LECTRA ENTERPRISE SOLUTIONS
PLM DATA EXCHANGE

Setup Guide

Date of last update : April 2016

Contents

Modifications made to the document since its last publication are highlighted in blue.

The aim of this document is to give detailed information about the use of the data exchange solution provided with the PLM. First, the principles will be described, then the data model will be detailed and finally, we will give an overall view of the import/export functionalities of the PLM.

1. DATA EXCHANGE PRINCIPLES

In order to secure the integration of data into the PLM, no direct access to the PLM database is allowed.

The Enterprise server includes a module allowing to extract and to insert data into the PLM.

Data are integrated as XML files. Those files conform to XSD files corresponding to PLM Objects (also named containment roots). The XSD files describe the structure of the XML files awaited.

Lectra's PLM connector consists in:

- Public java methods to manage the data insertion and extraction from the PLM
- XSD files describing the XML data files structures
- Core Services (enterprise Layer Connector)

To interface the PLM with a third party application, it is recommended to use an ETL tool which will be in charge of transforming the data from the source application to the target and to trigger all data exchanges and monitoring processes.

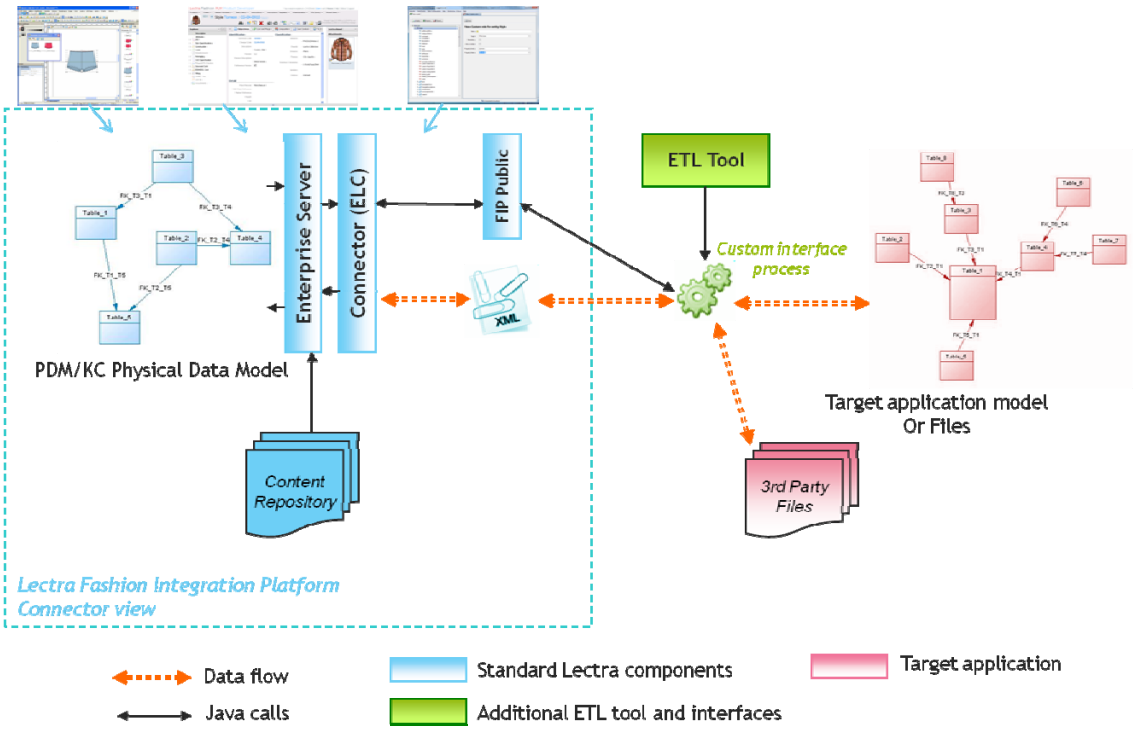
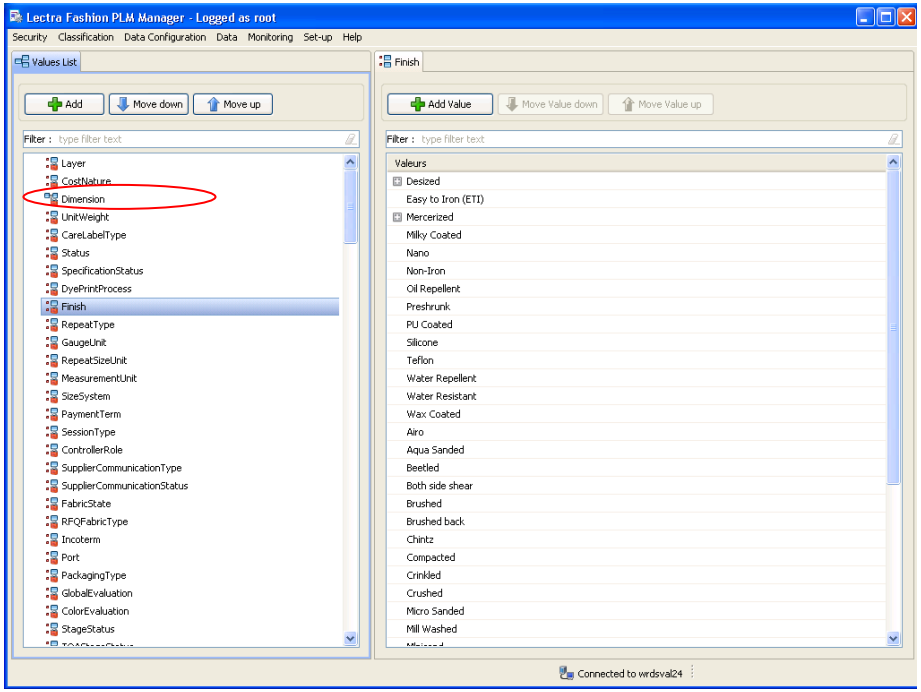


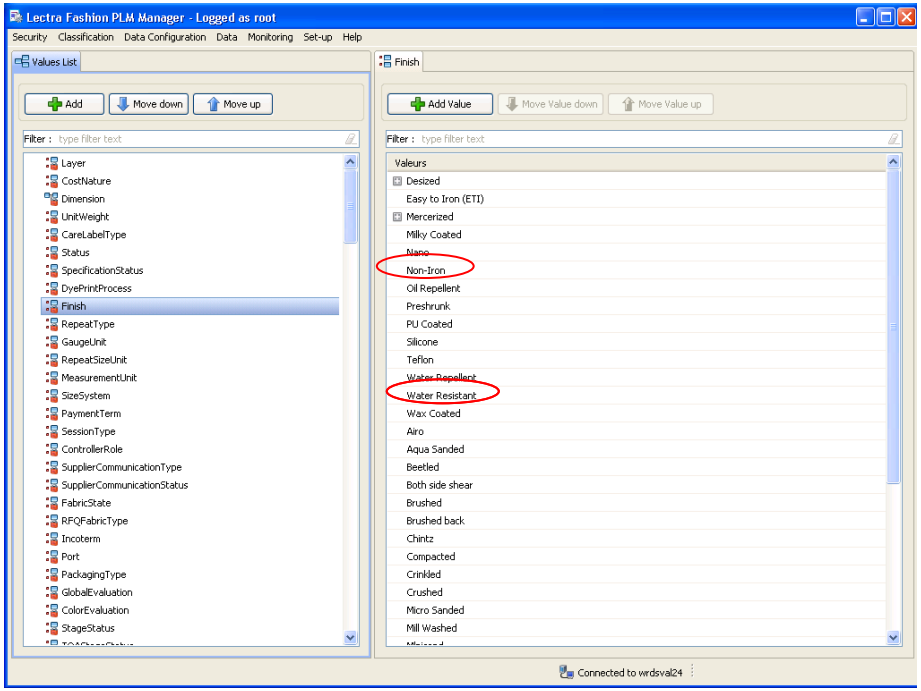
Fig1: Data exchange between the PLM and a 3rd party application

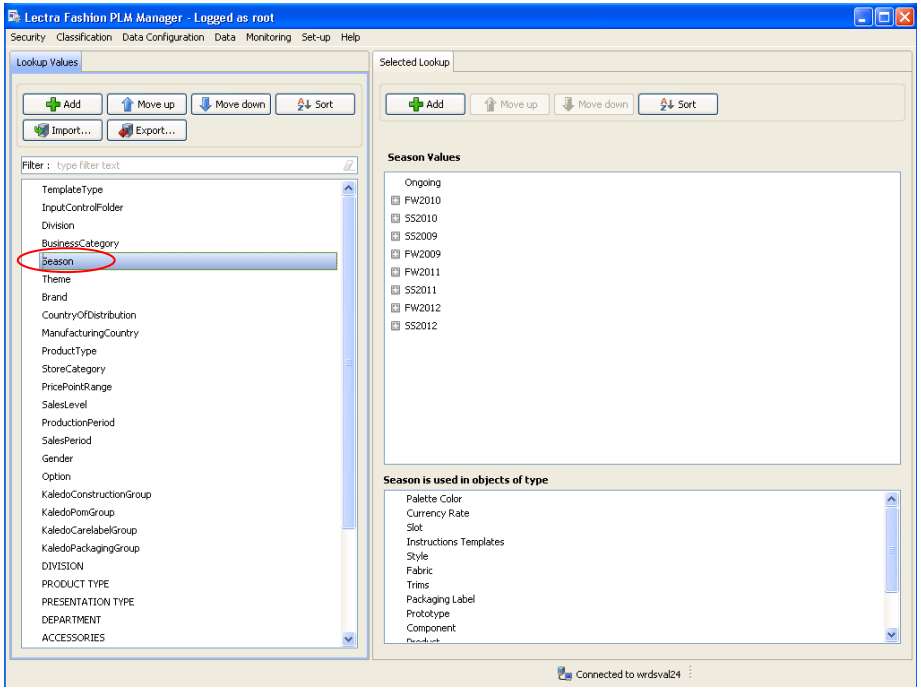
Lectra provides components and examples of use, for the open source ETL tool Talend Open Studio. These components aim at simplifying data exchanges with the PLM Platform.

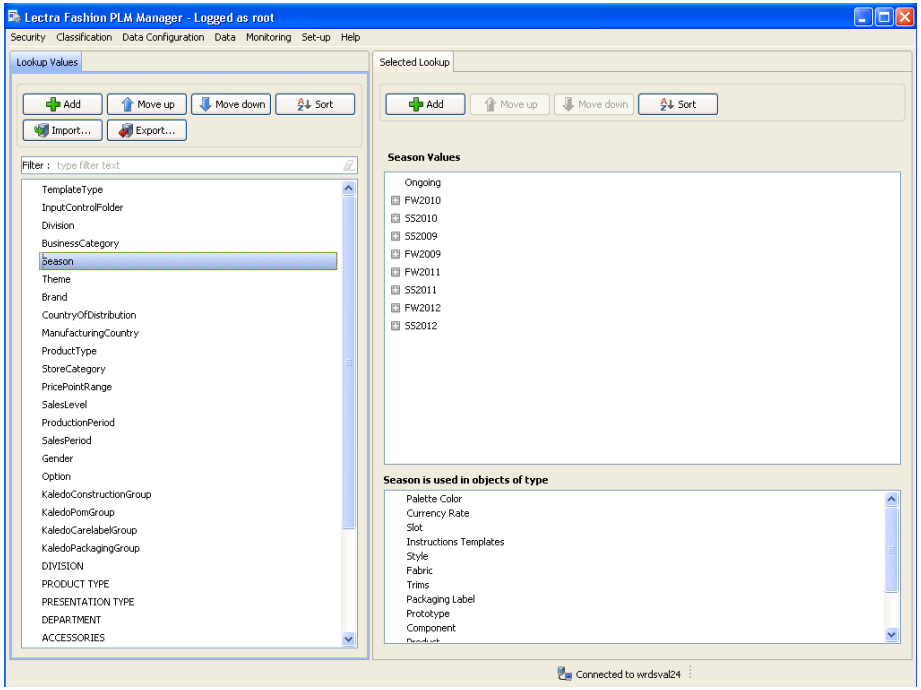
2. SCOPE OF THE CONNECTOR

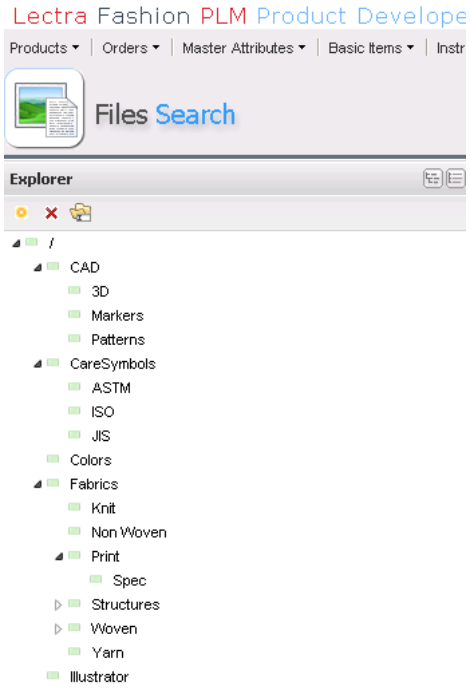
2.1 Fashion Integration Platform Common Entities

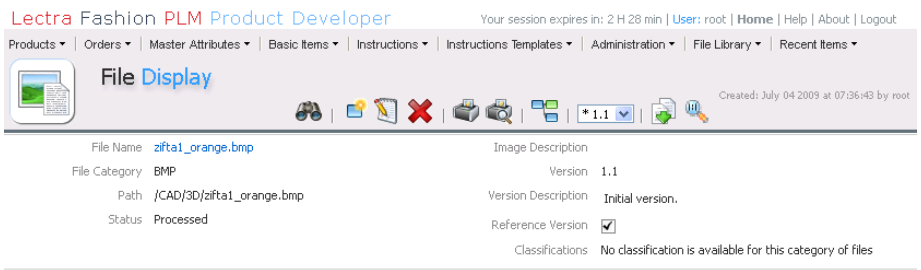
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Lists (SVL, HVL, Classification category)	List name		core.Propertydef	

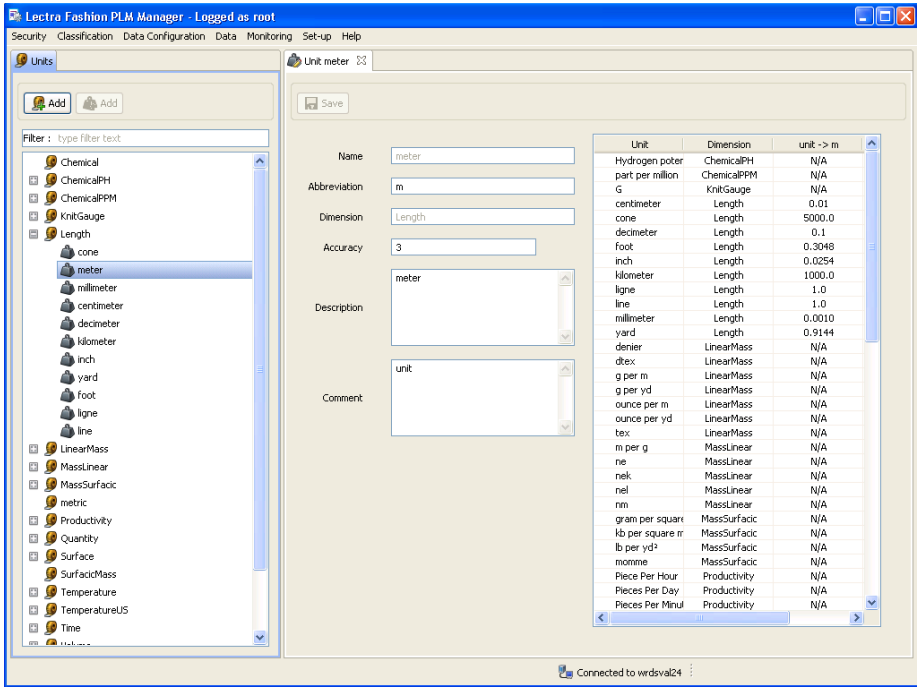
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
List elements	Elements of lists		core.Property	§ 0

ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Classification Lists	Classification criteria		classifmanagement.axe.ClassifPropertyDef	

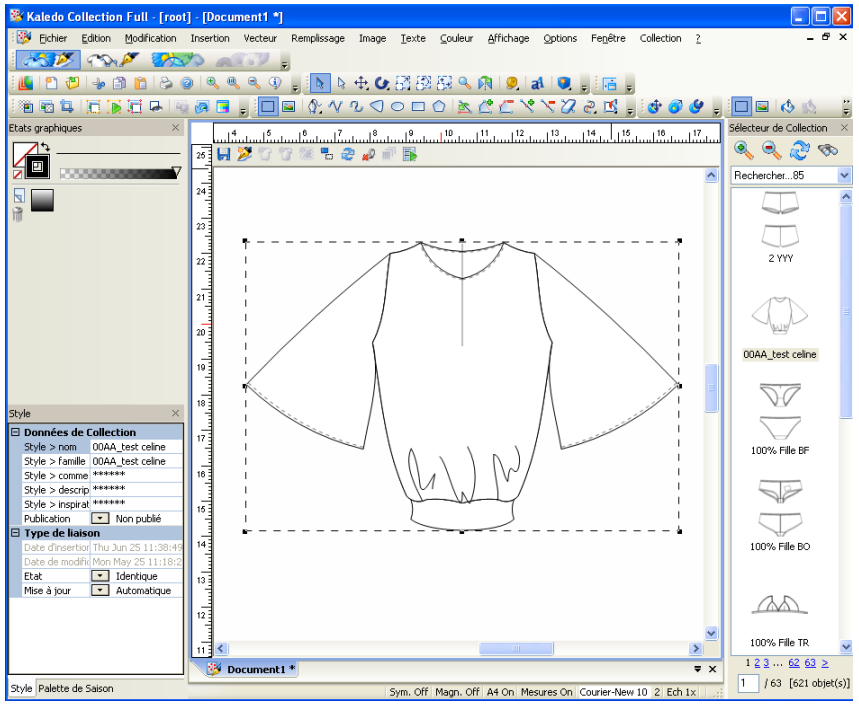
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Classification values	Value of a classification list		classifmanagement.axe.ClassifProperty	

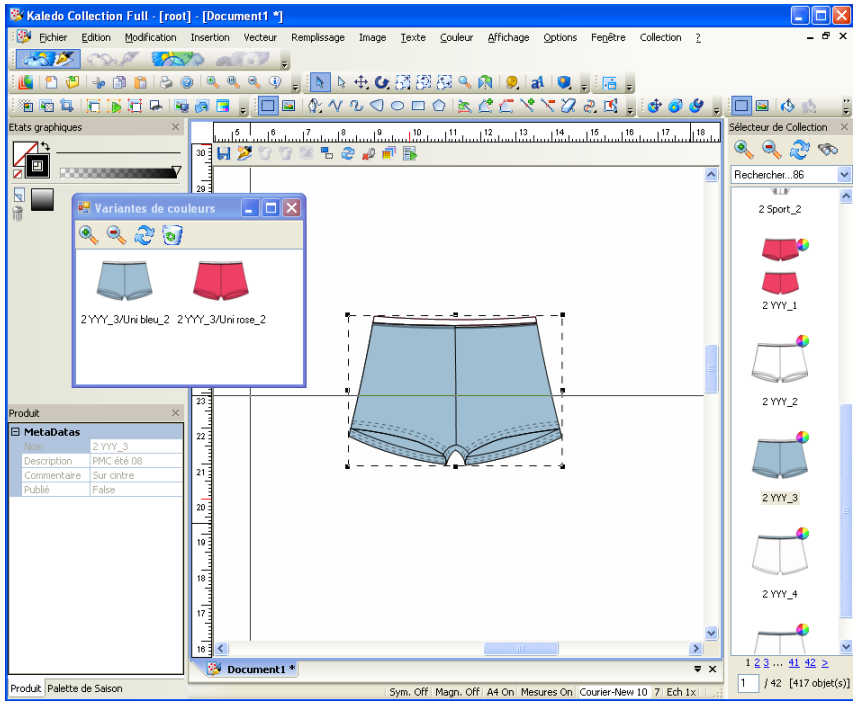
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Folder	File directory		filemanagement.process.Folder	§ 3.1.7

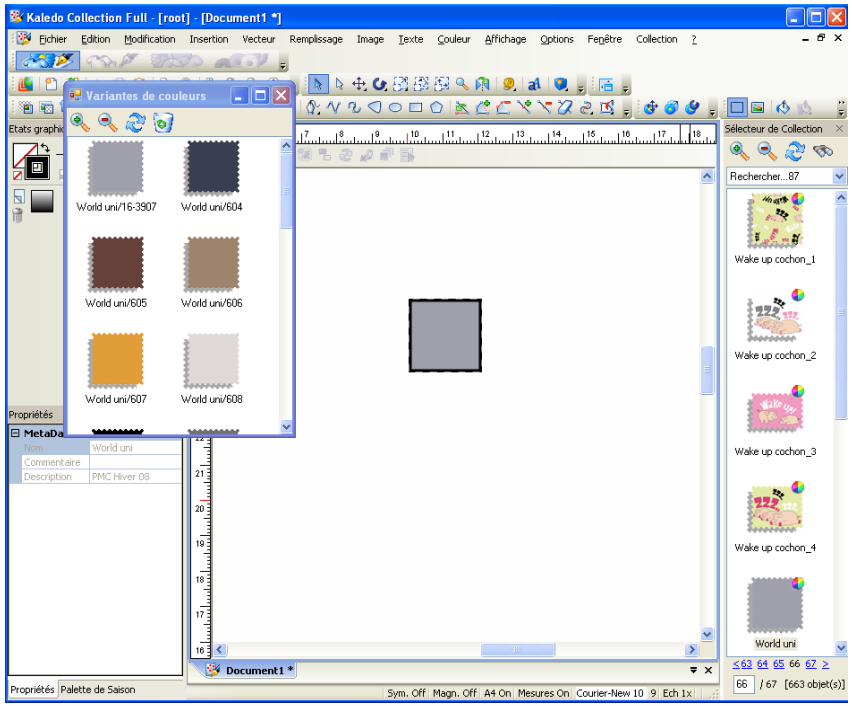
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
File	Any kind of file uploaded into the PLM. Images, reports, CAD files…		filemanagement.process.File	§ 3.1.8

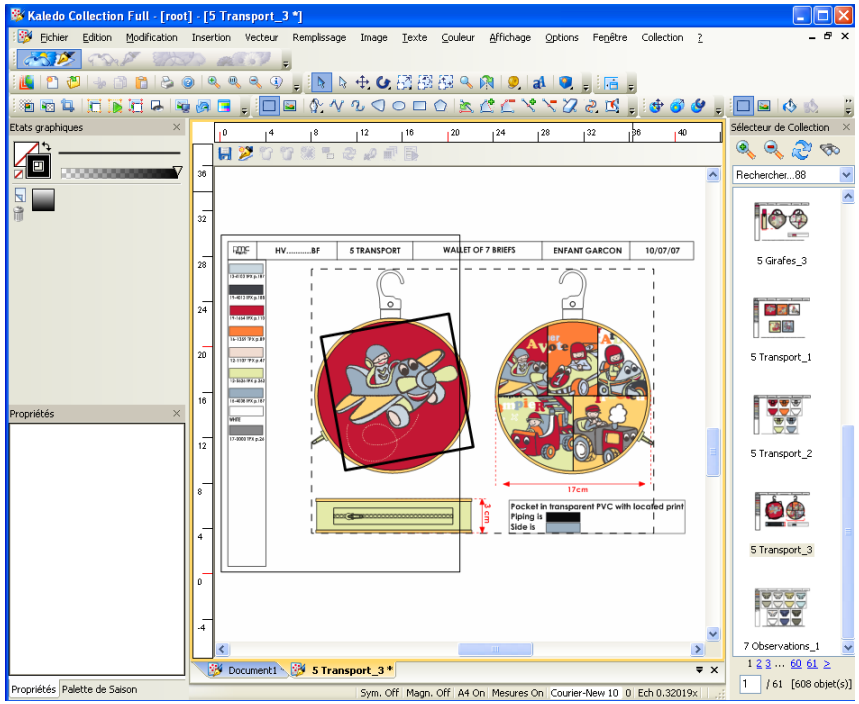
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Unit			productmanagement.envitems.Unit	

2.2 Kaledo Entities

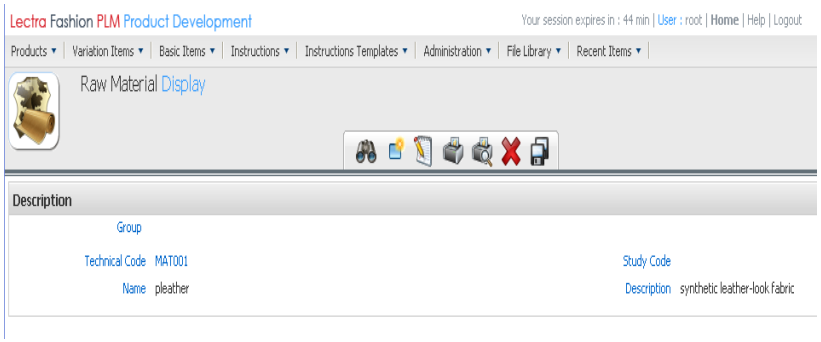
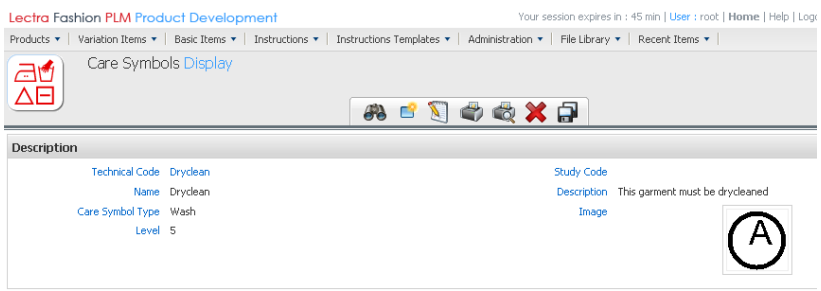
Entity	Description	Screen shot	Technical name of the root element	Supported operations	Details Reference
Style			kaledomanagement.Style		§ 3.1.9

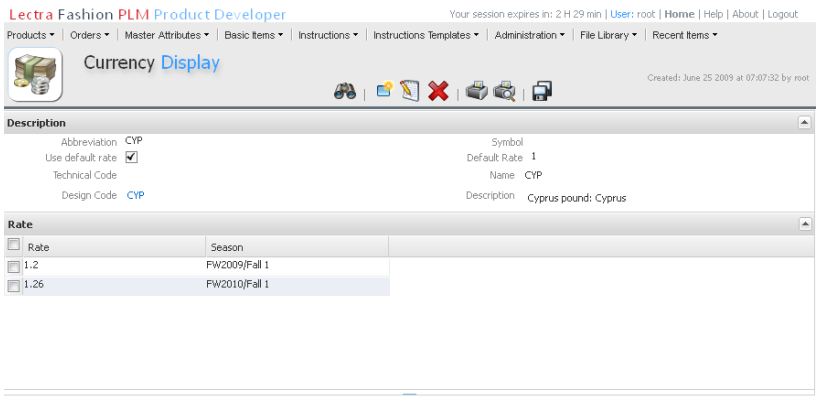
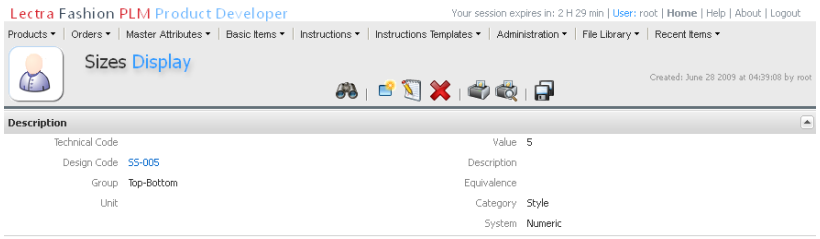
Entity	Description	Screen shot	Technical name of the root element	Supported operations	Details Reference
Product			kaledomanagement.Product		§ 3.1.10

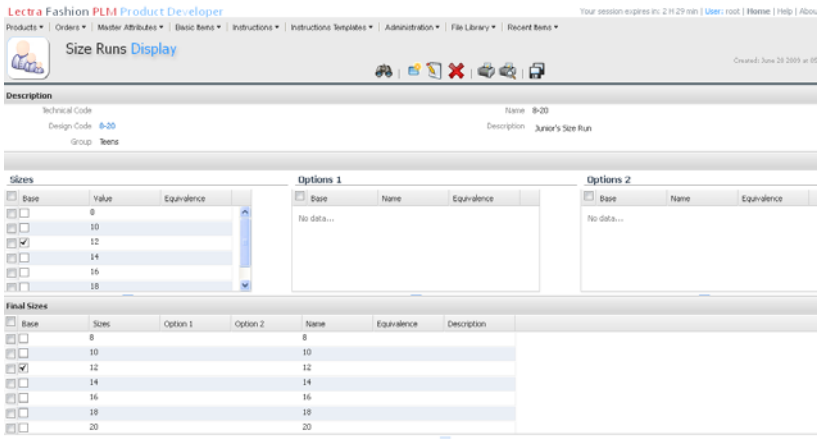
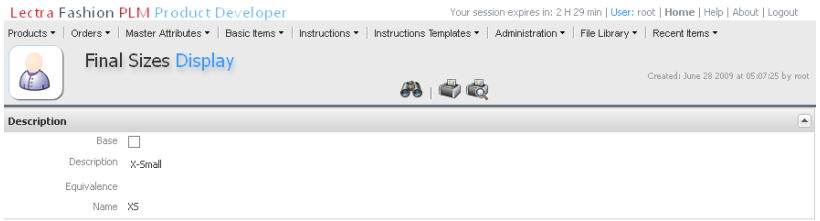
Entity	Description	Screen shot	Technical name of the root element	Supported operations	Details Reference
Material			kaledomanagement.GenericFabric		

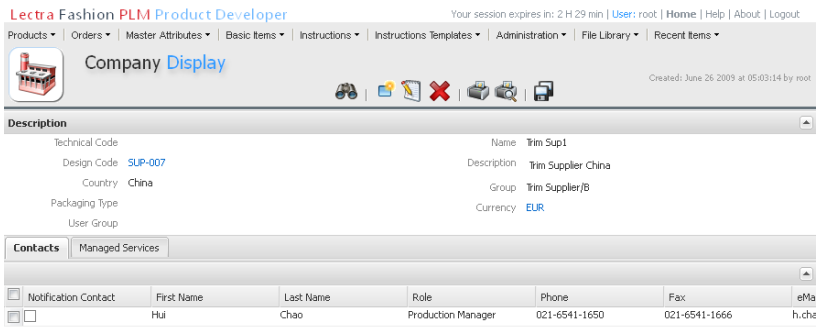
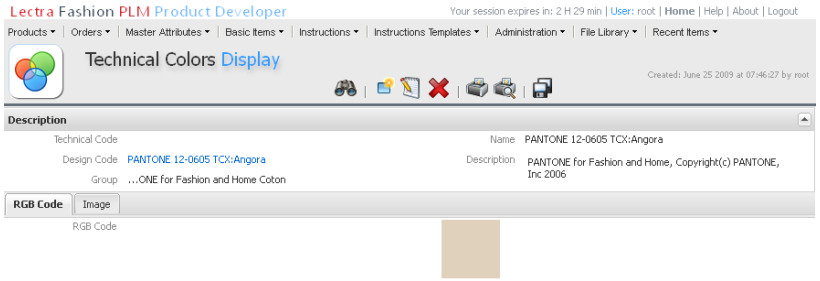
Entity	Description	Screen shot	Technical name of the root element	Supported operations	Details Reference
Board			kaledomanagement.Board		§ 0
Palette data					

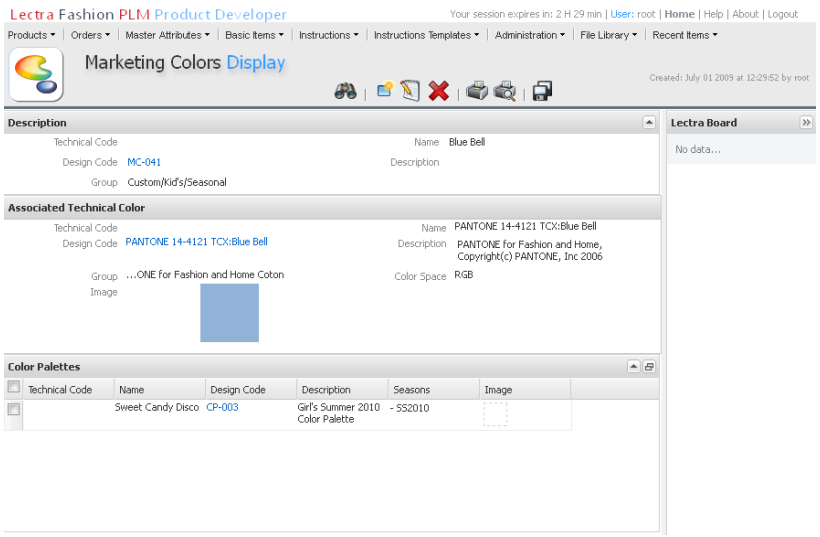
2.3 PDM Entities

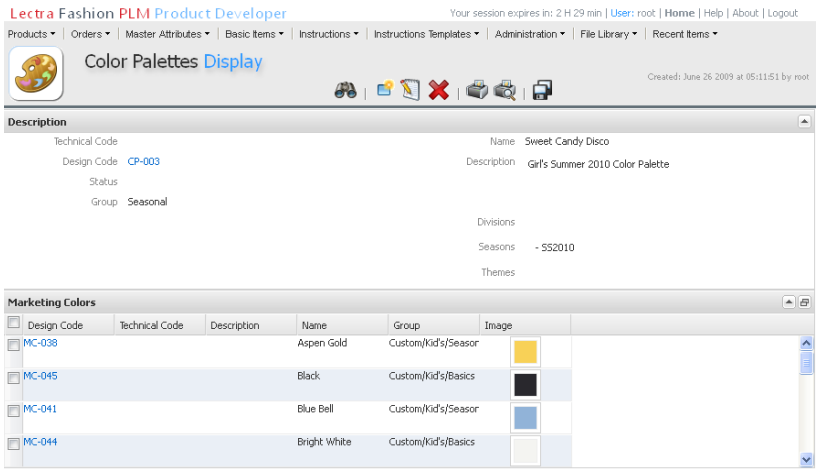
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Raw material			Productmanagement.envitems.Material	§ 3.1.15
Care Symbol			Productmanagement.envitems.CareLabel	§ 3.1.13

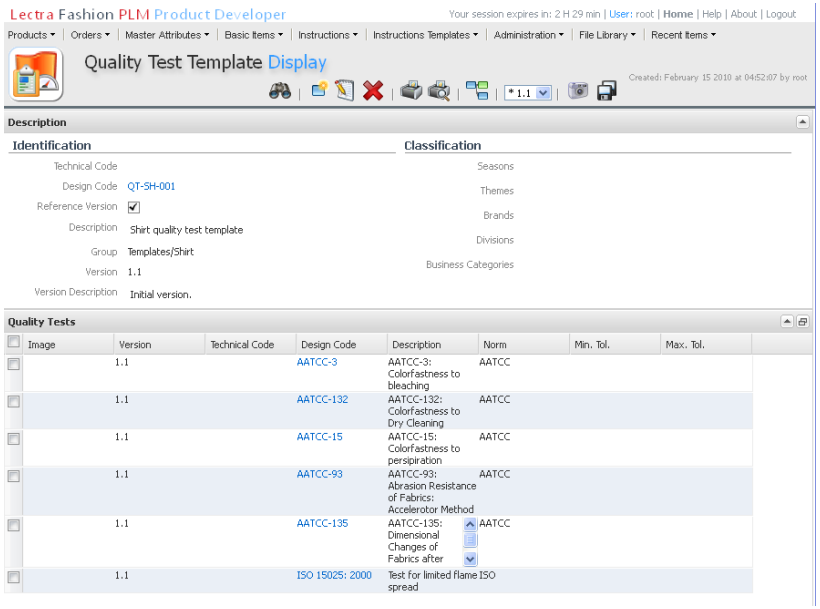
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Currency			Productmanagement.envitems.Currency	§3.1.14
Size			Productmanagement.envitems.Size	§ 3.1.20

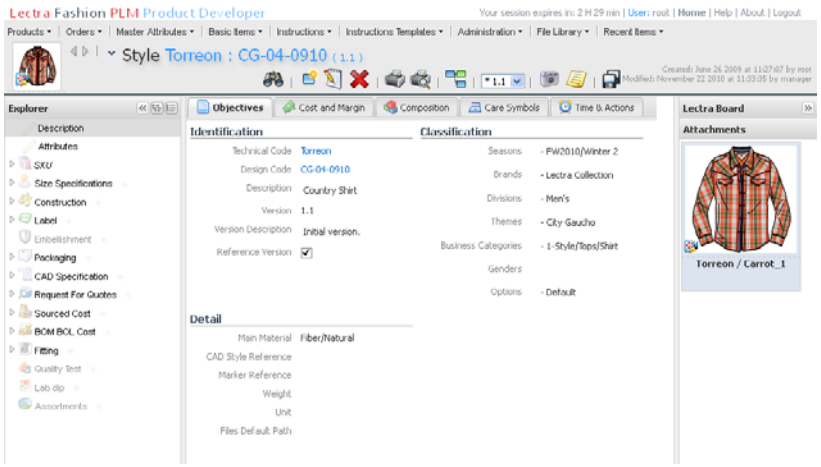
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Sizerun			Productmanagement.envitems.SizeRun	§ 3.1.21
FinalSize			Productmanagement.envitems.FinalSize	

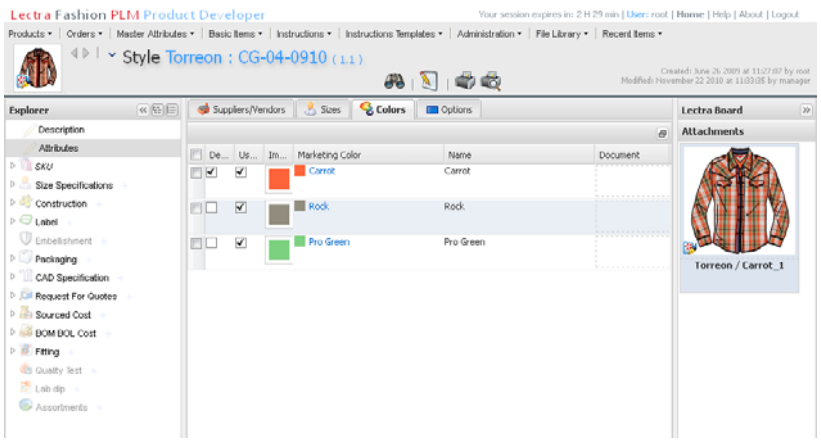
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Company			Productmanagement.envitems.Company	§ 3.1.19
Technical Color			Productmanagement.envitems.TechnicalColor	§ 3.1.16

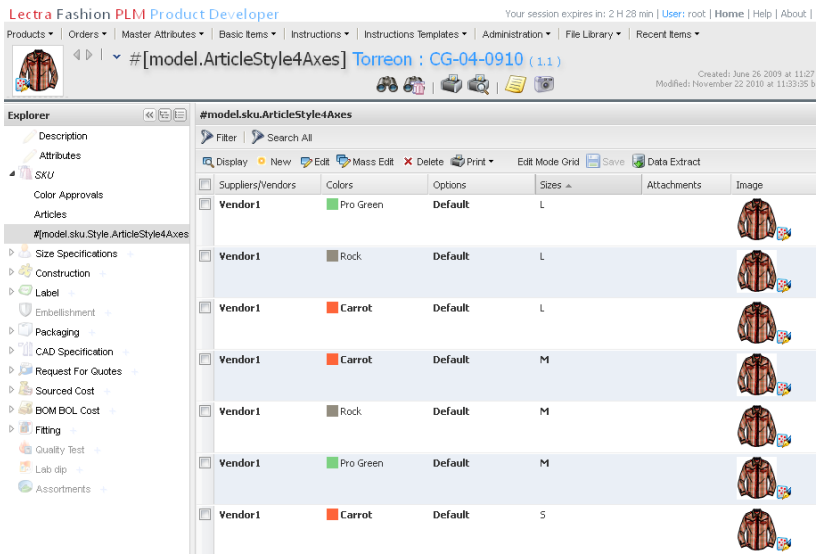
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Marketing Color			Productmanagement.envitems.MarketingColor	§ 3.1.17

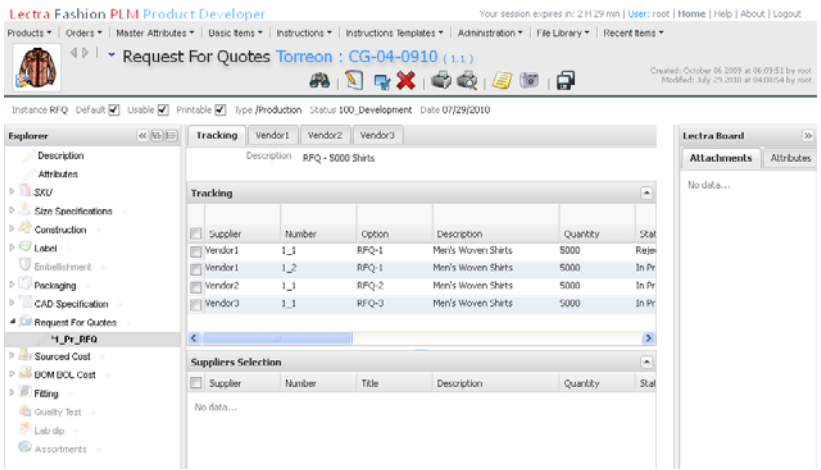
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Color Palette			Productmanagement.envitems.ColorPalette	§ 3.1.18

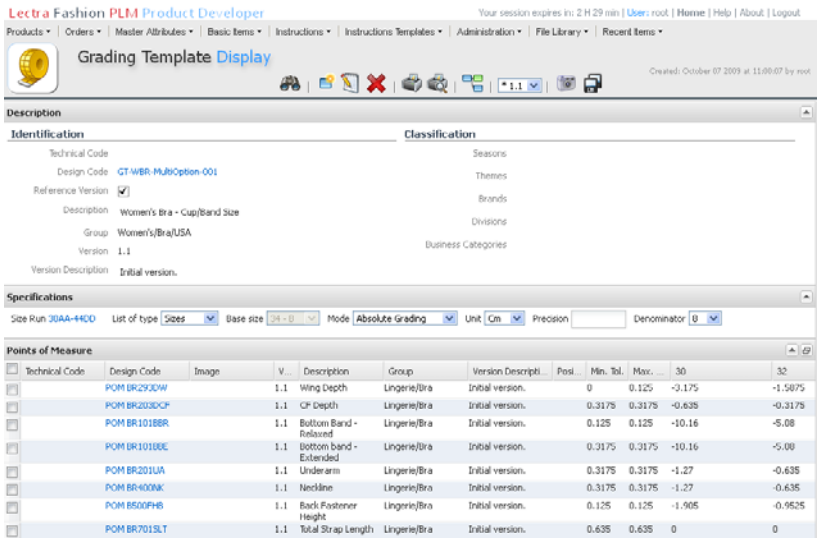
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Instruction Template			Productmanagement.process.Product	

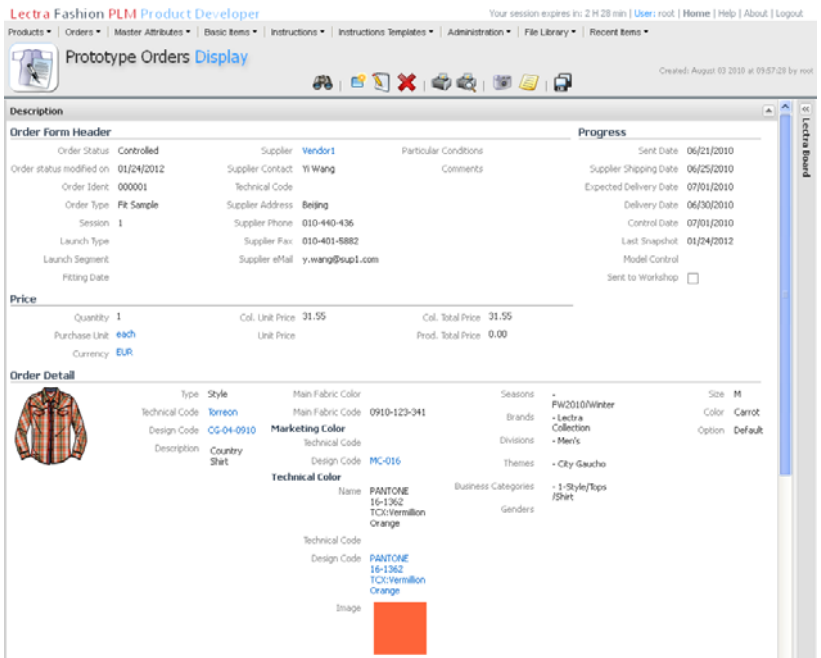
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Product General Objectives			Productmanagement.process.Product	

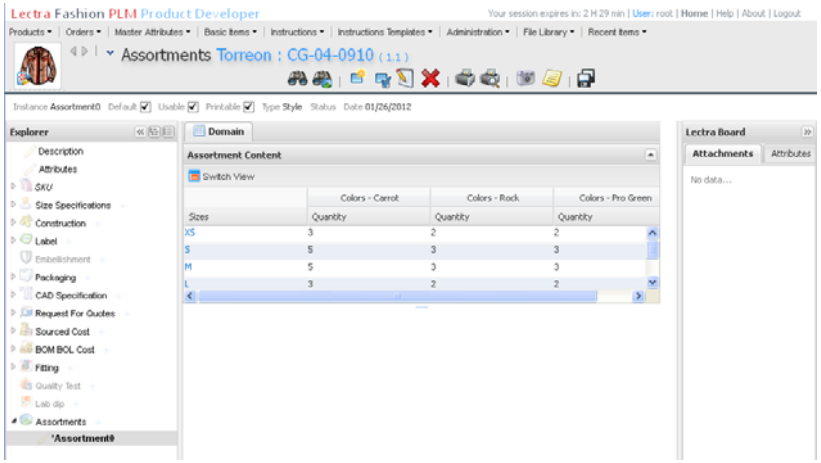
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Product Attributes			Productmanagement.process.Product	

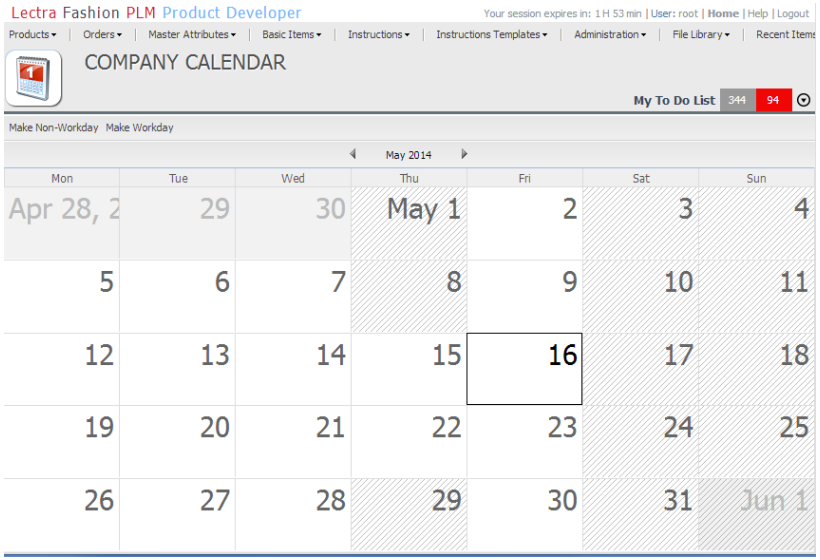
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Product SKU			Productmanagement.process.SKU	

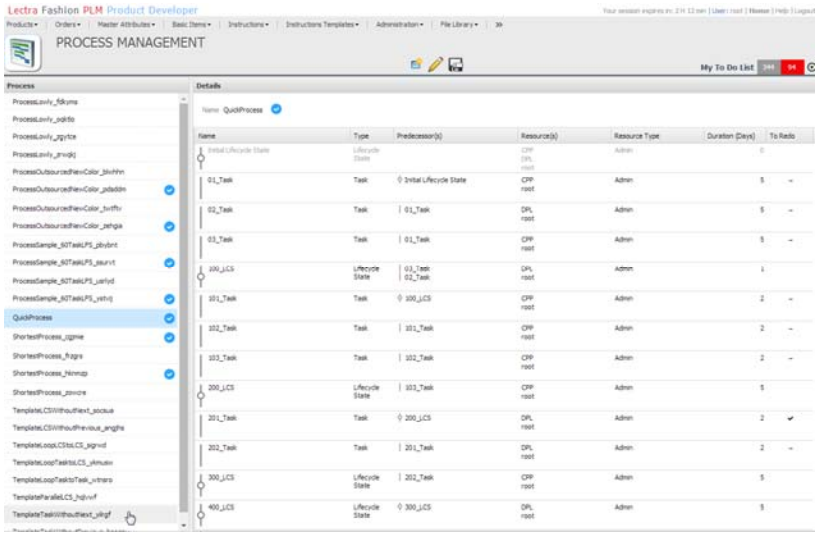
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Product SpecPackage			Productmanagement.process.Product	

ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Product Breakdown			Productmanagement.process.Product	

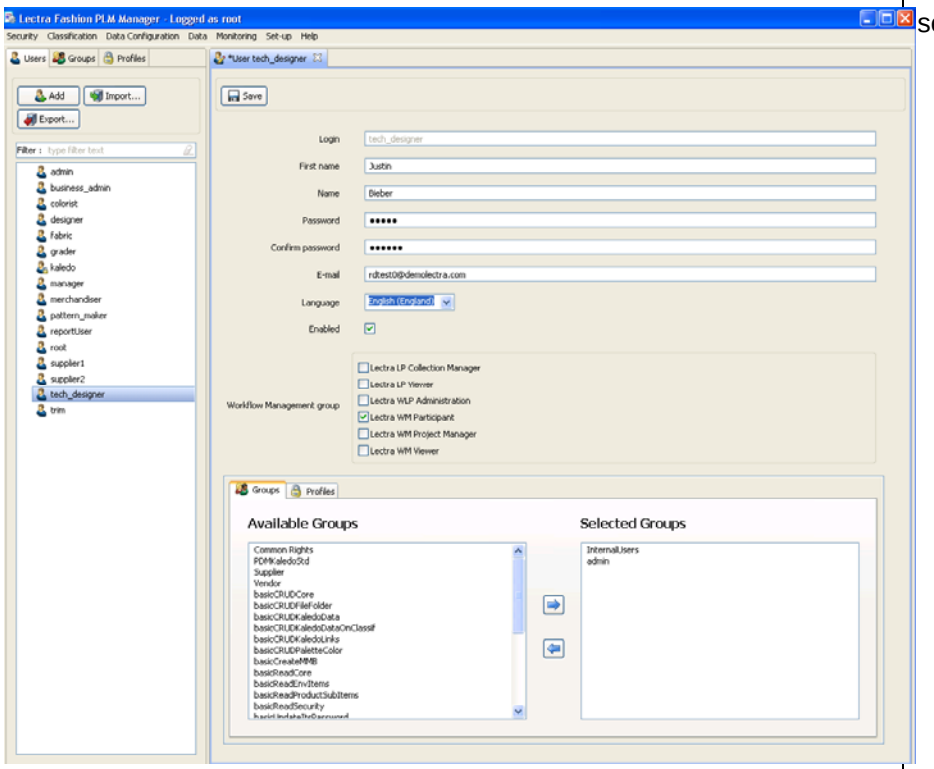
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Order	Group of Order lines		Productmanagement.order.Order	

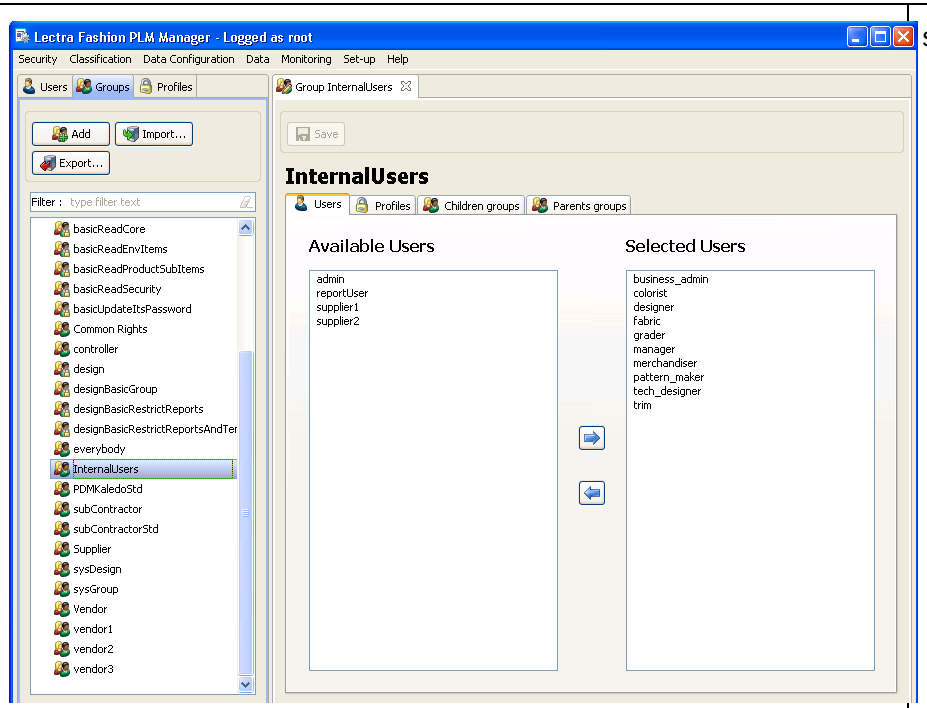
ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Assortment	Subside of Product		Productmanagement.order.Product	

ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Calendar			Core.calendar.EnterpriseCalendar	

ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	DETAILS REFERENCE
Process Management Template	Template of workflow process		Workflow.Template	

2.4 Security Entities

ENTITY	DESCRIPTION	SCREEN SHOT	TECHNICAL NAME OF THE ROOT ELEMENT	SUPPORTED OPERATIONS	DETAILS REFERENCE
User			security.process.User	CREATE UPDATE CREATE_OR_UPDATE	

Group			security.process.Group	CREATE UPDATE CREATE_OR_UPDATE	

3. DETAILED DATA MODEL

The structure of the XML messages managed by the Enterprise Server is described by **XSD files**. These files are **generated from the Enterprise Server ETL Model** (that derivates directly from the Enterprise Server Model).

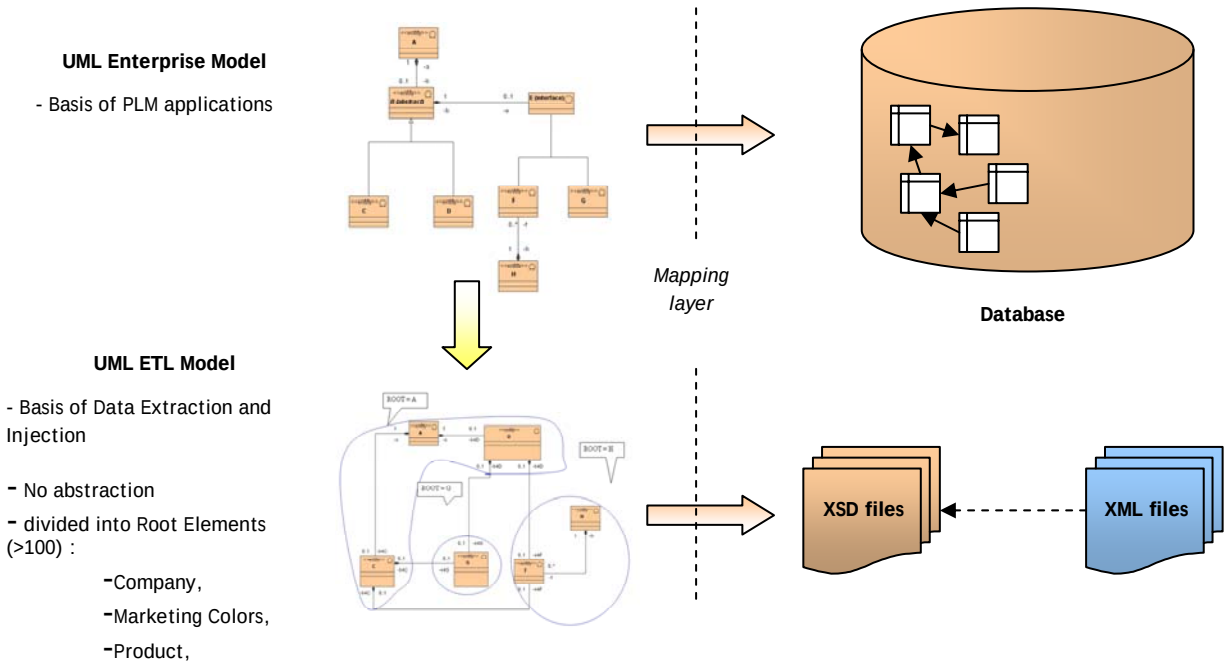


Fig 2: Object mapping

The XSD files are generated from the ETL model in the following way:

- one XSD by root object
- each attribute is projected as follow :

  <xsd:attribute name=”myAttribute” type=”xsd:string”/>

- each relation is seen as an element of the xsd:

  <xsd:element name=”myRelation” type=”target entity type” minOccurs="minimum cardinality" maxOccurs="maximum cardinality" nillable="true"/>

These XSD files are available in the PLM archive file:

“<PLM_INSTALL_DIR>/archives/plm-mssql.ear/enterpriselayerconnector-xsd.zip”

You will find below the description of the main entities of the PLM and the corresponding XML files managed by the connector.

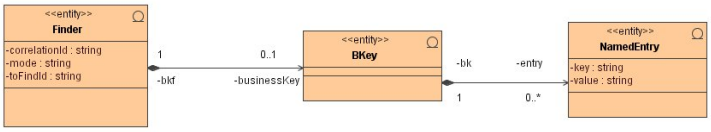
The ETL data model is automatically generated from the FIP model. Thus, there is no graphical representation of it. Nevertheless, it is quite similar to the FIP model.
With the Data Model view of the PLM Manager tool, you can have a hierarchical view of the model which is close to the XML structure used by the ETL connector.

3.1 Main elements

3.1.1 Finder

The “Finder” entity is defined in the FIP ETL Model to identify each element of the root object. It has 3 main objectives:

1) to allow references between entities/root objects, with the help of the business key or of the technical ID (toFindId),
2) to allow references between root objects inside an ETL session, with the help of the correlation Id,
3) to indicate the injection mode which will define how to process the data (CREATE, UPDATE, CREATE-OR-UPDATE)

ETL CONCRETE MODEL	XSD PROJECTION
	<xsd:element name="myFinder" type="impl:Finder" minOccurs="0" maxOccurs="1" nillable="true"/> … <xsd:complexType name="Finder"> <!-- Finder relations --> <xsd:sequence> <xsd:element name="businessKey" type="impl:BKey" minOccurs="0" maxOccurs="1" nillable="true"/> </xsd:sequence> <!-- Finder fields --> <xsd:attribute name="correlationId" type="xsd:string"/> <xsd:attribute name="mode" type="xsd:string"/> <xsd:attribute name="toFindId" type="xsd:string"/> </xsd:complexType>

Example	
<prop:myFinder correlationId="65884" mode="CREATE-OR-UPDATE" toFindId="65884"> <prop:businessKey> <prop:entry key="propertyDefName" value="TRENDS"/> <prop:entry key="propertyDefFamily" value="process"/> <prop:entry key="path" value="02 MATERIALS"/> </prop:businessKey> </prop:myFinder>	CorrelationId : unique value identifying the element in the current ETL session Mode : if the entity exists, it will be updated, else it will be created toFindId : Id of the entity in the system businessKey : list of attributes/entries (key, value) identifying the element in a unique way key : name of the attribute value : value of the attribute

Research

When referencing an entity, the following order is followed:

1) search the entity with the provided toFindId value
2) if the id was not provided, search the entity with the correlationId
3) if the correlation Id was not found, search the entity with the business key

Only the correlationId attribute is mandatory when inserting an entity.
If an entity is not found, its process will be suspended. The suspension mechanism will be released when the referenced entity is created. If at the end of the session the reference entity still does not exists, an error will be raised.

By default the mode provided is “CREATE”
Trying to create an already existing entity or to update a non existing entity will result in an error.

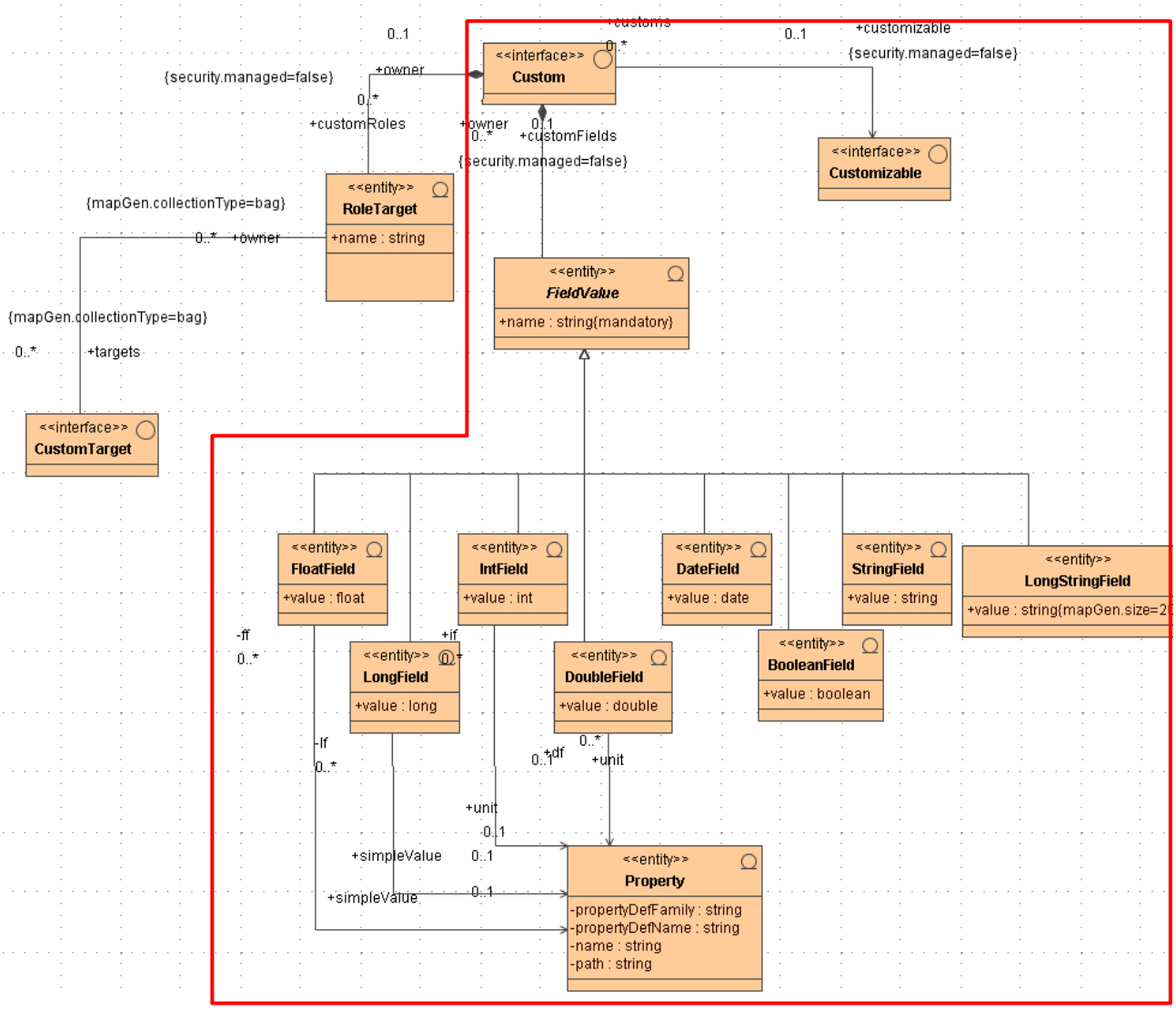
3.1.2 Deep Finder

Deep Finder is very similar to the Finder entity. It is an extension of the finder system to reference a specific element of a root object. Thus in addition to the finder usual attributes, you will find the following:

- rootCorrelationId : Id of the root object into which the referenced elements is present
- rootId: Id (database id) of the root into which the referenced elements is present

3.1.3 Custom fields

3.1.3.1 FIP Model



3.1.3.2 Customizable entities

Custom fields can be added on the following entities :

- Property
- DistributionList
- DistributionListMember
- All Envitems (Technical colors, Marketing colors, Color Palettes, Care Labels, Companies, Contacts, Currencies, Sizes, Raw Materials, Units)
- Companies Managed Services and Contacts
- Product

- Product SKUs, Assortment, Axevalues, Specification Packages, Breakdowns, Change Descriptions, Material ratios
- Multimedia Boards, Multimedia Documents
- Group
- User

3.1.3.3 XSD Projection

As shown in the FIP Model, a custom field can be of many types (Float, Long, Int, Double, Date, Boolean, String, LongString). In the ETL model, the projection of the fieldvalue interface results in a new entity for each type. For example :

- custo2DoubleF : Fieldvalue of type Double
- custo2IntFie : Fieldvalue of type Int
- custo2FloatF : Fieldvalue of type Float

Custom fields are not root objects but part of them. All customizable entities will contain the following structure in the ETL model

```
<xsd:element name="custo2DoubleF" type="impl:DoubleField" minOccurs="0"
        maxOccurs="unbounded" nillable="true"/>
<xsd:element name="custo2IntFie" type="impl:IntField" minOccurs="0" maxOccurs="unbounded"
        nillable="true"/>
<xsd:element name="custo2FloatF" type="impl:FloatField" minOccurs="0"
        maxOccurs="unbounded" nillable="true"/>
<xsd:element name="custo2LongFi" type="impl:LongField" minOccurs="0"
        maxOccurs="unbounded" nillable="true"/>
<xsd:element name="custo2ProperD" type="impl:Finder" minOccurs="0" maxOccurs="1"
        nillable="true"/>
<xsd:element name="custo2BooleaF" type="impl:BooleanField" minOccurs="0"
        maxOccurs="unbounded" nillable="true"/>
<xsd:element name="custo2StringF" type="impl:StringField" minOccurs="0"
        maxOccurs="unbounded" nillable="true"/>
<xsd:element name="custo2LongStF" type="impl:LongStringField" minOccurs="0"
        maxOccurs="unbounded" nillable="true"/>
<xsd:element name="custo2DateFi" type="impl:DateField" minOccurs="0"
        maxOccurs="unbounded" nillable="true"/>
<xsd:element name="customRoles" type="impl:RoleTarget" minOccurs="0"
        maxOccurs="unbounded" nillable="true"/>
```

```
<xsd:complexType name="DoubleField">
   <!-- DoubleField relations -->
   <xsd:sequence>
        <xsd:element name="dunit" type="impl:Finder" minOccurs="0" maxOccurs="1"
          nillable="true"/>
        <xsd:element name="myFinder" type="impl:Finder" minOccurs="0" maxOccurs="1"
          nillable="true"/>
   </xsd:sequence>
   <!-- DoubleField fields -->
   <xsd:attribute name="value" type="xsd:string"/>
   <xsd:attribute name="name" type="xsd:string"/>
 </xsd:complexType>
…
```

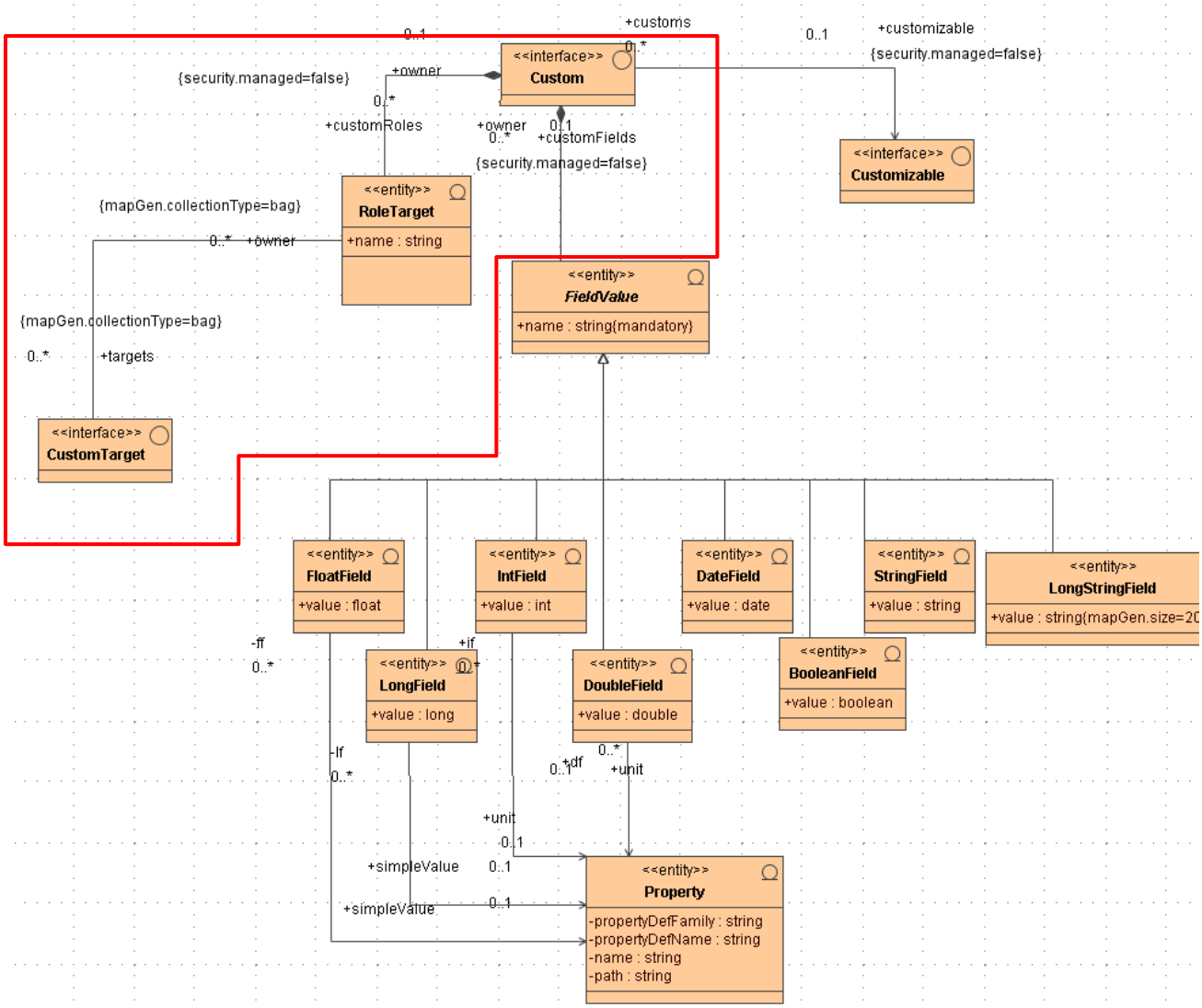
3.1.3.4 Example of extracted data

The value of a custom field of type String, named “control_type”, added on a product will be extracted as follow:

```
…
<prod:custo2StringF value="Tested" name="control_type">
        <prod:myFinder correlationId="478021" mode="EXTRACTED" toFindId="478021"/>
</prod:custo2StringF>
…
```

3.1.4 Custom roles

3.1.4.1 FIP Model



3.1.4.2 XSD Projection

As shown in the FIP Model, a custom field can be of many types (Float, Long, Int, Double, Date, Boolean, String, LongString). In the ETL model, the projection of the roletarget interface results in a new entity for each CustomTarget. For example :

- targe2DistriL : to point to a Distribution List
- targe2MarketC : to point to a Marketing Color
- targe2Proper : to point to a Property

All customizable entities will contain the following structure in the ETL model

```
<xsd:complexType name="RoleTarget">
  <!-- RoleTarget relations -->
  <xsd:sequence>
    <xsd:element name="targe2DistriL" type="impl:Finder" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2MarketC" type="impl:Finder" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2SpecTa" type="impl:DeepFinder" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2Proper" type="impl:Finder" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="myFinder" type="impl:Finder" minOccurs="0" maxOccurs="1"
      nillable="true"/>
    <xsd:element name="targe2CadVarL" type="impl:CadVariantLink" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2Varian" type="impl:DeepFinder" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2Gradin" type="impl:Grading" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2Curren" type="impl:Finder" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2MarkerL" type="impl:Finder" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2SpecPa" type="impl:DeepFinder" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2Unit" type="impl:Finder" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2NamedS" type="impl:NamedString" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2Compan" type="impl:Finder" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2Group" type="impl:Finder" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2CadSizL" type="impl:Finder" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
    <xsd:element name="targe2AxeVal" type="impl:DeepFinder" minOccurs="0"
      maxOccurs="unbounded" nillable="true"/>
```

```
<xsd:element name="targe2SubCon" type="impl:DeepFinder" minOccurs="0"
  maxOccurs="unbounded" nillable="true"/>
<xsd:element name="targe2EntCri" type="impl:Finder" minOccurs="0"
  maxOccurs="unbounded" nillable="true"/>
</xsd:sequence>

<!-- RoleTarget fields -->
<xsd:attribute name="name" type="xsd:string"/>

</xsd:complexType>
```

3.1.4.3 Example of extracted data

The value of a custom role of type Property (a pick list), named “sp_fitting_step”, added on a product will be extracted as follow:

…

```
<prod:customRoles name="sp_fitting_step">
  <prod:targe2Proper correlationId="4321" mode="EXTRACTED" toFindId="4321">
    <prod:businessKey>
      <prod:entry key="propertyDefName" value="prop_FittingStep" />
      <prod:entry key="propertyDefFamily" value="process" />
      <prod:entry key="path" value="SA-Sample" />
    </prod:businessKey>
  </prod:targe2Proper>
  <prod:myFinder correlationId="45836737" mode="EXTRACTED" toFindId="45836737">
    <prod:businessKey />
  </prod:myFinder>
</prod:customRoles>
...
```

Business Key of the property selected in the pick list :

Element “SA-Sample” of the list named “prop_FittingStep” which family is “process’

The type of the entity picked in the pick list is provided by the element name. Here, the pick list allows to pick Properties

Internal Id of the property selected in the pick list

Custom Role name

If no value is set to a custom role, the “targe2XXX” element and its business key will not be extracted at all.

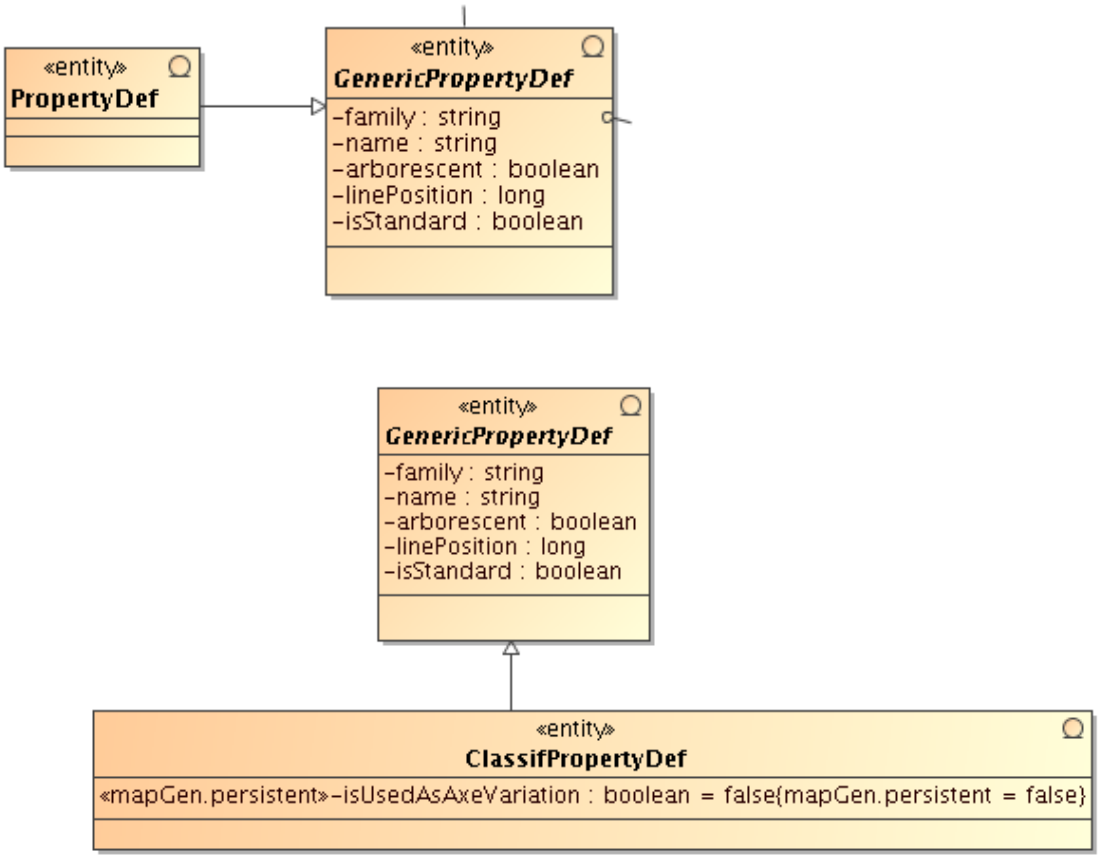
3.1.5 Lists

3.1.5.1 FIP Model

The concept of propertyDefs has been refactored to differentiate lists involved in a classification (Season list, Brand list…) from lists of simple elements (Status list…).

Lists are now represented by the entity “GenericPropertyDef” which regroups the entities:

- PropertyDef : list of simple elements
- ClassifPropertyDef : list of elements meant to classify an object.



3.1.5.2 XSD Projection

See PropertyDef.xsd and ClassifPropertyDef.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.5.3 Example of extracted data

The result of the extraction of a PropertyDef (core.PropertyDef) named « YarnSpinningType » will look as follow:

```
<prop:GPropertyDef xmlns:prop="http://www.lectra.com/fip/connector/xml/PropertyDef">
    <prop:PropertyDef arborescent="true" family="process"
        name="YarnSpinningType">
        <prop:myFinder correlationId="2742" mode="CREATE-OR-UPDATE"
            toFindId="2742">
            <prop:businessKey>
                <prop:entry key="family" value="process"></prop:entry>
                <prop:entry key="name"
                    value="YarnSpinningType"></prop:entry>
            </prop:businessKey>
        </prop:myFinder>
    </prop:PropertyDef>
</prop:GPropertyDef>
```

PropertyDef attributes

Arborescent : boolean indicating whether the list is hierarchical or not

Business Key of the propertyDef

Internal Id of the propertyDef

To be able to extract as many instances of propertyDef as you want in a single XML file, the element GPropertyDef has been added in the file structure. This is a sequence of PropertyDef. All root objects xsd files will contain such a sequence. Its name is G<rootname>.

The result of the extraction of a ClassifPropertyDef (Classifmanagement.axe) named « Division » will look as follow:

```
<prop:GClassifPropertyDef
        xmlns:prop="http://www.lectra.com/fip/connector/xml/ClassifPropertyDef">
    <prop:ClassifPropertyDef arborescent="true"
            family="process" name="Division">
            <prop:myFinder correlationId="2046" mode="CREATE-OR-UPDATE"
                    toFindId="2046">
                    <prop:businessKey>
                            <prop:entry key="family" value="process"></prop:entry>
                            <prop:entry key="name" value="Division"></prop:entry>
                    </prop:businessKey>
            </prop:myFinder>
    </prop:ClassifPropertyDef>
</prop:GClassifPropertyDef>
```

3.1.6 Elements of a list

3.1.6.1 Definition

Elements of lists are now represented by the entity “GenericProperty” which regroups the entities:

- Property: element of a simple lists
- ClassifProperty: element of a list meant to classify an object.

3.1.6.2 XSD Projection

See Property.xsd and ClassifProperty in the archive enterpriselayerconnector-xsd.zip

3.1.6.3 Example of extracted data

You will find here after the result of the extraction of the content of the list "*MarketingColorGroup*" which is composed of 2 elements.

```
<prop:GProperty xmlns:prop="http://www.lectra.com/fip/connector/xml/Property">
    <prop:Property propertyDefName="MarketingColorGroup"
                   propertyDefFamily="process" path="Standard" name="Standard">
        <prop:custo2ProperD correlationId="2055"
                            mode="CREATE-OR-UPDATE" toFindId="2055">
            <prop:businessKey>
                <prop:entry key="family" value="process"></prop:entry>
                <prop:entry key="name"
                            value="MarketingColorGroup"></prop:entry>
            </prop:businessKey>
        </prop:custo2ProperD>
        <prop:myFinder correlationId="368394" mode="CREATE-OR-UPDATE"
                       toFindId="368394">
            <prop:businessKey>
                <prop:entry key="propertyDefName"
                            value="MarketingColorGroup"></prop:entry>
                <prop:entry key="path" value="Standard"></prop:entry>
                <prop:entry key="propertyDefFamily"
                            value="process"></prop:entry>
            </prop:businessKey>
        </prop:myFinder>
    </prop:Property>
```

Group of Properties ➔ eventually more than one property extracted.

First Property (element of the list)

```
<prop:Property propertyDefName="Service"
        propertyDefFamily="process" path="Material Supplier" name="Material
            Supplier">
        <prop:custo2ProperD correlationId="2066"
            mode="CREATE-OR-UPDATE" toFindId="2066">
            <prop:businessKey>
                <prop:entry key="family" value="process"></prop:entry>
                <prop:entry key="name" value="Service"></prop:entry>
            </prop:businessKey>
        </prop:custo2ProperD>
        <prop:myFinder correlationId="368395" mode="CREATE-OR-UPDATE"
            toFindId="368395">
            <prop:businessKey>
                <prop:entry key="propertyDefName"
                    value="Service"></prop:entry>
                <prop:entry key="path"
                    value="Material Supplier"></prop:entry>
                <prop:entry key="propertyDefFamily"
                    value="process"></prop:entry>
            </prop:businessKey>
        </prop:myFinder>
    </prop:Property>
</prop:GProperty>
```

Business Key of the propertyDef to which the property is attached (list name)

Business Key of the second property

Internal Id of the propertyDef to which the property is attached (list name)

Attributes of the second property

propertyDefName : Name of the propertyDef to which the element is attached

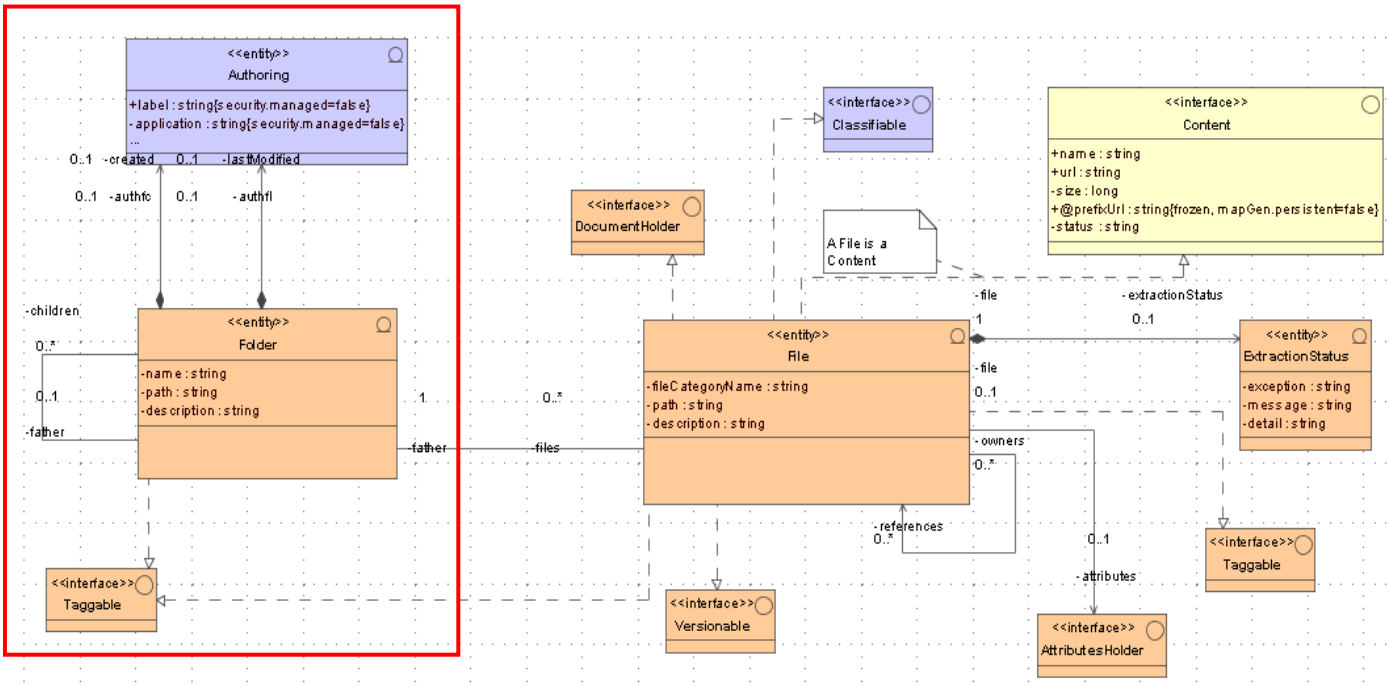
propertyDefFamily : Family of the PropertyDef

name : name of the property (element of a list)

path : (calculated field, it is not necessary to set a value to this attribute in injection mode) for Hierarchical list the path is composed of the name of the element and all the previous elements to reach this one. Each element is separated by a slash. For example “Waterwear/Women/Goggles”

3.1.7 filemanagement.process.Folder

3.1.7.1 FIP Model

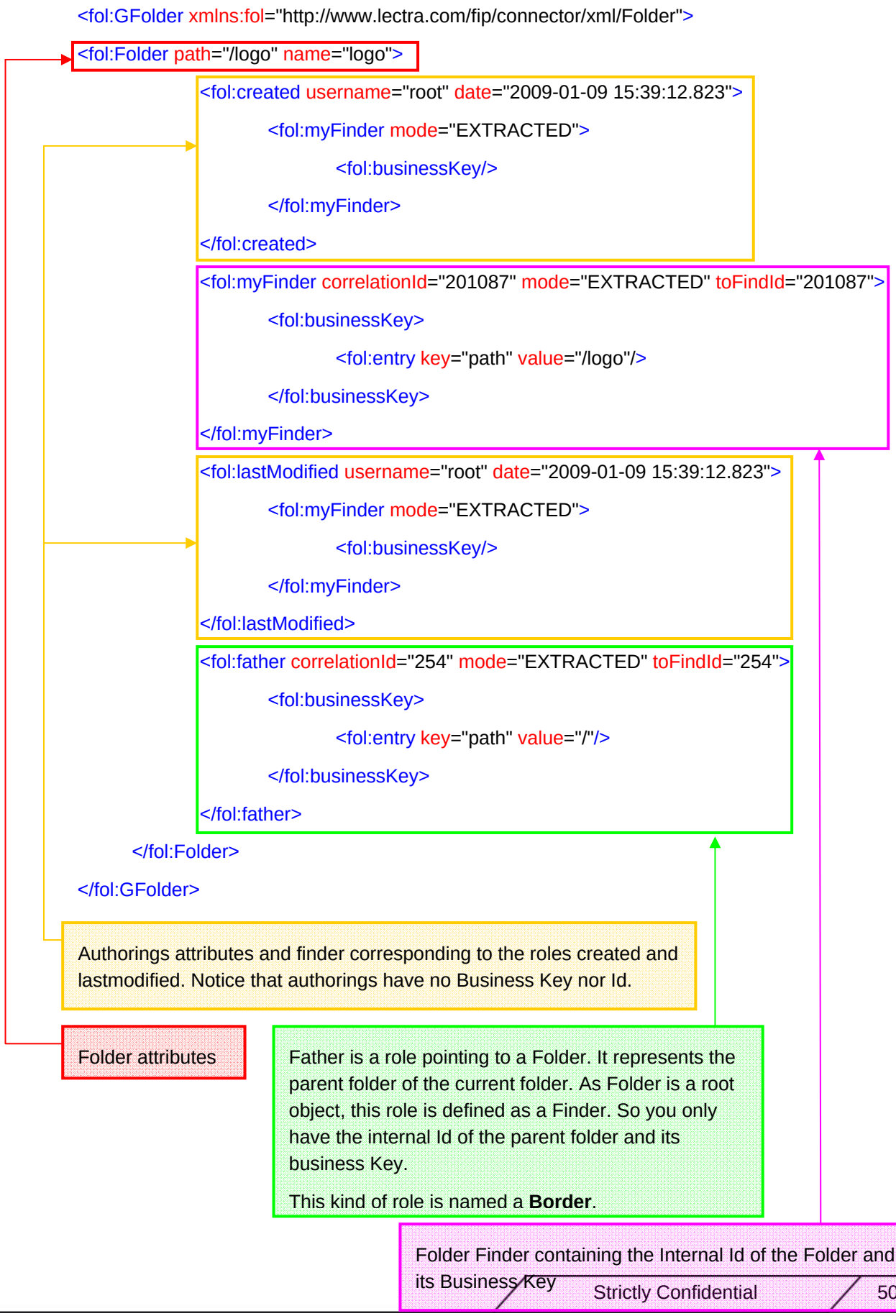


3.1.7.2 XSD Projection

See Folder.xsd in the archive enterpriselayerconnector-xsd.zip

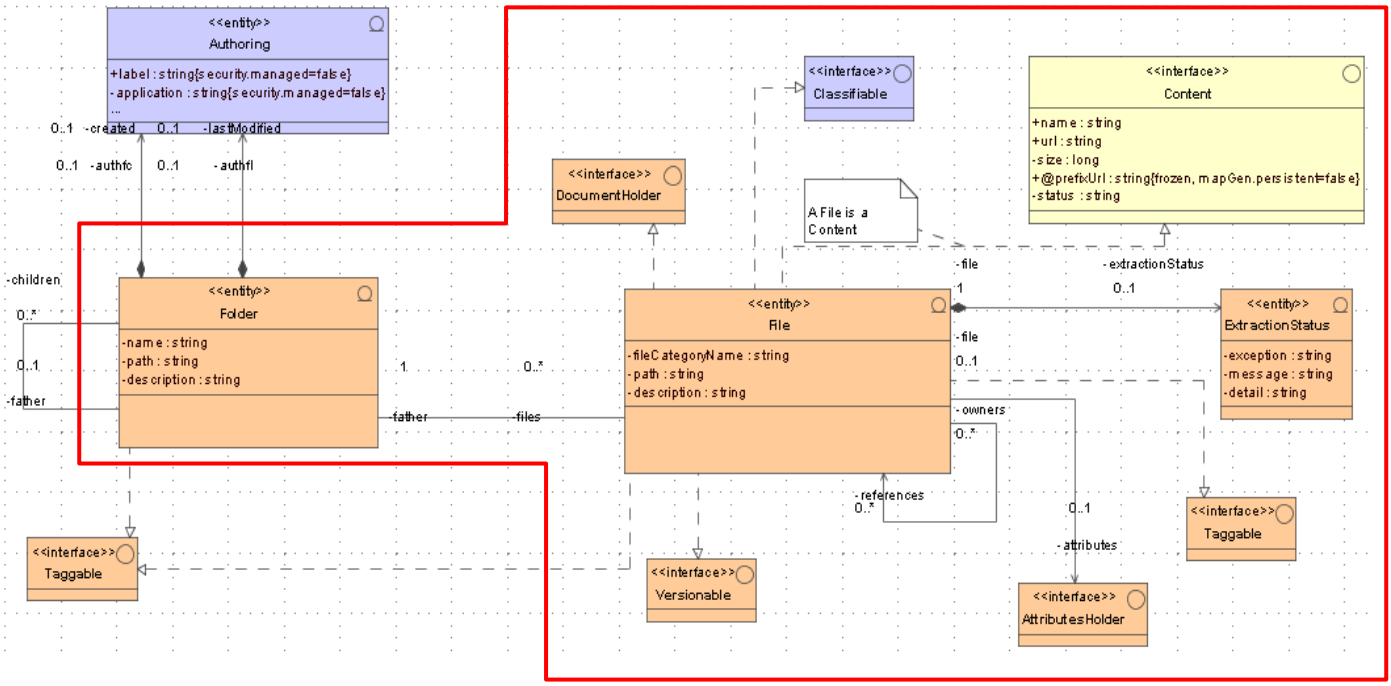
3.1.7.3 Example of extracted data

You will find here after the result of the extraction of the Folder “/logo”


<fol:GFolder xmlns:fol="http://www.lectra.com/fip/connector/xml/Folder">
<fol:Folder path="/logo" name="logo">
<fol:created username="root" date="2009-01-09 15:39:12.823">
<fol:myFinder mode="EXTRACTED">
<fol:businessKey/>
</fol:myFinder>
</fol:created>
<fol:myFinder correlationId="201087" mode="EXTRACTED" toFindId="201087">
<fol:businessKey>
<fol:entry key="path" value="/logo"/>
</fol:businessKey>
</fol:myFinder>
<fol:lastModified username="root" date="2009-01-09 15:39:12.823">
<fol:myFinder mode="EXTRACTED">
<fol:businessKey/>
</fol:myFinder>
</fol:lastModified>
<fol:father correlationId="254" mode="EXTRACTED" toFindId="254">
<fol:businessKey>
<fol:entry key="path" value="/"/>
</fol:businessKey>
</fol:father>
</fol:Folder>
</fol:GFolder>
Authorings attributes and finder corresponding to the roles created and lastmodified. Notice that authorings have no Business Key nor Id.
Folder attributes
Father is a role pointing to a Folder. It represents the parent folder of the current folder. As Folder is a root object, this role is defined as a Finder. So you only have the internal Id of the parent folder and its business Key.
This kind of role is named a Border.
Folder Finder containing the Internal Id of the Folder and its Business Key

3.1.8 filemanagement.process.File

3.1.8.1 FIP Model



3.1.8.2 XSD Projection

See File.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.8.3 Example of extracted data

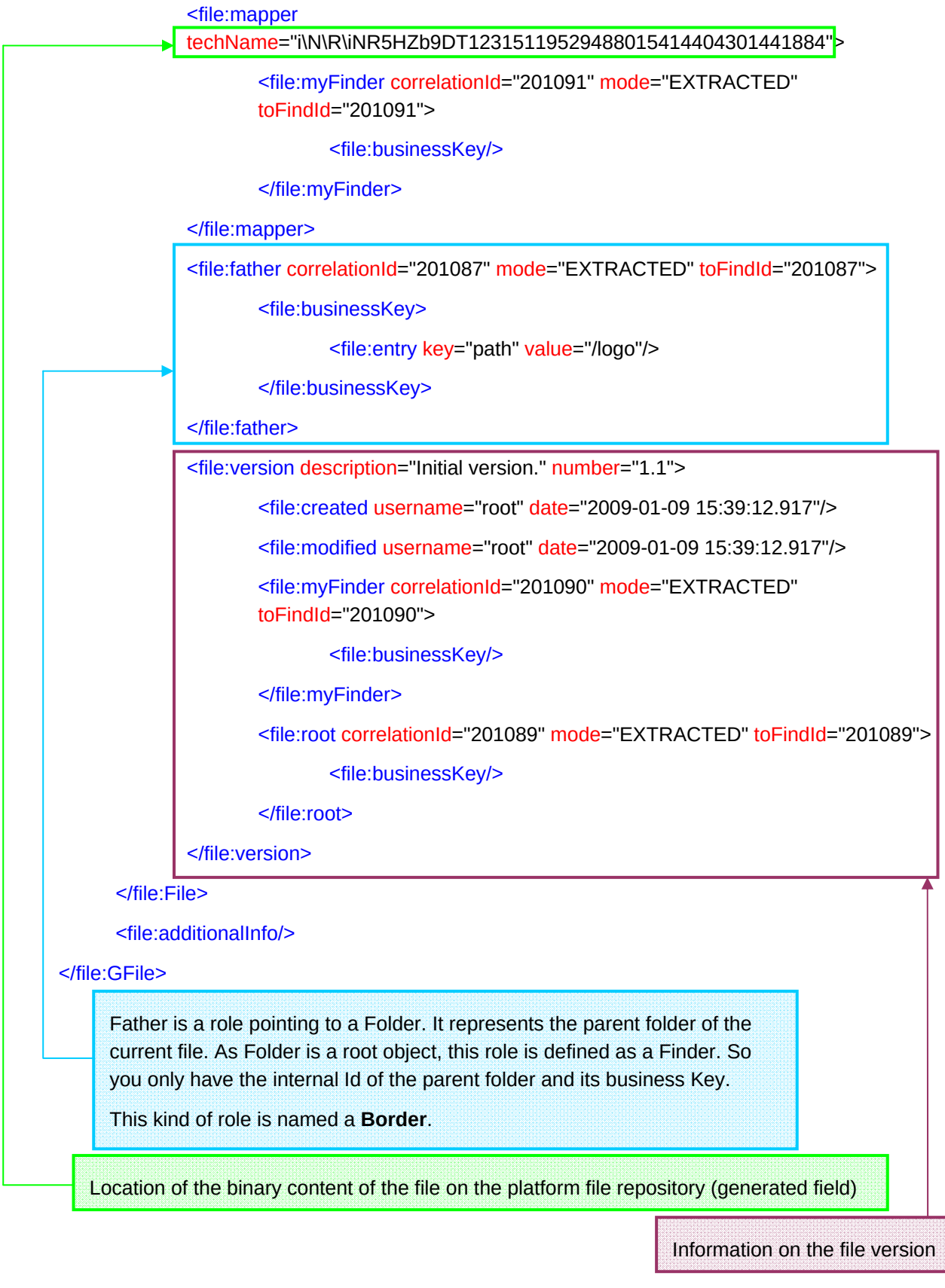
You will find here after the result of the extraction of the File “/logo/KaledoReportlogo”

```
<file:GFile xmlns:file="http://www.lectra.com/fip/connector/xml/File">
    <file:File refVersion="true" description="KaledoReportlogo"
    url="/ContentAccess?id=201088&amp;fqn=filemanagement.process.File" size="2274"
    path="/logo/KaledoReportlogo" status="NO_PROCESS_REQUIRED"
    name="KaledoReportlogo">
        <file:created username="root" date="2009-01-09 15:39:12.917"/>
        <file:lastModified username="root" date="2009-01-14 17:02:39.620"/>
        <file:myFinder correlationId="201088" mode="EXTRACTED" toFindId="201088">
            <file:businessKey>
                <file:entry key="path" value="/logo/KaledoReportlogo"/>
                <file:entry key="version.number" value="1.1"/>
            </file:businessKey>
        </file:myFinder>
```

Files attributes

The url and path are calculated

Finder of the File


<file:mapper
techName="i\N\R\iNR5HZb9DT123151195294880154144043014418 84">
<file:myFinder correlationId="201091" mode="EXTRACTED"
toFindId="201091">
<file:businessKey/>
</file:myFinder>
</file:mapper>
<file:father correlationId="201087" mode="EXTRACTED" toFindId="201087">
<file:businessKey>
<file:entry key="path" value="/logo"/>
</file:businessKey>
</file:father>
<file:version description="Initial version." number="1.1">
<file:created username="root" date="2009-01-09 15:39:12.917"/>
<file:modified username="root" date="2009-01-09 15:39:12.917"/>
<file:myFinder correlationId="201090" mode="EXTRACTED"
toFindId="201090">
<file:businessKey/>
</file:myFinder>
<file:root correlationId="201089" mode="EXTRACTED" toFindId="201089">
<file:businessKey/>
</file:root>
</file:version>
</file:File>
<file:additionalInfo/>
</file:GFile>
Father is a role pointing to a Folder. It represents the parent folder of the current file. As Folder is a root object, this role is defined as a Finder. So you only have the internal Id of the parent folder and its business Key.
This kind of role is named a Border.
Location of the binary content of the file on the platform file repository (generated field)
Information on the file version

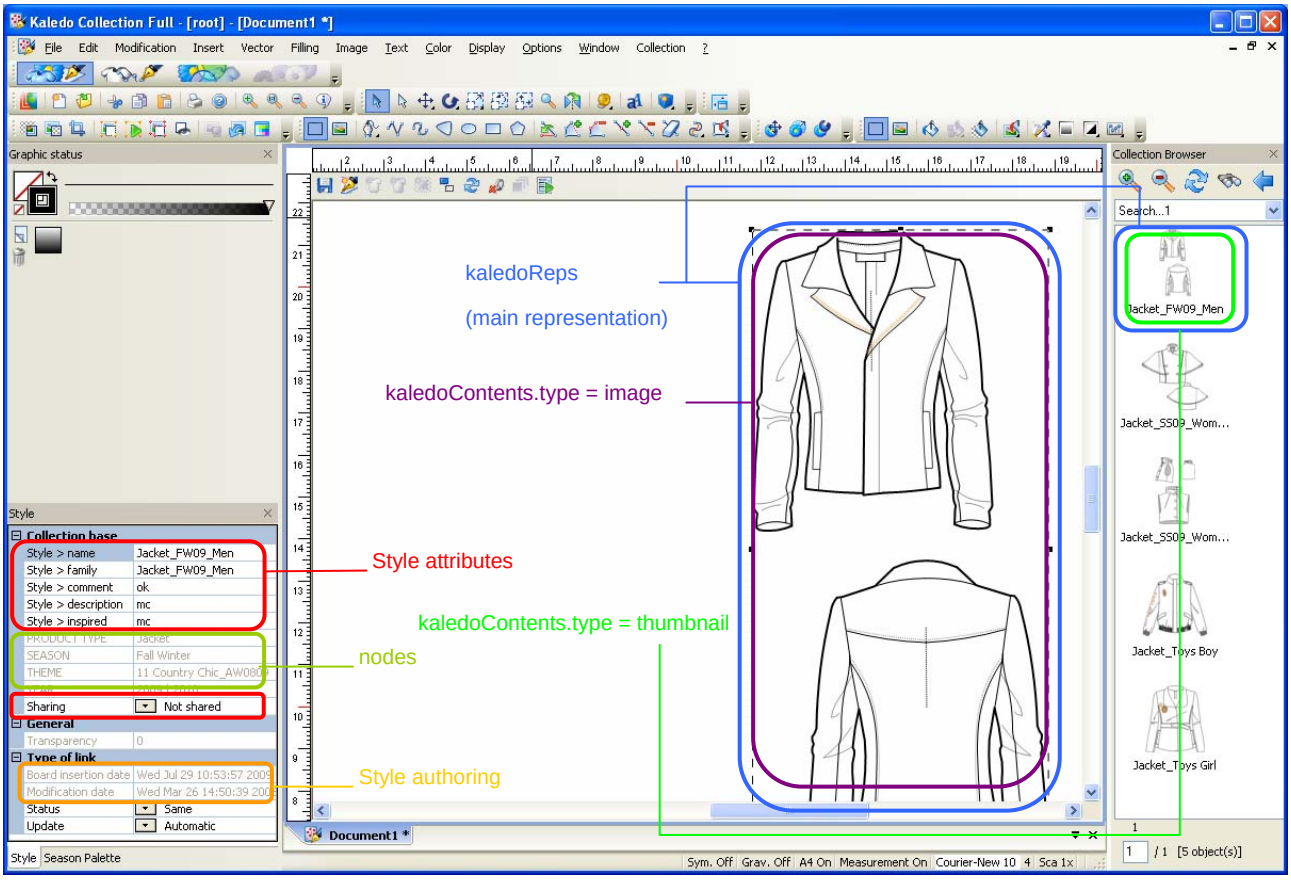
3.1.9 kaledomanagement.Style

3.1.9.1 XSD Projection

See Style.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.9.2 Example of extracted data

You will find here after the result of the extraction of the Style shown in the following screenshot:




```
<sty:Style family="Jacket_FW09_Men" published="false"
        description="mc" comment="ok" date="2008-03-05 14:49:11.567"
        frozen="false" name="Jacket_FW09_Men" inspired="mc"
        ident="fed2f41d-6a1c-4bef-80f8-fe3b846bd6c5">
    <sty:created label="batchUser" username="kaledo"
        date="2008-02-06 11:17:49.80" application="unknown"/>
    <sty:lastModified label="batchUser" username="kaledo"
        date="2008-03-05 14:49:11.490" application="unknown"/>
    <sty:myFinder correlationId="913917" mode="CREATE-OR-UPDATE"
        toFindId="913917">
```

```
<sty:businessKey>
        <sty:entry key="name" value="Jacket_FW09_Men" />
</sty:businessKey>
</sty:myFinder>
<sty:kaledoReps styleRepType="KaledoStyle file" scale=""
        ident="b28c4159-2913-4ef6-bcd8-df9e75fd2ce2">
        <sty:kaledoContents type="thumbnail"
url="/ContentAccess?id=913925&amp;fqn=kaledomanagement.KaledoContent"
        size="135718" ident="F7887F94-3B72-DAE2-B457-
                9E6565DB35BF">
        <sty:created username="kaledo" date="2008-02-06
                11:17:49.80"/>
        <sty:myFinder correlationId="913925" mode="CREATE-OR-
                UPDATE" toFindId="913925"/>

        <sty:lastModified username="kaledo"
                date="2008-03-05 14:49:11.537"/>
        <sty:mapper
techName="N\u\x\NuxUGe1x4r120229306908172718349861500502 28">
                <sty:myFinder correlationId="913927" mode="CREATE-
                        OR-UPDATE"   toFindId="913927">
                </sty:myFinder>
        </sty:mapper>
</sty:kaledoContents>
        <sty:kaledoContents type="image"
url="/ContentAccess?id=913933&amp;fqn=kaledomanagement.KaledoContent"
        size="24952" ident="D247FDD8-9939-E153-2937-
                6A6FFF1326AC">
        <sty:created username="kaledo" date="2008-02-06
                11:17:49.80"/>
        <sty:myFinder correlationId="913933" mode="CREATE-OR-UPDATE"
        toFindId="913933"/>
        <sty:lastModified username="kaledo"
                date="2008-03-05 14:49:11.490"/>
        <sty:mapper
techName="B\E\5\BE5XQwpkMX120229306908123867525333179793 4">
                <sty:myFinder correlationId="913935" mode="CREATE-
                        OR-UPDATE"   toFindId="913935"/>
```

Location of the binary content of the thumbnail on the platform file repository (generated field)

Location of the binary content of the image on the platform file repository (generated field)

```
                </sty:mapper>
        </sty:kaledoContents>

        <sty:myFinder correlationId="913923" mode="CREATE-OR-UPDATE"
                toFindId="913923">
                <sty:businessKey>
                        <sty:entry key="ident" value="b28c4159-2913-4ef6-
                                bcd8-df9e75fd2ce2" />
                </sty:businessKey>
        </sty:myFinder>
</sty:kaledoReps>
<sty:nodes correlationId="911167" mode="CREATE-OR-UPDATE"
        toFindId="911167">
        <sty:businessKey>
                <sty:entry key="propertyDefName" value="PRODUCT TYPE" />
                <sty:entry key="path" value="Lingerie" />
                <sty:entry key="propertyDefFamily" value="process" />
        </sty:businessKey>
</sty:nodes>
<sty:nodes correlationId="911197" mode="CREATE-OR-UPDATE"
        toFindId="911197">
        <sty:businessKey>
                <sty:entry key="propertyDefName" value="DEPARTMENT" />
                <sty:entry key="path" value="Intimate" />
                <sty:entry key="propertyDefFamily" value="process" />
        </sty:businessKey>
</sty:nodes>
[…]
<sty:nodes correlationId="911023" mode="CREATE-OR-UPDATE"
        toFindId="911023">
        <sty:businessKey>
                <sty:entry key="propertyDefName" value="YEAR" />
                <sty:entry key="path" value="2009" />
                <sty:entry key="propertyDefFamily" value="process" />
        </sty:businessKey>
</sty:nodes>
```

nodes is a role pointing to a Property. As Property is a root object, this role is defined as a Finder. So you only have the internal Id of the property and its business Key.

This kind of role is named a **Border**.

```
<sty:kaledoMainRep correlationId="913923" mode="CREATE-OR-UPDATE"
        rootCorrelationId="913917" rootId="913917" toFindId="913923">
        <sty:businessKey>
                <sty:entry key="ident" value="b28c4159-2913-4ef6-bcd8-
                        df9e75fd2ce2" />
        </sty:businessKey>
</sty:kaledoMainRep>
</sty:Style>
```

"mainRepresention" points on one element representation of the Style. As style is a root object but not representation, we use what is called a **DeepFinder** : a finder with in addition references to the root object.

In this example, the main representation is the representation of the style with the internal Id equal to *913917* (rootId) and the representation internal id is *913923* (toFindId).

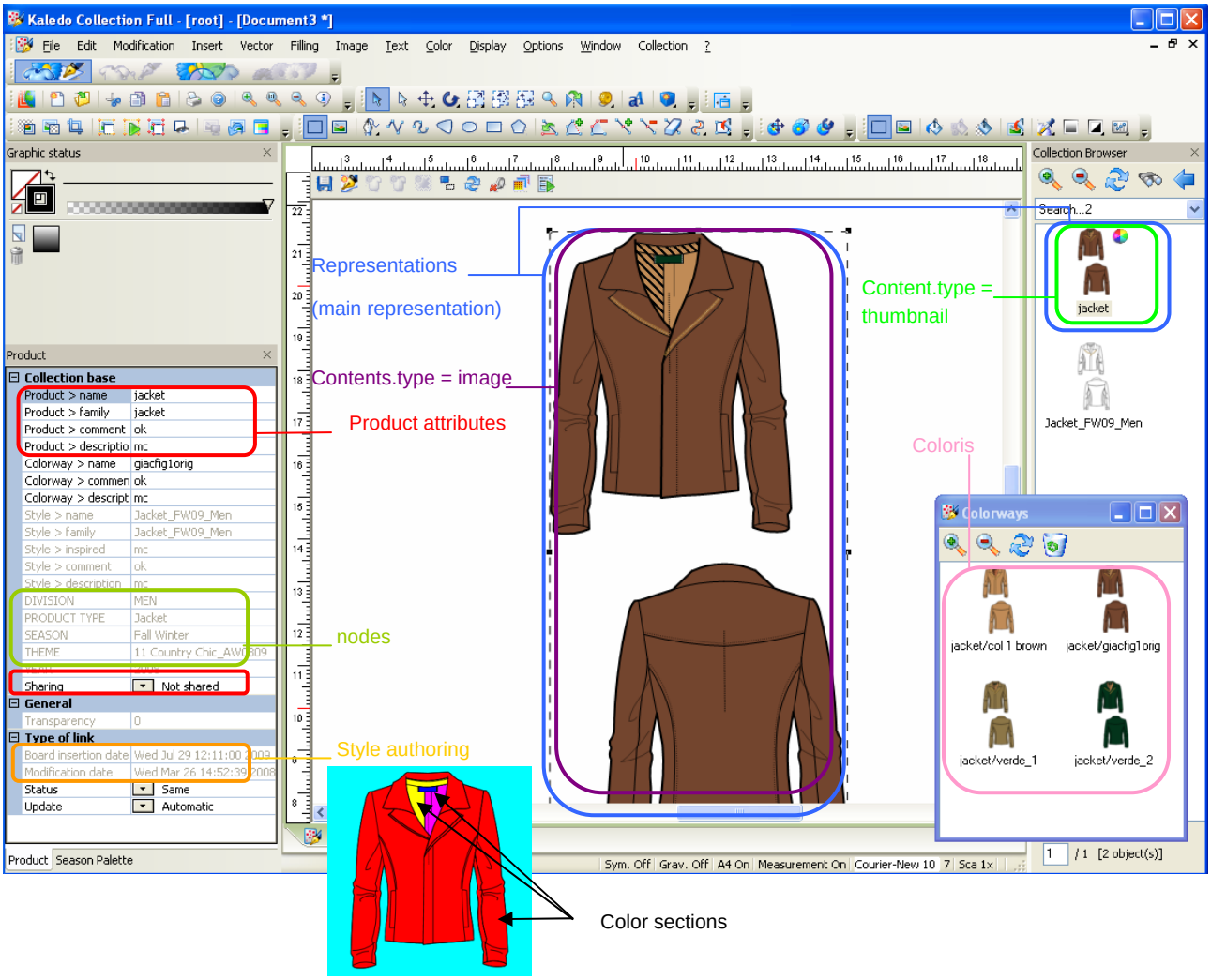
3.1.10 kaledomanagement.KaledoProduct

3.1.10.1 XSD Projection

See KaledoProduct.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.10.2 Example of extracted data

You will find here after the result of the extraction of the Product shown in the following screenshot:



All authorings have been removed from the XML to ease its understanding.

```
<kal:KaledoProduct family="T-shirt_Toys Girl_1"
published="false" description="" comment="" date="2009-06-16 17:12:01.277"
frozen="false" name="T-shirt_Toys Girl_1" ident="946a32a0-e615-42b0-94f3-
b944c8e34914">
    <kal:kaledoMainRep correlationId="948601" mode="CREATE-OR-UPDATE"
        rootCorrelationId="948593" rootId="948593" toFindId="948601">
        <kal:businessKey>
            <kal:entry key="ident" value="9eec4cde-ebde-454f-88db-
            d3d2c84688d3" />
        </kal:businessKey>
    </kal:kaledoMainRep>
    <kal:myFinder correlationId="948593" mode="CREATE-OR-UPDATE"
        toFindId="948593">
        <kal:businessKey>
            <kal:entry key="name" value="T-shirt_Toys Girl_1" />
        </kal:businessKey>
    </kal:myFinder>
    <kal:kaledoReps ident="9eec4cde-ebde-454f-88db-d3d2c84688d3">
        <kal:myFinder correlationId="948601" mode="CREATE-OR-UPDATE"
            toFindId="948601">
            <kal:businessKey>
                <kal:entry key="ident" value="9eec4cde-ebde-454f-
                88db-d3d2c84688d3" />
            </kal:businessKey>
        </kal:myFinder>
    </kal:kaledoReps>
    <kal:coloris published="false" description="mc" comment=""
        date="2009-05-19 16:04:00.947" frozen="false" name="parchment"
        ident="7644994c-570e-4bdf-8469-f47dd456728d">
        <kal:myFinder correlationId="948659" mode="CREATE-OR-UPDATE"
            toFindId="948659">
            <kal:businessKey>
                <kal:entry key="name" value="parchment" />
            </kal:businessKey>
```

```
</kal:myFinder>
<kal:kaledoReps ident="918f1060-936f-41f5-82f4-3387123cd702">
    <kal:kaledoContents type="image"
url="/ContentAccess?id=948675&amp;fqn=kaledomanagement.KaledoContent"
        size="126121" ident="587D29AF-FADE-D2A5-3768-
            8B23BF09A0A2">
        <kal:myFinder correlationId="948675" mode="CREATE-
        OR-UPDATE"  toFindId="948675"/>
        <kal:mapper
            techName="h\D\N\hDNegmUIS4121069429257133
                86966042970958096">
            <kal:myFinder correlationId="948677"
                mode="CREATE-OR-UPDATE"
                toFindId="948677"/>
            </kal:mapper>
</kal:kaledoContents>
    <kal:kaledoContents type="thumbnail"
        url="/ContentAccess?id=948667&amp
            ;fqn=kaledomanagement.KaledoContent"
        size="138750" ident="9072EF33-7538-4575-0565-
        6BD3D0D0C24A">
[…]
    </kal:kaledoContents>
    <kal:myFinder correlationId="948665" mode="CREATE-OR-
        UPDATE"toFindId="948665">
        <kal:businessKey>
            <kal:entry key="ident" value="918f1060-936f-
                41f5-82f4-3387123cd702" />
        </kal:businessKey>
    </kal:myFinder>
</kal:kaledoReps>
<kal:colorSections paletteIndex="0" name=""
    ident="b6778470-5e02-400c-8140-0ebe970ff1f8">
    <kal:myFinder correlationId="948683" mode="CREATE-OR-
        UPDATE"      toFindId="948683">
        <kal:businessKey>
            <kal:entry key="ident" value="b6778470-5e02-
```

Location of the binary content of the image on the platform file repository (generated field)

```
                                    400c-8140-0ebe970ff1f8" />
                        </kal:businessKey>
                    </kal:myFinder>
                    <kal:fabricLink date="2008-03-25 15:30:31.933">
                        <kal:fabri2FabricC correlationId="922371"
                        mode="CREATE-OR-UPDATE" rootCorrelationId="921963"
                        rootId="921963"          toFindId="922371">
                            <kal:businessKey>
                                <kal:entry key="name" value="11-0603-
                                        Parchment" />
                            </kal:businessKey>
                        </kal:fabri2FabricC>
                        <kal:myFinder correlationId="948685" mode="CREATE-
                        OR-UPDATE" toFindId="948685">
                            <kal:businessKey>
                                <kal:entry key="colorSection.ident"
                              value="b6778470-5e02-400c-8140-0ebe970ff1f8"/>
                                <kal:entry key="fabric.name"
                                        value="11-0603-Parchment" />
                            </kal:businessKey>
                        </kal:myFinder>
                    </kal:fabricLink>
                </kal:colorSections>
```

```
<kal:kaledoMainRep correlationId="948665" mode="CREATE-OR-
        UPDATE" rootCorrelationId="948593" rootId="948593" toFindId="948665">
        <kal:businessKey>
            <kal:entry key="ident" value="918f1060-936f-41f5-82f4-
            3387123cd702" />
        </kal:businessKey>
    </kal:kaledoMainRep>
</kal:coloris>
<kal:mainColoris correlationId="948687" mode="CREATE-OR-UPDATE"
        rootCorrelationId="948593" rootId="948593" toFindId="948687">
        <kal:businessKey>
            <kal:entry key="name" value="Malaga" />
        </kal:businessKey>
</kal:mainColoris>
<kal:nodes correlationId="911425" mode="CREATE-OR-UPDATE"
        toFindId="911425">
        <kal:businessKey>
            <kal:entry key="propertyDefName" value="PRODUCT TYPE" />
            <kal:entry key="path" value="T-shirt" />
            <kal:entry key="propertyDefFamily" value="process" />
        </kal:businessKey>
</kal:nodes>
```

"kaledoMainRep" points on one element kaledoReps of the Coloris. As KaledoProduct is a root object but not kaledoReps, we use what is called a **DeepFinder** : a finder with in addition references to the root object.

In this example, the main representation is the representation of the kaledoProduct with the internal Id equal to *948593* (rootId) and the representation internal id is *948665* (toFindId).

This is another DeepFinder to define the main colori.

"nodes" is a role pointing to a Property. As Property is a root object, this role is defined as a Finder. So you only have the internal Id of the property and its business Key.

This is a Border.

```
<kal:styleLink date="2009-05-19 15:44:45.737">
        <kal:myFinder correlationId="948599" mode="CREATE-OR-UPDATE"
                      toFindId="948599">
            <kal:businessKey>
              <kal:entry key="product.name" value="T-shirt_Toys
                          Girl_1" />
                      <kal:entry key="style.name" value="T-shirt_Toys *
                          Girl_3" />
            </kal:businessKey>
        </kal:myFinder>
        <kal:style correlationId="917907" mode="CREATE-OR-UPDATE"
                      toFindId="917907">
            <kal:businessKey>
              <kal:entry key="name" value="T-shirt_Toys Girl_3" />
            </kal:businessKey>
        </kal:style>
</kal:styleLink>
</kal:KaledoProduct>
```

The styleLink is used to reference the Style used to create the current KaledoProduct.

As Style is a root object, you will find only the Finder to that style.

3.1.11Kaledo Fabrics

Kaledo Fabrics are divided in 4 categories:

- Weave
- Knit
- Print
- Basic (Collection)

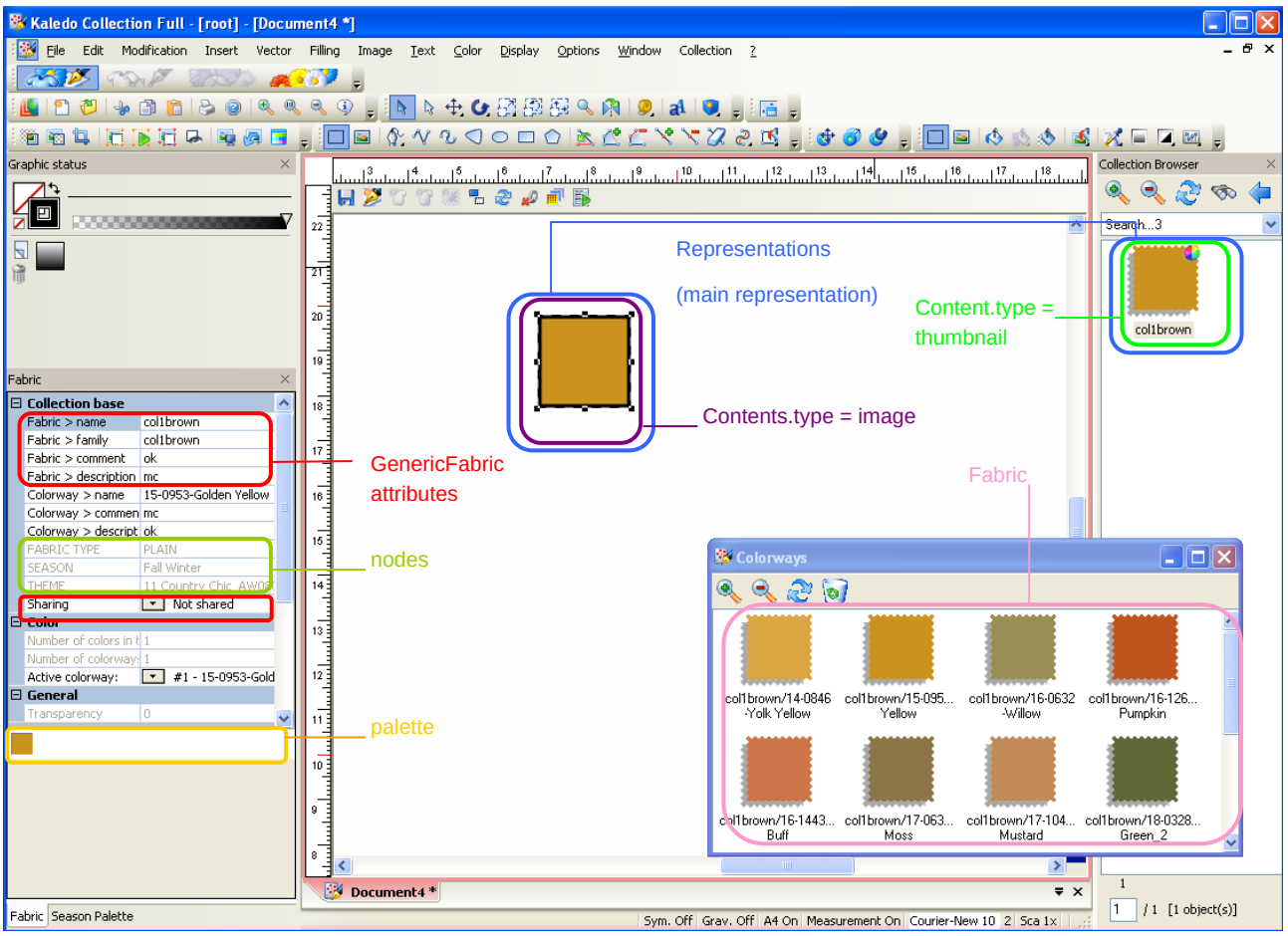
They all have the same structure but their attributes differs.

3.1.11.1 XSD Projection

See GenericFabricCollection.xsd, GenericFabricPrint.xsd, GenericFabricWeave.xsd and GenericFabricKnit.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.11.2 Example of extracted data

You will find here after the result of the extraction of the Basic Fabric shown in the following screenshot:



To ease understanding :

- All authorings have been removed from the XML
- All business keys have been removed from the XML
- Only one Fabric is provided
- Only one node is provided

```
<gen:GenericFabricCollection family="blu" published="false" description=""
        comment="" date="2009-06-16 17:09:29.370" frozen="false" name="blu"
        ident="a594c816-0fb7-4256-952e-1dd8f544d27a">
        <gen:kaledoMainRep correlationId="921550" mode="CREATE-OR-UPDATE"
                rootCorrelationId="921544" rootId="921544" toFindId="921550"/>
        <gen:mainF2FabricC correlationId="921568" mode="CREATE-OR-UPDATE"
                rootCorrelationId="921544" rootId="921544" toFindId="921568"/>
        <gen:myFinder correlationId="921544" mode="CREATE-OR-UPDATE"
                toFindId="921544"/>
        <gen:kaledoReps ident="b4bdf6a4-f649-4cd9-b61a-f26671de2968">
                <gen:kaledoContents type="thumbnail"
                        url="/ContentAccess?id=921560&amp;fqn
                                =kaledomanagement.KaledoContent"
                        ident="31E76ABD-1E47-BE9D-79AE-A8D29A87B8AB">
                        <gen:myFinder correlationId="921560" mode="CREATE-OR-
                                UPDATE" toFindId="921560"/>
                        <gen:mapper techName="u\c\V\ucVkwpOgxR1198076855939
                                944234758052593619"/>
                </gen:kaledoContents>
                <gen:kaledoContents type="image"
                url="/ContentAccess?id=921552&amp;fqn
                                =kaledomanagement.KaledoContent"
                        size="350" ident="B3AE6133-3D44-CD07-C1AA-A7E2C601A876">
                        <gen:myFinder correlationId="921552" mode="CREATE-OR-
                                UPDATE" toFindId="921552"/>
                        <gen:mapper techName="r\8\5\r85DScS1w0119
                                807685595499188380003339816O">
                                <gen:myFinder correlationId="921554" mode="CREATE-
                                OR-UPDATE" toFindId="921554"/>
                        </gen:mapper>
                </gen:kaledoContents>
                <gen:myFinder correlationId="921550" mode="CREATE-OR-UPDATE"
                        toFindId="921550"/>
        </gen:kaledoReps>
        <gen:fabri2FabricC published="false" colorVariant="ColorVariant"
                description="" comment="" date="2007-12-19 16:07:36.110"
                frozen="false" name="blu_1"
                ident="cf960dea-7a1f-4c4a-8de7-09b1e6bee01d">
```

```
<gen:palette url="/ContentAccess?id=9215
        92&amp;fqn=kaledomanagement.FabricPalette"
        size="430" name="blu"
        ident="34ae96fc-ed6a-42fc-8e6a-31285f823520">
        <gen:myFinder correlationId="921592" mode="CREATE-OR-
        UPDATE" toFindId="921592"/>
        <gen:mapper techName="R\y\l\RylqgdGUW0119807685
                632840814673310119349 3">
                <gen:myFinder correlationId="921594" mode="CREATE-
                OR-UPDATE" toFindId="921594"/>
        </gen:mapper>
</gen:palette>
<gen:myFinder correlationId="921568" mode="CREATE-OR-UPDATE"
        toFindId="921568"/>
<gen:kaledoReps ident="64abb365-a125-43aa-96c8-a6f9341bd4b8">
        <gen:kaledoContents type="image" url="/ContentAccess?i
                d=921576&amp;fqn=kaledomanagement.KaledoContent"
                ident="0975565A-7F32-A54C-A24A-2F247B485615">
                <gen:myFinder correlationId="921576" mode="CREATE-
                OR-UPDATE"   toFindId="921576"/>
                <gen:mapper techName="f\2\J\f2JHfI5HvU1
                        19807685614123104043909370600">
                        <gen:myFinder correlationId="921578"
                                mode="CREATE-OR-UPDATE"
                                toFindId="921578"/>
                </gen:mapper>
        </gen:kaledoContents>
        <gen:kaledoContents type="thumbnail"
                url="/ContentAccess?id=921584&amp
                        ;fqn=kaledomanagement.KaledoContent"
                size="112172"
                ident="9C90CF0E-405B-D0EF-D3ED-1ADEFAB88355">
                <gen:myFinder correlationId="921584" mode="CREATE-
                        OR-UPDATE"   toFindId="921584"/>
                <gen:mapper techName="8\I\E\8IEvMMOFlf
                        11980768561574908687087911173492">
                        <gen:myFinder correlationId="921586"
                                mode="CREATE-OR-UPDATE"toFindId="921586"/>
```

```
                    </gen:mapper>
                </gen:kaledoContents>
                <gen:myFinder correlationId="921574"
                    mode="CREATE-OR-UPDATE" toFindId="921574"/>
            </gen:kaledoReps>
            <gen:kaledoMainRep correlationId="921574" mode="CREATE-OR-
                UPDATE" rootCorrelationId="921544" rootId="921544" toFindId="921574">
            </gen:kaledoMainRep>
        </gen:fabri2FabricC>

        </gen:GenericFabricCollection>
```

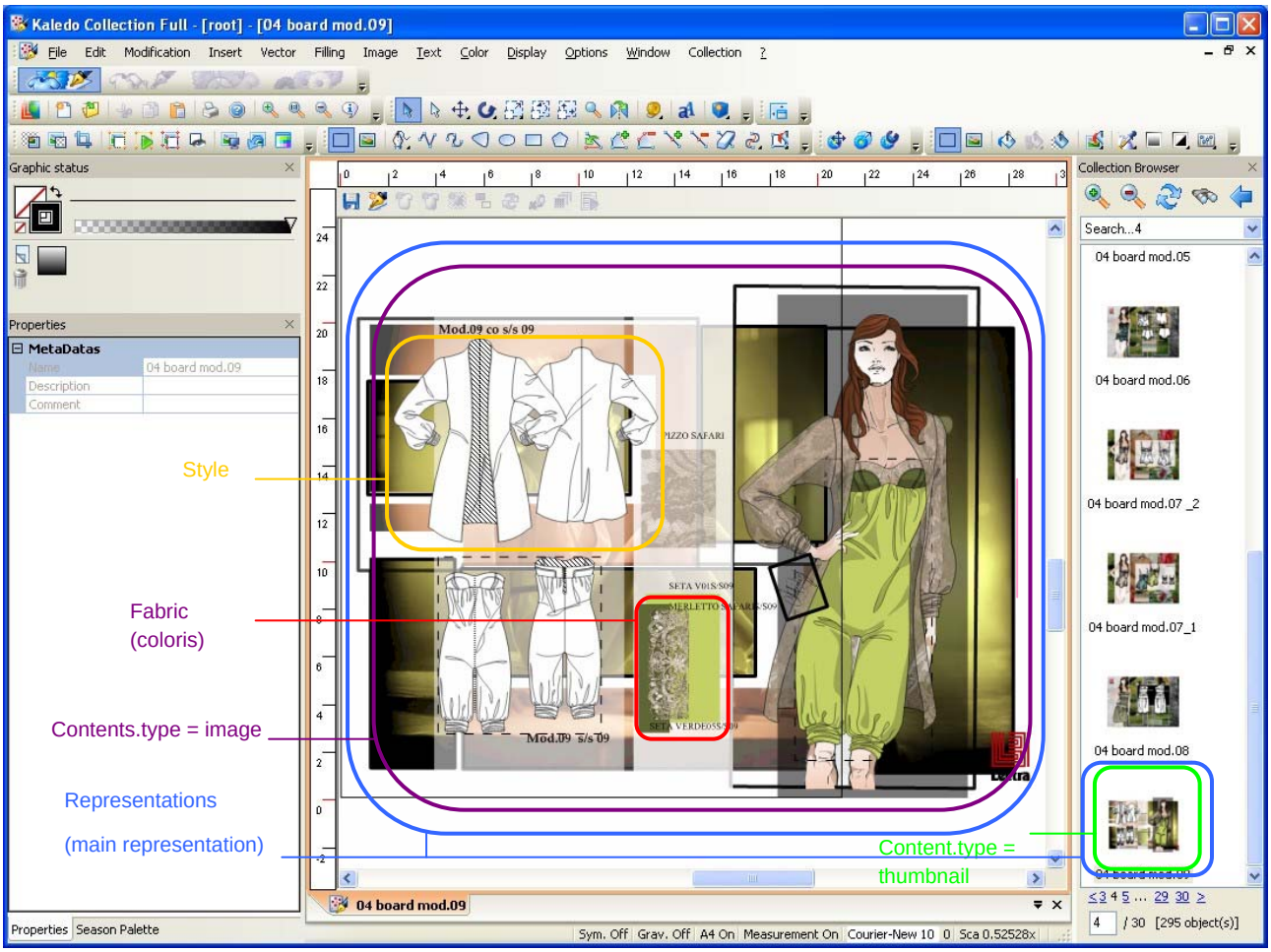
3.1.12 kaledomanagement.Board

3.1.12.1 XSD Projection

See Board.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.12.2 Example of extracted data

You will find here after the result of the extraction of the Fabric shown in the following screenshot:



To ease understanding:

- All authorings have been removed from the XML
- All business keys have been removed from the XML
- Only one node is provided

```
<boar:Board family="04 board mod.08 " published="false"
        description="" comment="" date="2009-06-16 17:19:13.553"
        frozen="false" name="04 board mod.08 "
        ident="db36730a-18a0-471a-8c1f-3322c696907a">
        <boar:myFinder correlationId="964678" mode="CREATE-OR-UPDATE"
                toFindId="964678"/>
        <boar:kaledoReps ident="ce48de42-8531-4bd6-b435-60c2095e844d">
                <boar:kaledoContents type="image" url="/ContentAccess?
                        id=964694&amp;fqn=kaledomanagement.KaledoContent"
                        size="1410517"
                        ident="CF7C5CFE-0351-D1EE-414A-295D23693459">
                        <boar:myFinder correlationId="964694" mode="CREATE-OR-
                                UPDATE" toFindId="964694"/>
                        <boar:mapper techName="e\6\J\e6JLV2dAeR1204887632087-
                                305021023510128975">
                                <boar:myFinder correlationId="964696"
                                        mode="CREATE-OR-UPDATE"
                                        toFindId="964696"/>
                        </boar:mapper>
                </boar:kaledoContents>
                <boar:kaledoContents type="thumbnail" url="/Content
                        Access?id=964686&amp;fqn=kaledomanagement.KaledoContent"
                        size="91914"
                        ident="AAD09541-23EA-7739-5F1D-0348B3080B5C">
                        <boar:myFinder correlationId="964686" mode="CREATE-OR-
                                UPDATE" toFindId="964686"/>
                        <boar:mapper techName="Y\R\L\YRLRfhYHRS1204887632087-
                                751122910504662321">
                                <boar:myFinder correlationId="964688"
                                        mode="CREATE-OR-UPDATE" toFindId="964688"/>
                        </boar:mapper>
                </boar:kaledoContents>
                <boar:myFinder correlationId="964684" mode="CREATE-OR-UPDATE"
                        toFindId="964684"/>
        </boar:kaledoReps>
        <boar:styleLinks date="2008-03-07 11:34:00.267">
```

Finder of the root object Style used in the current Board

```
<boar:myFinder correlationId="964702" mode="CREATE-OR-UPDATE"
        toFindId="964702"/>
<boar:style correlationId="915963" mode="CREATE-OR-UPDATE"
        toFindId="915963">
 <boar:businessKey>
   <boar:entry key="name" value="Night dress_SS10_Women_2"/>
 </boar:businessKey>
</boar:style>
</boar:styleLinks>
<boar:colorisLinks date="2008-03-25 14:33:26.447">
        <boar:myFinder correlationId="964704" mode="CREATE-OR-UPDATE"
        toFindId="964704"/>
```

DeepFinder on the colori of the Generic Fabric used in the current Board

```
<boar:coloris correlationId="946384" mode="CREATE-OR-UPDATE"
        rootCorrelationId="946342" rootId="946342"
        toFindId="946384">
        <boar:businessKey>
                <boar:entry key="name" value="verde_3" />
        </boar:businessKey>
</boar:coloris>
</boar:colorisLinks>
<boar:nodes correlationId="910939" mode="CREATE-OR-UPDATE"
        toFindId="910939">
        <boar:businessKey>
                <boar:entry key="propertyDefName" value="PRESENTATION
                        TYPE" />
                <boar:entry key="path" value="04 COLLECTION plan" />
                <boar:entry key="propertyDefFamily" value="process" />
        </boar:businessKey>
</boar:nodes>
<boar:kaledoMainRep correlationId="964684"
        mode="CREATE-OR-UPDATE" rootCorrelationId="964678"
        rootId="964678" toFindId="964684"/>
</boar:Board>
```

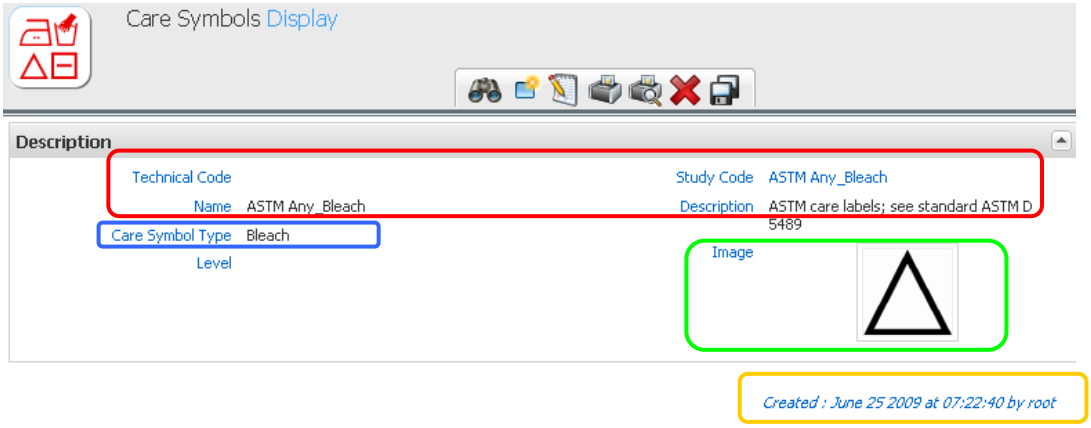
3.1.13 productmanagement.envitems.CareLabel

3.1.13.1 XSD Projection

See CareLabel.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.13.2 Example of extracted data

You will find here after the result of the extraction of the Carelabel shown in the following screenshot:




```
<car:CareLabel description="ASTM care labels; see standard ASTM D 5489"
        envItemDefName="CareLabel"
        name="ASTM Tumble_Dry_Permanent_Press_Medium_Heat"
        linkDocNameType="filemanagement.process.File"
        studyCode="ASTM Tumble_Dry_Permanent_Press_Medium_Heat">
        <car:created label="root" username="root"
                        date="2009-06-25 19:24:33.73"
                        application="InitializationEngine"/>
        <car:myFinder correlationId="370349" mode="CREATE-OR-UPDATE"
                toFindId="370349">
                <car:businessKey>
                        <car:entry key="studyCode"
                        value="ASTM Tumble_Dry_Permanent_Press_Medium_Heat" />
                </car:businessKey>
        </car:myFinder>
        <car:lastModified label="root" username="root"
                date="2009-06-25 19:24:33.73"
```

```
        application="InitializationEngine"/>
<car:docHo2File correlationId="348793" mode="CREATE-OR-UPDATE"
        toFindId="348793">
        <car:businessKey>
                <car:entry key="path"
                        value="/CareSymbols/ASTM/
                          Tumble_Dry_Permanent_Press_Medium_Heat.jpg" />
                <car:entry key="version.number" value="1.1" />
        </car:businessKey>
</car:docHo2File>
<car:careLabelType correlationId="196003" mode="CREATE-OR-UPDATE"
        toFindId="196003">
        <car:businessKey>
          <car:entry key="propertyDefName" value="CareLabelType" />
          <car:entry key="path" value="Dry" />
          <car:entry key="propertyDefFamily" value="process" />
        </car:businessKey>
</car:careLabelType>

</car:CareLabel
```

CarelabelType is a role to a Property which is a root. Thus this is a Border. So we only have a finder (internal Id and Business Key)

As CarelabelType, docHo2File is a role to a File. As File is a root object, we only have the finder of this File

3.1.14productmanagement.envitems.Currency

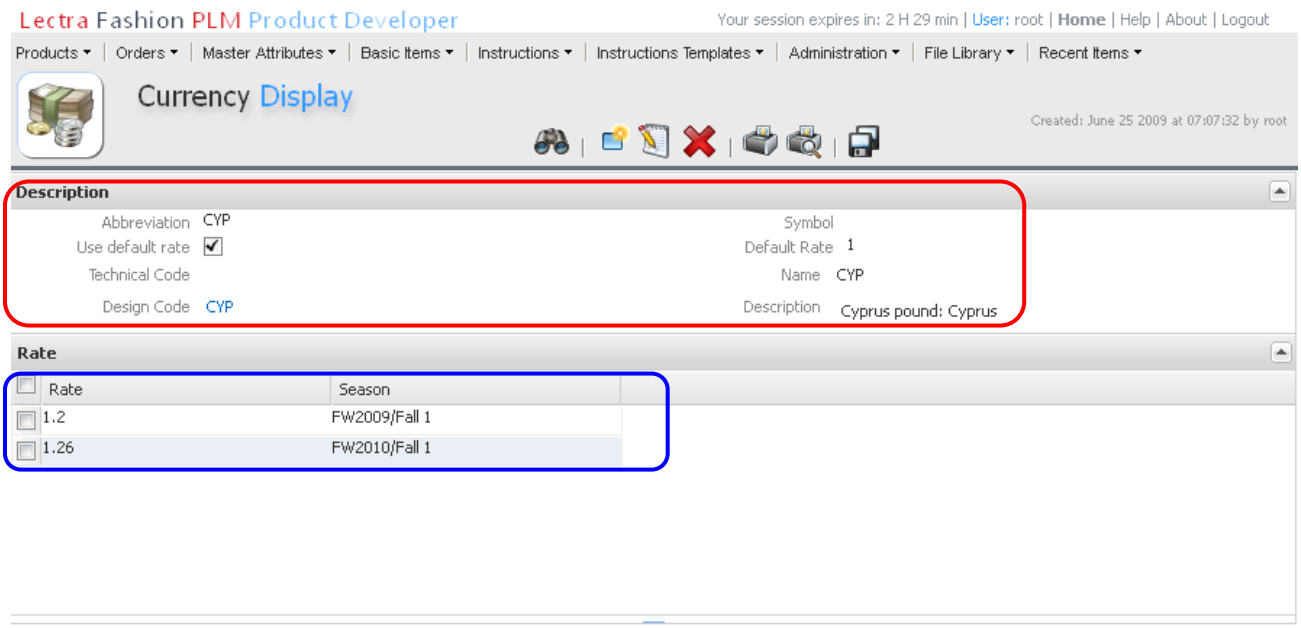
3.1.14.1 FIP Model

3.1.14.2 XSD Projection

See Currency.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.14.3 Example of extracted data

You will find here after the result of the extraction of the Currency shown in the following screenshot:




```
<cur:Currency abbreviation="CYP" useDefaultRate="true"
        description="Cyprus pound: Cyprus" defaultRate="1.0"
        envItemDefName="Currency"
        name="CYP" studyCode="CYP">
        <cur:created label="root" username="root"
                date="2009-06-25 19:07:32.137"
                application="InitializationEngine"/>
        <cur:myFinder correlationId="370125" mode="CREATE-OR-UPDATE"
                toFindId="370125">
                <cur:businessKey>
                        <cur:entry key="studyCode" value="CYP" />
                </cur:businessKey>
        </cur:myFinder>
        <cur:lastModified label="root" username="root"
                date="2009-06-25 19:07:32.137"
                application="InitializationEngine"/>
        <cur:rates rate="1.2">
                <cur:nodes correlationId="7853018" mode="CREATE-OR-UPDATE">
                        <cur:businessKey>
                           <cur:entry value="Season" key="propertyDefName"/>
                           <cur:entry value="FW2009/Fall 1" key="path"/>
                        I  <cur:entry value="process" key="propertyDefFamily"/>
                        </cur:businessKey>
                </cur:nodes>
```

```
        </cur:rates>
</cur:Currency>
```

"nodes" is the for the role classification pointing to a ClassifProperty which is a root. Thus this is a Border. So we only have a finder (internal Id and Business Key)

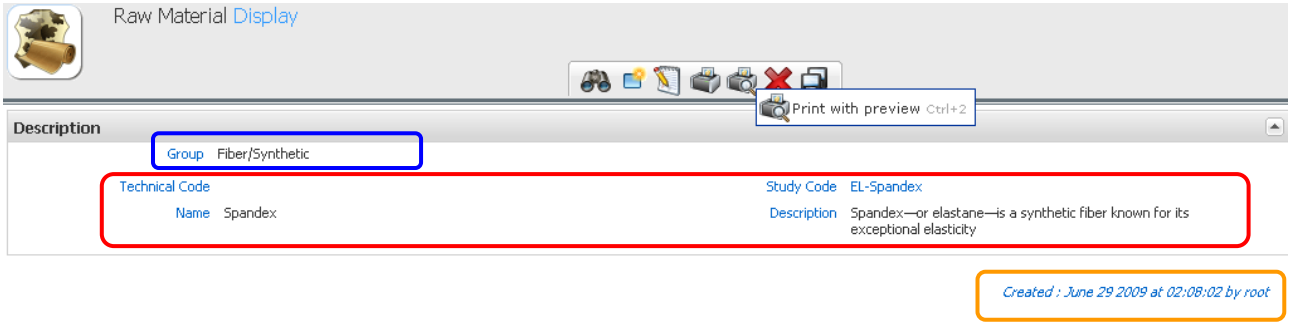
3.1.15 productmanagement.envitems.Material

3.1.15.1 XSD Projection

See Material.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.15.2 Example of extracted data

You will find here after the result of the extraction of the Raw Material shown in the following screenshot:



```
<mat:Material envItemDefName="Material" name="Acetate"
        studyCode="AC">
        <mat:created label="root" username="root"
                date="2009-06-29 14:07:59.933" application="InitializationEngine"/>
        <mat:group correlationId="196301" mode="CREATE-OR-UPDATE"
                        toFindId="196301">
          <mat:businessKey>
                  <mat:entry key="propertyDefName" value="MaterialGroup" />
                   <mat:entry key="path" value="Fiber/Artificial" />
                   <mat:entry key="propertyDefFamily" value="process" />
                </mat:businessKey>
        </mat:group>
        <mat:myFinder correlationId="573001" mode="CREATE-OR-UPDATE"
                toFindId="573001">
                <mat:businessKey>
                        <mat:entry key="studyCode" value="AC" />
                </mat:businessKey>
        </mat:myFinder>
        <mat:lastModified label="root" username="root"
                date="2009-06-29 14:07:59.933"
                application="InitializationEngine"/>

        </mat:Material>
```

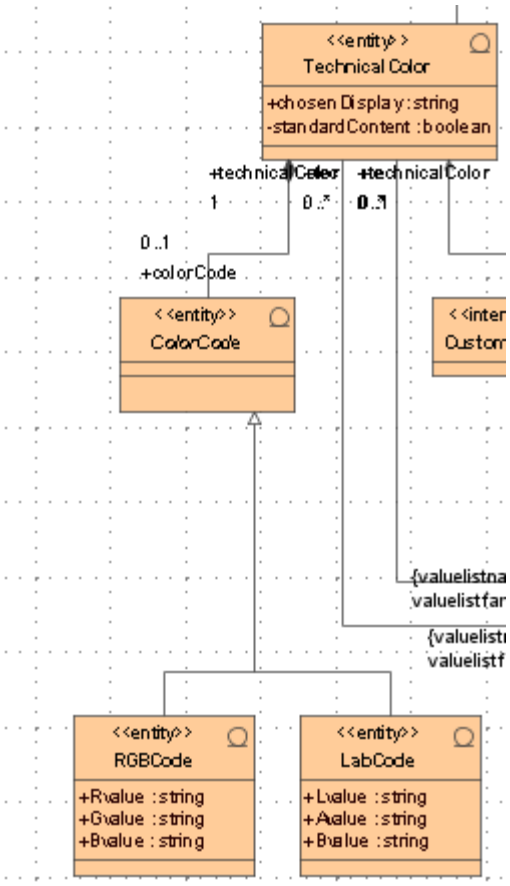
"Group" is a role to a Property. As Property is a root, we only have a finder to that property.

This is a Border.

Internal Id of the Raw Material

3.1.16 productmanagement.envitems.TechnicalColor

3.1.16.1 FIP Model

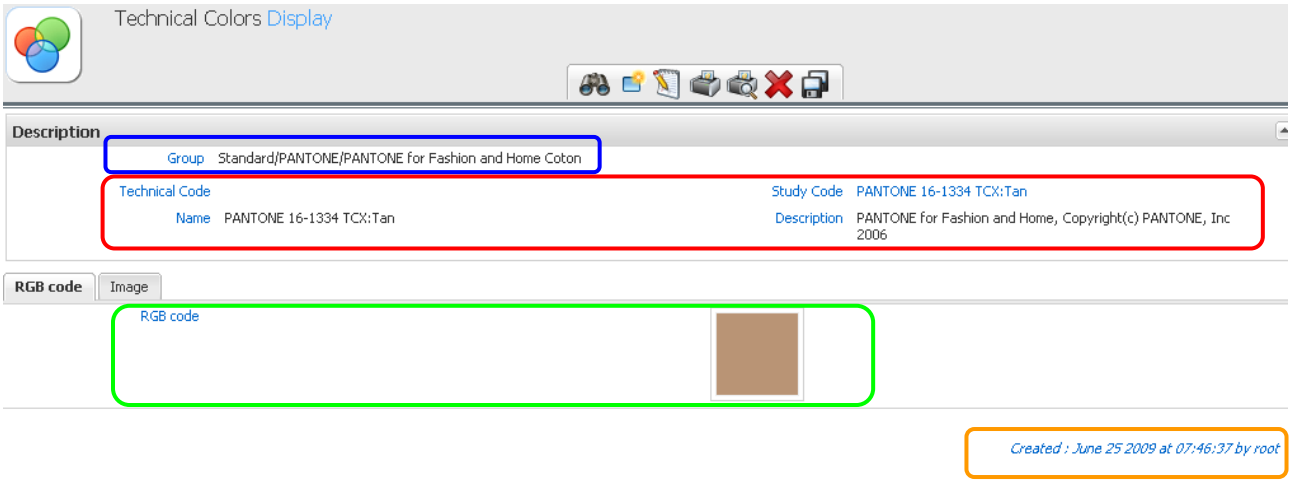


3.1.16.2 XSD Projection

See TechnicalColor.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.16.3 Example of extracted data

You will find here after the result of the extraction of the Technical Color shown in the following screenshot:



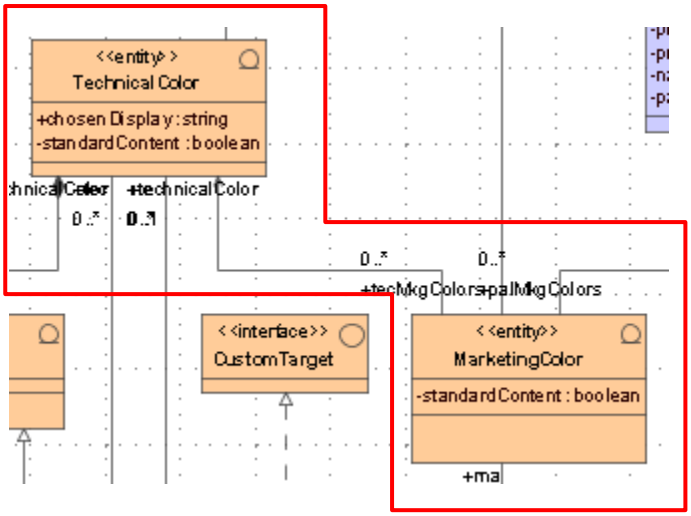

```
<tec:TechnicalColor standardContent="true"
description="PANTONE for Fashion and Home, Copyright(c) PANTONE, Inc 2006"
        envItemDefName="TechnicalColor" name="PANTONE 11-0103 TCX:Egret"
        chosenDisplay="colorCode" studyCode="PANTONE 11-0103 TCX:Egret">
    <tec:colorSpace correlationId="46008" mode="CREATE-OR-UPDATE"
            toFindId="46008">
            <tec:businessKey>
                <tec:entry key="propertyDefName" value="ColorSpace" />
                <tec:entry key="path" value="RGB" />
                <tec:entry key="propertyDefFamily" value="config" />
            </tec:businessKey>
    </tec:colorSpace>
    <tec:created label="root" username="root"
            date="2009-06-25 19:46:26.933"
            application="InitializationEngine"/>
    <tec:myFinder correlationId="370538" mode="CREATE-OR-UPDATE"
            toFindId="370538">
            <tec:businessKey>
                <tec:entry key="studyCode"
                        value="PANTONE 11-0103 TCX:Egret" />
            </tec:businessKey>
    </tec:myFinder>
    <tec:lastModified label="root" username="root"
            date="2009-06-25 19:46:26.933"
            application="InitializationEngine"/>
```

"colorSpace" is a role to a Property indicating which kind of representation has the technical color. As Property is a root object, we only have the finder of that property.

```
<tec:group correlationId="369000" mode="CREATE-OR-UPDATE"
        toFindId="369000">
        <tec:businessKey>
                <tec:entry key="propertyDefName"
                        value="TechnicalColorGroup" />
                <tec:entry key="path"
                        value="Standard/PANTONE/PANTONE for Fashion and
                                Home Coton" />
                <tec:entry key="propertyDefFamily" value="process" />
        </tec:businessKey>
</tec:group>
<tec:color2RGBCod Rvalue="244" Gvalue="236" Bvalue="224">
        <tec:myFinder correlationId="399001" mode="CREATE-OR-UPDATE"
                toFindId="399001">
                <tec:businessKey />
        </tec:myFinder>
</tec:color2RGBCod>
</tec:TechnicalColor>
```

3.1.17 productmanagement.envitems.MarketingColor

3.1.17.1 FIP Model

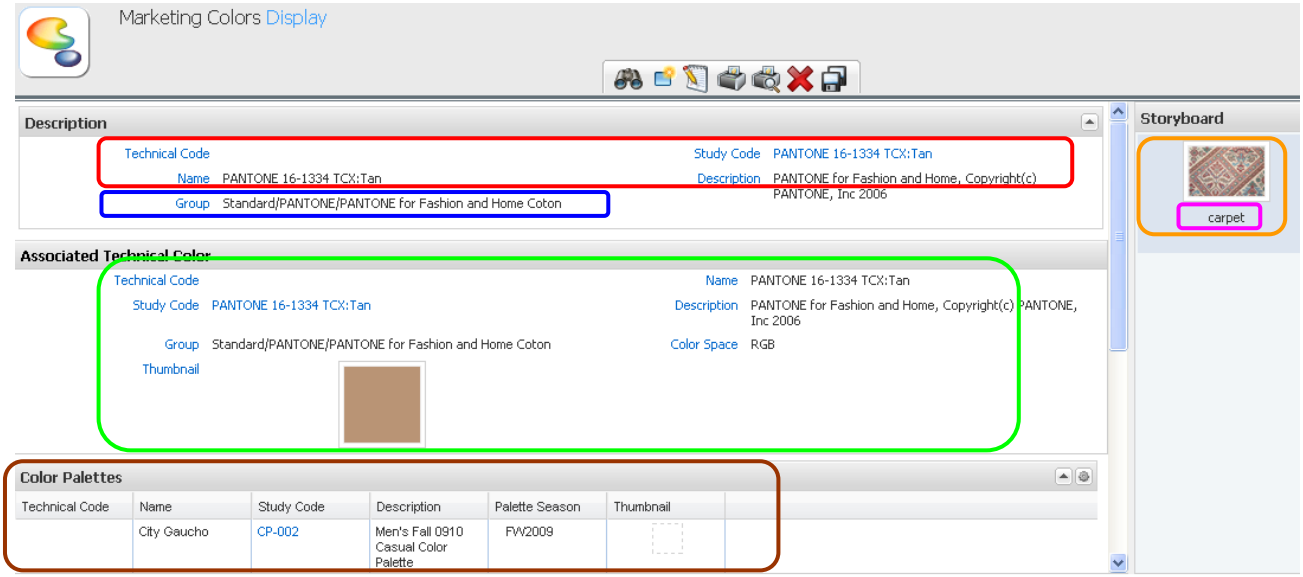


3.1.17.2 XSD Projection

See MarketingColor.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.17.3 Example of extracted data

You will find here after the result of the extraction of the MarketingColor shown in the following screenshot:




```
<mar:MarketingColor axifyableDefName="MarketingColor"
        standardContent="true"
        description="PANTONE for Fashion and Home, Copyright(c) PANTONE, Inc
                2006"
        envItemDefName="MarketingColor" name="PANTONE 11-0103 TCX:Egret"
        studyCode="PANTONE 11-0103 TCX:Egret">
```

```
<mar:created label="root" username="root"
 date="2009-06-25 19:47:53.153" application="InitializationEngine"/>
<mar:group correlationId="403002" mode="CREATE-OR-UPDATE"
        toFindId="403002">
  <mar:businessKey>
    <mar:entry key="propertyDefName" value="MarketingColorGroup" />
    <mar:entry key="path"
                value="Standard/PANTONE/PANTONE for Fashion and Home
                       Coton" />
        <mar:entry key="propertyDefFamily" value="process" />
   </mar:businessKey>
</mar:group>
<mar:technicalColor correlationId="370538"
        mode="CREATE-OR-UPDATE" toFindId="370538">
        <mar:businessKey>
          <mar:entry key="studyCode" value="PANTONE 11-0103
                TCX:Egret" />
        </mar:businessKey>
</mar:technicalColor>
<mar:myFinder correlationId="402463" mode="CREATE-OR-UPDATE"
        toFindId="402463">
        <mar:businessKey>
                <mar:entry key="studyCode" value="PANTONE 11-0103
                       TCX:Egret" />
        </mar:businessKey>
</mar:myFinder>
<mar:lastModified label="root" username="root"
        date="2009-06-25 19:47:53.153"
        application="InitializationEngine"/>
</mar:MarketingColor>
```

"Group" is a role to a Property. As Property is a root, we only have a finder to that property.

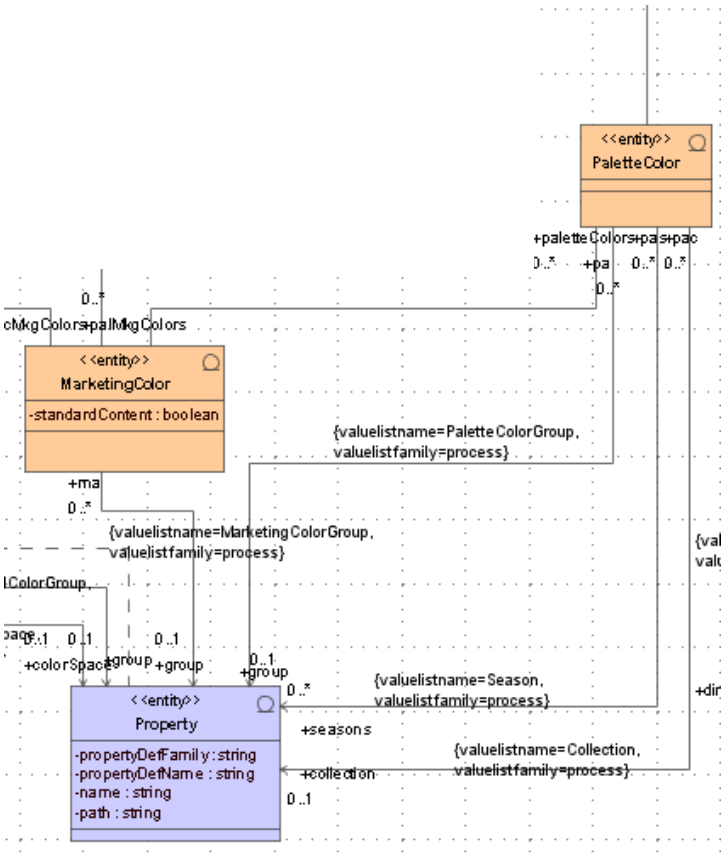
This is a Border.

"technicalColor" is a role to a technicalColor. As it a root, we only have a finder to that Color.

This is a Border too.

3.1.18 productmanagement.envitems.PaletteColor

3.1.18.1 FIP Model

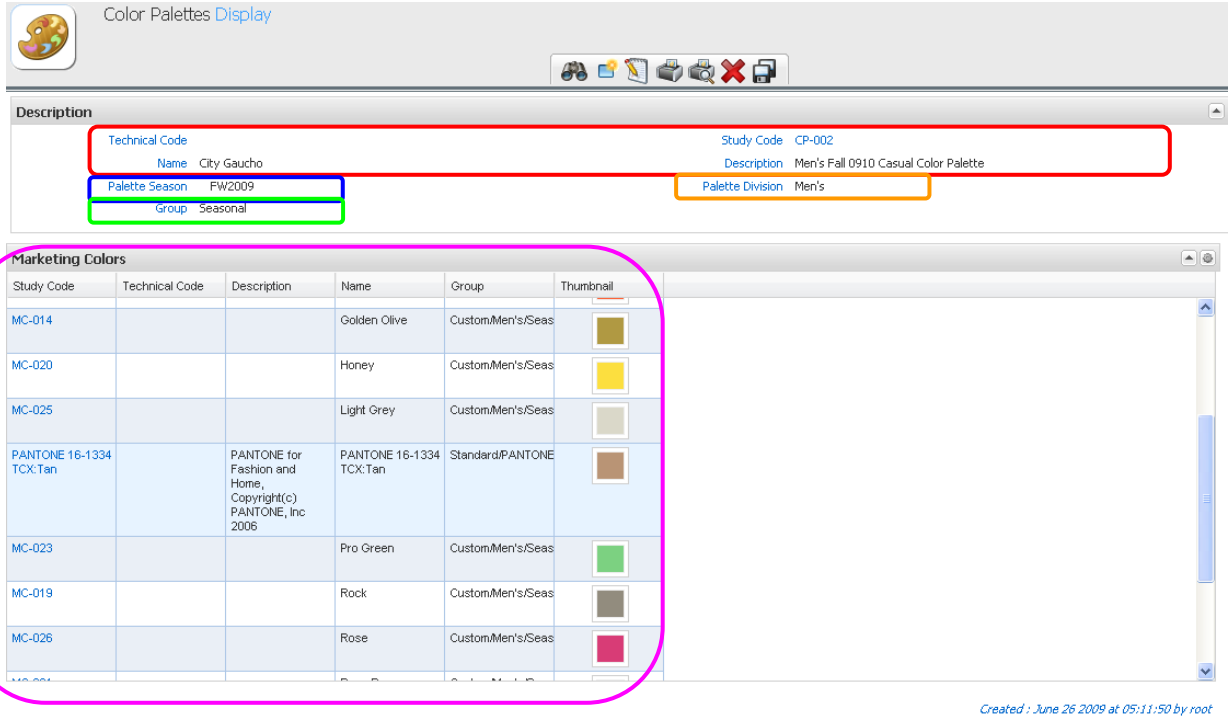


3.1.18.2 XSD Projection

See paletteColor.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.18.3 Example of extracted data

You will find here after the result of the extraction of the Fabric shown in the following screenshot:




```
<PaletteColor envItemDefName="PaletteColor"
              description="Women's Fall 0910 Casual Color Palette"
              name="Out There"
              studyCode="CP-001">
    <lastModified username="root" label="root"
                  date="2009-06-26 17:11:50.370"/>
    <palMkgColors toFindId="485028" correlationId="485028"
                  mode="CREATE-OR-UPDATE">
      <businessKey>
        <entry value="MC-012" key="studyCode"/>
      </businessKey>
    </palMkgColors>
    <palMkgColors toFindId="485026" correlationId="485026"
                  mode="CREATE-OR-UPDATE">
      <businessKey>
        <entry value="MC-010" key="studyCode"/>
      </businessKey>
    </palMkgColors>
    <palMkgColors toFindId="485027" correlationId="485027"
                  mode="CREATE-OR-UPDATE">
      <businessKey>
        <entry value="MC-011" key="studyCode"/>
```

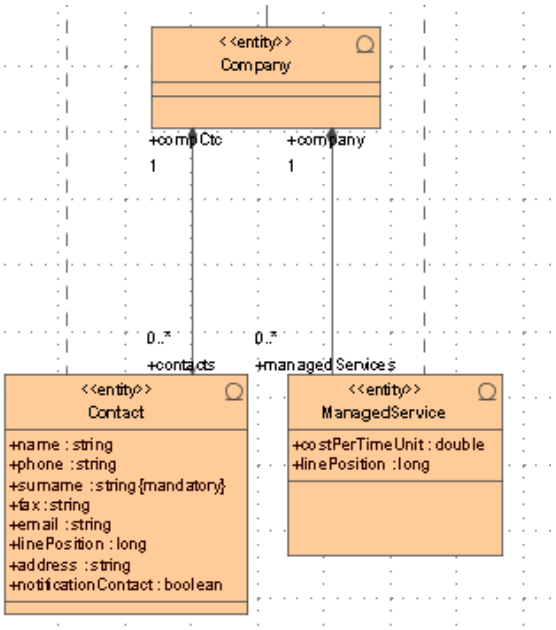
Finder of the Marketing Color "MC-012" selected in the Palette.

```
    </businessKey>
  </palMkgColors>
  <myFinder toFindId="485055" correlationId="485055" mode="CREATE-OR-UPDATE">
    <businessKey>
      <entry value="CP-001" key="studyCode"/>
    </businessKey>
  </myFinder>
  <created username="root" label="root" date="2009-06-26 17:11:50.370"/>
  <nodes toFindId="196311" correlationId="196311" mode="CREATE-OR-UPDATE">
    <businessKey>
      <entry value="Season" key="propertyDefName"/>
      <entry value="FW2010" key="path"/>
      <entry value="process" key="propertyDefFamily"/>
    </businessKey>
  </nodes>
  <group toFindId="196394" correlationId="196394" mode="CREATE-OR-UPDATE">
    <businessKey>
      <entry value="PaletteColorGroup" key="propertyDefName"/>
      <entry value="Seasonal" key="path"/>
      <entry value="process" key="propertyDefFamily"/>
    </businessKey>
  </group>
</PaletteColor>
```

Finder of properties.

3.1.19 productmanagement.envitems.Company

3.1.19.1 FIP Model

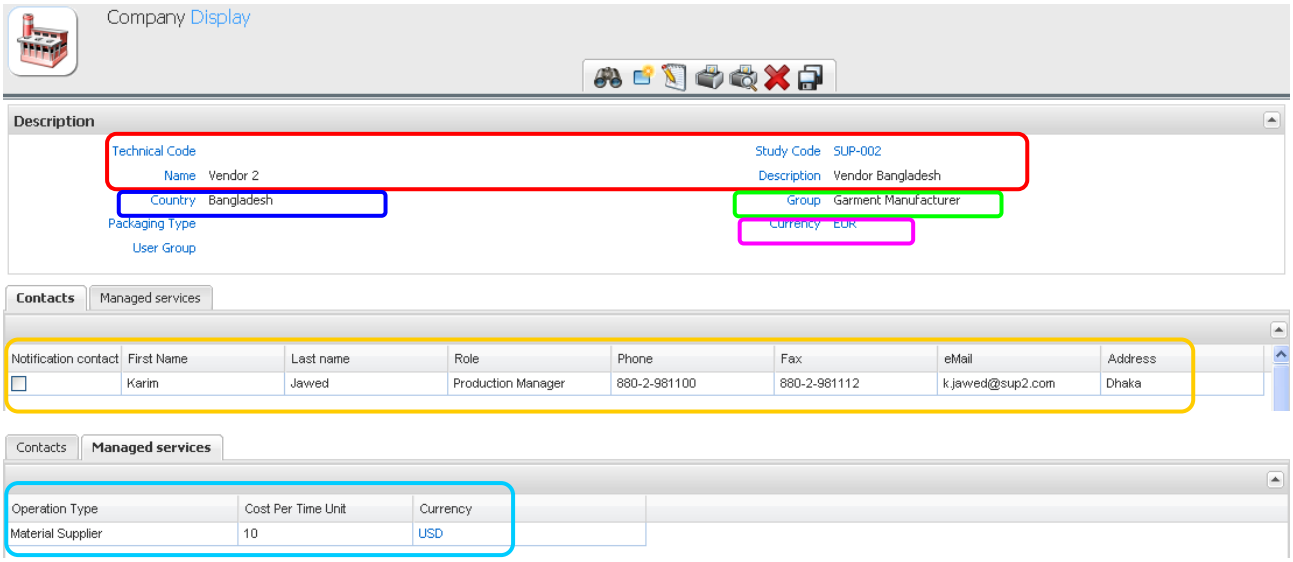


3.1.19.2 XSD Projection

See Company.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.19.3 Example of extracted data

You will find here after the result of the extraction of the Company shown in the following screenshot::



```
<com:Company axifyableDefName="Company" description="Vendor China "
        envItemDefName="Company" name="Vendor1" studyCode="SUP-001">
        <com:created label="root" username="root"
                date="2009-06-26 17:03:11.760"
                application="InitializationEngine"/>
        <com:group correlationId="473002" mode="CREATE-OR-UPDATE"
                toFindId="473002">
                <com:businessKey>
                        <com:entry key="propertyDefName" value="CompanyGroup" />
                        <com:entry key="path" value="Garment Manufacturer/B" />
                        <com:entry key="propertyDefFamily" value="process" />
                </com:businessKey>
        </com:group>
        <com:currency correlationId="370001" mode="CREATE-OR-UPDATE"
                toFindId="370001">
                <com:businessKey>
                        <com:entry key="studyCode" value="EUR" />
                </com:businessKey>
        </com:currency>
        <com:contacts phone="010-440-436" linePosition="0"
                surname="Wang" address="Beijing" email="y.wang@sup1.com"
                name="Yi"       fax="010-401-5882">
                <com:myFinder correlationId="487001" mode="CREATE-OR-UPDATE"
                        toFindId="487001"/>
                <com:role correlationId="196390" mode="CREATE-OR-UPDATE"
                        toFindId="196390">
                        <com:businessKey>
                          <com:entry key="propertyDefName"
                                        value="ControllerRole" />
                          <com:entry key="path" value="Production Manager" />
                          <com:entry key="propertyDefFamily" value="process" />
                        </com:businessKey>
                </com:role>
        </com:contacts>
```

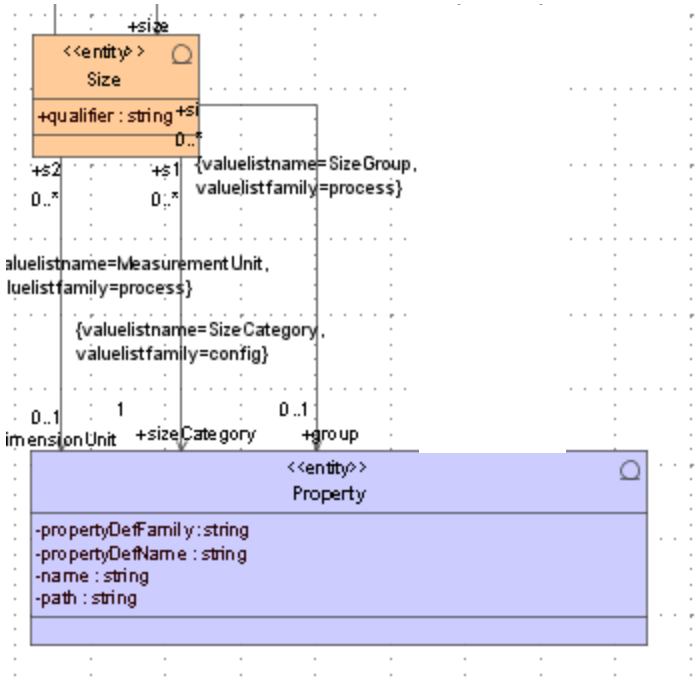
```
<com:country correlationId="368069" mode="CREATE-OR-UPDATE"
        toFindId="368069">
        <com:businessKey>
                <com:entry key="propertyDefName" value="Country" />
                <com:entry key="path" value="China" />
                <com:entry key="propertyDefFamily" value="process" />
        </com:businessKey>
</com:country>
<com:myFinder correlationId="485001" mode="CREATE-OR-UPDATE"
        toFindId="485001">
        <com:businessKey>
                <com:entry key="studyCode" value="SUP-001" />
        </com:businessKey>
</com:myFinder>
<com:lastModified label="root" username="root"date="2009-06-26
        17:03:11" application="InitializationEngine"/>
<com:managedServices linePosition="3"
        costPerTimeUnit="8.0">
        <com:munit correlationId="4789005" mode="CREATE-OR-UPDATE"
                toFindId="4789005">
                <com:businessKey>
                        <com:entry key="name" value="hour" />
                </com:businessKey>
        </com:munit>
        <com:currency correlationId="370001" mode="CREATE-OR-UPDATE"
                toFindId="370001">
                <com:businessKey>
                        <com:entry key="studyCode" value="EUR" />
                </com:businessKey>
        </com:currency>
        <com:service correlationId="196257" mode="CREATE-OR-UPDATE"
                toFindId="196257">
                <com:businessKey>
                  <com:entry key="propertyDefName" value="Service" />
                  <com:entry key="path" value="Finishing" />
                  <com:entry key="propertyDefFamily" value="process" />
                </com:businessKey>
        </com:service>
```

```
            <com:myFinder correlationId="1405004" mode="CREATE-OR-UPDATE"
                toFindId="1405004"/>
        </com:managedServices>
        <com:customRoles name="userGroup">
            <com:myFinder correlationId="1044231" mode="CREATE-OR-UPDATE"
                toFindId="1044231">
                <com:businessKey />
            </com:myFinder>

        </com:customRoles>
</com:Company>
```

3.1.20 productmanagement.envitems.Size

3.1.20.1 FIP Model

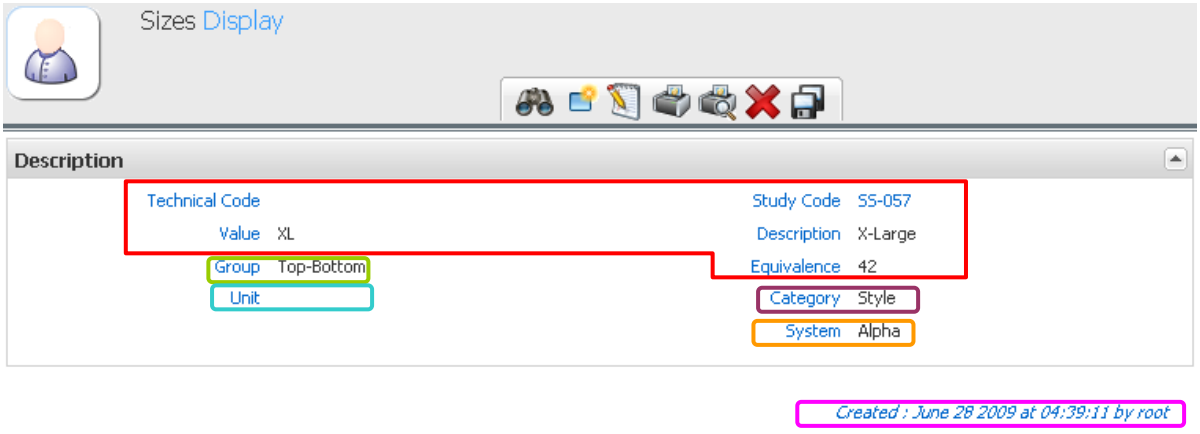


3.1.20.2 XSD Projection

See Size.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.20.3 Example of extracted data

You will find here after the result of the extraction of the Size shown in the following screenshot




```
<size:Size axifyableDefName="Size" description="X-Large" qualifier="42" envItemDefName="Size"
name="XL" studyCode="SS-057">
    <size:created label="root" username="root" date="2009-06-28 16:39:11.807"
    application="InitializationEngine"/>
    <size:group correlationId="278001" mode="EXTRACTED" toFindId="278001">
        <size:businessKey>
            <size:entry key="propertyDefName" value="SizeGroup"/>
            <size:entry key="propertyDefFamily" value="process"/>
            <size:entry key="path" value="Top-Bottom"/>
        </size:businessKey>
    </size:group>
    <size:sizeCategory correlationId="46014" mode="EXTRACTED" toFindId="46014">
        <size:businessKey>
            <size:entry key="propertyDefName" value="SizeCategory"/>
            <size:entry key="propertyDefFamily" value="config"/>
            <size:entry key="path" value="Style"/>
        </size:businessKey>
    </size:sizeCategory>
    <size:lastModified label="root" username="root" date="2009-06-28 16:39:11.807"
    application="InitializationEngine"/>
```

Finder of properties.

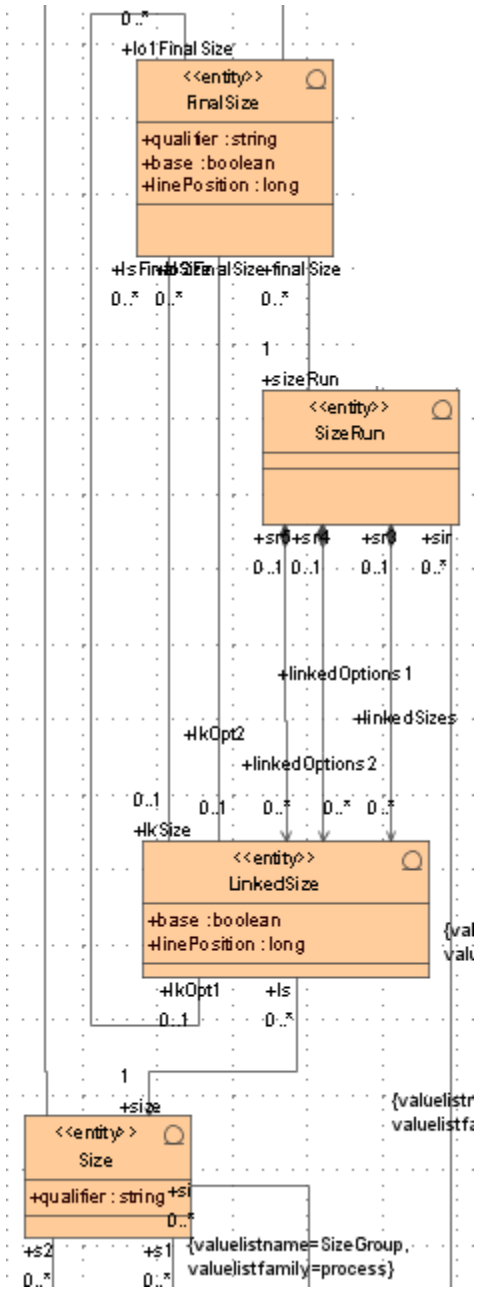
```
<size:customRoles name="system">
        <size:targe2Proper correlationId="196059" mode="EXTRACTED"
        toFindId="196059">
            <size:businessKey>
                <size:entry key="propertyDefName" value="SizeSystem"/>
                <size:entry key="propertyDefFamily" value="process"/>
                <size:entry key="path" value="Alpha"/>
            </size:businessKey>
        </size:targe2Proper>
        <size:myFinder correlationId="495168" mode="EXTRACTED" toFindId="495168"/>
    </size:customRoles>
</size:Size>
```

Custom role (pick list of properties)

As the unit is not set, no information appears about it in the XML file (not even a null value).

3.1.21 productmanagement.envitems.SizeRun

3.1.21.1 FIP Model

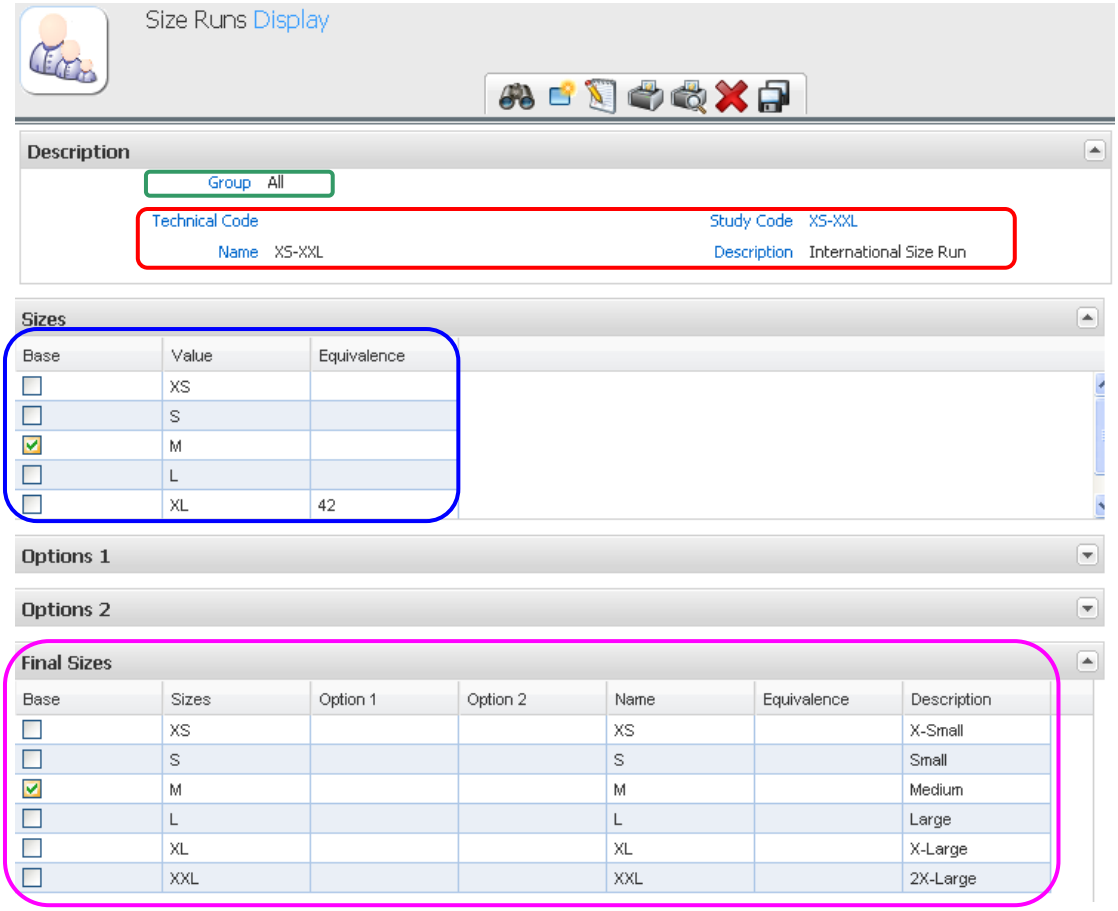


3.1.21.2 XSD Projection

See SizeRun.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.21.3 Example of extracted data

You will find here after the result of the extraction of the SizeRun shown in the following screenshot




```
<siz:SizeRun description="International Size Run" envItemDefName="SizeRun" name="XS-XXL"
studyCode="XS-XXL">
    <siz:created label="root" username="root" date="2009-06-28 17:07:24.997"
    application="pdm"/>
    <siz:group correlationId="278004" mode="EXTRACTED" toFindId="278004">
        <siz:businessKey>
            <siz:entry key="propertyDefName" value="SizeRunGroup"/>
            <siz:entry key="propertyDefFamily" value="process"/>
            <siz:entry key="path" value="All"/>
        </siz:businessKey>
    </siz:group>
    <siz:custo2EnvIteD correlationId="2086" mode="EXTRACTED" toFindId="2086">
```

```
            <siz:businessKey>
                <siz:entry key="name" value="SizeRun"/>
            </siz:businessKey>
        </siz:custo2EnvIteD>

        <siz:linkedSizes correlationId="499027" mode="EXTRACTED" toFindId="499027">
            <siz:businessKey>
                <siz:entry key="sizeStudyCode" value="SS-055"/>
            </siz:businessKey>
        </siz:linkedSizes>
        <siz:linkedSizes correlationId="499025" mode="EXTRACTED" toFindId="499025">
            <siz:businessKey>
                <siz:entry key="sizeStudyCode" value="SS-053"/>
            </siz:businessKey>
        </siz:linkedSizes>
        [...Other linkedSizes...]
        <siz:finalSize correlationId="485198" mode="EXTRACTED" toFindId="485198">
            <siz:businessKey>
                <siz:entry key="techCode" value="nullXS-XXL 3"/>
            </siz:businessKey>
        </siz:finalSize>
        <siz:finalSize correlationId="485196" mode="EXTRACTED" toFindId="485196">
            <siz:businessKey>
                <siz:entry key="techCode" value="nullXS-XXL 1"/>
            </siz:businessKey>
        </siz:finalSize>
        [...Other finalSizes...]
        <siz:myFinder correlationId="485195" mode="EXTRACTED" toFindId="485195"/>
        <siz:lastModified label="root" username="root" date="2009-06-28 17:07:24.997"
        application="pdm"/>
    </siz:SizeRun>
```

3.1.22 productmanagement.process.Product

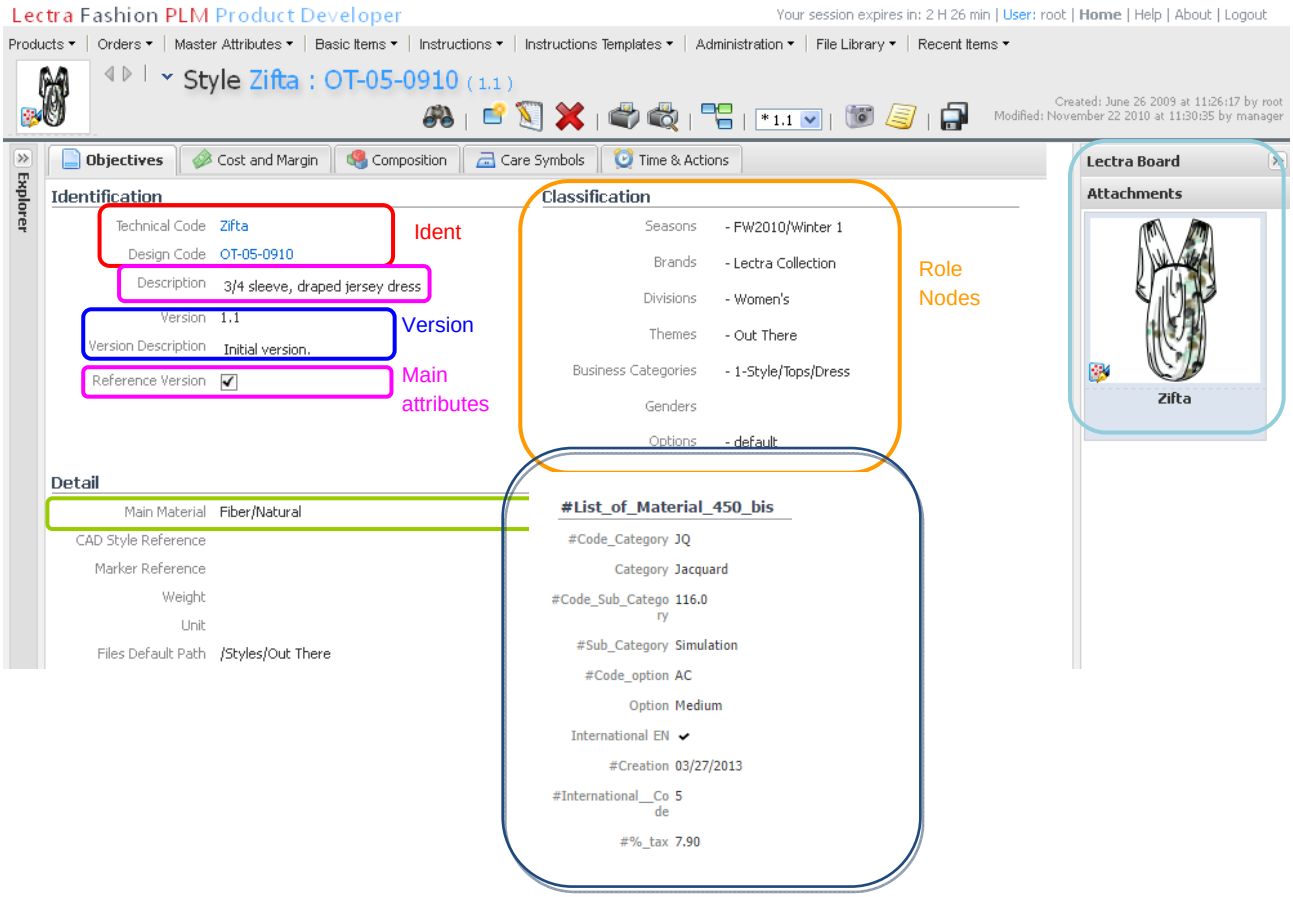
Trims, Fabrics, Styles, Instructions and InstructionTemplates are all different categories of the same root object: Product.

3.1.22.1 XSD Projection

See Product.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.22.2 Example of extracted data

You will find here after the result of the extraction of the Fabric general objectives shown in the following screenshots



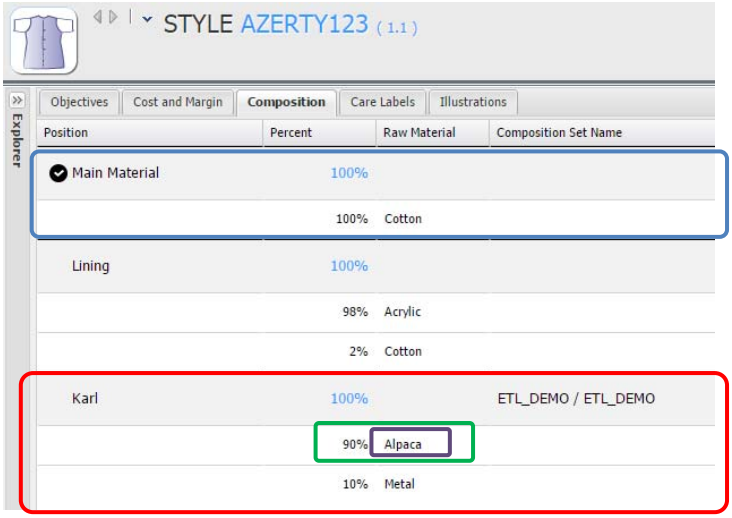
```
<?xml version="1.0" encoding="UTF-8"?><prod:GProduct
xmlns:prod="http://www.lectra.com/fip/connector/xml/Product">
        <prod:Product refVersion="true" local="false"
                statusDate="2009-06-26 12:15:29.950" categoryName="Style"
                description="3/4 sleeve, draped jersey dress" ratio="1.0">
                <prod:nodes correlationId="196086" mode="CREATE-OR-UPDATE"
                                toFindId="196086">
                <prod:businessKey>
                <prod:entry key="propertyDefName" value="Brand"/>
                        <prod:entry key="path" value="Lectra Collection"/>
                        <prod:entry key="propertyDefFamily" value="process"/>
                    </prod:businessKey>
            </prod:nodes>
                <prod:nodes correlationId="196188" mode="CREATE-OR-UPDATE"
                                toFindId="196188">
                <prod:businessKey>
                <prod:entry key="propertyDefName" value="Division"/>
                <prod:entry key="path" value="Women's"/>
                <prod:entry key="propertyDefFamily" value="process"/>
                </prod:businessKey>
        </prod:nodes>
        <prod:nodes correlationId="196140" mode="CREATE-OR-UPDATE"
                                toFindId="196140">
                <prod:businessKey>
                <prod:entry key="propertyDefName"
                                                value="BusinessCategory"/>
                <prod:entry key="path" value="1-Style/Tops/Dress"/>
                <prod:entry key="propertyDefFamily" value="process"/>
                </prod:businessKey>
                </prod:nodes>
                <prod:nodes correlationId="196376" mode="CREATE-OR-UPDATE"
                                toFindId="196376">
                <prod:businessKey>
                <prod:entry key="propertyDefName" value="Theme"/>
                <prod:entry key="path" value="Out There"/>
                <prod:entry key="propertyDefFamily" value="process"/>
                </prod:businessKey>
```

```
</prod:nodes>
<prod:myFinder correlationId="455006" mode="CREATE-OR-UPDATE"
                toFindId="455006"/>
    <prod:customRoles name="main_fabric">
    <prod:targe2Proper correlationId="196304"
                mode="CREATE-OR-UPDATE" toFindId="196304">
    <prod:businessKey>
                <prod:entry key="propertyDefName"
                                value="MaterialGroup"/>
                <prod:entry key="path" value="Fiber/Natural"/>
                <prod:entry key="propertyDefFamily"
                                value="process"/>
    </prod:businessKey>
    </prod:targe2Proper>
    <prod:myFinder correlationId="1510262" mode="CREATE-OR-UPDATE"
                toFindId="1510262"/>
</prod:customRoles>
```

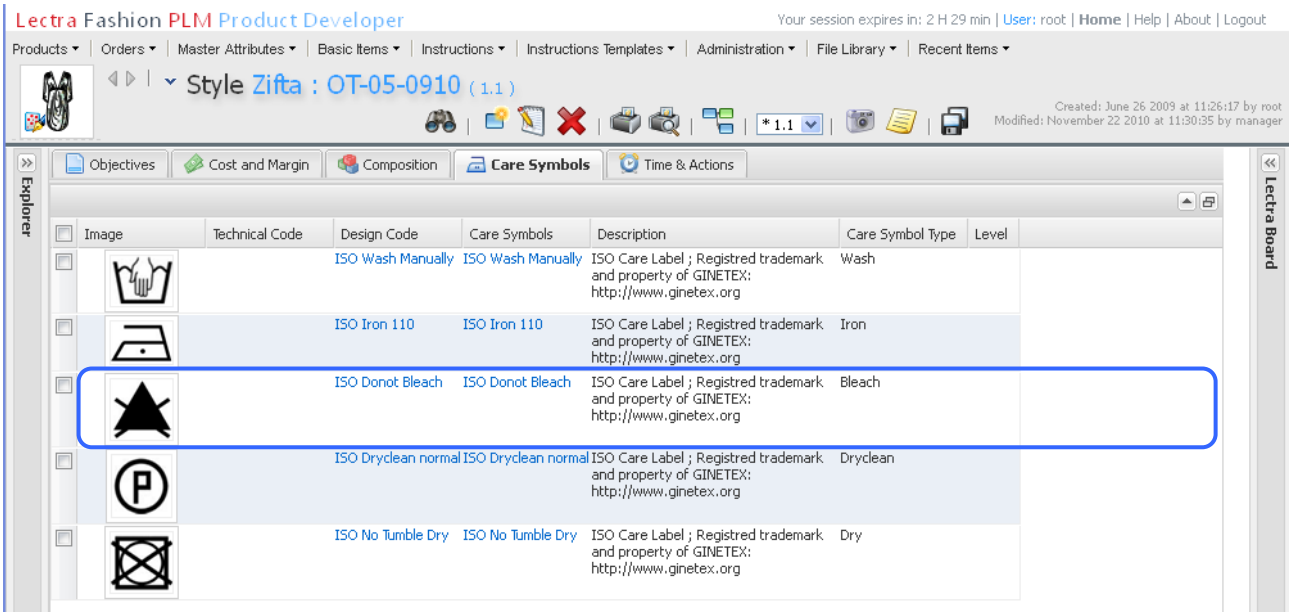
```
<prod:multiMediaBoard>
<prod:multiMediaDocuments linePosition="0"
                linkDocNameType="kaledomanagement.KaledoProduct">
<prod:docAttributes
                value="kaledomanagement.KaledoProduct" path="PRODUCT">
                <prod:myFinder correlationId="5684001"
                mode="CREATE-OR-UPDATE" toFindId="5684001"/>
</prod:docAttributes>
<prod:docHo2KaledoP correlationId="957498"
                mode="CREATE-OR-UPDATE" toFindId="957498">
                <prod:businessKey>
                <prod:entry key="name" value="Zifta"/>
                </prod:businessKey>
</prod:docHo2KaledoP>
<prod:myFinder correlationId="5682001"
                mode="CREATE-OR-UPDATE" toFindId="5682001"/>
</prod:multiMediaDocuments>
<prod:myFinder correlationId="461006" mode="CREATE-OR-UPDATE"
                toFindId="461006"/>
<prod:defaultMultiMediaDocument correlationId="5682001"
```

Finder of the kaledo entity attached in the multimediaboard

```
                    mode="CREATE-OR-UPDATE" rootCorrelationId="455006"
                    rootId="455006" toFindId="5682001"/>
        </prod:multiMediaBoard>
        <prod:ident codeAlpha2="OT-05-0910" codeWorkflow="PDT_23"
                    codeAlpha1="Zifta">
            <prod:myFinder correlationId="457006" mode="CREATE-OR-UPDATE"
                    toFindId="457006"/>
        </prod:ident>
            <prod:version description="Initial version." number="1.1"/>
        </prod:Product>
        <prod:validationLine refId="221103" refTableId="219009">
            <prod:myFinder mode="CREATE-OR-UPDATE">
                <prod:businessKey/>
            </prod:myFinder>
        </prod:validationLine>
</prod:GProduct>
```




```
<prod:GProduct xmlns:prod="http://www.lectra.com/fip/connector/xml/Product">
    <prod:Product description="Red Skirt With Fur" refVersion="true" categoryName="Style" local="false">
        <prod:compositionLines isMain="false" linePosition="3" designation="Karl" isLocal="false">
            <prod:myFinder mode="CREATE-OR-UPDATE" toFindId="1737010" correlationId="1737010">
            <prod:materialElements linePosition="2" percent="10">
                <prod:myFinder mode="CREATE-OR-UPDATE" toFindId="1738011" correlationId="1738011">
                    <prod:businessKey>
                        <prod:entry value="2" key="materialElementLP"/>
                        <prod:entry value="3" key="compositionLineLP"/>
                        <prod:entry value="AZERTY123" key="productIdentAlpha1"/>
                        <prod:entry value="1.1" key="productVersion"/>
                    </prod:businessKey>
                </prod:myFinder>
                <prod:material mode="CREATE-OR-UPDATE" toFindId="31283" correlationId="31283">
                    <prod:businessKey>
                        <prod:entry value="Metal" key="studyCode"/>
                    </prod:businessKey>
                </prod:material>
            </prod:materialElements>
            <prod:materialElements linePosition="1" percent="90">
                <prod:myFinder mode="CREATE-OR-UPDATE" toFindId="1738012" correlationId="1738012">
                    <prod:businessKey>
                        <prod:entry value="1" key="materialElementLP"/>
                        <prod:entry value="3" key="compositionLineLP"/>
                        <prod:entry value="AZERTY123" key="productIdentAlpha1"/>
                        <prod:entry value="1.1" key="productVersion"/>
                    </prod:businessKey>
                </prod:myFinder>
                <prod:material mode="CREATE-OR-UPDATE" toFindId="31250" correlationId="31250">
                    <prod:businessKey>
                        <prod:entry value="WP" key="studyCode"/>
                    </prod:businessKey>
                </prod:material>
            </prod:materialElements>
            <prod:compositionSet refId="1450008" refCode="ETL_DEMO">
                <prod:myFinder mode="CREATE-OR-UPDATE">
                    <prod:businessKey/>
                </prod:myFinder>
            </prod:compositionSet>
        </prod:compositionLines>
        <prod:compositionLines isMain="true" linePosition="1" designation="Main Material">
            <prod:myFinder mode="CREATE-OR-UPDATE" toFindId="1737008" correlationId="1737008">
            <prod:materialElements linePosition="1" percent="100">
        </prod:compositionLines>
        <prod:compositionLines isMain="false" linePosition="2" designation="Lining">
            <prod:myFinder mode="CREATE-OR-UPDATE" toFindId="1737009" correlationId="1737009">
            <prod:materialElements linePosition="1" percent="98">
            <prod:materialElements linePosition="2" percent="2">
        </prod:compositionLines>
    </prod:Product>
    <prod:additionalInfo/>
</prod:GProduct>
```



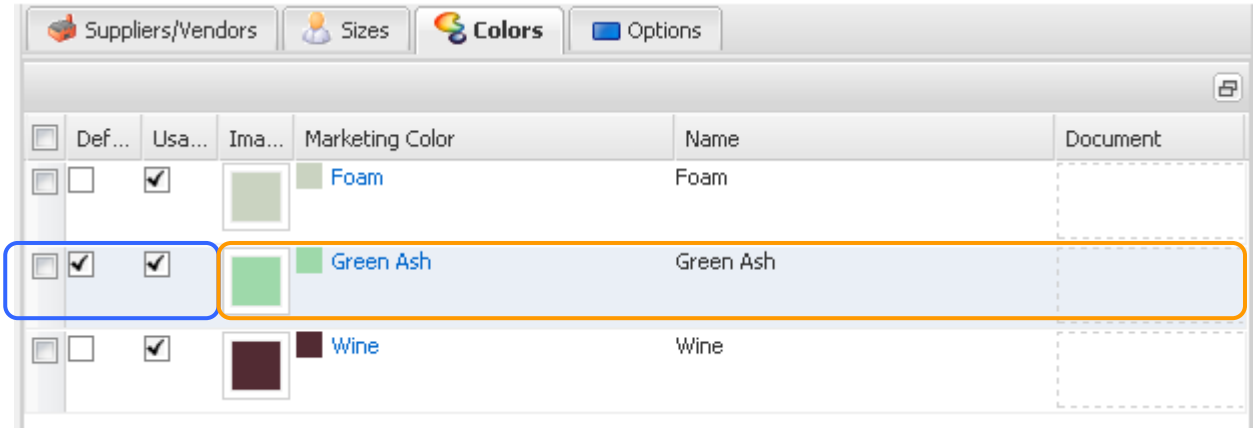

```
<prod:prodCareLabels linePosition="1">
  <prod:careLabel correlationId="370359" mode="CREATE-OR-UPDATE"
                                  toFindId="370359">
    <prod:businessKey>
      <prod:entry key="studyCode" value="ISO Iron 110"/>
    </prod:businessKey>
  </prod:careLabel>
  <prod:myFinder correlationId="690026" mode="CREATE-OR-UPDATE"
                                  toFindId="690026"/>
</prod:prodCareLabels>
<prod:prodCareLabels linePosition="2">
  <prod:careLabel correlationId="370362" mode="CREATE-OR-UPDATE"
                                  toFindId="370362">
    <prod:businessKey>
      <prod:entry key="studyCode" value="ISO Donot Bleach"/>
    </prod:businessKey>
  </prod:careLabel>
  <prod:myFinder correlationId="690025" mode="CREATE-OR-UPDATE"
                                  toFindId="690025"/>

   </prod:prodCareLabels>

          [...Other prodCareLabels...]
```

Finder of the selected care label.

So, you only have the id and business key of the care label.

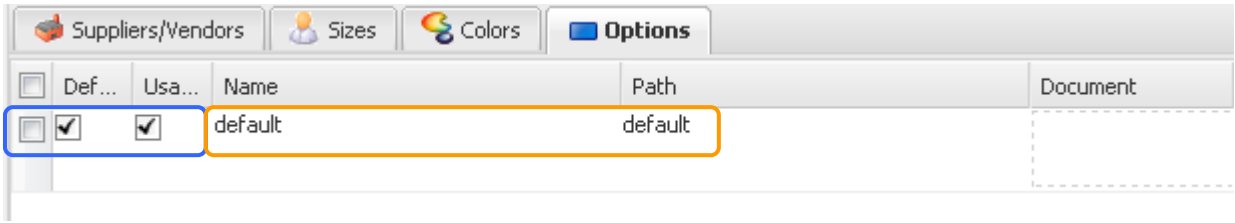



```
<prod:axes usable="true" linePosition="2" axeName="Style|||MarketingColor"
                        isDefaultInAxeName="true">
  <prod:myFinder correlationId="807113" mode="CREATE-OR-UPDATE"
                                toFindId="807113"/>
  <prod:axify2MarketC correlationId="485018" mode="CREATE-OR-UPDATE"
                                toFindId="485018">
    <prod:businessKey>
      <prod:entry key="studyCode" value="MC-002"/>
    </prod:businessKey>
  </prod:axify2MarketC>
</prod:axes>
```

[…Other axes…]

Finder of the selected marketing color

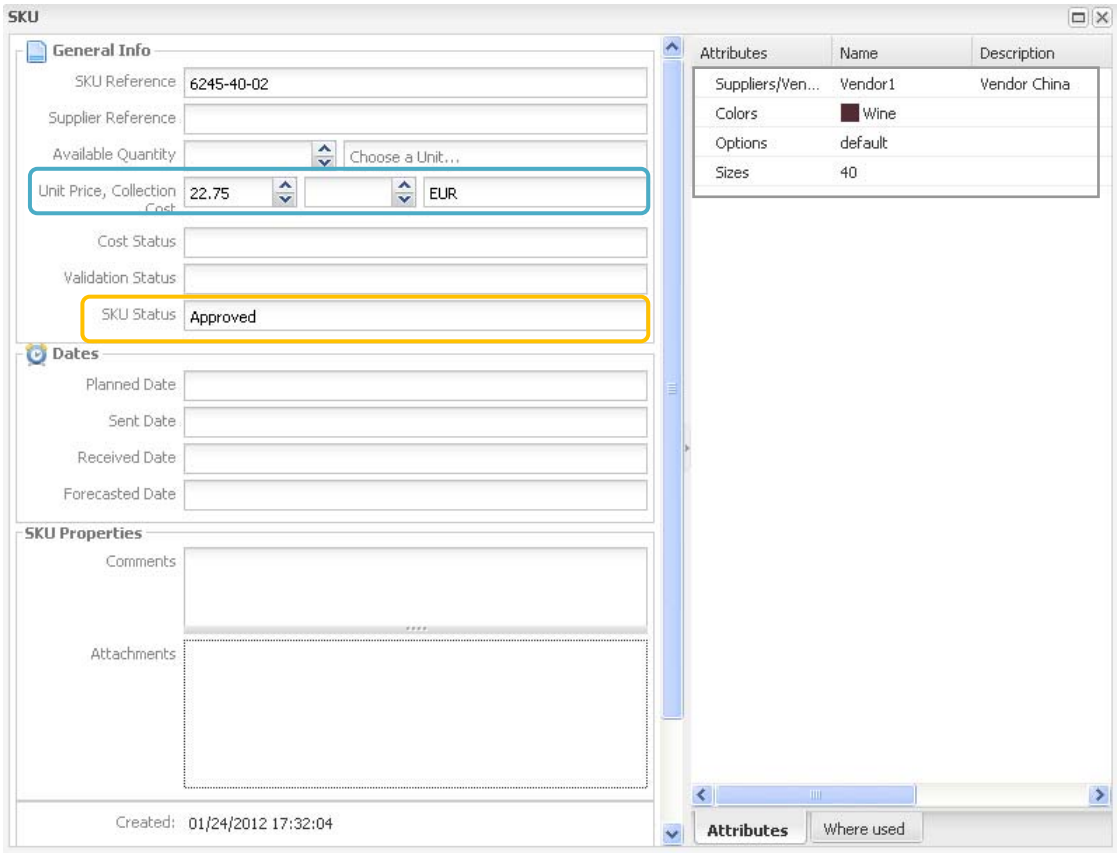
So, you only have the id and business key of the marketing color.




```
<prod:axes usable="true" linePosition="0" isDefaultInAxeName="true"
                    axeName="Style|||Classif.process/Option">
 <prod:myFinder correlationId="823003" mode="CREATE-OR-UPDATE"/>
 <prod:axify2ClassiP correlationId="Variant_823003_axifyable"
                                      mode="CREATE-OR-UPDATE">
   <prod:businessKey>
     <prod:entry key="propertyDefFamily" value="process"/>
     <prod:entry key="propertyDefName" value="Option"/>
     <prod:entry key="path" value="default"/>
   </prod:businessKey>
 </prod:axify2ClassiP>
 </prod:axes>
```

Finder of the selected classifProperty Option

So, you only have the id and business key of the ClassifProperty.




```
<prod:skus skuDefName="ArticleStyle4Axes" skuReference="6245-38-01"
                    supplierReference="">
  <prod:priceDatas collectionPrice="" unitPrice="22.75">
    <prod:currency correlationId="370001" mode="CREATE-OR-UPDATE"
                                    toFindId="370001">
      <prod:businessKey>
        <prod:entry key="studyCode" value="EUR"/>
      </prod:businessKey>
    </prod:currency>
  </prod:priceDatas>
  <prod:globalData correlationId="1516023" mode="CREATE-OR-UPDATE"
          rootCorrelationId="455006" rootId="455006"/>
  <prod:axeValues correlationId="807018" mode="CREATE-OR-UPDATE"
          rootCorrelationId="455006" rootId="455006" toFindId="807018"/>
  <prod:axeValues correlationId="807017" mode="CREATE-OR-UPDATE"
          rootCorrelationId="455006" rootId="455006" toFindId="807017"/>
  <prod:axeValues correlationId="807011" mode="CREATE-OR-UPDATE"
          rootCorrelationId="455006" rootId="455006" toFindId="807011"/>
  <prod:axeValues correlationId="823003" mode="CREATE-OR-UPDATE"
```

Deep finders.

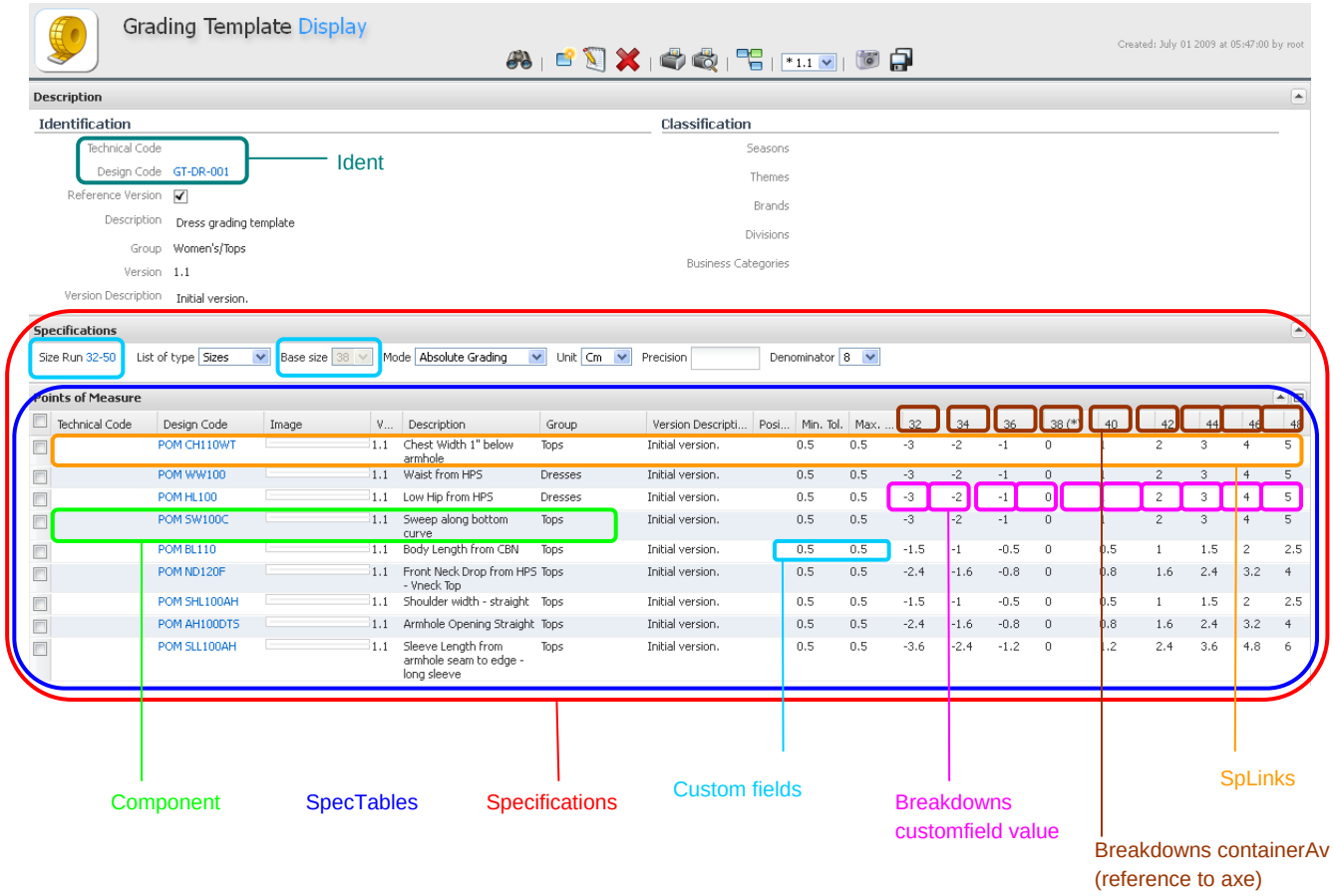
Linked to the axes of the current product

```
        rootCorrelationId="455006" rootId="455006"/>

        <prod:skuStatus>
<prod:status correlationId="845002" mode="CREATE-OR-UPDATE">
        <prod:businessKey>
        <prod:entry key="propertyDefName" value="SKUStatus"/>
        <prod:entry key="path" value="Approved"/>
        <prod:entry key="propertyDefFamily" value="process"/>
        </prod:businessKey>
</prod:status>
<prod:myFinder correlationId="Status_845002_SkuState"
                                mode="CREATE-OR-UPDATE"/>
</prod:skuStatus>
    <prod:myFinder correlationId="809019"
                        mode="CREATE-OR-UPDATE"/>

</prod:skus>
```

3.1.22.3 Example of extracted data



<prod:Product refVersion="true" local="false" categoryName="GradingSizeTemplate" description="Dress grading template">

<prod:defaultSpecInstances correlationId="829006" mode="EXTRACTED" rootCorrelationId="841004" rootId="841004" toFindId="829006"/>

<prod:myFinder correlationId="841004" mode="EXTRACTED" toFindId="841004"/>

<prod:specifications specPackageDefName="GradingSizeTemplate|||Grading" toBePrinted="true" name="SpecPackagePointOfMeasurement">

<prod:specTables num="1" specTableDefName="GradingSizeTemplate|||Grading|||Default">

<prod:custo2SpecTaD correlationId="2198" mode="EXTRACTED" rootCorrelationId="2194" rootId="2194" toFindId="2198"/>

<prod:spLinks spLinkDefName="GradingSizeTemplate|||Grading|||Default|||PointOfMeasurement" linePosition="9">

<prod:component correlationId="364562" mode="EXTRACTED" rootCorrelationId="360562" rootId="360562" toFindId="364562"/>

DeepFinder

The component role is pointing to a product variant.

The rootId is the Id of the POM selected

and the toFindId is the variant Id of this POM

<prod:custo2FloatF value="0.5" name="tolerance_max">
<prod:myFinder correlationId="815059" mode="EXTRACTED" toFindId="815059"/>
</prod:custo2FloatF>

Custom field of type float.

<prod:custo2FloatF value="0.5" name="tolerance_min">
<prod:myFinder correlationId="815060" mode="EXTRACTED" toFindId="815060"/>
</prod:custo2FloatF>

<prod:custo2SpLinkD correlationId="2199" mode="EXTRACTED" rootCorrelationId="2194" rootId="2194" toFindId="2199"/>

<prod:myFinder correlationId="833018" mode="EXTRACTED" toFindId="833018"/>

<prod:breakDowns breakDownDefName="GradingSizeTemplate|||Grading|||Default|||PointOfMeasurement|||Axe_Size">

Custom field of type double.

<prod:custo2DoubleF value="4.8" name="grading_value">
<prod:myFinder correlationId="815162" mode="EXTRACTED" toFindId="815162"/>
</prod:custo2DoubleF>

<prod:custo2BreakDD correlationId="2200" mode="EXTRACTED" rootCorrelationId="2194" rootId="2194" toFindId="2200"/>

DeepFinder.
Link to the Size axis of the current product.

<prod:containerAv correlationId="807026" mode="EXTRACTED" rootCorrelationId="841004" rootId="841004" toFindId="807026"/>

<prod:myFinder correlationId="831177" mode="EXTRACTED" toFindId="831177"/>

</prod:breakDowns>

<prod:breakDowns breakDownDefName="GradingSizeTemplate|||Grading|||Default|||PointOfMeasurement|||Axe_Size">

<prod:custo2DoubleF value="-1.2" name="grading_value">
<prod:myFinder correlationId="815159" mode="EXTRACTED" toFindId="815159"/>
</prod:custo2DoubleF>

<prod:custo2BreakDD correlationId="2200" mode="EXTRACTED" rootCorrelationId="2194" rootId="2194" toFindId="2200"/>

<prod:containerAv correlationId="807031" mode="EXTRACTED" rootCorrelationId="841004" rootId="841004" toFindId="807031"/>

```
                    <prod:myFinder correlationId="831172" mode="EXTRACTED"
                    toFindId="831172"/>
                </prod:breakDowns>
            [...Other breakdowns...]
            </prod:spLinks>
            <prod:myFinder correlationId="835006" mode="EXTRACTED" toFindId="835006"/>
        </prod:specTables>
        <prod:myFinder correlationId="829006" mode="EXTRACTED" toFindId="829006"/>
</prod:specifications>
<prod:ident codeAlpha2="GT-DR-001">
        <prod:myFinder correlationId="847003" mode="EXTRACTED" toFindId="847003"/>
</prod:ident>
        <prod:custo2LongFi value="485216" name="base_size_id">
            <prod:myFinder correlationId="815046" mode="EXTRACTED" toFindId="815046"/>
        </prod:custo2LongFi>
        <prod:custo2LongFi value="485212" name="size_run_id">
            <prod:myFinder correlationId="815045" mode="EXTRACTED" toFindId="815045"/>
        </prod:custo2LongFi>
        <prod:axes axeName="GradingSizeTemplate|||Size">
            <prod:axify2Size correlationId="485106" mode="EXTRACTED" toFindId="485106"/>
            <prod:myFinder correlationId="807026" mode="EXTRACTED" toFindId="807026"/>
            <prod:custo2Axe correlationId="2195" mode="EXTRACTED"
            rootCorrelationId="2194" rootId="2194" toFindId="2195"/>
        </prod:axes>
        [...Other axes (sizes)...]
        <prod:custo2Catego correlationId="2194" mode="EXTRACTED" toFindId="2194"/>
</prod:Product>
```

3.1.23 productmanagement.order.Order

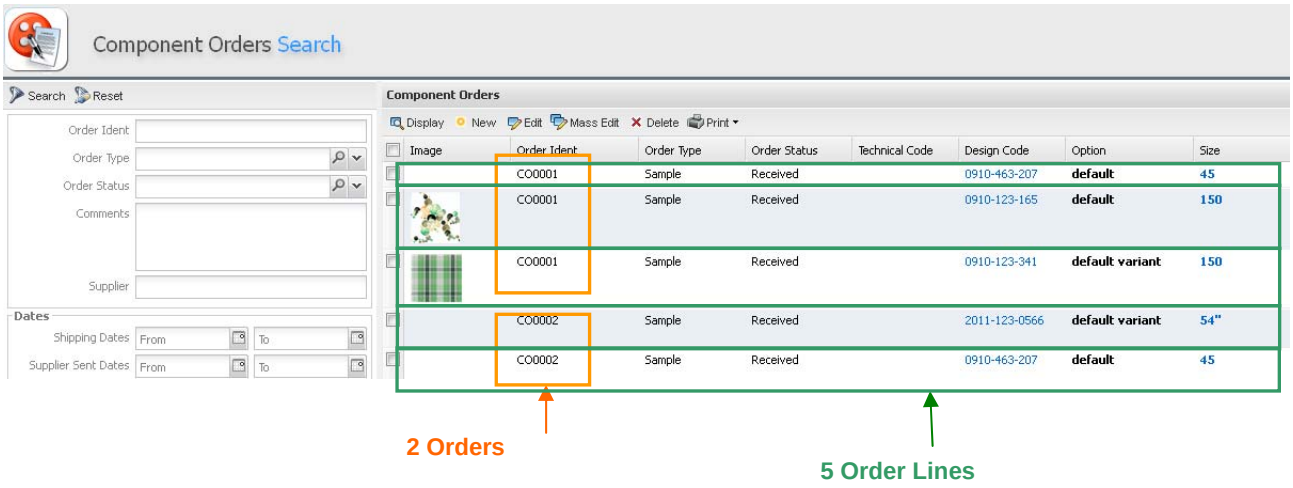
3.1.23.1 XSD Projection

See Order.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.23.2 Example of extracted data

You will find here after the result of the extraction of one order and its order lines shown in the following screenshot

As described in the model, an order is a group of Order Lines. When you create what is called an Order in the PDM, in fact, you create an Order Line. The Order to which the order line will be attached is defined by the order Ident.



The order lines are not root objects. Thus it is not possible to extract an order line without extracting the order to which it is related.

```
<ord:GOrder xmlns:ord="http://www.lectra.com/pdm/enterpriselayer/connector/xml/Order">
  <ord:Order orderDefName="Order" ident="14785478">
    <ord:created label="root" username="root" date="2010-02-02 14:22:01.687"
    application="pdm"/>
    <ord:order2PrototOL1 linePosition="0" particularConditions="DHL Delivery"
    colUnitPrice="21.0" sentToWorkshop="false" unitPrice="16.81" sentDate="2010-02-
    02 00:00:00.00" orderStatusDate="2010-02-02 14:32:36.423" controlDate="2010-02-
    08 00:00:00.00" orderLineDefName="Order|||Prototype"
    expectedDeliveryDate="2010-02-04 00:00:00.00" orderSession="2"
    supplierSentDate="2010-02-03 00:00:00.00" deliveryDate="2010-02-04 00:00:00.00"
    quantity="10.0">
    […]
    </ord:order2PrototOL1>
    <ord:order2PrototOL1 linePosition="0" particularConditions="DHL Delivery"
    colUnitPrice="21.0" unitPrice="16.81" sentDate="2010-02-02 00:00:00.00"
    orderStatusDate="2010-02-02 14:22:01.907" controlDate="2010-02-08 00:00:00.00"
    orderLineDefName="Order|||Prototype" expectedDeliveryDate="2010-02-04
    00:00:00.00" orderSession="1" supplierSentDate="2010-02-03 00:00:00.00"
    deliveryDate="2010-02-04 00:00:00.00" quantity="10.0">
```

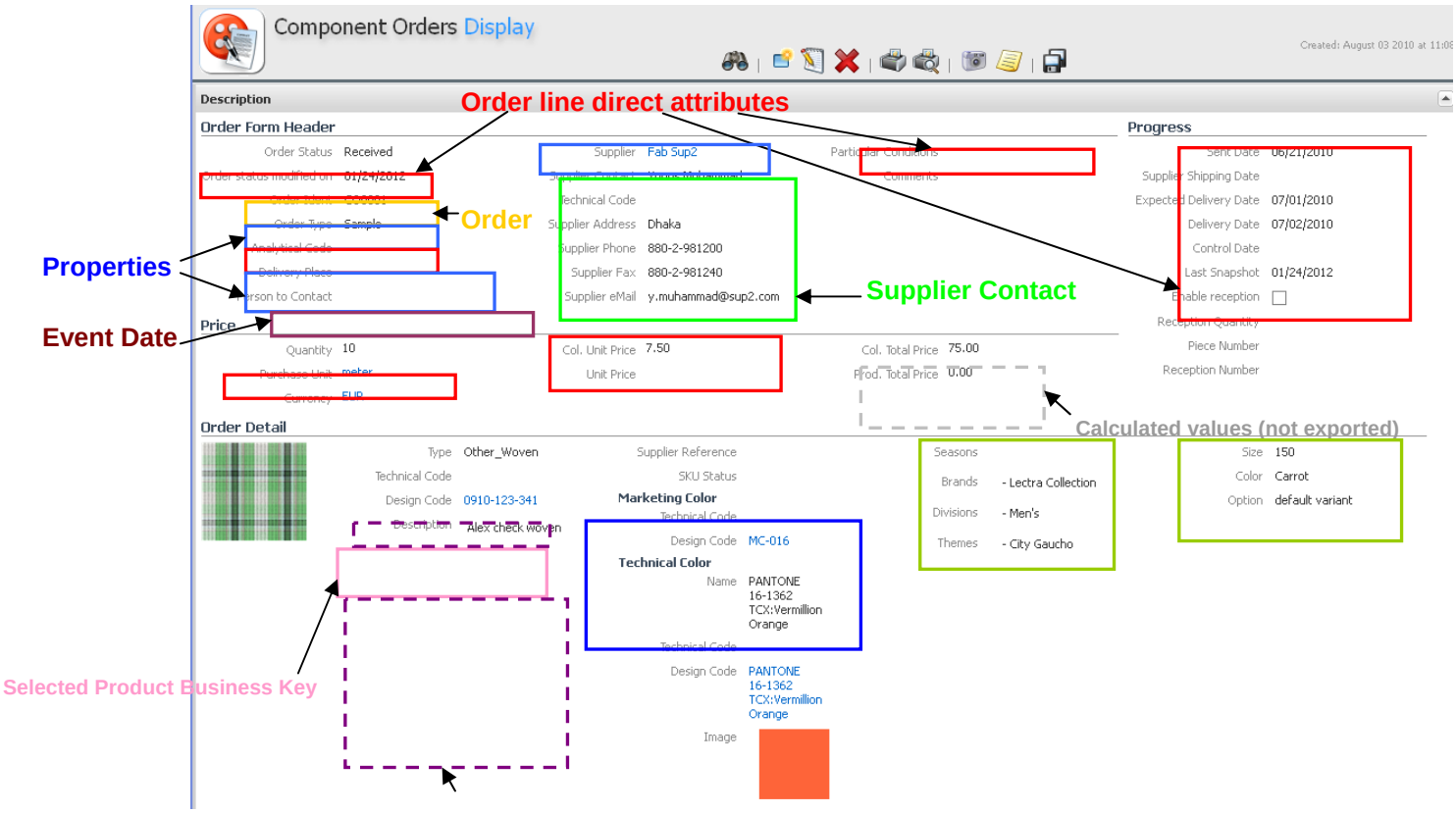
Order 14785478 composed of 2 Order Lines of type Prototype

Order Lines of type Prototype

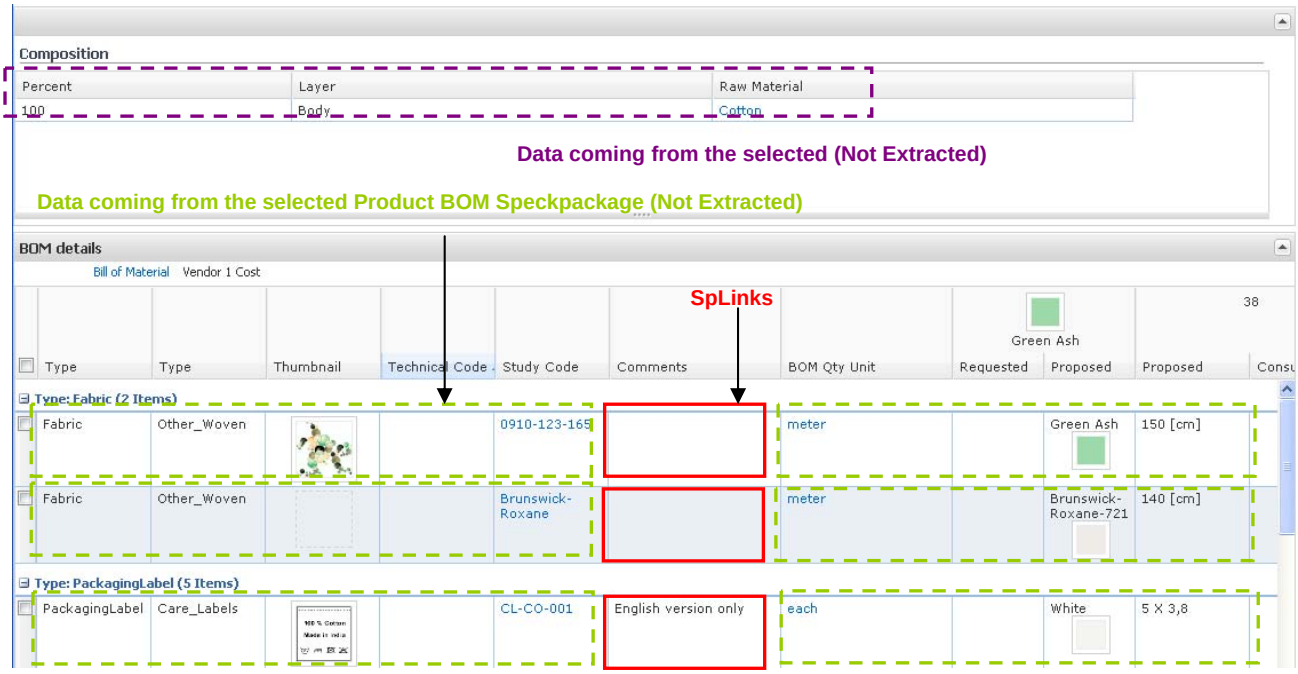
(in this example only the direct attributes are displayed. A detailed example

```
[…]
</ord:order2PrototOL1>
<ord:myFinder correlationId="15964001" mode="CREATE-OR-UPDATE"
toFindId="15964001">
        <ord:businessKey>
            <ord:entry key="ident" value="14785478"/>
        </ord:businessKey>
</ord:myFinder>
<ord:lastModified label="root" username="root" date="2010-02-02 14:22:01.687"
application="pdm"/>
    </ord:Order>
</ord:GOrder>
```

Finder of the Order



Selected Product information (not extracted, only its business key is extracted in the Order)




```
<ord:order2PrototOL1 linePosition="0" particularConditions="DHL Delivery" colUnitPrice="21.0" sentToWorkshop="false" unitPrice="16.81" sentDate="2010-02-02 00:00:00.00" orderStatusDate="2010-02-02 14:32:36.423" controlDate="2010-02-08 00:00:00.00" orderLineDefName="Order|||Prototype" expectedDeliveryDate="2010-02-04 00:00:00.00" orderSession="2" supplierSentDate="2010-02-03 00:00:00.00" deliveryDate="2010-02-04 00:00:00.00" quantity="10.0">
    <ord:product correlationId="455006" mode="CREATE-OR-UPDATE" toFindId="455006">
        <ord:businessKey>
            <ord:entry key="identAlpha2" value="OT-05-0910"/>
            <ord:entry key="identAlpha1" value="Zifta"/>
            <ord:entry key="version" value="1.1"/>
        </ord:businessKey>
    </ord:product>
    <ord:specPackage correlationId="1435013" mode="CREATE-OR-UPDATE" rootCorrelationId="455006" rootId="455006" toFindId="1435013">
        <ord:businessKey>
            <ord:entry key="specPackageName" value="Vendor 1 Cost"/>
            <ord:entry key="specPackageDefName" value="Style|||CostingNG"/>
            <ord:entry key="productIdentAlpha2" value="OT-05-0910"/>
            <ord:entry key="productIdentAlpha1" value="Zifta"/>
            <ord:entry key="productVersion" value="1.1"/>
```

Selected BOM Specpakage of the Product

```
        </ord:businessKey>
    </ord:specPackage>
    <ord:orderSpLinks>
        <ord:spLink correlationId="1506001" mode="CREATE-OR-UPDATE"
rootCorrelationId="455006" rootId="455006" toFindId="1506001"/>
    </ord:orderSpLinks>
    […Other Order SpLinks…]
    <ord:orderSpLinks comment="English version only">
        <ord:spLink correlationId="1506002" mode="CREATE-OR-UPDATE"
rootCorrelationId="455006" rootId="455006" toFindId="1506002">
    <ord:orderSpLinks>
</ord:order2PrototOL1>
```

3.1.24Core.calendar.EnterpriseCalendar

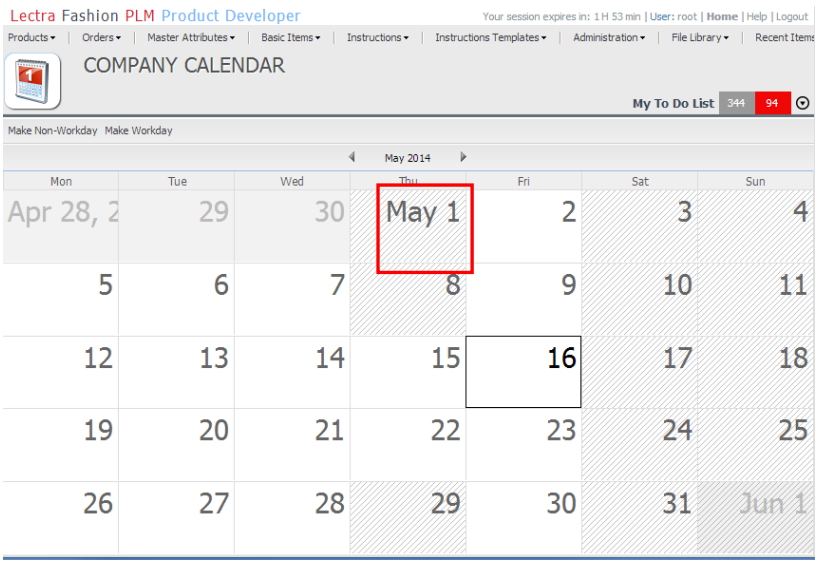
3.1.24.1 XSD Projection

See EnterpriseCalendar.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.24.2 Example of extracted data

Here you will find an extracted example of the EnterpriseCalendar

This calendar is designed to show the non-working days of the company.



```
<ent:GEnterpriseCalendar
xmlns:ent="http://www.lectra.com/fip/connector/xml/EnterpriseCalendar">
<ent:EnterpriseCalendar ident="enterprise_calendar">
        <ent:days date="2014-05-01 00:00:00.00" workingDay="false">
                <ent:myFinder correlationId="195198" mode="CREATE-OR-UPDATE">
                        <ent:businessKey/>
                </ent:myFinder>
        </ent:days>
        <ent:days date="2013-09-28 00:00:00.00" workingDay="false">
                <ent:myFinder correlationId="195199" mode="CREATE-OR-UPDATE">
                        <ent:businessKey/>
                </ent:myFinder>
        </ent:days>
[...]
</ent:EnterpriseCalendar>
</ent:GEnterpriseCalendar>
```

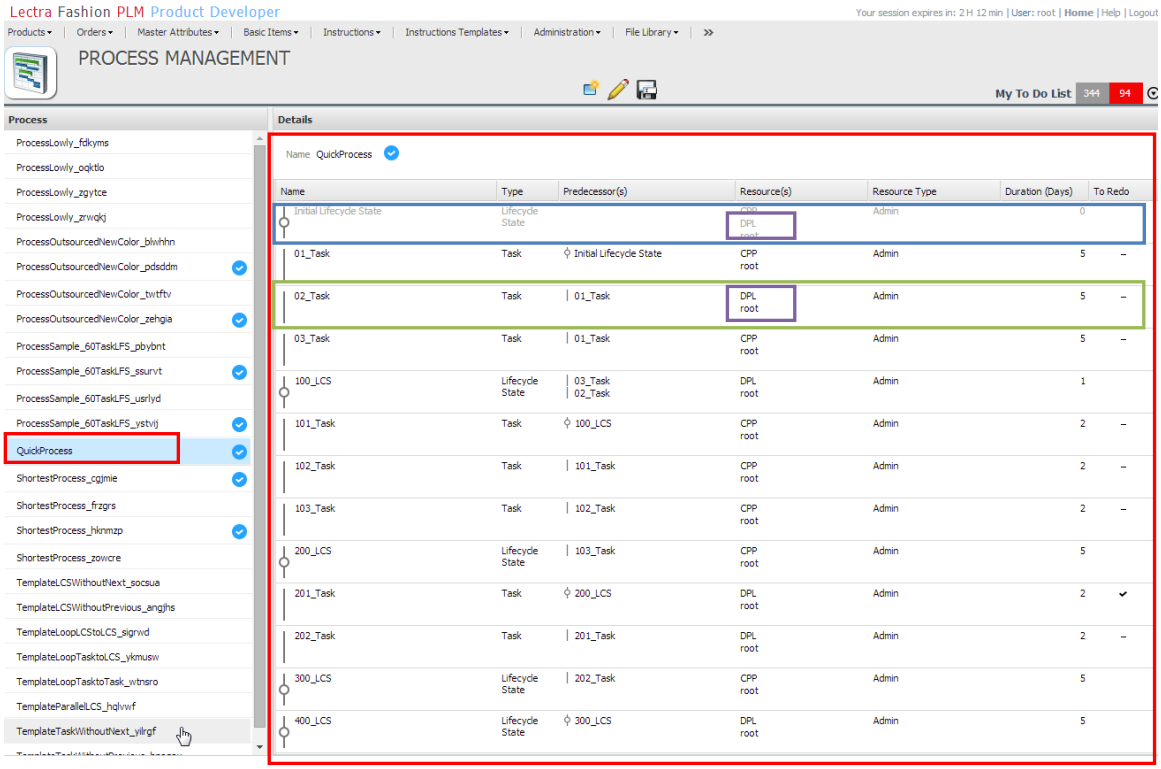
3.1.25Workflow.Template

3.1.25.1 XSD Projection

See Template.xsd in the archive enterpriselayerconnector-xsd.zip

3.1.25.2 Example of extracted data

Here you will find an extraction of one workflow process.



```
<tem:GTemplate xmlns:tem="http://www.lectra.com/fip/connector/xml/Template">
    <tem:Template ident="1400069079337" name="QuickProcess" available="true">
        <tem:states linePosition="0" resourceType="Admin" duration="0" ident="Initial Lifecycle State1400070306146" name="Initial Lifecycle State"/>
        <tem:states linePosition="4" resourceType="Admin" duration="1" ident="4_0.c7sdtw4z2uk463" name="100_LCS">
            <tem:users toFindId="6039" correlationId="6039" mode="CREATE-OR-UPDATE">
                <tem:businessKey>
                    <tem:entry value="DPL" key="name"/>
                </tem:businessKey>
            </tem:users>
            <tem:users toFindId="6001" correlationId="6001" mode="CREATE-OR-UPDATE"/>
            <tem:requisites toFindId="202783" correlationId="202783" rootCorrelationId="201029" rootId="201029" mode="CREATE-OR-UPDATE">
                <tem:businessKey>
                    <tem:entry value="1_0.frsp3b372jv164" key="ident"/>
                </tem:businessKey>
            </tem:requisites>
            <tem:requisites toFindId="202782" correlationId="202782" rootCorrelationId="201029" rootId="201029" mode="CREATE-OR-UPDATE"/>
            <tem:requisites toFindId="202780" correlationId="202780" rootCorrelationId="201029" rootId="201029" mode="CREATE-OR-UPDATE"/>
            <tem:nextTasks toFindId="202784" correlationId="202784" rootCorrelationId="201029" rootId="201029" mode="CREATE-OR-UPDATE">
                <tem:businessKey>
                    <tem:entry value="5_0.brfojhxsd1u631" key="ident"/>
                </tem:businessKey>
            </tem:nextTasks>
            <tem:previousTasks toFindId="202783" correlationId="202783" rootCorrelationId="201029" rootId="201029" mode="CREATE-OR-UPDATE">
```

```
            <tem:businessKey>
                <tem:entry value="1_0.frsp3b372jv164" key="ident"/>
            </tem:businessKey>
        </tem:previousTasks>
        <tem:previousTasks toFindId="202782" correlationId="202782" rootCorrelationId="201029" rootId="201029" mode="CREATE-OR-UPDATE"/>
        <tem:myFinder toFindId="202781" correlationId="202781" mode="CREATE-OR-UPDATE">
            <tem:businessKey>
                <tem:entry value="4_0.c7sdtw4z2uk463" key="ident"/>
            </tem:businessKey>
        </tem:myFinder>
</tem:states>
<tem:states linePosition="8" resourceType="Admin" duration="5" ident="8_0.wspoo1lgmhk908" name="200_LCS"/>
<tem:states linePosition="11" resourceType="Admin" duration="5" ident="11_0.mfikziu128176" name="300_LCS"/>
<tem:states linePosition="12" resourceType="Admin" duration="5" ident="11_0.xh2xub467og158" name="400_LCS"/>
<tem:tasks toRedo="false" ident="1_0.wsksvbqxka203" name="01_Task" linePosition="1" resourceType="Admin" duration="5">
        <tem:users toFindId="6047" correlationId="6047" mode="CREATE-OR-UPDATE">
            <tem:businessKey>
                <tem:entry value="CPP" key="name"/>
            </tem:businessKey>
        </tem:users>
        <tem:users toFindId="6001" correlationId="6001" mode="CREATE-OR-UPDATE"/>
        <tem:nextTasks toFindId="202783" correlationId="202783" rootCorrelationId="201029" rootId="201029" mode="CREATE-OR-UPDATE">
            <tem:businessKey>
                <tem:entry value="1_0.frsp3b372jv164" key="ident"/>
            </tem:businessKey>
```

```
</tem:nextTasks>
<tem:nextTasks toFindId="202782" correlationId="202782" rootCorrelationId="201029" rootId="201029" mode="CREATE-OR-UPDATE">
<tem:businessKey>
<tem:entry value="1_0.kdkqzdedyi186" key="ident"/>
</tem:businessKey>
</tem:nextTasks>
<tem:previousStates toFindId="202779" correlationId="202779" rootCorrelationId="201029" rootId="201029" mode="CREATE-OR-UPDATE">
<tem:businessKey>
<tem:entry value="Initial Lifecycle State1400070306146" key="ident"/>
</tem:businessKey>
</tem:previousStates>
<tem:myFinder toFindId="202780" correlationId="202780" mode="CREATE-OR-UPDATE">
<tem:businessKey>
<tem:entry value="1_0.wsksvbqxka203" key="ident"/>
</tem:businessKey>
</tem:myFinder>
</tem:tasks>
<tem:tasks toRedo="false" ident="1_0.kdkqzdedyi186" name="02_Task" linePosition="2" resourceType="Admin" duration="5"/>
<tem:tasks toRedo="false" ident="1_0.frsp3b372jv164" name="03_Task" linePosition="3" resourceType="Admin" duration="5"/>
<tem:myFinder toFindId="201029" correlationId="201029" mode="CREATE-OR-UPDATE">
<tem:businessKey>
<tem:entry value="1400069079337" key="ident"/>
</tem:businessKey>
</tem:myFinder>
<tem:first toFindId="202779" correlationId="202779" rootCorrelationId="201029" rootId="201029" mode="CREATE-OR-UPDATE">
<tem:businessKey>
```

```
                    <tem:entry value="Initial Lifecycle State1400070306146" key="ident"/>
                </tem:businessKey>
            </tem:first>
        </tem:Template>
    </tem:GTemplate>
```

3.1.26 CollectionPlan

3.1.26.1 Extract case sequence.xml for a specific collectionNode “Brand2”:

If you need to exctract just a sub-tree of a collection plan, use this sequence.xml for a starter. It will only extract the specified path in collection plan’s hierarchy. If you have a hierarchy: Brand2|||Winter|||Woman|||Classy and you only need tree under Winter, you can specify Brand2|||Winter||| as this :

```
<?xml version="1.0" encoding="UTF-8"?>
<sequence>
    <root fqn="collectionplanmanagement.process.CollectionPlan">
        <equals attribute="name" value="CollPlanName" type="String" />
        <controller pageSize="1" outputFinderMode="CREATE-OR-UPDATE">
            <attribute-restriction fqn="collectionplanmanagement.process.CompositeNode">
                <field attribute="path" value="Brand2|||Winter" operator="equals"/>
                <field attribute="path" value=" Brand2|||Winter|||" operator="startsWith"/>
            </attribute-restriction>
            <attribute-restriction fqn="collectionplanmanagement.process.LeafNode">
                <field attribute="path" value=" Brand2|||Winter|||" operator="startsWith"/>
            </attribute-restriction>
        </controller>
    </root>
</sequence>
```

3.1.26.2 Merge cases:

With the merge engine, datas can't be removed. You can only add or modify Collection Plan, nodes, Budget Plan and Range Plan attributes and roles.

ETL	DB	RESULTING DATAS
Datas	No Data	ETL Datas
No Data	No Data	No Data
Datas	Datas	ETL Datas
No Data	Datas	DB Datas

3.1.26.3 Example with nodes:

COLLECTIONPLAN FROM ETL	COLLECTIONPLAN ON DB	RESULT AFTER MERGE
MyCollectionPlan |- node_1 |- node_2	**MyCollectionPlan** |- node_1 |- node_3	**MyCollectionPlan** |- node_1 |- node_2 |- node_3

3.1.27 Validation Table

To attach a validation table line to a product (update or create) we add the following fragment in the file productmanagement.process.Product.xml:

```
<prod:validationLine refId="LineId" refTableId="TableId">
        <prod:myFinder mode="CREATE-OR-UPDATE">
                <prod:businessKey/>
        </prod:myFinder>
</prod:validationLine>
```

To find LineId and TableId, the Rest resource to use is "**/validation-tables/lines**" from ValidationTable module (see ascii doc). This resource allows to find the line id (and associated table) in the destination database by data (table name , field names and data of the line) of source database.

4. IMPORT / EXPORT USE

4.1 Session management

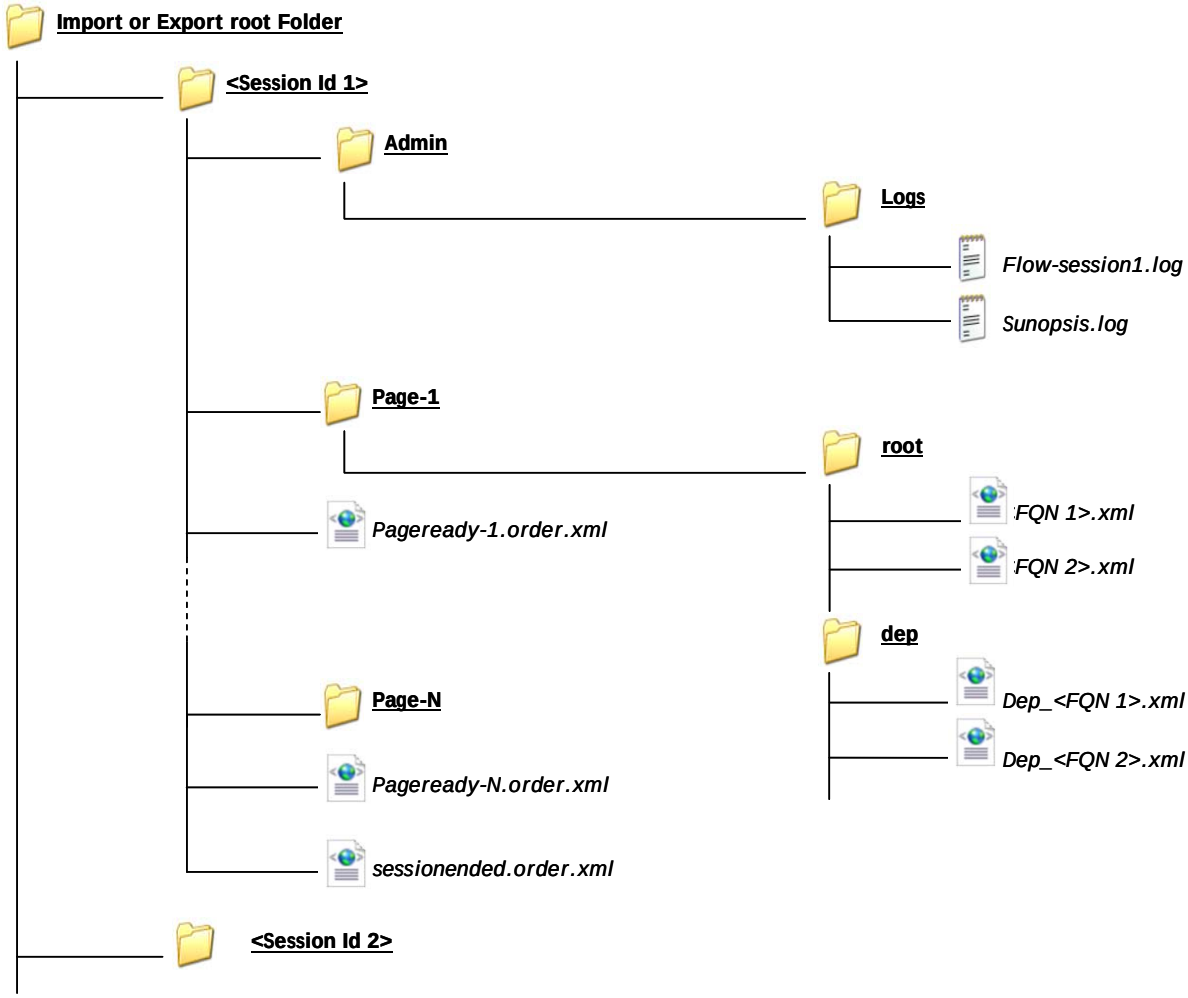
Extraction and Integration processes are now included into sessions.

The beginning and the end of the sessions are set by the user through public enterprise server methods.

This allows parallel extractions and integrations and ease dependency management.

4.2 Folder organization

The same XML data organisation will be used for extraction and injection. These XML data files are organised in the following manner: from a folder defined in the main configuration file, the following folder organisation is used:



One common root folder is used for all the exported data. One common folder is used for all data to import.

Non data files are generated in this organization. They are:

- "Page ready" files (ex: *pageready-1.order.xml)*, that indicates that a data page is available for processing (transformation or injection).
- "End of sequence" file (ex: *sessionended.order.xml*), that indicates that all the data pages are now available for processing (transformation or injection).
- Logs: logs are provided in two ways:
  - A columns delimited file that is filled during the process of all pages
  - An XML file that is generated at the end of the session of data import.

4.3 Configuration file

The file "etlgate-config.xml" is used to setup on the client side the folder that will be used for data exchanges with the PDM.

If the ETL client is not on the same server than the Fashion Integration Platform, a network drive has to be set up.

The "etlgate-config.xml" will then indicate which folder/drive as to be used locally and which folder/drive as to be used on the enterprise server.

```
<etlgate-config>
    <etl-sender usedefault="yes">
        <class>
            <config>
                <server url="http://server12:8080/connector/JMSHttpAccess" />
            </config>
        </class>
    </etl-sender>
    <etl-filesystem usedefault="yes">
        <class>
            <config>
                <root local="D:\Dev\Demo_Import_Export_PDM\EFS" path="\\myserver\EFS" />
            </config>
        </class>
    </etl-filesystem>
</etlgate-config>
```

Folder where xml files to import / export will be located from the client point of view

Folder where xml files to import / export will be located from the fip server point of view.

The system user starting the PLM service must have read/write access to this folder.

On the machine “myserver”, the directory “D:\Dev\Demo_Import_Export_PDM\EFS” is shared with the PLM server as the folder “EFS”. Its UNC name is “\\myserver\EFS”

4.4 Extraction

4.4.1 Sequence file

The subset of data to extract is described in an XML file called “Sequence file”.

In this file, you can specify the following elements:

- **ROOTS**

The fully qualifying names of the entities that you need to extract

- **FILTERS**

You can apply filters on the fields of the extracted entities to reduce the scope of extraction.

Filters can be done on common fields and on custom fields.

List of filters operators:

- equals,
- less than,
- greater than,
- less than or equals,
- greater than or equals
- in
- NEquals
- roleEquals

These operators can be combined with the logical operators “AND” and “OR”.

- **RESTRICTIONS**

To reduce the amount of data returned by the extractor and increase the performances, it is possible to specify exactly which information on the entities has to be extracted.

This can be done by excluding path or defining the path to follow, and by giving the list of customfields or customroles to extract.

- **LINKED ROOT EXTRACTION**

Relations between entities can be specified in the sequence file in order to extract the main roots and roots that are linked to them (For example, products and the colors that are associated to them in the color axis).

In this case, main roots will be extracted in the folder “Page-X\root” and linked roots will be extracted in separated files in the folder “Page-X\dep”.

Joins betweens entities are made with the finder elements.

- **PAGING**

To reduce the size of the generated XML files, a paging process can be used. The maximum number of entities included into an extraction file can be set in the sequence file.

- **MODE SETTING**

By default, the attribute “Mode” in the finder element is set to “EXTRACTED”. Its value can be set by the sequence file. This is useful when you need to generate dataset to prepare a test environment for example (extracted data can be imported directly without any transformation).

- **ADDITIONAL COMMENTS**

Any User information (independent from the data) can be added in the generated XML files.

This feature can be used to modify the files processing either by the ETL or the PLM Injector. (Example: you can indicate to the injector the kind of update service to use (mass update or simple update) or disable the dependencies checking.

4.4.2 Sequence file grammar

Structure of the file

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<sequence dio=”entreprise”>

<root fqn=” YourContainmentTreeFQN”>
[<LOGICAL OPERATOR>]
<ARITHMETIC OPERATOR attribute=”YourAttributeToFilter”
                                    value=”YourValue”
                                    type=”YourAttributeType”
                                   [format=”YourDateFormat”]
 />
…
[</LOGICAL OPERATOR>]
```

```
[<controller pageSize="100" outputFinderMode="CREATE-OR-UPDATE">
        <attribute-restriction fqn="FQN">
            <field attribute="AttributeName" custom="true"/>
            …
        <attribute-restriction/>
        [<paths-to-follow>
            <path begin="FQN " role="RoleToFollow"/>
            …
        </paths-to-follow>]
        [<paths-to-exclude>
            <path begin="FQN " role="RoleToFollow"/>
            …
        </paths-to-exclude>]

        [<borders-to-extract>
            <border begin="SourceFQN" end="AdditionalInfoFQN">
                [<controller>
                    [<border-restriction fqn=" SourceFQN ">
                        <field attribute=" AttributeName "
                        value=" YourValue "/>
                    </border-restriction>]
                …</controller>]
            …
        </borders-to-extract>]
    <controller>]
</root>
</sequence>
```

4.4.3 Supported Operators

4.4.3.1 Arythmetic operators

OPERATOR	SYNTAX	TYPE RESTRICTION
=	<equals attribute="" type="" value="" format=""></equals>	-
<	<lessthan attribute="" type="" value="" format=""></lessthan>	-
>	<greaterthan attribute="" type="" value="" format=""></greaterthan>	-
<=	<lessthanorequals attribute="" type="" value="" format=""></lessthanorequals>	-
>=	<greaterthanorequal attribute="" type="" value="" format=""></greaterthanorequals>	-
startsWith	<startsWith attribute="" type="string" value="content"></startsWith>	string only
endsWith	<endsWith attribute="" type="string" value="content"></endsWith>	string only
contains	<contains attribute="" type="string" value="content"></ contains>	string only

Attribute : Attribute of the containment tree on which you wish to apply the filter

For example, “id”, “name”, “created.date”, “lastmodified.date” …

Type: Type of the attribute on which you wish to apply the filter.

DateField --> date or timestamp

StringField --> string

IntField --> int

FloatField --> float

LongField --> long

DoubleField --> double

BooleanField --> boolean

LongStringField --> longstring

Value: value to which the attribute value will be compared.

Format: used only for date and timestamp attributes. Accept all Standard SQL date format.

This format describes the format of the value to which the attribute value will be compared.

For example: “YYYY-MM-DD HH24:MI:SS”, “DD/MM/YYYY”, “DD-MM-YYYY HH24:MI”…

4.4.3.2 Advanced operators

OPERATOR	DESCRIPTION	SYNTAX
IN	Select the entities with the attribute equals to one of the values defined in the value list.	<in attribute=”attr” value=”val1, val2, val3, …” type=”String” separator=”,” />
NEquals	Operator to check more than one atributes values in only one operation.	<nequals attribute=”attr1,attr2, attr3” value=”attr1-val,attr2-val, attr3-val” type=”String” separator=”,” /> Equivalent to <and> <equals attribute=”attr1” value=”attr1_val” type=”String”/> <equals attribute=”attr3” value=”attr2_val” type=”String”/> <equals attribute=”attr3” value=”attr3_val” type=”String”/> </and>
roleEquals	Filter on the value of the one or more attributes of the target entity of a role	<roleEquals target="<fqn of the target entity>" path="<name of the role>" custom="<false|true>"> <equals attribute="<name of the target attribute on which to filter> " value="<expected value>" type="<type>"/> </roleEquals>

4.4.3.3 Examples

Custom Field

Filter on the custom field named "custom_float_field 1" of type "float" with the value "-1,78'

<equals **attribute="custom_float_field 1" value="-1,78" type="float" custom="true"**/>

Same filter but when the custom field is attached to an axe value.

<equals **attribute="axes.custom_float_field 1" value="-1,78" type="float" custom="true"**/>

Custom Role

Filter on the custom role named "myCustomSVL" pointing to a property having :

A propertyDefName equals to “CustomTargetSVL”

And, a propertyDefFamily equals to “process”

And, a path equals to “CustomTargetSV”

```
<roleEquals target="core.Property" path="myCustomSVL" custom="true">
        <equals attribute="propertyDefName" value="CustomTargetSVL" type="string"/>
        <equals attribute="propertyDefFamily" value="process" type="string"/>
        <equals attribute="path" value="CustomTargetSV" type="string"/>
</roleEquals>
```

Same filter but when the custom role is attached to an axe value.

```
<roleEquals target="core.Property" path="axes.myCustomSVL" custom="true">
        <equals attribute="propertyDefName" value="CustomTargetSVL" type="string"/>
        <equals attribute="propertyDefFamily" value="process" type="string"/>
        <equals attribute="path" value="CustomTargetSV" type="string"/>
</roleEquals>
```

Classification

Filter on the classification for the value corresponding to the defName, defFamily and path

```
<roleEquals target="classifmanagement.process.ClassifProperty" path="nodes"
custom="false">
        <equals attribute="propertyDefName" value="Yellow" type="string"/>
        <equals attribute="propertyDefFamily" value="process" type="string"/>
        <equals attribute="path" value="dark/sharp/gauss/weak" type="string"/>
</roleEquals>
```

Authoring

Filter on the date of authoring created (need to give the date format)

```
<greaterthanorequals attribute="created.date" value="2011-03-08" format="yyyy-mm-dd"
type="date"/>
```

Pay attention that Authoring is managed as an attribute and not a role !

4.4.3.4 Logical operators:

OPERATOR	DESCRIPTION	SYNTAX
And	All filters describe between the begin and end tag must verify the condition	<and> <Arythmetic OP1 …/> < Arythmetic OP2 …/> < Arythmetic OP3 …/> … </and>
Or	At least on filter describes between the begin and end tag must verify the condition	<or> < Arythmetic OP1 …/> < Arythmetic OP2 …/> < Arythmetic OP3 …/> … </or>

4.4.4 Controller

PageSize

Define the maximum number of elements to extract per xml file

DESCRIPTION	SYNTAX
Defines the maximum number of elements to extract per xml file.	<controller pageSize= "100" [..]/>

OutputFinderMode

DESCRIPTION	SYNTAX
Set the value of the attribute “mode” of the Finders	<controller outputFinderMode="CREATE-OR-UPDATE" [..]/>

BusinessKeyMode

DESCRIPTION	SYNTAX
Defines when the business key should be extracted	<controller businessKeyMode="outer|none|all” [..]/> “all” (default value): each finder will have its business key extracted “outer”: only the finder towards other root entities (borders)

	will have a complete business key, others will only have the attributes of the myFinder element. "none": only the attributes of the myFinder element will be extracted, no business key.

Additional information extraction

If you need information about containment trees referenced by the main trees you are extracting, you must define the borders to extract.

DESCRIPTION	SYNTAX
List of linked referenced trees to extract in the additional information.	<borders-to-extract> <border begin="SourceFQN" end="AdditionalInfoFQN"/> … </borders-to-extract>

SourceFQN : Fqn of the entity, inside the containment tree, pointing to another containment tree.

AdditionalInfoFQN : FQN of the linked tree to extract.

Scope limitation

By default, all information concerning the containment trees you defined are extracted.

For performance purpose, you can avoid to extract not needed information by indicating only the necessary element of the trees.

DESCRIPTION	SYNTAX
List of links to follow for the extraction	<paths-to-follow> <path begin="FQN" role="RoleToFollow"/> … </paths-to-follow>
Links of links not to follow for the extraction	<paths-to-exclude> <path begin="FQN" role="RoleToExclude"/> … </paths-to-exclude>

FQN : Fqn of the source

role : Role that will be followed.

DESCRIPTION	SYNTAX
Attribute restriction	<attribute-restriction fqn="FQN"> <field attribute="AttributeName" value="AttributeValue custom="BooleanValue" operator="OperatorType"/> … </attribute-restriction>

fqn : Fqn of the entity, inside the containment tree

attribute : Name of the attribute to retrieve

value : Value to which the attribute must be equal

custom : (true or false) Indicates if the attribute is a custom field or not

Operator(optional) : equals (default if not specified) or startsWith : matching type, startsWith will match values starting with “AttributeValue”, equals those strictly equal to “AttributeValue”.

Detailed example

```
<?xml version="1.0" encoding="UTF-8"?>

<sequence dio="enterprise">
        <!-- Extraction of product -->
        <root fqn="productmanagement.process.Product">

                <!-- Where categoryName = Style -->
                <!-- and custom field casStyleErpSendField = true-->
                <and>
                        <equals attribute="categoryName" value="Style" type="varchar"/>
                        <equals attribute="casStyleErpSendField" type="boolean" value="true"
custom="true"/>
                </and>

                <controller pageSize=”10”r>

                        <borders-to-extract>
                                <!-- Marketing colors referenced by the Products -->
                                <!-- each Marketing Color linked to a Product wherever it is in the tree -->
                                <border begin="productmanagement.process.Product"
                                end="productmanagement.envitems.MarketingColor"/>

                                <!-- FinalSizes referenced by the Products -->
                                <border begin="productmanagement.process.Product"
                                end="productmanagement.envitems.FinalSize"/>

                                <!-- Sizes referenced by the Products -->
                                <border begin="productmanagement.process.Product"
                                end="productmanagement.envitems.Size"/>

                                <!-- SizeRuns referenced by the Products -->
                                <border begin="productmanagement.process.Product"
                                end="productmanagement.envitems.SizeRun"/>
```

```
            <!-- FinalSizes referenced by the SizeRuns -->
            <border begin="productmanagement.envitems.FinalSize"
                    end="productmanagement.envitems.SizeRun"/>
        </borders-to-extract>

        <!-- Determines information to be followed as needed by the ETL process   -->
        <!-- If an element (fqn) is used, only fixed roles by this config will be -->
        <!-- followed. If an element (fqn) doesn't appear in this config, all     -->
        <!-- its role will be followed                                            -->
        <paths-to-follow>
            <!-- Links of Product to follow -->
            <path begin="productmanagement.process.Product" role="ident"/>
            <path begin="productmanagement.process.Product" role="customFields"/>
            <path begin="productmanagement.process.Product" role="customRoles"/>
            <path begin="productmanagement.process.Product" role="nodes"/>
            <path begin="productmanagement.process.Product" role="composition"/>
            <!-- Links of AxeValue to follow -->
            <path begin="productmanagement.process.AxeValue" role="axifyable"/>
            <path begin="productmanagement.process.AxeValue"
role="customFields"/>
            <!-- Links of SpecPackage to follow -->
            <path begin="productmanagement.process.SpecPackage"
role="specTables"/>
            <path begin="productmanagement.process.SpecPackage"
                  role="customFields"/>
            <!-- Links of Splink to follow -->
            <path begin="productmanagement.process.SpLink" role="component"/>
            <path begin="productmanagement.process.SpLink" role="customFields"/>
            <path begin="productmanagement.process.SpLink" role="customRoles"/>
            <!-- Links of Material to follow -->
            <path begin="productmanagement.process.MaterialRatio" role="material"/>
            <path begin="productmanagement.process.MaterialRatio"
                  role="customFields"/>
            <!-- Links of MarketingColor to follow -->
```

```
                    <path begin="productmanagement.envitems.MarketingColor"
                          role="customFields"/>
                    <path begin="productmanagement.envitems.MarketingColor"
                          role="customRoles"/>
                    <!-- Links of FinalSize to follow -->
                    <path begin="productmanagement.envitems.FinalSize"
role="customFields"/>
                    <path begin="productmanagement.envitems.FinalSize" role="sizeRun"/>
                    <!-- Links of SizeRun to follow -->
                    <path begin="productmanagement.envitems.SizeRun"
role="customFields"/>
                </paths-to-follow>
            </controller>
        </root>
</sequence>
```

4.4.5 Extraction methods

The library “enterpriselayerconnector-pub.jar” provides methods to manage all ETL operations:

Method (*Class ETLFileSystemGateStaticAccess***)**	**Description**
static public long openETLSession()	Starts an ETL session : creates the session folder in the extraction and in the injection path Returns the session number
static public String startExtraction(**long** session, String sequenceFile)	Start the extraction of the data defined by the sequence file provided. *Returns* the full path into which files will be generated *Params* : Session : the ETL session number SequenceFile : the complete file path of the sequence file

4.5 Injection

4.5.1 Dependencies management

Links between Roots correspond to borders and are materialized by Finder elements.

Those Finder elements allow identifying a root in 3 ways:

1) by its ID in the PLM,
2) by a Correlation ID: a unique ID set by the ETL process, that can be used during the current injection session,
3) by its business key: ID composed of one or more couple of key,value (ex: (techode,1234))

When a root is injected with a reference to another root that cannot be found in the PLM, The root is “suspended”.

When the referenced root is injected, the injection of suspended roots that references this root is triggered.

At the end of the session, all remaining suspended trees are returned as errors.

4.5.2 Transactions management

Xml files sent to the injector may contain many root elements.

The injection of each root element is managed in separated transactions.

If any error occurs on the injection of an element, it will have no impact on the other elements of the files that have been already injected or that remain to be processed. This element will return as an error, already injected data will stay in the PLM and the process of the file will continue.

4.5.3 Injection modes

There are 3 modes of injection:

- CREATE: to insert new entities in the PLM. Trying to insert an entity that already exists will result as an error.
- UPDATE: to modify existing entities in the PLM.
- CREATE_OR_UPDATE: to modify existing entities in the PLM and create them if they are not found.

4.5.4 Injection methods

The library “enterpriselayerconnector-pub.jar” provides methods to manage all ETL operations:

Method (*Class ETLFileSystemGateStaticAccess***)**	**Description**
static public long openETLSession()	Starts an ETL session : creates the session folder in the extraction and in the injection path Returns the session number
static public boolean startInjection(**long** session, **int** pageNumber)	Start the extraction of the data defined by the sequence file provided. *Returns* the full path into which files will be generated *Params* : Session : the ETL session number SequenceFile : the complete file path of the sequence file
static public String getInjectionFileLocation(**long** session, String fqn, String type, **int** pageNumber)	*Returns* the full path to the file to inject *Params* : Session : the ETL session number Fqn : the name of the root object to inject Type : root or dep PageNumber : the page number

5. TALEND COMPONENTS FOR FIP

Lectra has developed components dedicated to the Fashion Integration Platform on a Talend Open Studio 5.4 / Talend Enterprise Data Integration / Talend Platform for Data Management / Talend Integration Suite.

5.1 Components provided

Lectra provides some Talend components to ease the integration between the PLM platform and third party applications.

They are packaged in a single zip file *lectraTalendComponents-a.b.c.d.zip* (where *a.b.c.d* is the version number).

The following components are available:

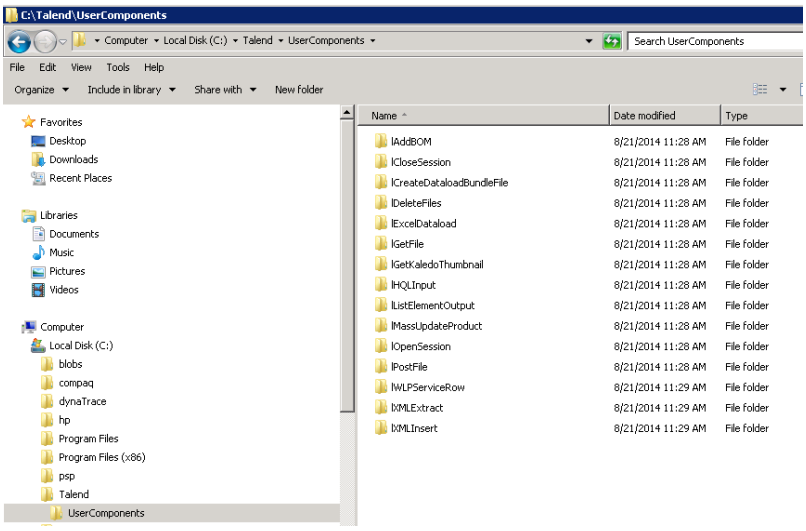
Name	Description
lXMLInsert	Send data into the PLM. The data are provided in an XML file conform to the FIP connector structure (see documentation *Lectra_Enterprise_Solutions_Data-Exchange_Setup-Guide_en*)
lXMLExtract	Extract data from the PLM into Xml files
lOpenSession	Open a connection to the platform
lCloseSession	Close a connection to the platform
lPostFile	Send a file into the platform file repository
lGetFile	Download a file from the platform file repository
lDeleteFiles	Delete a file from the platform file repository
lCreateDataloadBundleFile	Create a dataload bundle from an Excel file
lExcelDataload	Load data into the PLM from a dataload bundle
lMassUpdateProduct	Update the description of products (Styles, Fabrics, Trims…) in mass
lListElementOutput	Get one element (id) from a list (HVL/SVL) from its path and create it if it does not exist yet
lHQLInput	Run an HQL query on the PLM
lGetKaledoThumbnail	Retrieve a thumbnail of any Kaledo entity
lAddBOM	Add a BOM in the PLM from data stored in dedicated tables

5.2 Installation of Lectra Components

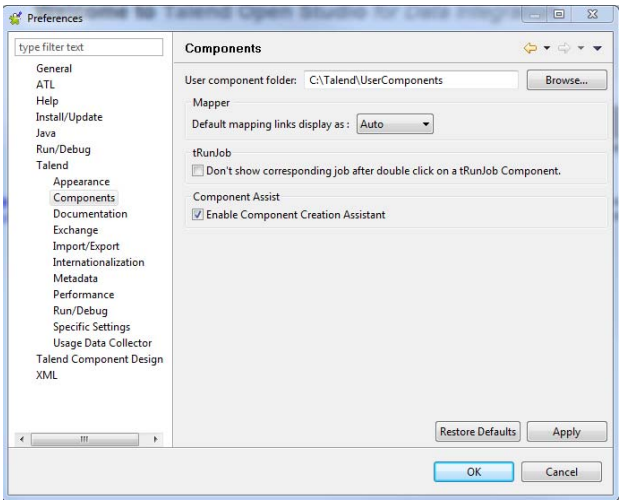
- Create a folder close to your Talend Install folder

  For example: **C:\Talend\UserComponents**

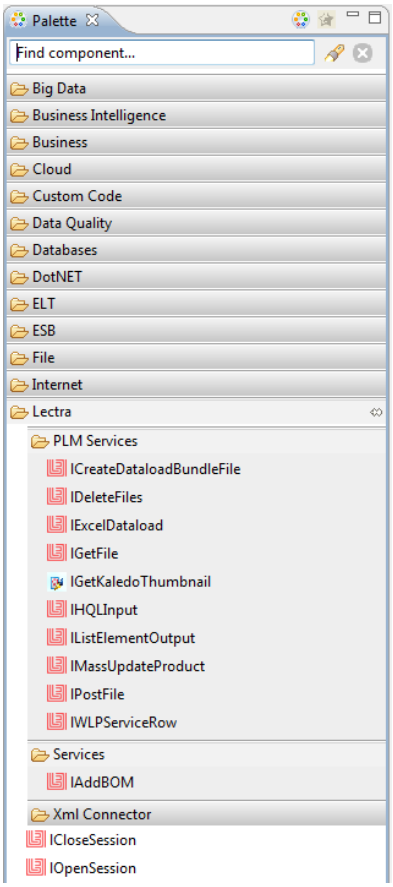
- Unzip the archives into the components folder created above



- Start **Talend Designer**
- Open the **Preferences** menu (**Window** > **Preferences**)
- Select the node **Talend – Components**
- Set the user component folder with the folder path in which the components have been unzipped
- Click on **Apply**
- Click on **OK**



The **Components** will automatically be added to the **Palette** in the Lectra section.


Palette
Find component...
Big Data
Business Intelligence
Business
Cloud
Custom Code
Data Quality
Databases
DotNET
ELT
ESB
File
Internet
Lectra
PLM Services
ICreateDataloadBundleFile
IDeleteFiles
IExcelDataload
IGetFile
IGetKaledoThumbnail
IHQLInput
IListElementOutput
IMassUpdateProduct
IPostFile
IWLPServiceRow
Services
IAddBOM
Xml Connector
ICloseSession
IOpenSession