

OIIE Publish Alarm and State Event Data

This Event is published to provide the information about alarms and state events related to measurement location, asset, device/transducer, functional location etc., with the receiving system(s).

Specific Data Content

The data sent from the source system is, at a minimum, composed of:

- The alarm(s)
- The state event(s)

In addition, the following data can be sent for context:

- The associated measurement location or asset or functional location or device/transducer
- The agent(s) and/or their role(s) associated with the alarm or state event, e.g., person who acknowledged the alarm

Data Processing

This Event is publishing operation and condition data and does not require any data processing by the receiving systems. The recipient system may either just record the information or further trigger an Event to perform some action.

Expected Response

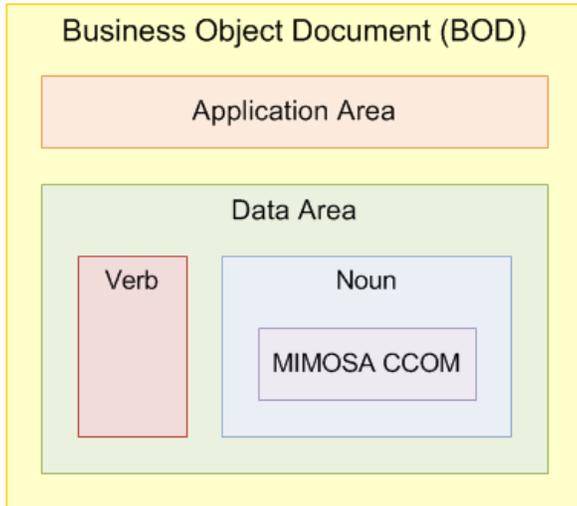
No response is expected.

Reference Implementation

The alarm and state event data can be published in many ways. The following is the list of current reference implementation(s) available:

1. Using SyncActualEvents and SyncMeasurementLocationTriggeredRegions CCOM BOD
2. Using SyncAlarmsAndEvents OIIE BOD for OPC UA content

NOTE Business Object Document (BOD) message structure is used to provide additional message concepts that encapsulate a MIMOSA CCOM payload. BODs indicate both behavior and structure for messages and the major components of a BOD are depicted below.



Example

An example of reference implementation of the publish alarm and state event data Event is provided below using the following MIMOSA CCOM BODs:

1. SyncActualEvents
2. SyncMeasurementLocationTriggeredRegions

```

<SyncActualEvents languageCode="EN" releaseID="4.1.0" xmlns="http://www.mimosa.org/ccom4"
xmlns:oa="http://www.openapplications.org/oagis/9"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <oa:ApplicationArea>
    <oa:Sender>
      <oa:LogicalID>19a137cf-a70d-2888-343a-bc1158bf7f9f</oa:LogicalID>
    </oa:Sender>
    <oa:CreationDateTime>2020-10-18T04:21:21Z</oa:CreationDateTime>
    <oa:BODID>24e920d6-fc80-4b23-b464-8825510e5136</oa:BODID>
  </oa:ApplicationArea>
  <DataArea>
    <oa:Sync/>
    <ActualEvents>
      <ActualEvent>
        <UUID>d13aa825-8b5a-4f60-963a-d38ae1106d45</UUID>
        <Type>
          <UUID>b8dde830-f0dd-4584-a7b3-b064f9638dc4</UUID>
          <ShortName>Abnormal Condition</ShortName>
        </Type>
        <Start>2020-10-17T23:47:38Z</Start>
        <SubstantiatedByMeasurement>
          <UUID>d8620c23-f074-461c-9372-36aa9dec850b</UUID>
          <Measurement xsi:type="SingleDataMeasurement">
            <UUID>611ee2af-12d5-5cec-578c-160c9aeb5118</UUID>
            <InfoSource>
              <UUID>19a137cf-a70d-2888-343a-bc1158bf7f9f</UUID>
            </InfoSource>
          </Measurement>
        </SubstantiatedByMeasurement>
      </ActualEvent>
    </ActualEvents>
  </DataArea>
</SyncActualEvents>
  
```

```

    <Recorded>2020-10-17T23:47:38Z</Recorded>
    <MeasurementLocation>
      <UUID>e015177c-8281-576b-56a9-87c16c3d91cc</UUID>
      <InfoSource>
        <UUID>19a137cf-a70d-2888-343a-bc1158bf7f9f</UUID>
      </InfoSource>
      <ShortName>Temp. Loc. 1</ShortName>
    </MeasurementLocation>
    <Data>
      <Measure>
        <Value>105.36</Value>
        <UnitOfMeasure>
          <UUID>3912c639-8c27-4b29-868b-a0f01790770f</UUID>
          <InfoSource>
            <UUID>cf3f3a8a-1e42-4f15-9288-9cf2241e163d</UUID>
          </InfoSource>
          <ShortName>Degrees Celsius</ShortName>
        </UnitOfMeasure>
      </Measure>
    </Data>
  </Measurement>
</SubstantiatedByMeasurement>
</ActualEvent>
</ActualEvents>
</DataArea>
</SyncActualEvents>

```

```

<SyncMeasurementLocationTriggeredRegions languageCode="EN" releaseID="4.1.0"
xmlns="http://www.mimosa.org/ccom4" xmlns:oa="http://www.openapplications.org/oagis/9"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <oa:ApplicationArea>
    <oa:Sender>
      <oa:LogicalID>19a137cf-a70d-2888-343a-bc1158bf7f9f</oa:LogicalID>
    </oa:Sender>
    <oa:CreationDateTime>2020-10-18T04:21:21Z</oa:CreationDateTime>
    <oa:BODID>24e920d6-fc80-4b23-b464-8825510e5136</oa:BODID>
  </oa:ApplicationArea>
  <DataArea>
    <oa:Sync/>
    <MeasurementLocationTriggeredRegions>
      <MeasurementLocation>
        <UUID>e015177c-8281-576b-56a9-87c16c3d91cc</UUID>
        <InfoSource>
          <UUID>19a137cf-a70d-2888-343a-bc1158bf7f9f</UUID>
        </InfoSource>
        <ShortName>Temp. Loc. 1</ShortName>
      </MeasurementLocation>
      <MeasurementLocationTriggeredRegion>
        <UUID>4956009f-c39a-4883-8382-fed7ae90b3af</UUID>
        <Type>
          <UUID>8055e0d5-0ff6-41aa-85f6-03f800d9106d</UUID>
          <ShortName>External Thermal Condition, Abnormal, Above Norm</ShortName>
        </Type>
      </MeasurementLocationTriggeredRegion>
    </MeasurementLocationTriggeredRegions>
  </DataArea>
</SyncMeasurementLocationTriggeredRegions>

```

```
</Type>
<Start>2020-10-17T23:47:38Z</Start>
<RegionType>
  <UUID>c5fdcdbb-a924-4ac1-9352-c9d791d623ab</UUID>
  <ShortName>Warning</ShortName>
</RegionType>
</MeasurementLocationTriggeredRegion>
</MeasurementLocationTriggeredRegions>
</DataArea>
</SyncMeasurementLocationTriggeredRegions>
```

Version Applicability/Alignment

Events describe individual message exchanges between systems detailing data and processing 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 specific data elements required by newer Events, while older Events may become obsolete or have their data requirements change over time.

This Event is applicable to the following versions of CCOM:

- CCOM 3.x (part of OSA-EAI 3.x)
- CCOM 4.x

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
1.0	2021-01-17	Created as per OIIE use case architecture and updated OpenO&M template