

Using I-DEAS Associative Copy



Prepared By:

Larry Carpenter, P.E.

Prepared For:

SMS NMG Users Meeting

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What is Associative Copy?

Design Command Description

Associative Copy

Location

Design, Master Assembly

Locate the Icon



Description...

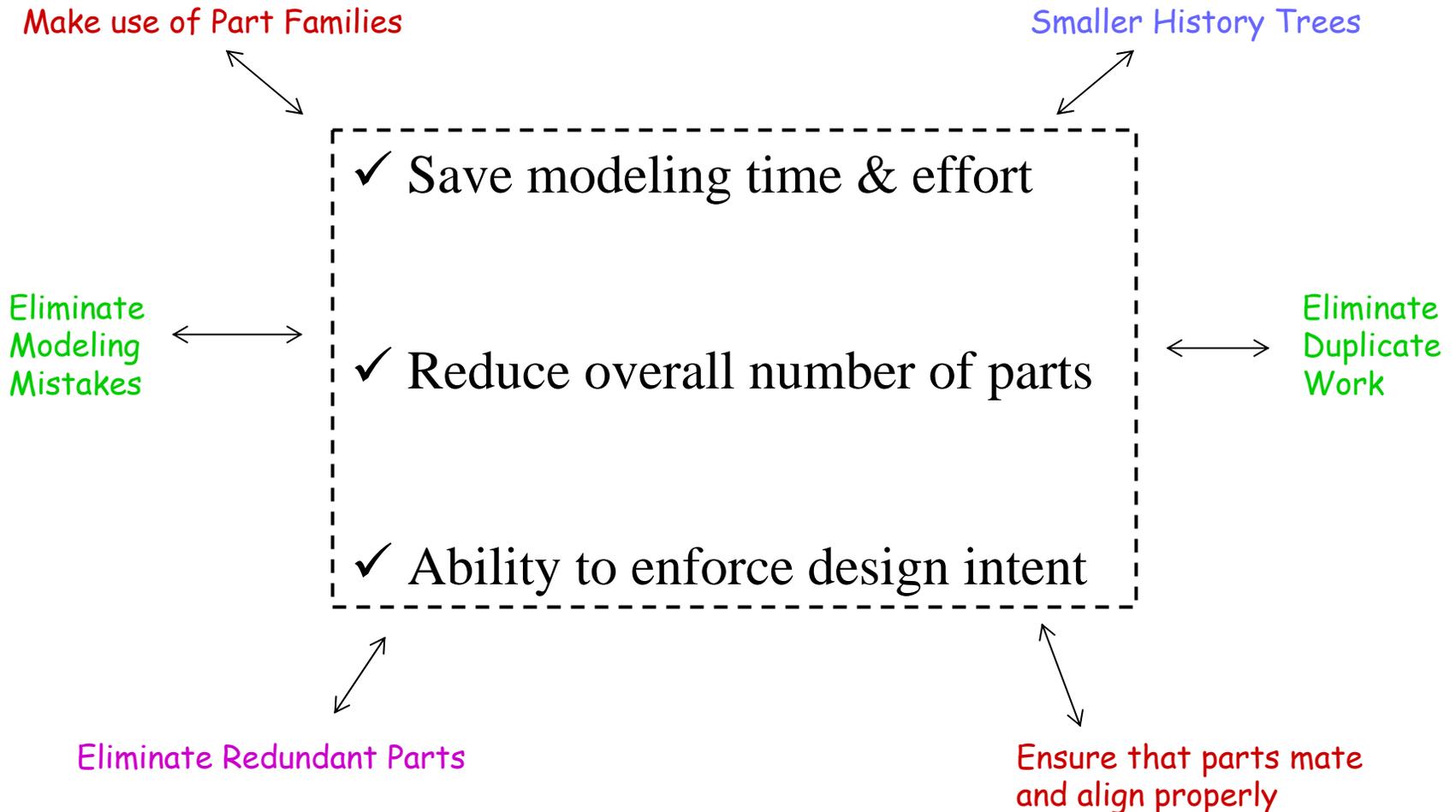
From the I-DEAS Help Library...

“*Associative Copy* allows the user to copy surfaces and/or reference geometry from one part instance (the *source* instance) to another instance (the *target* instance). This must be done within a common parent assembly (the context assembly).

Associative Copy copies a history tree node from the source part to an associative copy feature (ACF) which is added to the history tree of the target part. The ACF contains all the selected geometric information from the source part.

Updating the target incorporates changes to the copied surfaces. This associativity allows the source part designer to maintain some control of design intent in the target part.”

Benefits of using Associative Copy



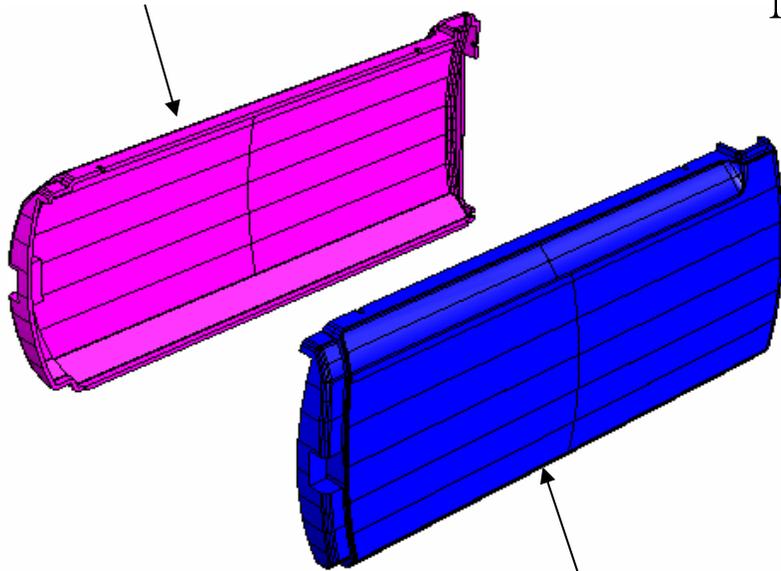
Useful Applications for Associative Copy

- Modeling Symmetric Parts
- Creating Finished Parts from Castings
- Creating Castings from Finished Parts
- Cutter Parts/Geometry
- Controlling Design Intent for Multiple Parts
- Different States of Same Part
- Finite Element Analysis

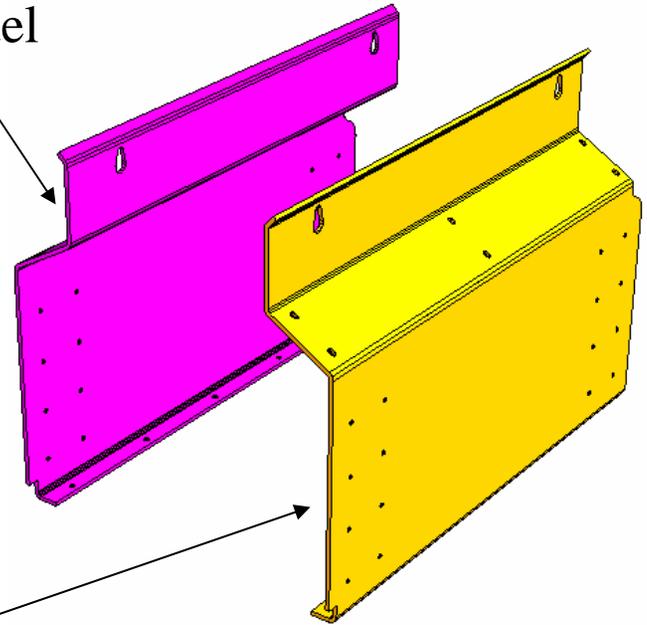
Modeling Symmetric Parts

Left & Right Hand Parts

LH Part is
Master Model



LH Part is
Master Model



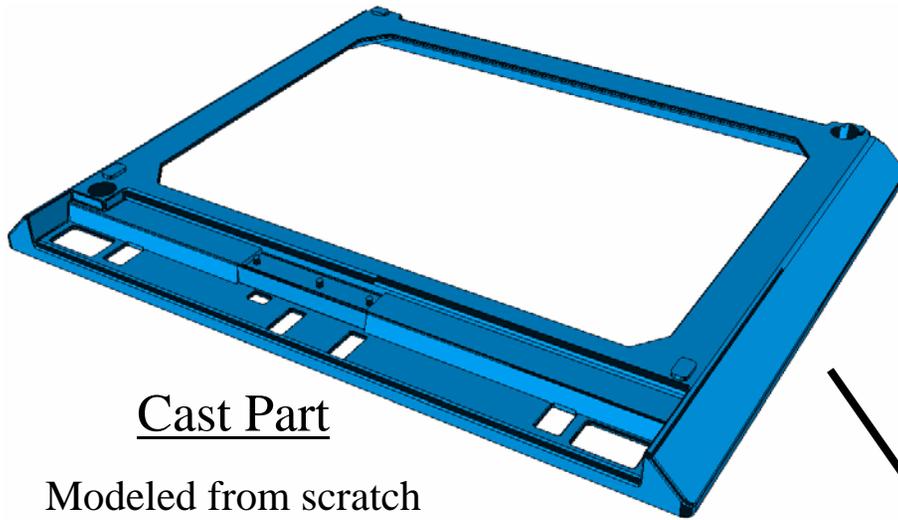
RH Part is a reflected
Associative Copy of LH
Part

Advantage:

Reduces overall modeling & modification effort and also eliminates modeling discrepancies between the two parts.

Creating Finished Parts from Castings

Flange Modeling

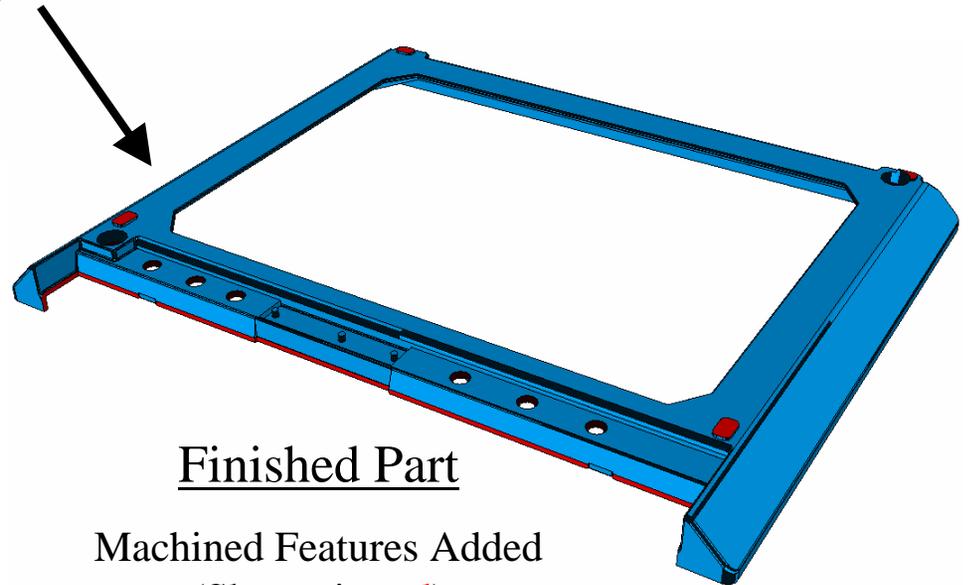


Cast Part

Modeled from scratch

Advantage:

Reduces overall modeling & modification effort and also eliminates modeling discrepancies between the two parts.



Finished Part

Machined Features Added
(Shown in red)

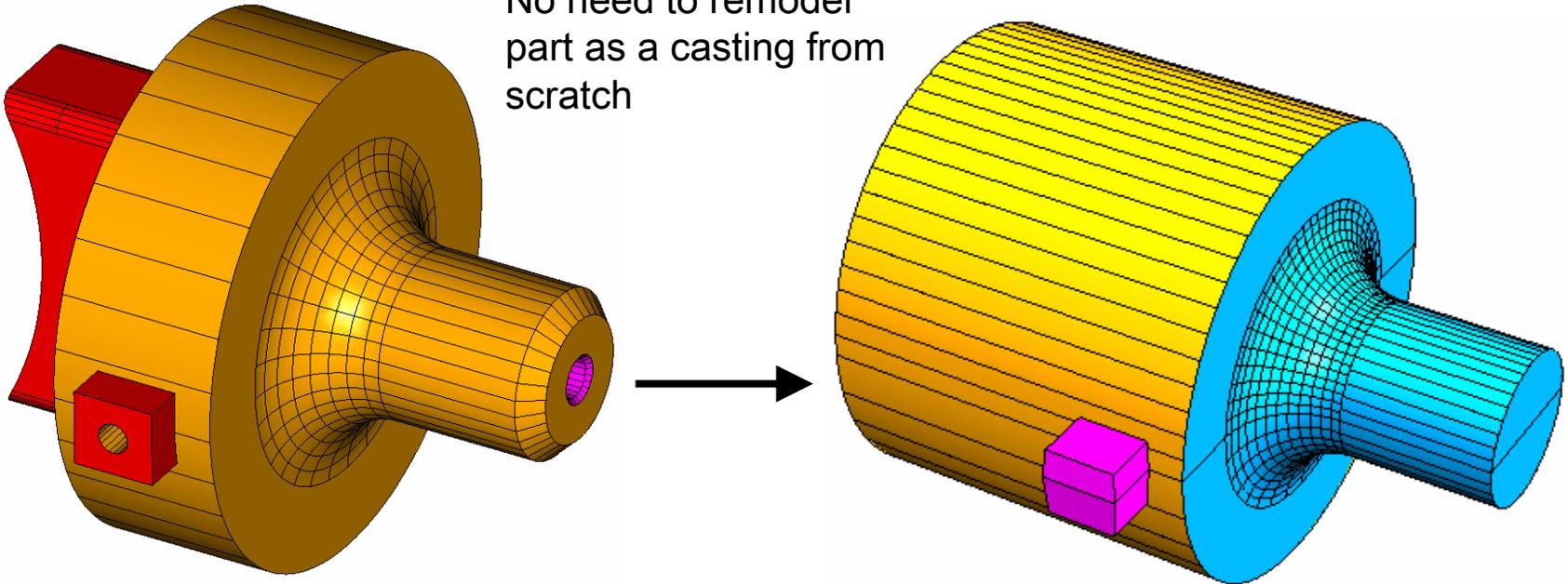
Extra Bonus: Part Families

You can create multiple finished parts based on the same casting. This avoids having to change several CAD models when there is a casting change. Only the casting model needs to be changed.

Creating Castings from Finished Parts

Advantage:

No need to remodel
part as a casting from
scratch



Finished Part

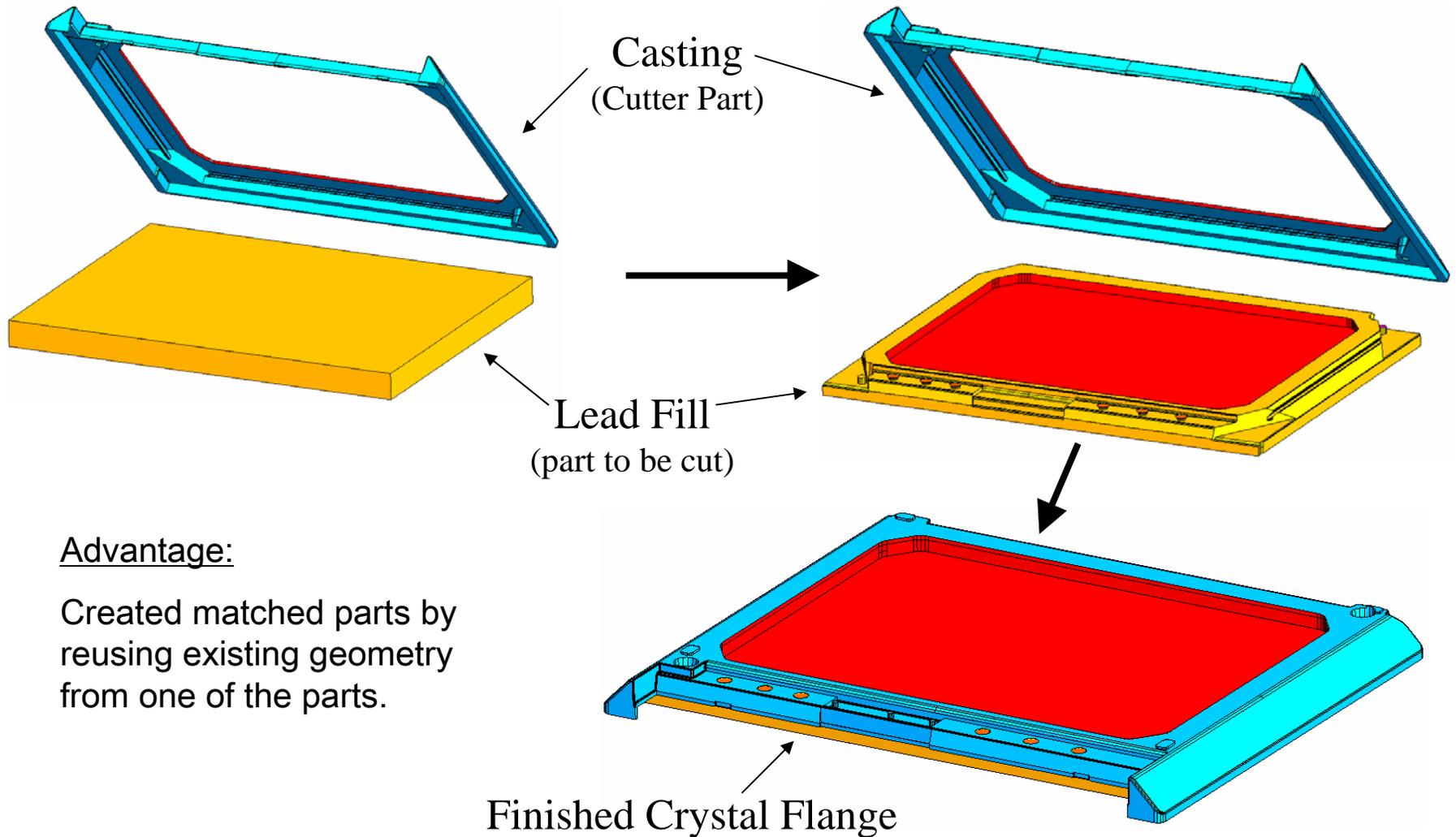
As Originally Modeled

Casting

Machined Features Removed;
Machining Stock Added; Parting
Line & Draft Added

Cutter Parts/Geometry

Creating a Lead Filled Crystal Flange

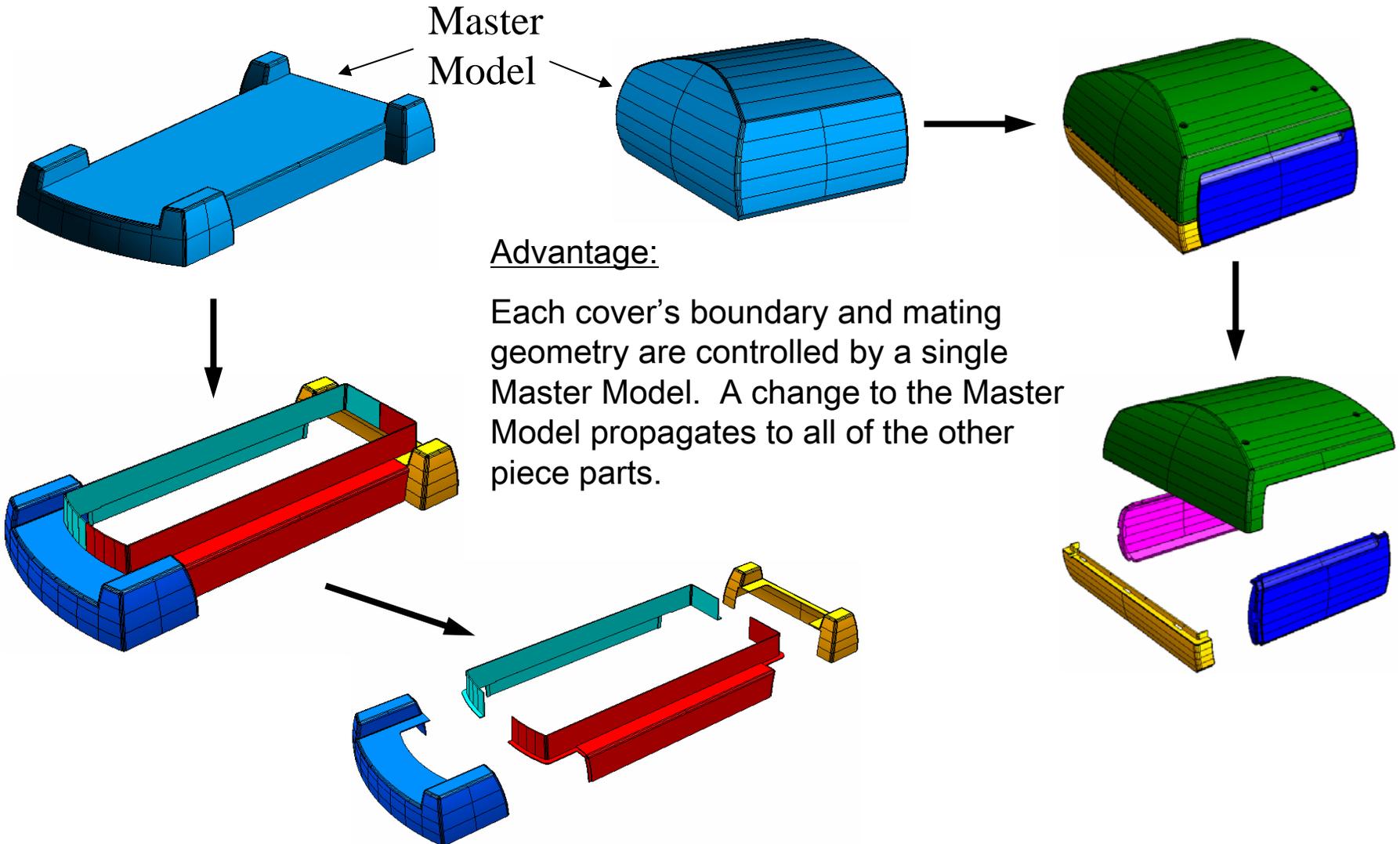


Advantage:

Created matched parts by reusing existing geometry from one of the parts.

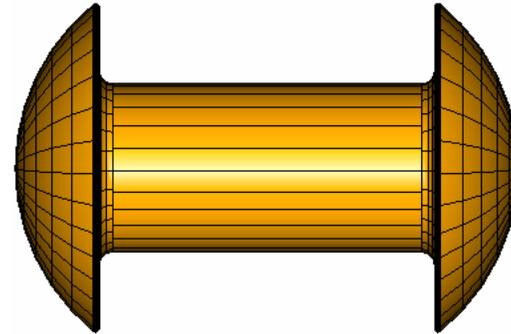
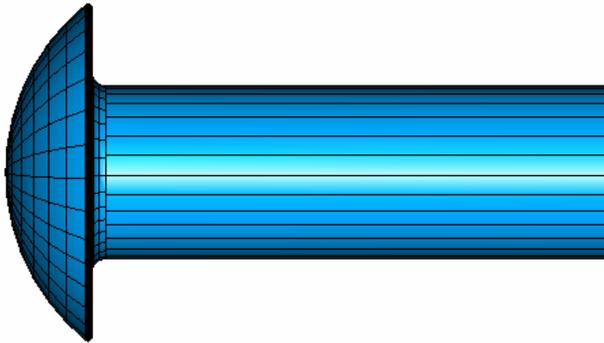
Controlling Design Intent for Multiple Parts

Cover Design



Different States of Same Part

Free vs. Assembled State



Free State

For creating drawing of
purchased part

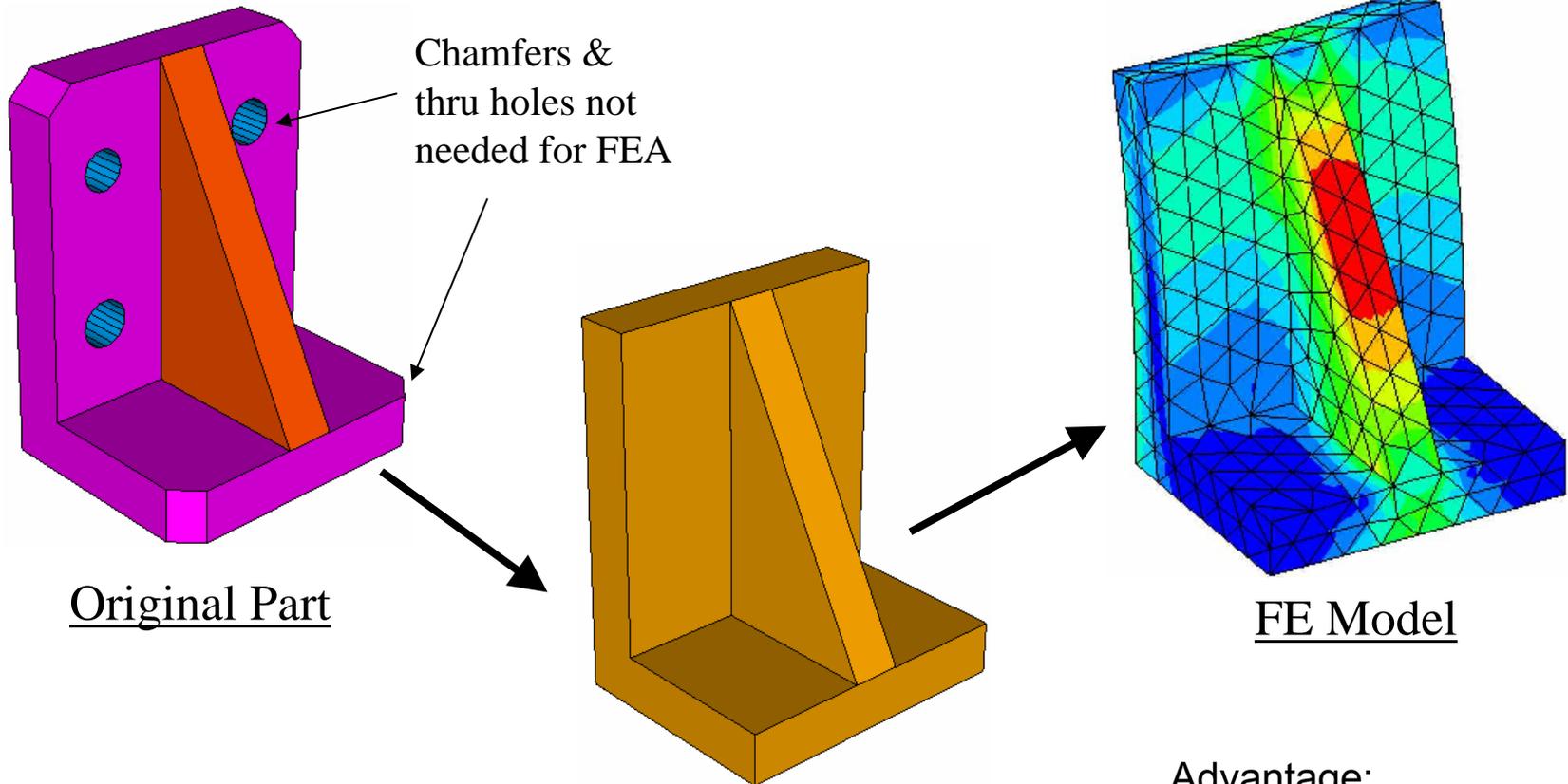
Installed State

For use in assembly

Manage Configurations			
Assembly	Uses	Configuration	Available configurations
RIVET:12345,	-->	INSTALLED-ACR	INSTALLED-ACR
			FREE STATE

Finite Element Analysis

Maintaining Associativity of FEM to Original Part



Prepared Part for FEA
Chamfers & Thru Holes Removed

Advantage:

FEM can now be updated whenever changes are made to the original part.



Getting Help



- Use the Help Library by selecting the Help pull down, choosing *On Context*, and picking the Associative Copy Button
- Use the Tutorials in the Help Library
- Check the EDS PLM Solutions GTAC website: <http://support.plms-eds.com>



Associative Copy Button

