

Inventor and AutoCAD Electrical Working Together

Presenters:

Justin B. Martin

Kristopher Mike Myers

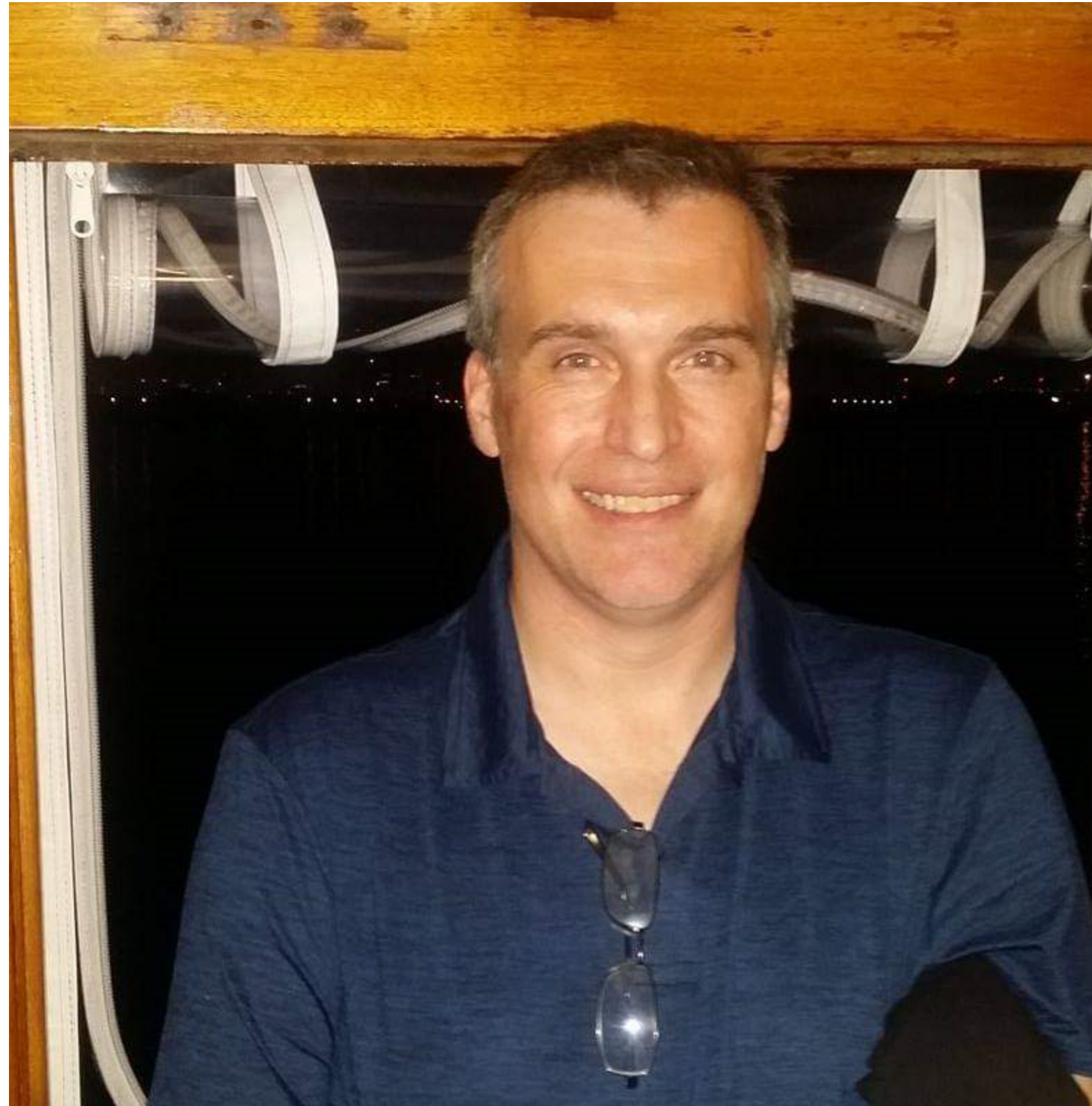




About the speaker

Justin B. Martin

Justin has 20 years of experience in the industry with a background of power distribution and controls design. Not knowing much about the industry but having taken drafting in high school, Justin knew that he had an interest in drafting and electricity. He attended Maryland Drafting Institute to study drafting and basic architecture but knew architecture wasn't for him. He was able to land his first job in the industry with a MEP consulting firm in 2001 doing MEP drafting. While employed there, he showed a lot of interest in the electrical field and earned the opportunity to learn basic power distribution design. Over the course of his career, he continued to work hard to learn more about power distribution, automation controls, commissioning, and project managing. Justin is currently the CAD Lead within the Transmissions group at Duke Energy Carolina's West region.



About the speaker

Kristopher Mike Myers

Mike is a Senior CAD Operator as well as technical specialist at Duke Energy's Carolina's West region. Mike has 20 years of experience in the Mechanical Engineering/Fabrication industry and 9 years in utilities Substation Design. Mike has been using AutoCAD since release 10, Autodesk Inventor since release 8, and Autodesk Vault since 2008. Mike has been writing code and lisp routines mostly for AutoCAD since 2002. In many cases these codes and routines were used to incorporate company's CAD standards which Mike has taken part in developing along with other SMEs.

Description

This session illustrates how Inventor and AutoCAD Electrical (ACADE) can interact with each other for enhanced workflow.

- Inventor displays visual representations of components, such as transformers, regulators, breakers
- Inventor's visual representation allows the designer to exercise better judgment for clearances, footprint, connections points, and more
- When incorporating ACADE with Inventor, the user is able to convert from 2D to 3D format, to create a more visually realistic representation of the design

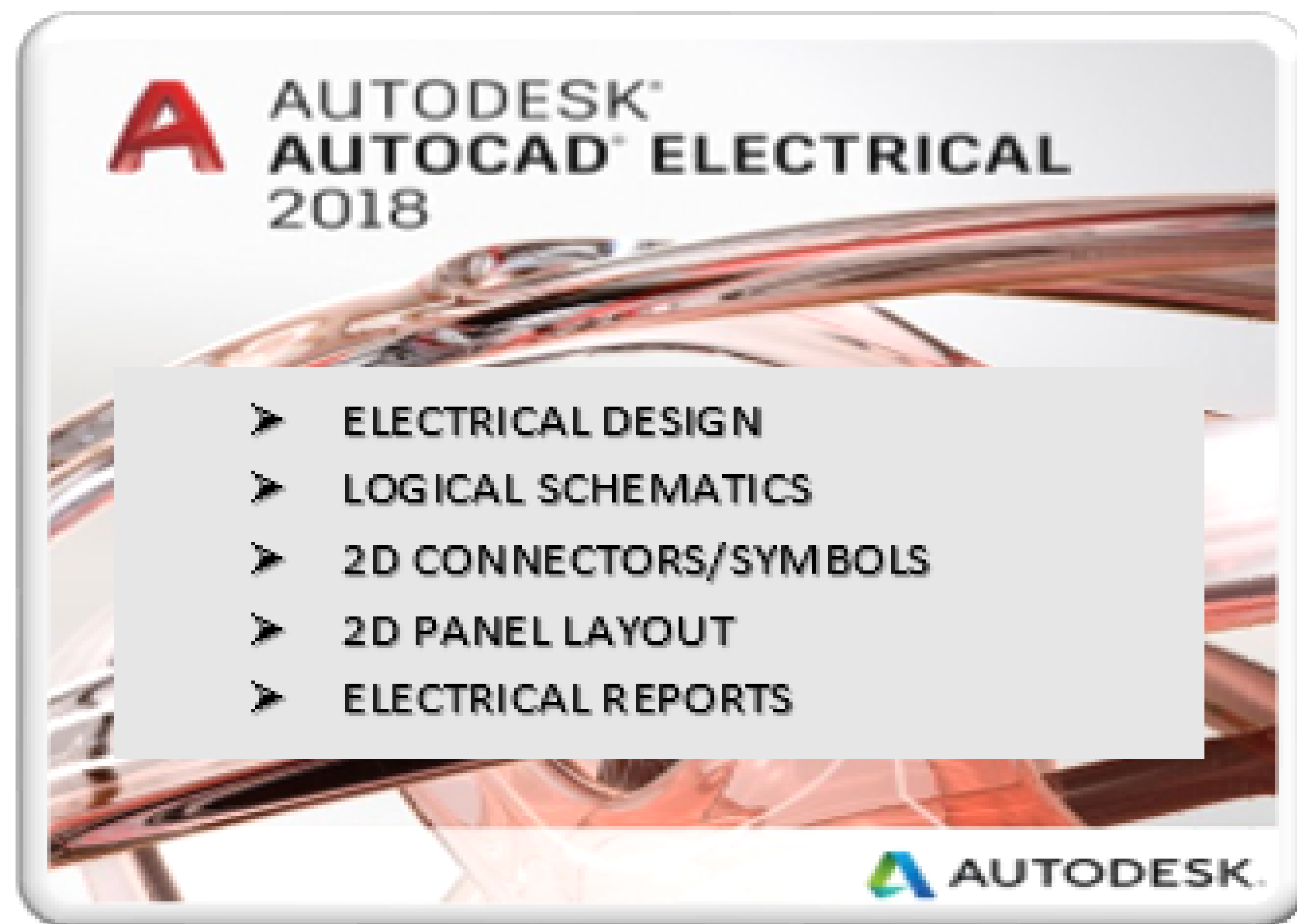
End result:

The designer can determine the correct wiring points on a device, as well as clearances, length, and bend radius.

Learning Objectives

- Use Inventor and ACADE to provide a clear picture to your customer for the substation design
- Apply designing methods in a realistic view
- Modify design to eliminate costly errors
- Provide an accurate Bill of Material (BOM)

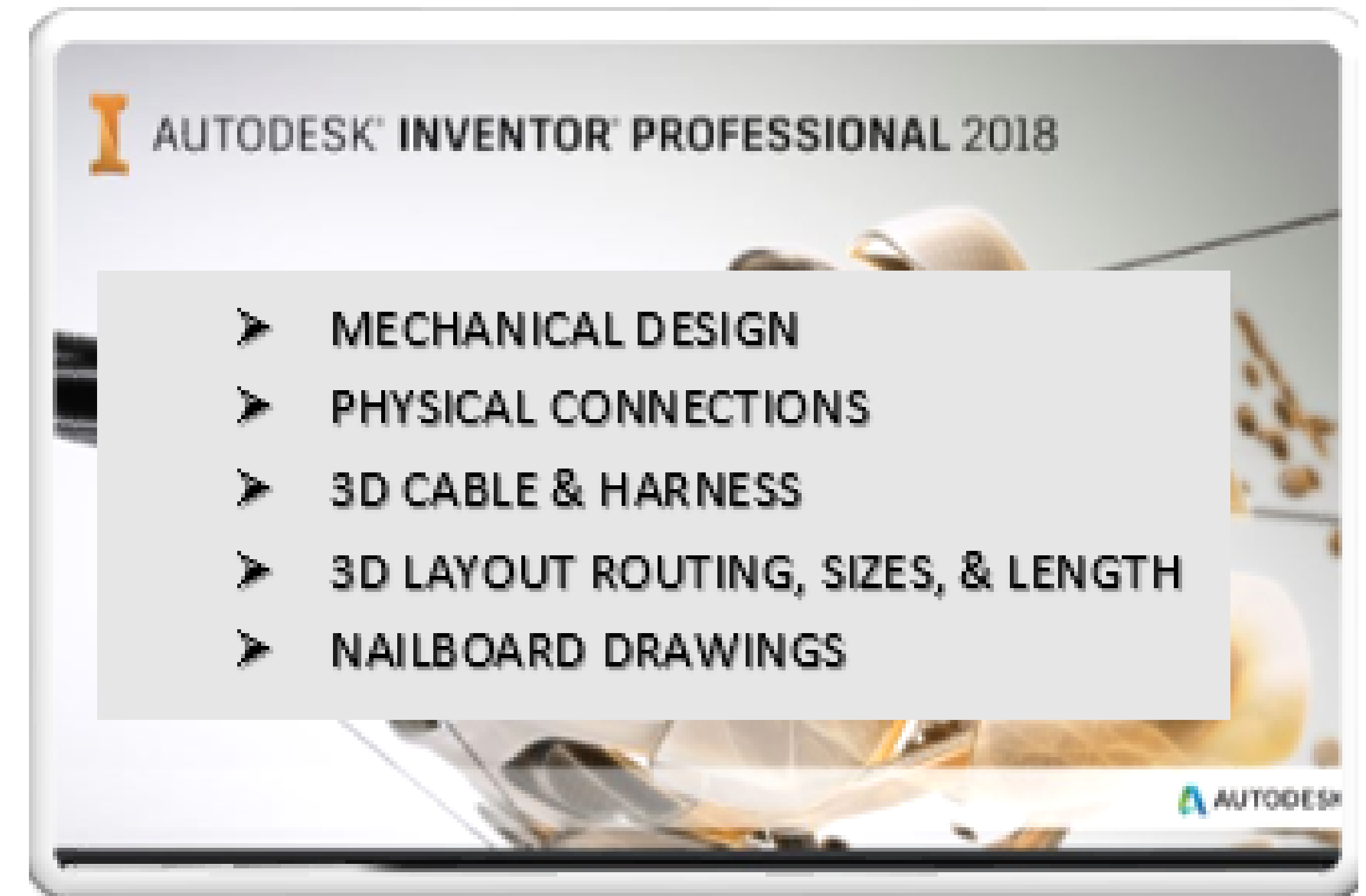
What ACADE and Inventor Can Produce



A AUTODESK®
AUTOCAD® ELECTRICAL
2018

- ELECTRICAL DESIGN
- LOGICAL SCHEMATICS
- 2D CONNECTORS/SYMBOLS
- 2D PANEL LAYOUT
- ELECTRICAL REPORTS

AUTODESK



I AUTODESK® INVENTOR® PROFESSIONAL 2018

- MECHANICAL DESIGN
- PHYSICAL CONNECTIONS
- 3D CABLE & HARNESS
- 3D LAYOUT ROUTING, SIZES, & LENGTH
- NAILBOARD DRAWINGS

AUTODESK

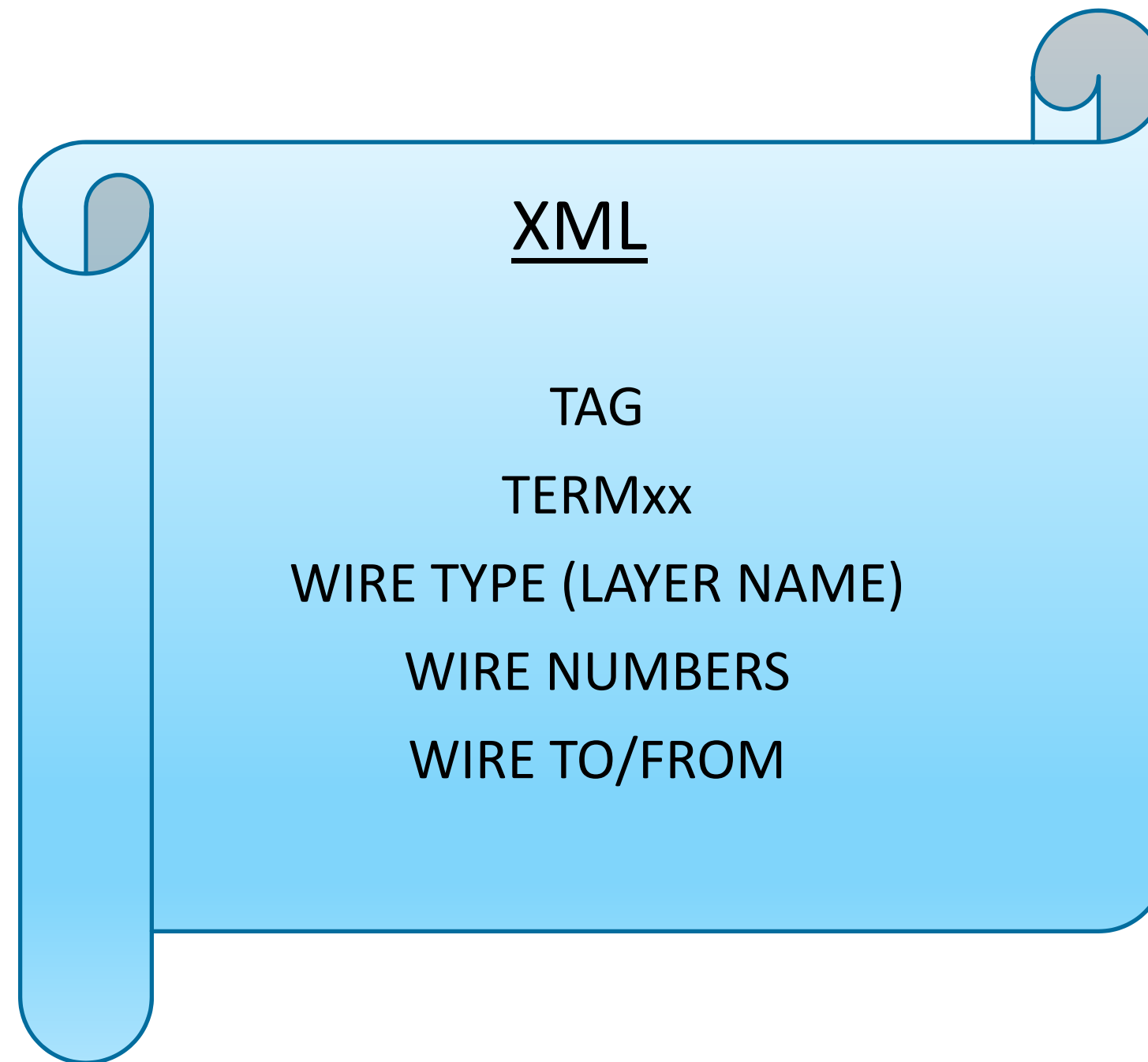
Relationship Between ACADE and Inventor



- | | | |
|------------------------|---|---------------------------------|
| ➤ TAG | = | ➤ REFDES |
| ➤ <u>TERMxx</u> | = | ➤ PIN |
| ➤ WIRE TYPE/LAYER NAME | = | ➤ WIRE TYPE (LIBRARY) |
| ➤ WIRE IDENTIFIERS | = | ➤ WIRE IDENTIFIERS (AUTOMACTIC) |

ALL WIRES NEED CONNECTIONS ON BOTH ENDS

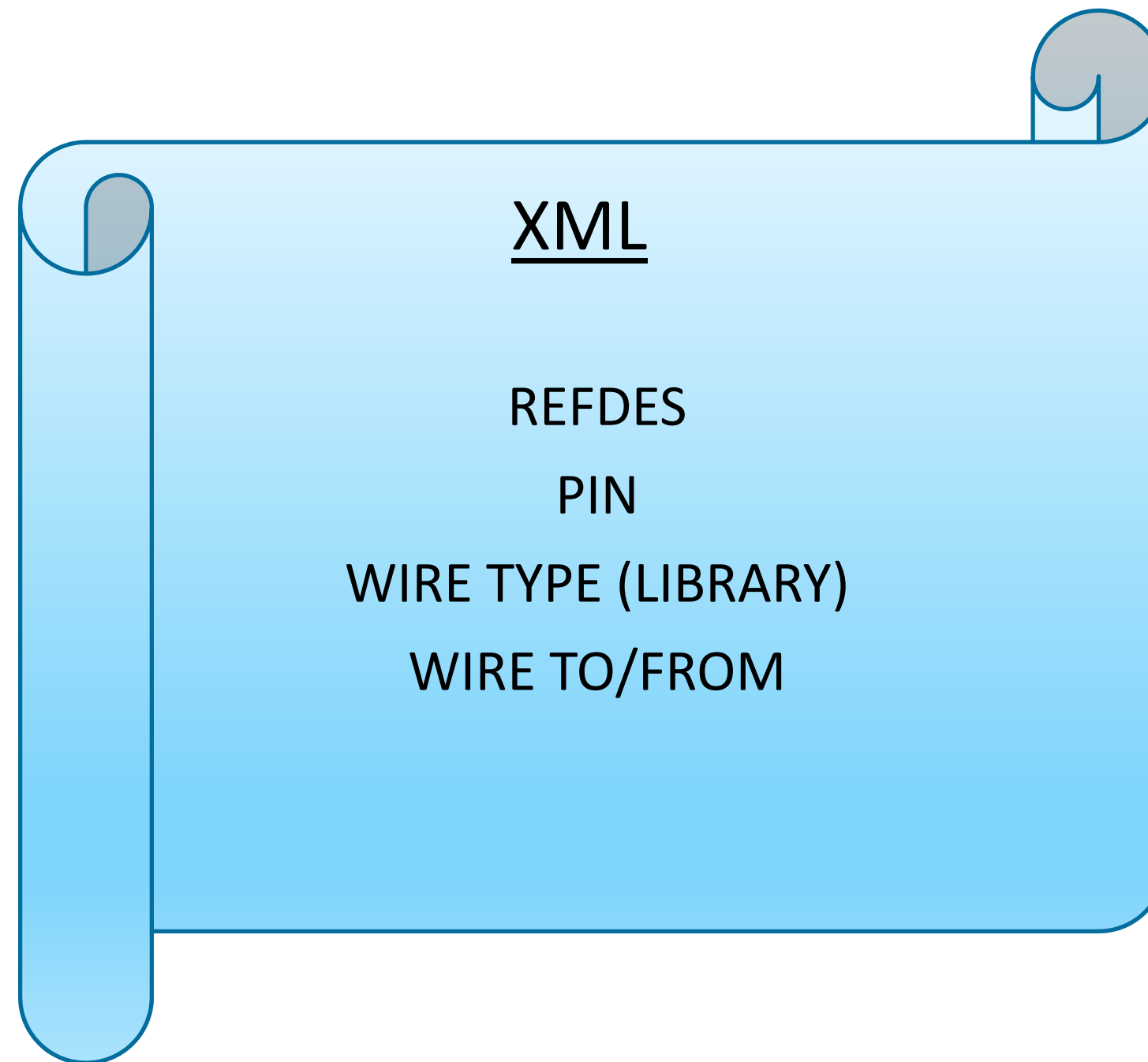
Exporting ACADE to Inventor



Exporting Inventor to ACADE



IMPORT



EXPORT

Overall Demo Video

- Please click link below to be redirected to on-line video

[Inventor and AutoCAD Electrical Working Together](#)



AUTODESK®

Make anything™

Autodesk and the Autodesk logo are registered trademarks or trademarks of Autodesk, Inc., and/or its subsidiaries and/or affiliates in the USA and/or other countries. All other brand names, product names, or trademarks belong to their respective holders. Autodesk reserves the right to alter product and services offerings, and specifications and pricing at any time without notice, and is not responsible for typographical or graphical errors that may appear in this document.

© 2019 Autodesk. All rights reserved.

