

aseXML Schema Change Request

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|-------------|------------------|
| Document ID | 24 |
| Title | NOS Enhancements |
| Change Type | Enhancement |
| Date | 6/9/2005 |
| Prepared By | Darren Field |

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|--------------|
| <i>Notes</i> |
|--------------|

Document Control

| Version | Date | Author | Summary of Change |
|----------------|-------------|---------------|--------------------------|
| 1.0 | 6/9/2005 | D Field | Initial draft |
| 2.0 | 26/10/2005 | N Reinprecht | Schema review |
| 3.0 | 30/11/2005 | D Field | Completed section 5 |
| 4.0 | 5/12/2005 | D Field | Release version |

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Figures

Nil

Glossary

| Abbreviation | Description |
|--------------|--------------------------|
| NOS | Network Outage Scheduler |
| | |

1. Change Proposal

This Change Proposal has been created to propose some minor additions and changes to the Network Outage Scheduler (NOS) schema definitions. The changes are the result of requests from participants who use the system, so that greater clarity can be provided in NOS requests and notices.

1.1. Description of the proposed change

The proposed changes are listed in the following table.

| Item# | Change Description | Change Type ¹ |
|-------------------------|---|--------------------------|
| Business Changes | | |
| 1 | Modify the NOS Booking transactions to allow additional values in ServiceAffected and ScopeOfWork | Enhancement |
| 2 | Modify the NOS Equipment transactions to allow longer NEMMCO equipment names to be used | Enhancement |

Table 1-1, Proposed Changes

1.1.1 Modify NOS Booking Transactions

Allow the following additional enumerations to be used in the ServiceAffected element of a Booking transaction:

- Overload scheme
- DC link scheme
- Other control scheme

Allow the following additional enumeration to be used in the ScopeOfWork element of a Booking transaction:

- Auto Control Scheme

1.1.2 Modify NOS Equipment Transactions

Extend the NEMMCOName element of an Equipment Submission transaction from 40 characters to 60 characters.

1.2. Reason for Change

The additional enumerations in the NOS Booking transactions are required so that outages involving Auto Control schemes can be more clearly defined by participants when making bookings. This will provide both NEMMCO and other participants better information for NOS management.

The increase in the length of the NEMMCOName element allows better support for full naming of circuit breakers and isolators.

¹ Change Type can be one of

- New
- Enhancement, or
- Bug Fix

1.3. Supplied Documents

1.3.1 Business process document

This request was submitted by e-mail to the ASWG chair. No other business process documents have been provided.

1.3.2 Other

Nil

1.4. Baseline Schema

The schema used as a basis for this proposal is r17

2. Approval Proposal

2.1. Proposed Change

2.1.1 Draft schema

A draft r18 schema is supplied with this CR

2.1.2 Change log

The following changes have been implemented in this draft:

| Chg No | Description | FileName | Item# |
|--------|---|---------------|-------|
| 1 | Modified the namespace and include files in the aseXML schema file to move to version r18 | aseXML | All |
| 2 | Added the simple type 'r18' for the r18 schema version | Events | All |
| 3 | Added the enumerations 'Overload scheme', 'DC link scheme' and 'Other control scheme' to the simple type <i>EnumBookingElementServiceAffectedType</i> | NOSCommon | 1 |
| 4 | Added the enumeration 'Auto Control Scheme' to the simple type <i>EnumScopeOfWork</i> | NOSCommon | 1 |
| 5 | Modified the constraint maxLen from 40 to 60 for the element 'NEMMCOName' in the complex type <i>EquipmentBaseType</i> | NOSEquipment | 2 |
| 6 | Changed version attribute to r18 on the transaction <i>NOSInfoResponse</i> | NOSAssessment | 1,2 |
| 7 | Changed version attribute to r18 on the transactions <i>NOSBookingSubmission</i> and <i>NOSBookingResponse</i> | NOSBooking | 1 |
| 8 | Changed version attribute to r18 on the transaction <i>NOSEquipmentSubmission</i> | NOSEquipment | 2 |

Table 2-1 Change Log

2.1.3 Schema change description

The following paragraphs define the changes made to individual schema files:

2.1.3.1 aseXML

- Change namespace to urn:aseXML:r18
- Added r18 include files:
 - Events_r18
 - NOSAssesment_r18
 - NOSBooking_r18
 - NOSCommon_r18
 - NOSEquipment_r18

List of changes:

```
<xsd:schema targetNamespace="urn:aseXML:r17urn:aseXML:r18">
  <xsd:include schemaLocation="Events_r17.xsdEvents_r18.xsd"/>
  <xsd:include schemaLocation="CustomerDetails_r17.xsdCustomerDetails_r18.xsd"/>
  <xsd:include schemaLocation="NOSCommon_r16.xsdNOSCommon_r18.xsd"/>
  <xsd:include schemaLocation="NOSBooking_r16.xsdNOSBooking_r18.xsd"/>
  <xsd:include schemaLocation="NOSEquipment_r16.xsdNOSEquipment_r18.xsd"/>
  <xsd:include schemaLocation="NOSAssessment_r16.xsdNOSAssessment_r18.xsd"/>
</xsd:schema>
```

2.1.3.2 Events

- Added simple type r18 for use by version attributes

List of changes:

```
<xsd:simpleType name="r18">
  <xsd:restriction base="ReleaseIdentifier">
    <xsd:enumeration value="r18"/>
  </xsd:restriction>
</xsd:simpleType>
```

2.1.3.3 NOSAssesment

- Changed version attribute on transaction NOSInfoResponse to r18

List of changes:

```
<xsd:complexType name="NOSInfoResponse">
  <xsd:attribute name="version" use="required" type="r16r18"/>
</xsd:complexType>
```

2.1.3.4 NOSBooking

- Changed version attribute on transaction NOSBookingSubmission to r18
- Changed version attribute on transaction NOSBookingResponse to r18

List of changes:

```
<xsd:complexType name="NOSBookingSubmission">
  <xsd:attribute name="version" use="required" type="r16r18"/>
</xsd:complexType>

<xsd:complexType name="NOSBookingResponse">
  <xsd:attribute name="version" use="required" type="r14r18"/>
</xsd:complexType>
```

2.1.3.5 NOSCommon

- Added enumerations to EnumBookingElementServiceAffectedType:
- Added enumerations to EnumScopeOfWorkType:

List of changes:

```
<xsd:simpleType name="EnumBookingElementServiceAffectedType">
  <xsd:restriction base="xsd:string">
    <xsd:maxLength value="30"/>
    <xsd:whiteSpace value="collapse"/>
    <xsd:enumeration value="HV plant"/>
    <xsd:enumeration value="HV A/R OFF"/>
    <xsd:enumeration value="HV trip & A/R test"/>
    <xsd:enumeration value="HV plant protection+trip test"/>
    <xsd:enumeration value="HV plant protection"/>
    <xsd:enumeration value="System Protection"/>
    <xsd:enumeration value="UV control scheme"/>
    <xsd:enumeration value="UF load shed scheme"/>
    <xsd:enumeration value="Overload scheme"/>
    <xsd:enumeration value="DC link scheme"/>
    <xsd:enumeration value="Other control scheme"/>
    <xsd:enumeration value="Voice"/>
    <xsd:enumeration value="Data & controls"/>
    <xsd:enumeration value="AGC controls"/>
    <xsd:enumeration value="Other equipment"/>
  </xsd:restriction>
</xsd:simpleType>

<xsd:simpleType name="EnumScopeOfWorkType">
  <xsd:restriction base="xsd:string">
    <xsd:maxLength value="25"/>
    <xsd:whiteSpace value="collapse"/>
    <xsd:enumeration value="Line"/>
    <xsd:enumeration value="Substn"/>
    <xsd:enumeration value="Line/Substn"/>
    <xsd:enumeration value="Live Line"/>
    <xsd:enumeration value="Live Substn"/>
    <xsd:enumeration value="Live Line/Substn"/>
    <xsd:enumeration value="Protection"/>
    <xsd:enumeration value="SCADA"/>
    <xsd:enumeration value="Communications"/>
    <xsd:enumeration value="Other secondary equip"/>
    <xsd:enumeration value="Auto Control Scheme"/>
  </xsd:restriction>
</xsd:simpleType>
```

2.1.3.6 NOSEquipment

- Changed maxLen constraint on element NEMMCOName in type EquipmentBaseType:
- Changed version attribute on transaction NOSEquipmentSubmission to r18

List of changes:

```
<xsd:complexType name="EquipmentBaseType" abstract="true">
  <xsd:sequence>
    <xsd:element name="NEMMCOName" minOccurs="0">
      <xsd:simpleType>
        <xsd:restriction base="xsd:string">
          <xsd:whiteSpace value="collapse"/>
          <xsd:minLength value="1"/>
          <xsd:maxLength value="4060"/>
        </xsd:restriction>
      </xsd:simpleType>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

```

        </xsd:restriction>
    </xsd:simpleType>
</xsd:element>
</xsd:sequence>
</xsd:complexType>

<xsd:complexType name="NOSEquipmentSubmission">
    <xsd:attribute name="version" use="required" type="r16r18"/>
</xsd:complexType>

```

2.1.4 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_r18.xsd | | | X |
| BAR_r15.xsd | | | |
| BulkDataTool_r15.xsd | | | |
| CATSReports_r15.xsd | | | |
| CATSTableReplication_r15.xsd | | | |
| ClientInformation_r15.xsd | | | |
| Common_r17.xsd | | | |
| CustomerDetails_r17.xsd | | | |
| CustomerTransfer_r15.xsd | | | |
| Electricity_r17.xsd | | | |
| Enumerations.xsd | | | |
| Events_r18.xsd | | | X |
| Faults_r15.xsd | | | |
| Gas_r17.xsd | | | |
| Header_r15.xsd | | | |
| MDMTRReport_r15.xsd | | | |
| MeterDataManagement_r17.xsd | | | |
| NetworkBilling_r15.xsd | | | |
| NMIDataAccess_r17.xsd | | | |
| NOSAssessment_r18.xsd | | | X |
| NOSBooking_r18.xsd | | | X |
| NOSCommon_r18.xsd | | | X |
| NOSEquipment_r18.xsd | | | X |
| Reports_r15.xsd | | | |
| ServiceOrder_r17.xsd | | | |
| TableReplication_r15.xsd | | | |
| Transactions_r17.xsd | | | |
| No of files added | 0 | | |
| No of files removed | | 0 | |
| No of files modified | | | 6 |
| Total No of files | | | 28 |

2.2. Developer Test

2.2.1 Test Platforms

The new schema has been tested using the following platforms as advised by ASWG:

- XMLSpy 2004
- MSXML4 SP1
- Xerces 1.4.4 and 2.2.1

2.2.2 Test Cases

Modified schema has been tested using the following instance documents (included with CR submission):

- NOSAck_r18.xml
- NOSBookingDeleteOutageFromRepeating_r18.xml
- NOSBookingOutageActutalUpdate_r18.xml
- NOSBookingResponse_r18.xml
- NOSBookingWithAttachment_r18.xml
- NOSBooking_r18.xml
- NOSEquipmentResponse_r18.xml
- NOSEquipmentSubmitType_r18.xml
- NOSNAck_r18.xml
- NOSWithdrawBooking_r18.xml

2.3. Dependency analysis

This table identifies the transaction types and derived types that must have their version attribute updated as the result of these changes.

| Item# | Modified Types | Versioned Types Impacted | Transactions Where Used | Schema Filenames |
|-------|---------------------------------------|---|---|--|
| 1 | EnumBookingElementServiceAffectedType | NOSBookingSubmission NOSBookingResponse NOSInfoResponse | NOSBookingSubmission NOSBookingResponse NOSInfoResponse | NOSCommon_r18.xsd NOSBooking_r18.xsd NOSAssessment_r18.xsd |
| 1 | EnumScopeOfWorkType | NOSBookingSubmission NOSInfoResponse | NOSBookingSubmission NOSInfoResponse | NOSCommon_r18.xsd NOSBooking_r18.xsd NOSAssessment_r18.xsd |
| 2 | EquipmentBaseType | NOSEquipmentSubmission NOSInfoResponse | NOSEquipmentSubmission NOSInfoResponse | NOSEquipment_r18.xsd NOSAssessment_r18.xsd |

Table 2-2, Dependency Analysis

3. Proposal Assessment

3.1. Test

The ASWG ensures that all recommended parsers on relevant platforms can successfully validate the proposed schema.

3.1.1 Test Platforms

Supplied samples have been tested using the following parsers:

- MSXML 4.0 SP1
- Xerces 1.4.1
- Xerces 2.2.1
- XMLSpy 2004

3.1.2 Test Cases

See section 2.2.2

3.1.3 Test Results

All cases tested successfully

3.2. Conformance Report

The ASWG completes the conformance report validating each proposed new schema file against the published aseXML guidelines.

| Schema Filename | Impacted by Item # | Conformance Details |
|-----------------------|--------------------|---------------------|
| aseXML_r18.xsd | 1,2 | Conforms |
| Event_r18.xsd | 1,2 | Conforms |
| NOSAssessment_r18.xsd | 1,2 | Conforms |
| NOSBooking_r18.xsd | 1 | Conforms |
| NOSCommon_r18.xsd | 1 | Conforms |
| NOSEquipment_r18.xsd | 2 | Conforms |

Table 3-1, Change Proposal Conformance Details

4. Review Process

This section describes the status of the proposed changes and any modifications that are made to the original proposal during the Change Process

4.1. Status of Changes

| Item# | Review Notes | Status ² |
|-------|--------------|---------------------|
| 1 | No change | Accepted |
| 2 | No change | Accepted |

Table 4-1, Review Notes for proposed approvals

4.1.1 First modification description

<Description of modification to Change Item>

4.2. Supplied Documents

<List any other supplied documentation>

² Status can be one of

- Accepted
- Accepted as changed
- Rejected, or
- Deferred

5. Resolution

The ASWG provides a resolution for each change item contained in the Change Log. The resolution is forwarded to the Originator for implementation considerations as required by respective Change Management Process.

5.1. Changes Approved and Accepted

The ASWG compiles the list of change items proposed for approval together with their resolution status in the table below.

| Chg No | Description | Status (Approved, Rejected or Deferred) |
|--------|---|--|
| 1 | Modified the namespace and include files in the aseXML schema file to move to version r18 | Approved |
| 2 | Added the simple type 'r18' for the r18 schema version | Approved |
| 3 | Added the enumerations 'Overload scheme', 'DC link scheme' and 'Other control scheme' to the simple type <i>EnumBookingElementServiceAffectedType</i> | Approved |
| 4 | Added the enumeration 'Auto Control Scheme' to the simple type <i>EnumScopeOfWork</i> | Approved |
| 5 | Modified the constraint maxLen from 40 to 60 for the element 'NEMMCOName' in the complex type <i>EquipmentBaseType</i> | Approved |
| 6 | Changed version attribute to r18 on the transaction <i>NOSInfoResponse</i> | Approved |
| 7 | Changed version attribute to r18 on the transactions <i>NOSBookingSubmission</i> and <i>NOSBookingResponse</i> | Approved |
| 8 | Changed version attribute to r18 on the transaction <i>NOSEquipmentSubmission</i> | Approved |

Table 5-1, Change Resolution