"A day in the life of the S-Series"

International specification for technical publications using a common source database

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ILS S-Series Spec Day September 24, 2015
Agenda

• Basic S1000D process - Input / Output
• Documentation process & chapter structure
• Bicycle brake system - Product breakdown
• Bicycle brake system - Input data requirement examples
• More information needed?
• Abbreviations
• The End
International specification for technical publications using a common source database

**Input**
- Design data (eg, wiring)
- S2000M IPD
- S3000L Task data
- S4000P Preventive maint.data
- S6000P Training
- S5000P Feedback

**Basic S1000D process**
- Customize S1000D (business rules)
- Agree InfoSets (scope & depth)
- Create/Update DML
- Produce/Update DM, PM, SCO, SCORM & related info
- Agree publication structure & deliverable media

**Output**
- S3000P DMC
- S4000P DMC
- SCO, SCORM content pack.
- Tech Pubs for maintenance & operation of the Product: IETP / page-oriented

**Input data specification for S1000D**

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Source data
- S3000D
  - Maintenance concept
  - Product breakdown
  - Maintenance planning
  - Maintenance tasks

- S2000M
  - Illustrated parts information

- S6000D
  - Training docu needs

- S5000P
  - Comments

Design data
- Product descriptions
- 3D models / 2D drawings
- Operational information

Documentation process & chapter structure

1. **Customize S1000D** (business rules)
2. **Agree information sets** (scope & depth)
3. **Create/Update DML**
4. **Produce/Update DM, PM, SCO, SCORM & related information**

Chapter 1: Introduction
Chapter 2: Documentation process
Chapter 3: Information generation
Chapter 4: Information management
Chapter 5: Information sets & publications
Chapter 6: Information presentation/use
Chapter 7: Information processing
Chapter 8: SNS & information codes
Chapter 9: Terms & data dictionary

Source data:
- Training docu needs
- Comments
- Illustrated parts information
- Product descriptions

Output data (media & publications):
- Generate publications
- Produce media & publish

Agreement:
- Agree publication structure

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Hardware/System identification
Bicycle brake system - Product breakdown

Product breakdown

Brake system
S1000DBIKE-AAA-DA1-00-00-00AA

Front brake
S1000DBIKE-AAA-DA1-10-00-00AA

Front brake lever
S1000DBIKE-AAA-DA1-10-10-00AA

Front brake cable
S1000DBIKE-AAA-DA1-10-20-00AA

Front wheel brake
S1000DBIKE-AAA-DA1-10-30-00AA

V-Brake assy
S1000DBIKE-AAA-DA1-11-30-00AA

V-Brake mechs
S1000DBIKE-AAA-DA1-11-30-01AA

Brake pad
S1000DBIKE-AAA-DA1-11-30-02AA

Rear brake
S1000DBIKE-AAA-DA1-20-00-00AA

Rear brake lever
S1000DBIKE-AAA-DA1-20-10-00AA

Rear brake cable
S1000DBIKE-AAA-DA1-20-20-00AA

Rear wheel brake
S1000DBIKE-AAA-DA1-20-30-00AA

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Bicycle brake system - Input data requirement examples (1)

**Bicycle** - Illustrated parts data
S1000DBIKE-AAA-D00-00-00-01AA-941A-D

Includes front wheel brake illustrated parts info such as:
- partNumber: VF-10001 - Brake
- partNumber: BP-2500016 - Pad

**Design data**

**Front brake** - Description of how it is made
S1000DBIKE-AAA-DA01-10-00-00AA-041A-D

Detailed front brake description including associated illustrations

ICN-S1000DBIKE-AAA-DA10000-0-U8025-00512-A-04-1
Bicycle brake system - Input data requirement examples (2)

Maintenance concept
- Maintenance levels
- Skill levels
- Operational profile

- Level 1: User on-bike
- Level 2: User garage
- Level 3: Bike shop
- Level 4: Bike manufacturer

- Basic
- Intermediate
- Advanced

- Cycling (5%): 400 h per year
- Parked (95%): 8,360 h per year

- Front wheel (98% of all cycling time): 392 h per year
- Brake system (6% of all cycling time): 24 h per year

LSA results are used in various data modules
## Bicycle brake system - Input data requirement examples (3)

### Maintenance planning information (scheduled and unscheduled)

<table>
<thead>
<tr>
<th><strong>Input data example:</strong></th>
<th><strong>Input data example:</strong></th>
<th><strong>Input data example:</strong></th>
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<tbody>
<tr>
<td><strong>Check brake pads for wear</strong></td>
<td><strong>Replace brake pads when wear indicators reached</strong></td>
<td><strong>Brake pads - Wear indicators reached</strong></td>
</tr>
<tr>
<td><strong>Bicycle - Inspection</strong> S1000DBIKE-AAA-D05-40-00-00AA-000A-D</td>
<td><strong>Bicycle - Maintenance lists</strong> S1000DBIKE-AAA-D05-20-00-00AA-000A-D</td>
<td><strong>Brake pads - Wear indicators reached</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• limitType = <strong>On condition</strong></td>
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<tr>
<td></td>
<td></td>
<td>• threshold = <strong>One month</strong></td>
</tr>
</tbody>
</table>
Bicycle brake system - Input data requirement examples (4)

Maintenance task: Replace front brake assy

- **Front brake - Remove procedures**
  S1000DBIKE-AAA-DA1-10-00-00AA-520A-A

- **Front brake - Install procedures**
  S1000DBIKE-AAA-DA1-10-00-00AA-720A-A

- **Brake system - Manual test**
  S1000DBIKE-AAA-DA1-00-00-00AA-341A-A

- **Maintenance level:** 2 (garage)
- **Required conditions:**
  Hold bike secure for easy work
- **Required persons:** 2
- **Skill levels:**
  A - Basic, B - Intermediate
- **Estimated time:** 1.5 h
- **Required support equipment:**
  Allen key 3 mm
  Philips screwdriver #2
- **Required supplies:**
  Cleaner liquid
  Lubricate oil
  Paper
- **Required spares:**
  1 front brake assy (VF-10001)
  2 brake pads (BP-2500016)
Fault reporting, fault isolation and repair

**Front brake - Observed fault**
S1000DBIKE-AAA-DA1-10-00-00AA-413A-A

**Brake pad - Isolated fault**
S1000DBIKE-AAA-DA1-11-30-02AA-411A-A

**Brake pad - Change = Remove and install a new item**
S1000DBIKE-AAA-DA1-11-30-02AA-921A-A

- **Observed fault:** Loss of front braking force
- **Isolated faults:** Brake pads worn (or: Brake pads misaligned)
- **Repair:** Replace brake pads
  Mean time to repair = 0,3 h
More information needed?

• Please visit:  www.s1000d.org

• Please contact either:  http://public.s1000d.org/Pages/ContactUs.aspx
  
or:  sc-chair@members.s1000d.org
  
or:  council-chair@members.s1000d.org

• Download a free copy of S1000D:
  http://public.s1000d.org/Downloads/Pages/S1000DDownloads.aspx
## Abbreviations

- **CSDB**: Common Source Database
- **DM**: Data Module
- **DMC**: Data Module Code
- **DML**: Data Management List
- **DMRL**: Data Management Requirement List
- **iaw**: in accordance with
- **IETP**: Interactive Electronic Technical Publication
- **IPD**: Illustrated Parts Data
- **LSA**: Logistics Support Analysis
- **PM**: Publication Module
- **PNR**: Part Number
- **SCO**: Sharable Content Object
- **SCORM**: Sharable Content Object Reference Model
- **SNS**: Standard Numbering System
Thank you for your attention!

Questions?

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