DEDICATED TO SOLUTIONS.

Resource Management for Maintenance Tasks

Vienna, September 17, 2013

S1000D User Forum

Paper versus IETP

Technical documentation in paper format

- Made for reading
- No digital information available
- “Dead end street” for information

IETP- Behind the screen more information is hidden

```
- <StockNumber>
  - <identno>
      <mfc>D8286</mfc>
      <pnr>DIN835-M6X20-8.8</pnr>
    </identno>
  </StockNumber>
  <Description>SCHRAUBE, STIFT-</Description>
```

Technical documentation is in digital format

- Made for reading (Screen and printed), too
- Written in XML-format
- XML-format can be easily extracted

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XML

Definition XML (Wikipedia)

The Extensible Markup Language (XML) is a general-purpose *specification* for creating custom markup languages.
It is classified as an extensible language, because it allows the user to define the mark-up elements.
XML's purpose is to aid information systems in sharing structured data, especially via the Internet, to encode documents, and to serialize data;…..

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The idea of ILS

Before technical systems will be fielded, the manufacturer has to make provisions for preventive and corrective maintenance.

Required resources are:

- **Personnel** (qualification and number of, especially per maintenance assignment)
- **Tools** (special tools and test equipment)
- **Spare parts** (consumables und replacement parts)
- **Documentation** (descriptive and spare part documentation)

The target is, to preplan the demand of resource for each maintenance assignment as precise as possible and to support it by IT-systems as much as possible.

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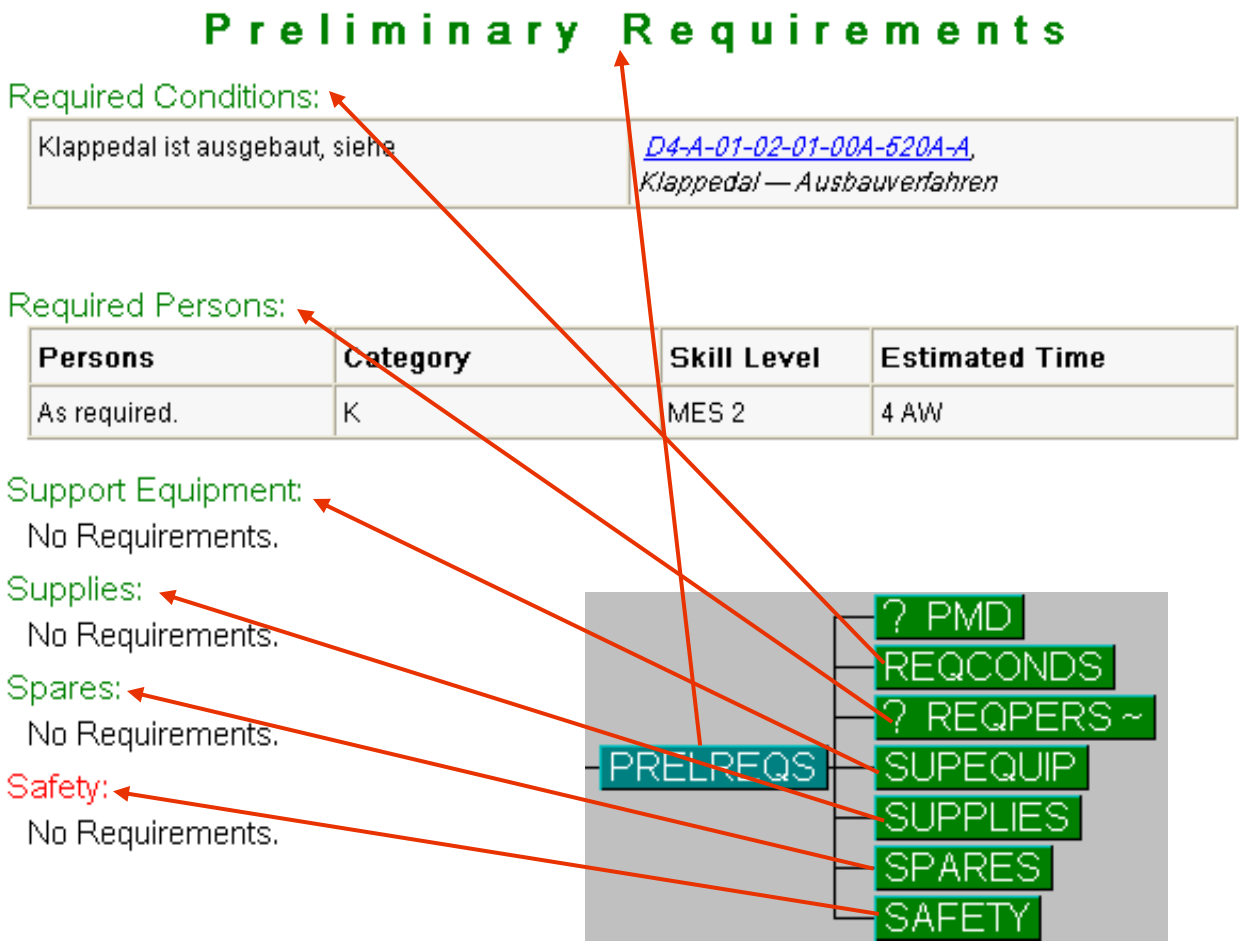
Procedural Data Modules

The logistics resources can be found in the Procedural DMs.
Why don't we use them?



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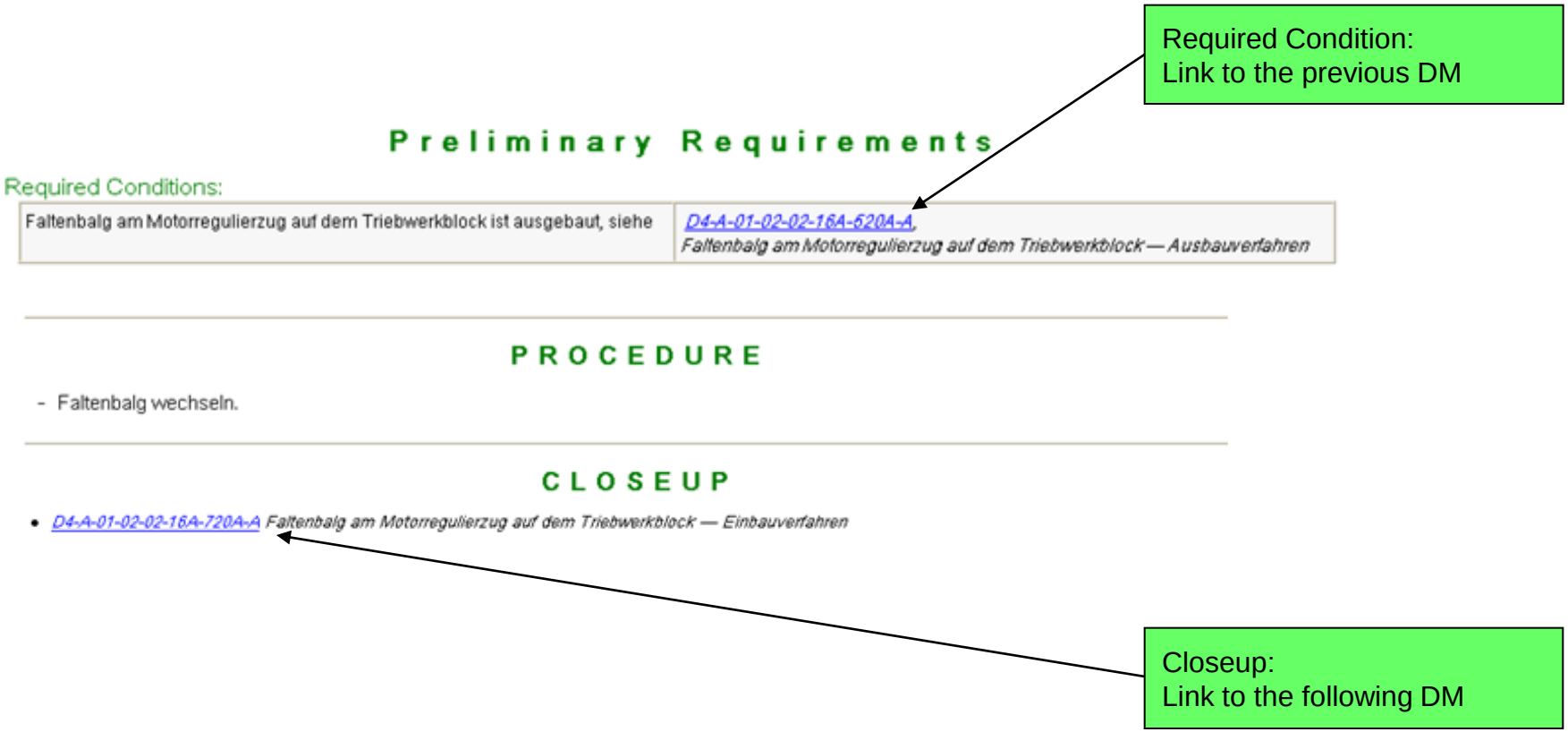
Links

A single DM represents only one step of a process, the complete maintenance task is composed by linking the related DMs



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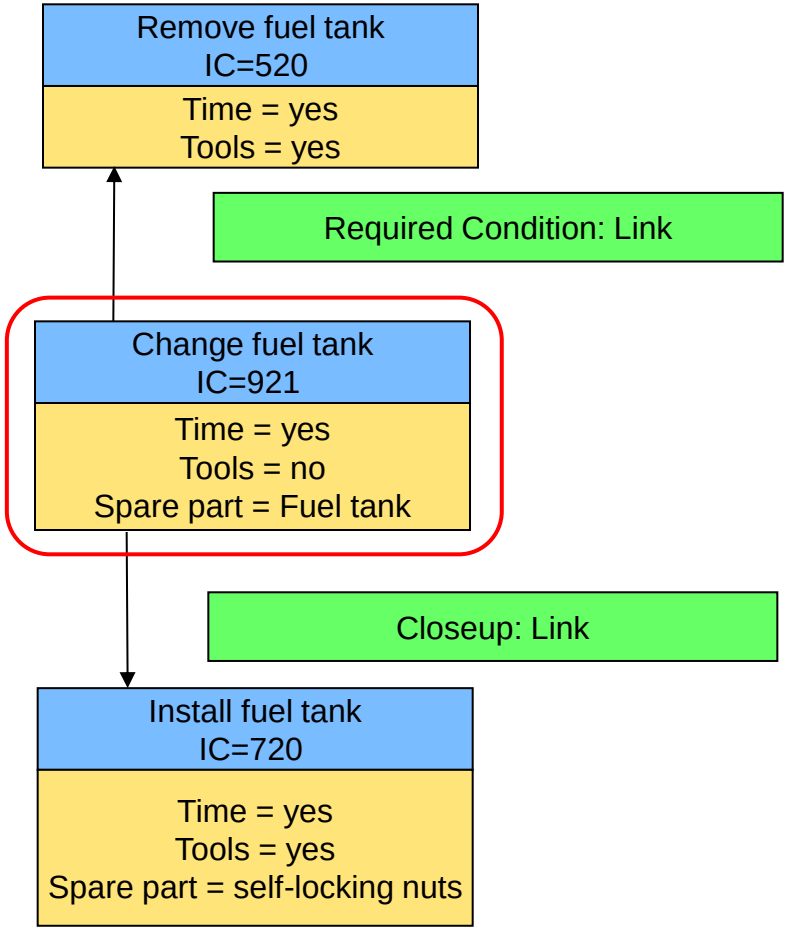
Maintenance Task = DM Chain

Example for the maintenance task “replacing a fuel tank”.

Information codes
520 = Remove procedures
921 = Change = Remove + install a new item
720 = Install procedures



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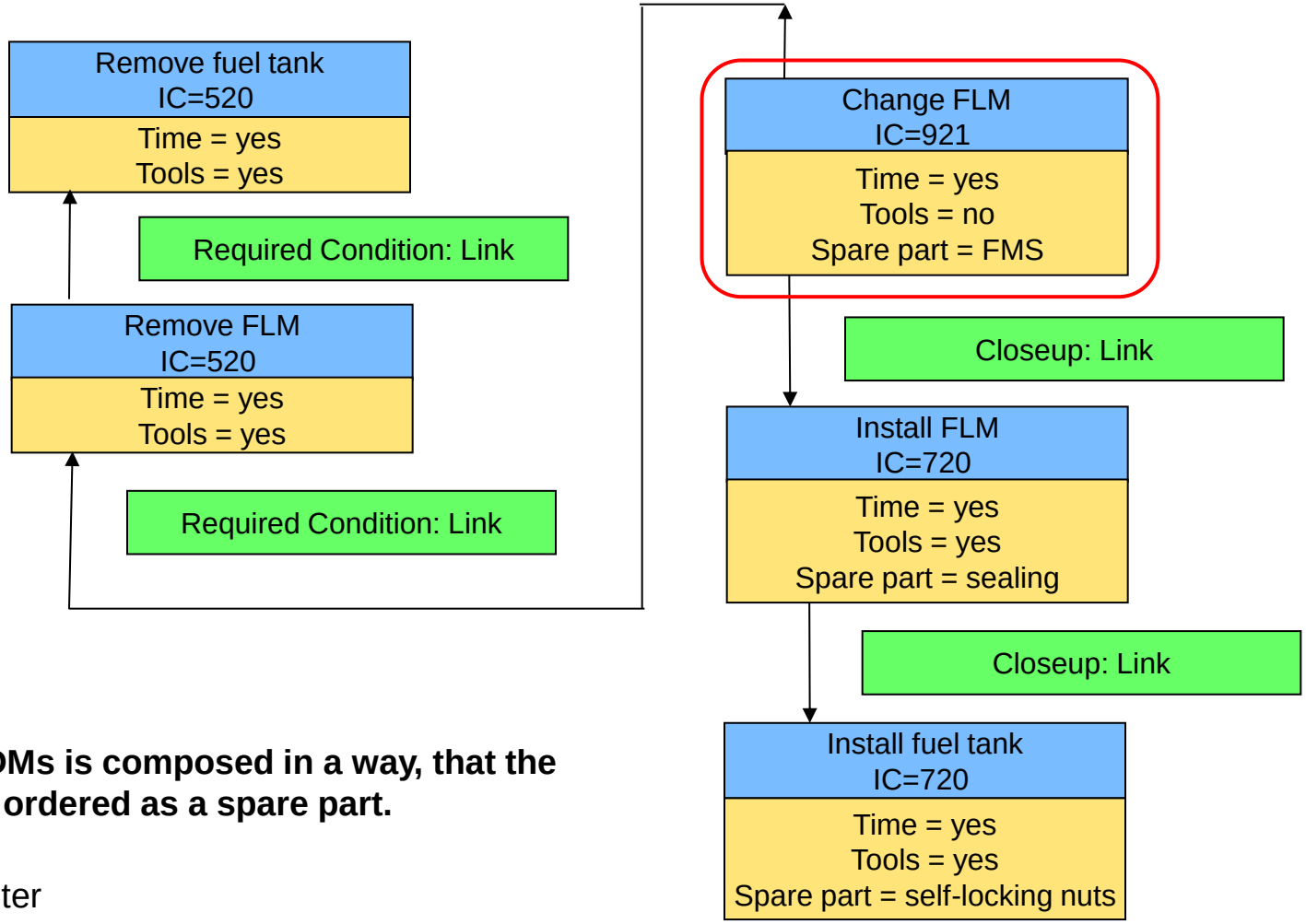
Maintenance Task with more steps

Example for replacing a “filling-level meter” including removing the fuel tank.



The content of the DMs is composed in a way, that the fuel tank will <u>not</u> be ordered as a spare part.

FLM = filling-level meter

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Creating maintenance orders

How to create a maintenance order ?

- Follow the links to build a complete Data Module Chain (complete maintenance task)
- Filter the DMs for the maintenance resources (e.g. personnel, tools, spares)
- Add up all resources and write them into an XML file
- Make the XML file available for user and maintenance control system

How to merge maintenance orders?

- Look for redundant steps (represented by DMs)
- Check the logic of the repair action
- Delete redundant steps
- Realign the remaining maintenance steps according to the logic of the repair action

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Questions

Questions are welcome!

Next:

Software demonstration

QuILS Retrieval

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