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# The Power of the Configurable Link

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## The Power of the Configurable Link

### Our Discussion

#### • Introduction to Configurable Links

- General behavior
- Safe, Simple, Supported
- Types of Configurable Links
- Constraints and Subtyping

#### Basic Implementation Approach

- Configure and go

#### • A SRAM Example

- A robust part qualification solution
- Open Discussion and Questions

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Windchill objects that link Parts and Documents









What are Configurable Links?

- Supported extension in Windchill
- Robust functionality for Configurable Links
- Safe and easy way to extend your product data



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Configurable Link Types

- Configurable Masters Link
- Configurable Reference Link
- Configurable Describe Link



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Configurable Link Types – Masters Link

- Master to Master link
- Not version or iteration specific
  - Low overhead
- Use when relationship extends over the lifetime of each object
  - Changes apply to all versions

🗄 🔙 Affected Activity Data ÷ Agreement + Alternate Unit Link 🗄 🚸 Analysis Activity 🗄 🚺 Change Action ÷ Change Directive 🗄 🕃 Change Investigation 🗄 🚝 Change Notice 🗄 🛀 Change Proposal 🔜 Change Record a Change Request + Change Task ÷ Choice ± Configurable Describe Link ÷ Configurable Masters Link ÷ Configurable Reference Link ÷ Configuration Context + Deleted Object + Deliverable (Classic) ÷ Delivery Discussion Posting + Document 🗄 📩 Document Master + Document Usage + EPMDescribe Link 🗄 📐 EPM Document 🗄 🍖 EPM Document Master + EPM Document Reference Link + EPM Document Uses Link



Configurable Link Types – Reference Link

- Version to Master link
- A specific version references the latest version
- Use to refer to the latest version from a specific version





Configurable Link Types – Describe Link

- Version to Version link
- A specific version/iteration refers to a specific version
- Used to maintain version specificity between objects



## Configurable Links and Subtypes

- Configurable Links must be subtyped
  - OOTB define link behaviors
  - No Relationship constraints
- Configurable Link Constraints
  - "Parent" and "Child" types differentiate Configurable Links
  - Define the "scope" of the link
  - Subtypes of Parts and Documents



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## Configurable Link Behavior

- OOTB support for linked types
  - Collection and display
  - Constraint aware
- Configurable links support attributes (IBAs)
- Use APIs to support searching and navigating links



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## **Basic Implementation Approach**

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## Hypothetical: Test Specifications for Parts

- Define Link
  - Subtypes of Part and Document must exist
  - Subtype Link
- Add Action
  - Action & Resource Info
  - Action Model
- Start using new link!





#### **Production Qualification**

- Need: Manage part qualification process and artifacts
- Goals: Integrated solution with global consistency and transparency



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Production Qualification – Our Qualification Needs

- Many types of qualification activities
- Group parts for qualification
- Production by different factories
- Global testing facilities and teams





#### Part Qualification Objects and Links





#### **SRAM** Qualification Activities

- SRAM Configurable links defined for "generic" subtype
- Many Specific Qualification Activity subtypes
  - All work within the link constraints defined using the "generic" super type
- Provides extensible framework



Subtypes of Qualification activity

- Many different processes needed to qualify a part
- Subtypes to support each business process
  - Teams
  - Workflows
  - Lifecycles
  - Attributes



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## "Business Object" Subtypes

- Document Subtypes that do NOT have content
  - Used for elements of the business process
- Factories, Locations
  - Teams
  - Lifecycle
  - Attributes

#### Qualification Governor

- Workflows
- Lifecycle
- Teams
- Attributes





Integrated solution with global consistency and transparency

- Automated Part promotion
  - Determine state of qualification using links
- Fully transparent solution
  - View and report on all qualification for a part
- Configurable Links provide basis for a robust solution in Windchill





#### In Summary...

- Configurable Links are safe, simple, and supported
  - Configurable Windchill objects
  - Strong support for links and their constraints
- Different Types of Links provide flexibility
  - Masters, Reference, and Describe cover many scenarios
- Subtyping provides robust functionality
  - Leverage Teams, Lifecycles, Workflows to extend your process
- SRAM: A robust solution based on these concepts
  - Transparency and automation of qualification process and information
- A Powerful way to extend the value of your Windchill solution



# **Questions and Discussion**

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