

XJDF and JDF Side by Side

This is an annotated simple annotated ConventionalPrinting job to illustrate the differences and similarities of JDF and XJDF.

The XJDF was created automatically using the CIP4 JDF editor, which in turn uses utility classes which are available in the CIP4 open source Java Library - see: [JDFLibJ](#).

[Rainer Prosi](#) add Product definition to this example

XJDF

JDF

Remarks

XJDF Header

```
<?xml version="1.0" encoding="
UTF-8"?>
<XJDF Category="MISCPS.
Printing" CommentURL="
http://www.example.com"
  DescriptiveName="MISCPS
Golden Ticket Example Job -
version: CIP4 JDF Writer Java
1.5 BLD 81"
  ID="n_000001" JobID="
Job_000010" JobPartID="
n_000001" MaxVersion="2.0"
  Types="InkZoneCalculation
ConventionalPrinting" Version="
2.0" xmlns="http://www.CIP4.org
/JDFSchema_2_0">
  <AuditPool>
    <AuditCreated>
      <Header AgentName="CIP4
JDFEditor" AgentVersion="Build
version CIP4 JDF Writer Java
1.5 BLD 81" ID="a_001024"
TimeStamp="2014-11-20T12:04:
15+08:00"/>
    </AuditCreated>
    <AuditResource>
      <ResourceSet Name="Media"
Usage="Input">
        <Resource DescriptiveName="
the paper to print on"
          ProductID="paperID">
          <AmountPool>
            <PartAmount Amount="
1005" Waste="88">
              <Part SheetName="
Sheet1"/>
            </PartAmount>
          </AmountPool>
        </Resource>
      </ResourceSet>
    </AuditPool>
```

JDF Header

```
<?xml version="1.0" encoding="
UTF-8"?>
<JDF Category="MISCPS.Printing"
CommentURL="http://www.example.
com"
  DescriptiveName="MISCPS
Golden Ticket Example Job -
version: CIP4 JDF Writer Java
1.5 BLD 81"
  ID="n_000001" JobID="
Job_000010" JobPartID="
n_000001" MaxVersion="1.5"
  Status="Waiting" Type="
ProcessGroup"
  Types="InkZoneCalculation
ConventionalPrinting" Version="
1.5"
  xmlns="http://www.CIP4.org
/JDFSchema_1_1"
  xmlns:xsi="http://www.w3.org
/2001/XMLSchema-instance" xsi:
type="ProcessGroup">
  <AuditPool>
    <Created AgentName="CIP4
JDFEditor"
      AgentVersion="Build
version CIP4 JDF Writer Java
1.5 BLD 81"
      ID="a_000002" TimeStamp="
2014-11-20T12:03:45+08:00"/>
    </AuditPool>
    <ResourcePool>
      ...
    <ResourceLinkPool>
      ...
```

The root tag, version information and schema are obviously different.

Whereas JDF allows for multiple JDF nodes, XJDF requires exactly one.

Audits have remained mostly unchanged.

ResourceLinkPool and ResourcePool have been removed. The ResourceSet elements reside directly in the only XJDF.

ColorantControl

ColorantControl

ColorantControlLink and ColorantControl have been merged into one ResourceSet.

Separations are referred to by attribute lists rather than SeparationSpec elements.

```

<ResourceSet ID="r_000003"
Name="ColorantControl" Usage="
Input">
  <Resource ID="r_000003.1"
Status="Available">
    <ColorantControl
ColorRef="r_000004"
    ColorantOrder="Black
Cyan Magenta Yellow Spot1"
ProcessColorModel="DeviceCMYK"/>
  </Resource>
</ResourceSet>

```

```

<ColorantControl class="
Parameter" ID="r_000003"
ProcessColorModel="
DeviceCMYK" Status="Available">
  <ColorPoolRef rRef="
r_000004"/>
  <ColorantOrder>
    <SeparationSpec Name="
Black"/>
    <SeparationSpec Name="
Cyan"/>
    <SeparationSpec Name="
Magenta"/>
    <SeparationSpec Name="
Yellow"/>
    <SeparationSpec Name="
My Color"/>
  </ColorantOrder>
</ColorantControl>
...
<ColorantControlLink Usage="
Input" rRef="r_000003"/>

```

Color

```

<ResourceSet ID="r_000004"
Name="Color">
  <Resource ID="r_000004.1" >
    <Part Separation="Black"/>
    <Color ActualColorName="
Black" CMYK="0 0 0 1"/>
  </Resource>
  <Resource ID="r_000004.2" >
    <Part Separation="Cyan"/>
    <Color ActualColorName="
Cyan" CMYK="1 0 0 0"/>
  </Resource>
  <Resource ID="r_000004.3" >
    <Part Separation="Magenta"
/>
    <Color ActualColorName="
Magenta" CMYK="0 1 0 0"/>
  </Resource>
  <Resource ID="r_000004.4" >
    <Part Separation="Yellow"
/>
    <Color ActualColorName="
Yellow" CMYK="0 0 1 0"/>
  </Resource>
  <Resource ID="r_000004.5" >
    <Part Separation="Spot1"/>
    <Color ActualColorName="
My Color" CMYK="0.4 0.4 0 0"/>
  </Resource>
</ResourceSet>

```

ConventionalPrintingParams

ColorPool

```

<ColorPool class="
Parameter" ID="r_000004"
Status="Unavailable">
  <Color CMYK="0 0 0 1"
class="Parameter" Name="Black"/>
  <Color CMYK="1 0 0 0"
class="Parameter" Name="Cyan"/>
  <Color CMYK="0 1 0 0"
class="Parameter" Name="Magenta"
/>
  <Color CMYK="0 0 1 0"
class="Parameter" Name="Yellow"
/>
</ColorPool>

```

ConventionalPrintingParams + Link

ColorPool is a "standard" partitioned Color ResourceSet rather than a specific animal.

The name is a token that SHOULD be matched to an ActualColorName that is a string may contain blanks and other special characters.

This allows separations to be referenced as NMTOKENS lists rather than requiring explicit SeparationSpec elements.

In JDF, a resource is only applicable to the JDF that contains a matching ResourceLink. In XJDF the two concepts have been combined into a "Set" entry that is always applicable. Thus you need no longer search for the matching resource to a ResourceLink.

```

<ResourceSet ID="r_000005"
Name="
ConventionalPrintingParams"
Usage="Input">
  <Resource ID="r_000005.1"
Status="Available">

<ConventionalPrintingParams
PrintingType="SheetFed"
WorkStyle="Simplex"/>
  </Resource>
</ResourceSet>

```

```

<ConventionalPrintingParams
class="Parameter" ID="r_000005"
PrintingType="SheetFed"
Status="Available" WorkStyle="
Simplex"/>
...
<ConventionalPrintingParamsLink
Usage="Input" rRef="r_000005"/>

```

Generic attributes such as Usage are defined in explicit elements which are the parent elements of the specific resources such as ConventionalPrintingParams.

Thus each table in the specification is self contained and does not require an implementor to follow the tree of inheritance in the specification.

Partitioned NodeInfo ParameterSet

```

<ResourceSet ID="r_000011"
Name="NodeInfo" Usage="Input">
  <Resource
    DescriptiveName="Printing
forJDFAttributeMap: {(SheetName
= Sheet1) (SignatureName =
Sig1) "
    ID="r_000011.1" Status="
Available">
    <Part SheetName="Sheet1"/>
    <NodeInfo NodeStatus="
Waiting"/>
  </Resource>
</ResourceSet>

```

Partitioned NodeInfo

```

<NodeInfo class="Parameter"
ID="r_000011" NodeStatus="
Waiting"
  PartIDKeys="SignatureName
SheetName Side Separation"
  PartUsage="Implicit"
  Status="Available">
  <Employee class="
Implementation" PersonalID="
personalID1" Roles="CSR"/>
  <NodeInfo SignatureName="
Sig1">
    <NodeInfo
      DescriptiveName="
Printing for Sheet1 "
      NodeStatus="Waiting"
      SheetName="Sheet1"/>
    </NodeInfo>
  </NodeInfo>
  ...
  <NodeInfoLink Usage="Input"
rRef="r_000011"/>

```

Partitioning always is written as a linear list with Part elements rather than a hierarchical structure.

The SignatureName partition key has been removed.

CustomerInfo

```

<ResourceSet ID="r_000012"
Name="CustomerInfo" Usage="
Input">
  <Resource ID="r_000012.1"
Status="Available">
    <CustomerInfo ContactRef="
r_000013.1" CustomerID="
customerID"
      CustomerJobName="
customer job name"
      CustomerOrderID="
customerOrder_1"/>
  </Resource>
</ResourceSet>

```

CustomerInfo

```

<CustomerInfo class="
Parameter" CustomerID="
customerID"
  CustomerJobName="customer
job name"
  CustomerOrderID="
customerOrder_1" ID="r_000012"
  PartUsage="Implicit"
  Status="Available">
  <ContactRef rRef="
r_000013"/>
</CustomerInfo>
...
<CustomerInfoLink
CombinedProcessIndex="0 1"
Usage="Input" rRef="r_000012"/>

```

References, if used at all, are simple ID-IDRef pairs rather than

```
<ContactRef rRef="r_000013"/>
```

that may even contain additional partitioning data, requiring specific lookup functions.

Contact

Contact

```

<ResourceSet ID="r_000013"
Name="Contact">
  <Resource ID="r_000013.1"
Status="Available">
    <Part ContactType="
Customer"/>
    <Part ContactType="
Administrator"/>
    <Contact>
      <Person FamilyName="
Töpfer" FirstName="Harald"/>
      <ComChannel
ChannelType="Phone" Locator="
tel:+666.42.123456"/>
      <ComChannel
ChannelType="Fax" Locator="tel:
+666.42.123455"/>
      <ComChannel
ChannelType="Email" Locator="
mailto:harald.topfer@thepits.
net"/>
      <Company
OrganizationName="The Pits"/>
    </Contact>
  </Resource>
  <Resource ID="r_000013.1"
Status="Available">
    <Part ContactType="
Employee"/>
    <Contact
ContactTypeDetails="CSR"/>
  </Resource>
</ResourceSet>

```

```

<Contact class="Parameter"
ContactTypes="Customer
Administrator"
ID="r_000013" Status="
Available">
  <Person class="Parameter"
FamilyName="Töpfer" FirstName="
Harald"/>
  <ComChannel ChannelType="
Phone" class="Parameter"
Locator="tel:+666.42.123456"/>
  <ComChannel ChannelType="
Fax" class="Parameter" Locator="
tel:+666.42.123455"/>
  <ComChannel ChannelType="
Email" class="Parameter"
Locator="mailto:harald.
topfer@thepits.net"/>
  <Company class="
Parameter" OrganizationName="
The Pits"/>
</Contact>

```

Preview

Preview

```

<ResourceSet ID="r_000014"
Name="Preview" Usage="Input">
  <Resource ID="r_000014.1">
    <Part Separation="Black"
SheetName="Sheet1" Side="Front"
/>
    <Preview PreviewFileType="
PNG" PreviewUsage="Separation"/>
  </Resource>
  <Resource ID="r_000014.2">
    <Part Separation="Cyan"
SheetName="Sheet1" Side="Front"
/>
    <Preview PreviewFileType="
PNG" PreviewUsage="Separation"/>
  </Resource>
  <Resource ID="r_000014.3">
    <Part Separation="
Magenta" SheetName="Sheet1"
Side="Front" />
    <Preview PreviewFileType="
PNG" PreviewUsage="Separation"/>
  </Resource>
  <Resource ID="r_000014.4">
    <Part Separation="Yellow"
SheetName="Sheet1" Side="Front"
/>
    <Preview PreviewFileType="
PNG" PreviewUsage="Separation"/>
  </Resource>
  <Resource ID="r_000014.5">
    <Part Separation="Black"
SheetName="Sheet1" Side="Back"/>
    <Preview PreviewFileType="
PNG" PreviewUsage="Separation"/>
  </Resource>
  <Resource ID="r_000014.6">
    <Part Separation="Cyan"
SheetName="Sheet1" Side="Back"/>
    <Preview PreviewFileType="
PNG" PreviewUsage="Separation"/>
  </Resource>
  <Resource ID="r_000014.7">
    <Part Separation="
Magenta" SheetName="Sheet1"
Side="Back"/>
    <Preview PreviewFileType="
PNG" PreviewUsage="Separation"/>
  </Resource>
  <Resource ID="r_000014.8">
    <Part Separation="Yellow"
SheetName="Sheet1" Side="Back"/>
    <Preview PreviewFileType="
PNG" PreviewUsage="Separation"/>
  </Resource>
</ResourceSet>

```

```

<Preview class="Parameter"
ID="r_000014"
  PartIDKeys="SignatureName
SheetName Side Separation"
  PartUsage="Explicit"
  PreviewFileType="PNG"
  PreviewUsage="Separation">
  <Preview SignatureName="
Sig1">
    <Preview SheetName="
Sheet1">
      <Preview Side="Front">
        <Preview
Separation="Black"/>
        <Preview
Separation="Cyan"/>
        <Preview
Separation="Magenta"/>
        <Preview
Separation="Yellow"/>
      </Preview>
      <Preview Side="Back">
        <Preview
Separation="Black"/>
        <Preview
Separation="Cyan"/>
        <Preview
Separation="Magenta"/>
        <Preview
Separation="Yellow"/>
      </Preview>
    </Preview>
  </Preview>
  ...
  <PreviewLink
CombinedProcessIndex="0 1"
Usage="Input" rRef="r_000014"/>

```

Paper Media excluding consumption reporting

Paper Media including consumption reporting

JDF allows Amount definitions both in the resource and the ResourceLink. XJDF has only one container object, in our case it is the <Resource> that contains an AmountPool.

All planned amounts are defined in:

XJDF/ResourceSet/Resource/AmountPool /PartAmount

All actual amounts are defined in:

```

<ResourceSet ID="r_000006"
Name="Media" Usage="Input">
  <Resource DescriptiveName="
the paper to print on" ID="
r_000006.1"
    ProductID="paperID"
Status="Unavailable">
    <Media Dimension="
2891.33858268 1984.2519685"
MediaType="Paper"
    Thickness="112.5"
Weight="90"/>
    <AmountPool>
    <PartAmount Amount="
1000" MaxAmount="1100" Waste="
100">
    <Part SheetName="
Sheet1"/>
    </PartAmount>
    </AmountPool>
  </Resource>
</ResourceSet>

```

```

<Media class="Consumable"
DescriptiveName="the paper to
print on"
    Dimension="2891.33858268
1984.2519685" ID="r_000006"
    MediaType="Paper"
ProductID="paperID" Status="
Unavailable"
    Thickness="112.5" Weight="
90"/>
...
  <MediaLink Usage="Input"
rRef="r_000006">
    <AmountPool>
    <PartAmount Amount="
1000" MaxAmount="1100">
    <Part Condition="
Good" SheetName="Sheet1"
SignatureName="Sig1"/>
    </PartAmount>
    <PartAmount MaxAmount="
100">
    <Part Condition="
Waste" SheetName="Sheet1"
SignatureName="Sig1"/>
    </PartAmount>
    </AmountPool>
  </MediaLink>

```

XJDF/AuditPool/AuditResource/ResourceSet
/Resource/AmountPool/PartAmount

Waste has been made a specific attribute,
thus removing the requirement for Part
/@Condition.

ExposedMedia (Plates)

```

<ResourceSet ID="r_000007"
Name="ExposedMedia"
ProcessUsage="Plate" Usage="
Input">
  <Resource ID="r_000007.1"
Status="Unavailable">
    <Part Separation="Black"
SheetName="Sheet1" Side="Front"
/>
    <ExposedMedia MediaRef="
r_000008.1"/>
  </Resource>
  <Resource ID="r_000007.2"
Status="Unavailable">
    <Part Separation="Cyan"
SheetName="Sheet1" Side="Front"
/>
    <ExposedMedia MediaRef="
r_000008.1"/>
  </Resource>
  <Resource ID="r_000007.3"
Status="Unavailable">
    <Part Separation="
Magenta" SheetName="Sheet1"
Side="Front" />
    <ExposedMedia MediaRef="
r_000008.1"/>
  </Resource>
  <Resource ID="r_000007.4"
Status="Unavailable">
    <Part Separation="Yellow"
SheetName="Sheet1" Side="Front"
/>
    <ExposedMedia MediaRef="
r_000008.1"/>
  </Resource>
</ResourceSet>

```

ExposedMedia (Plates)

```

    </Resource>
    <Resource ID="r_000007.5"
Status="Unavailable">
      <Part Separation="Black"
SheetName="Sheet1" Side="Back"
/>
      <ExposedMedia MediaRef="
r_000008.1"/>
    </Resource>
    <Resource ID="r_000007.6"
Status="Unavailable">
      <Part Separation="Cyan"
SheetName="Sheet1" Side="Back"
/>
      <ExposedMedia MediaRef="
r_000008.1"/>
    </Resource>
    <Resource ID="r_000007.7"
Status="Unavailable">
      <Part Separation="
Magenta" SheetName="Sheet1"
Side="Back" />
      <ExposedMedia MediaRef="
r_000008.1"/>
    </Resource>
    <Resource ID="r_000007.8"
Status="Unavailable">
      <Part Separation="Yellow"
SheetName="Sheet1" Side="Back"
/>
      <ExposedMedia MediaRef="
r_000008.1"/>
    </Resource>
  </ResourceSet>
  <ResourceSet ID="r_000008"
Name="Media">
    <Resource DescriptiveName="
the plates to use" ID="r_000008.
1" Status="Available">
      <Media Dimension="
2919.68503937 2012.5984252"
MediaType="Plate"/>
    </Resource>
  </ResourceSet>

```

Output Component

```

    <ExposedMedia class="
Handling" ID="r_000007"
      PartIDKeys="SignatureName
SheetName Side Separation"
      PartUsage="Explicit"
      Status="Unavailable">
      <MediaRef rRef="r_000008"
/>
      <ExposedMedia
SignatureName="Sig1">
        <ExposedMedia
SheetName="Sheet1">
          <ExposedMedia Side="
Front">
            <ExposedMedia
Separation="Black"/>
            <ExposedMedia
Separation="Cyan"/>
            <ExposedMedia
Separation="Magenta"/>
            <ExposedMedia
Separation="Yellow"/>
          </ExposedMedia>
          <ExposedMedia Side="
Back">
            <ExposedMedia
Separation="Black"/>
            <ExposedMedia
Separation="Cyan"/>
            <ExposedMedia
Separation="Magenta"/>
            <ExposedMedia
Separation="Yellow"/>
          </ExposedMedia>
        </ExposedMedia>
      </ExposedMedia>
      <Media class="Consumable"
DescriptiveName="the plates to
use"
      Dimension="2919.68503937
2012.5984252" ID="r_000008"
      MediaType="Plate"
      PartUsage="Implicit" Status="
Available"/>
      ...
    <ExposedMediaLink
ProcessUsage="Plate" Usage="
Input" rRef="r_000007"/>

```

Output Component

```
<ResourceSet ID="r_000009"
Name="Component" Usage="Output">
  <Resource DescriptiveName="
Description for Component part#
0"
  ID="r_000009.1" Status="
Unavailable">
    <Part SheetName="Sheet1"
  />
    <AmountPool>
      <PartAmount Amount="
1000">
        <Part Condition="
Good" SheetName="Sheet1" />
      </PartAmount>
    </AmountPool>
  </Component
ComponentType=" Sheet"
Dimensions="2891.33858268
1984.2519685 0"/>
</Resource>
</ResourceSet>
```

```
<Component class="Quantity"
ComponentType="FinalProduct
Sheet"
  Dimensions="2891.33858268
1984.2519685 0" ID="r_000009"
  PartIDKeys="SignatureName
SheetName" ProductType="
Unknown" Status="Unavailable">
  <Component SignatureName="
Sig1">
    <Component
DescriptiveName="Description
for Component part# 0"
SheetName="Sheet1"/>
  </Component>
</Component>
...
  <ComponentLink Usage="
Output" rRef="r_000009">
    <AmountPool>
      <PartAmount Amount="
1000">
        <Part Condition="
Good" SignatureName="Sig1"
SheetName="Sheet1" />
      </PartAmount>
    </AmountPool>
  </ComponentLink>
```

End of File

```
</XJDF>
```

End of File

```
</ResourcePool>
...
</ResourceLinkPool>
</JDF>
```