LIMS, MES, etc.) available for process troubleshooting is time consuming or requires significant duplication of data across systems.

3. **Going Digital –** Migrating manual systems/reports (downtime reporting, shift reports, log sheets, etc.) to electronic versions is often a choice between multiple systems from multiple vendors or a home-grown solution. dataPARC was designed from Day 1 to solve these and other problems, making it a great solution for the Pulp & Paper industry.

Grade Troubleshooting

PARCview's Run Browser engine smartly determines when a grade or product was produced, and then loads those time periods in Trends or Chart displays. Also retrieved are the correct limits for the grade, including multiple limit types (ex. Process Limits, Reliability Limits, Operating Limits and Safety limits).

Centerlines

Centerlining is a common methodology in Paper Making and PARCview contains an integrated module that makes implementation of Centerlining easy. PARCview's Centerline display delivers at-a-glance where the process is currently, where the it has been historically and where it's supposed to be - the defined reliable operating range (i.e. The Centerline). Color-coding to indicate limit violations provides immediate feedback to operators.
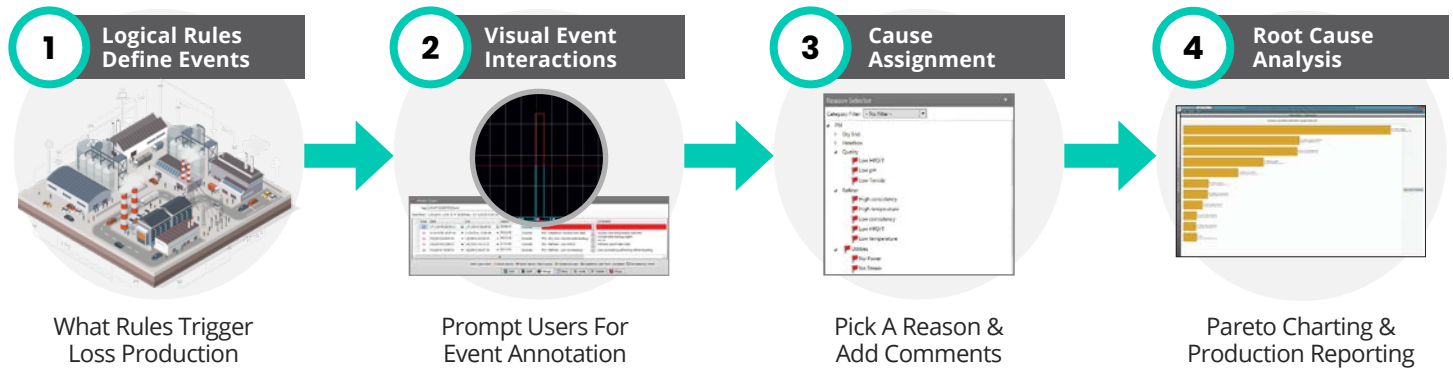

PARCview Trend Filtered by Grade

1. Grade Run #1 **2.** Grade Run #2 **3.** Grade Run #3

PARCview Centerline Display Filtered by Grade

1. Current Value from Data Sources **2.** Grade Based Limits **3.** Historical Grade Run Aggregates

Production Loss Tracking (i.e. Downtime)

Analyze lost opportunity events, triggered by process upsets or slowdowns, using actual loss of production to each event. Compare planned down time with slowdowns caused by other factors. Easily build daily, weekly, and monthly reports to calculate lost production and the associated cost.

1 Logical Rules Define Events	**2** Visual Event Interactions	**3** Cause Assignment	**4** Root Cause Analysis
What Rules Trigger Loss Production	Prompt Users For Event Annotation	Pick A Reason & Add Comments	Pareto Charting & Production Reporting

Dashboards

Large amounts of detailed, in-depth data, isn't always necessary. Many users just want the "big picture". dataPARC's built-in graphic designer can be used to create dynamic, highly-informative dashboards that give you an at-a-glance overview of the condition of major process flows and KPIs at your plant.
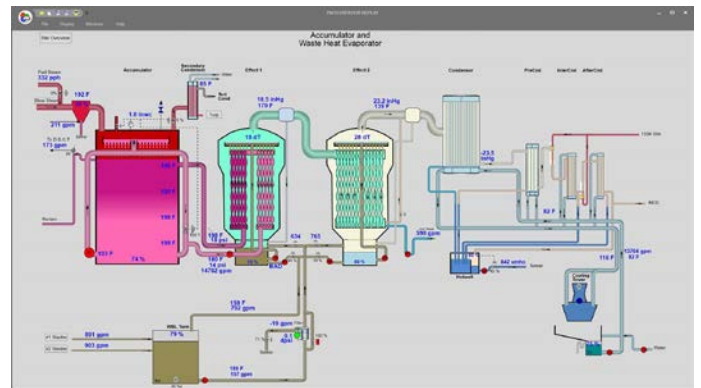
Production Cost Monitoring

View production cost information in real time and make data-driven decisions. Use Multitrends to compare individual components with total cost values. Monitor against budgeted values by applying limits to cost tags.

Tank Inventory & Modeling

PARCtips minimizes rate changes and lessen the impact of maintenance interruptions, allowing operators to accurately predict process needs in the most complex production facilities. The model calculates the upstream rate recommendations (Pulp Mill, Recovery, etc.) and monitors intermediate tank levels based on the Paper Machine schedule.

SPC/SQC

Apply PARCview's SPC/SQC analysis to tags from any data source available to dataPARC. Build control charts (x-bar, range, standard deviation, etc.) from existing sources or PARCview formulas. Define simple min/max limits, choose from Western Electric Rules or custom logic.

Stock Tracking

Improve troubleshooting by time-shifting process data to predict issues before they occur. Easily correlate process issues to conditions that existed in prior stages of the operation. Visualize how equipment will operate as a result of a changes earlier in the process.