

The change history of the schemas (Version 4.0)

This is a document for writing down changes that are made to schema files and their documentation. This document covers changes that are made to version 4.0.

| Date | Schema file | Author | Change |
|------------|--|----------|---|
| 17.12.2020 | StanForD2010CommonDefinitions_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none">• Added missing string type for tableName attribute in DataTableType• Added missing nonNegativeInteger type for columnOrder attribute in ColumnDataType• Added missing positiveInteger type for DeliveryPresentationOrder element in CommonDeliveryDefinitionType• Changed primitive type of LoadNumberOfItems from positive integer to integer in LoadNumberOfItemsType• Changed type of element LongLogButtMAX from nonNegativeInteger to positiveInteger in LongTimberDefinitionType• Added missing positiveInteger type for TrackingKey element in TrackCoordinatesType• Changed types of elements ConstantA and FactorB from NonNegativeDecimal to decimal in SwedishZaccoType• Description of messageType in boi schema updated to: <i>Enumeration list of file extensions of StanForD 2010 messages: Allowed value in felling bunching object instruction message is: "boi"</i>• Description of messageType in bpr schema updated to: <i>Enumeration list of file extensions of StanForD 2010 messages: Allowed value in felled bunched production message is: "bpr"</i>• Changed the second "LengthClassAdjustment1" is changed to "LengthClassAdjustment2" in the description of element LengthClassAdjustment in LengthDefinitionType. |

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| | | | <ul style="list-style-type: none"> • Removed optional attribute agency from types UserIDType, LoggingFormType and RealEstateIDObjectType and after that deleted RealEstateIDObjectType and changed types of RealEstateIDObject element and RealEstateIDSubObject element to string • Made ContactInformation element optional in LoggingOrganisationType • Made countryCodeCategory attribute mandatory in CountryCodeType • Added a new mandatory attribute modificationRestricted to EstonianVolumeParametersType • Added a new mandatory element DiameterSectionModificationDate (ModificationDateType) in DiameterSectionDefinitionType • Added a new complex DiameterSectionDefinitionsHarvestedProductionType that contains a sequence of DiameterSectionDefinition elements (DiameterSectionDefinitionMachineType) and modificationRestricted attribute • Added a new optional DiameterSectionDefinitions element (DiameterSectionDefinitionsHarvestedProductionType) in ObjectDefinitionMachineType • Removed repeatable DiameterSectionDefinition element from MachineHarvestedProductionType • Removed optional SubObjectKey element from LocationDefinitionMachineType |
| 17.12.2020 | OperationalMonitoring_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Removed extra space from enumeration value "Object filter" in ReportFilterCategoryType • ShiftKey is changed to ShiftKey in OperatorShiftDefinitionType • Added a new optional ShiftKey element in IndividualMachineWorkTimeType |
| 17.12.2020 | FellingBunchingQualityControl_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Created a new ControlStemSettingsFellingBunchingControlType where we have removed elements RandomMINLength and RandomLogNotification that are not needed because there are no logs. |

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| 17.12.2020 | ForwardingDeliveryInstruction_V4p0.xsd | JOAR/JAS | <pre data-bbox="1205 103 2016 414"> <xsd:key name="ProductUserIDProductDefinition"> <xsd:selector xpath="sfd:ProductDefinition"/> <xsd:field xpath="sfd:ProductUserID"/> </xsd:key> <xsd:keyref name="ProductUserIDRefProductDefinition" refer="ProductUserIDProductDefinition"> <xsd:selector xpath="sfd:DeliveryDefinition"/> <xsd:field xpath="sfd:ProductUserID"/> </xsd:keyref> </pre> <ul data-bbox="846 406 1702 550" style="list-style-type: none"> • Added a new constraint: • Made ProductName element mandatory in ClassifiedProductDefinitionForwardingDeliveryInstructionType |
| 17.12.2020 | HarvestedProduction_V4p0.xsd HarvestedDeltaProduction_V4p0.xsd | JOAR/JAS | <ul data-bbox="846 598 1814 702" style="list-style-type: none"> • Removed DiameterSectionUserId constraint • Updated DiameterSectionDefinition constraints to follow new structure |
| 17.12.2020 | ObjectInstruction_V4p0.xsd | JOAR/JAS | <ul data-bbox="846 805 2139 1460" style="list-style-type: none"> • Added a new complex ProductUserIDsType that contains a sequence of ProductUserID elements and modificationRestricted attribute • Added a new mandatory ProductUserIDs element in ObjectDefinitionObjectInstructionType • Removed repeatable ObjectUserID element from ObjectDefinitionObjectInstructionType • Updated UniqueProductUserID constraint to follow previous changes • Added a new complex DiameterSectionDefinitionsObjectInstructionType that contains a sequence of DiameterSectionDefinition elements (DiameterSectionDefinitionType) and modificationRestricted attribute • Added a new optional DiameterSectionDefinitions element in ObjectDefinitionObjectInstructionType • Removed repeatable DiameterSectionDefinition element from ObjectInstructionType |

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| 17.12.2020 | ForwardingObjectInstruction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added new complex types DeliveryUserIDsType and LocationUserIDsType that contain mandatory modificationRestricted attribute and sequences of DeliveryUserID and LocationUserID elements • Added a new mandatory element DeliveryUserIDs and a new optional element LocationUserIDs in ObjectDefinitionForwardingObjectInstructionType • Removed repeatable DeliveryUserID element and LocationUserID element from ObjectDefinitionForwardingObjectInstructionType |
| 17.12.2020 | FellingBunchingQualityControl_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Made StemMeasurement element repeatable in SingleTreeFelledStemFellingBunchingControlType • Added a new complex type CalibrationValuesFellingBunchingControlType that is derived from CalibrationValuesType removing there LengthCalibration structure and changing diameterCalibrationPosition to stemDiameterCategory with enumeration values “DBH” and “ReferenceDiameter”. • Added a new complex type DiameterCalibrationFellingBunchingControlType to implement previous change • Added a new complex type DiameterCalibrationAdjustmentFellingBunchingControlType to implement previous change • Updated types of CalibrationValues elements to CalibrationValuesFellingBunchingControlType |
| 22.3.2021 | | JOAR/JAS | <ul style="list-style-type: none"> • Added four new schemas: <ul style="list-style-type: none"> ○ YardedProduction_V4p0.xsd ○ YardingObjectInstruction_V4p0.xsd ○ SkiddedProduction_V4p0.xsd ○ SkiddingObjectInstruction_V4p0.xsd |

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| 22.3.2021 | StanForD2010CommonDefinitions_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none">• During previous process we have added following new types to StanForD2010CommonDefinitions_V4p0.xsd-file:<ul style="list-style-type: none">○ MachineWithWinchType○ MachineWinchModelType,○ LocationDefinitionMachineType○ LoadGreenMassMethodType○ StemLoadVolumeCategoryType○ StemLoadEstimationMethodType○ StemLoadEstimationUnitType○ StemLoadEstimationType○ StemLoadGreenMassType○ StemLoadVolumeType○ StemLoadEstimationType○ StemLoadType○ PartialStemLoadType○ SpeciesGroupDefinitionWithKeyType○ DataTableGroupProductionType○ UserDefinedDataProductionType |

- Added a new simple type to be used for UserID:s :

```
<xsd:simpleType name="RestrictedStringType">  
  <xsd:restriction base="xsd:string">  
    <xsd:pattern value="([\S-[%?&lt;&gt;:&quot;&apos;/\|*+]]+  
      ( ([\S-[%?&lt;&gt;:&quot;&apos;/\|*+]]+)*" />  
    </xsd:restriction>  
  </xsd:simpleType>
```

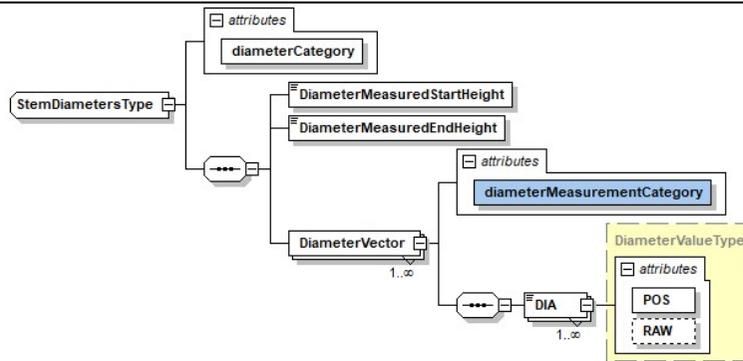
- Added a new simple type:

```
<xsd:simpleType name="SingleDigitNonNegativeDecimal">  
  <xsd:restriction base="NonNegativeDecimal">  
    <xsd:fractionDigits value="1" fixed="true"/>  
  </xsd:restriction>  
</xsd:simpleType>
```

and changed type of LogLength element in LogMeasurementHarvestingQualityControlType and LogMeasurementType to SingleDigitNonNegativeDecimal

- Changed StemKey elements type from xsd:positiveInteger to xsd:unsignedLong
- Added a new structure for stem diameters that has following types:
 - StemDiametersType
 - DiameterVectorType
 - DiameterValueType

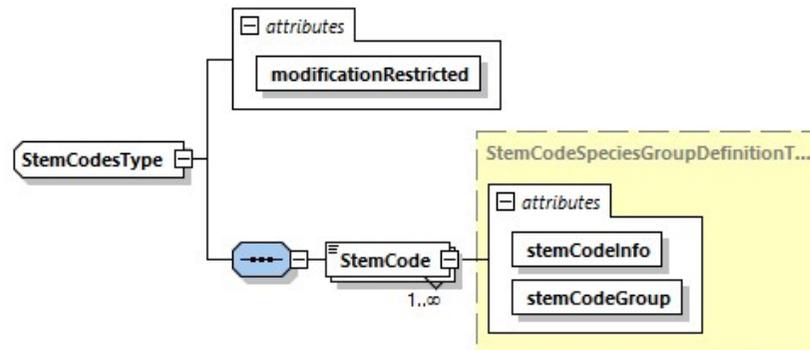
They implement following structure:



- Added a new StemCodes-structure with following types:

- StemCodesType
- StemCodeType
- StemCodeGroupType

They implement following structure:



StemCodeGroupType has following enumerations:

```
<xsd:simpleType name="StemCodeGroupType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Nature (high stumps, retention trees etc)"/>
  </xsd:restriction>
</xsd:simpleType>
```

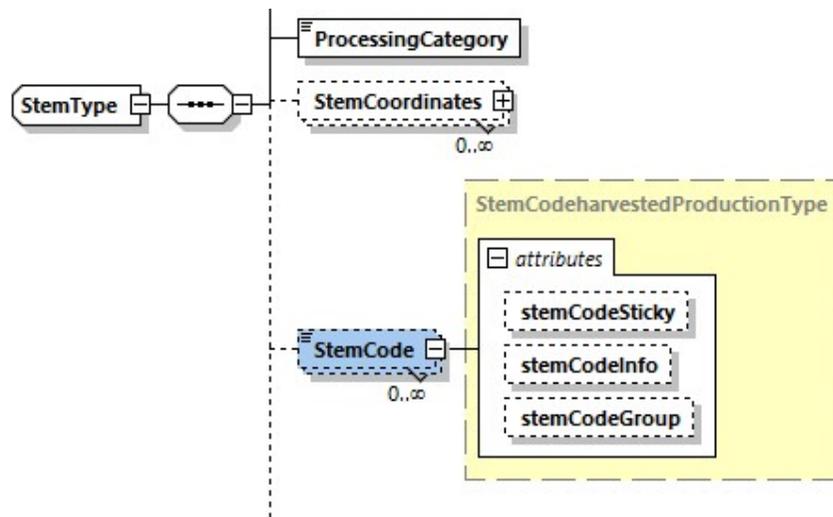
```

<xsd:enumeration value="Culture (ruin, foot path etc)"/>
<xsd:enumeration value="Special harvesting (selective cutting,
windthrow, snow breakage etc)"/>
<xsd:enumeration value="Other"/>
</xsd:restriction>
</xsd:simpleType>

```

- Added a new StemCode-structure with following types:
 - StemCodeHarvestedProductionType

That implement following structure:



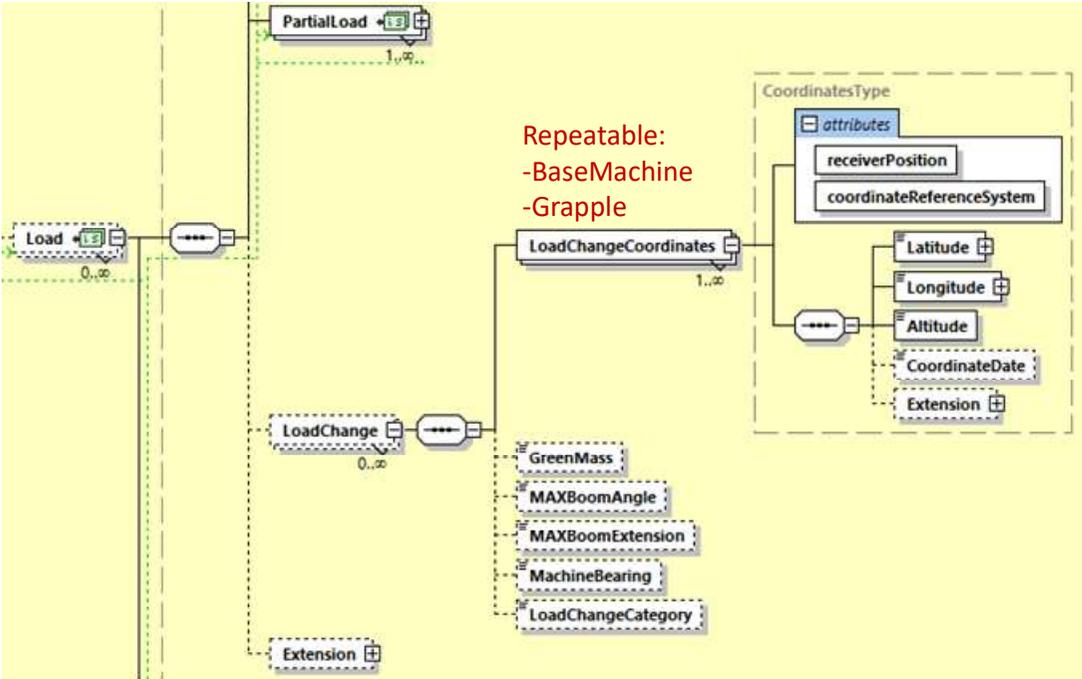
Changed type of StemCode element to StemCodeHarvestedProductionType in StemType and made it repeatable

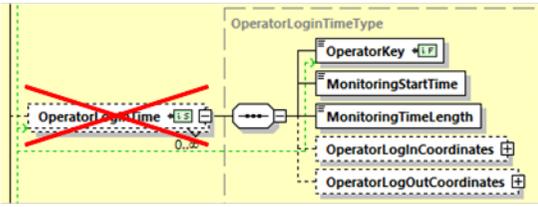
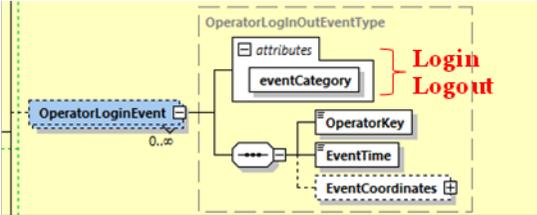
7.4.2021

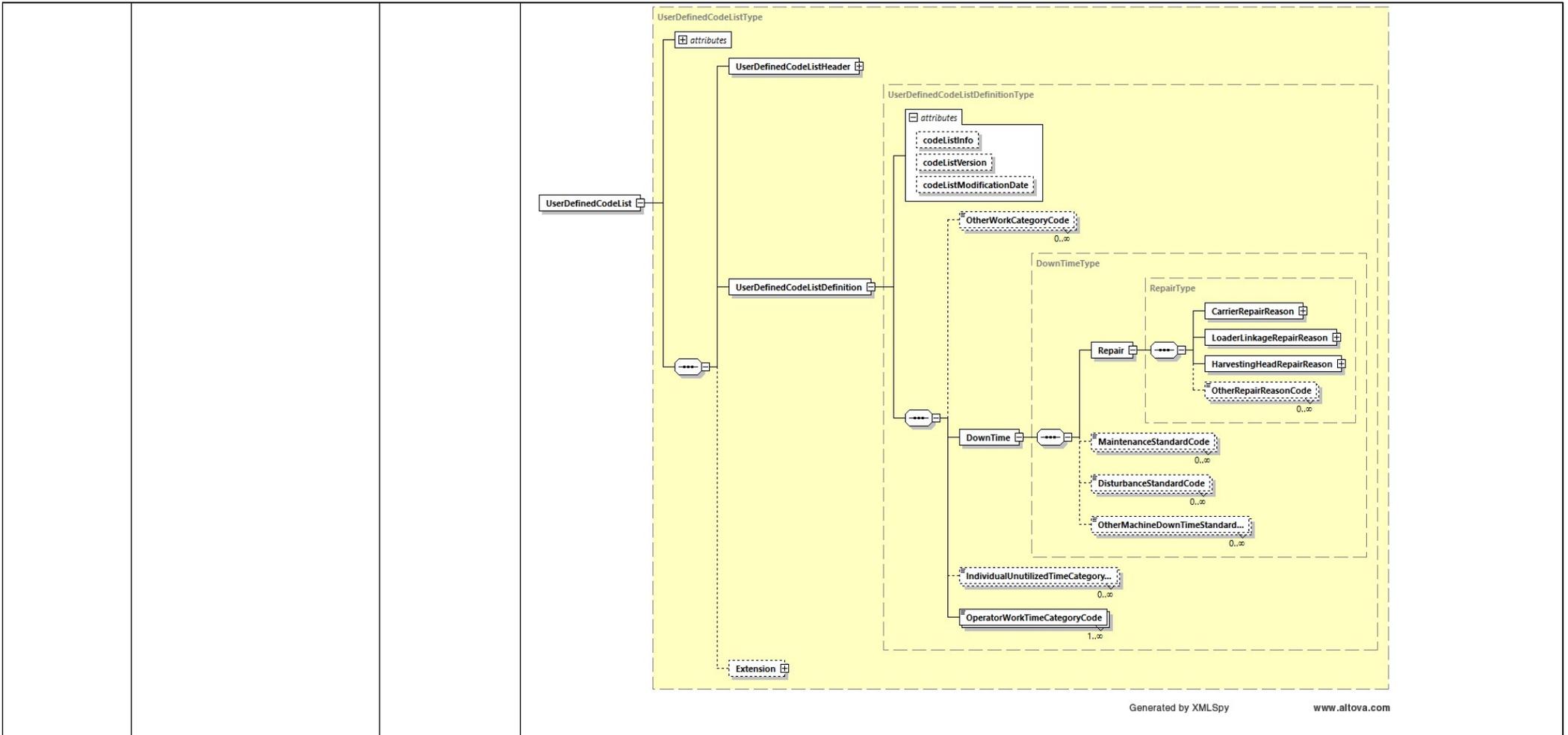
JOAR/JAS

- Added one new and one totally updated schema:
 - ObjectGeographicalInstruction_V4p0.xsd
 - DesignInstruction_V4p0.xsd

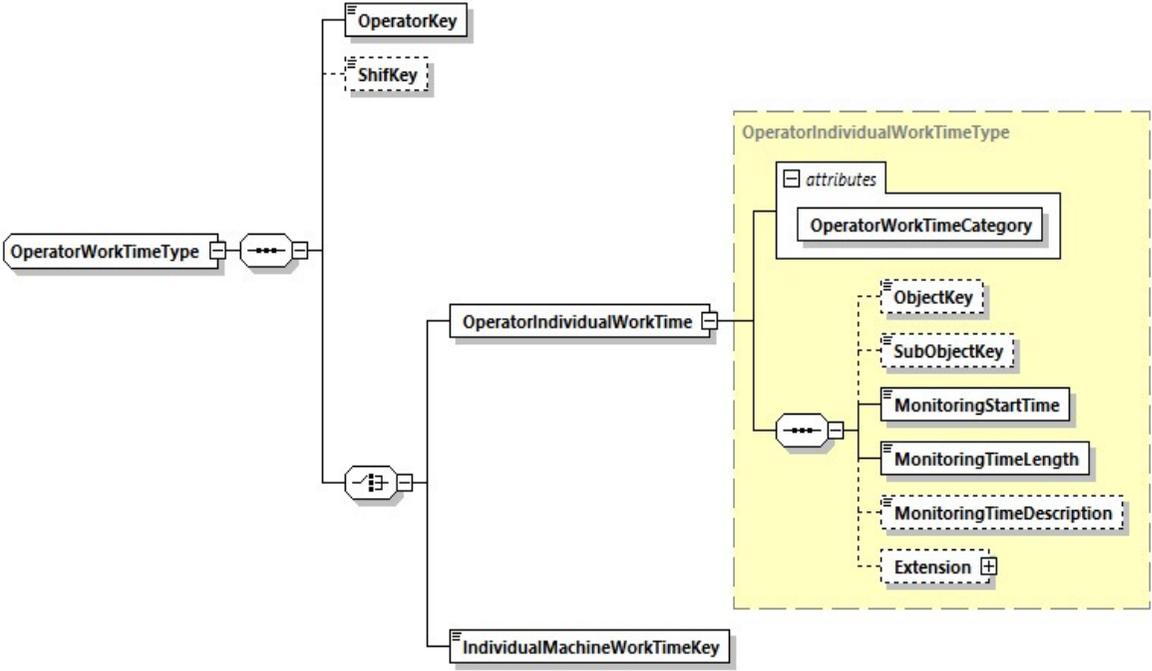
| | | | |
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| 1.6.2021 | new simple types to common schema file and changes to multiple schemas | JOAR/JAS | <ul style="list-style-type: none"> Added new simple types and changed types of corresponding elements and types: <ul style="list-style-type: none"> Diameters/DBH → DiameterType = xsd:positiveInteger Changed diameter elements and types: DBH, DiameterClassLowerLimit, DiameterMAXButt, DiameterClassMAX, LogDiameterType, ReferenceDiameterType, DiameterValueType Volumes → VolumeType = nonNegativeDecimal Changed volume elements and types: DiameterSectionVolume, LogVolumeType, StemVolumeType, TotalProductVolumeType, TotalProductVolumeType, TotalStemVolumeType, TotalForwardedVolumeType, TotalVolumeOfHarvestedLogsType, LoadVolumeType, StemLoadVolumeType Presentation/Order → OrderType = xsd:positiveInteger Changed presentation order elements: DeliveryPresentationOrder, ProductPresentationOrder, SpeciesGroupPresentationOrder Keys → KeyType = xsd:unsignedLong Changed key elements: SpeciesGroupKey, OperatorKey, ObjectKey, SubObjectKey, LocationKey, DeliveryKey, DiameterSectionKey, StemLoadKey, PartialStemLoadKey, ScaleKey, ScaleControlKey, TrackingKey, StemBunchKey, LoadKey, PartialLoadKey, MonitoringSettingsKey, ShifKey, ProductKey Mass → MassType = nonNegativeDecimal Changed mass elements and types: ForwardedGreenMass, StemLoadGreenMassType, LoadGreenMassType LogLengths → LogLengthType = singleDigitNonNegativeDecimal Changed log length element: LogLength |
| | | | <ul style="list-style-type: none"> Removed optional Tracking-element from MachineType Removed TrackingType |

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| 1.6.2021 | ForwardedProduction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added new types TrackCoordinatesForwardedProductionType and TrackingForwardedProductionType to implement Tracking structure • Added a new optional element Tracking to MachineForwardedProductionType • Added a new optional LoadChange structure to LoadType  <ul style="list-style-type: none"> • Repeatable: <ul style="list-style-type: none"> -BaseMachine -Grapple |
| 1.6.2021 | StanForD2010CommonDefinitions_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Modified StemCodeHarvestedProductionType so that it has now two optional attributes stemCodeInfo and stemCodeGroup so took away stickyCode attribute |
| 1.6.2021 | ObjectGeographicalInstruction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added Extension element to Feature and FeatureCollection, • Added ModificationDate element to FeatureCollection type • Added FeatureCollectionInfo element to FeatureCollection type |

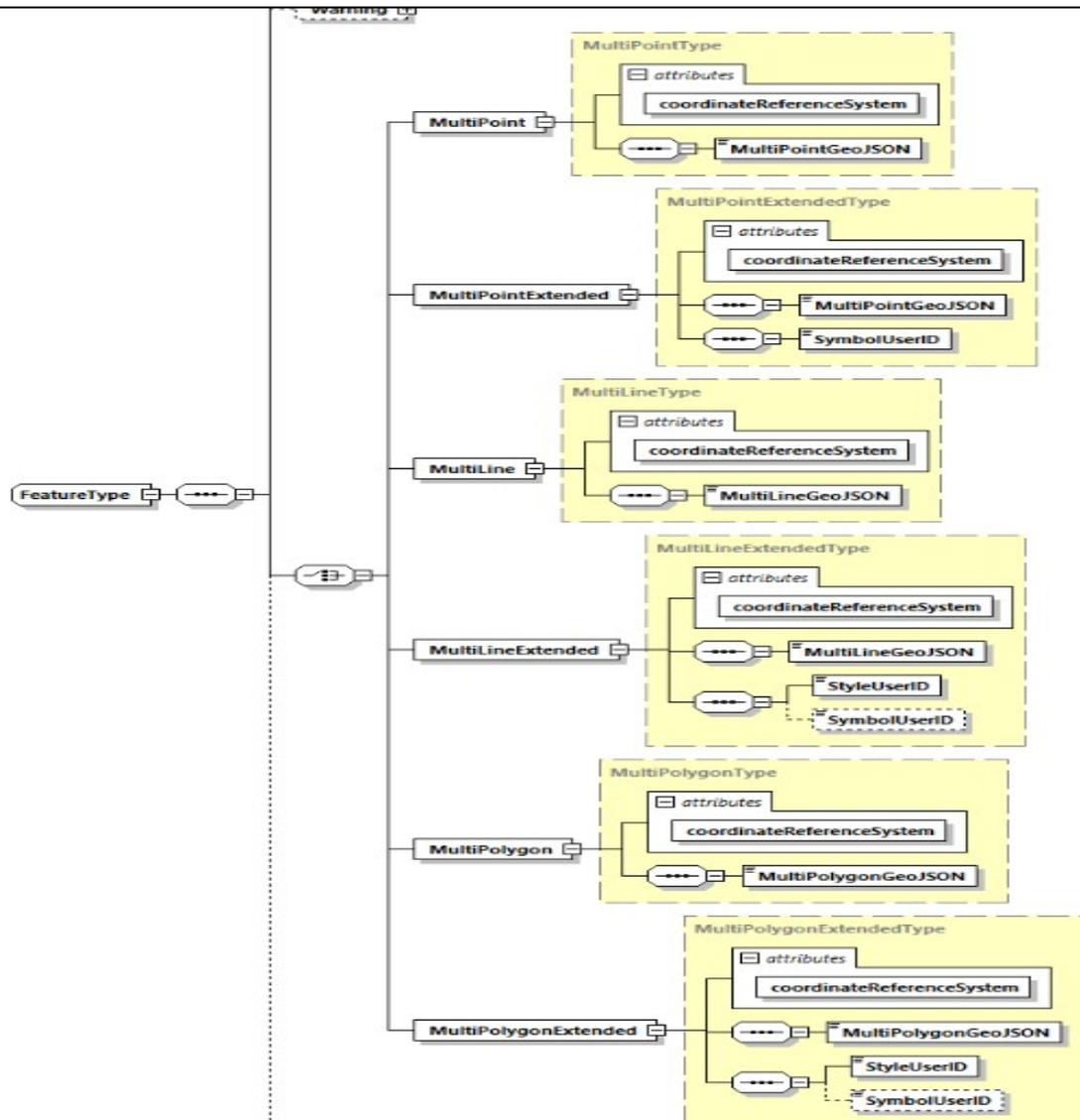
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| | | | <ul style="list-style-type: none"> Added FeatureInfo element to Feature type Added SymbolUserID element to Warning type |
| 1.6.2021 | DesignInstruction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> Added Extension element to StyleDefinition and SymbolDefinition types Added ModificationDate element to StyleDefinition and SymbolDefinition types |
| 1.6.2021 | OperationalMonitoring_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> Removed ShiftKey from the IndividualMachineWorkTime Removed CombinedWorkTime and FrequencyShortDownTimes structures and after that took away also corresponding choices Removed all constraints that belong to previous removed structures Replaced OperatorLoginTime structure by the OperatorLoginEvent structure <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <ul style="list-style-type: none"> Added IndividualMachineWorkTimeKey to IndividualMachineWorkTimeType Removed all references to imported StanForD2010CodeList_V4p0 schema file and replaced those used code types with xsd:string Excluded StanForD2010CodeList_V4p0.xsd file |
| 1.6.2021 | UserDefinedCodeList_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> Created a totally new schema for user defined mom codes |



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| 22.6.2021 | OperationalMonitoring_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added a new complex type <code>OperatorIndividualWorkTimeType</code> that is used to implement modified <code>OperatorWorkTimeType</code> • Modified <code>OperatorWorkTimeType</code> as follows |
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| | | |  <p style="text-align: right;">Generated by XMLSpy www.altova.com</p> <ul style="list-style-type: none"> • Changed HarvestingHead elements name to Attachment • Added a new optional name attribute for every code element • Added a new CodeListDefinitionType which is an extension of CommonCodeListType with one additional element CodeListKey. • Added a new mandatory and repeatable element CodeListDefinition • Added CodeListKey element to OperatorWorkTime and IndividaulMachineWorkTIme structures • Added IndividualMachineWorkTimeKey element to ShortDownTimeType |
| 22.6.2021 | OperationalMonitoringCodeList_V4p0.xsd was | JOAR/JAS | <ul style="list-style-type: none"> • Made all code elements mandatory • Added a new mandatory name attribute for every code element |

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| | UserDefinedCodeList_V4p0.xsd | | <ul style="list-style-type: none"> • Changed HarvestingHead elements name to Attachment • Modified UserDefinedCodeListDefinitionType so that common codelist identification information is moved from attributes to elements of CommonCodeListType which is then base type of UserDefinedCodeListDefinitionType • Changed schema name (and many names of elements and types also) from UserDefinedCodeList to OperationalMonitoringCodeList and changed file type from “udl” to “mcl” |
| 22.6.2021 | StanForD2010CommonDefinitions_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added a new complex type CommonCodeListDefinitionType |
| 22.6.2021 | ObjectGeographicalInstruction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added an GISCoordinateReferenceSystem -attribute for every GIS type • Created MultiPointExtended, MultiLineExtended and MultiPolygonExtended types and put there non GIS data of original types and use them in FeatureType as can be seen in picture below • Added an AlarmCoordinates and BorderCoordinates structures to ObjectDefinitionObjectGeographicalInstructionType |



- Added and updated element and attribute descriptions

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| 22.6.2021 | DesignInstruction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added and updated element and attribute descriptions |
| 28.6.2021 | din/mcl/mom/commondef | JOAR | <p>Updates to din/mcl/mom/commondef done by John Arlinger 2021-06-28</p> <ul style="list-style-type: none"> • Description of messageType should include mcl and not mom in the mcl-schema. • Descriptions for DesignInstruction, DesignInstructionHeader, DesignDefinition in the din-schema has been updated. • Descriptions for CodeListInfo, CodeListVersion, CodeListModificationDate, CodeListKey, Name-attributes has been updated in mom- and mcl-schemas • Descriptions in mom for otherMachienWorkCategory, Electrical, Hydraulics, Mechanical, Air updated in order to point out that codes come from mcl-file. • Attribute name changed from hydraulics to HydraulicsName (under AttachmentRepairReason) • Attribute name changed from otherWorkCategory to otherWorkCategoryCode in mom • Attribute name changed from OperatorWorkTimeCategory to OperatorWorkTimeCategoryCode in mom • Element name changed from IndividualUnutilizedTimeCategory to IndividualUnutilizedTimeCategoryCode in mom • Element names changed from Electrical/Hydraulics/Mechanics/Air changed to ElectricalCode/HydraulicsCode/MechanicsCode/AirCode in mom (same as in mcl) |

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| 30.6.2021 | OperationalMonitoring_v4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added otherWorkCategoryName, operatorWorkTimeCategoryName and individualUnutilizedTimeCategoryName -attributes • MachineRunTimeCategory updated with the following standardized enumeration values "Processing", "Terrain travel" and "Other work" in mom. These values not from mcl. |
| 30.6.2021 | mcl, mom | JOAR | <p>Updates to mcl done by John Arlinger 2021-06-30</p> <ul style="list-style-type: none"> • Description of messageType should include mcl and not mom in the mcl-schema. <p>Updates to mom done by John Arlinger 2021-06-30</p> <ul style="list-style-type: none"> • Description of otherWorkCategoryCode updated in mom. • Descriptions for OperatorIndividualWorkTime and CodeListKey per OperatorWorkTime has been updated in mom-schemas. • Attribute name changed from OperatorWorkTimeCategoryCode to operatorWorkTimeCategoryCode in mom • Element name changed from IndividualUnutilizedTimeCategory to IndividualUnutilizedTimeCategoryCode in mom |
| 30.6.2021 | mcl, mom | JOAR | <ul style="list-style-type: none"> • Deleted MultiLine and kept only MultiLineExtended under element Feature (same for point and polygon). • Updated the description of MultiLineGeoJSON/MultiPointGeoJSON/MultiPolygonGeoJSON: <i>Multi point string according to GeoJSON. This example includes the required tags:</i> <pre> { "type": "MultiPoint", "coordinates": [[10, 40], [40, 30], [20, 20], [30, 10]] } </pre> |

```
}
```

Multi line string according to GeoJSON. This example includes the required tags:

```
{  
  "type": "MultiLineString",  
  "coordinates": [  
    [[10.0, 10.0], [20.0, 20.0], [10.0, 40.0]],  
    [[40.0, 40.0], [30.0, 30.0], [40.0, 20.0], [30.0, 10.0]]  
  ]  
}
```

Multi polygon string according to GeoJSON. This example includes the required tags:

```
{  
  "type": "MultiPolygon",  
  "coordinates": [  
    [  
      [[40.0, 40.0], [20.0, 45.0], [45.0, 30.0], [40.0, 40.0]]  
    ],  
    [  
      [[20.0, 35.0], [10.0, 30.0], [10.0, 10.0], [30.0, 5.0], [45.0, 20.0], [20.0, 35.0]],  
      [[30.0, 20.0], [20.0, 15.0], [20.0, 25.0], [30.0, 20.0]]  
    ]  
  ]  
}
```

7.12.2021

StanForD2010CommonDefinitions_V4p0.xsd

JOAR/JAS

- Mandatory attribute coordinateReferenceSystem moved to MessageAttributeGroup from CoordinatesAttributeGroup in CoordinatesType
- Moved MultiPolygonType from ObjectGeographicalInstruction schema to StanForD2010CommonDefintions
- Added new optional BorderPolygon-element to CommonObjectDefinitionType
- Added an optional LogCoordinates element to LogType

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| | | | <ul style="list-style-type: none"> • Added three new optional attributes to CoordinatesAttributeGroup <ul style="list-style-type: none"> ○ qualityIndicatorGNSS ○ noOfSatellitesInUseGNSS |
| | | | <ul style="list-style-type: none"> ○ accuracyCoordinate • Added a new type MachineBearingType with optional attribute accuracyMachineBearing . Changed corresponding type of element MachineBearing in BooPositioningType • Added Extension structure to BoosPositioningType • Changed totally allowed values in enumeration list of receiverPosition attribute in ReceiverPositionType • Added a new bark function named ConsolidatedFunction and removed SwedishZacco barkfunction sgructure. Renamed all other bark functions and updated enumerations in BarkFuctionCategoryType. • Added two new mandatory elements BarkFunctionUserID and BarkFunctionName to BarkFunctionType • Added a new mandatory attribute barkFunctionDefault to BarkFunctionType • Made BarkFunction element repeatable in SpeciesGroupDefinition types • Added an new complex type BarkFunctionWithKey that is an extension of BarkFunctionType with additional StemKey element. • Reorganized SpeciesGroupDefinition types by taking away BarkFunction element from SpeciesGroupDefinitionDetailsType and add it to SpeciesGroupDefinitionDetailsAndBarkFunction and SpeciesGroupDefinitionDetailsAndBarkFunctionAndKey types • Added a new optional element BarkFunctionKey to StemType |

- Added a new complex type DensityAdjustmentType
- Removed DiameterSectionDefinitions-structure from ObjectDefinitionMachineType and put it in a new ObjectDefinitionMachineWithDiameterSectionDefintionsType. This type is only used in hpr messages.
- Added new ComplexTypes TrackCoordinatesWithKeytype and TrackCoordinatesWithStemLoadKeytype
- Added TrackCoordinates structure to MachineHarvestedProductionType
- Moved following types from ObjectGeographicalInstruction schema:

| | |
|-------------|---------------------------------|
| complexType | FeatureCollectionType |
| complexType | FeatureType |
| complexType | MultiLineType |
| complexType | MultiPointType |
| complexType | MultiLineExtendedType |
| complexType | MultiPointExtendedType |
| complexType | MultiPolygonExtendedType |
| complexType | WarningType |

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| 7.12.2021 | ObjectInstruction_v4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added a new complex BarkReferenceType and a new repeatable and optional BarkReference element to ObjectDefinitionObjectInstructionType • Added unique constraints for BarkFunctionUserID and SpeciesGroupUserID in BarkReference structure • Added an optional attribute textToMachine to ProductUserID element in ProductUserIDsType |
| 7.12.2021 | SpeciesGroupInstruction_v4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added unique constraint for BarkFunctionUserID |
| 7.12.2021 | ForwardedProduction_v4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Removed LoadingCoordinates structure from PartialLoadType • Added a new complex type ObjectDefinitionMachineForwardedProductionType that add |

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| | | | DensityAdjustment-structure to object definition |
| 7.12.2021 | ForwardingObjectInstruction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added a new complex type DensityAdjustmentsType and repeatable DensityAdjustments element to ObjectDefinitionForwardingObjectInstructionType • Added an optional attribute textToMachine to DeliveryUserID element in DeliveryUserIDsType |
| 17.12.2021 | StemVolumeTableInstruction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added a new schema StemVolumeTableInstruction (vti) |
| 17.12.2021 | ObjectGeographicalInstruction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Removed BorderPolygon element from ObjectDefinitionObjectGeographicalInstructionType because that element is now included to CommonObjectDefintionType |
| 17.12.2021 | FellingBunchingObjectInstruction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added an optional repeatable VolumeTableUserID element to FellingBunchingObjectDefinitionObjectInstructionType |
| 17.12.2021 | FelledBunchedProduction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added an optional repeatable StemVolumeTableDefinition structure with VolumeTableKey element to MachineFelledBunchedProductionType • Added TrackCoordinates structure |
| 17.12.2021 | OperationalMonitoring_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added TrackCoordinates structure |
| 17.12.2021 | SkiddedProduction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added TrackCoordinates structure |
| 17.12.2021 | YardedProduction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added TrackCoordinates structure |

| 17.12.2021 | ObjectGeographicalReport_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> Replaced GeographicalDirective structure with FeatureCollection structure Changed element name from TextToMachine to TextFromMachine | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|--|----------|---|--------|--------------------|-------|-------------------------------|-------------------------------|------|-----------------------------|-------------------|------|--------------------------|-------------|-------|-----------------------|----------------------------|------|-------------------------------|-------------|------|-------------------------------|-----------|-------|-------------------------------|------------|------|-------------------------------|----------------|------|--------------------------|--------------------|------|--------------------------|-----------------|------|
| 17.12.2021 | Multiple schemas | JOAR/JAS | <ul style="list-style-type: none"> Added more strict range values for certain repeatable elements. List of changes: <table border="1" data-bbox="792 320 1765 1078"> <thead> <tr> <th>Schema</th> <th>Repeatable element</th> <th>Range</th> </tr> </thead> <tbody> <tr> <td>FellingBunchingQualityControl</td> <td>DiameterCalibrationAdjustment</td> <td>1..2</td> </tr> <tr> <td>ForwardingObjectInstruction</td> <td>DensityAdjustment</td> <td>0..3</td> </tr> <tr> <td>HarvestingQualityControl</td> <td>LogDiameter</td> <td>0..24</td> </tr> <tr> <td>OperationalMonitoring</td> <td>TotalVolumeOfHarvestedLogs</td> <td>0..4</td> </tr> <tr> <td>StanForD2010CommonDefinitions</td> <td>LogDiameter</td> <td>1..8</td> </tr> <tr> <td>StanForD2010CommonDefinitions</td> <td>LogVolume</td> <td>1..18</td> </tr> <tr> <td>StanForD2010CommonDefinitions</td> <td>StemVolume</td> <td>0..4</td> </tr> <tr> <td>StanForD2010CommonDefinitions</td> <td>StemLoadVolume</td> <td>0..3</td> </tr> <tr> <td>TotalHarvestedProduction</td> <td>TotalProductVolume</td> <td>1..6</td> </tr> <tr> <td>TotalHarvestedProduction</td> <td>TotalStemVolume</td> <td>1..4</td> </tr> </tbody> </table> | Schema | Repeatable element | Range | FellingBunchingQualityControl | DiameterCalibrationAdjustment | 1..2 | ForwardingObjectInstruction | DensityAdjustment | 0..3 | HarvestingQualityControl | LogDiameter | 0..24 | OperationalMonitoring | TotalVolumeOfHarvestedLogs | 0..4 | StanForD2010CommonDefinitions | LogDiameter | 1..8 | StanForD2010CommonDefinitions | LogVolume | 1..18 | StanForD2010CommonDefinitions | StemVolume | 0..4 | StanForD2010CommonDefinitions | StemLoadVolume | 0..3 | TotalHarvestedProduction | TotalProductVolume | 1..6 | TotalHarvestedProduction | TotalStemVolume | 1..4 |
| Schema | Repeatable element | Range | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FellingBunchingQualityControl | DiameterCalibrationAdjustment | 1..2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ForwardingObjectInstruction | DensityAdjustment | 0..3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HarvestingQualityControl | LogDiameter | 0..24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OperationalMonitoring | TotalVolumeOfHarvestedLogs | 0..4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| StanForD2010CommonDefinitions | LogDiameter | 1..8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| StanForD2010CommonDefinitions | LogVolume | 1..18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| StanForD2010CommonDefinitions | StemVolume | 0..4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| StanForD2010CommonDefinitions | StemLoadVolume | 0..3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TotalHarvestedProduction | TotalProductVolume | 1..6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TotalHarvestedProduction | TotalStemVolume | 1..4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18.2.2022 | StanForD2010CommonDefinitions_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> Added a new mandatory attribute modificationRestricted to FeatureCollectionType Made BarkFunction element in SpeciesGroupDefinitionWithDetailsAndBarkFunctionType optional Excluded enumeration "None" from BarkFunctionCategoryType | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| | | | <ul style="list-style-type: none"> • Added optional elements BarkFunctionInfo and BarkFuntionVersion to BarkFunctionType • Changed Density element mandatory and non-repeatable in CommonDeliveryDefinitionType • Added a new mandatory element ForwardingVolumeCategory in CommonDeliveryDefinitionType |
| 18.2.2022 | ForwardedProduction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Changed LoadVolume element non-repeatable in PartialLoadType • Moved LoadVolumeCategoryType to StanForD2010CommonDefinitions schema file |
| 18.2.2022 | ObjectGeographicalReport_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Excluded extra TextFromMachine element from ObjectDefinitionObjectGeographicalReportType because it's already in base type ObjectDefinitionMachineType |
| 14.3.2022 | StanForD2010CommonDefinitions_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Changed the enumeration value "Log center" to "Product position" in ReceiverPositionType • Added two new complex types: FelledStemCoordinatesType and LogCoordinatesType • Changed type of LogCoordinates element from CoordinatesType to LogCoordinatesType in LogType • Added a new optional element FelledStemCoordinates to SingleTreeFelledStemType and MultiTreeFelledStemType • Added a new simple type DegreeType that is a nonnegative integer with upper limit 360 • Changed type of MachineBearingType from nonnegative integer to DegreeType |
| 31.3.2022 | StanForD2010CommonDefinitions_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Changed simple type UserIDType from <pre> <xsd:simpleType name="UserIDType"> <xsd:restriction base="xsd:string"/> </xsd:simpleType> </pre> to <pre> <xsd:simpleType name="UserIDType"> </pre> |

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| | | | <pre><xsd:restriction base="RestrictedStringType"/> </xsd:simpleType></pre> |
| 28.4.2022 | StanForD2010CommonDefinitions_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Added a new complex type DiameterAdjustmentMatrixItemType • Added a new mandatory repeatable element DiameterAdjustmentMatrixItem to StemVolumeTableDefinitionType • Changed description of BoomExtension element in BoomPositioningType • Changed element/attribute names in MachineWithHeadType: <ul style="list-style-type: none"> ○ MachineHeadManufacturer → MachineAttachmentManufacturer ○ MachineHeadModel → MachineAttachmentModel ○ headModelYear → headModelYear • Changed corresponding names also in descriptions and type names • Added “Skidder” and “Yarder” to MachineCategoryType enumeration list |
| 28.4.2022 | HarvestingQualityControl_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Changed description of CalibrationUseLog element in LogHarvestingQualityControlType |
| 10.5.2022 | StanForD2010CommonDefinitions_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Removed DensityAdjustmentType • Made sequence mandatory in BarkFunctionType • Made BarkFunction element non-mandatory in SpeciesGroupDefinitionWithDetailsAndBarkFunctionAndKeyType |

| 10.5.2022 | ForwardedProduction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> Made DensityAdjustment non-repeatable in ObjectDefinitionMachineForwardedProductionType and removed densityCategory attribute | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|--|-----------|--|------|-----------|------|-------------|-----------|--------------------|-----------|----------------|-----------|-------------------|-----------|--|--------------|-------------------|-----------|--|------------|--------|-----------|---|------------|--------------------|-----------|-----------------|------------|-------------------|-----------|---|--------------|--------|-----------|---|
| 10.5.2022 | ForwardingObjectInstruction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> Made DensityAdjustment non-repeatable in DensityAdjustmentsType and removed densityCategory attribute | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21.6.2022 | StanForD2010CommonDefinitions_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> Made BarkFunction element non-mandatory in SpeciesGroupDefinitionWithDetailsAndBarkFunctionAndKeyType Removed DensityType Removed DensityCategoryType Changed type of Density element to xsd:decimal in CommonDeliveryDefinitionType | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21.6.2022 | ForwardingDeliveryInstruction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> Made ProductName element mandatory in ClassifiedProductDefinitionForwardingDeliveryInstructionType | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21.6.2022 | DesignInstruction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> Added following elements into StyleDefinition and SymbolDefinition types <table border="1" data-bbox="786 922 1749 1471"> <thead> <tr> <th>Name</th> <th>Data type</th> <th>Unit</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>StyleName</td> <td>String (mandatory)</td> <td>Free text</td> <td>Name per style</td> </tr> <tr> <td>StyleInfo</td> <td>String (optional)</td> <td>Free text</td> <td>Free text identity information per style. Identity element normally to be used by logging organization. No constraints in standard concerning how to use this element.</td> </tr> <tr> <td>StyleVersion</td> <td>String (optional)</td> <td>Free text</td> <td>Additional identity information of style. Identity element normally to be used by logging organization. No constraints in standard concerning how to use this element.</td> </tr> <tr> <td>StyleGroup</td> <td>string</td> <td>Free text</td> <td>Descriptive text for a group of styles.</td> </tr> <tr> <td>SymbolName</td> <td>String (mandatory)</td> <td>Free text</td> <td>Name per symbol</td> </tr> <tr> <td>SymbolInfo</td> <td>String (optional)</td> <td>Free text</td> <td>Free text identity information per symbol. Identity element normally to be used by logging organization. No constraints in standard concerning how to use this element.</td> </tr> <tr> <td>SymbolVersio</td> <td>String</td> <td>Free text</td> <td>Additional identity information of symbol. Identity element</td> </tr> </tbody> </table> | Name | Data type | Unit | Description | StyleName | String (mandatory) | Free text | Name per style | StyleInfo | String (optional) | Free text | Free text identity information per style. Identity element normally to be used by logging organization. No constraints in standard concerning how to use this element. | StyleVersion | String (optional) | Free text | Additional identity information of style. Identity element normally to be used by logging organization. No constraints in standard concerning how to use this element. | StyleGroup | string | Free text | Descriptive text for a group of styles. | SymbolName | String (mandatory) | Free text | Name per symbol | SymbolInfo | String (optional) | Free text | Free text identity information per symbol. Identity element normally to be used by logging organization. No constraints in standard concerning how to use this element. | SymbolVersio | String | Free text | Additional identity information of symbol. Identity element |
| Name | Data type | Unit | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| SymbolName | String (mandatory) | Free text | Name per symbol | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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|-------------|--|-----------|---|---|------------|--|---|-------------|-------------------|-----------|---|
| | | | <table border="1"> <tr> <td>n</td> <td>(optional)</td> <td></td> <td>normally to be used by logging organization. No constraints in standard concerning how to use this element.</td> </tr> <tr> <td>SymbolGroup</td> <td>String (optional)</td> <td>Free text</td> <td>Descriptive text for a group of symbol.</td> </tr> </table> | n | (optional) | | normally to be used by logging organization. No constraints in standard concerning how to use this element. | SymbolGroup | String (optional) | Free text | Descriptive text for a group of symbol. |
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| SymbolGroup | String (optional) | Free text | Descriptive text for a group of symbol. | | | | | | | | |
| 27.6.2022 | StanForD2010CommonDefinitions_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Changed SpeciesGroupKey element to SpeciesGroupUserID element in ControlStemSettingsType and CommonCalibrationValuesType | | | | | | | | |
| 12.8.2022 | All | JOAR/JAS | <ul style="list-style-type: none"> • Changed version attribute to "release_4.0" and versionDate attribute to "2022-08-15" | | | | | | | | |
| 29.11.2022 | ForwardedProduction_V4p0.xsd | JOAR/JAS | <ul style="list-style-type: none"> • Changed in LoadGreenMassType base-property from MassType to xsd:decimal • Changed in LoadVolumeType base-property from VolumeType to xsd:decimal | | | | | | | | |