Autodesk® Factory Design Suite: *The Power is in the Workflow*

Deepak Maini

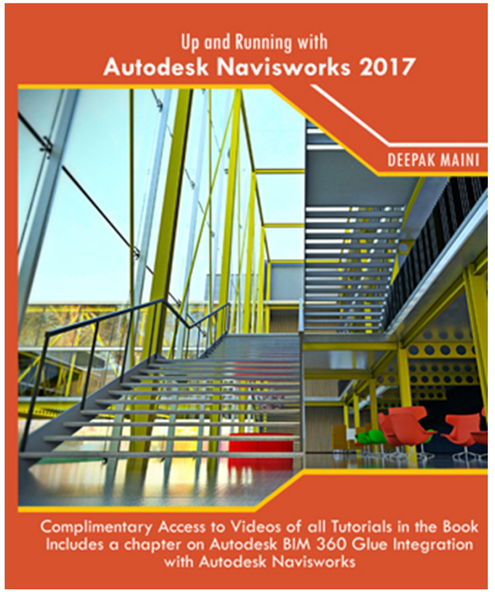
National Technical Manager – Named Accounts

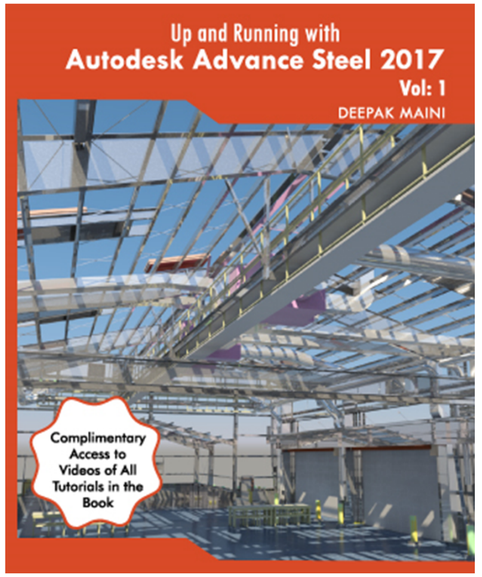
Cadgroup Australia

For no real reason at all… Just because everyone loves it

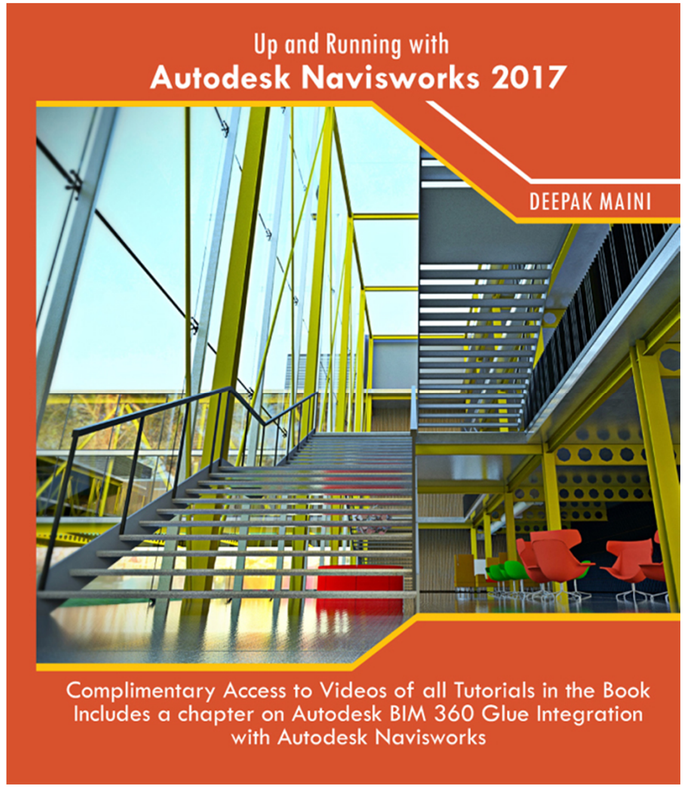
My Introduction

- Qualified Mechanical Engineer
- More than 18 Years of Experience on various CAD Software
- Regular Speaker at Autodesk University in Las Vegas
- Guest Lecturer at the University of New South Wales (UNSW) and University of Technology Sydney (UTS)
- Author of the “Up and Running with Autodesk Navisworks” series of books
- Author of the “Up and Running with Autodesk Advance Steel” series of books





Goodies…



pluralsight

My Aim: Lets Keep it Simple and Have Fun as we Learn

- Units in Millimetres
- Class is Being Recorded. You and your colleagues will be able to view it around January as “Class on Demand” from AU Website
- Happy to Receive Emails from Attendees Anytime about Any Technical Question
- Mobile Phones on Silent Mode Please. Thanks

Class summary

In this class you will learn how the integrated workflow in Autodesk® Factory Design Suite/Product Design Collection is used to efficiently create factory layouts. You will also learn how this program can be used outside the factory environment where the information flows between client to sales representatives and then to the engineering team and then back to client using A360 Drive.

Key learning objectives

At the end of this class, you will be able to:

- Learn how to sync between AutoCAD Architecture, Inventor, and Navisworks
- Learn about Revit Interoperability with Inventor
- Learn how to use Navisworks to create collaborated factory designs with factory buildings and machine layouts
- Learn how to perform clash tests in Navisworks to resolve clashes between building and assembly line

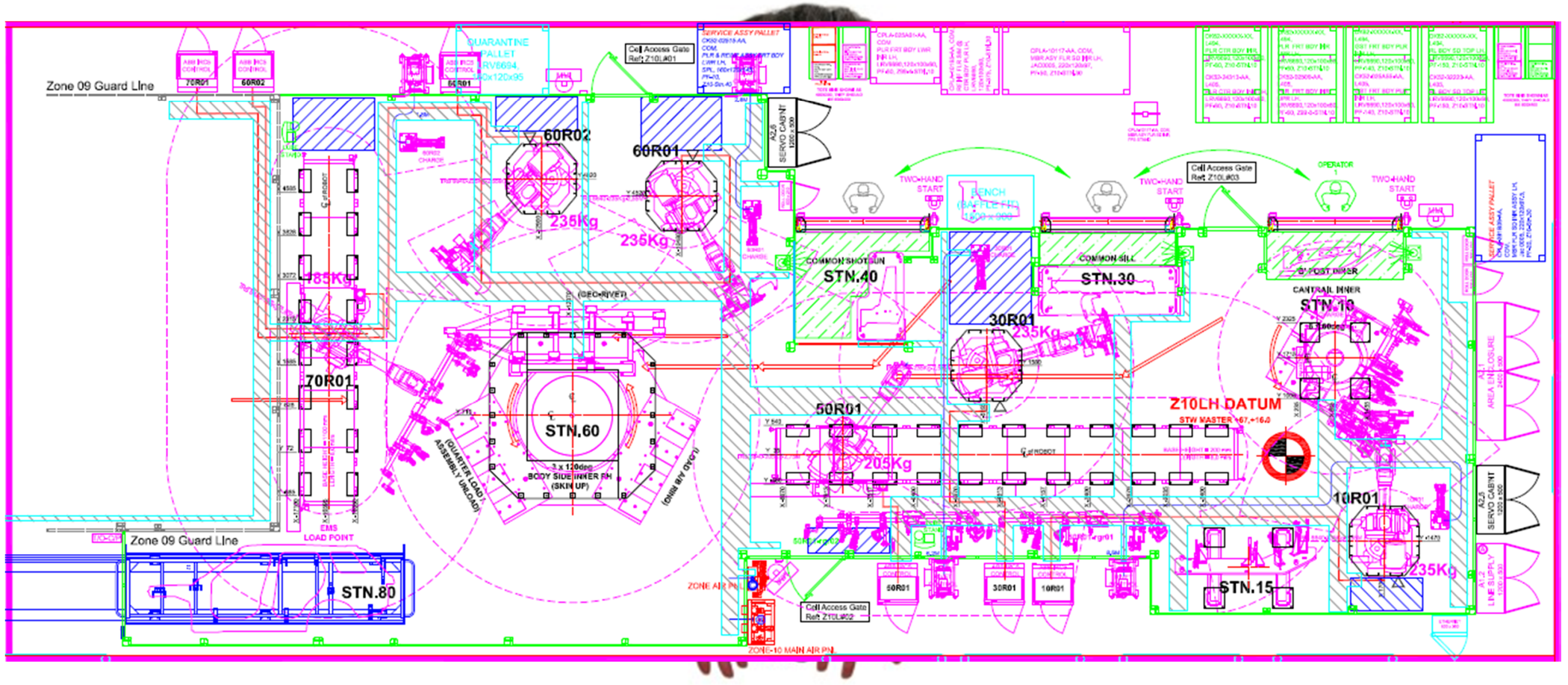
Presentation Talks About 3 Scenarios + Virtual Reality

- Scenario 1: Use the Power of the FDS/PD Collection Workflows to efficiently create factory layouts
- Scenario 2: Use Architect's Autodesk Revit® building as reference to insert assets in Autodesk® Inventor® *(Actual Customer Issue)*
- Scenario 3: Autodesk® Factory Design Suite used by Warehouse Logistic Solutions Company to improve their workflow *(Actual Customer Issue)*
- Virtual Reality to Review Factory Layouts

Before Autodesk FDS/PD Collection

- Use AutoCAD LT to create 2D layouts
- X-ref 2D machine layouts into factory layouts
- Look at red, green, blue lines and arcs
- No real means to view the “virtual factory”
- No option to check and resolve clashes

Before Autodesk FDS/PD Collection



Is there a Better Solution???

Autodesk® Factory Design Suite

Or

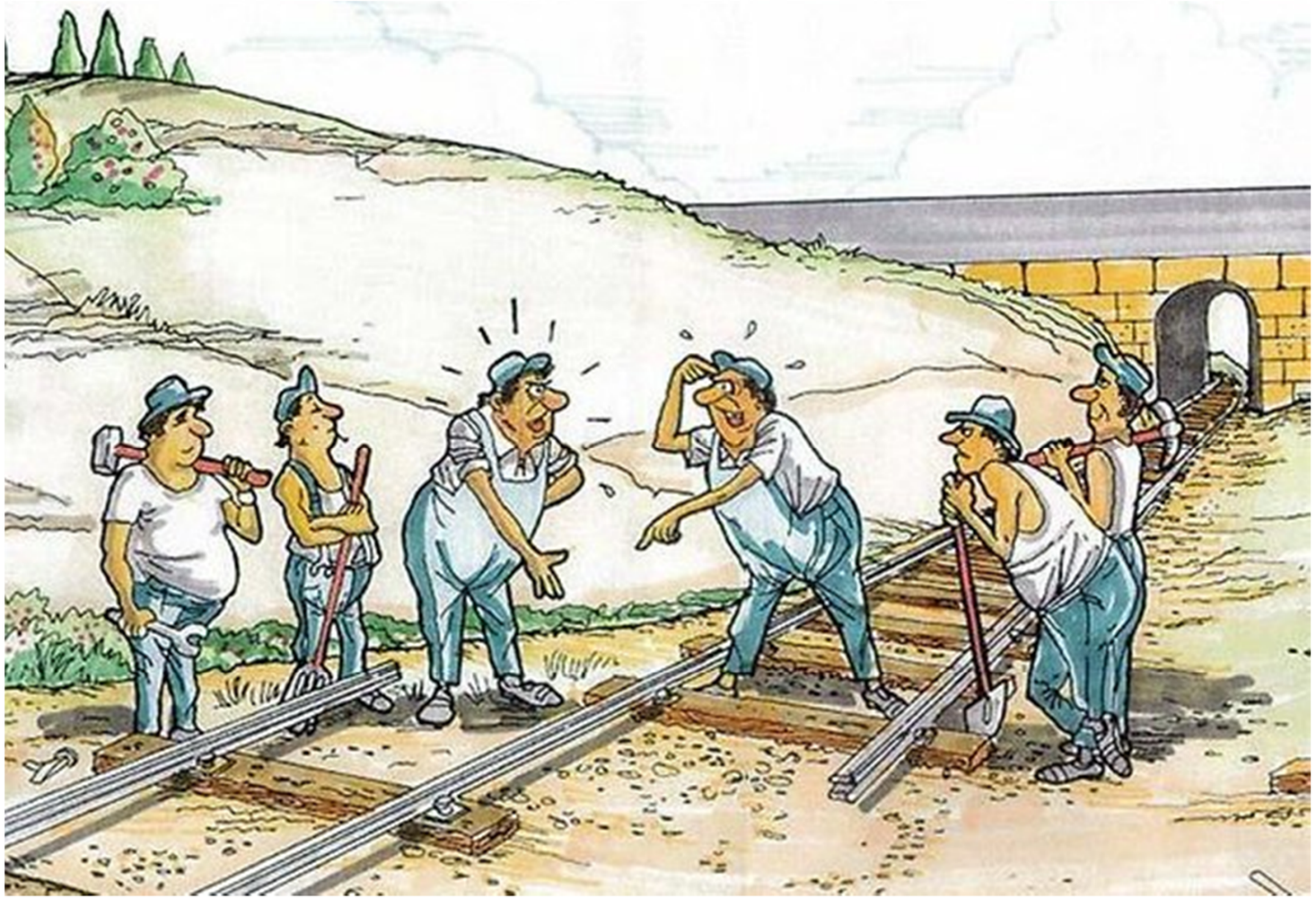
Autodesk Product Design Industry Collection

Scenario 1: Use the Power of the FDS/PD Collection Workflows to efficiently create factory layouts

- Create 2D layout in AutoCAD® Architecture
- Use 1:1 Sync between AutoCAD® Architecture and Autodesk® Inventor® to create 3D General Arrangements of a factory
- Create a virtual factory in Autodesk® Navisworks®
- Perform clash detection between different components of factory in Autodesk® Navisworks®
- Resolve clashes and update the virtual factory

Scenario 1: Presentation on Software

Scenario 2: Resolving Lack of Information Issue



Scenario 2: Use Architect's Autodesk Revit® models as reference to insert Autodesk Inventor® models *(Actual Customer Issue)*

- Architect's building model created in Autodesk® Revit®
- Model exported as AutoCAD® DWG®
- A360® Drive used to share the design data
- 3D model brought in AutoCAD® Architecture and used as a reference in Autodesk® Inventor®
- Autodesk® Inventor® design imported in Revit model

Scenario 2: Presentation on Software

Scenario 3: Autodesk® Factory Design Suite used by Warehouse Logistic Solutions Company *(Actual Customer Issue)*

- Sales Rep of a Warehouse Logistic Solutions company meets the customer
- General Arrangement created by sales in AutoCAD® 360
- A360® Drive used to share the data with the design team
- 3D layout created in AutoCAD® Architecture and Autodesk® Inventor® using 2D drawing
- 3D model imported in Autodesk® Navisworks® to create walkthroughs
- A360® Drive used to share the completed design with the customer

Scenario 3: Presentation on Software

Lets put the Oculus on

Scenario 4: Using Virtual Reality to Review Factory Layouts

- Software used is Revizto
- Mainly meant for BIM Data Coordination and Review
- One button click to Virtual Reality from Navisworks
- Open the VR model in Oculus or HTC Vive
- The same model can be opened for normal viewing, reviewing, markup, and coordination

Q & A

Technical Questions

dmaini@cadgroup.com.au