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NX Knowledge Fusion Tips and Tricks

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Agenda

- KF dialog ui_comp classes
- Selection intent (ug_section and ug_collector)
- Journaling coverage for Knowledge Fusion
- New NX classes (human, sheet metal, motion, drafting)
- Debugging in Knowledge Fusion ICE

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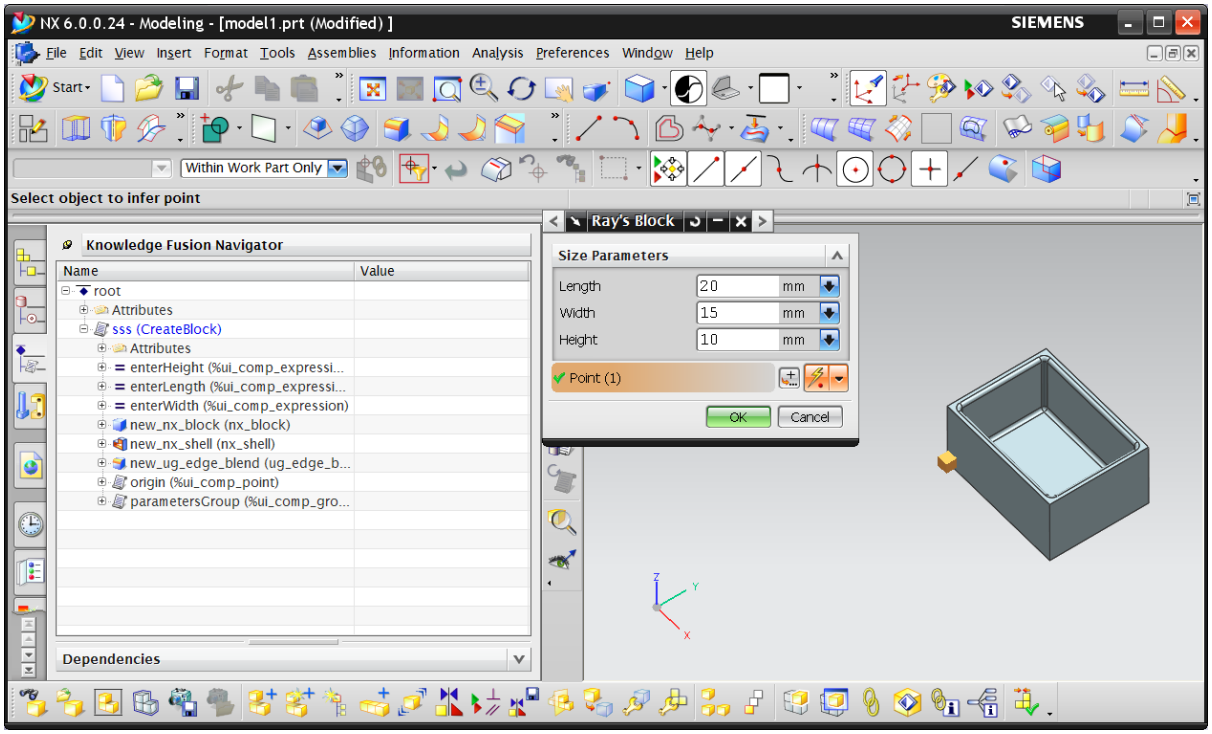
KF dialog ui_comp classes

- Provide KF coverage for new NX UI blocks for construction of application User Interface
- Allows for the construction of KF application UI which have the same look-and-feel as the NX 5 and NX 6 OOTB dialogs



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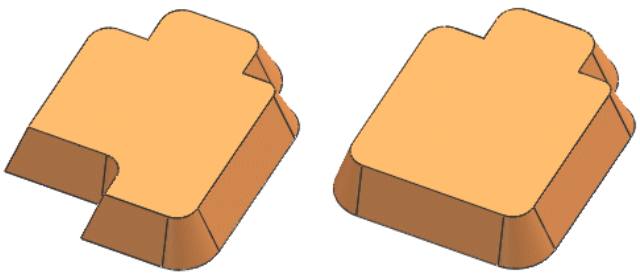
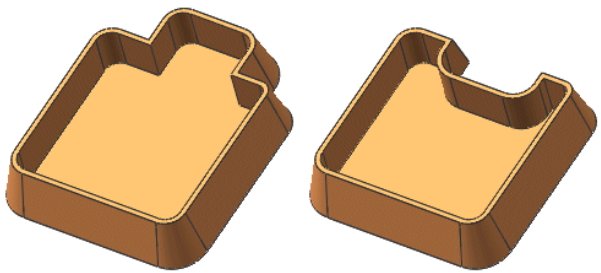
Selection intent (ug_section and ug_collector)

Use of ug_collector and ug_section to enable Selection Intent for Knowledge Fusion;



When Material is Added to the Model on the left, the Draft Still Updates Correctly (right)



Selection Intent Allows Successful Update After Changes to the Model (Before - Left, After - Right))

Selection Intent lets you select and group multiple curves, edges and faces into collections with rules that define how a feature can use them. You choose which rules to use based on what you intend the feature to do.

This also works in combination with UDFs – the use of selection intent will make the use of UDFs in your KF application quite different!

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Who calls who?

```
#include <uf.h>
#include <uf_kf.h>

DllExport extern void my_func (UF_KF_value_t *data,
                               int num,
                               UF_KF_value_t *rv)
```

NX/Open C
NX/Open C++

GRIP
TC ITK

```
Defun: Volume( Instance $instance;
               String ($lib; "my_library");
               String ($name; "ask_volume_of_feature_body")
             )
@{ CFunc("UF_KF_invoke_user_function"; "libufun"); } number;
```

Knowledge Fusion

```
nx_ja_session_execute(
      "MyDotNet.dll",
      "Class",
      "Method",
      {
          first(generator:selectedObject:),
          localX(direction:vector:),
          localY(direction:vector:),
          localZ(direction:vector:),
          d0:value:,
          d1:value:
      }
  );
```

```
Defun: ug_invokePDMServer()
```

```
RuleManager rm = workPart.ruleManager();
String rootName = "Root:";
String[] rules = rm.getDynamicRules( rootName );
```

TC ITK

NX/Open JAVA
NX/Open .NET

TC SOA
JAVA, C++, and .NET

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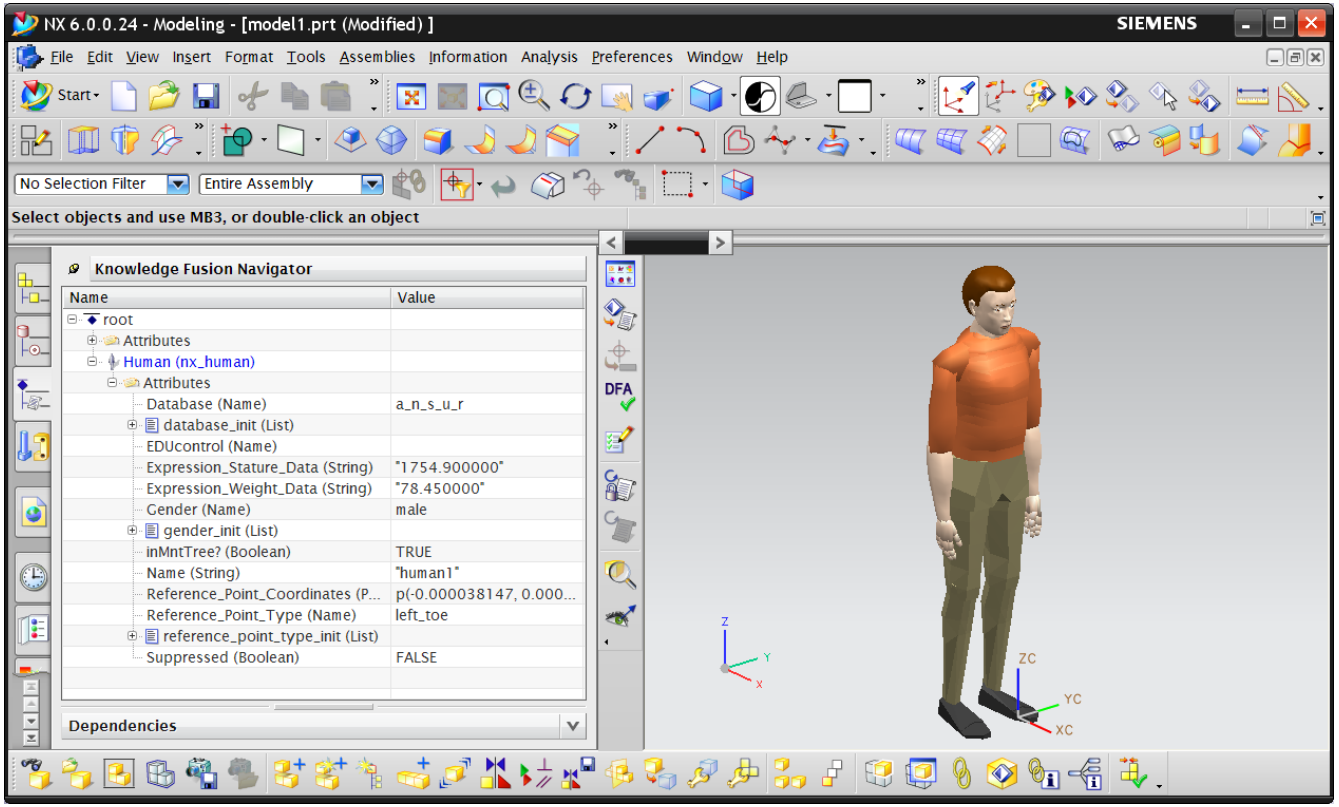
New NX classes (human, sheet metal, drafting)



- Knowledge Fusion classes automatically generated from NX Journamation
- Demonstration of several new classes including Knowledge Fusion coverage for Human Modeling, Sheet Metal and Drafting

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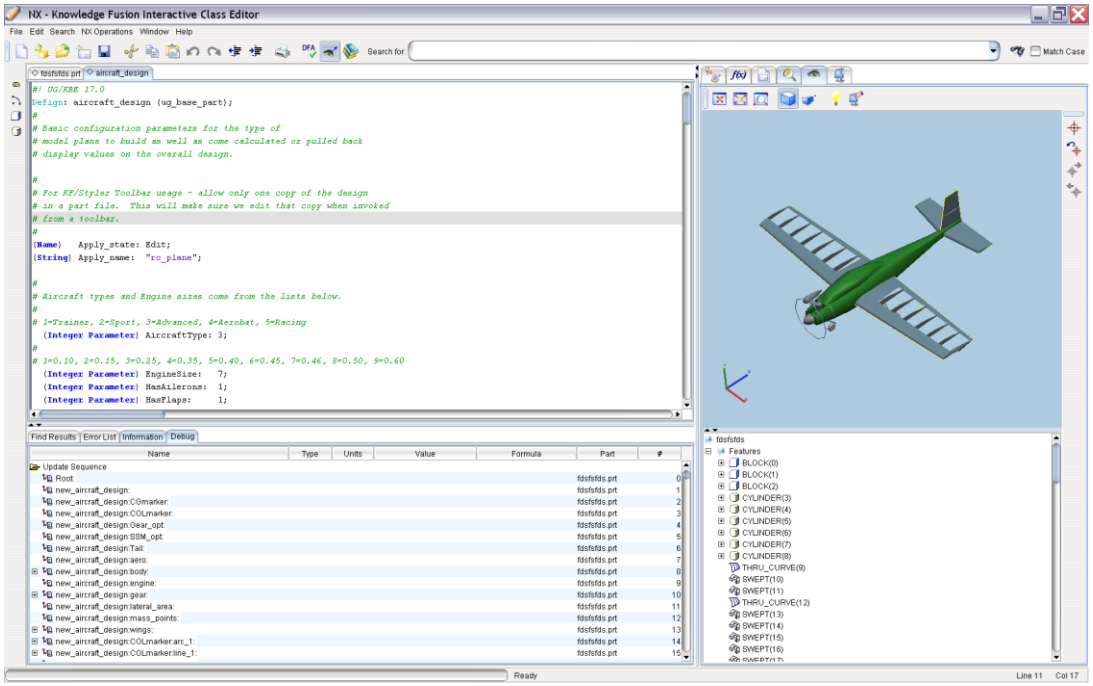
KF ICE Highlight – Integrated Debugger



- Due to the declarative nature of Knowledge Fusion programming language users typically have a need to know the <u>update order of Knowledge Fusion rules</u>.
- In Knowledge Fusion ICE one can find an <u>integrated debugger</u> which is focused on the execution order or of rules, the formula of the rule and its corresponding value.

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Thank you…

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