

Schema Release

AseXML Schema Working Group

Release r21

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Document History

Version	Date	Authors	Comments
1.0	1 Jun 2007	Andrew Screen	

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1. Introduction

Version r21 of the aseXML schema has been developed from r20. This schema release is presented to aseXML Subscribers and Industry Participants for review, and to NEMMCO for approval, in accordance with the ASWG Terms of Reference.

2. Change Requests

The following ASWG Change Requests have been included in this schema release:

CR#	Description
30	New transactions and supporting types for the introduction High Speed Monitoring (HSM) additions
31	Introduction of new simple type of NonZeroLengthString

These Change Requests are available from the ASWG or the aseXML website (www.aseXML.com) for review by all impacted parties.

3. Impact Summary

This table identifies the files, transactions and versioned types that are changed in this schema, where:

- Modified types - is a full list of types changed in this schema
- Derived types – is a list of any types that are derived from a modified type, and are therefore also modified by default
- Versioned types affected – is a list of all versioned types that will need to have the version attribute updated to use this schema
- Transactions potentially affected – is a list of all transactions that contain a modified type, either directly or via a type substitution
- Schema files affected – is a list of schema files that have been changed in some way for this schema.

Modified types	Derived types	Versioned types affected	Transactions potentially affected	Schema files affected
None	None	None	None	aseXML Common Events ElectricityHighSpeedMonitoring (New) HighSpedMonitoring (New) Header Transactions

4. File Change Summary

The following file changes are implemented to create the r21 schema version

4.1. aseXML

- Changed aseXML namespace to urn:aseXML:r21
- Updated file references for Common, Events, Header, Transactions to reflect file version r21
- New file references for : ElectricityHighSpeedMonitoring , HighSpeedMonitoring

4.2. Events

- R21 version type added

4.3. Common

- NonZeroLengthString type definition added

```
<xsd:simpleType name="NonZeroLengthString">  
  <xsd:restriction base="xsd:string">  
    <xsd:minLength value="1"/>  
    <xsd:whiteSpace value="collapse"/>  
  </xsd:restriction>  
</xsd:simpleType>
```

4.4. Header

- Addition of new Transaction Group HSMD — High Speed Monitoring system

4.5. Transaction

Addition of new Transactions:

- HSMMonitorsRequest
- HSMMonitorsResponse
- HSMMonitorDataRequest
- HSMMonitorDataResponse
- HSMTTriggeredDataNotification

New Files:

4.6. ElectricityHighSpeedMonitoring

containing type definitions for HSM:

Complex types:

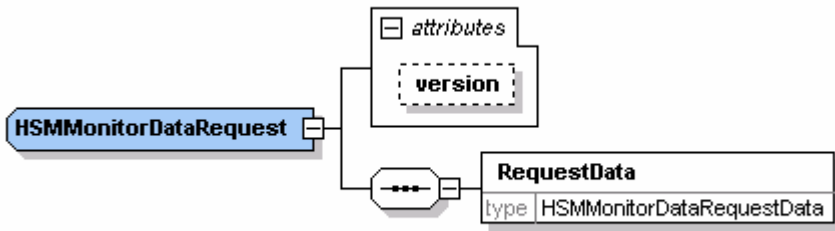


Figure 0-1:HSMMonitorDataRequest

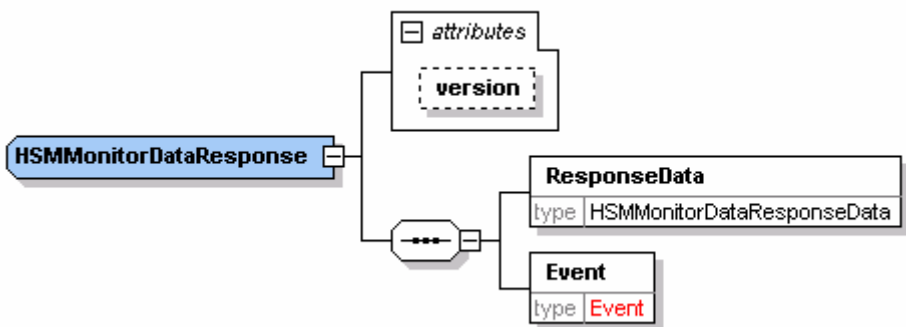


Figure 0-2:HSMMonitorDataResponse

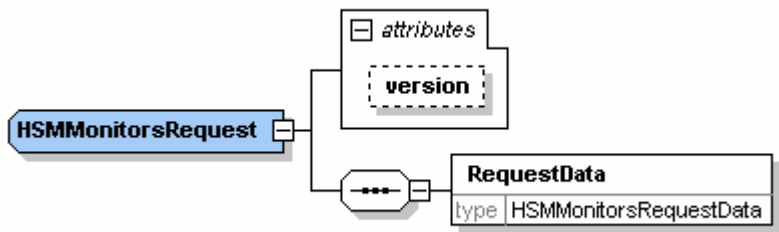


Figure 0-3:HSMMonitorsRequest

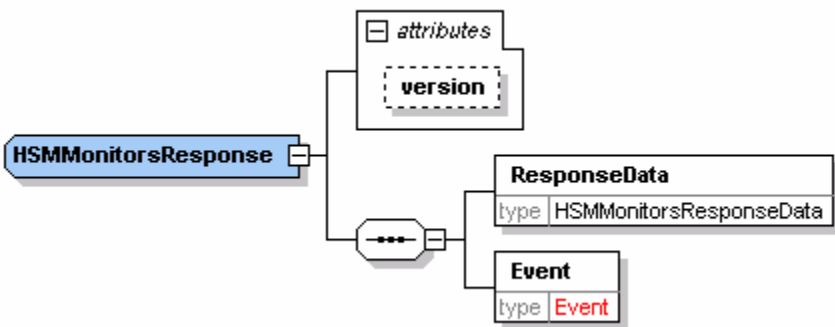


Figure 0-4:HSMMonitorsResponse

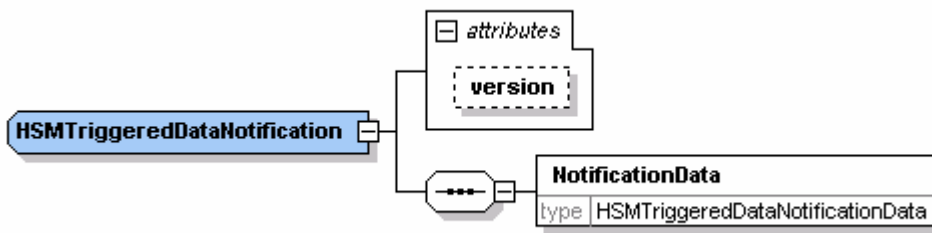


Figure 0-5:HSMTriggeredDataNotification

Abstract transaction payload types:

HSMMonitorDataRequestData

```
<xsd:complexType name="HSMMonitorDataRequestData" abstract="true"/>
```

HSMMonitorDataResponseData

```
<xsd:complexType name="HSMMonitorDataResponseData" abstract="true"/>
```

HSMMonitorsRequestData

```
<xsd:complexType name="HSMMonitorsRequestData" abstract="true"/>
```

HSMMonitorsResponseData

```
<xsd:complexType name="HSMMonitorsResponseData" abstract="true"/>
```

HSMTriggeredDataNotificationData

```
<xsd:complexType name="HSMTriggeredDataNotificationData" abstract="true"/>
```

4.7. HighSpeedMonitoring

containing type definitions for Electricity market specialisations of HSM

Simple types:

HSMEID

```
<xsd:simpleType name="HSMEID">
  <xsd:restriction base="xsd:positiveInteger">
    <xsd:totalDigits value="15"/>
  </xsd:restriction>
</xsd:simpleType>
```

HSMID

```
<xsd:simpleType name="HSMID">
  <xsd:restriction base="NonZeroLengthString">
    <xsd:maxLength value="40"/>
    <xsd:pattern value="[A-Z0-9_]*"/>
  </xsd:restriction>
</xsd:simpleType>
```


HSMPlant

```
<xsd:simpleType name="HSMPlant">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Bus" />
    <xsd:enumeration value="Generator" />
    <xsd:enumeration value="Load" />
    <xsd:enumeration value="Region" />
    <xsd:enumeration value="Shunt" />
    <xsd:enumeration value="Station" />
    <xsd:enumeration value="Static VAR Compensator" />
    <xsd:enumeration value="Switch" />
    <xsd:enumeration value="Transformer" />
    <xsd:enumeration value="Transmission Line" />
    <xsd:enumeration value="Zero Impedance Branch" />
  </xsd:restriction>
</xsd:simpleType>
```

HSMQuantity

```
<xsd:simpleType name="HSMQuantity">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Angle Blue" />
    <xsd:enumeration value="Angle Positive Sequence" />
    <xsd:enumeration value="Angle Red" />
    <xsd:enumeration value="Angle White" />
    <xsd:enumeration value="Frequency" />
    <xsd:enumeration value="Power Blue" />
    <xsd:enumeration value="Power Red" />
    <xsd:enumeration value="Power Three Phase" />
    <xsd:enumeration value="Power White" />
    <xsd:enumeration value="Reactive Power Blue" />
    <xsd:enumeration value="Reactive Power Red" />
    <xsd:enumeration value="Reactive Power Three Phase" />
    <xsd:enumeration value="Reactive Power White" />
    <xsd:enumeration value="Voltage Blue" />
    <xsd:enumeration value="Voltage Positive Sequence" />
    <xsd:enumeration value="Voltage Red" />
    <xsd:enumeration value="Voltage White" />
  </xsd:restriction>
</xsd:simpleType>
```

HSMStatus

```
<xsd:simpleType name="HSMStatus">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Offline" />
    <xsd:enumeration value="Synchronised" />
    <xsd:enumeration value="Unsynchronised" />
  </xsd:restriction>
</xsd:simpleType>
```

HSMSource

```
<xsd:simpleType name="HSMSource">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Continuous" />
    <xsd:enumeration value="Triggered" />
  </xsd:restriction>
</xsd:simpleType>
```

HSMCompression

```
<xsd:simpleType name="HSMCompression">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="7Zip" />
    <xsd:enumeration value="Bzip2" />
    <xsd:enumeration value="Rar" />
    <xsd:enumeration value="Zip" />
  </xsd:restriction>
</xsd:simpleType>
```

HSMFormat

```

<xsd:simpleType name="HSMFormat">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="COMTRADE Configuration"/>
    <xsd:enumeration value="COMTRADE Data"/>
  </xsd:restriction>
</xsd:simpleType>

```

Complex types:

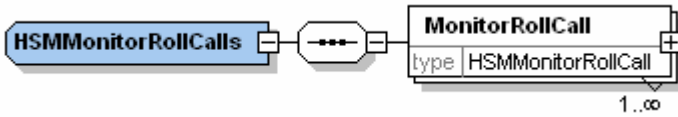


Figure 0-6 HSMMonitorRollCalls

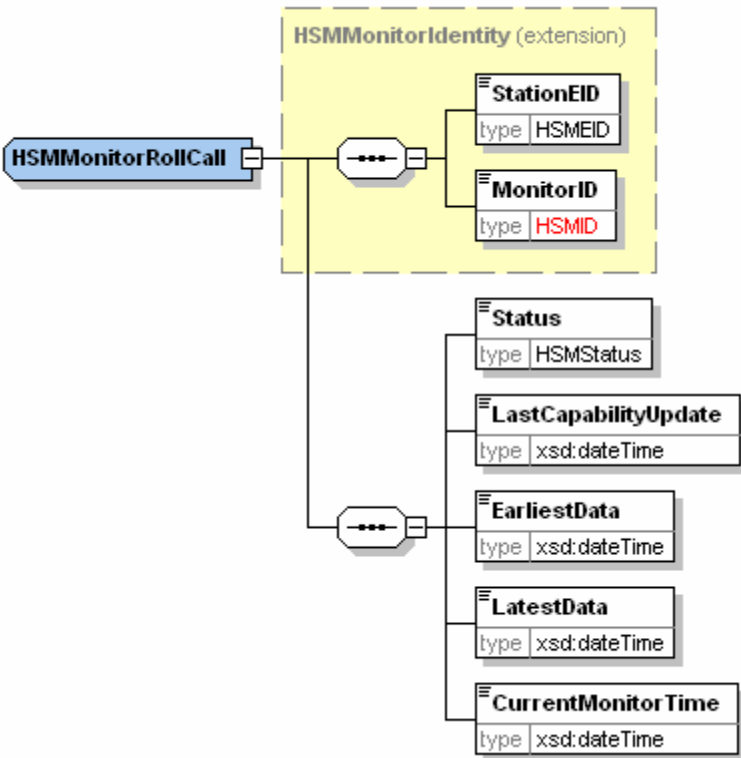


Figure 0-7 HSMMonitorRollCall

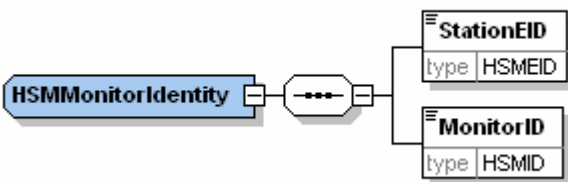


Figure 0-8 HSMMonitorIdentity

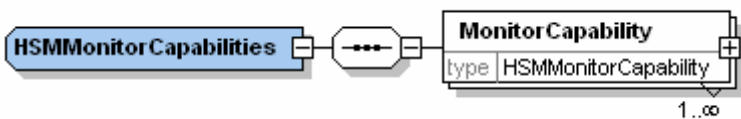
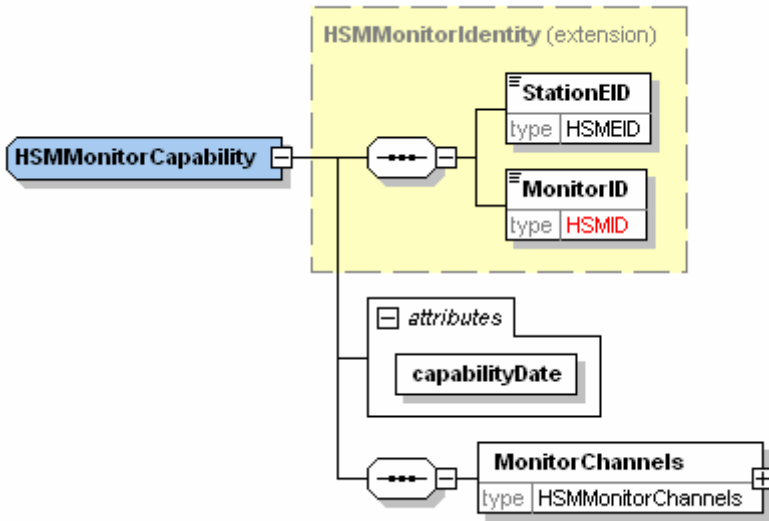


Figure 0-9 HSMMonitorCapabilities



The required attribute **capabilityDate** is of type `xsd:dateTime`.

Figure 0-10 HSMMonitorCapability

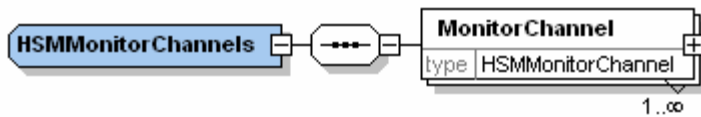


Figure 0-11 HSMMonitorChannels

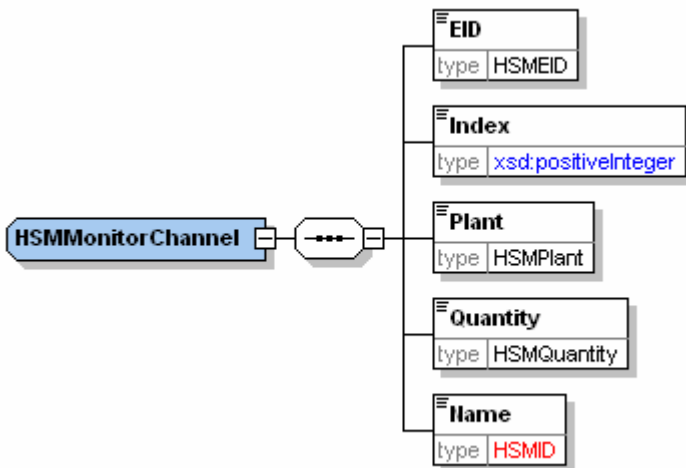
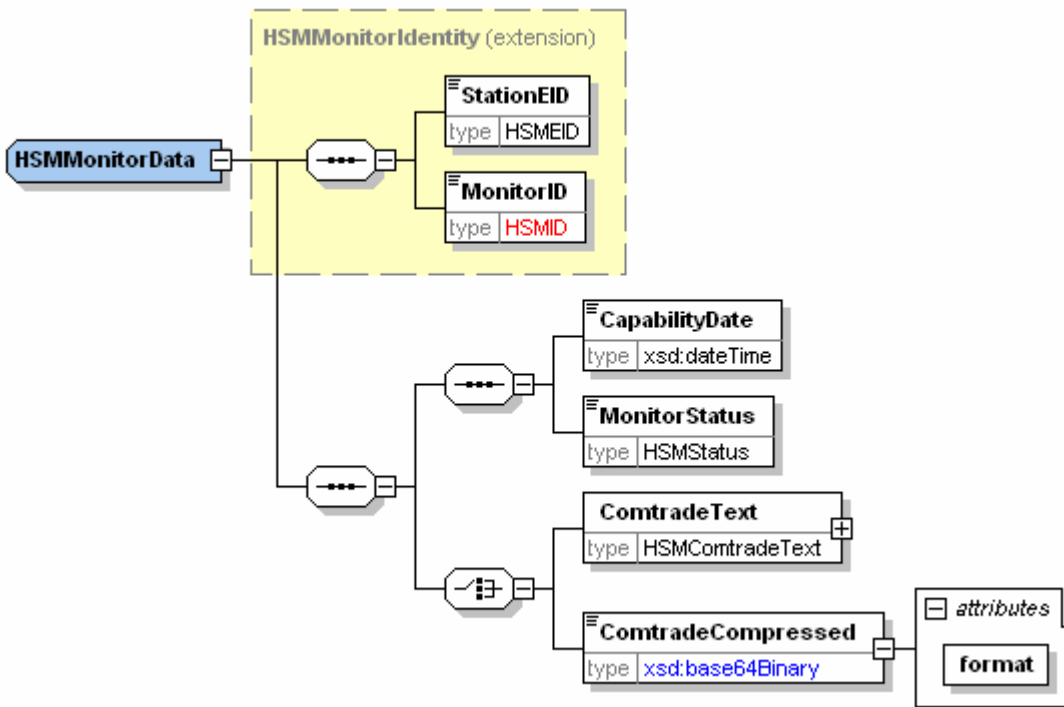


Figure 0-12 HSMMonitorChannel



The attribute **format** is of HSMCompression simple type.

Figure 0-13 HSMMonitorData

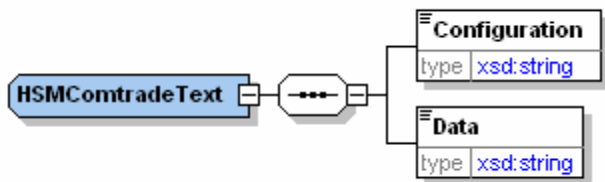


Figure 0-14 HSMComtradeText

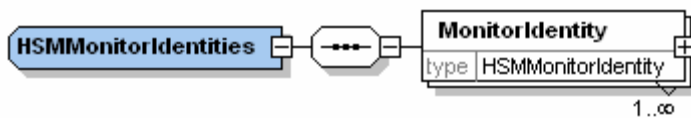
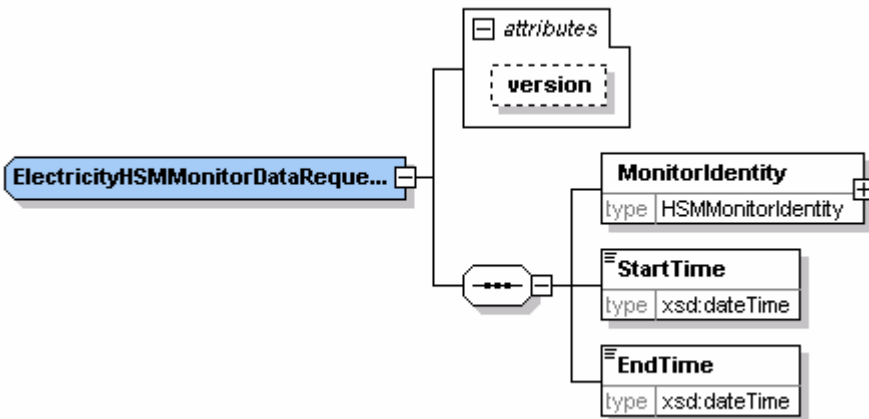


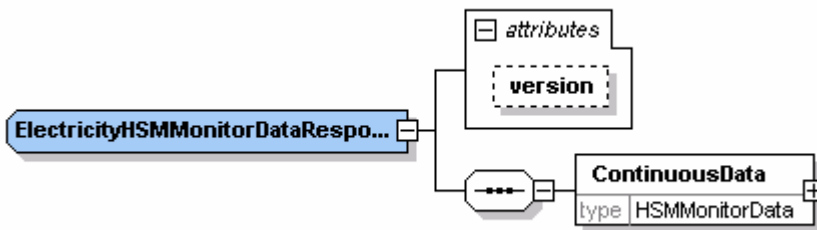
Figure 0-15 HSM MonitorIdentities

Concrete transaction payload types:



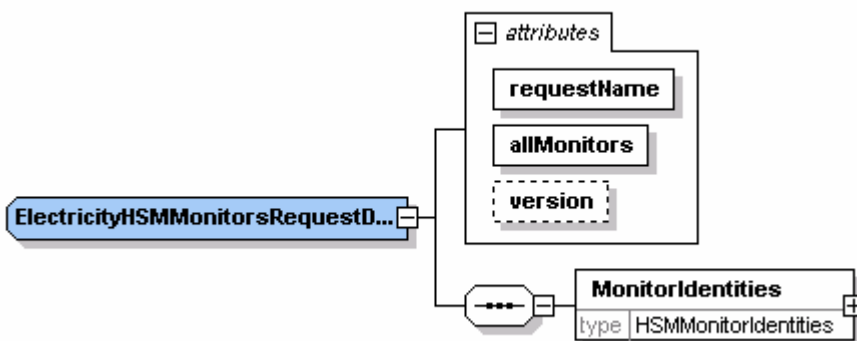
This type is an extension of the abstract payload type **HSMMonitorDataRequestData**. The attribute **version** is of r21simple type and has a default value of "r21".

Figure 0-16 ElectricityHSMMonitorDataRequestData



This type is an extension of the abstract payload type **HSMMonitorDataResponseData**. The attribute **version** is of r21simple type and has a default value of "r21".

Figure 0-17 ElectricityHSMMonitorDataResponseData



This type is an extension of the abstract payload type **HSMMonitorsRequestData**. The attribute **requestName**:

```
<xs:attribute name="requestName" use="required">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="RollCall"/>
      <xs:enumeration value="Capability"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
```

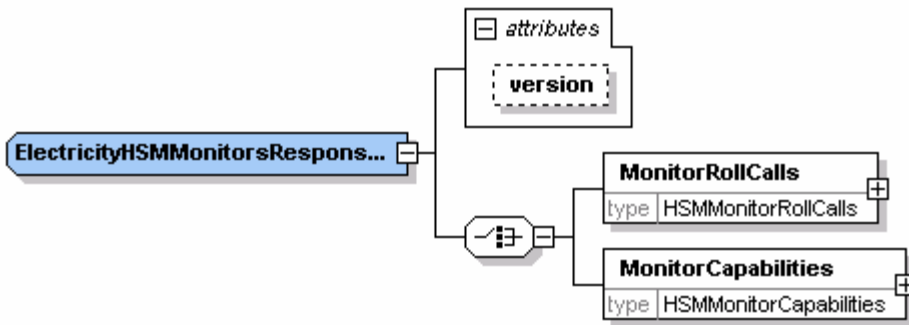
```
</xs:simpleType>
</xs:attribute>
```

The attribute **allMonitors**:

```
<xs:attribute name="allMonitors" type="xs:boolean" use="required"/>
```

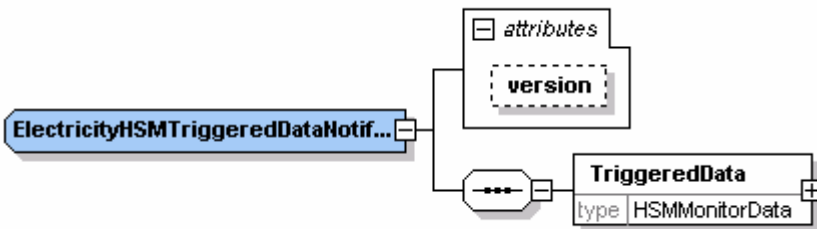
The attribute **version** is of r21simple type and has a default value of "r21".

Figure 0-18 ElectricityHSMMonitorsRequestData



This type is an extension of the abstract payload type **HSMMonitorsResponseData**. The attribute **version** is of r21simple type and has a default value of "r21".

Figure 0-19 ElectricityHSMMonitorsResponseData



This type is an extension of the abstract payload type **HSMTriggeredDataNotificationData**. The attribute **version** is of r21simple type and has a default value of "r21".

Figure 0-20 ElectricityHSMTriggeredDataNotificationData

1. Schema Manifest

The table below shows the schema files included in this release. Files that have been added, removed or modified for this release are marked.

File names	Added	Removed	Modified
Acknowledgements_r15.xsd			
aseXML_r21.xsd			
BAR_r15.xsd			
BulkDataTool_r15.xsd			
CATSReports_r20.xsd			
CATSTableReplication_r20.xsd			
ClientInformation_r15.xsd			
Common_r21.xsd			
CustomerDetails_r19.xsd			
CustomerTransfer_r20.xsd			
Electricity_r19.xsd			
ElectricityHighSpeedMonitoring_r21.xsd			
Enumerations.xsd (ver 1.0)*			
Events_r21.xsd			
Faults_r15.xsd			
Gas_r19.xsd			
GasMarketWholesale_r20.xsd			
Header_r21.xsd			
HighSpeedMonitoring_r21.xsd			
MarketWholesale_r20.xsd			
MDMTRReport_r15.xsd			
MeterDataManagement_r19.xsd			
NetworkBilling_r15.xsd			
NMIDataAccess_r17.xsd			
NOSAssessment_r18.xsd			
NOSBooking_r18.xsd			
NOSCommon_r18.xsd			
NOSEquipment_r18.xsd			
Reports_r15.xsd			
ServiceOrder_r17.xsd			
TableReplication_r15.xsd			
Transactions_r21.xsd			
No of files added	2		
No of files removed		0	
No of files modified			5
Total No of files			32

*Note ver 1.0 of the enumeration file has been included. As part of the release the new version 2.0 should be distributed

5. Schema Test

5.1. Test Platforms

The new schema has been tested using the following platforms:

- XMLSpy 2004
- MSXML4 SP1
- Xerces 1.4.4 and 2.2.1

5.2. Test Cases

Change has been tested using the supplied HSM sample files.

- HSMMonitorDataCompressed_Response.xml
- HSMMonitorData_Request.xml
- HSMMonitorData_Response.xml
- HSMMonitorsCapabilities_Request.xml
- HSMMonitorsCapabilities_Response.xml
- HSMMonitorsStatusAll_Request.xml
- HSMMonitorsStatus_Request.xml
- HSMMonitorsStatus_Response.xml
- HSMTriggeredDataCompressed_Notification.xml
- HSMTriggeredData_Notification.xml

As above and in addition with the modified contents of HSMMonitorData_Request.xml where the MonitorID is being set to the following values

Case	Node Value	Description
1	<MonitorID> </MonitorID>	Single space in between start and end tag.
2	<MonitorID> </MonitorID>	Single tab in between start and end tag.
3	<MonitorID> </MonitorID>	Single CRLF in between start and end tag.

The following updated schema files have also been tested :

- AccCreationNotification_r21.xml
- AmendMeterRouteDetails(RouteChange)_r21.xml
- AmendMeterRouteDetails(SiteAccess)_r21.xml
- AmendMeterRouteDetails(SiteAddress)_r21.xml
- CATSChangeAlertToNFRO_r21.xml
- CATSChangeAlertToVENCORP_r21.xml
- CATSChangeRequestAlternateRetro_r21.xml
- CATSChangeRequestAlternate_r21.xml
- CATSChangeRequestRetro_r21.xml
- CATSChangeRequestStandingDataResponseRetro_r21.xml
- CATSChangeRequestStandingDataResponse_r21.xml
- CATSChangeRequest_r21.xml
- CATSChangeResponse_r21.xml
- CATSChangeWithdrawal_r21.xml

- CATSDataRequest_r21.xml
- CATSNoticeOfReadFailure_r21.xml
- CATSNotificationCDB_r21.xml
- CATSNotificationCFRO_r21.xml
- CATSNotificationCompletedCDB_r21.xml
- CATSNotificationPendingCFRO_r21.xml
- CATSNotificationWithdrawalCDB_r21.xml
- CATSNotificationWithdrawalCFRO_r21.xml
- CATSNotification_r21.xml
- CATSObjectionNotification_r21.xml
- CATSObjectionRequest_r21.xml
- CATSObjectionResponse_r21.xml
- CATSObjectionWithdrawal_r21.xml
- CATSSDRTrafficLightReportResponser21.xml
- CATSSecurityReportr21.xml
- CATSSstandingDataQualityReportResponser21.xml
- ChangeRequestAllFieldsr21.xml
- CustomerDetailsNotification_r21.xml
- GasInformationRequestData_IDr21.xml
- GasInformationRequestDatar21.xml
- GasInformationResponseData_ID_r21.xml
- GasInformationResponseData_IDr21.xml
- GasInformationResponseDatar21.xml
- GasRetrieveRequestData_AgencyNominationDetailr21.xmlr21.xml
- GasRetrieveRequestData_AgencyNominationHeaderr21.xml
- GasRetrieveRequestData_BidSetCGDr21.xml
- GasRetrieveRequestData_ForecastCGDr21.xml
- GasRetrieveRequestData_ForecastValidationr21.xml
- GasRetrieveRequestData_GasForecastValidationTyper21.xml
- GasRetrieveRequestData_GetBidSetr21.xml
- GasRetrieveRequestData_GetBidr21.xml
- GasRetrieveRequestData_InjectionNominationCGDr21.xml
- GasRetrieveRequestData_InjectionNominationr21.xml
- GasRetrieveRequestDatar21.xml
- GasRetrieveRequestDr21.xml
- GasRetrieveResponseData_AgencyNominationDetailr21.xmlr21.xml
- GasRetrieveResponseData_AgencyNominationHeaderr21.xml
- GasRetrieveResponseData_BidSetCGDr21.xml
- GasRetrieveResponseData_ForecastCGDr21.xml
- GasRetrieveResponseData_ForecastValidationr21.xml
- GasRetrieveResponseData_GasForecastValidationTyper21.xml
- GasRetrieveResponseData_GetBidSetr21.xml
- GasRetrieveResponseData_GetBidr21.xml
- GasRetrieveResponseData_InjectionNominationCGDr21.xml
- GasRetrieveResponseData_InjectionNominationr21.xml
- GasRetrieveResponseDatar21.xml
- GasRetrieveResponseDr21.xml
- GasSearchRequestDatarr21.xml
- GasSearchRequestData_AgencyNominationr21.xml
- GasSearchRequestData_forecastr21.xml
- GasSearchRequestData_InjectionNominationr21.xml
- GasSearchRequestDatar21.xml

- GasSearchResponseDatar21.xmlr21.xml
- GasSearchResponseData_AgencyNominationr21.xml
- GasSearchResponseData_forecastr21.xml
- GasSearchResponseData_InjectionNominationr21.xml
- GasSearchResponseDatar21.xml
- GasSubmitRequestData_AgencyNominationConfirmationr21.xml
- GasSubmitRequestData_AgencyNominationWithdrawr21.xml
- GasSubmitRequestData_Bidr21.xml
- GasSubmitRequestData_Forecastr21.xml
- GasSubmitRequestData_InjectionNominationr21.xml
- GasSubmitRequestDatar21.xml
- GasSubmitRequestDr21.xml
- GasSubmitResponseData_AgencyNominationConfirmationr21.xml
- GasSubmitResponseData_AgencyNominationWithdrawr21.xml
- GasSubmitResponseData_Bidr21.xml
- GasSubmitResponseData_Forecastr21.xml
- GasSubmitResponseData_InjectionNominationr21.xml
- GasSubmitResponseDatar21.xml
- GasSubmitResponseDr21.xml
- MDMReportRMr21.xml
- MDMTMeterDataDeliveryReportResponser21.xml
- MeterDataHistoryRequest_r21.xml
- MeterDataMissingNotification_r21.xml
- MeterDataNotification_r21.xml
- MeterDataResponse_r21.xml
- MeterDataVerifyRequest_r21.xml
- MeterDataVerifyResponse_r21.xml
- MeteredSupplyPointsCount_r21.xml
- MeterNotificationMeterFix_r21.xml
- MeterNotificationMIRNStatusUpdate_r21.xml
- MeterReadInputNotification_r21.xml
- NetworkDUoSBillingNotificationExclServ_r21.xml
- NetworkDUoSBillingNotificationTariffD_r21.xml
- NetworkDUoSBillingNotificationTariffV_r21.xml
- NetworkDUoSBillingNotification_DisputeRes_r21.xml
- NetworkDUoSBillingNotification_Dispute_r21.xml
- NetworkDUoSBillingNotification_PaymentAdvice_r21.xml
- NMIDiscoveryRequest_r21.xml
- NMIDiscoveryResponse_r21.xml
- NMIStandingDataRequest_r21.xml
- NMIStandingDataResponseGas_r21.xml
- NMIStandingDataUpdateNotificationResponse_r21.xml
- NMIStandingDataUpdateNotification_r21.xml
- ReplicationNotificationMSATSCodeValuesr21.xml
- ReplicationNotificationStandingDataAccessRulesr21.xml
- ReportRequestChangeManagementr21.xml
- ReportRequestMasterr21.xml
- ReportResponseNMIMasterMeterConfigr21.xml
- ReportResponseStatisticsr21.xml
- SeqChangeRequestNotificationr21.xml
- SeqObjectionr21.xml
- ServiceOrderRequest(MeterFix)_r21.xml

- ServiceOrderRequest(NewConnection)_r21.xml
- ServiceOrderResponse(Completion)_r21.xml
- ServiceOrderResponse(Initial)_r21.xml
- ServiceOrderResponse(NoAccess)_r21.xml
- SpecialReadRequest_r21.xml
- SpecialReadResponse(NoAccess)_r21.xml
- SpecialReadResponse_r21.xml
- TransAck_r21.xml
- TxnAckDuplicate_r21.xml
- TxnNAck_r21.xml

6. ASWG Endorsement

The ASWG votes for endorsement of the schema, with the included aseXML Change Requests, and the voting results are forwarded to NEMMCO for approval. When 75% of those ASWG members who voted endorse a schema, this represents an ASWG Recommendation for that schema. NEMMCO will not reject an ASWG Recommendation without first consulting with the ASWG.

The results of the ASWG vote for the final schema to be released are as follows:

Date of Vote: 29/05/2007

Option	# Votes	% Vote
For	5	100
Against	0	0
Abstained		
Total Members Present	6*	100%

*Note Chairperson doesn't vote unless it a split vote.

7. NEMMCO Approval

The schema approval and approval date are identified below

Status	Date	Authorised by
Approved – The schema has been approved by NEMMCO and is formally released for use		