Business To Manufacturing Markup Language

Work Alert

Version 6.0 - March 2013

B2MML-WorkAlert

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CHANGE HISTORY

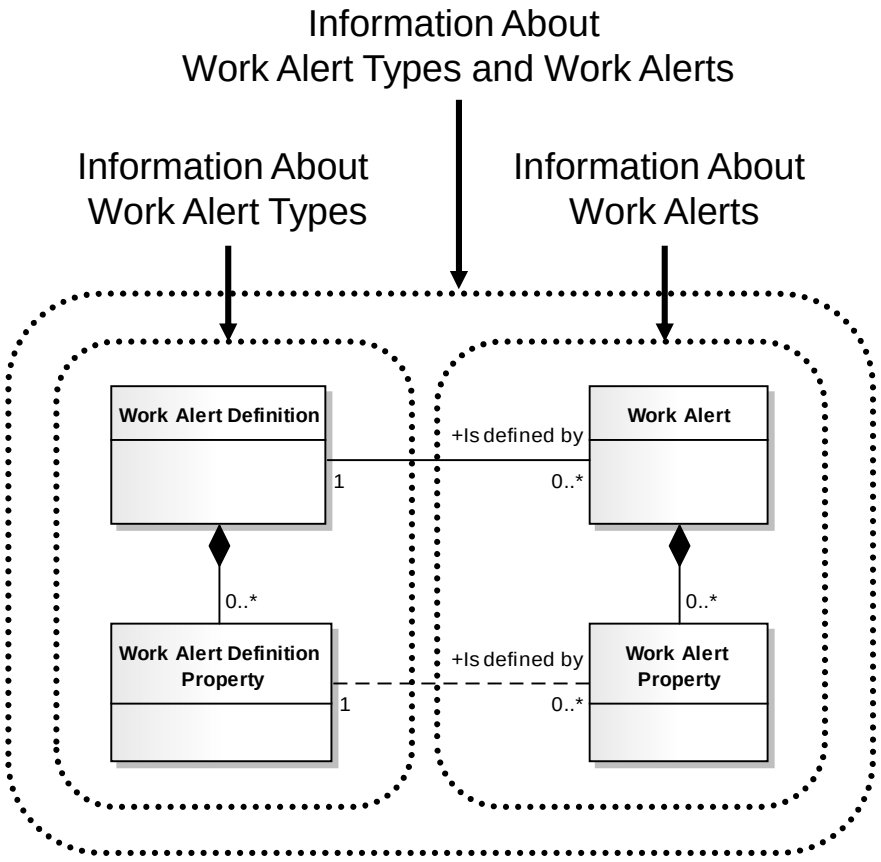
Change	Date	Person	Description
V0600	Aug 2012	D. Brandl	• Initial Version

SCHEMA SCOPE

This document defines the information about the definition of work alert information that may be exchanged by manufacturing operations management systems. This information is based on the data models and attributes defined in the ANSI/ISA 95.00.04 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 95.00.04 standard. The key assumption is that the information will be accessed by a single Work Alert Definition, a single Work Alert, or a collection of Work Alerts and Work Alert Definitions.



Model of Exchanged Work Alert Information

This schema uses a common schema for definition of elements that are used in multiple schemas, such as ID, Description, and Value. See the document defining the Common schema for definition of the common elements.

Type Definitions

The XML schema uses a model that defines simple and complex data types for each element. The data types follow the convention of a suffix of "Type" added to the element name.

The method is a modification of the "Venetian Blind Model", defined in the book Professional XML Schemas, 2001, published by WROX (ISBN 1-861005-47-4). It makes all of the type names global and usable in user derived works, without a loss of context or additional information required to identify the element as of being of the same type as related B2MML elements.

Some elements are specified as "nillable". At times, it is very important to distinguish between empty content and null content in your XML documents. XML Parsers consider text values of empty elements as an empty string, and not null. Elements which may be required, but which may have a null value are identified with a nill able attribute.

WorkAlertInformation

A main structuring element of the schema definition is WorkAlertInformation. This element allows for the exchange of multiple WorkAlertDefinitions and WorkAlerts in a single message.

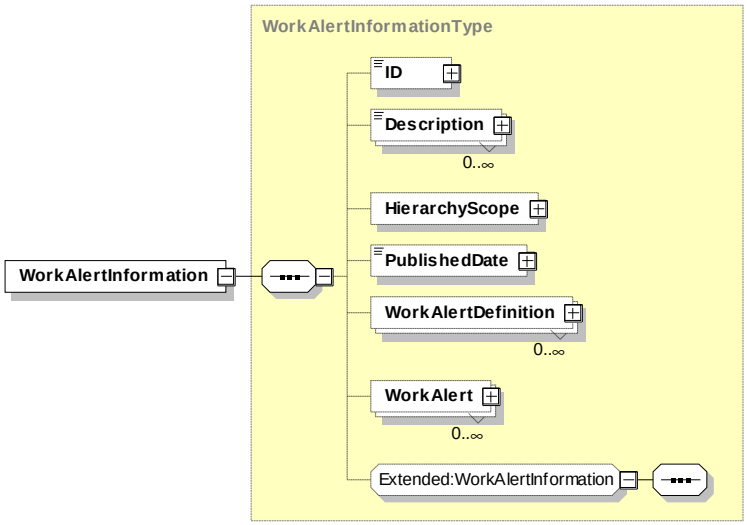
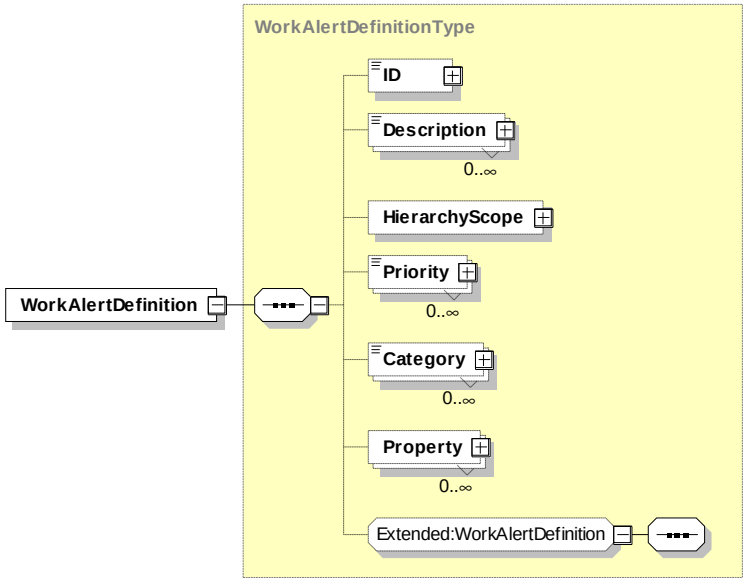
WorkAlertDefinition

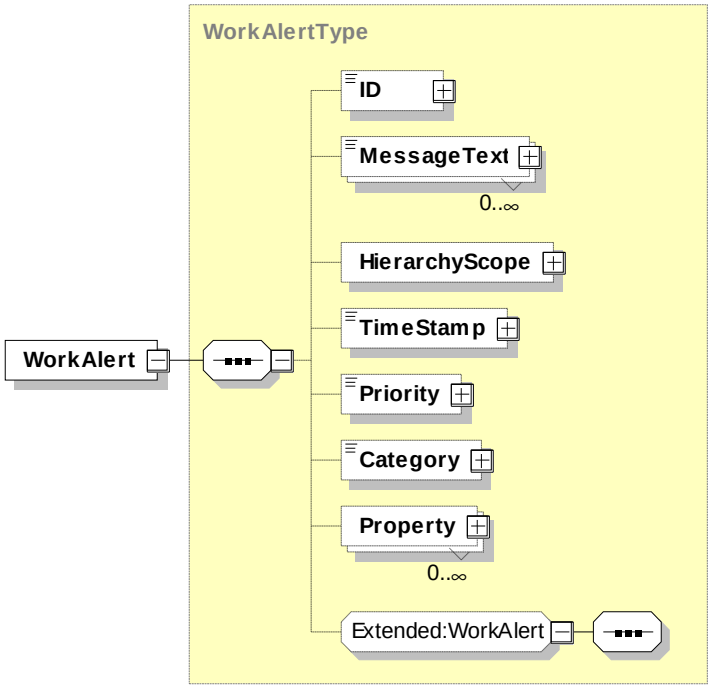
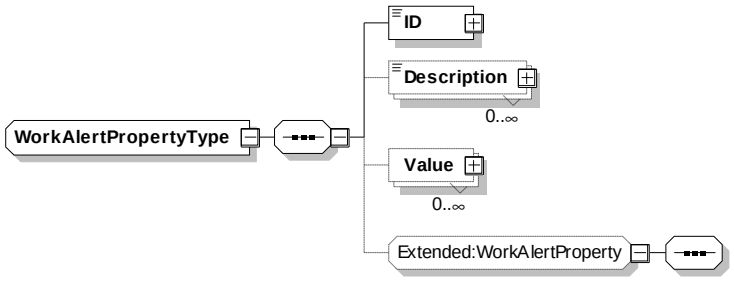
A main structuring element of the schema definition is WorkAlertDefinition. This element allows for the exchange of information about a single work alert definition.

WorkAlert

A main structuring element of the schema definition is WorkAlert. This element allows for the exchange of information about a single work alert.

ELEMENT DEFINITIONS

Element/Type	Description
WorkAlertInformation ***WorkAlertInformationType***	Defines a collection or work alerts and/or work alert definitions. Contains the hierarchy scope of the work alerts and/or work alert definitions and the published date of the alerts or definitions. 
WorkAlertDefinition ***WorkAlertDefinitionType***	Contains the definition of a work alert. This includes an ID of the work alert type, the hierarchy scope of the definition, a priority of the work alert definition that acts as a guide to the relative level of importance of a *work alert*, a category that defines a general grouping associated with a *work alert definition*, and properties associated with the work alert. 

Element/Type	Description
WorkAlert ***WorkAlertType***	Contains a work alert, including the ID of the associated work alert definition, any text messages associated with the alert, the hierarchy scope of the alert, the timestamp, priority, and category of the work alert, and any properties of the work alert. 
WorkAlertDefinition/Property WorkAlert/Property ***WorkAlertPropertyType***	Contains a property for a work alert definition or for a work alert. Properties define additional elements of data that may be associated with the work alert. 

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.

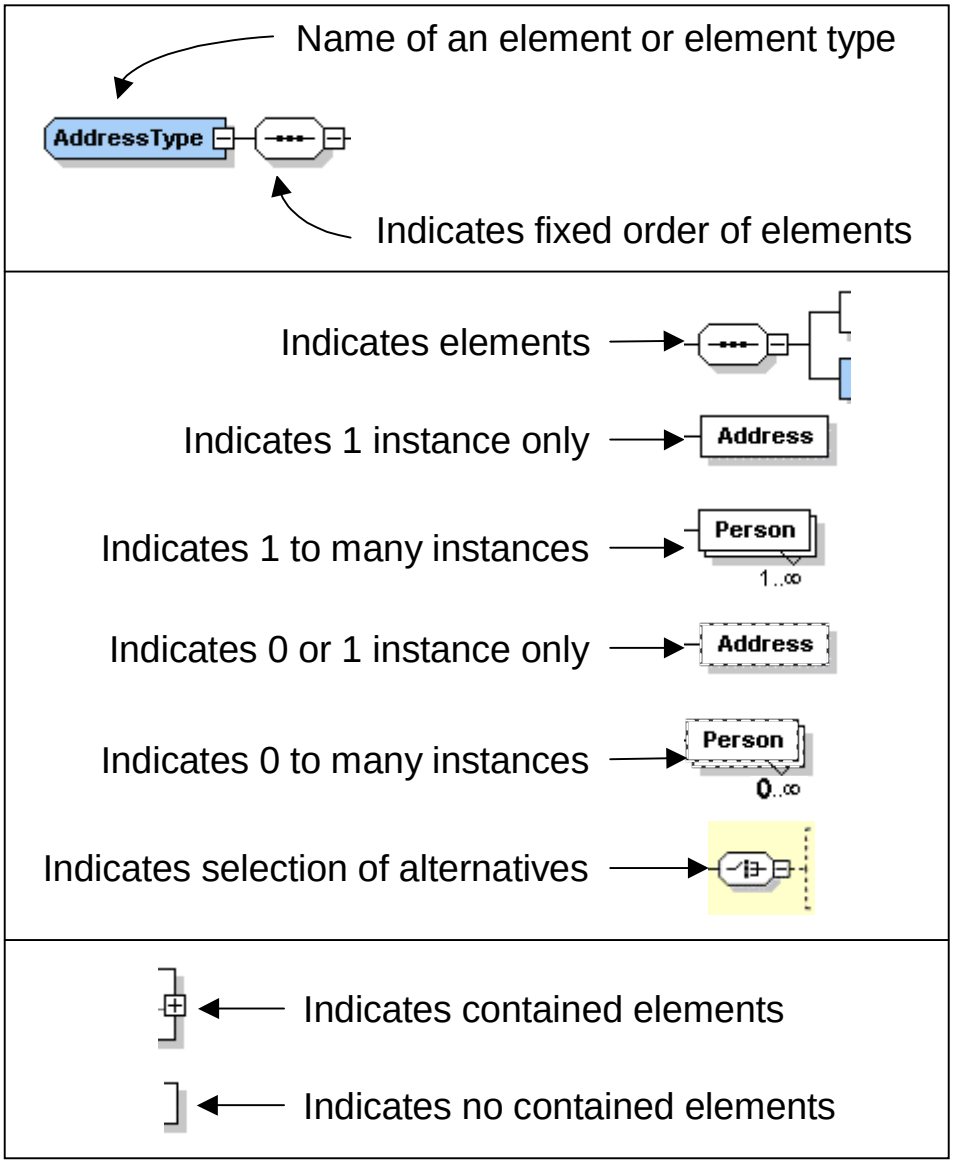
Work Alert Information Elements	Description
GetWorkAlertInformation	Get *WorkAlertInformation* definitions.
ShowWorkAlertInformation	Returned information from the *Get*WorkAlert*Information* message.
ProcessWorkAlertInformation	Process *WorkAlertInformation* definitions.
AcknowledgeWorkAlertInformation	Returned status from the *ProcessWorkAlertInformation* message.
ChangeWorkAlertInformation	Change *WorkAlertInformation* definitions.
RespondWorkAlertInformation	Returned status from the *ChangeWorkAlertInformation* message.
CancelWorkAlertInformation	Cancel *WorkAlertInformation* definitions.
SyncWorkAlertInformation	Published *WorkAlertInformation* definitions.

Work Alert Definition Elements	Description
GetWorkAlertDefinition	Get *WorkAlertDefinition* definitions.
ShowWorkAlertDefinition	Returned information from the *Get*WorkAlertDefinition message.
ProcessWorkAlertDefinition	Process *WorkAlertDefinition* definitions.
AcknowledgeWorkAlertDefinition	Returned status from the *ProcessWorkAlertDefinition* message.
ChangeWorkAlertDefinition	Change *WorkAlertDefinition* definitions.
RespondWorkAlertDefinition	Returned status from the *ChangeWorkAlertDefinition* message.
CancelWorkAlertDefinition	Cancel *WorkAlertDefinition* definitions.
SyncWorkAlertDefinition	Published *WorkAlertDefinition* definitions.

Work Alert Elements	Description
GetWorkAlert	Get *WorkAlert* definitions.
ShowWorkAlert	Returned information from the *Get*WorkAlert message.
ProcessWorkAlert	Process *WorkAlert* definitions.
AcknowledgeWorkAlert	Returned status from the *ProcessWorkAlert* message.
ChangeWorkAlert	Change *WorkAlert* definitions.
RespondWorkAlert	Returned status from the *ChangeWorkAlert* message.
CancelWorkAlert	Cancel *WorkAlert* definitions.
SyncWorkAlert	Published *WorkAlert* definitions.

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 Committe was formed within MESA to provide a forum for the development of the B2MML and BatchML specifications.