Abstract

This Application Note describes how pagination in a Stripping device works and contains recommendations as to how to paginate using JDF 1.2. The main interest is for Stripping consumers, but understanding the pagination method may be of interest for Stripping producers as well.
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1 Pagination

A Stripping device converts a StrippingParams resource into a Layout, through which an Imposition device can flow pages in a straightforward manner. During Stripping, the device adds cell numbers to each BinderySignature if they are not yet specified and it renumbers the BinderySignatures using the order specified in the Assembly. The next two sections elaborate on each of these steps.

1.1 Renumbering BinderySignatures

The StrippingParams resource places multiple BinderySignatures onto sheets. It is up to the Stripping device to renumber the BinderySignatures. The value of Assembly/@Order determines how the renumbering happens. When Assembly/@Order="None", the order of the sections is unspecified and renumbering happens as follows:

- For BinderySignatures based on SignatureCells, no renumbering happens.
- For other BinderySignatures, it is common practice to renumber according to the Gathering order.

The figure below illustrates a product with two BinderySignatures: BinderySignature 1 is a 4-page signature and BinderySignature 2 is an 8-page signature. BinderySignature 1 contains cell numbers ranging from 0-3 while the second BinderySignature contains cell numbers ranging from 0-7. When combining those two BinderySignatures into one StrippingParams, the cell numbers are renumbered according to the order of the sections defined in Assembly/@order.
Figure 1 – Renumbering BinderySignatures Gathering order

3 0

3 0

7 0

8 7

11 4

sig1

sig2

renumber
Assembly@Order="Gathering"
1.2 Adding cell numbers

A BinderySignature specified by FoldCatalog or Folds must be expanded by the Stripping device into SignatureCells. In JDF 1.2 the method for generating SignatureCells is implementation dependent, but it is common practice to use the following procedure:

1. Fold the BinderySignature according to the FoldCatalog or Folds
2. Rotate and/or flip the folded BinderySignature to closed head position, except when there is no closed head.
3. Number the BinderySignature from top of the stack to the bottom

The figure below illustrates the expansion of FoldCatalog based BinderySignatures into SignatureCells. F4-1 is not rotated in step two of the procedure, because there is no closed head. F8-7 is rotated 90 degrees clockwise before numbering.
A Stripping device can use other procedures to add cell numbers to BinderySignatures than the one described above. In JDF 1.2 these procedures are implementation specific. In JDF 1.3 a Stripping procedure will be able to specify this procedure in more detail using new concepts like JogEdge and BindingOrientation.

2 BindingSide and BindingEdge

The Assembly resource is often referred to as the product view, while the BinderySignature is referred to as the production view. In this way, Assembly/@BindingSide typically refers to the bound side of the final product, while BinderySignature/@BindingEdge refers to the bound side during production. When both attributes are not equal, it is up to the Stripping device to modify the orientation and/or sequence of the cell numbers to synchronize product and production view.

The figure below illustrates a calendar product. The left side of the picture shows the product view where the spine of the calendar is at the top. The right side of the picture shows the production view where the spine of the calendar is at the left. The Stripping device can synchronize both views by rotating the content pages by 90 degrees before flowing them through the cells (after renumbering as explained in section 1).
Figure 5 - Calendar

```xml
<Assembly Class="Parameter" ID="ASM000" Status="Available" BindingSide="Top" Order="Collecting"/>
<BinderySignature Class="Parameter" ID="BINSIG1" Status="Available" BindingEdge="Left"
FoldCatalog="FL6-6"/>
<StrippingParams Class="Parameter" ID="STP000" PartIDKeys="SignatureName SheetName"
Status="Available">
<StripCellParams BleedFace="5.66929" BleedSpine="0.000" BleedFoot="5.66929" BleedHead="5.66929"
TrimFace="14.17323" Spine="0.00000" TrimHead="14.17323" TrimFoot="14.17323"
FrontOverfold="28.34646" BackOverfold="0.00000" MillingDepth="0.00000" TrimSize="595.27559
841.88976"/>
<StrippingParams SignatureName="SIG1">
<StrippingParams SheetName="SHT1" WorkStyle="WorkAndBack">
<Position RelativeBox="0.00000 0.00000 1.00000 1.00000" Orientation="Flip180"/>
</StrippingParams>
</StrippingParams>
<StrippingParams SignatureName="SIG2">
<StrippingParams SheetName="SHT2" WorkStyle="WorkAndBack">
<BinderySignatureRef rRef="BINSIG1"/>
<Position RelativeBox="0.00000 0.00000 1.00000 1.00000" Orientation="Flip180"/>
</StrippingParams>
</StrippingParams>
</StrippingParams>
</StrippingParams>
```
The figure below illustrates an oriental book. The left side of the picture shows the product view where the spine of
the book is at the right. The right side of the picture shows the production view where the spine of the book is at the
left. The Stripping device can synchronize both views by flowing the content pages in reverse order through the
cells (after renumbering as explained in section 1).

Figure 6 - Oriental book: product and production view

![Oriental book: product and production view](image)

The next picture shows the JDF code of the oriental book. From a product point of view the
Assembly/@BindingSide="Right", while from a production point of view BinderySignature/@BindingEdge="Left".

Figure 7 - Oriental Book

```xml
<Assembly Class="Parameter" ID="ASM000" Status="Available" BindingSide="Right"
Order="Collecting"/>
<BinderySignature Class="Parameter" ID="BINSIG1" Status="Available" BindingEdge="Left"
FoldCatalog="F16-6"/>
<StrippingParams Class="Parameter" ID="STP000" PartIDKeys="SignatureName SheetName"
Status="Available">
<StripCellParams BleedFace="5.66929" BleedSpine="0.000" BleedFoot="5.66929" BleedHead="5.66929"
TrimFace="14.17323" Spine="0.00000" TrimHead="14.17323" TrimFoot="14.17323"
FrontOverfold="28.34646" BackOverfold="0.00000" MillingDepth="0.00000" TrimSize="595.27559
841.88976"/>
<Assembly Class="Parameter" ID="ASM000" Status="Available" BindingSide="Right"
Order="Collecting"/>
<BinderySignature Class="Parameter" ID="BINSIG1" Status="Available" BindingEdge="Left"
FoldCatalog="F16-6"/>
<StrippingParams Class="Parameter" ID="STP000" PartIDKeys="SignatureName SheetName"
Status="Available">
<StripCellParams BleedFace="5.66929" BleedSpine="0.000" BleedFoot="5.66929" BleedHead="5.66929"
TrimFace="14.17323" Spine="0.00000" TrimHead="14.17323" TrimFoot="14.17323"
FrontOverfold="28.34646" BackOverfold="0.00000" MillingDepth="0.00000" TrimSize="595.27559
841.88976"/>
```