S1000D Users Forum 2010

"Application of S1000D within a state-of-the-art Integrated Logistic Support environment"

September 27 - September 30, 2010
Aerostar Hotel, Moscow, Russia

Issue 4.1: Common Information Repositories (CIR)

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Agenda

1. History
2. Why Introducing Repositories?
3. Main Principle
4. CIR Structure
5. What’s New in 4.1?

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History

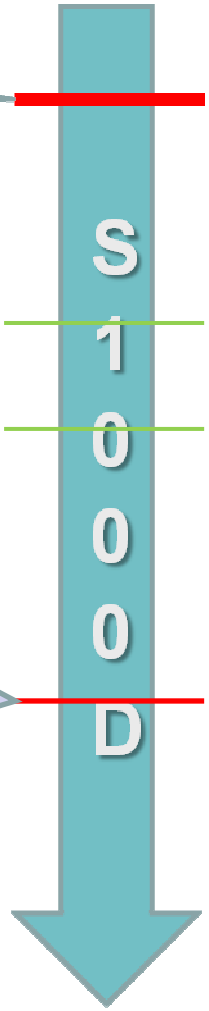
S1000D 2.3: Introduction of the Technical Information Repositories

S1000D 3.0 and 4.0: Addition of new repository types

*Creation of the **T**echnical **I**nformation **R**epository **T**ask **T**eam (TIRTT)*

S1000D 4.1:

- **Technical Information Repositories become Common Information Repository (CIR). The schema techrep.xsd is replaced by comrep.xsd**
- **Clear distinction between data exchange and publication**
- **Enhanced explanations (Re-writing of Chap 4.13.2 which becomes Chap 4.13.1)**
- **New functionalities added (Incremental update, new warning CIR etc.)**



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Why introducing repositories?

Civil Aviation requirement: in the context of data exchange,
avoid data duplication

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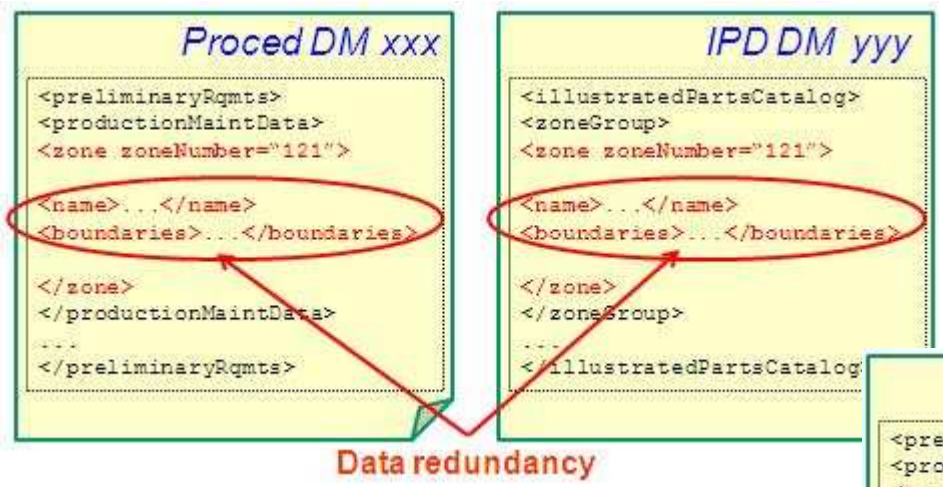
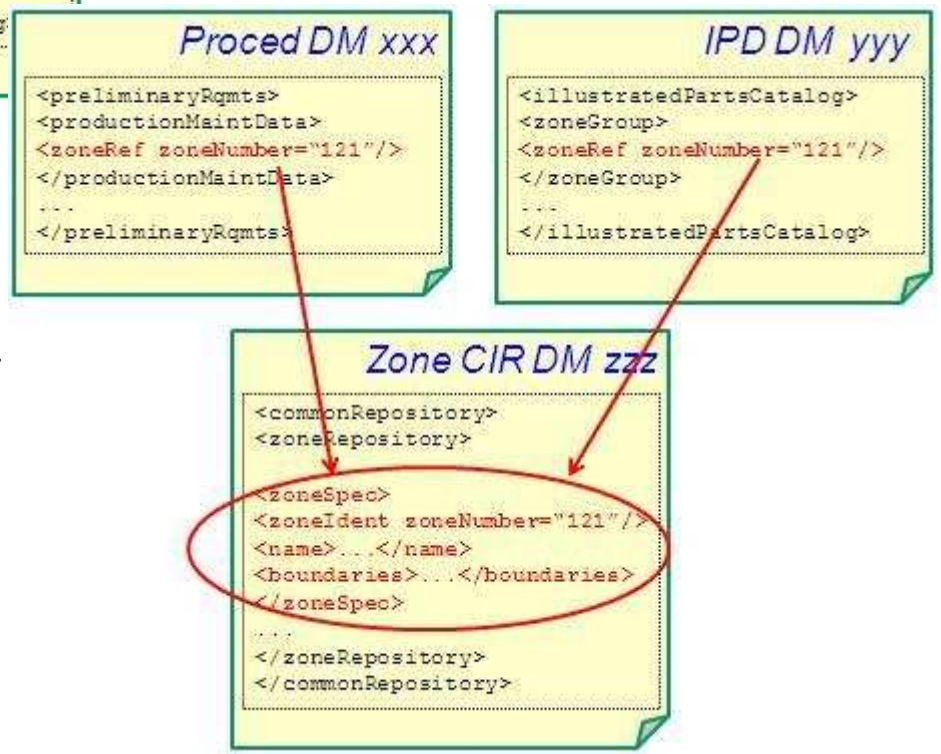
Main principle



- No CIR: Where to store zone information?
- Data duplication within classical data modules.
- No storage of additional metadata.



- Only necessary information is available within the classical data modules: the zone number.
- Additional information is stored once and in one place within the zone CIR data module

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CIR structure

CIR data modules have a dedicated schema: comrep.xsd

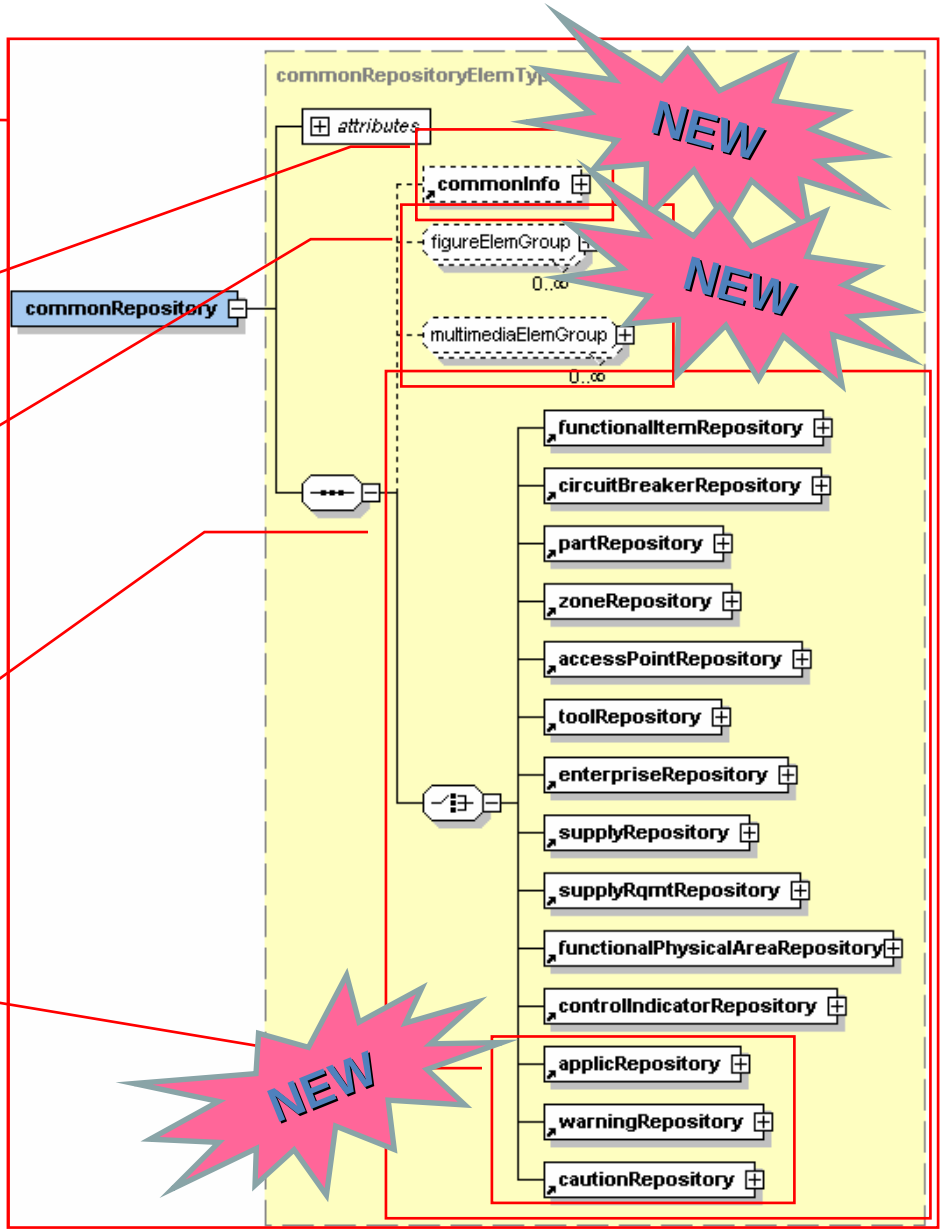
Each CIR data module can have an introductory text (CPF 2009-045US)

New consistent approach on associated illustrations and multimedia files.

There is one CIR data module per CIR type (with dedicated Information code).

3 new CIR types are introduced for 4.1:

- Warnings
- Cautions
- Externalized applicability annotations



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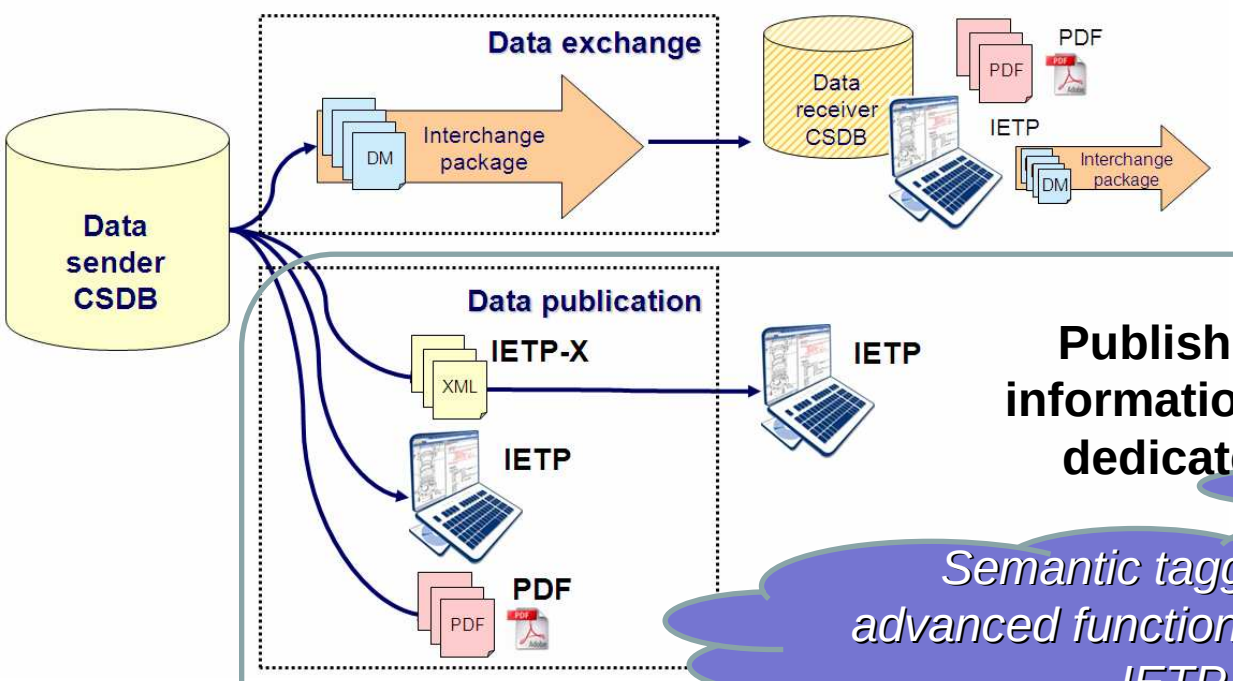
What's new in 4.1? (1)

NEW

- Data exchange and publication (CPF 2009-145S1)
  - CIR implementation supports both scenarios



Avoid data duplication

Publish structured information thanks to a dedicated schema

Semantic tagging and advanced functionalities in the IETP

For example, the zone CIR data module enables publishing complete zoning information as a whole.

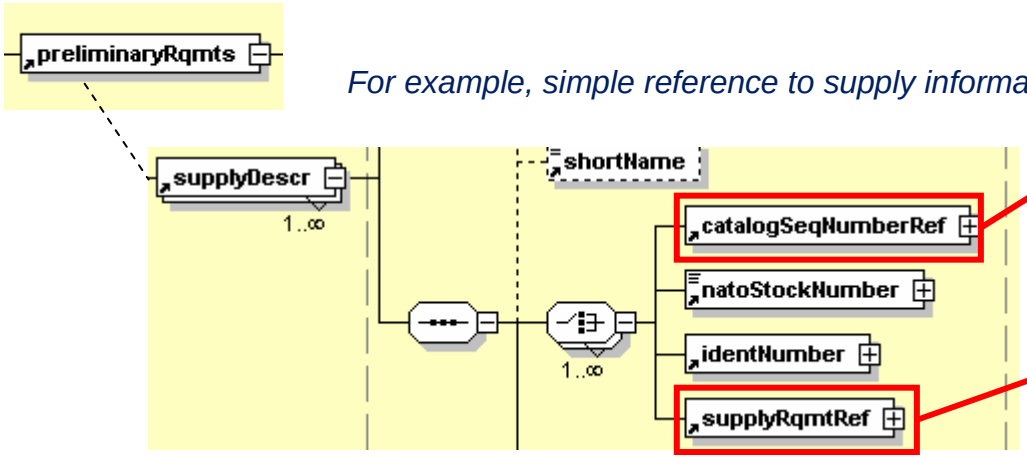
What's new in 4.1? (2)

NEW

- References to CIR data modules (CPF 2007-066S1)
  - There are 2 types of references to CIR data modules:
    - (1) Simple references to CIR.

The reference is for information and the referred information is not mandatory part of the referring data module.

For example, simple reference to supply information from the procedure preliminary requirements



Simple reference to the supply properties listed in an IPD CSN

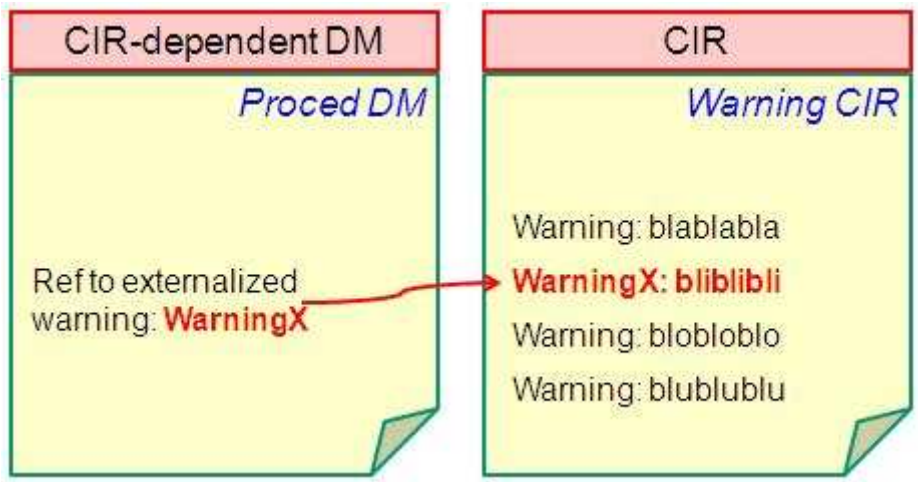
or

Simple reference to the supply properties listed in the supply requirement CIR

What's new in 4.1? (3)

NEW

- References to CIR data modules (CPF 2007-066S1)
  - There are 2 types of references to CIR data modules:
    - (1) Simple references to CIR.
    - (2) CIR-dependent data modules.



A data module from which a piece of mandatory information has been externalized to a CIR data module.

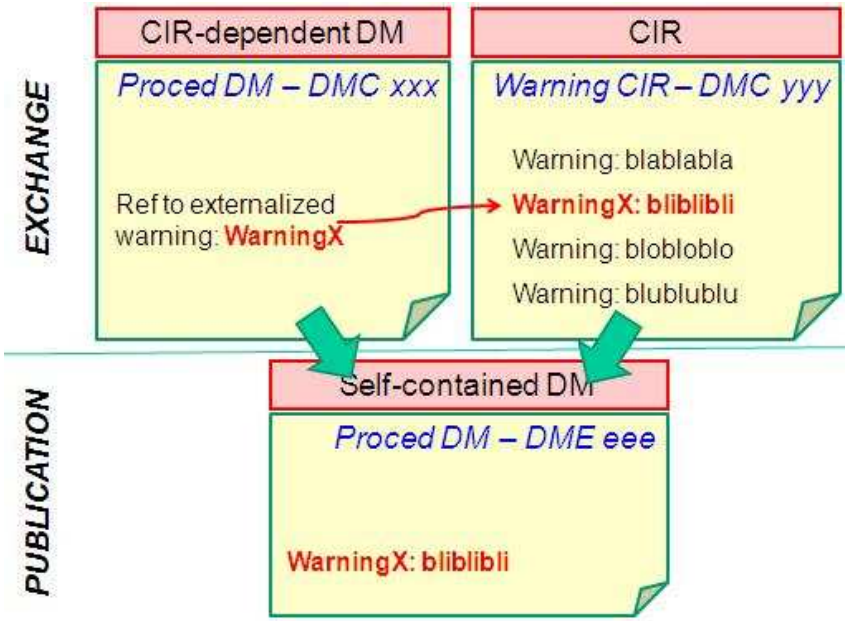
Only for applicability annotations, warnings, cautions and parts (for IPD).

What's new in 4.1? (4)

NEW

- References to CIR data modules (CPF 2007-066S1)
  - There are 2 types of references to CIR data modules:
    - (1) Simple references to CIR.
    - (2) CIR-dependent data modules.

For publication, self-contained data modules can always be retrieved from the CIR-dependent data modules
(See S1000D v4.1 for detailed method)



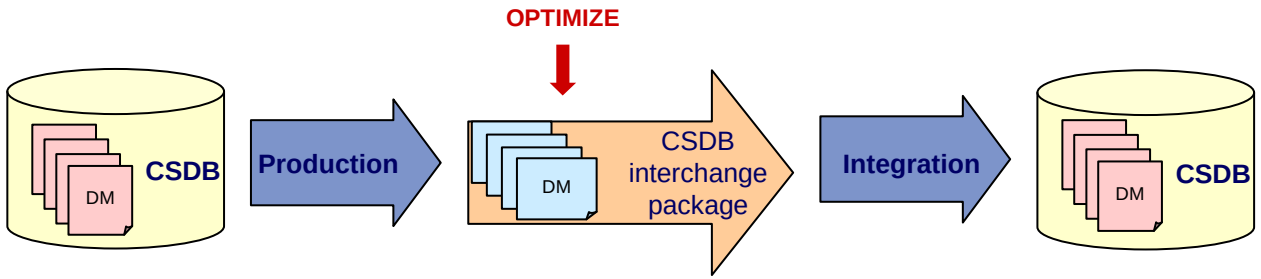
What's new in 4.1? (5)

- Clean-up of references to CIR data modules (CPF 2010-014S1):
  - Replaced <referenceDesignator> by <functionalItemRef> to enable clean references to functional item CIR.
  - Added <partRef> in addition to <identNumber>
  - Removed the ability to express zone using element <installationLocation>. <zoneRef> to be used instead
  - …
- Further clean-up will be needed in later issues

What's new in 4.1? (6)

NEW

- Incremental update for CIR data modules (CPF 2007-004AA)
  - Mechanism for Data exchange.



➔ Reduce the volume of exchanged data by delivering only the CIR entries that have been updated since last CIR data module issue instead of delivering all the CIR entries.

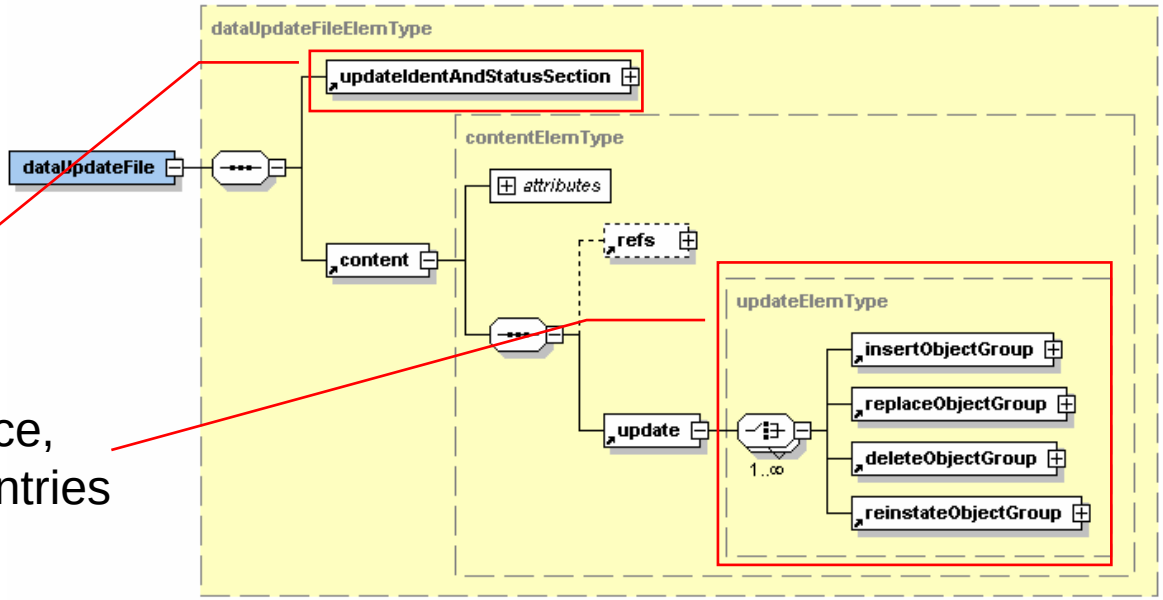
What's new in 4.1? (7)

NEW

- Incremental update for CIR data modules (CPF 2007-004AA)
  - Creation of a new CSDB object to deliver these increments: The Data update file.
  - The data update file has a specific schema: update.xsd

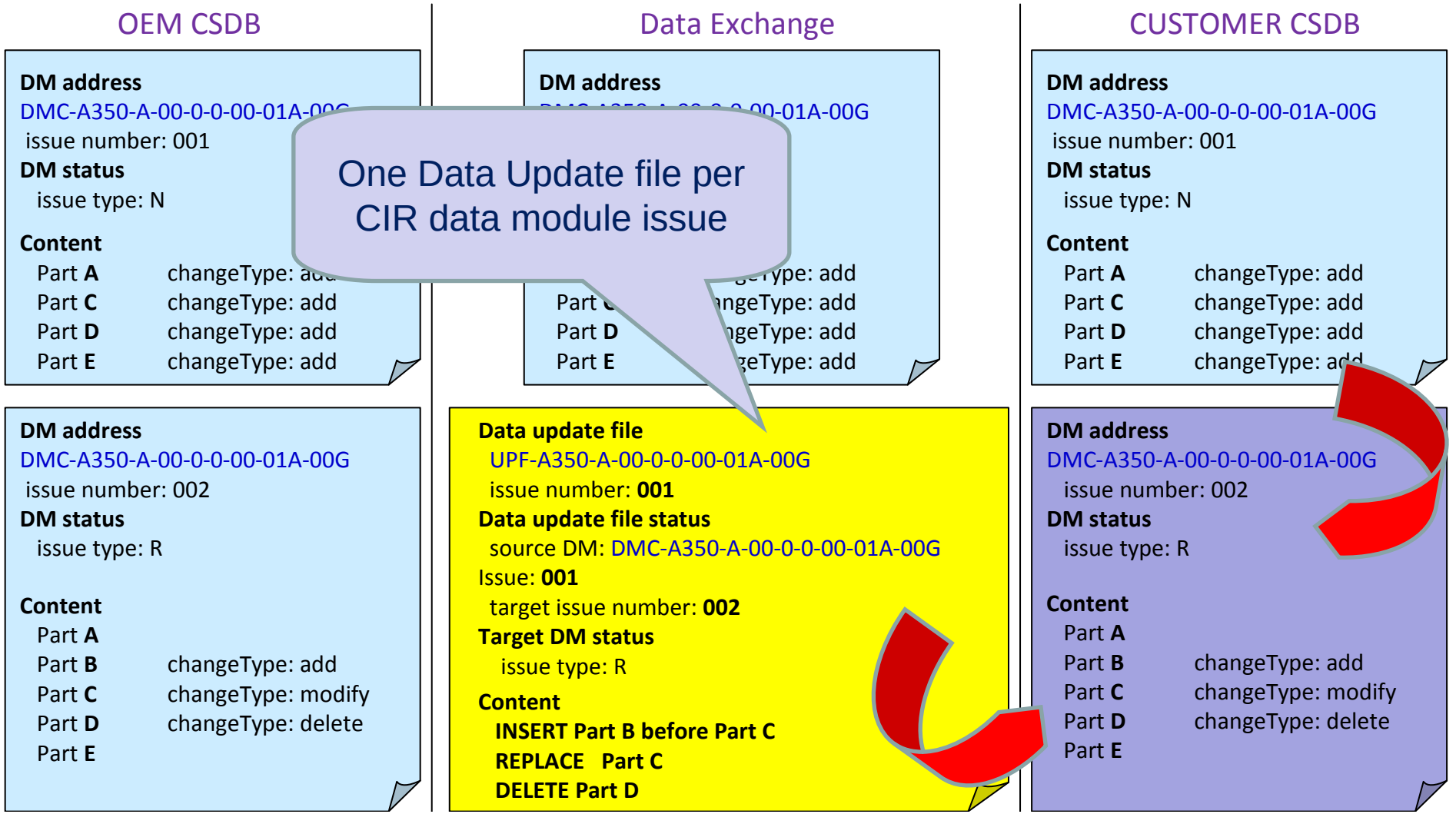
A specific identification and management method

Elements to insert, replace, delete or reinstate CIR entries



What's new in 4.1? (8)

- Incremental update for CIR data modules (CPF 2007-004AA)



What's new in 4.1? (9)

- Business enhancements
  - Circuit breaker repository
    - Enhanced circuit breaker identification, new properties
  - Functional Item repository
    - Enhanced functional item identification, new properties
  - Access point repository
    - New properties
  - Part repository
    - See GIPDTT presentation
  - Functional and/or physical area repository
    - Enhanced identification

Conclusion

- TIRTT work for 4.1:
  - *Extend the scope of CIR types…*
    - Technical Information Repository becomes **C**ommon **I**nformation **R**epository
    - 3 new CIR data module types: Externalized applicability annotations, Warnings, Cautions
  - *Ease the use for all Projects…*
    - Enhanced CIR explanation (Chap 4.13.1): Publication and data exchange, simple references to CIR and CIR-dependent data modules
    - Started the schema clean-up for references to CIR data modules
  - *A step further to data exchange optimization…*
    - Incremental update of CIR data modules (Chap 4.13.2) with Data update file