Integrated ECAD, Modeling, and CAM in EAGLE/Fusion 360

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TOPICS

• The PCB workspace in Fusion 360 and the Fusion Sync button in EAGLE

• Eagle/Fusion 360 Integration
  • EAGLE to Fusion 360
  • Fusion 360 to EAGLE

• Workflows and Design Situations

• Advantages of integrated ECAD and MCAD
The PCB workspace in Fusion 360 and the Fusion Sync button in EAGLE
The PCB workspace in Fusion 360

Four Available tools:
The Fusion Sync button in EAGLE

- Define source Fusion 360 design for a PCB component
- ALL pushes and pulls are done through the Fusion Sync button
EAGLE/Fusion 360 Integration
PUSH an existing EAGLE board to an empty Fusion 360 design

Use the “Create new Fusion design” option in EAGLE

Creates a new Fusion design of the PCB board component and the 3D library packages for any electrical components
DEMO: EAGLE BOARD TO FUSION 360

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Fusion 360 to EAGLE

- Create a PCB component in a Fusion 360 design and PULL to EAGLE
  1. Sketch Fusion board profile
  2. Create PCB
  3. PCB Profile
  4. Finish PCB
DEMO: FUSION 360 TO EAGLE PCB COMPONENT CREATION
CUSTOM GRAPHICS CARD

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Workflows and Design Situations
Which workflow should be used?

- Depends on design process! Could have:
  - Standard board into many designs
  - Mechanical design dictates board shape
  - Board and enclosure still being designed
Workflows and Design Situations

- Standard Board into many designs
- Push into a new Fusion design and insert into assemblies as XREFS
Mechanical design dictates board shape

- Create board in Fusion and pull to EAGLE
- Can derive board shape from assembly
Workflows and Design Situations

- Board and enclosure still being designed
  - Start with Fusion board component
  - Use Fusion board shape to drive throughout design process
DEMO: EDITING FUSION ASSEMBLY WITH CHANGES TO PCB COMPONENT

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Advantages of integrated ECAD and MCAD
Advantages of integrated ECAD and MCAD

- The electrical, mechanical, and manufacturing teams can work with a single Fusion 360 design and EAGLE board file
- Less file conversions
- Communication! Comments!
QUESTIONS?