OIIE Pull Historical Test and Sample Data

This Event is sending a query requesting historical test and sample data and expects a reply having the historical test and sample data.

Specific Data Content

The data included in the request is, at a minimum, composed of:

- A filter/flag to specify that measurements of type Sample and Test are returned.

NOTE   In MIMOSA CCOM BOD reference implementation, the measurement category filter is specified as "LIMS" so that only Test and Sample measurements data is returned.

In addition, the following data can be used for filtering the request:

- The material item of interest

- The measurement location at which measurements were taken

- The serialized asset or functional location of interest

- Device/Transducer that took the measurement

- Measurement source from which the measurement was published

Data Processing

This Event is querying historical test and sample data and require that the recipient system processes the data received. The receiving system is expected to respond to the query by sending the historical test and sample data including any contextual data.

Expected Response

The receiving system is expected to send the historical test and sample data consisting of:

- The measurement/data value

- The timestamp at which the measurement value was acquired

- The data quality

- Any associated events or alarms

Additionally, the following contextual data may be provided in the response:

- The material item

- The measurement location at which measurement were taken

- The serialized asset or functional location of interest

- Device/Transducer that took the measurement

- Measurement source from which the measurement was published

- Any agent associated with the alarm or event

Reference Implementation

The query to request historical test and sample data can be sent to the target system in many ways. Similarly, the response from the recipient system can be sent back to the source system in many ways. The following is the list of current reference implementation(s) available using MIMOSA CCOM BODs:

1. GetMeasurements

2. ShowMeasurements

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.
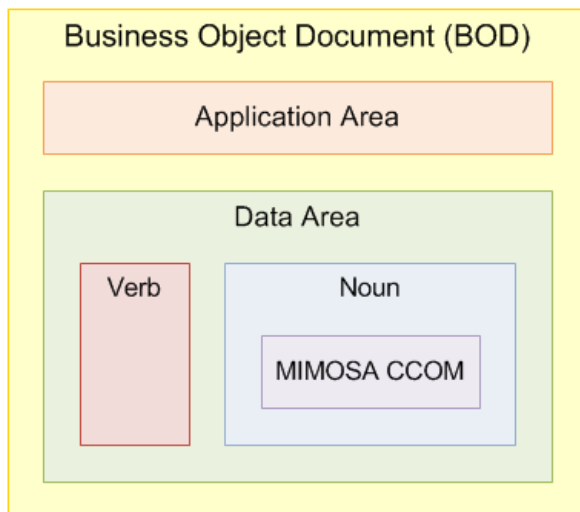
Example

An example of reference implementation of the pull historical test and sample data Event using GetMeasurements CCOM BOD is provided below.

```xml
<?xml  version="1.0"?>
<GetMeasurements  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>fc3899f0-9703-0137-e25d-22000a6f90e2</oa:LogicalID>
    </oa:Sender>
    <oa:CreationDateTime>2020-10-15T13:21:00Z</oa:CreationDateTime>
    <oa:BODID>a020740f-f0df-4ee0-a798-eb9c183d3</oa:BODID>
  </oa:ApplicationArea>
  <DataArea>
```

```
    <oa:Get>
      <oa:Expression>/*</oa:Expression>
    </oa:Get>
    <MeasurementsCriteria>
      <MeasurementCategory>LIMS</MeasurementCategory>
    </MeasurementsCriteria>
  </DataArea>
</GetMeasurements>
```

An example of reference implementation of the response message using ShowMeasurements CCOM BOD is provided below.

```
<?xml  version="1.0"?>
<ShowMeasurements 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>df758f83-fb11-4fee-8086-f4ed3222fff8</oa:LogicalID>
    </oa:Sender>
    <oa:CreationDateTime>2019-09-15T15:21:00Z</oa:CreationDateTime>
    <oa:BODID>8872be3e-84ab-47b1-85dc-8729e62e35f5</oa:BODID>
  </oa:ApplicationArea>
  <DataArea>
    <oa:Show/>
  <Measurements>
    <Measurement xsi:type="SingleDataMeasurement">
      <UUID>611ee2af-12d5-5cec-578c-160c9aeb5118</UUID>
      <InfoSource>
        <UUID>19a137cf-a70d-2888-343a-bc1158bf7f9f</UUID>
      </InfoSource>
      <Recorded>2019-07-25T23:47:38Z</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>55.36</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>
  </Measurements>
  </DataArea>
</ShowMeasurements>
```

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	2021-01-27	Created as per OIIE use case architecture and updated OpenO&M template