

## 3D Plant Event Simulation

Client: Leading Product Manufacturer

### Platforms

- ▶ Factory CAD
- ▶ Plant Simulation
- ▶ Solid Edge
- ▶ Windows XP With NVIDIA Graphics Card

### The Problem

The client is a conglomerate with competitive edge in products ranging from automotive components, machined castings and forgings, to battery operated in-plant material handling equipment.

The client was looking for a solution to optimize its existing production plant that would provide the following:

- ▶ Analyze and plan capacity with simulation
- ▶ Process planning integrated with product development to manage change

Major Challenges that the client was facing were:

- ▶ Virtual deployment of the plant
- ▶ Simulate the entire production process with equipments & material handling devices

### The Solution

To overcome the above problems, Axcend worked with the customer to understand the complete requirement & based on the study provided necessary consultancy to offer a complete solution

- ▶ Virtual Deployment includes plant design, simulation of machine operations & workers keeping in mind all their constraints.
- ▶ Development of entire 3D plant layout using Factory CAD; equipments like CNC Machines & Material handling equipments were designed using Solid Edge.
- ▶ Entire layout was imported into Plant Simulation for integration to give necessary Human animation and simulation of production process.
- ▶ The components in the simulation process were designed as per scale and hence provide information on the actual space occupied at any point of the work cell along with machine animations.

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### ROI

- ▶ Improve communication with proper visualization in 3D
- ▶ Reduce costly changes during commissioning
- ▶ Reduce time from facility design to production
- ▶ Visualization of material movement within the plant

### Salient Features

- ▶ Space computations & analysis
- ▶ Material Handling Analysis
- ▶ Process visualization of machines as well as worker operations
- ▶ Flexibility on deployment of additional component
- ▶ Virtual walkthrough of the entire plant along with running machines