Material Handling Edition

simulator

Shorten your time to results with the combined power of Process Simulator's predictive analytics and material handling capabilities integrated with Autodesk[®] Factory Design Utilities, AutoCAD,[®] and Inventor[®]

Static flowcharts, workflow diagrams, and CAD drawings can be transformed into dynamic simulation models that accurately predict process performance measures such as throughput, cycle time, resource utilization, and cost per unit... all in a risk-free virtual environment. It's as easy as V-A-O...



Material Handling features now allow modeling with conveyors and other transport equipment.

Visualize

- Easily build simple to complex process models, including material handling elements like conveyors, forklifts, human operators, and other transporting equipment. Then view system performance results via standard reports or export results to Excel or PowerPoint for further analysis.
- See how dynamic conditions such as equipment downtimes, conveyor backups, or labor absenteeism affect process performance. More importantly, propose and test changes to resolve these problems.
- Watch your processes play out over time to gain a greater understanding of your current or future operating environment.



Analyze

- Use the standard reports or easily build custom reports to support your individual needs.
- System performance metrics such as throughput, cost, and cycle time are displayed in the animation and the reports.
- Brainstorm using the model to identify potential changes and test improvements.
- Safely consider "out-of-the-box" ideas in a virtual, risk-free environment.

Optimize

 Perform sensitivity analyses and use Scenario Manager to understand the impact of each system input factor, independent of each other and in combinations, to find the optimal solution.

Scenario Manager ✦ Add Parameters ◇ ✦ Add Scenario ↑ ↓ ☑ Show Baseline Values				
Simulate Scenario?	\checkmark	\checkmark	✓	 Image: A start of the start of
Last Run Date				
Op_40_Install_Sub_Assemblies - Time	N(42, 3)	N(42, 3)	N(37.8, 3)	N(37.8, 3)
Op_50_InspectTest - Time	T(30, 35, 45)	T(30, 35, 45)	T(27, 31.5, 40.5)	T(27, 31.5, 40.5)
Op_70_Rework - Time	T(10, 60, 240)	T(10, 60, 240)	T(10, 60, 240)	T(10, 60, 240)
Assy AT Op_10_Clean_and_Prep - Quantity	20	20	20	20
Sub_1 AT S1_Op_10_Mask - Quantity	20	20	20	20
Sub_2 AT S2_Op_10_Mask - Quantity	20	20	20	20
Paralene_Tank - Percent Available	80	80	80	80
Rework_Specialist - Percent Available	40	40	40	40
Rework_Pct	0.1	0.05	0.1	0.05

AutoCAD Integration

Optimized models can be opened in AutoCAD or Inventor shortening time to final factory layouts.

Use Cases

Capacity Planning

- Determine the right amount of personnel, equipment, tooling, and WIP to meet demand
 - Justify capital expenditures
 - Test production schedules





Lean Six Sigma / Continuous Process Improvement

- Capture value stream maps in Visio to simulate current and future-state scenarios
- Perform "Virtual Kaizen Events" to eliminate disruption and reduce risks of implementing changes on the floor
- Determine what performance gains you can expect before "going live" with process changes

Conveyor Merges & Splits

Facility Design | Material Handling | In-Plant Logistics

- Simulate material flows and perform line balancing in manufacturing systems
- Model inventory storage and delivery methods in manufacturing and service systems



PS-21/06

ProModel