Process Simulation Engineering

The ability to visualize the dynamics of workstations and assess their efficiency in terms of cycle time and layout design is a critical component of Process Simulation. Integrating 2D and 3D Resources as well as human models in a virtual environment and simulating work assignments provides a unique advantage to visualize non-value added activities and man-machine interaction. Process Simulation also allows for the virtual verification and assessment of product assembly sequences and product-plant interferences, leading to accurate and timely virtual evaluations of manufacturing and assembly facility design and production.

Real-World Applications

Transfer Systems, Conveyor Systems, Assembly Sequence, Fixtures, Pallets, Robots
Static Work Stations, Kit Cells, Machine Load Stations
Dynamic Assembly Lines with Conveyors, Carriers, AGVs

The DSI Advantage

- Determine if modifications to manual and automated stations will affect cycle time
- Animated representation of your system to detect any interferences
- Ability to test “what if?” scenarios
- Design station platform heights to suit your environment requirements
- MODAPTS IE time integration and man-machine interaction
- 2D/3D layout / BIM integration and exporting capabilities
- Point cloud integration
- Line optimization by simulation to determine bottlenecks
- Ergonomics and golden zone analysis for population anthropometry
- Virtual safety risk assessment utilizing virtual / augmented reality technology and 3D station buy-offs prior to capital expenditures

Operator’s Point of View Analysis and Station Buy-offs Using VR/AR Application