



# Industrial automation systems — Manufacturing Message Specification —

## Part 1: Service definition

### TECHNICAL CORRIGENDUM 2

*Systèmes d'automatisation industrielle — Spécification de messagerie industrielle*

*Partie 1: Définition de service*

*RECTIFICATIF TECHNIQUE 2*

Technical corrigendum 2 to International Standard ISO/IEC 9506-1:1990 was prepared by Technical Committee ISO/TC 184, *Industrial automation systems and integration*, Subcommittee SC 5, *Architecture and communications*.

NOTE — Proper application of this corrigendum requires that amendment 1, technical corrigendum 1, and amendment 2 have been applied (in that order) to the base document. Page numbers in this technical corrigendum refer to the base standard as published in 1990; subclause and paragraph references are to the base standard as modified by the prior two amendments and the prior corrigendum.

Page 23

#### Subclause 7.2.13

Replace the text for Current Modifier Reference with:

This attribute is an integer representing the position of the currently executing modifier in the Transaction Object's List of Pre-execution Modifiers.

Page 25

#### Subclause 7.3.2

Remove the "X" under **Domain** for **Semaphore Objects**.

Page 37

### Subclause 8.3.2

In the paragraph between note 1 and note 2 in the second line, change

are released unless other

to

are released and any defined procedures associated with their deletion are performed unless other

Page 38

### Subclause 8.4.2

In the third paragraph, change

are released unless other

to

are released and any defined procedures associated with their deletion are performed unless other

Page 56

### Subclause 10.1.1

Under Domain Content, replace

LoadDomainContent services.

with

UploadSegment services and is the information transferred by the LoadDomainContent and StoreDomainContent services.

Page 58

### Subclause 10.1.3

In figure 4 change arrow between IN-USE and D7 to be:

17

-----&gt;

19,31

&lt;-----

*Page 77***Subclause 10.11.2**

In the note change

StoreDomainUpload

to:

StoreDomainContent

*Page 78***Subclause 10.12.2**

Insert the following before the last sentence of the paragraph:

In conjunction with the deletion of any object the MMS server shall perform any procedure defined for the deletion of that object.

*Page 88***Subclause 11.2.2**

Insert the following text at the end of the first paragraph in item h) between "(see 11.1.3)." and "The MMS":

The MMS server shall verify that there does not exist an Event Condition, Event Action, or Event Enrollment with the same name or scope as the Program Invocation. If one should exist, the service shall fail.

*Page 142***Subclause 12.16.1.2.1**

Change

Named Variable or Scattered Access

to

Named Variable List

**Subclause 12.16.1.2.2**

Change

Named Variable or Scattered Access

to

Named Variable List

**Subclause 12.16.1.3.1**

Change

Named Variable or Scattered Access

to

Named Variable List

*Page 156*

**Subclause 13.1.4**

Add a period to the end of the first sentence.

*Page 157*

**Subclause 13.1.5**

Change the first sentence from

A Pool Semaphore may be described by the following model.

to

A Pool Semaphore may be described by the model in figure 11.

*Page 182*

**Subclause 15.1.1.1**

Replace the text for Alarm Summary Reports with the following:

The Alarm Summary Reports attribute shall exist for monitored Event Conditions objects only. If true, it shall specify that the Event Condition object shall be included in responses to the GetAlarmSummary service without consideration of other filtering criteria. If false, the presence of the Event Condition object shall be subject to the filtering criteria described in the GetAlarmSummary service.

Page 185

### Subclause 15.1.2.3

Add the following new subclause:

#### 15.1.2.3 Procedure on Deletion of Event Condition Object

If the List Of Event Enrollment Reference attribute contains a reference to an Event Enrollment object which specifies the transition ANY-TO-DELETED, the VMD shall execute the Event Transition Processing (see 15.1.4.2) prior to deleting the Event Condition Object.

The Event Condition Reference attribute of any Event Enrollment object which is referred to the deleted Event Condition object shall be set to the value UNDEFINED.

Page 186

### Subclause 15.1.3.1

In the object definition under attribute **State** add "UNDEFINED" to the list.

Page 190

### Subclause 15.1.3.1

Add to end of the first paragraph under **State**:

The State attribute may have a value of UNDEFINED, if an AlterEventEnrollment service attempt to change the Alarm Acknowledgement Rule attribute when the value of the Event Condition Reference attribute is UNDEFINED.

Page 196

### Subclause 15.1.4.2.7

In the last paragraph before the note add a new sentence:

If necessary, the value of the State attribute shall be updated for the appropriate minor state.

Page 202

### Subclause 15.3.2

Replace all of this subclause with the following text:

If the request is acceptable, the VMD shall determine the set of Event Condition names that are to be deleted and shall attempt to delete them.

If an error occurs during the deletion of any of the specified objects, such as the object does not exist, the VMD shall return a negative response. Otherwise, the procedure on deletion of Event Condition Object (see 15.1.2.3) shall be executed, the Event Condition object shall be deleted, and its name shall be made available for immediate redefinition and a positive response shall be issued, containing the value of the Candidates Not Deleted parameter.

The following conditions shall not be deemed an error and the Event Condition shall not be deleted:

- a) Attempting to delete an object with the MMS deletable attribute equal to false.
- b) Attempting to delete an object with a List of Event Enrollment Reference attribute which is not empty.

For each attempt to delete an object with an MMS deletable attribute equal to false, or a list of Event Enrollment Reference attribute which is not empty, the VMD shall increment by one the Candidates Not Deleted value response parameter.

NOTE — If this count is not equal to zero, the requesting MMS-user (the client) may use the GetNameList service to determine the Event Condition objects which were not deleted.

Page 206

### Subclause 15.6.1.1

Change

Enable

to

Enabled

Page 211

### Subclause 15.9.2

Replace all of this subclause with the following text:

If the request is acceptable, the VMD shall determine the set of Event Action names that are to be deleted and shall attempt to delete them.

If an error occurs during the deletion of any of the specified objects, such as the object does not exist, the VMD shall return a negative response. Otherwise, the Event Action object shall be deleted, and its name shall be made available for immediate redefinition and a positive response shall be issued, containing the value of the Candidates Not Deleted parameter.

The following conditions shall not be deemed an error and the Event Action shall not be deleted:

- a) Attempting to delete an object with the MMS deletable attribute equal to false.

- b) Attempting to delete an object with a List of Event Enrollment Reference attribute which is not empty.

For each attempt to delete an object with an MMS deletable attribute equal to false, or a list of Event Enrollment Reference attribute which is not empty, the VMD shall increment by one the Candidates Not Deleted value response parameter.

NOTE — If this count is not equal to zero, the requesting MMS-user (the client) may use the GetNameList service to determine the Event Action objects which were not deleted.

Page 215

#### **Subclause 15.12.1.1.2**

Add the following to the end of the paragraph:

If the Client Application Argument is present, Event Condition references of AA-scope shall only be permitted if the value of the Client Application Argument is the same as the MMS-user initiating the Define Event Enrollment service.

#### **Subclause 15.12.1.1.5**

Add the following to the end of the paragraph:

If the Client Application Argument is present, Event Action references of AA-scope shall only be permitted if the value of the Client Application Argument is the same as the MMS-user initiating the Define Event Enrollment service.

Page 219

#### **Subclause 15.13.1.2**

Replace

A successful result shall not supply service specific parameters.

with

When a positive result is issued the following parameter is supplied.

Page 220

#### **Subclause 15.13.2**

In the second paragraph, delete the second sentence "An Event Enrollment object ...".

**Subclause 15.13.2.1**

Change in item a)

, and  
to

Change in item b)

attribute  
to  
attribute, and

Insert after item b):

- c) has the value of NOTIFICATION in the enrollment class attribute

**Subclause 15.13.2.2**

Delete the last sentence: "Finally, a positive response ...".

**Subclause 15.13.2.3**

Replace the paragraph with the following text:

When the value of the Scope Of Delete parameter is equal to SPECIFIC, the VMD shall execute the procedure for Event Enrollment Deletion, (see 15.13.2.4), for each of the specified Event Enrollment objects for which the value of the MMS Deletable attribute is equal to true. If an Event Enrollment is specified that has the value of MODIFIER for the Enrollment class attribute, a negative response shall be returned.

**Subclause 15.13.2.4**

Add the following paragraph between the second and third paragraphs:

If an error occurs during the deletion of any of the specified objects, the VMD shall return a negative response. Otherwise, a positive response shall be issued, indicating the count of candidate Event Enrollment objects which are not deleted due to the presence of the value FALSE in the MMS deletable attribute.

Page 222

### **Subclause 15.14.1.1.3**

Insert the following paragraph after the first paragraph:

If the Scope of Request parameter specifies the value SPECIFIC, this parameter shall not be present.

In the third paragraph first line, change

EC, EA or SPECIFIC,

to

EC or EA,

Page 228

### **Subclause 15.16.1.2.1**

Delete the second sentence.

Page 229

### **Subclause 15.16.2**

Change the phrase in the last sentence of the second paragraph

shall be UNDEFINED

to

shall be set to UNDEFINED

Add the following phrase to the end of this sentence:

and the value of the Alarm Acknowledgement Rule attribute is changed by this service

Page 231

### **Subclause 15.17.1.1.7**

Modify the first line of the subclause from

shall be included

to

shall only be included