OIIE Scenario 9 – Publish OEM Model data from O&M to O&M

As operations and maintenance make observations about certain products, they may supplement the initial product data baseline with these observations. This data needs to be made available to other O&M systems, including REG-PRODUCT, ORM, EAM, etc., depending on which system is considered the System of Record for the supplementary data.

Actors

O&M System SoR	Send model updates. May be any O&M system acting as SoR for some subset of observational/supplementary data.
O&M Systems (other)	Receive model updates. May be any other O&M system that is not acting as SoR for the subset of data.

Data Content

The data sent from the O&M systems to other O&M systems are at a minimum composed of:

- The model(s)

- Any changes and/or additions to the meta-data properties of the model(s) made by O&M

- Any changes and/or additions to data sheet properties or their definitions for the model(s) made by O&M

NOTE   The changes and/or additions MUST be owned by O&M and not the OEM, i.e., some O&M system MUST be the SoR for the data that is being changed or added. Any changes or additions performed to OEM data MUST be published by the OEM as per Scenario 25.

MIMOSA CCOM Reference Types

For the purposes of reference data management, the following MIMOSA CCOM types may be referenced:

- AssetType

- PropertySetType/PropertySetDefinition (for Data Sheets)

- PropertyType/PropertyDefinition

- SegmentType

- UnitType

NOTE   For versions of MIMOSA CCOM prior to 4.1, the types referring to 'Property' use the term 'Attribute' instead.

System Interoperability Events

This scenario the requires the sending/receipt of the following Events:

- Publish Product Model Data Updates

Data Formats

The data published and received by O&M Systems must comply with MIMOSA CCOM BODs.

Infrastructural Components

ISBM

The communication between all systems occurs via the ISBM using publish-subscribe services.

Implementation Requirements

O&M Systems must implement a client for the ISBM Provider Publication, Consumer Publication and Channel Management (only the GetChannel operation) Services. O&M Systems may implement the ISBM Notify Listener Services for message notification.

Suggested Channel/Topic Configuration

A channel can be created specifically for model data. For example:

```
/Enterprise/Enterprise Subdivision/.../Model/Definition/ISO18435:D0.2/Publication
```

For example:

```
/Demo Enterprise/Refinery A/Area A/Model/Definition/ISO18435:D0.2/Publication
```

As outlined in the document ISBM Guidelines, topics should match the message content. Correspondingly, the following topic format should be used:

```
OIIE:S9:V1.1/StandardSchemaName{:Version}
```

For example:

```
OIIE:S9:V1.1/CCOM-XML:SyncModels:V1.0
```

SDAIR

In this Scenario, an SDAIR may participate as an explicit actor in the role of the Product Model Registry.

Additionally, the Scenario may require the use of an SDAIR in the following capacities:

- Registry of agreed upon ISDDs and/or Enterprise Data Sheet Definitions (conforming to ISDD specification)

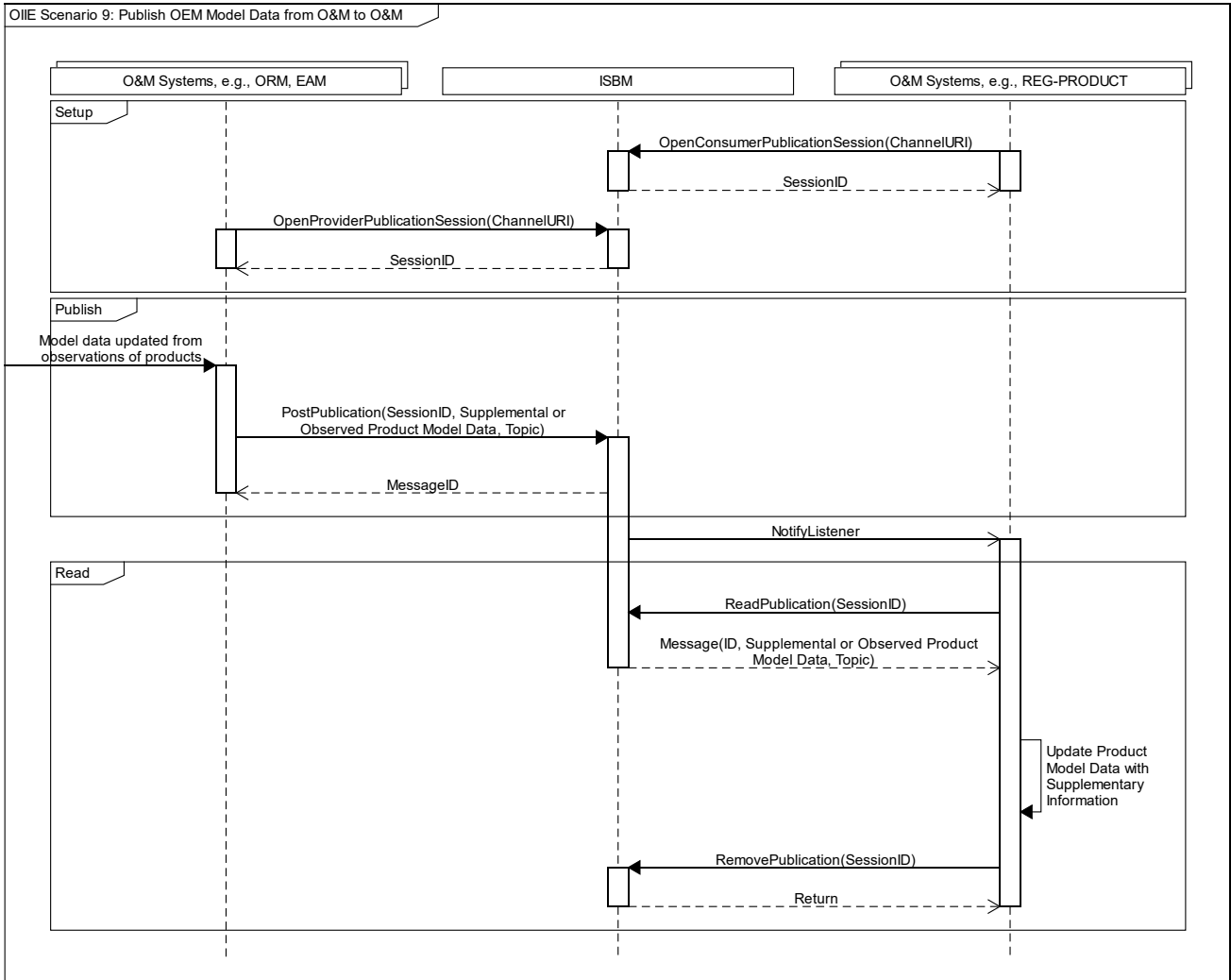- Registry of mappings between ISDD properties and enterprise (i.e., O/O and OEM) defined properties

CIR

The CIR is used to keep track of the object mappings between all systems.

Suggested Categories Configuration

Data Type	MIMOSA CCOM Categories
Models	Model
Data Sheet Definitions	PropertySetDefinition
Data Sheets	PropertySet

Event Sequence

The following diagram represents a simplified set of exemplar interactions between the systems required to achieve this Scenario. The system actors are assumed to have OIIE/ISBM adaptors implemented as required, with services according to the ISBM Implementation Requirements described above. For simplicity, it is assumed that each system/adaptor implements the optional Notify Listener service.

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O&M Systems, e.g., ORM, EAM — ISBM — O&M Systems, e.g., REG-PRODUCT

Setup
- OpenConsumerPublicationSession(ChannelURI)
- SessionID
- OpenProviderPublicationSession(ChannelURI)
- SessionID

Publish
- Model data updated from observations of products
- PostPublication(SessionID, Supplemental or Observed Product Model Data, Topic)
- MessageID
- NotifyListener

Read
- ReadPublication(SessionID)
- Message(ID, Supplemental or Observed Product Model Data, Topic)
- Update Product Model Data with Supplementary Information
- RemovePublication(SessionID)
- Return

Version Applicability/Alignment

Scenarios describe general data requirements and, hence, they are aligned to specific versions of CCOM and/or other MIMOSA standards. For example, older versions of CCOM may not include the data elements required by newer Scenarios, while older Scenarios may become obsolete or have their data requirements change over time.

This Scenario is applicable to the following versions of CCOM:

- CCOM 4.x

NOTE   This Scenario was introduced in its more complete form after the release of CCOM 4.x series, which was designed, in part, to support the ISDDs and, hence, is not compatible with the CCOM 3.x series.

NOTE   Use of 'x' in the version number indicates a variable version. For example, "4.x" indicates applicability to all versions of CCOM with the MAJOR version '4', regardless of MINOR and PATCH versions.

Document Versioning

Version	Date	Major Changes
1.1	2020-12-12	Updated to new Use Case Architecture format and to use OpenO&M template. Clarified data content requirements. Added sequence diagram. Revised channel configuration.
1.0	2019-01-29	Imported from old draft documentation.