



Business To Manufacturing Markup Language Transaction Profile Version 6.0 - March 2013 B2MML-TransactionProfile



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CHANGE HISTORY

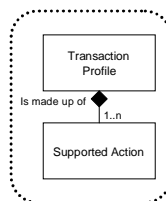
Change	Date	Person	Description
V04	04 June 2007	Dennis Brandl	<ul style="list-style-type: none">Initial version with transaction elements
V0401	Oct 2008	Dennis Brandl	<ul style="list-style-type: none">Updated version number
V0500	Mar 2011	Dennis Brandl	Updated version documentation and WBF name in copyright. Updated list of objects types.
V0600	Aug 2012	Dennis Brandl	Updated MESA Copyright and branding

SCHEMA SCOPE

This document defines the information about transaction profile definitions that may be exchanged between business systems and manufacturing operations systems. This information is based on the data models and attributes defined in the ANSI/ISA 95.00.02 Enterprise/Control System Integration standard. Contact ISA (The Instrumentation, System, and Automation Society) for copies of the standard. Additional information on the standard is available at www.isa.org.

Key Information Assumptions

The data represented in these schemas is derived from the UML model below. This model is defined in the ANSI/ISA 95.00.05 standard. The information model defines a transaction profile as a collection of supported action definitions.



Model of Transaction Profile Information

This schema uses a common schema for definition of elements that are used in multiple schemas. See the document defining the Common schema for definition of the common elements.

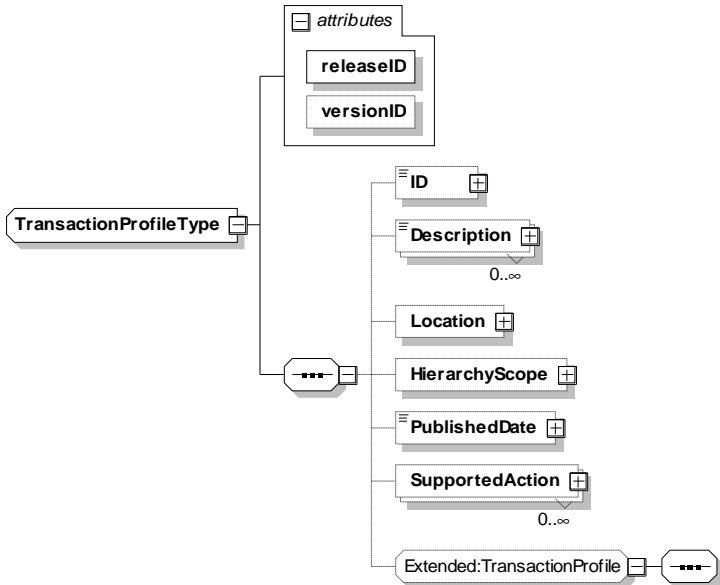
Transaction Profile

A TransactionProfile contains a set of supported transaction actions. There is only one transaction defined for a TransactionProfile, a GET transaction. This allows an application to query another application to obtain what B2MML transaction services the server provides.

Supported Action

A SupportedAction contains a definition of a single transaction that is supported by an application. This includes the verb that is supported (GET, PROCESS, CHANGE, CANCEL, CONFIRM, SYNC ADD, SYNC CHANGE, and SYNC DELETE) and the noun (object type) that is supported.

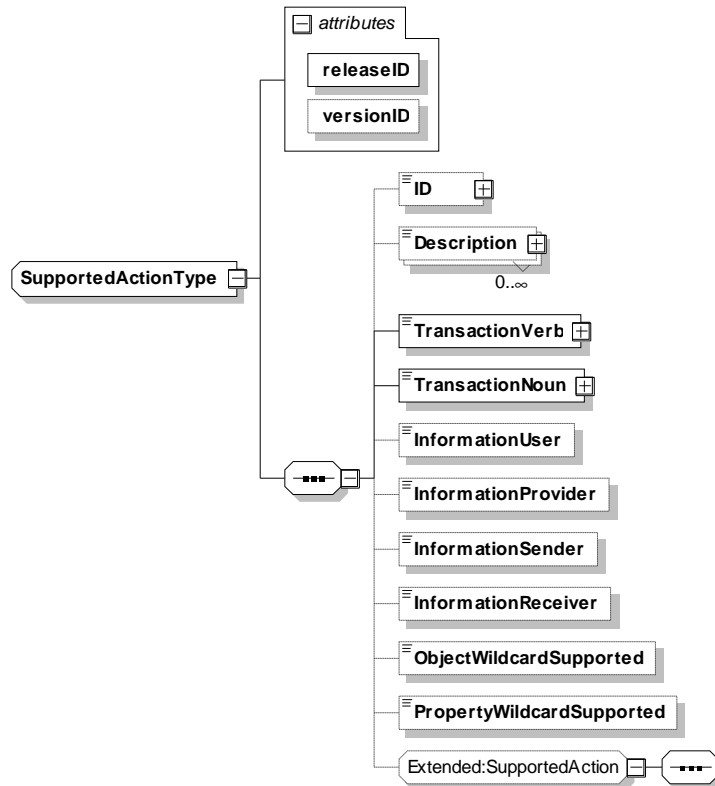
ELEMENT DEFINITIONS

Element/Type	Description
TransactionProfile	<p>A complex type that includes an identification of the transaction profile, a location (scope) of the profile, the published date of the profile, and any supported actions.</p>  <pre> classDiagram class TransactionProfileType { +attributes { +releaseID +versionID } +ID +Description 0..∞ +Location +HierarchyScope +PublishedDate +SupportedAction 0..∞ +Extended:TransactionProfile } </pre>

SupportedAction

A complex type that contains:

- An identification of the supported action.
- An optional description of the supported action.
- The verb that is defined for the supported action.
- The noun that is defined for the supported action.
- An indication (True or False) that the responder can act as an information user.
- An indication (True or False) that the responder can act as an information provider.
- An indication (True or False) that the responder can act as an information Sender.
- An indication (True or False) that the responder can act as an information Receiver.
- An indication (True or False) that the responder supports wildcard specifications in object identifications.
- An indication (True or False) that the responder supports wildcard specifications in property identifications.



TransactionNounType	<p>A string used to indicate the noun supported by a transaction that is defined in a TransactionProfile. The value must be one of the following standard enumerations:</p> <p>"PERSONNEL CLASS", "PERSON", "QUALIFICATION TEST", "EQUIPMENT CLASS", "EQUIPMENT", "CAPABILITY TEST", "MAINTENANCE REQUEST", "MAINTENANCE WORK ORDER", "MAINTENANCE RESPONSE", "MATERIAL CLASS", "MATERIAL DEFINITION", "MATERIAL LOT", "MATERIAL SUBLOT", "MATERIAL TEST", "PROCESS SEGMENT", "OPERATIONS CAPABILITY", "OPERATIONS DEFINITION", "OPERATIONS SCHEDULE", "OPERATIONS PERFORMANCE", "PRODUCTION CAPABILITY", "PRODUCT DEFINITION", "PRODUCTION SCHEDULE", "PRODUCTION PERFORMANCE", "TRANSACTION PROFILE", "RESOURCE RELATIONSHIP NETWORK", "RESOURCE NETWORK CONNECTION INFORMATION", "WORK ALERT", "WORK ALERT DEFINITION", "WORK ALERT INFORMATION", "WORK DEFINITION INFORMATION", "WORK DIRECTIVE", "WORK MASTER", "WORK FLOW INFORMATION", "WORK FLOW SPECIFICATION", "WORK FLOW SPECIFICATION TYPE", "WORK SCHEDULE", "JOB LIST", "WORK PERFORMANCE", "JOB RESPONSE", "WORK CAPABILITY", "WORK CAPABILITY INFORMATION", "CONFIRM BOD", or "Other"</p> <p>If "Other" then the type is an application specific extension and the value is defined in the attribute "OtherValue".</p>
TransactionVerbType	<p>A string used to indicate a verb transaction set that is defined in a TransactionProfile. The value must be one of the following standard enumerations:</p> <p>"GET", "PROCESS", "CHANGE", "CANCEL", "CONFIRM", "SYNC ADD", "SYNC CHANGE", "SYNC DELETE", or "Other".</p> <ul style="list-style-type: none"> • GET à Supports the GET/SHOW transaction • PROCESS à Supports the PROCESS/ACKNOWLEDGE transaction • CHANGE à Supports the CHANGE/RESPOND transaction • CANCEL à Supports the CANCEL transaction • CONFIRM à Supports a CONFIRM response • SYNC ADD à Supports the SYNC ADD transaction • SYNC CHANGE à Supports the SYNC CHANGE transaction • SYNC DELETE à Supports the SYNC DELETE transaction <p>If "Other" then the type is an application specific extension and the value is defined in the attribute "OtherValue".</p>

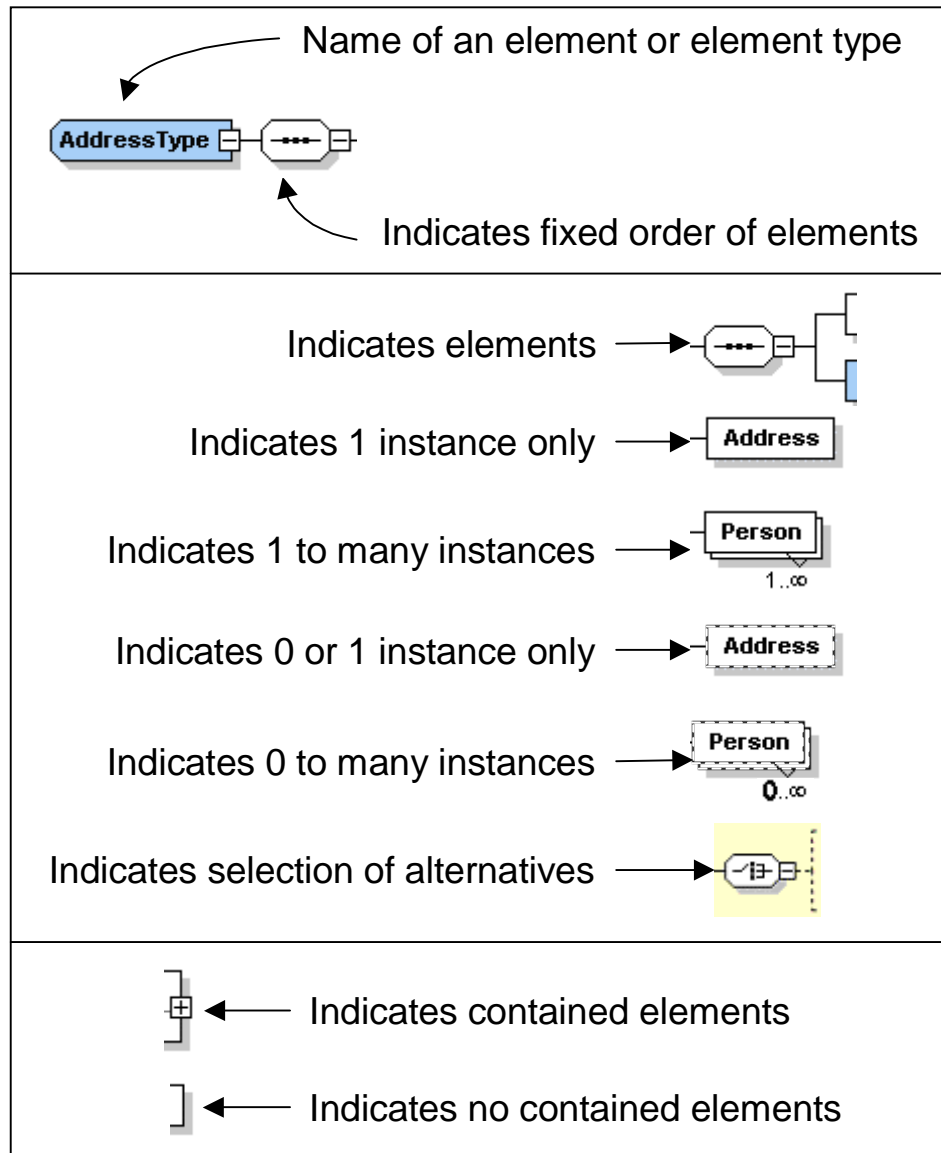
TRANSACTION ELEMENTS

The following elements are defined to support the ISA 95 Part 5 transactions, using the transaction data types defined in the B2MML-Common.xsd schema.

Transaction Profile Information Elements	Description
GetTransactionProfile	Get <i>TransactionProfile</i> definitions.
ShowTransactionProfile	Response from a <i>GetTransactionProfile</i> message.

DIAGRAM CONVENTION

The schema diagrams using the following convention to illustrate the structure of the schema elements, the type of the elements and attributes, and the rules for optional elements and repetition.





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About the XML Committee: The XML Committee was formed within MESA to provide a forum for the development of the B2MML and BatchML specifications.