Paper Trail vs. Digital Thread

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It sounds so simple

• Example: PWB Drawing Note

“UNLESS OTHERWISE SPECIFIED
PERFORM ELECTRICAL TESTS PER FIND NUMBER 106”
DESCRIPTION – “PRINTED WIRING BOARDS, RIGID, FABRICATION REQUIREMENTS”
DOCUMENT PAGE COUNT - 24

4 GOVERNMENT / NATIONALLY RECOGNIZED PUBLICATIONS

12 REFERENCED DOCUMENTS

6 INDUSTRY PUBLICATIONS (ANSI, IPC, SAE)

2 GOVERNMENT PUBLICATIONS

11 INDUSTRY PUBLICATIONS (ASTM, ANSI, IPC)

4 OTHER NGSC DOCUMENTS

2 OTHER NGSC DOCUMENTS (AS APPLICABLE)

2 GOVERNMENT PUBLICATIONS

12 INDUSTRY PUBLICATIONS (ASTM, ANSI, IPC)

4 OTHER NGSC DOCUMENTS

Represents 40+ Unique Documents
Bow & twist requirement

Bow & Twist (Para 3.11.4)

Shall Meet Para 3.6.1.2

Requirements of IPC-6012 apply

25 IPC specs
2 joint industry standards
3 ASTM standards
1 UL standard
1 NEMI standard
2 AMS standards
1 ASME standard

37 Unique Documents
Where’s the problem?

• Large amounts of information
• Information extraneous to task at hand
• Large amounts of cross referencing
• Stacks and Folders of specifications

Let’s go Electronic!

Electronic is not enough!
Let's get “Smart”

Pertinent Information!

SWISS Semantic Model
But Wait … There’s more!

Is my task affected by the change?

Version Aware
Bow & twist requirement

Bow & Twist (Para 3.11.4)

Shall Meet Para 3.6.1.2

Requirements IPC-601

1 Appropriate Document
Part of the Model Based Enterprise

Digitally Integrated Model definition
Maximize the Digital Thread

- Purposeful Specifications
- Version cognizance
- Managed in PLM/PDM/ERP
- Linked to CAD data
- Available on Demand

SMART CONNECTED DOCUMENTS!