



Standards for Technology in Automotive Retail

Data Compliance Guidelines

Version 1.2

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Table of Contents

1.	Introduction.....	1
2.	General Data Compliance Criteria.....	2
2.1	Implementation Versions	2
2.2	Field Usage	2
2.3	Data Format.....	2
2.4	Required Fields	2
2.5	Optional Fields	2
2.6	Enumerations	3
3.	STAR XML BOD Data Compliance.....	4
3.1	STAR Schema Repository	4
3.1.1	Developer Schema.....	4
3.1.2	Standalone Schema.....	4
3.2	Validation.....	4
3.3	Schema Usage	4
3.4	Required BOD Structure	5
3.5	Optional Components	5
3.6	Verbs	5
3.7	Namespaces.....	5
4.	STAR DTS Data Compliance.....	6
4.1	General File Format	6
4.2	Required DTS Structure.....	6
4.3	Text Format.....	6
5.	Examples of Non-compliance.....	7
5.1	Other XML Formats.....	7
5.2	Extensions	7

Revision History

Date	Version Number	Description
10/18/04	1.0	Initial Version
11/29/05	1.1	Change XML Validation Statement to read: “All XML transactions must be able to validate against STAR schema to be compliant.”
01/24/07	1.2	Reformatted document Updated Field Usage and Enumerated Section with information about modification requests Updated and moved XML Validation requirement to XML specific compliance section Update the STAR Schema Repository Section with information about Developer versus Standalone schema Added information about Verb compliance Added information about Namespace compliance Removed “N/A” for required fields discussion

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Data Compliance Guidelines

1. INTRODUCTION

STAR currently supports two standard formats for the movement of data: 1) DTS (Data Transfer Specifications) standards which define batch-oriented, flat file formats, and 2) Business Object Documents (BODs) based on XML (Extensible Mark-up Language) standards which define data formats used for more direct server to server exchange, such as over the Internet. For implementations of STAR standards to be successful and interoperable, the standards must be used consistently among trading partners.

In order to promote interoperability between applications using these standard formats, STAR has developed a series of data compliance guidelines. Implementers of STAR data format standards, XML or DTS, are to use these guidelines when determining whether or not their implementations are STAR data compliant.

The intention of this document is to cover compliance at the payload level only. This document is not intended to address compliance at the transport level. For more information on STAR's standard transport mechanisms, please see the STAR Transport Guidelines located on the STAR website at <http://www.starstandard.org/index.php?n=SIGARCHITECTURE.Architecture>.

2. GENERAL DATA COMPLIANCE CRITERIA

The following set of data compliance criteria apply to both the STAR XML standards as well as the STAR DTS standards.

2.1 IMPLEMENTATION VERSIONS

It is expected that the initial STAR member implementation of each DTS would be at least at the current version of the DTS and any XML implementations would be done at least at the current effective version of the STAR XML Repository. For example, if the current version of the STAR Parts Order DTS standard 4.0 STAR member should not implement 3.0 as their initial implementation.

2.2 FIELD USAGE

Fields must only contain the information that has been defined for that field per the definition in the STAR XML schema specification or the STAR DTS.

If fields are being used for other purposes, that is an indication that a requirement is not being met within the standard. When that is the case, the implementers should submit a modification request form to have the requirement added to the specification. Modification request forms can be found on the STAR website. Once completed, request forms are to be submitted to a STAR Data Architect. NOTE: Modification requests are only processed for STAR members.

2.3 DATA FORMAT

If data is sent from an originating system in a particular format, it must be sent back to the originating system in the same format.

For example, if the OEM sends a part number with dashes (123-0487-487), the DSP must return the part number with dashes.

2.4 REQUIRED FIELDS

All required fields must be populated. If the implementation is XML, without the required fields the payload will not pass schema validation.

2.5 OPTIONAL FIELDS

In the case of XML, optional fields do not need to be sent over the wire in order for an XML message to successfully pass STAR schema validation. However, STAR data compliance

guidelines require that the Sender must send all optional fields available in their system, and the Receiver will be responsible for only recognizing fields that they need.

If the implementation is XML, empty tags, i.e., tags with no data content should not be sent. For example:

<DealerNumber> <DealerNumber>

- Or -

<DealerNumber/>

In both cases the DealerNumber tag is empty and should not be sent.

2.6 ENUMERATIONS

Enumerated fields refer to those fields that have a standard list of values that must be used to populate the field. For example, SalesClassCode is an enumerated field with values that include “New”, “Used”, “Demo”, etc. When an enumerated list is defined for a field, only those values are considered compliant. Users may not add their own values to an enumerated list.

If values are needed for a particular STAR member implementation, STAR members may submit a modification request form to have those values added. Values are added quickly and will be published in the next Milestone release of the draft version of a standard.

3. STAR XML BOD DATA COMPLIANCE

The following set of data compliance criteria apply specifically to the STAR XML BOD standards. For the remainder of this document, these standards will be referred to as BODs.

3.1 STAR SCHEMA REPOSITORY

All BOD messages must be based on XML schema developed and approved by STAR located in the STAR schema repository. Schema that is added to the STAR Schema Repository by any organization other than STAR is not considered a STAR standard.

There are two forms of STAR schema that are considered compliant: 1. Developer, 2. Standalone

3.1.1 *Developer Schema*

A Developer Schema is made up of a series of individual schema, similar to a class library. The Components are found in one schema, the fields in another schema, the Nouns in another, etc. The individual schema are tied together with include statements in the Developer Schema

3.1.2 *Standalone Schema*

A Standalone or “flattened” schema is one that has all the necessary pieces of information from the individual files flattened into one schema. Note however that only information from one namespace can be flattened. Information from other namespaces will still require an include or import statement.

3.2 VALIDATION

In order for a BOD message to be considered valid based on STAR data compliance guidelines, the message must be able to successfully validate against the appropriate STAR schema.

XML Instances must be validated using the "strict" schema validation option of the parser. The "lax" option is not star compliant.

3.3 SCHEMA USAGE

All BODs must be used as specified by the corresponding XML schema and implementation guidelines as approved by the STAR members.

3.4 REQUIRED BOD STRUCTURE

In order for a BOD message to be considered compliant it must contain the following components of information:

- ApplicationArea
 - Sender
 - CreationDateTime
 - Destination
- DataArea
 - Verb
 - Noun
 - All required Components in the Noun

3.5 OPTIONAL COMPONENTS

If a component is optional it does not have to be included in order to pass schema validation. If there are required fields on an Optional component, they only need to be sent if the Optional component is used.

3.6 VERBS

In order for a BOD implementation to be compliant, the Verb must be used as defined by STAR. Modifications to the Verbs or the creation of new Verbs by users would not be considered compliant.

3.7 NAMESPACES

Only namespaces defined and/or included by STAR may be used in the implementation of STAR BODs. It is not considered compliant for users to define and incorporate their own namespaces

4. STAR DTS DATA COMPLIANCE

The following set of data compliance criteria apply specifically to the STAR DTS standards.

4.1 GENERAL FILE FORMAT

Interfaces implemented based on the STAR DTS must follow requirements outlined in the DTS General File Format document. This document can be found on the STAR website at <http://www.starstandard.org/index.php?n=SIGDTS.DTS>.

4.2 REQUIRED DTS STRUCTURE

In order for a DTS file transmission to be considered compliant it must contain at a minimum one IDENT record.

4.3 TEXT FORMAT

Text transmitted in files based on STAR DTS must be formatted as either:

- ASCII
- UTF-8,
- UTF-16 encoded

5. EXAMPLES OF NON-COMPLIANCE

The following section documents instances of implementations that would not be considered STAR compliant.

5.1 OTHER XML FORMATS

The use of XDR, DTD, or Relaxed NG are not considered STAR compliant

5.2 EXTENSIONS

Extending any part of a STAR data standard is not considered STAR compliant. Examples of this would be:

- The addition of a User Area to a BOD or DTS.
- The inclusion of a user-defined namespace to a BOD
- The inclusion of a user-defined BOD or schema to the STAR schema repository
- The addition of user-defined values to an enumerated list that have not been approved by STAR