



SIEMENS



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#SEU15

An Introduction to Hybrid Modeling

Introduction to Hybrid Modeling

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Introduction

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Craig Ruchti is a member of the Solid Edge Global Technical Business Development team (GTBD). This group creates Solid Edge demonstrations, produces and delivers technical Solid Edge update training and supports Solid Edge pre-sales activities globally. Craig is a graduate of the University of South Florida with a degree in Mechanical Engineering. Prior to working with the GTBD team, he worked designing rehabilitation engineering prototypes for various special projects and testing/altering existing designs to increase use and marketability.

Overview of Ordered vs. Synchronous

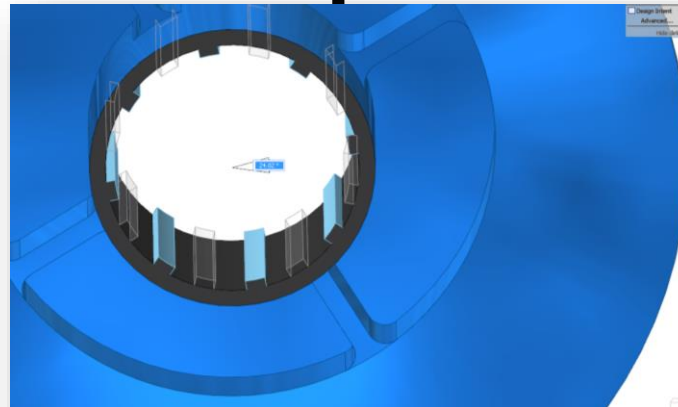
Let's grasp this concept!

Ordered –

- Sketch driven bodies and features
- Order of creation is important
- When other objects are used to create new geometry, links are created and held
- Design intent must be built in by the designer

Synchronous –

- Sketches only used to create initial geometry
- Order-less features allow users to control model through direct 3D geometry interaction
- Design intent controlled through the software/Synchronous Technology OR through the designer



Overview of Ordered vs. Synchronous

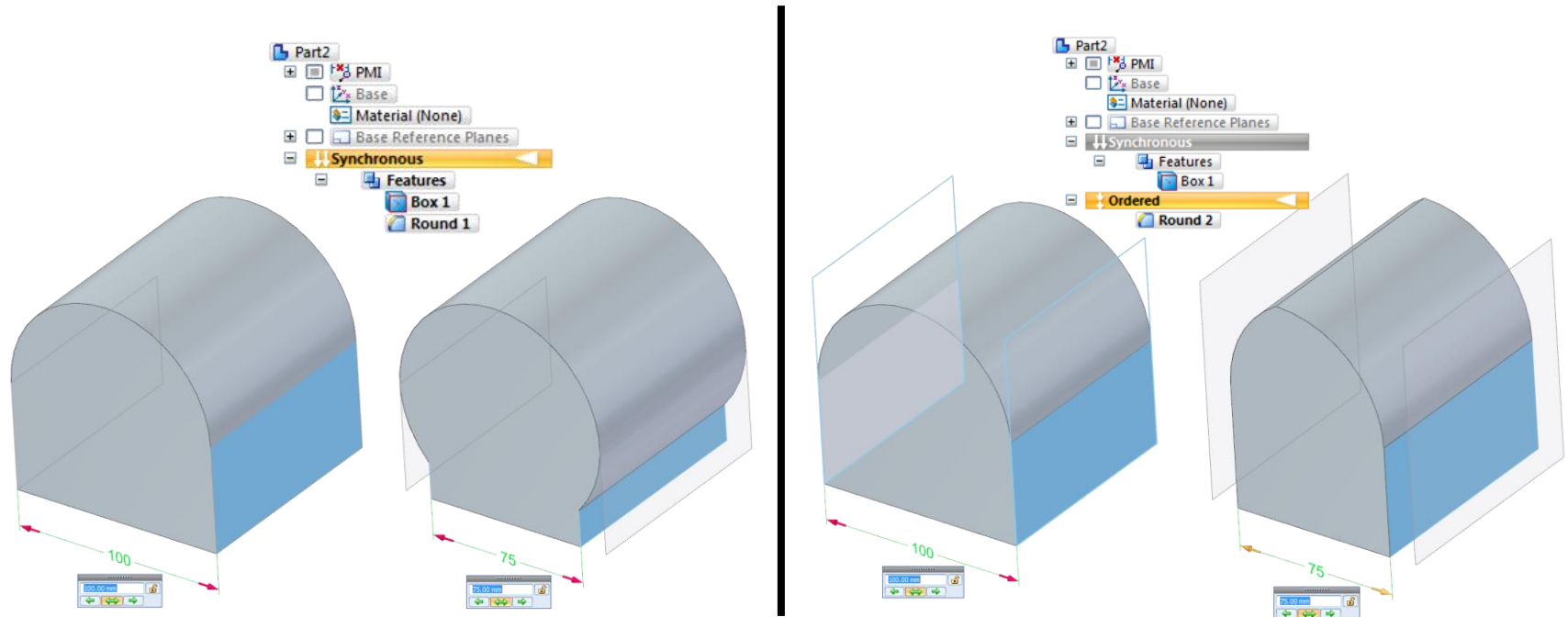
Best practices: When do I use what?

Ordered	Sync
Finishing features: Rounds, Chamfers	Reusing 3D geometry – Copy/paste
Surfacing	Importing 3D data
Sweeps	Editing multiple parts in one shot
Lofts	Precise direct modeling
When linking to other parts or geometry	Rapidly creating geometry/conceptualizing
	Unexpected design changes

Overview of Ordered vs. Synchronous

A few preliminary points...

- Seeing as Synchronous uses body geometry rather than sketches, once a face is consumed, measures have to be taken to retrieve it
- This is a great reason for placing finishing features last using a hybrid workflow – the faces that the ordered features are placed on get remembered



What is Hybrid Modeling?

Hybrid modeling is the practice of utilizing both the power and freedom of synchronous modeling in conjunction with the structure of ordered modeling. By creating your base features synchronously, you can have the same control that sync offers for moves and changes on them, but then be able to associate additional features in an ordered manner.



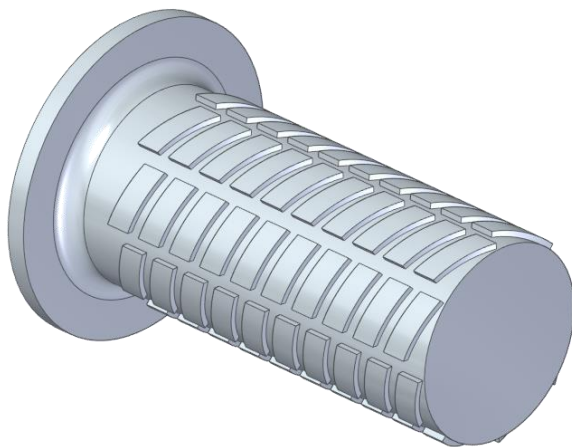
Note: Solid Edge offers users the ability to transfer any ordered features or bodies into the synchronous environment, but can not go the opposite way. If using a hybrid modeling technique, users can still control synchronous bodies while in the ordered environment.

Let's see that in action!



Other Use Cases

- Patterning



- Importing/Surfacing



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