

INTEGRITY MODELER 8.5 WHAT'S NEW

January 2018



ptc

AGENDA

1. Unified Architecture Framework (UAF) Profile
2. Variability
3. OSLC Integrations
4. Usability

AGENDA

- 1. Unified Architecture Framework (UAF) Profile**
2. Variability
3. OSLC Integrations
4. Usability

UNIFIED ARCHITECTURE FRAMEWORK (UAF) PROFILE

- The UAF Profile delivered with Integrity Modeler 8.5 enables you to define standardized architecture models
- Applicable to any type of organization
- UAF is the next version of the OMG's UPDM



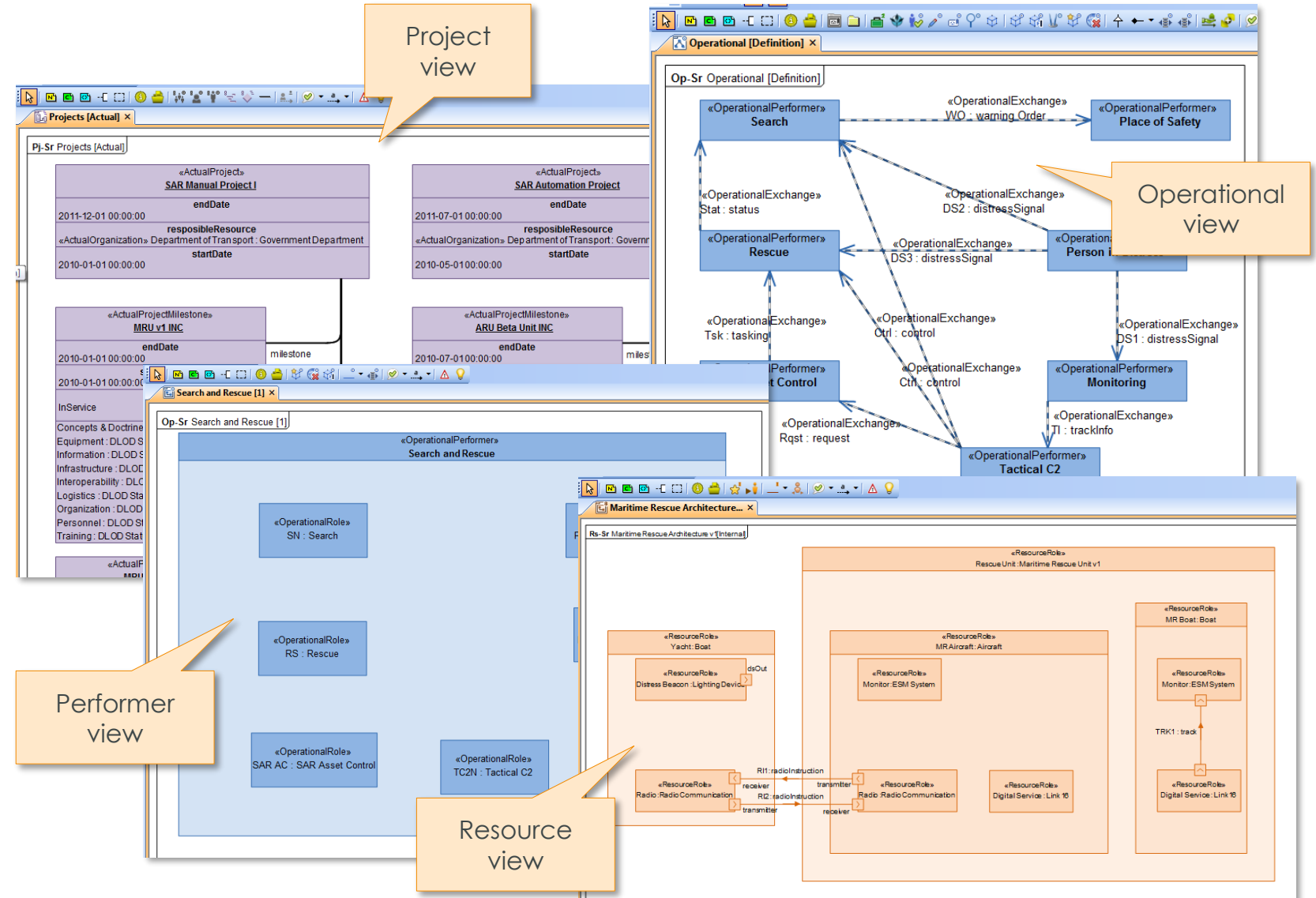
Architecture representations

	Taxonomy Tx	Structure Sr	Connectivity Cn	Processes Pr	States St	Interaction Scenarios Is	Information If	Parameters Pm	Constraints Ct	Roadmap Rm	Traceability Tr
Metadata Md	Metadata Taxonomy Md-Tx	Architecture Viewpoints ^a Md-Sr	Metadata Connectivity Md-Cn	Metadata Processes ^a Md-Pr	-	-	Conceptual Data Model,	Environment Pm-En	Metadata Constraints ^a Md-Ct	-	Metadata Traceability Md-Tr
Strategic St	Strategic Taxonomy St-Tx	Strategic Structure St-Sr	Strategic Connectivity St-Cn	-	Strategic States St-St	-			Strategic Constraints St-Ct	Strategic Deployment, St-Rm Strategic Phasing St-Rm	Strategic Traceability St-Tr
Operational Op	Operational Taxonomy Op-Tx	Operational Structure Op-Sr	Operational Connectivity Op-Cn	Operational Processes Op-Pr	Operational States Op-St	Operational Interaction Scenarios Op-Is			Operational Constraints Op-Ct	-	-
Services Sv	Service Taxonomy Sv-Tx	Service Structure Sv-Sr	Service Connectivity Sv-Cn	Service Processes Sv-Pr	Service States Sv-St	Service Interaction Scenarios Sv-Is			Service Constraints Sv-Ct	Service Roadmap Sv-Rm	Service Traceability Sv-Tr
Personnel Pr	Personnel Taxonomy Pr-Tx	Personnel Structure Pr-Sr	Personnel Connectivity Pr-Cn	Personnel Processes Pr-Pr	Personnel States Pr-St	Personnel Interaction Scenarios Pr-Is	Logical Data Model,	Measurements Pm-Me	Competence, Drivers, Performance Pr-Ct	Personnel Availability, Personnel Evolution, Personnel Forecast Pr-Rm	Personnel Traceability Pr-Tr
Resources Rs	Resource Taxonomy Rs-Tx	Resource Structure Rs-Sr	Resource Connectivity Rs-Cn	Resource Processes Rs-Pr	Resource States Rs-St	Resource Interaction Scenarios Rs-Is			Resource Constraints Rs-Ct	Resource evolution, Resource forecast Rs-Rm	Resource Traceability Rs-Tr
Security Sc	Security Taxonomy Sc-Tx	Security Structure Sc-Sr	Security Connectivity Sc-Cn	Security Processes Sc-Pr	-	-	Physical schema, real world results		Security Constraints Sc-Ct	-	-
Projects Pj	Project Taxonomy Pj-Tx	Project Structure Pj-Sr	Project Connectivity Pj-Cn	Project Activity Pj-Pr	-	-			-	Project Roadmap Pj-Rm	Project Traceability Pj-Tr
Standards Sd	Standard Taxonomy Sd-Tx	Standards Structure Sd-Sr	-	-	-	-			-	Standards Roadmap Sr-Rm	Standards Traceability Sr-Tr
Actuals Resources Ar	-	Actual Resources Structure, Ar-Sr	Actual Resources Connectivity, Ar-Cn	Simulation ^b			-	Parametric Execution/Evaluation ^b	-	-	
Dictionary * Dc											
Summary & Overview SmOv											
Requirements Rq											

Views

UNIFIED ARCHITECTURE FRAMEWORK (UAF) PROFILE

- Using UAF you can specify, analyze and verify architecture models
- UAF encompasses hardware, software, data, personnel and facilities elements
- Enables design of complex systems and systems-of-systems (SoS)

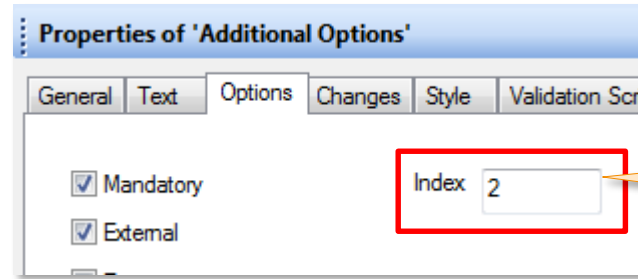


AGENDA

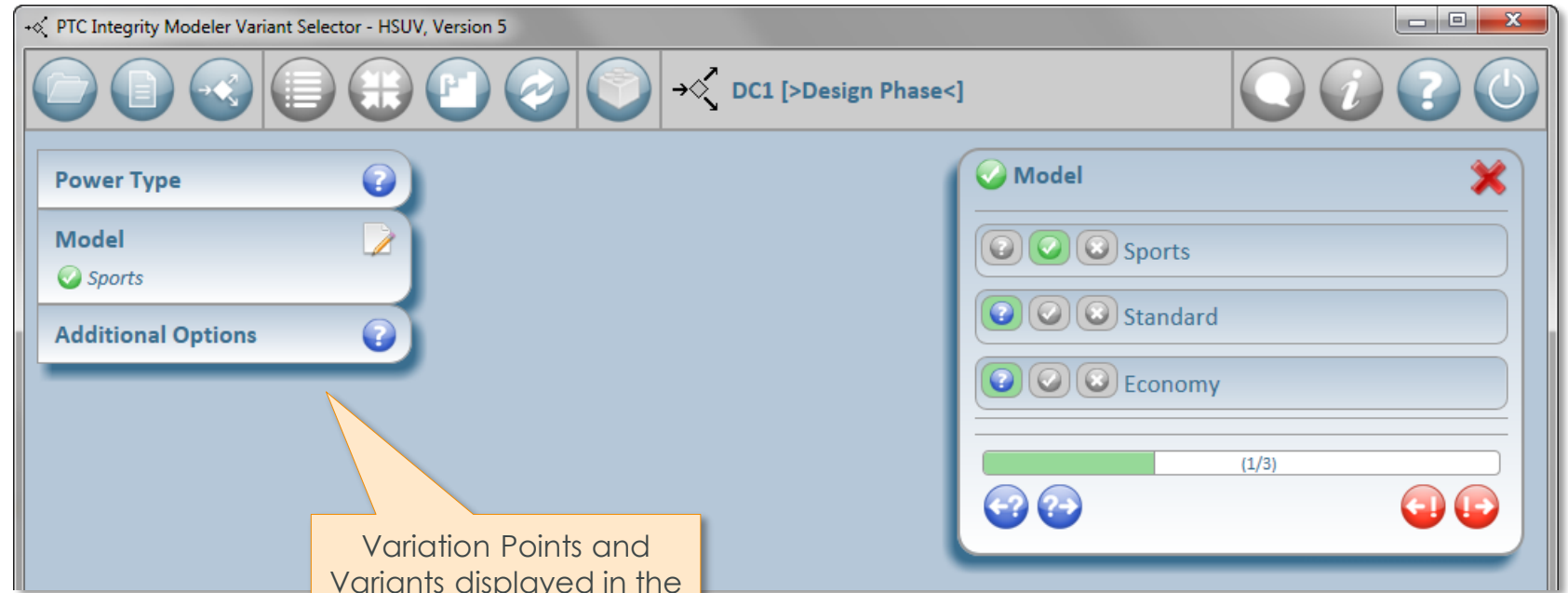
1. Unified Architecture Framework (UAF) Profile
- 2. Variability**
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VARIABILITY

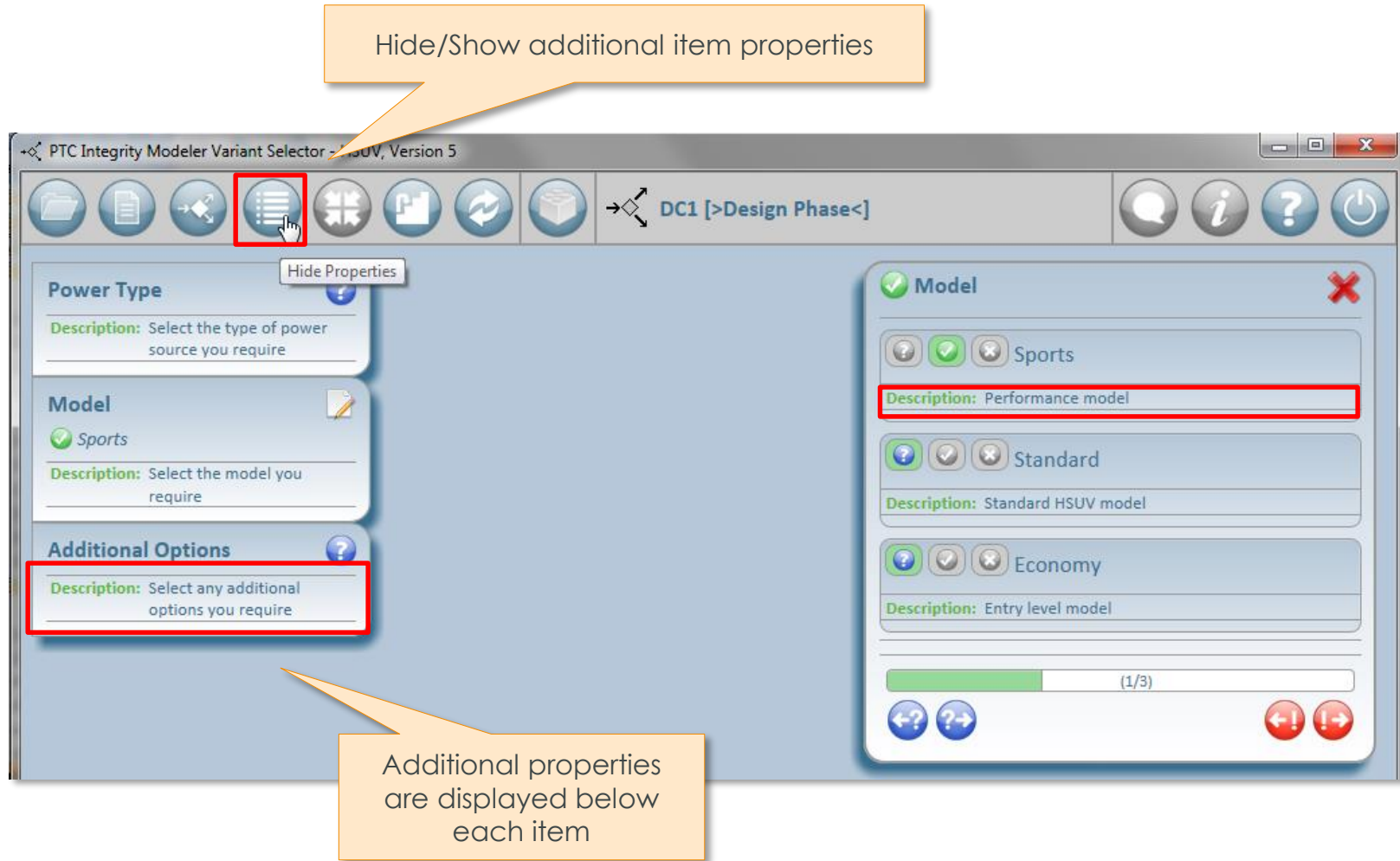
- Integrity Modeler 8.5 allows you to specify the order in which Variation Points and Variants are displayed in the Variant Selector
- Viewing, selecting and managing variability items is now more flexible and efficient



Use the Index property to specify the display order of Variation Points and Variants



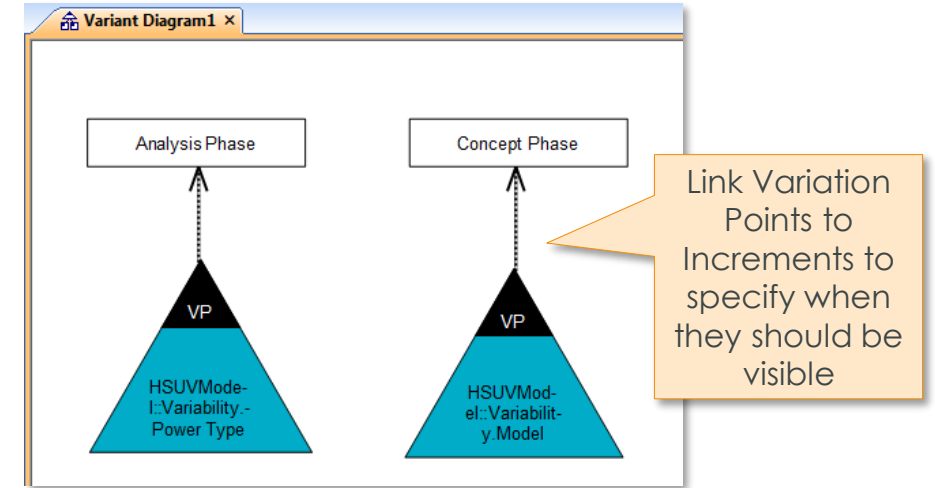
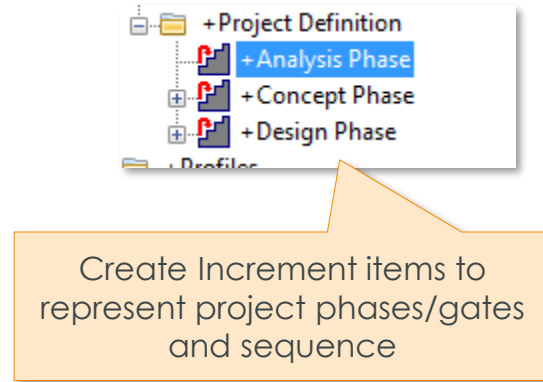
Variation Points and Variants displayed in the desired order



- Additional properties for Variation Points and Variants are now visible in the Variant Selector
- This ensures you can see all relevant design information
 - Easily show/hide additional attributes
 - The properties that are displayed can be easily modified by editing a configuration file

VARIABILITY

- You can now filter Variation Points in the Variant Selector based on their development maturity
- This ensures that the appropriate Variation Points are visible at each phase of development
- Variation Point maturity is determined by associations with Increment items



PTC Integrity Modeler Variant Selector - HSUV, Version 5

DC1 [>Concept Phase<]

Show available Increments

Select the Increment by which you wish to filter the Variation Points within this Decision Set:

- HSUVModel::Project Definition.Analysis Phase
- HSUVModel::Project Definition.Concept Phase
- HSUVModel::Project Definition.Design Phase

Current associated Increment:
HSUVModel::Project Definition.Concept Phase

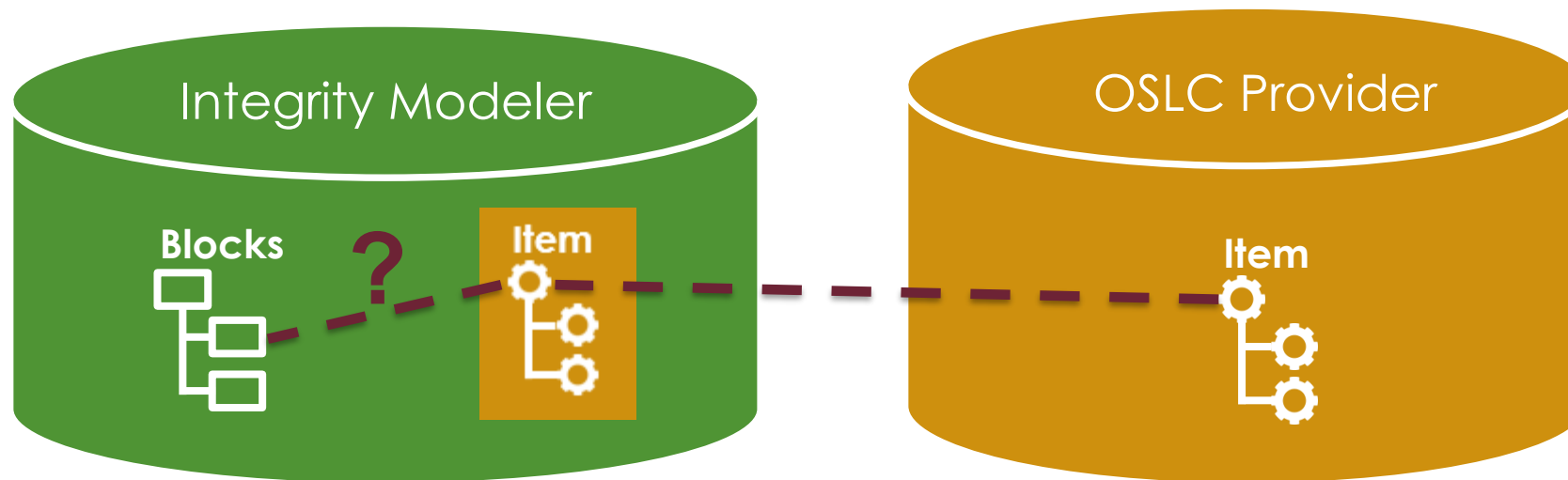
OK Remove Cancel

Select Increment to filter Variation Points (e.g. only show VPs at a specific project gate)

AGENDA

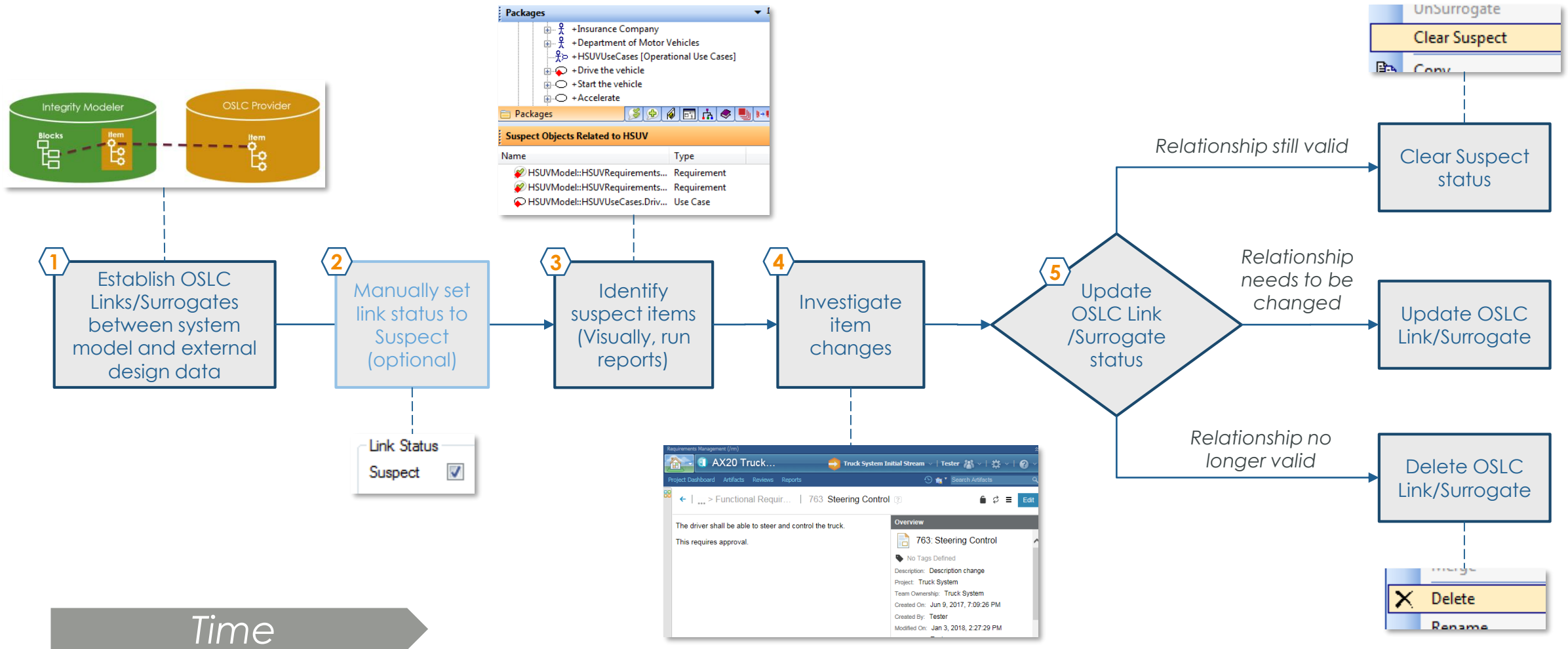
1. Unified Architecture Framework (UAF) Profile
2. Variability
3. **OSLC Integrations**
4. Usability

- OSLC Consumer - Suspecting
 - Integrity Modeler 8.5 provides suspecting of OSLC Links and Surrogates, which ensures that you are aware when remote data is modified
 - Manual and automatic time-based suspecting are available, providing flexibility for a wide range of development processes
 - Suspecting in Integrity Modeler is consistent with the suspecting features in ThingWorx Trace Management (SE-PE)



OSLC INTEGRATIONS

Using suspecting to maintain traceability relationships



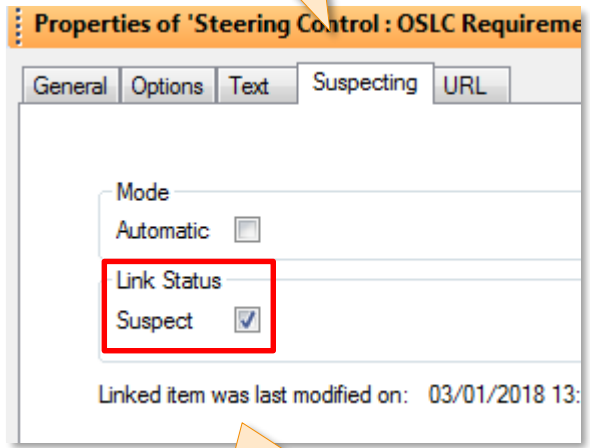
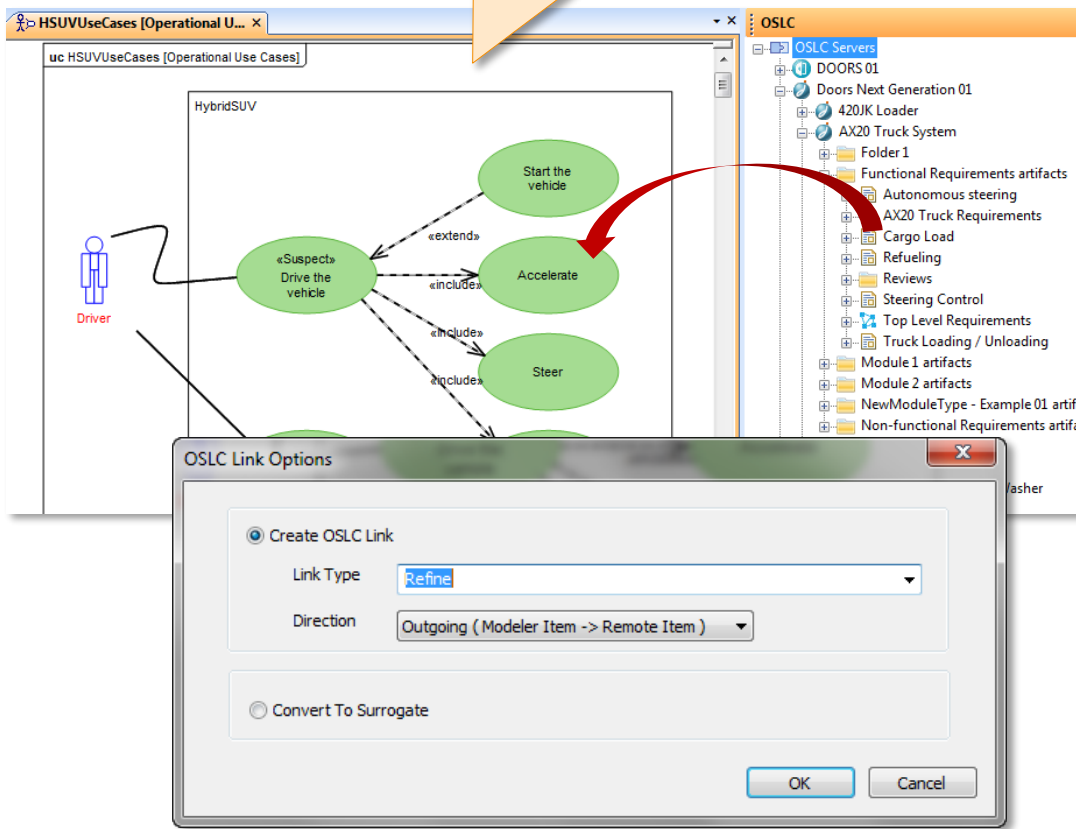
OSLC INTEGRATIONS

1 Establish OSLC Links/Surrogates between system model and external design data

Create OSLC Links and Surrogates
Automatic and manual suspecting is enabled by default

2 Manually set link status to Suspect (optional)

If you know linked data has been modified, OSLC Links/Surrogates can be manually set to Suspect



Access the Suspecting tab for the OSLC Link/Surrogate and select the Suspect checkbox

OSLC INTEGRATIONS

3

Identify suspect items (Visually, run reports)

OSLC Link/Surrogates and linked model items are automatically set to suspect when remote items are modified

Suspect status of linked model items displayed in browsers

The screenshot shows the PTC Integrity Modeler interface. The main diagram area displays a use case diagram for 'HybridSUV'. A central use case '«Suspect» Drive the vehicle' is highlighted with a red box. It is linked to several other use cases: 'Start the vehicle' (via «extend»), 'Accelerate' (via «include»), 'Steer' (via «include»), and 'Brake' (via «include»). A 'Driver' actor is also linked to 'Drive the vehicle'. Below the diagram, the 'Results' pane shows a table with columns 'Name' and 'Type'. The 'Properties of 'Steering Control : OSLC Requirement Resource (Refine)' pane is open, showing the 'Suspecting' tab selected and a red diamond icon in the 'Suspecting' field.

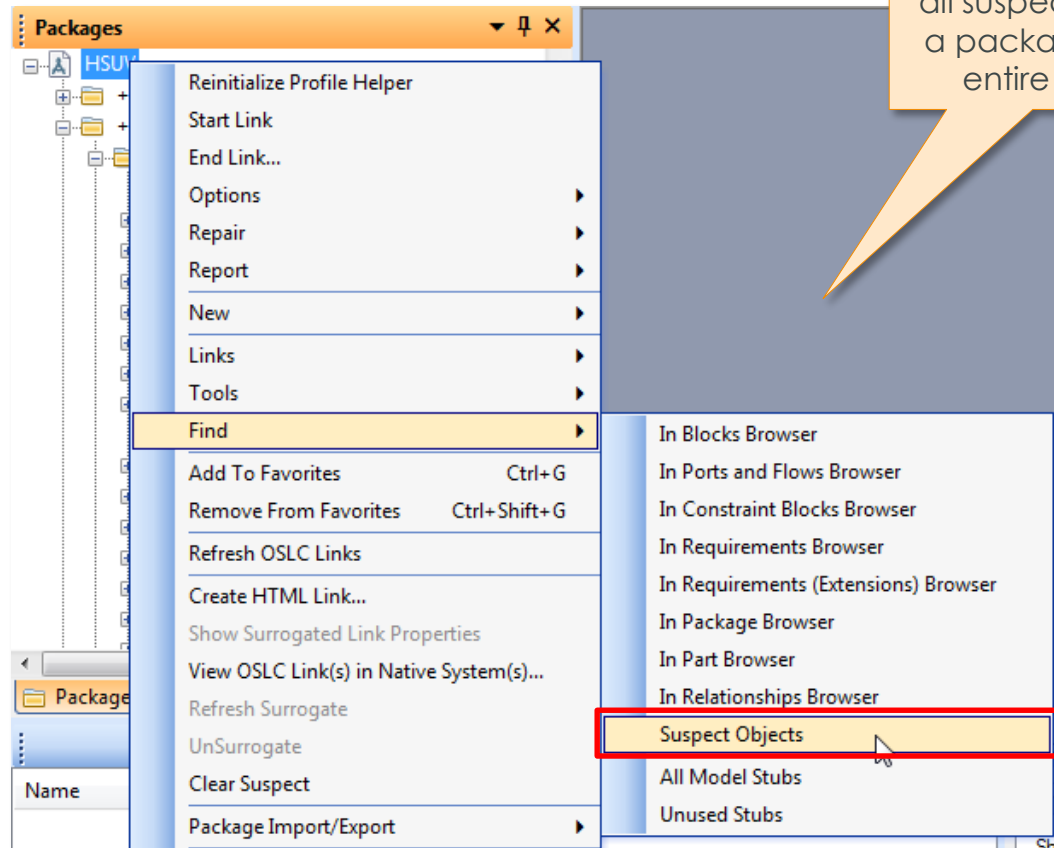
Name	Type
Steering Control	OSLC Link

Suspect status of linked model items displayed on diagrams

Suspect status displayed on OSLC Link property pane and Suspecting tab

OSLC INTEGRATIONS

3 Identify suspect items (Visually, run reports)



Run a report to list all suspect items in a package or the entire model

Suspect items listed in Results pane

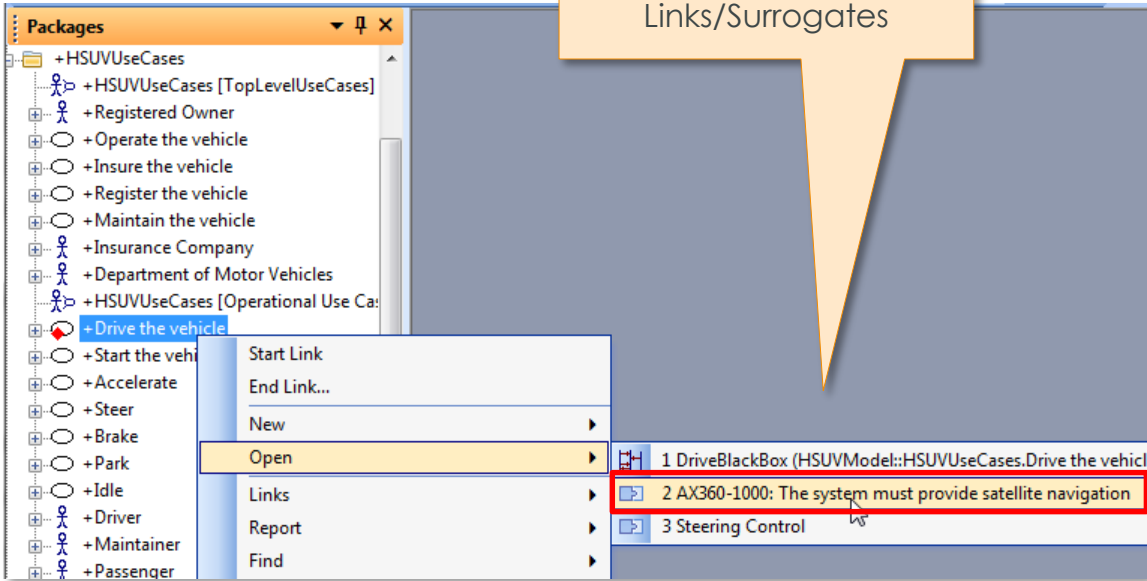
The screenshot shows a results pane titled 'Suspect Objects Related to HSUV'. It contains a table with two columns: 'Name' and 'Type'. The table lists three items, each with a red heart icon in the 'Name' column.

Name	Type
HSUVModel::HSUVRequirements::Re...	Requirement
HSUVModel::HSUVRequirements::Po...	Requirement
HSUVModel::HSUVUseCases.Drive th...	Use Case

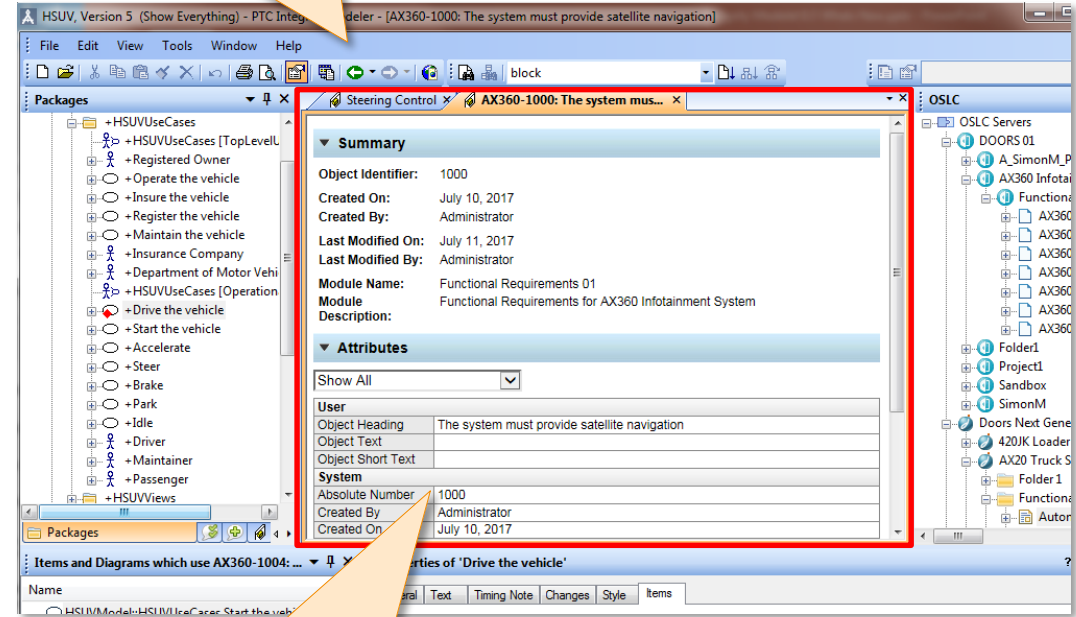
OSLC INTEGRATIONS

4 Investigate item changes

Open OSLC Links/Surrogates



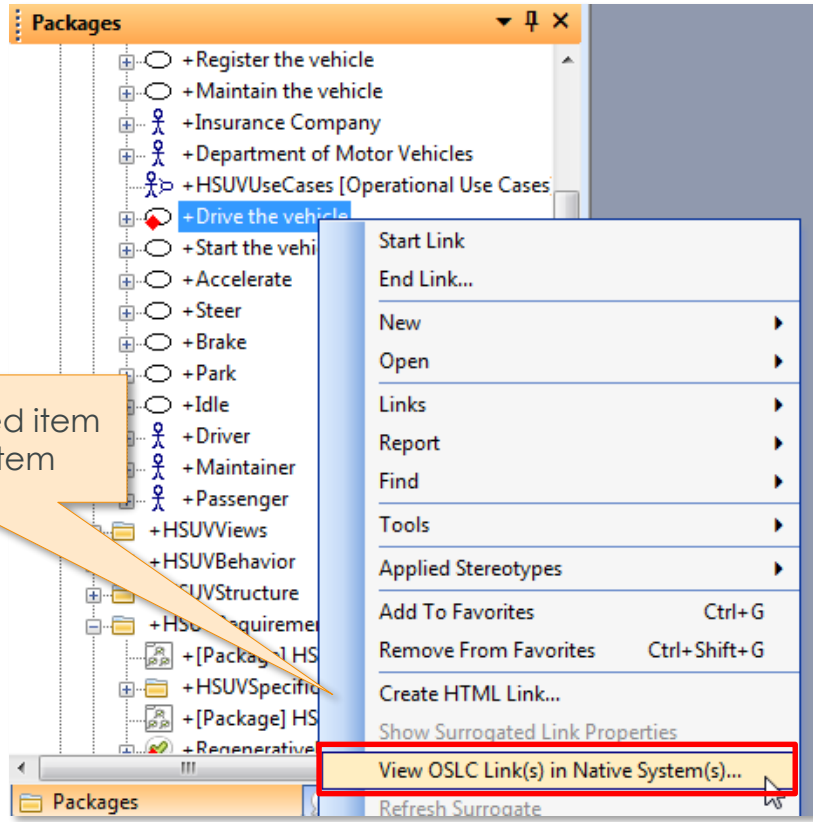
Linked item is displayed within Integrity Modeler



Review recent changes and determine if this item should continue to be linked to the system model item

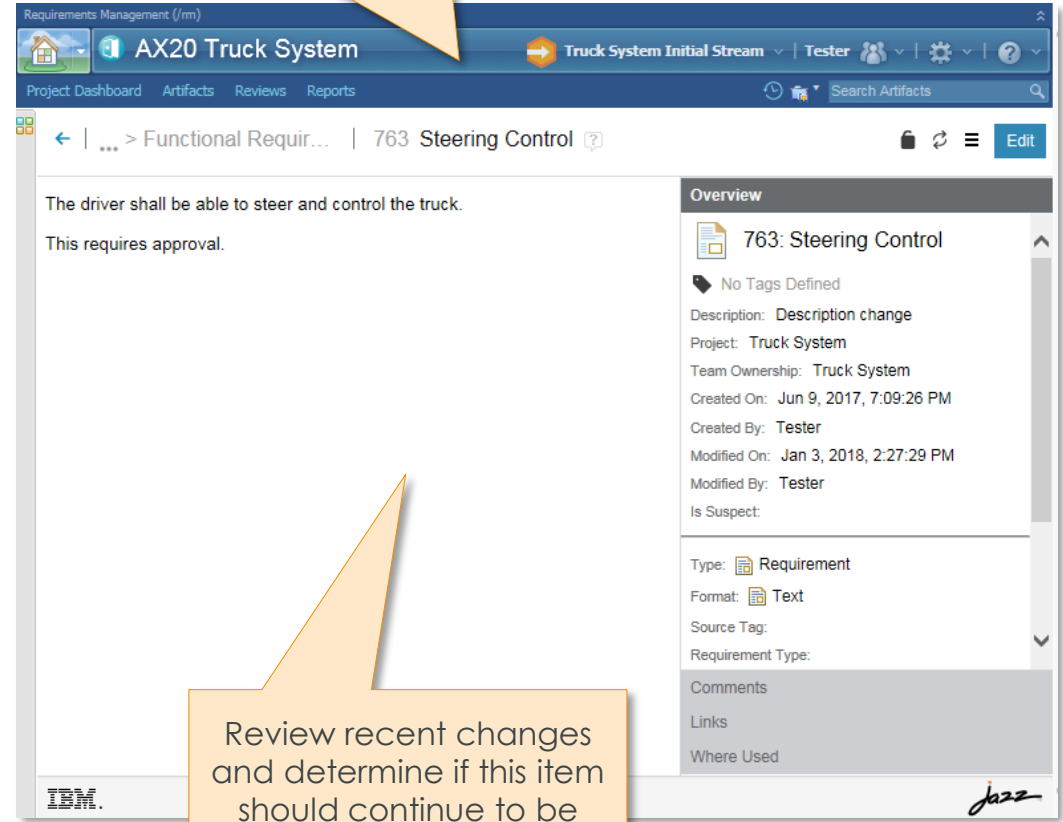
OSLC INTEGRATIONS

4 Investigate item changes

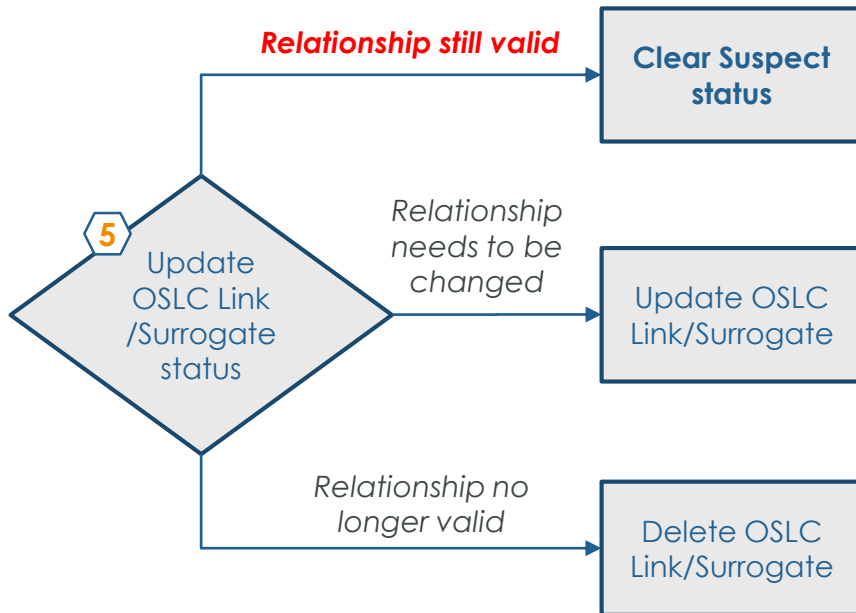


Navigate to linked item in external system

Linked item is opened in DOORS Next Generation or Integrity Modeler Web Interface



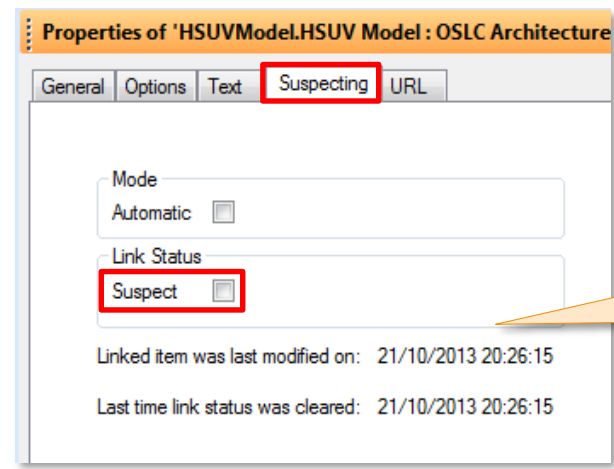
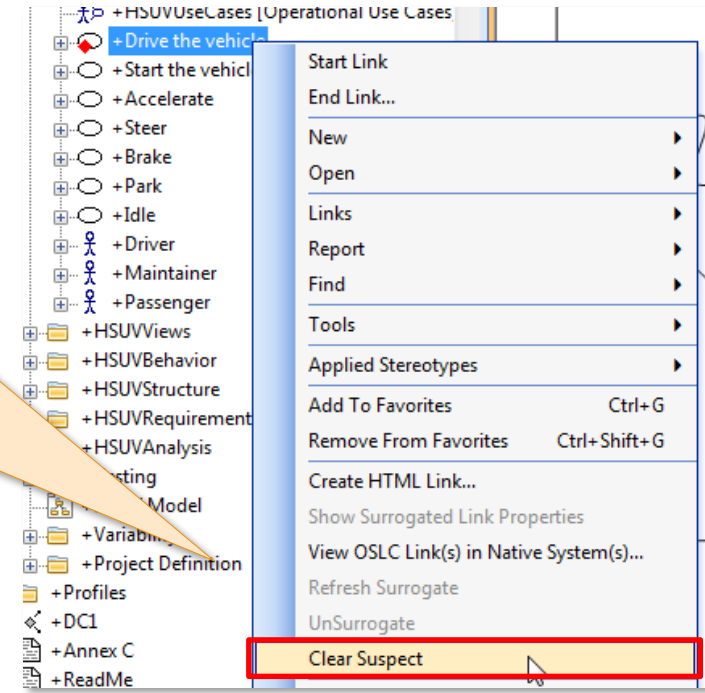
Review recent changes and determine if this item should continue to be linked to the system model item



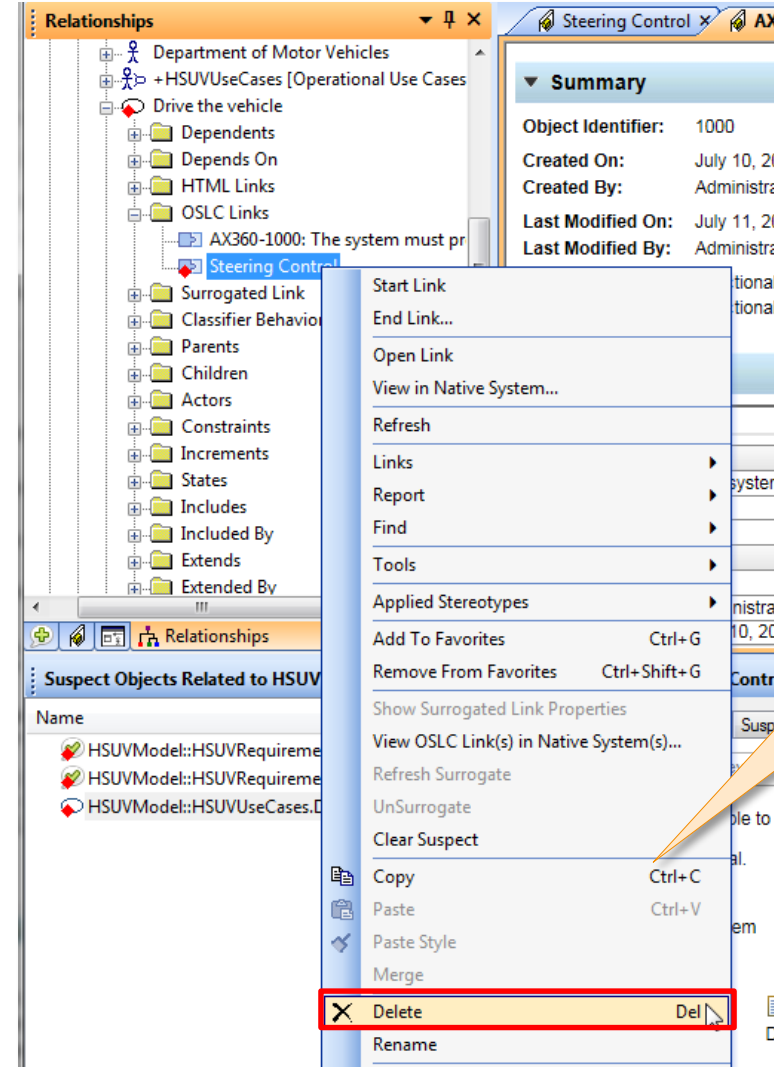
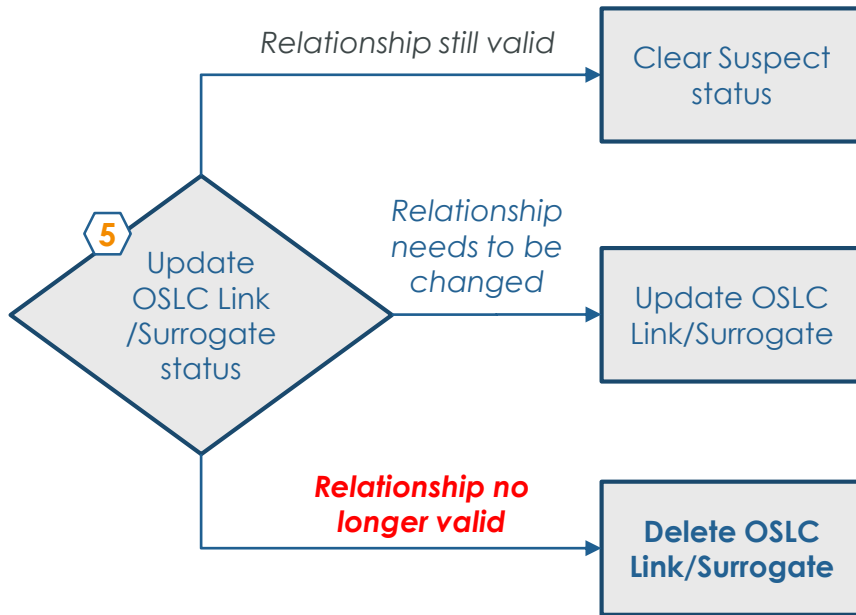
Right click the OSLC Link/Surrogate or the linked item and select Clear Suspect

Can be performed at item, package and model level

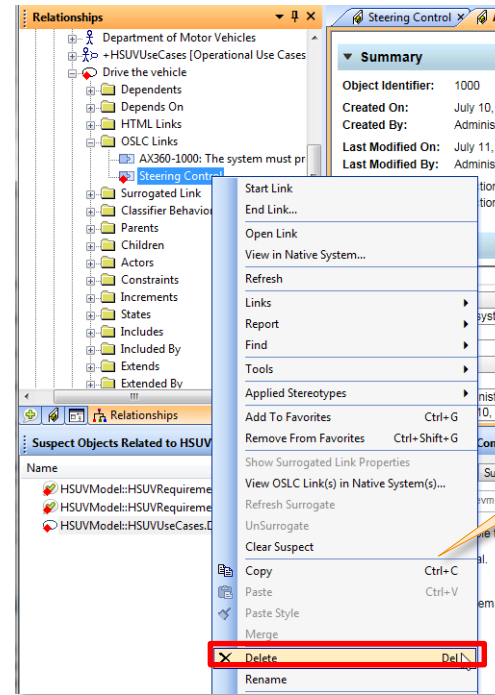
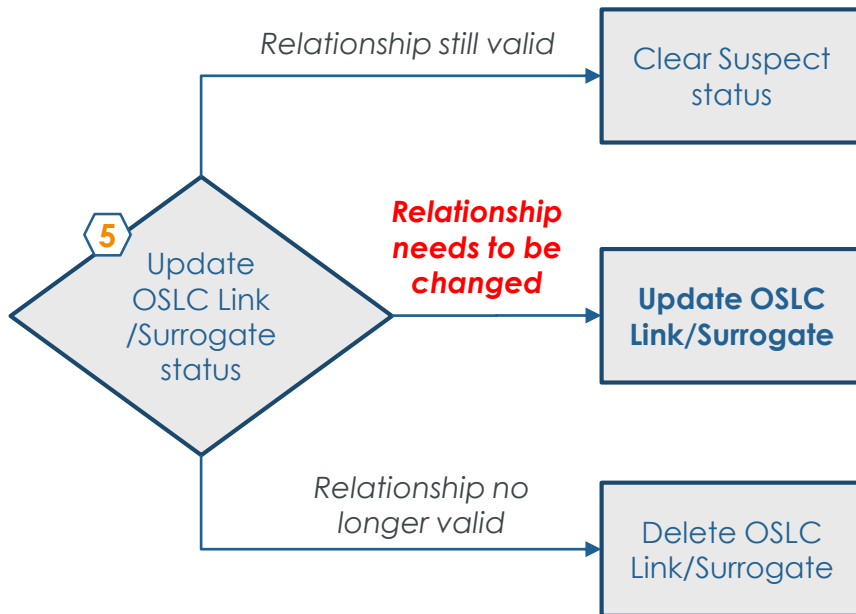
Automatic suspecting is re-enabled



Or access the OSLC Link/Surrogate and de-select the Suspect checkbox

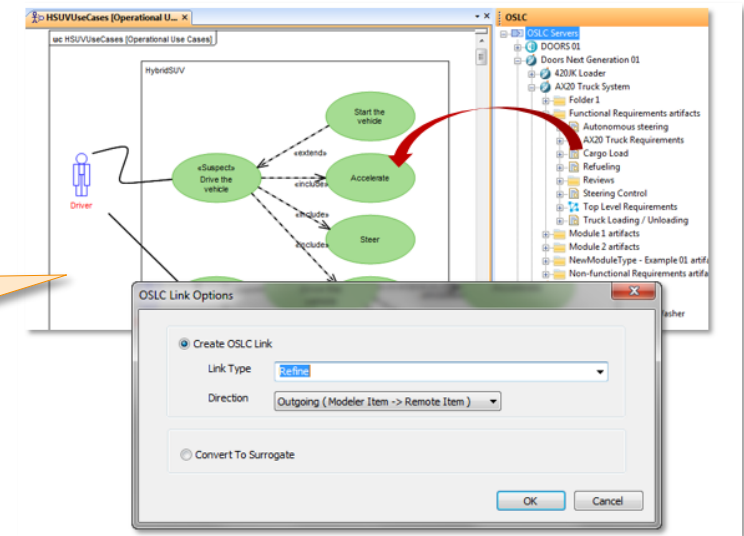


OSLC INTEGRATIONS

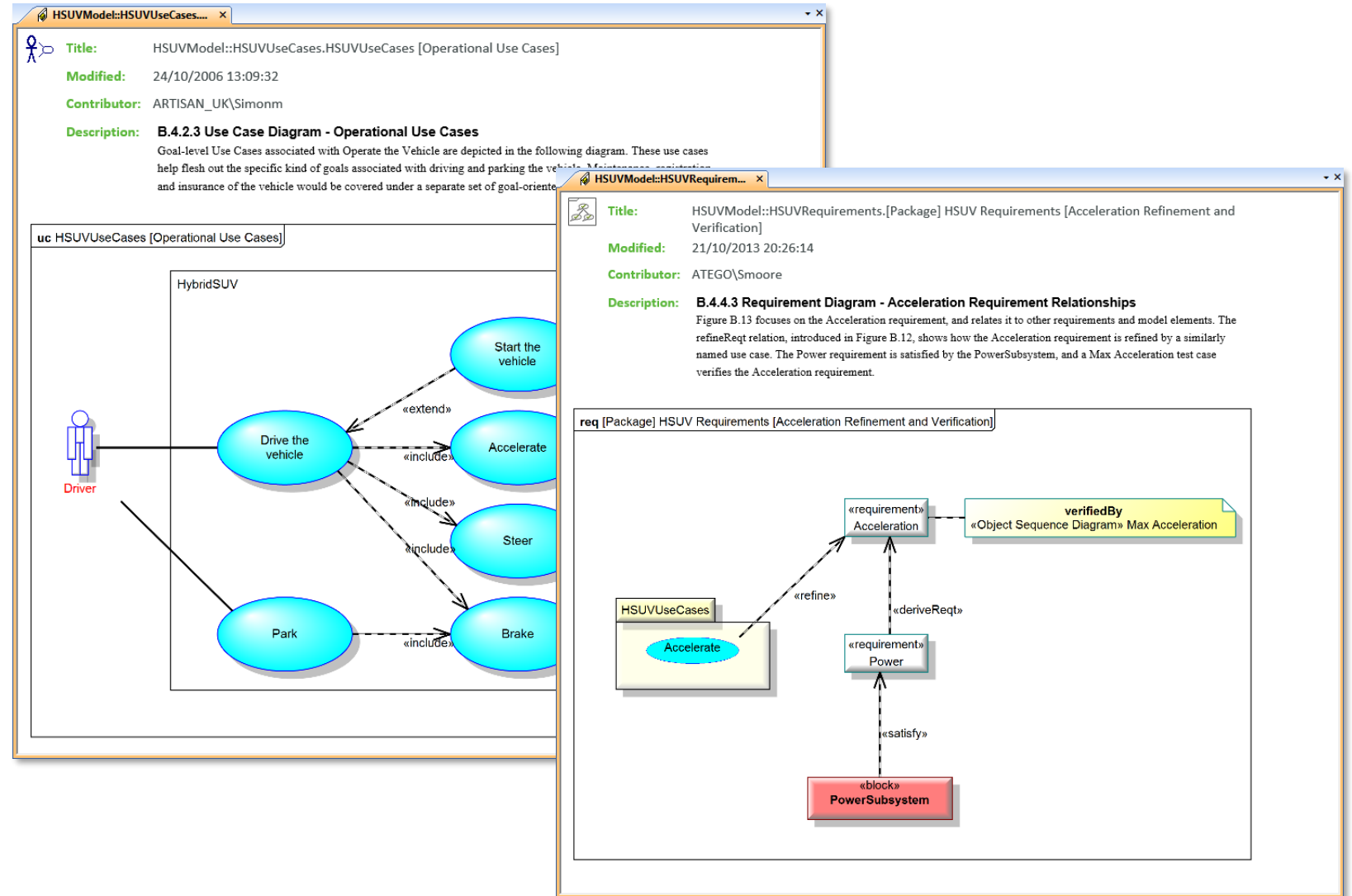


Delete OSLC Link/Surrogate

Create new OSLC Link/Surrogate to correct item



- OSLC Provider
 - Integrity Modeler diagram images are now displayed in delegated user interfaces

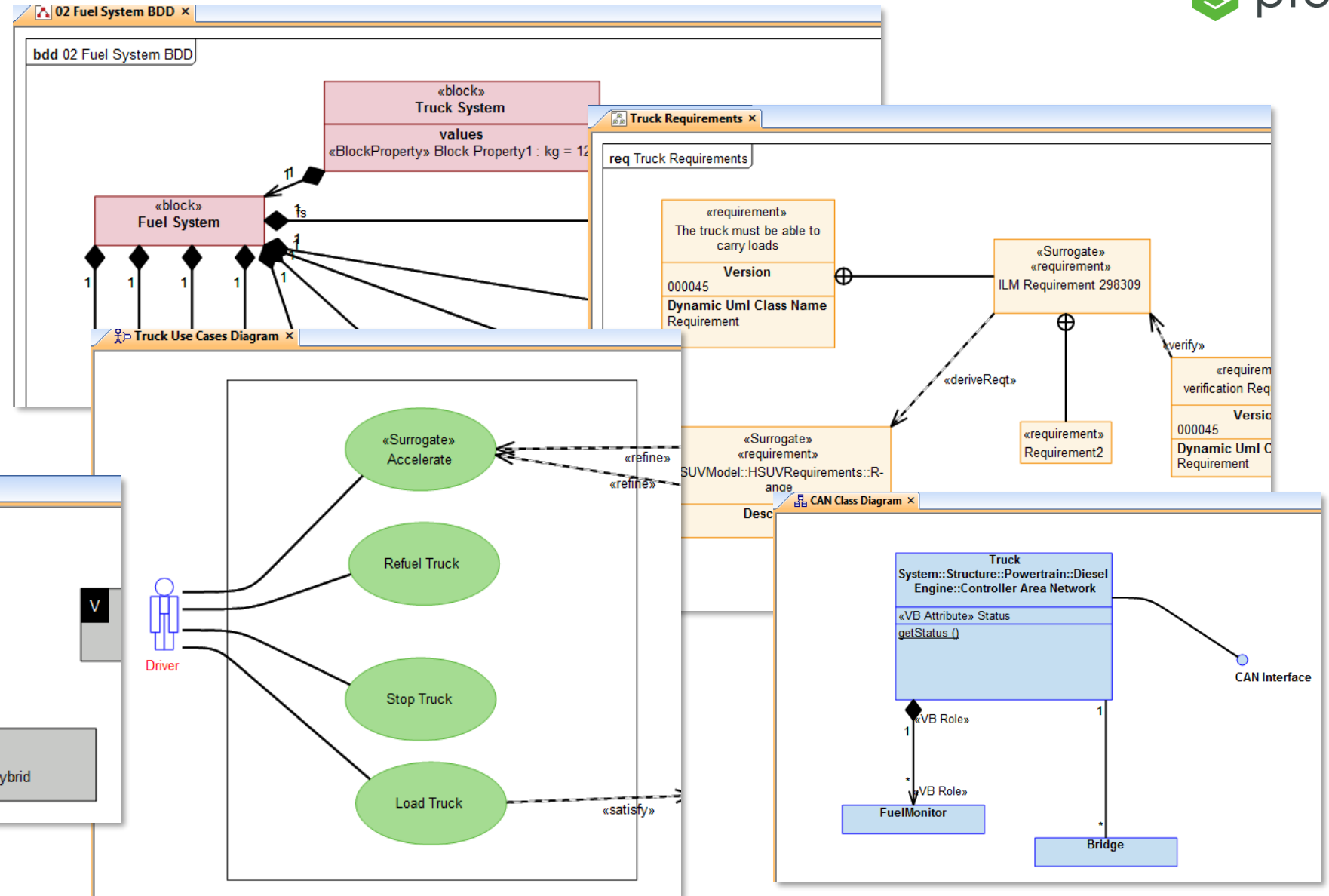


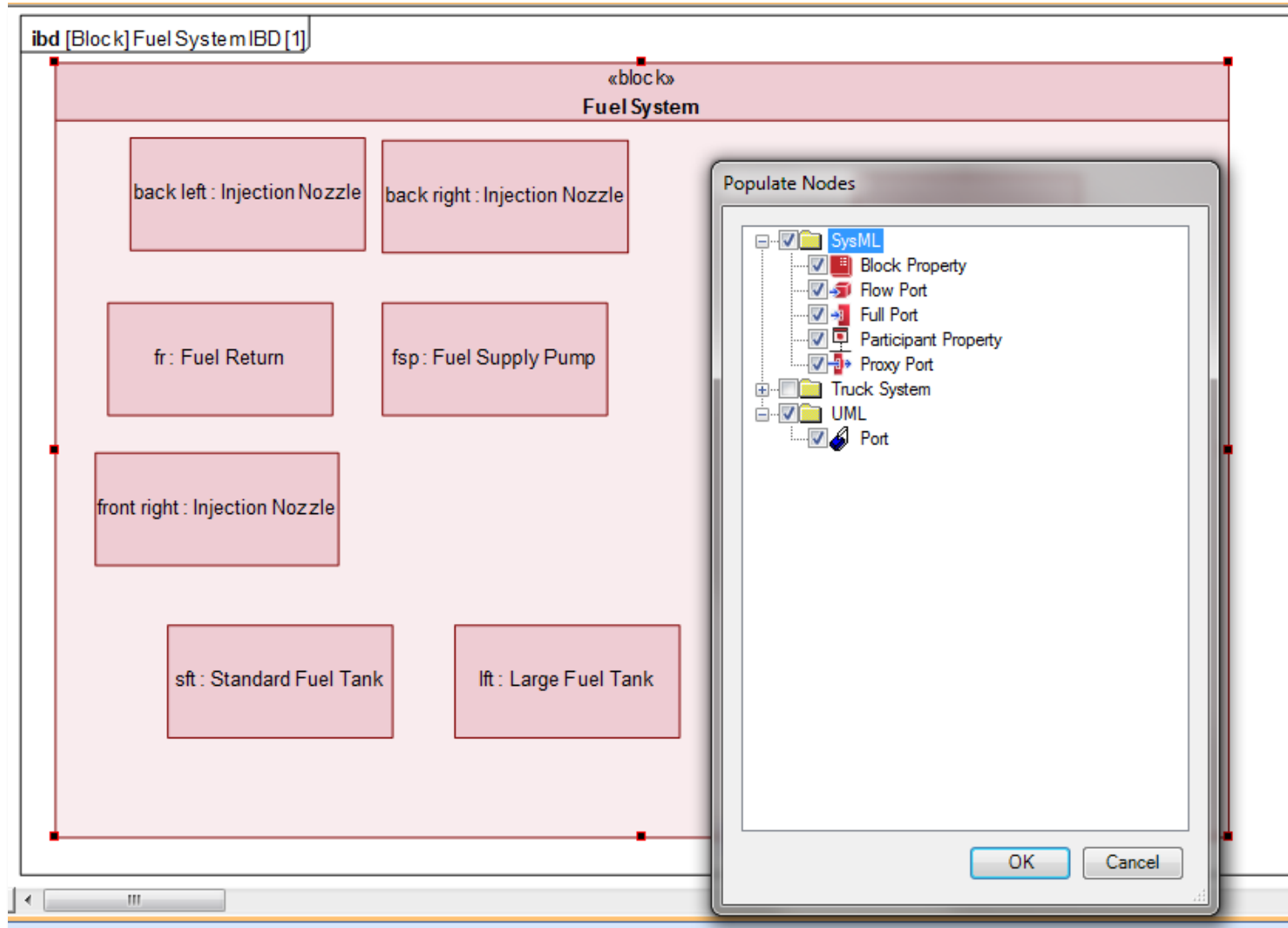
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USABILITY

- New clean and contemporary diagram style defaults

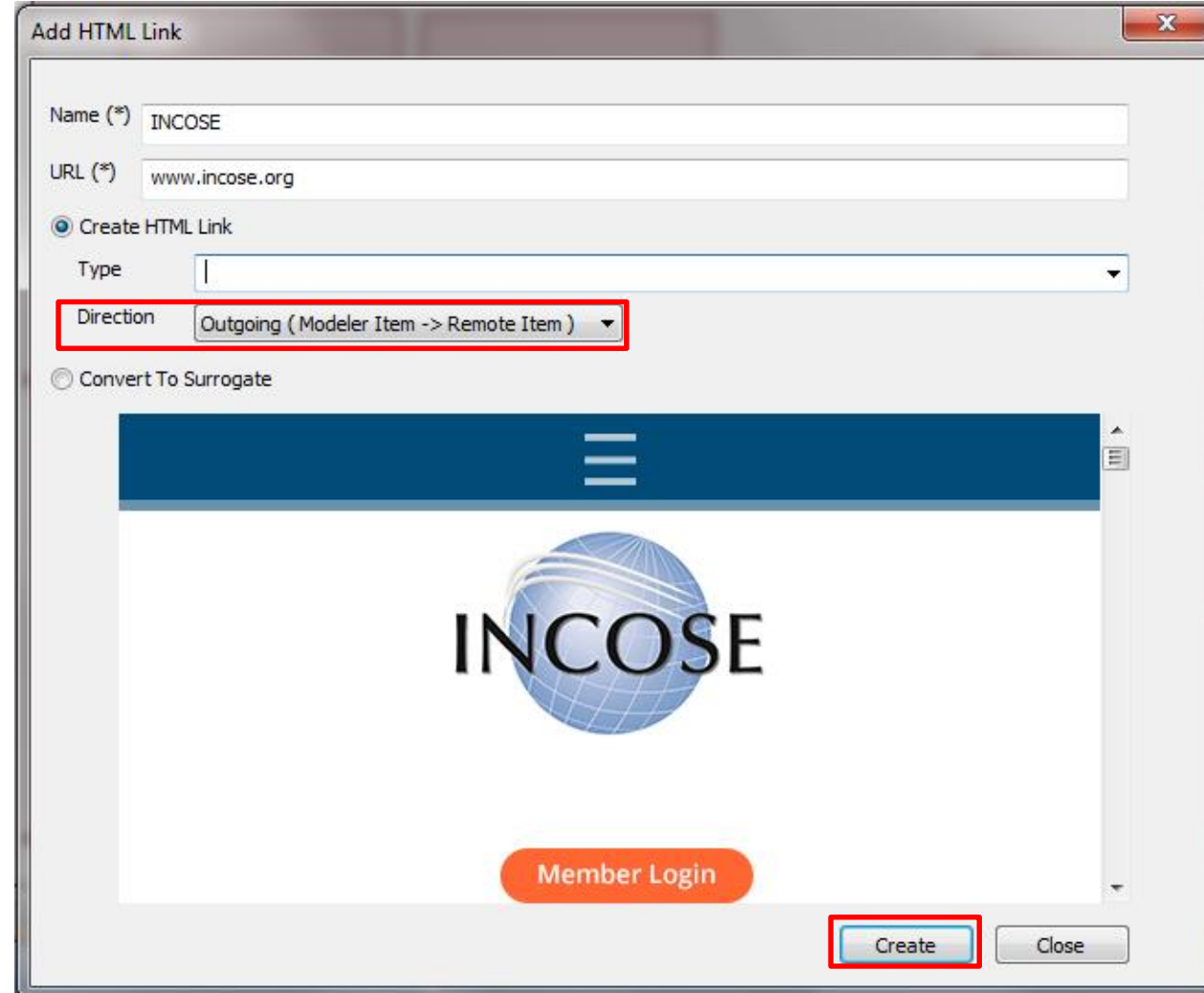




- Diagram population, including for multiple item types, is now easier and more efficient

USABILITY

- Creating multiple HTML Links is now more efficient
- Link direction for HTML and OSLC Links is now more logical and easy to understand
- You can now open HTML Links in an external web browser



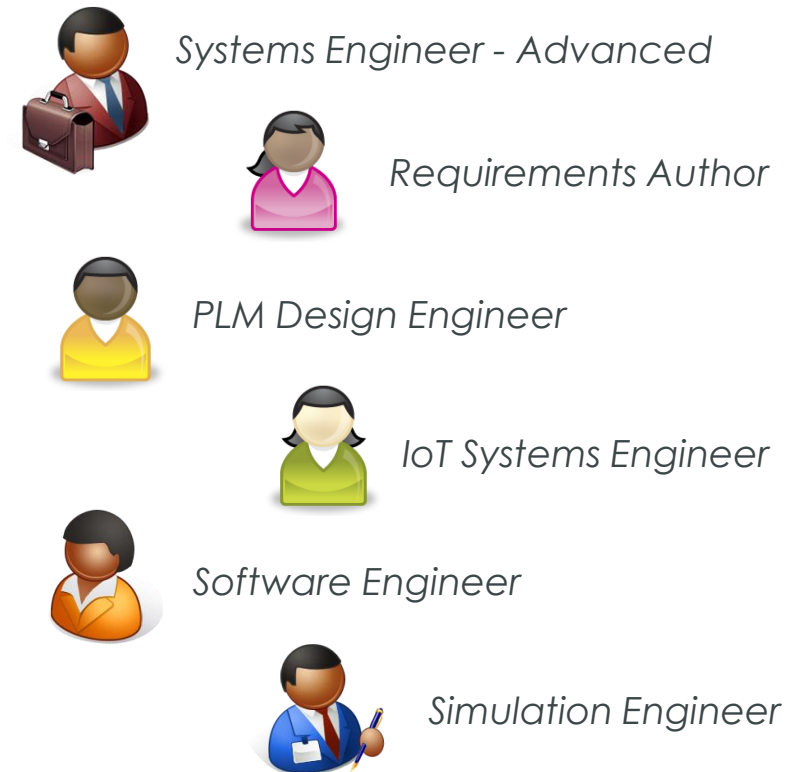
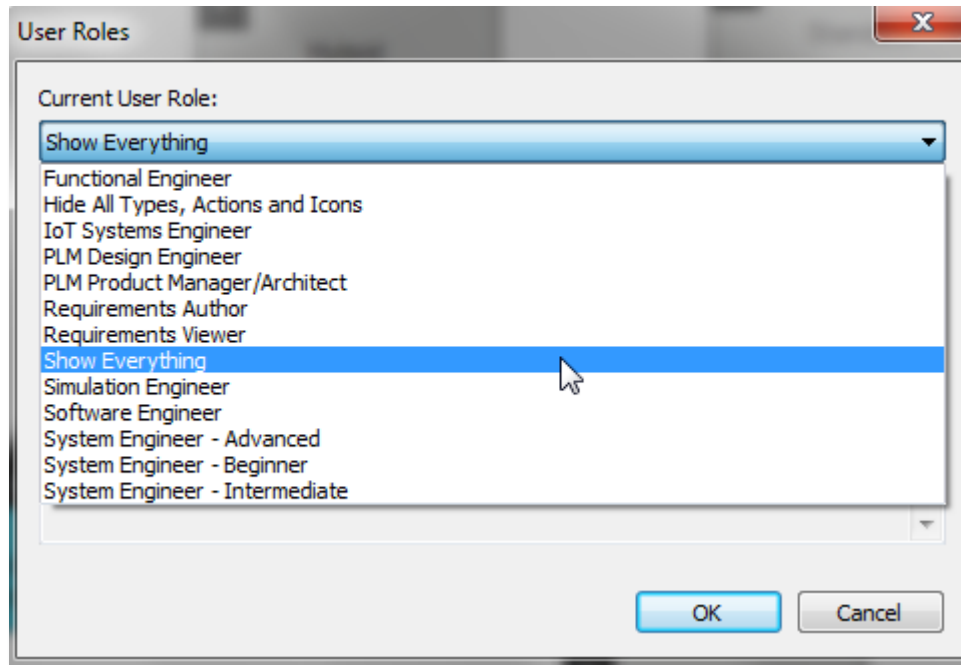
The screenshot shows the PTC Integrity Modeler interface. The main window displays a table titled "[Package] HSUVRequirements [Relationship Tree]". The table has the following columns: Name, txt, satisfiedBy, and derived. The data rows are as follows:

Name	txt	satisfiedBy	derived
Acceleration	The Hybrid SUV shall have the acceleration of a typical SUV.		«Requirements» Power (HSUVModel:HSUVRequirements)
Braking	The Hybrid SUV shall have the braking capability of a typical SUV.		«Requirements» RegenerativeBraking (HSUVModel:HSUVRequirements)
Capacity	The System shall do...		
CargoCapacity	The System shall do...		«Requirements» Power (HSUVModel:HSUVRequirements)
Eco-Friendliness	The System shall do...		
Emissions	The vehicle shall meet Ultra-Low Emissions Vehicle standards.	«Block Property» TestVehicle1 (HSUVModel:Testing:SUV_EPA_Fuel_Economy_Test)	
Ergonomics	The System shall do...		
FuelCapacity	The System shall do...		«Requirements» Range (HSUVModel:HSUVRequirements)
FuelEconomy	The Hybrid SUV shall have dramatically better fuel economy than a typical SUV.		«Requirements» PowerSourceManagement (HSUVModel:HSUVRequirements) «Requirements» Range (HSUVModel:HSUVRequirements) «Requirements» RegenerativeBraking (HSUVModel:HSUVRequirements)

The interface also includes a left-hand tree view showing the project structure, a top menu bar, and a bottom status bar.

- Table/Matrix diagrams are now displayed in the Integrity Modeler diagram pane
- Table/Matrix diagrams also show the diagram type and description

- The Default user role has been replaced by a new role called “Show Everything”
- This role can be deleted, thereby ensuring users select an appropriate user role for their job function





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