Linking Technical Requirements beyond PLM vault

Model-Based Enterprise Summit 2018

XSB

3 April 2018

NOTES:

1. SPEC MIL-W-13855 AWS ANSI Y14.5M-1982 APPLY.

2. MATERIAL: STEEL, BAR, ALLOY 4320 OR 8620.

3. UNLESS OTHERWISE SPECIFIED, ALL EXTERNAL SHARP EDGES SHALL BE BROKEN 0.05 TO 0.25; INTERNAL EDGES R0.2 MAX.

4. UNLESS OTHERWISE SPECIFIED, ALL SURFACE FINISH IS 3.2/

5. PROTECTIVE FINISH: FINISH 5.3.1.1 OR 5.3.2.1 OF MIL-STD-171.

6. QUALITY ASSURANCE PROVISION REQUIREMENTS PER DRAWING 12993884 APPLY.

7. APPLY CONTRACTORS CAGE CODE THIS APPLIES.

402 — MATERIAL

402 — PROTECTIVE FINISH

108 — HARDNESS

205 — Ra 16 SURFACE ROUGHNESS

206 — PROTECTIVE FINISH

207 — WORKMANSHIP PER MIL-W-6315

502 — SALT SPRAY TEST

503 — COATING WEIGHT

504 — SUPPLEMENTAL OIL SALT SPRAY TEST

505 — CASE DEPTH HARDNESS

*	5.3.1	Manganese phosphate base MIL-DTL-16232, type M
	5.3.1.1	Class 1, supplementary preservative treatment or coating, as specified.
	5.3.1.2	Class 2, supplementary treatment with lubricating oil conforming to MIL-PRF-3150
	5.3.1.3	Class 3, with no supplementary treatment
	5.3.1.4	Class 4, Chemically converted (may be dyed to color as specified) with no supplementary coating or with supplementary coating as specified
*	5.3.2	Zinc phosphate base, MIL-DTL-16232, type Z
	5.3.2.1	Class 1, supplementary preservative treatment or coating, as specified
	5.3.2.2	Class 2, supplementary treatment with preservative conforming to

502 - SALT SPRAY TEST: FIVE (5) PARTS SHALL BE SELECTED FROM EACH LOT. THE TEST SHALL BE PERFORMED AS SPECIFIED IN MIL-DTL-16232 OR MIL-A-8625, AS APPLICABLE, AND ASTM B117 WITHOUT SUPPLEMENTARY OIL. PHOSPHATE TEST PROCEDURES AND EQUIPMENT SHALL HAVE THE PRIOR APPROVAL OF THE GOVERNMENT. IF ANY PART SHOWS EVIDENCE OF CORROSION, IT SHALL BE CLASSIFIED AS DEFECTIVE, AND THE ENTIRE LOT SHALL BE REJECTED.

Each team member needs to do a rework

…Faster

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Complex Web of Concepts

INSIDE THE ENTERPRISE

Drawing Notes

Drawing number 12993884

9 pages

Compile Relevant Concepts from Referenced Documents

OUTSIDE THE ENTERPRISE

MIL-W-13855

20 pages

MIL-STD-171

56 pages

Implicitly Referenced Documents

26 additional documents

>500 pages

ASTM E18
MIL-DTL-16232
MIL-A-8625
ASTM B117
MIL-DTL-53072
...

SWISS®: Smart, Connected, Documents

CONNECTED DOCUMENT

TRADITIONAL DOCUMENT
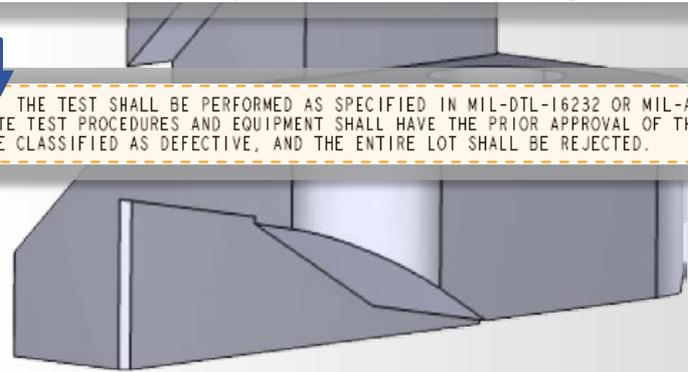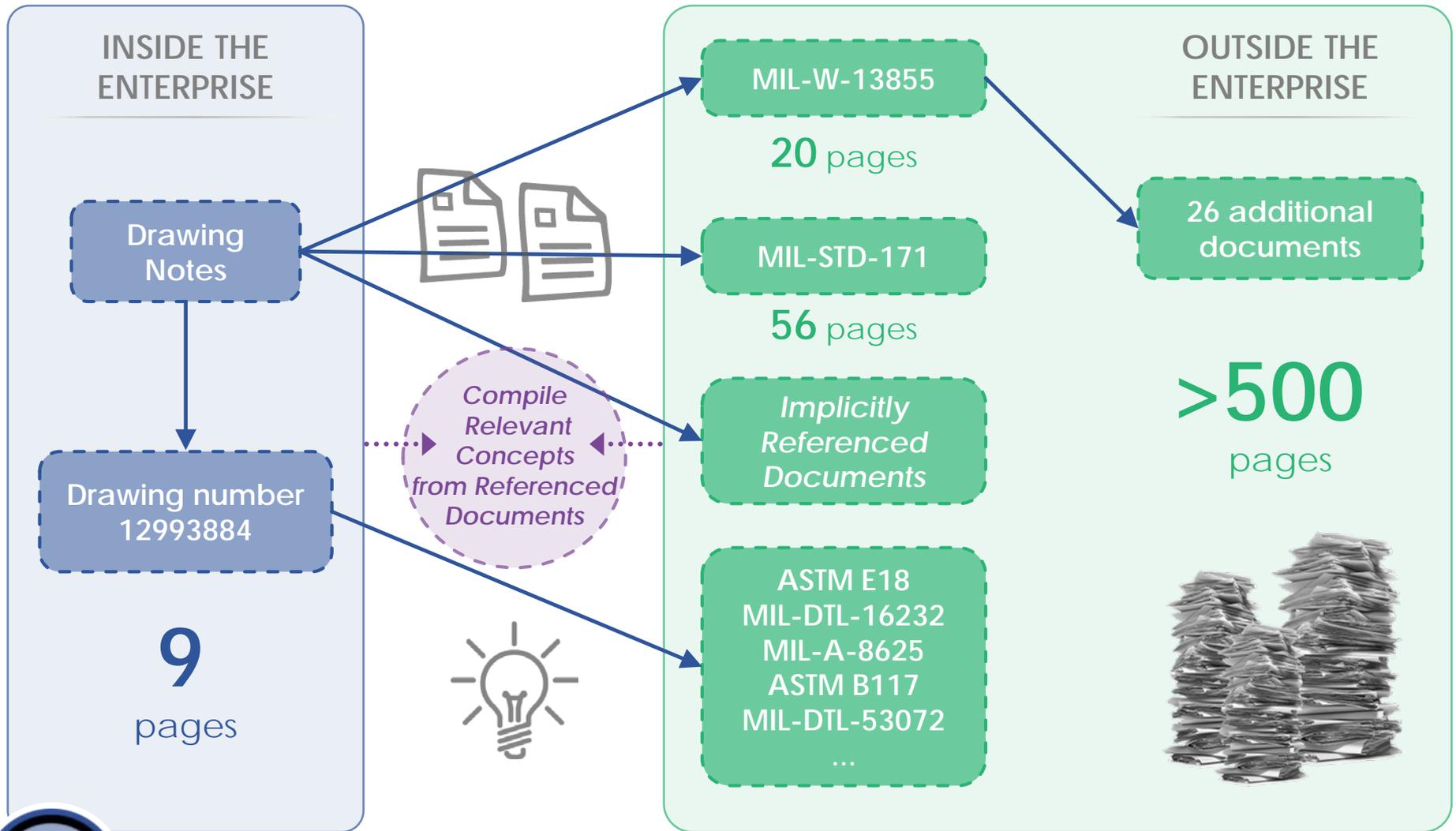
BENEFITS
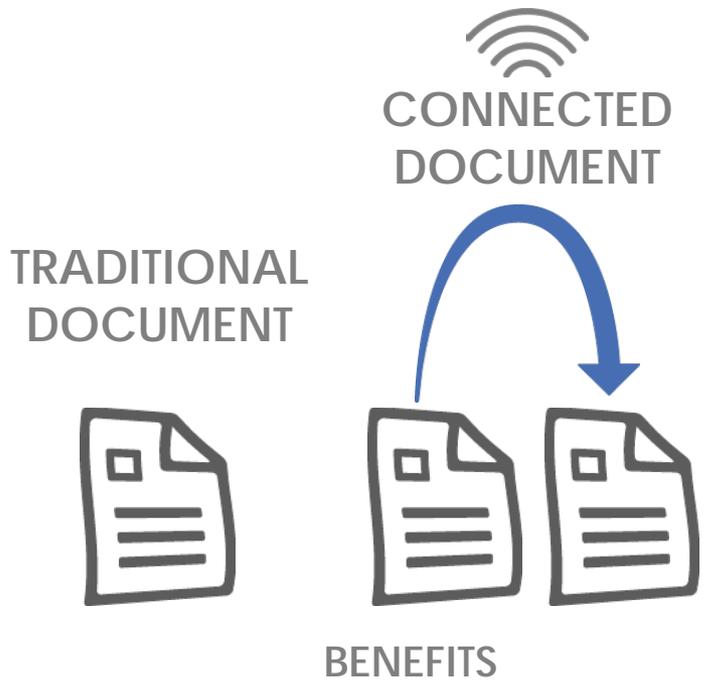
- Faster time to market
- Reduced risk
- Cost savings from less rework
- Consistency across enterprise and supply chain
- IP protection

Part

'WHO', 'WHY', AND 'STATE'

Material

Process

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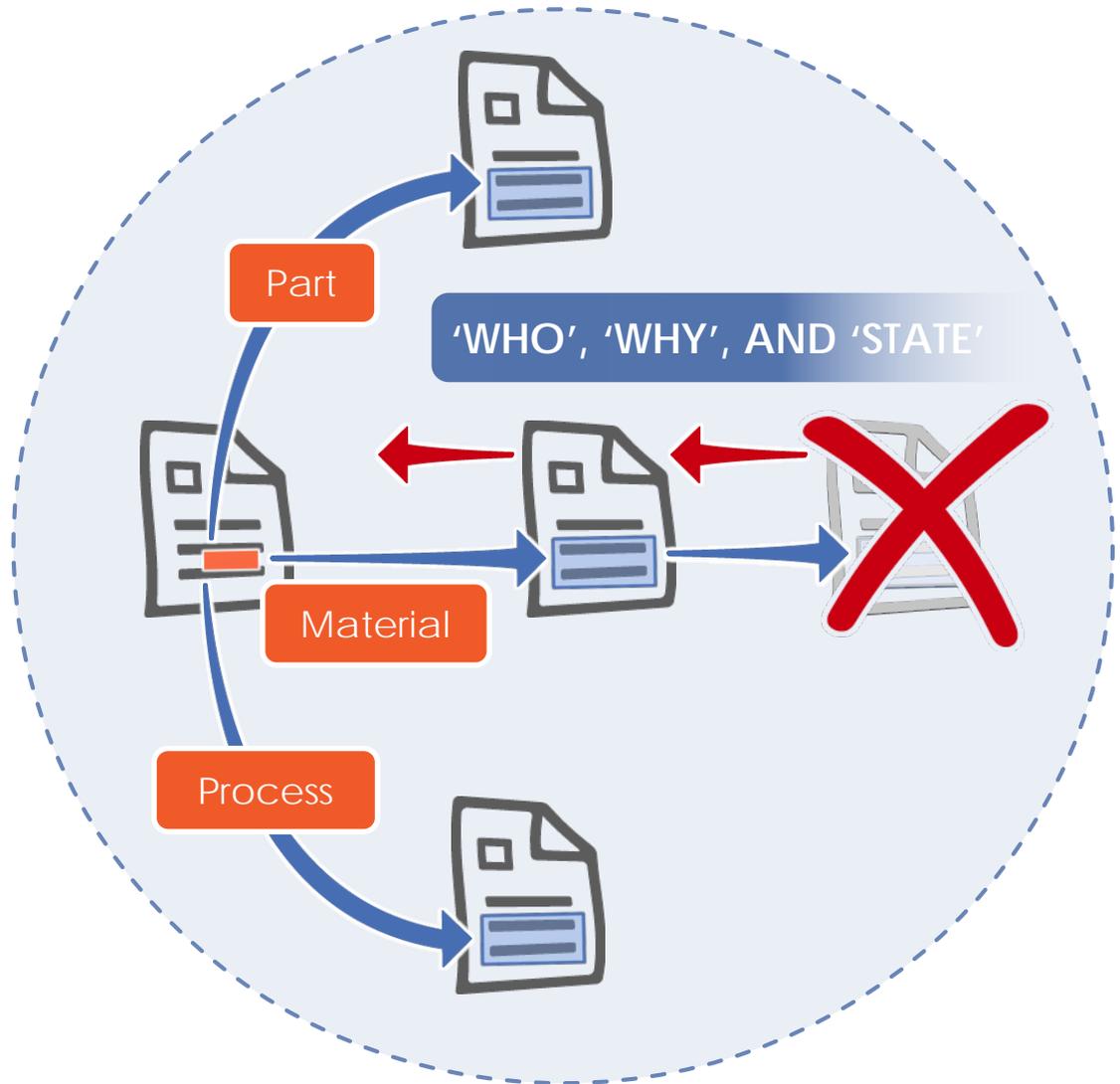
Semantic Linking:
"Who" am I pointing to and "why"

FROM DOCUMENTS

TO UNIQUELY IDENTIFIABLE CONCEPTS

Documents
- ASTM D380
  - Section 1 — SCOPE
  - Section 27.2 — OZONE TEST
- MIL-DTL-13444
  - Section 4.7.8 — OZONE RESISTANCE
    - Text

hasLinkTo

Subject
- Part
- Material
- Process
  - Testing
    - Environmental Testing
      - Ozone Testing
    - Electrical Testing

IsAbout

NAVIGATE HERE
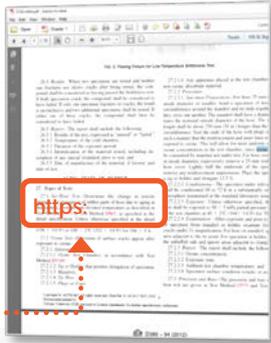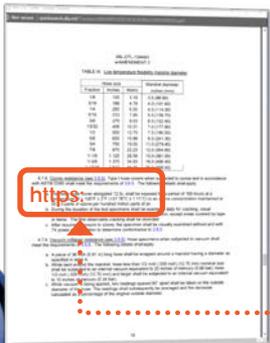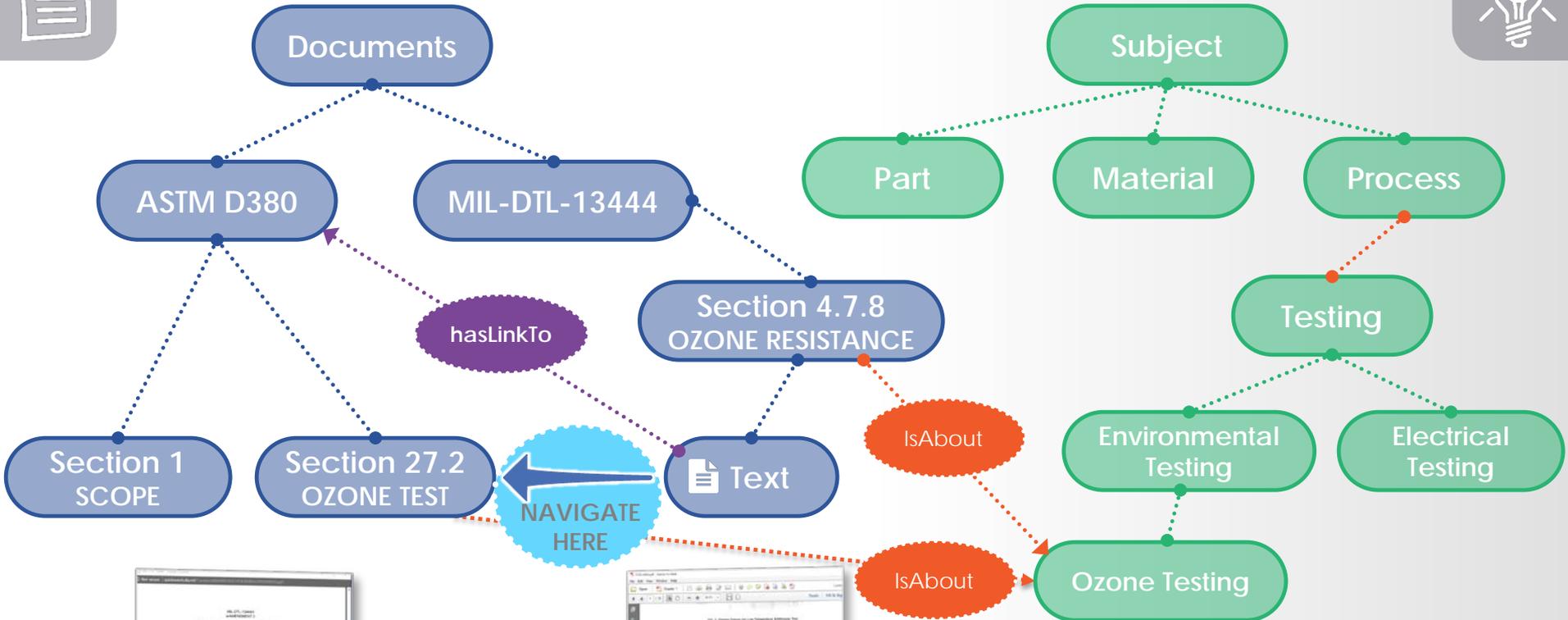
Crossing Enterprise Boundaries

URIs: Single Source of Truth in Derivative Work

Change management in the engineers' environment

My Teamcenter (Administrato

Home

- Home
  - Mailbox
  - Newstuff
  - Old Stuff
  - 000025-55628
    - 000025
    - 000025/A;2-55628
    - 000029-PRS_55600_B
      - 000029
      - 000029/A;1-PRS_55600_B
        - 000029/A
      - 000029/B
      - TC Baselined
  - 000026-PKG_DETAIL_0001_PP_C_0001
  - 000027-PRS_0001_CB_N_0001
  - 000028-PRS_55628_C
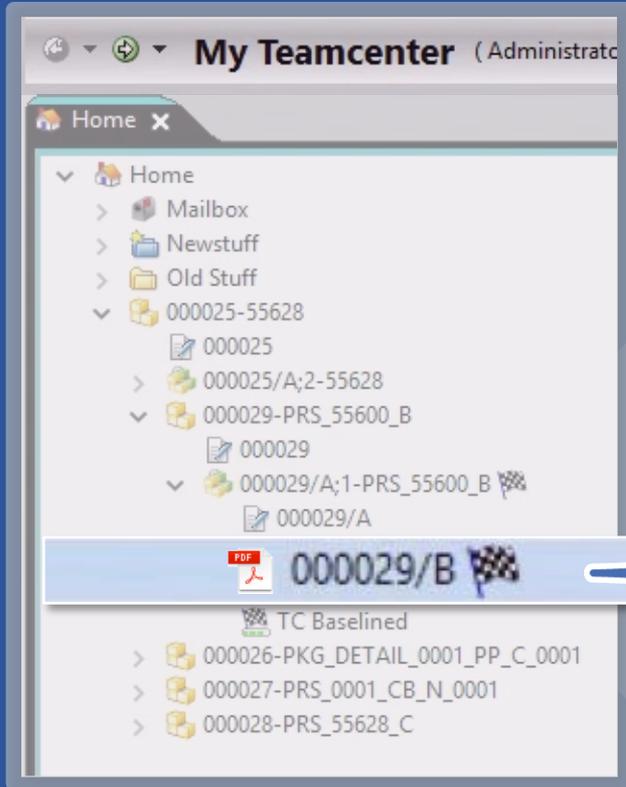
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Unlinked PDF document:
– No knowledge of dependencies or their status

APPROVED DATE 20 MAR 2012
APPROVED VERSION B
APPROVED BY WILL DO

PROPRIETARY

NUT, PLAIN, CAP, HIGH CROWN

1. Scope. This specification depicts the requirements for Nut, Plain, Cap, High Crown, coarse or fine threads, Class 2.

2. Salient characteristics.

2.1   Materials:

2.1.1   Steel, carbon, Types UNS (G10180) thru (G10400), (G11160) thru (G11370) or (G12120) thru (G12144).

2.1.2   Steel, corrosion resistant 300 series, Types UNS (3XXXX) series.

2.1.3   Copper alloys UNS (C23000) thru (C64600).

2.1.4   Aluminum alloys UNS (A92017), (A92117), (A96061), or (A96262).

2.1.5   Nylon in accordance with ASTM D4066, Group 1, Class 1 or 2 color natural white.

Protective finish:

2.2.1   Carbon steel cap nuts shall be cadmium plate in accordance with QQ-P-416, Type II, Class 2. Cadmium plate cap nuts should be used only on aerospace applications.

Extending the view:
SWISS® Intelligent Objects
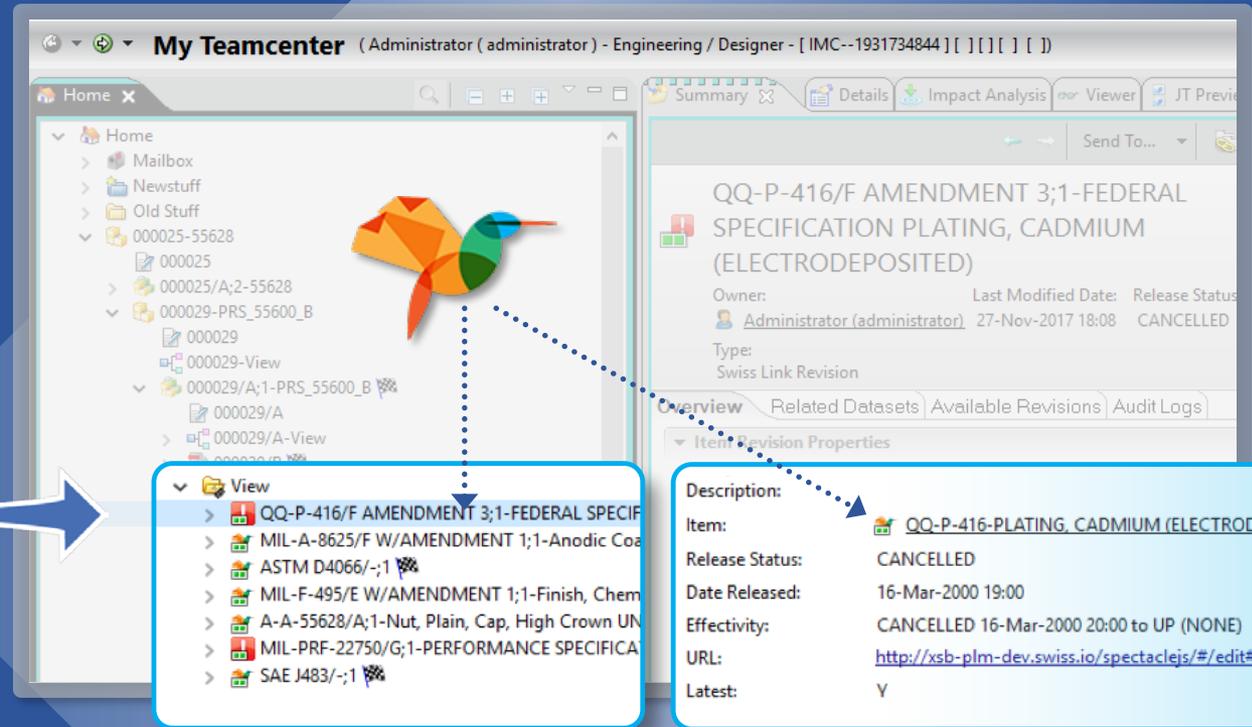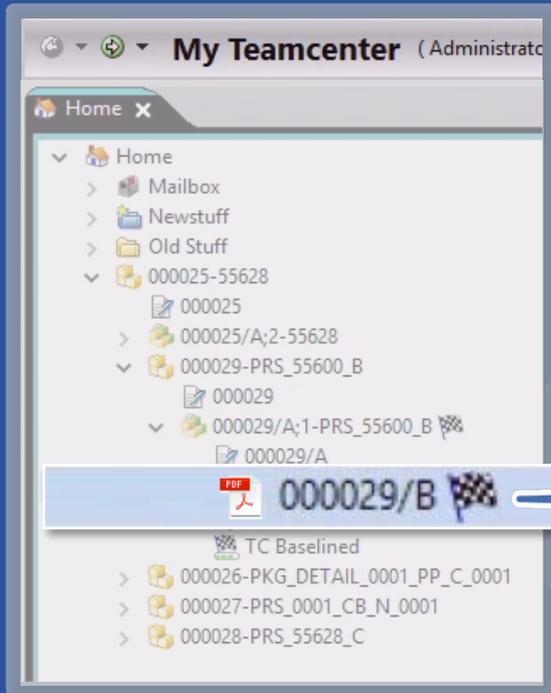
Expanding structure by creating
relationships to concepts in external Standards
SWISS objects 'know' their status and meaning.

Evaluation of impact of changes

Smart Connected Document:
– Changes can be reviewed and compared

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SWISS enables engineers to determine if changes are significant enough

Funded by DLA RDSS R&D Program

Next Steps

Even Smarter Standards

Deeper integration with DoD systems

Exploration of interoperability and linking with other frameworks and technologies

Questions