

2.10.0 neoRipEngine

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This document describes the basic usage of the RipEngine library, the job ticket structure and the interface used for the RIP communication.

Table of Contents

2.10.0 neoRipEngine	1
Supported Systems	3
Job ticket	4
XML Structure.....	4
Supported Units	5
Sources.....	6
Source Tags.....	6
Source TJB files	7
Position of TJB.....	7
PDF Source renderPdfSettings Parameters	8
Renderer parameters	8
Layout	13
Page.....	13
RapportInfo.....	13
Objects	14
Object	14
Transformations.....	23
Advanced Transformations.....	48
Repetition.....	63
Conditional	65
Output	67
Notifications	72
Automatic Variables	73
Source variables	73
Object variables.....	76
WorkingPaths	77
Practical Examples	78
Colorations XCM	84
Practical Examples	88
neoRipEngineCGI.....	92

Supported Systems

macOS

Sierra 10.12 or later

- Multicore Intel processor with 64bit support
- 4GB minimum RAM memory (16GB recommended)

Windows

Windows 8.1 or later

- Intel(R) Core(TM) i5 or AMD equivalent with 64bit support
- 4GB minimum RAM memory (16GB recommended)

Job ticket

The job ticket is a XML file that describes what the RIP has to process. It includes the source files used for the process (images, profiles, colorways, etc.), the output image layout structure, colour management parameters, the most used filters like inversion, gamma correction, rotation and others and the output encoding options.

XML Structure

Every XML file defines exactly one element, known as the *root element*. Any other elements in the file are contained *within* that element. A page has a number of associated data items, so it is natural to define them as attributes.

```
<Job>
  <Sources>
    <Source/>
  </Sources>
  <Layout>
    <Page>
      <Objects>
        <Object>
          <Transformations>
          </Transformations>
        </Object>
      </Objects>
    </Page>
  </Layout>
  <Output>
  </Output>
</Job>
```

Supported Units

Supported Units A

pixels

px

point

pt

millimeter

mm

centimeter

cm

meter

m

inch

in

pica

pc

repeat

rep

r

% (only for the "scale" filter)

Supported Units B

dpi

pixel/cm

ppc

ppm

Sources

The <Sources> group contains the list of the required files that the engine will process.

```
<Sources>
  <Source Id = "0" URL = "Images\640x480.tif"/>
</Sources>
```

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
Id	numeric	Source identifier. Does not allow duplicates.	required
URL	path	The file referenced. Can be an absolute path or a	required

Source Tags

The Source tags are used to control the source output in engine process corresponding to the source type.

```
<Sources>
<Source Id = "0" URL = "Images\640x480.tif" autoResolution="true"/>
<Source Id = "0" URL = "LogoNameColorsCT_RS.tjb" autoResolution="disable"
keepOutput="true"/>
<Source Id = "1" URL = "Texture.tjb" autoResolution="disable"
keepOutput="true"/>
</Sources>
```

TAG	VALUE	DESCRIPTION	REQUIREMENT
keepOutput	value	Used for .tjb source only. Values: true or false. When using "false", the output of the .tjb will be replaced by the main job's output attributes. When using "true", then the output of the .tjb will be kept (everything inside the .tjb will be rendered to this output) and the rendered .tjb will be converted to the main job's output attributes like colorspace, profile, resolution etc.	required
autoResolution	value	The source will be used for calculating the main job output resolution. Values: no, disable, false, N, 0 or yes, true, enable, Y, 1. Default value is "yes" for standard input images and "no" for .tjb's files.	required

Source TJB files

Files in with extension .tjb are found in the <Sources> directory and containing XML that can be used multiple times on one page either by being used in different parts of the layouts or being part of a loop that for example builds a list of objects on the page. The structure of the tjb file is the same as used in the XML Jobticket.

To add the .tjb in <Source>, use the tjb file name. In the source group you can define the SetID to apply the .tjb in multiple objects.

```
<Sources>
  <Source Id = "0" URL = "LogoNameColorsCT_RS.tjb"
    autoResolution="disable" SetID = "0"/>
  <Source Id = "1" URL = "Texture.tjb" autoResolution="disable"
    SetID = "0"/>
  <Source Id = "2" URL = "LogoNameColorsCT_RS.tjb"
    autoResolution="disable" SetID = "1"/> <Source Id = "3" URL =
    "Texture.tjb" autoResolution="disable" SetID = "1"/>
</Sources>
```

Position of TJB

To position the .tjb as the object in the XML use the following structure and attributes.

```
<Objects>
<Object Id="2" SourceID="2" MaintainAspectRatio="true"
autoResizeMask="Top|Width" autoResizePropTop="1/1" autoResizePropWidth="1/1"
autoPositionMask="Top" left="0 cm" top="40.7 cm" width="29.7 cm">
</Object>
</Objects>
```

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
Object Id	numeric	Object identifier. Does not allow duplicates.	required
Source Id	numeric	Source identifier from <Source> group . Does not	required
MaintainAspectRatio	value	Keeps the proportions. Values: "true" or "false". Default is true.	required
autoResizeMask	value	Sequence of flags with pipe separator to activate automatic resize areas. Values: "top", "left", "right", "bottom", "width" and "height".	optional
autoResizeProp	numeric	Set a factor of increment of the autoresize in top/ left and width/height as a fraction. Values: "1/1", "1/2", "1/3" etc.	optional
height	numeric	The object max height. Size of the Object will be manage inside .tjb file.	optional
width	numeric	The object max width. Size of the Object will be manage inside .tjb file.	optional
left	value	The position of the image from offset of the page.	required
top	value	The position of the image from offset of the page.	required

PDF Source renderPdfSettings Parameters

The target of this modifications consists in offer the neoRipEngine's user the possibility of specify the render parameters of each page that make up a PDF. For every page that the customer need to render a new Source need to be added. The number of the page will be specified by adding a colon and the number of the page at the end of the pdf's file name .

The structure of the Source PDF used in the XML Jobticket:

```
<Sources>
<Source Id="3" URL="C:\Users\<USER>\Test files\TALLA L 1015.20.pdf:0"/>
<Source Id="4" URL="C:\Users\<USER>\Test files\TALLA L 1015.20.pdf:1"/>
<Source/>
</Sources>
```

(page 0 and page 1 respectively).

Renderer parameters

The render parameters will be specified by adding the tag <RenderPdfSettings> inside a Source tag.

Render settings for SourceId = 3, file name= "Talla L 1015.20.pdf" page 3.

```
<Source Id="6" URL="TALLA L 1015.20.pdf:3">
<RenderPdfSettings>
<Dpi>360.000000</Dpi>
<Colorspace>CMYK</Colorspace>
<OutputProfile> C:\Windows\system32\Spool\Drivers\Color\EuroscaleCoated.icc
</OutputProfile>
</RenderPdfSettings>
</Source>
```

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
DPI	numeric	Specifies the dots per inch.	required
		Sample: <Dpi>360.000000</Dpi>	
ColorSpace	value	Specifies the color Space. Possible Values: RGB, CMYK.Unsupported spaces: MC, LAB and GRAY	required
		Sample: <Colorspace>CMYK</Colorspace>	
BitsPerComponent	numeric	Indicates the bits per component.Possible values: 8 or 16	required
		Sample: <BitsPerComponent>16</BitsPerComponent>	
Antialiasing	value	Indicates if the page must be rendered using antialiasing. Possible values. True or False.	required
		Sample: <Antialiasing>True</Antialiasing>	
Overprint	value	Indicates if the renderer must. Possible values. True or False.	required
		Sample: <Overprint>False</Overprint>	
OutputProfile	value	Indicates the name of the file that contains the output ICC profile. If no ICC profile is specified a default one be applied.	optional
		Sample: <OutputProfile> C:\Windows\system32\Spool\Drivers\Color\EuroscaleCoated.icc </OutputProfile>	

MaxBandMemory	numeric	Indicates the among of memory in MB that the renderer will allocate to render PDF bands. If no memory size is specified the default memory allocated will be 2MB.	optional
Sample: <MaxBandMemory>96</MaxBandMemory>			
SpotColor	numeric	Indicates the color components substitution for an specific spot color. If no layer is specified all the visible layer saves in file will be rendered.	optional
Sample: <SpotColor>0.180865 0.168399 0.169177 (NEGRO TAYMORY)</SpotColor> <SpotColor>0.956298 0.843442 0.398764 (PANTONE 122 C)</SpotColor> <SpotColor>0.000000 0.340719 0.704112 (PANTONE 2935 C)</SpotColor> <SpotColor>0.000000 0.225299 0.622950 (PANTONE 286 C)</SpotColor> <SpotColor>0.748394 0.086442 0.119051 (PANTONE 485 C)</SpotColor>			
Layer	value	Indicates that the layer must be visible. This parameter works only the layer has been saved also as visible in the original file.	optional
Sample: <Layer>HD</Layer> <Layer>SD</Layer> <Layer>HDW</Layer>			
Ink	value	Indicates the list of inks (spot colors) that must be rendered by library.	optional
Sample: <Ink>NEGRO TAYMORY</Ink> <Ink>PANTONE 122 C</Ink> <Ink>PANTONE 2935 C</Ink>			

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<Job>
<Sources>
<Source Id="0"
URL="C:\Code\Sampi\neoStampa\CiberPrint\output\x64\Debug\Color\inRGB\Adobe RGB
1998.icm"/>
<Source Id="1"
URL="C:\Code\Sampi\neoStampa\CiberPrint\output\x64\Debug\Color\inGRIS\Black Ink - ISO
Coated.icm"/>
<Source Id="2" URL="C:\Users\USER\Test files\Ghent_PDF-Output-Test-V50_ALL_X4.pdf:0">
  <RenderPdfSettings>
    <Dpi>360.000000</Dpi>
    <Colorspace>CMYK</Colorspace>
    <OutputProfile>C:\Users\Public\Documents\neoStampa
10\Tmp\ICC71B9.tmp</OutputProfile>
    <BitsPerComponent>16</BitsPerComponent>
    <Antialiasing>True</Antialiasing>
    <Overprint>False</Overprint>
    <MaxBandMemory>96</MaxBandMemory>
    <VerticalBands>no</VerticalBands>
  </RenderPdfSettings>
</Source>
<Source Id="3" URL="C:\Users\USER\Test files\Ghent_PDF-Output-Test-V50_ALL_X4.pdf:1">
```

```

    <RenderPdfSettings>
      <Dpi>360.000000</Dpi>
      <Colorspace>CMYK</Colorspace>
      <OutputProfile>C:\Users\Public\Documents\neoStampa
10\Tmp\ICC7DD0.tmp</OutputProfile>
      <BitsPerComponent>16</BitsPerComponent>
      <Antialiasing>True</Antialiasing>
      <Overprint>False</Overprint>
      <MaxBandMemory>96</MaxBandMemory>
      <VerticalBands>no</VerticalBands>
    </RenderPdfSettings>
  </Source>
  <Source Id="4" URL="C:\Users\USER\Test files\Ghent_PDF-Output-Test-V50_ALL_X4.pdf:2">
    <RenderPdfSettings>
      <Dpi>360.000000</Dpi>
      <Colorspace>CMYK</Colorspace>
      <OutputProfile>C:\Users\Public\Documents\neoStampa
10\Tmp\ICC7DE1.tmp</OutputProfile>
      <BitsPerComponent>16</BitsPerComponent>
      <Antialiasing>True</Antialiasing>
      <Overprint>False</Overprint>
      <MaxBandMemory>96</MaxBandMemory>
      <VerticalBands>no</VerticalBands>
    </RenderPdfSettings>
  </Source>
  <Source Id="5" URL="C:\Users\USER\Test files\Ghent_PDF-Output-Test-V50_ALL_X4.pdf:3">
    <RenderPdfSettings>
      <Dpi>360.000000</Dpi>
      <Colorspace>CMYK</Colorspace>
      <OutputProfile>C:\Users\Public\Documents\neoStampa
10\Tmp\ICC7DF1.tmp</OutputProfile>
      <BitsPerComponent>16</BitsPerComponent>
      <Antialiasing>True</Antialiasing>
      <Overprint>False</Overprint>
      <MaxBandMemory>96</MaxBandMemory>
      <VerticalBands>no</VerticalBands>
      <Ink>GWG Green</Ink>
      <Ink>PANTONE 265 C</Ink>
    </RenderPdfSettings>
  </Source>
  <Source Id="6" URL="C:\Users\USER\Test files\Ghent_PDF-Output-Test-V50_ALL_X4.pdf:4">
    <RenderPdfSettings>
      <Dpi>360.000000</Dpi>
      <Colorspace>CMYK</Colorspace>
      <OutputProfile>C:\Users\Public\Documents\neoStampa
10\Tmp\ICC7E12.tmp</OutputProfile>
      <BitsPerComponent>16</BitsPerComponent>
      <Antialiasing>True</Antialiasing>
      <Overprint>False</Overprint>
      <MaxBandMemory>96</MaxBandMemory>
      <VerticalBands>no</VerticalBands>
    </RenderPdfSettings>
  </Source>
  <Source Id="7" URL="C:\Users\USER\Test files\Ghent_PDF-Output-Test-V50_ALL_X4.pdf:5">

```

```

    <RenderPdfSettings>
      <Dpi>360.000000</Dpi>
      <Colorspace>CMYK</Colorspace>
      <OutputProfile>C:\Users\Public\Documents\neoStampa
10\Tmp\ICC7E22.tmp</OutputProfile>
      <BitsPerComponent>16</BitsPerComponent>
      <Antialiasing>True</Antialiasing>
      <Overprint>False</Overprint>
      <MaxBandMemory>96</MaxBandMemory>
      <VerticalBands>no</VerticalBands>
    </RenderPdfSettings>
  </Source>
</Sources>
<Layout>
<Page Width="2976.380000 pt" Height="1683.780000 pt">
<Objects>
<Object insideLeft="0.000000 pt" insideTop="0.000000 pt" insideWidth="595.276000 pt"
insideHeight="841.890000 pt" left="0.000000 pt" top="0.000000 pt" width="595.276000 pt"
height="841.890000 pt" interpolationMethod="nearest" rotation="0" Id="0">
  <Transformations>
  <AssignProfile SourceID="0"/>
  </Transformations>
</Object>
<Object insideLeft="0.000000 pt" insideTop="0.000000 pt" insideWidth="595.276000 pt"
insideHeight="841.890000 pt" left="595.276000 pt" top="0.000000 pt" width="595.276000
pt" height="841.890000 pt" interpolationMethod="nearest" rotation="0" Id="1">
  <Transformations>
  <AssignProfile SourceID="0"/>
  </Transformations>
</Object>
<Object insideLeft="0.000000 pt" insideTop="0.000000 pt" insideWidth="595.276000 pt"
insideHeight="841.890000 pt" left="1190.552000 pt" top="0.000000 pt" width="595.276000
pt" height="841.890000 pt" interpolationMethod="nearest" rotation="0" Id="2">
  <Transformations>
  <AssignProfile SourceID="0"/>
  </Transformations>
</Object>
<Object insideLeft="0.000000 pt" insideTop="0.000000 pt" insideWidth="595.276000 pt"
insideHeight="841.890000 pt" left="1785.828000 pt" top="0.000000 pt" width="595.276000
pt" height="841.890000 pt" interpolationMethod="nearest" rotation="0" Id="3">
  <Transformations>
  <AssignProfile SourceID="0"/>
  </Transformations>
</Object>
<Object insideLeft="0.000000 pt" insideTop="0.000000 pt" insideWidth="595.276000 pt"
insideHeight="841.890000 pt" left="2381.104000 pt" top="0.000000 pt" width="595.276000
pt" height="841.890000 pt" interpolationMethod="nearest" rotation="0" Id="4">
  <Transformations>
  <AssignProfile SourceID="0"/>
  </Transformations>
</Object>
<Object insideLeft="0.000000 pt" insideTop="0.000000 pt" insideWidth="595.276000 pt"
insideHeight="841.890000 pt" left="0.000000 pt" top="841.890000 pt" width="595.276000
pt" height="841.890000 pt" interpolationMethod="nearest" rotation="0" Id="5">

```

```

    <Transformations>
    <AssignProfile SourceID="0"/>
    </Transformations>
</Object>
</Objects>
</Page>
</Layout>
<Output>
    <WorkingProfile CMM="LCMS"/>
    <Space>RGB</Space>
    <Copies>1</Copies>
</Output>
<PrintScheme Copies="1" DigitalColorway="Yes">
<JobSettings>
<Variables>
    <Variable Id="0" Name="DefaultScheme" Value=""/></Variables>
</JobSettings>
</PrintScheme>
</Job>

```

inēdit

Layout

The <Layout> group describes the page/s composition and contains none tags and attributes.

```
<Layout>
  <Page Id = "0">
    <Objects></Objects>
  </Page>
  <Page Id = "1">
    <Objects></Objects>
  </Page>
</Layout>
```

Page

The <Page> group is used to describe the content of the page. It contains the list of objects that will compose the final image.

```
<Page Id = "0" width = "19.25 cm" height = "13.54 cm"></Page>
```

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
Id	numeric	Page identifier. Does not allow duplicates.	required
width	numeric	The page width.	optional
height	numeric	The page height.	optional

The *width* and *height* parameters are optional but it is recommended to use them when possible. If not informed (width, height or both), the RIP will compute the height, the width or the bounding box for all the objects that the page includes and will use it as the page size.

Page margin is calculated in the page and must be defined in the horizontal and vertical starting point relative to the Object.

RapportInfo

The <RapportInfo> is used to tell the page how the objects repeat inside the document .

```
<Page Id = "0" width = "19.25 cm" height = "13.54 cm">
  <RapportInfo direction="V" fraction_high="1" fraction_low="2"/>
</Page>
```

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
direction	value	Repeat direction. Values: "0" or "V" or "vertical" (vertical) or "1" or "H" or "horizontal" (horizontal). Default is 1.	required
fraction_high/fraction_low	value	The rapport drop as a fractional number or units. Required. Default is 1/1.	required

Objects

The <Objects> group describes elements that will be part of the page. It works as a graphic container and its target is to describe what to see into this container and how.

```
<Objects>
  <Object Id="0" maintainAspectRatio="false" SourceID="0" antialiasing="false"
    height="56.69 points" iccID="" index="0" insideHeight="1332.50 points"
    insideLeft="0.00 points" insideTop="0.00 points" insideWidth="794.00 points"
    interpolationMethod="default" left="0.00 points" overprint="false"
    resolution=" 0.00" shaderconvergence="0.00" shaderppi="0.00" top="1417.32
    points" width="538.58 points" rotation="0">
  </Object>
</Objects>
```

Object

The <Object> describes a page element and all its transformations.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
Id	numeric	Object identifier. Does not allow duplicates.	required
left	numeric	Fixes the horizontal starting point relative to the page. The default value is 0.	optional
top	numeric	Fixes the vertical starting point relative to the page. The default value is 0.	optional
height	numeric	Fixes the graphic's container height. If this attribute is not present, the engine will use the height of the referenced image.	optional
width	numeric	Fixes the graphic's container width. If this attribute is not present, the engine will use the width of the referenced image.	optional
maintainAspectRatio	value	Keeps proportions within the object. Values: "true" or "false". Default value is false.	required
insideWidth	numeric	Set the width size of the object contents (modify the scale of the original image and the number of repeats if the image repeat).	optional
insideHeight	numeric	Set the height size of the object contents (modify the scale of the original image and the number of repeats if the image repeat).	optional
insideTop	numeric	Set the top origin of the object contents.	optional
insideLeft	numeric	Set the left origin of the object contents.	optional
SourceID	numeric	References to the source image from <Sources> group.	required
iccID	numeric	References to the source ICC profile from <Sources> group.	optional
index	numeric	Page index from the source image. Only used on PDF documents.	optional

interpolationMet	value	Defines the used method for interpolation operations. Values: "default", "nearest", "bilinear", "bicubic". The "default" method equals to "bilinear".	optional
antialiasing	value	Smoothing. Only used on PDF documents. Values: "true" or "false".	optional
overprint	value	Only used on PDF documents. Values: "true" or "false".	optional
resolution	numeric	Only used on PDF documents. Used as rendering resolution.	optional
shaderconvergency	numeric	Only used on PDF documents.	optional
shaderppi	numeric	Only used on PDF documents.	optional
rotation	value	Fixes the source rotation on the object. Values in degrees "0", "90", "270" and "360".	optional
fitMode	value	Active fit source image into the object box. Value: "none" or "auto". Default value is none.	optional
blendMode	value	Set the blend mode of the object. Value: "normal", "multiply", "screen" or "over". Default value is normal.	optional
alpha	numeric	Set the opacity of the blend method. Value 0 > 100.	optional
scale	numeric	Set the scale method. Value: "before", "after", "auto" or "clip". Default value is auto.	optional
repeat	value	Active fill object area with source image repetition. Value: "none" or "rapport". Default value is none.	optional
autoResizeMask	value	Sequence of flags with separator to activate automatic resize areas. Values: "top", "left", "right", "bottom", "width" and "height".	required
autoPositionMask	value	Sequence of flags with separator to activate automatic position areas. Values: "top" and "left".	required
autoResizeMethod	value	Set auto resize method. Value: "none" or "auto". Default value is "none".	optional
autoResizePropLeft	value	Set a factor of increment of the autoresize as a fraction. Values: "1/1", "1/2", "1/3" etc.	required
autoResizePropTop	value	Set a factor of increment of the autoresize as a fraction. Values: "1/1", "1/2", "1/3" etc.	required
autoResizePropWidth	value	Set a factor of increment of the autoresize as a fraction. Values: "1/1", "1/2", "1/3" etc.	required
autoResizePropHeight	value	Set a factor of increment of the autoresize as a fraction. Values: "1/1", "1/2", "1/3" etc.	required

Due to its complexity, five more attributes need special attention. Those are related to the rapport mode.

Object insideLeft

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
insideLeft	numeric	Horizontal offset that will be applied to the source	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Object Id = "0" insideLeft = "100 points" SourceID = "0" top = "0 points" left =
"points" width = "650 points" height = "450 points">
    <Transformations></Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Object insideTop

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
insideTop	numeric	Vertical offset that will be applied to the source	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Object Id = "0" insideTop = "100 points" SourceID = "0" top = "0 points" left = "0
points" width = "650 points" height = "450 points">
    <Transformations></Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```


Object insideHeight

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
insideHeight	numeric	Describes the height size from the source image	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
<Object Id = "0" insideHeight = "250 points" SourceID = "0" top = "0 points" left = "0
points" width = "650 points" height = "450 points">
  <Transformations></Transformations>
</Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Object insideWidth

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
insideWidth	numeric	Describes the width size from the source image	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Object Id = "0" insideWidth = "100 points" SourceID = "0" top = "0 points" left =
"0 points" width = "650 points" height = "450 points">
    <Transformations></Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Object blendMode

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
blendMode	value	Set the blend mode of the object. Value: "normal", "multiply", "screen" or "over". Default value is normal.	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Sample-3.psd"/>
  <Source Id="1" URL="Embedded.xcm"/>
  <Source Id="85" URL="mask.svg"/>
</Sources>
<Layout>
<Page Id="0" height="60 cm" width="100 cm">
<Objects>
  <Object Id="0" MaintainAspectRatio="true" SourceID="0" blendMode="over" height="37
cm" left="0 cm" repeat="rapport" top="0 cm" width="40 cm">
    <Transformations>
      <Coloration coloID="1" idataID="2" index="0" specialcolor="0"/>
      <Mask SourceID="85" invert="no"/>
    </Transformations>
  </Object>
  <Object Id="1" MaintainAspectRatio="true" SourceID="0" blendMode="over" height="37
cm" left="40 cm" repeat="rapport" top="0 cm" width="40 cm">
    <Transformations>
      <Coloration coloID="1" idataID="2" index="0" specialcolor="0"/>
      <Mask SourceID="85" invert="no"/>
    </Transformations>
  </Object>
  <Object Id="2" MaintainAspectRatio="true" SourceID="0" blendMode="over" height="37
cm" left="0 cm" repeat="rapport" top="37 cm" width="40 cm">
    <Transformations>
      <Coloration coloID="1" idataID="2" index="0" specialcolor="0"/>
      <Mask SourceID="85" invert="no"/>
    </Transformations>
  </Object>
  <Object Id="3" MaintainAspectRatio="true" SourceID="0" blendMode="over" height="37
cm" left="40 cm" repeat="rapport" top="37 cm" width="40 cm">
    <Transformations>
      <Coloration coloID="1" idataID="2" index="0" specialcolor="0"/>
      <Mask SourceID="85" invert="no"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Object repeat [rapport]

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
repeat	value	Repeat mode. Value: "rapport"	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Object Id = "0" SourceID = "0" insideLeft = "0.5 rep" insideTop = "0.5 rep"
insideWidth = "2 rep" insideHeight = "2 rep" repeat = "rapport">
    <RapportInfo direction="V" fraction_high="1" fraction_low="2"/>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Object repeat [none]

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
repeat	value	Same object in repeat mode. Value: "none" or without the repeat attribute.	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Object Id = "0" SourceID = "0" insideLeft = "0.5 rep" insideTop = "0.5 rep"
insideWidth = "2 rep" insideHeight = "2 rep" repeat = "none">
    <RapportInfo direction="V" fraction_high="1" fraction_low="2"/>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Object repeat insideWidth/insideHeight [rapport]

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
repeat	value	Repeat mode using contents size for insideWidth and insideHeight attributes. Value: "rapport"	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
  <Page Id = "0">
    <Objects>
      <Object Id = "0" SourceID = "0" height="225 points" left="0 cm" top="0 cm"
width="325 points" maintainAspectRatio="true" insideLeft = "0 px" insideTop = "0 px"
insideWidth = "1 rep" insideHeight = "1 rep" repeat = "rapport">
        <RapportInfo direction="V" fraction_high="1" fraction_low="2"/>
      </Object>
    </Objects>
  </Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Object repeat insideWidth/insideHeight [none]

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
repeat	value	Repeat mode using contents size for insideWidth and insideHeight attributes. Value: "none"	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
  <Page Id = "0">
    <Objects>
      <Object Id = "0" SourceID = "0" height="225 points" left="0 cm" top="0 cm"
width="325 points" maintainAspectRatio="true" insideLeft = "0 px" insideTop = "0 px"
insideWidth = "1 rep" insideHeight = "1 rep" repeat = "rapport">
        <RapportInfo direction="V" fraction_high="1" fraction_low="2"/>
      </Object>
    </Objects>
  </Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Object autoPositionMask

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
autoPositionMask	value	Applies the automatic position areas for "top", left" and combination "top left".	required

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
  <Source Id = "1" URL = "Inedit.png"/>
</Sources>
<Layout>
<Page Id = "0" height="225 points" width="325 points">
<Objects>
  <Object Id = "0" SourceID = "0" left="0 cm" top="0 cm" height="225 points"
width="325 points" maintainAspectRatio="true" insideLeft = "0 px" insideTop = "0 px"
insideWidth = "1 rep" insideHeight = "1 rep" repeat = "rapport">
</Object>
  <Object Id = "1" SourceID = "1" autoPositionMask="left" left="105 points" top="90
points" maintainAspectRatio="true">
</Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```



Object autoResizeMask

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
autoResizeMask	value	Applies the automatic resize areas for "top", "left", "right", "bottom", "width" and "height".	required
autoResizePropLeft	value	Set a factor of increment of the autoresize as a fraction. Values: "1/1", "1/2", "1/3" etc.	required
autoResizePropTop	value	Set a factor of increment of the autoresize as a fraction. Values: "1/1", "1/2", "1/3" etc.	required
autoResizePropWidth	value	Set a factor of increment of the autoresize as a fraction. Values: "1/1", "1/2", "1/3" etc.	required
autoResizePropHeight	value	Set a factor of increment of the autoresize as a fraction. Values: "1/1", "1/2", "1/3" etc.	required
autoResizeMask	value	Applies the automatic resize areas for "top", "left", "right", "bottom", "width" and "height".	required
autoResizePropLeft	value	Set a factor of increment of the autoresize as a fraction. Values: "1/1", "1/2", "1/3" etc.	required
autoResizePropTop	value	Set a factor of increment of the autoresize as a fraction. Values: "1/1", "1/2", "1/3" etc.	required
autoResizePropWidth	value	Set a factor of increment of the autoresize as a fraction. Values: "1/1", "1/2", "1/3" etc.	required
autoResizePropHeight	value	Set a factor of increment of the autoresize as a fraction. Values: "1/1", "1/2", "1/3" etc.	required

```

<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
  <Source Id = "1" URL = "Inedit.psd"/>
</Sources>
<Layout>
<Page Id = "0" height="225 points" width="325 points">
  <Objects>
    <Object Id = "0" SourceID = "0" left="0 cm" top="0 cm" height="225 points"
width="325 points" maintainAspectRatio="true" insideLeft = "0 px" insideTop = "0 px"
insideWidth = "1 rep" insideHeight = "1 rep" repeat = "rapport">
    </Object>
    <Object Id = "1" SourceID = "1" autoResizeMask="height" autoResizePropHeight="1/1"
left="105 points" top="90 points">
    </Object>
  </Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>

```

Transformations

The <Transformations> group indicates what filters will be applied to the object during raster process.

NOTE: Filters are applied sequentially.

```
<Objects>
  <Object Id = "0" SourceID = "0">
    <Transformations>
      <AssignProfile CMM = "adobe" SourceID = "1"/>
    </Transformations>
  </Object>
</Objects>
```

Transformation - Flip

Flip is making the mirror effect.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
direction	value	Flip direction. Value: "horizontal" or "vertical".	required

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
  <Page Id = "0">
    <Objects>
      <Object Id = "0" SourceID = "0">
        <Transformations>
          <Flip direction = "horizontal"/>
        </Transformations>
      </Object>
    </Objects>
  </Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Transformation - Rotate

Rotates the object's content from its center point.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
degrees	numeric	Angle in degrees. Value 0° > 360°	required

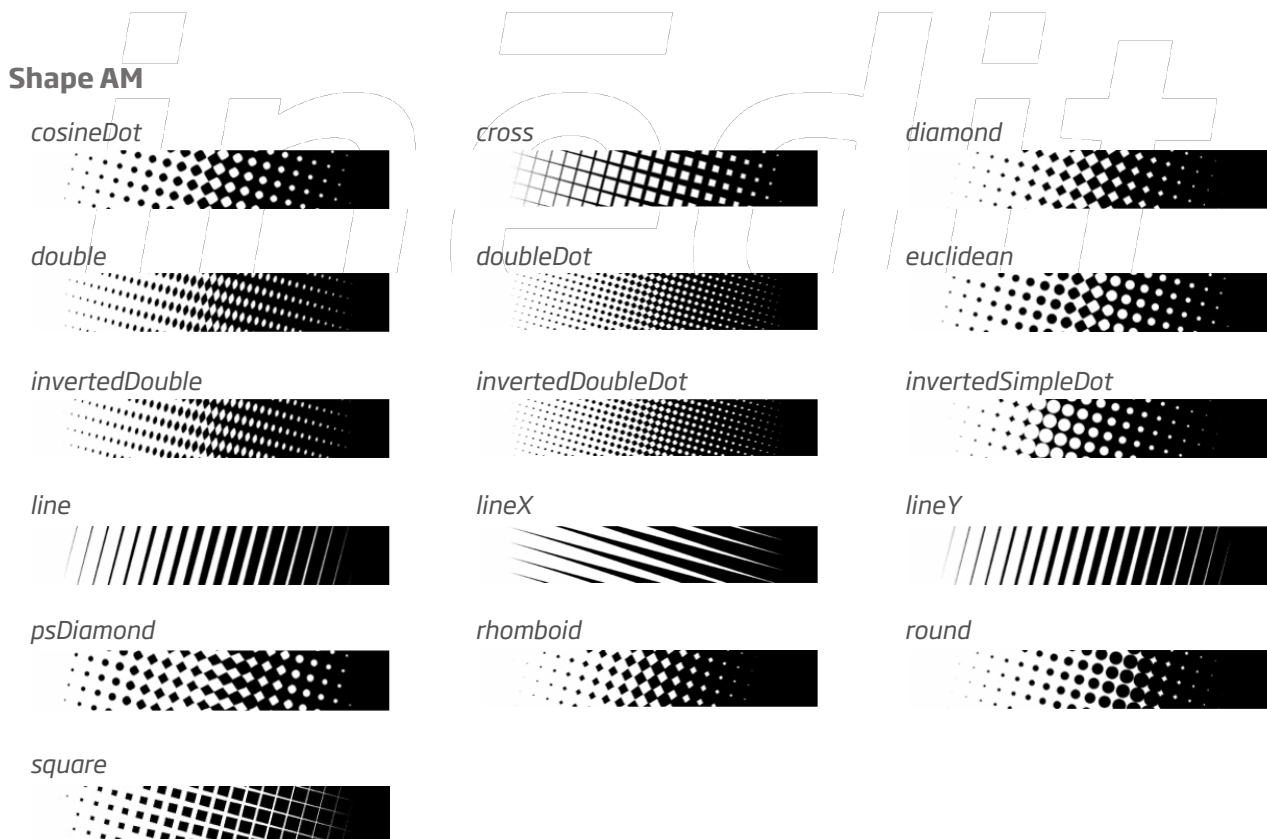
```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
  <Page Id = "0">
    <Objects>
      <Object Id = "0" SourceID = "0">
        <Transformations>
          <Rotate degrees = "90"/>
        </Transformations>
      </Object>
    </Objects>
  </Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

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Transformation - Halftone

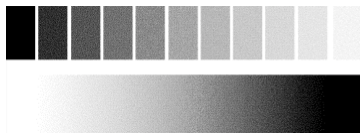
Applies screening filters.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
type	value	Shape type. Value: "AM" (traditional) or "FM" (stochastic)	required
levels	numeric	Number of gray levels.	required
shape	value	Form type. (see shape AM and FM samples)	required
cell	numeric	Cell size. It's a printing concept. Value: $1 > 5$	required
frequency	numeric	Lines per inch.	required
angle	numeric	Halftone angle.	required
seamless	value	Seamless defines if the halftone repeat or not in vertical direction. Value: "true" or "false".	required
dpiX	numeric	Rasters the image to a different X axis resolution than the original (from the source image)	optional
dpiY	numeric	Rasters the image to a different Y axis resolution than the original (from the source image)	optional
enhanceLevels	boolean	Advanced option that enhance visual levels for AM type halftones when raster resolution is very low in comparison with the halftone frequency. Default value is 'false'	optional

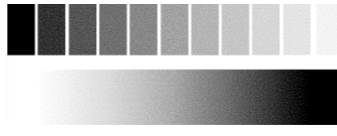


Shape FM

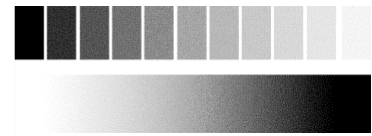
matrix



mixedMatrix



accumatrix



- Sample - Shape AM

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Object Id = "0" SourceID = "0">
    <Transformations>
      <Halftone type="AM" levels="2" shape="round" cell="1" frequency = "20.0"
angle = "45.0" seamless = "true"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

- Sample - Shape FM

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Spring.psd"/>
</Sources>
<Layout>
<Page Id="0">
<Objects>
  <Object Id="0" SourceID="0">
    <Transformations>
      <Halftone type="FM" levels="2" variant="matrix"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Transformation - AssignProfile

Performs an ICC profile assignment.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
CMM	value	Used engine. Value: "adobe", "Icms" or "native"	optional
SourceID	numeric	Reference to source ICC profile from <Sources> group that will be used for assignment.	required

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
  <Sources>
    <Source Id = "0" URL = "Spring.psd"/>
    <Source Id = "1" URL = "WideGamutRGB.icc"/>
  </Sources>
  <Layout>
    <Page Id = "0">
      <Objects>
        <Object Id = "0" SourceID = "0">
          <Transformations>
            <AssignProfile CMM = "adobe" SourceID = "1"/>
          </Transformations>
        </Object>
      </Objects>
    </Page>
  </Layout>
  <Output>
    <Space>RGB</Space>
  </Output>
</Job>
```

Transformation - ConvertProfile

Performs a color conversion using ICC profiles management.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
CMM	value	Used engine. Value: "adobe", "lcms" or "native". The "native" engine will use ICM © for Windows platforms and ColorSync © for Mac platforms. In 64bits "adobe" does not exists and is automatically replaced by "lcms".	required
SourceID	numeric	References to source ICC profile from <Sources> group. This field is exclusive.	required
Filename	numeric	References to source ICC profile path. This field is exclusive.	required
Space	value	To convert to space using working profiles (see output section). This field is exclusive.	required
intent	value	Rendering intent . Value: "perceptual", "saturation", "relative" or "absolute" or "match".	required
blackPoint	value	Black point compensation flag. Value: "yes", "true", "on", "enabled", "Y" or "1" to enable and "no", "false", "off", "disabled", "N" or "0" to disable	optional
whiteProof	value	White point simulation flag. Value: "yes", "true", "on", "enabled", "Y" or "1" to enable and "no", "false", "off", "disabled", "N" or "0" to disable	optional
blackProof	value	Black point simulation flag. Value: "yes", "true", "on", "enabled", "Y" or "1" to enable and "no", "false", "off", "disabled", "N" or "0" to disable	optional
quality	value	Define the precision of the conversion and the speed. More quality --> less speed. Value: "draft", "normal" or "hq". The default value is "normal".	optional

```

<?xml version="1.0" encoding="UTF-8"?>
<Job>
  <Sources>
    <Source Id = "0" URL = "Spring.psd"/>
    <Source Id = "1" URL = "WideGamut.icc"/>
  </Sources>
  <Layout>
    <Page Id = "0">
      <Objects>
        <Object Id = "0" SourceID = "0">
          <Transformations>
            <ConvertProfile CMM = "adobe" SourceID = "1" intent = "relative"/>
          </Transformations>
        </Object>
      </Objects>
    </Page>
  </Layout>
  <Output>
    <Space>RGB</Space>
  </Output>
</Job>

```

Transformation - ConvertProfiles

Performs a multiple color conversion using ICC profiles management.

NOTE: For ConvertProfiles the attributes and values are the same as used for ConvertProfile.

Transformation - MapLut

Applies a LUT to an image.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
Id	value	References to the curve file from <Sources> group. The preferred format is the "acv" Photoshop curves format. This field is exclusive.	required
Filename	value	References to source curve path. This field is exclusive.	required
curveIndex	numeric	Curve index within internal curves map.	required
channel	numeric	Where to apply the maplut filter. If it doesn't exist, the filter will be applied on all channels.	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Spring.psd"/>
  <Source Id="1" URL="curve.acv"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Object Id = "0" SourceID = "0">
    <Transformations>
      <MapLut Id = "1" curveIndex = "1"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Transformation - Gamma

Gamma filter.

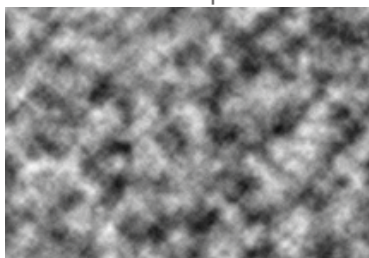
ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
exponent	numeric	Gamma value that will be applied. Values less than 1 will produce brighten images and values greater than 1 will produce darken images.	required
channel	numeric	The index channel where we apply the gamma filter. If it doesn't exist, the filter will be applied on all channels.	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
<Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id="0">
<Objects>
  <Object Id="0" SourceID="0">
    <Transformations>
      <Gamma exponent = "2.0"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
<Space>RGB</Space>
</Output>
</Job>
```

Transformation - BandAddition

This filter allows band/s addition and subtraction.

Addition file sample:



ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
<BandAddition>n</BandAddition>	numeric	With positive values it adds n empty channels to the object being processed. With negatives, it will subtract n channels from the object being processed.	required
SourceID	numeric	Reference to source image from <Sources> group which will be used to extract the desired channels. If the "channels" attribute is not present, all the channels will be extracted from the source image and added to the processed object.	optional
start	numeric	Fixes the extraction starting channel.	optional
channel	numeric	Channel index from source image to insert in the source object.	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
  <Sources>
    <Source Id="0" URL="Spring.psd"/>
    <Source Id="1" URL="Clouds.psd"/>
  </Sources>
  <Layout>
    <Page Id = "0">
      <Objects>
        <Object Id = "0" SourceID = "0">
          <Transformations>
            <BandAddition SourceID = "1" channel = "0"/>
          </Transformations>
        </Object>
      </Objects>
    </Page>
  </Layout>
  <Output>
    <InkSet NumChannels="4"/>
    <Space>RGB</Space>
  </Output>
</Job>
```

Transformation - Order

Channel inkset order specification.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
oldPosition	numeric	Original position in the source image.	required
position	numeric	New position in the object image being processed.	required

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id="0">
<Objects>
  <Object Id="0" SourceID="0">
    <Transformations>
      <InkSet NumChannels="3">
        <Order OldPosition="0" Position="2"/>
        <Order OldPosition="1" Position="1"/>
        <Order OldPosition="2" Position="0"/>
      </InkSet>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>MULTICHANNEL</Space>
  <ResolutionX>72</ResolutionX>
  <ResolutionY>72</ResolutionY>
  <ResolutionUnits>dpi</ResolutionUnits>
</Output>
</Job>
```

NOTE: This transformation has only effect in multichannel output images.

Transformation - Sharpen

Sharpen effect.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
radius	numeric	Mask radius.	required
frequency	numeric	Separate colors and tones of a photograph from its textures.	required
min	numeric	Doesn't brighten by more than min.	required
max	numeric	Can darken up to the max	required
sharpenMin	numeric	Sharpening in flat areas.	required
sharpenMax	numeric	Sharpening in jaggy areas.	required

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id="0">
<Objects>
  <Object Id="0" SourceID="0">
    <Transformations>
      <Sharpen radius = "7" frequency = "1.5" min = "20.0" max = "50.0" sharpenMin
= "1.0" sharpenMax = "2.0">
      </Sharpen>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Transformation - Blur

Gaussian blur effect.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
radius	numeric	Blur radius.	required

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
  <Page Id = "0">
    <Objects>
      <Object Id = "0" SourceID = "0">
        <Transformations>
          <Blur radius = "0.6"/>
        </Transformations>
      </Object>
    </Objects>
  </Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

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Transformation - Texturize

Textur effect.

Addition file sample:



ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
textureID	numeric	Reference to the texture image from <Sources> group.	required
blendMode	value	Determines how two layers are blended into each other. Value: "multiply" or "screen".	required
textureChannel	numeric	Channel used to texturize. Value: Default is 0.	optional
channel	numeric	Processed object's destination channel. Applied on all channels by default.	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
  <Sources>
    <Source Id="0" URL="Spring.psd"/>
    <Source Id="1" URL=" Logo_Inedit_WM.tif"/>
  </Sources>
  <Layout>
    <Page Id = "0">
      <Objects>
        <Object Id = "0" SourceID = "0">
          <Transformations>
            <Texturize textureID = "1" blendMode = "screen"/>
          </Transformations>
        </Object>
      </Objects>
    </Page>
  </Layout>
  <Output>
    <Space>RGB</Space>
  </Output>
</Job>
```

Transformation - Text

Inserts a text into the document.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
value	value	The text that will be inserted.	required
fontID	numeric	Reference to the font file from <Sources> group.	optional
fontsize	numeric	Size in points.	required
alignment	value	Text alignment. Value: "center", "left", "right". Default is "left".	optional
top	numeric	Y starting point within <Object> bounds. Value: Default is 0.	optional
left	numeric	X starting point within <Object> bounds. Value: Default is 0.	optional
invert	value	Paint text in negative mode. Value: "N" (no) or "Y" (yes).	optional
maxwidth	numeric	Text maximum width. By default it uses the <Object> width.	optional
textRGBAColor	numeric	textRGBAColor="255,0,0" for a red text, and textRGBAColor="255,0,0,128" for half transparent text the 4th component is the alpha, 255 is opaque, and 0 is completely transparent	optional
backgroundRGBAColor	numeric	backgroundRGBAColor="255,0,0" for a red text, and backgroundRGBAColor="255,0,0,128" for half transparent text the 4th component is the alpha, 255 is opaque, and 0 is completely transparent	optional

If you want to insert new line in text value attribute use:

```
"&#xD;" = "\r"
```

```
"&#xA;" = "\n"
```

Sample:

```
<Text alignment="left" fontsize="15" left="0 points" maxwidth="100 points" top="0 points" value = "1&#xA;2&#13;3"/>
```

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Spring.psd"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Object Id = "0" SourceID = "0">
    <Transformations>
      <Text value = "This is a DEMO" fontsize = "36" alignment = "left" top = "110
points" left = "180 points" maxwidth = "500 points"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Transformation - Invert

Inverts the output components values.

NOTE: For "Invert" attributes and values doesn't exist.

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Spring.psd"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Object Id = "0" SourceID = "0">
    <Transformations>
      <Invert/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Transformation - Scale

Scales the object's content.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
width	numeric	New width. Scale factor if percent (%) units are used.	required
height	numeric	New height. Scale factor if percent (%) units are used.	required
h	numeric	Horizontal width. Scale factor if percent (%) units are used.	required
v	numeric	Vertical height. Scale factor if percent (%) units are used.	required
ResolutionX	numeric	New X axis resolution.	required
ResolutionY	numeric	New Y axis resolution.	required
ResolutionUnits	numeric	Resolution units. Value: Default is dpi.	required
interpolationMethod	value	Defines the used method for interpolation operations. Value: "default", "nearest", "bilinear", "bicubic". The "default" method equals to "bilinear".	required

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Spring.psd"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Object Id = "0" SourceID = "0">
    <Transformations>
      <Scale ResolutionX="100" ResolutionY="100"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Transformation - Crop

Extracts a portion of an image.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
top	numeric	Y axis starting point.	required
left	numeric	X axis starting point.	required
width	numeric	Width to be extracted.	required
height	numeric	Height to be extracted.	required

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Object Id = "0" SourceID = "0">
    <Transformations>
      <Crop left = "550 px" top = "350 px" width = "500 px" height = "400 px"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```



Transformation - Posterize

Reduce the colour graduation with abrupt changes from one tone to another.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
levels	numeric	The total number of colors $2 > 256$.	required

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id="0">
<Objects>
  <Object Id="0" SourceID="0">
    <Transformations>
      <Posterize levels = "2"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id="0">
<Objects>
  <Object Id="0" SourceID="0">
    <Transformations>
      <Posterize levels = "2"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```


Transformation - Gradient

Draws a colour gradient or composition gradient.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
name	value	Colour name identifier (for colour substitution proposes).	required
space	value	Space of the colour information. Value "GRAY", "RGB", "RGB16", "RGB32", "CMYK", "CMYK16", "CMYK32", "LAB", "LAB16", "LAB32", "MULTICHANNEL", "MULTICHANNEL16", "MULTICHANNEL32", "NCHA5", "NCHA6", "NCHA7", "NCHA8"	required
profileName	value	Description of the colour profile of the gradient (internal profile name).	required
alias	value	Path of the colour profile of the gradient	required
useProfile	value	Flag to enable use the profile. Value: "Y" (yes) or "N" (no).	required
left	numeric	Fixes the horizontal starting point relative to the object. Value: Default is 0.	optional
top	numeric	Fixes the vertical starting point relative to the object. Value: Default is 0.	optional
height	numeric	Fixes the graphic's container height.	required
width	numeric	Fixes the graphic's container width.	required
percentbase	numeric	This is the maximum numbers of colour positions. Value: 255 or 100.	optional
percentages	numeric	Colour percentages to draw. Example: "100,75,50,25" with percentbase="100" draw a gradient with 4 colours with 100%, 75%, 50% and 25% of the colour.	optional
borderColor	value	Hexadecimal expression of a rib border colour in format #RRGGBB.	required
composition	value	Activates composition space draw mode (numeric colour values). Value "RGB", "CMYK", "GRAY", "LAB", "HSL", "HSB" or "LCH".	required
formater	value	Text to set the caption name and format of each colour component. Example: "R: %d G: %d B: %d" where %d is the value of each component.	required
arrange	value	Composition arrange. Value: "horizontal" or "vertical".	required
fontID	numeric	Reference to the font file from <Sources> group.	optional
fontSize	numeric	Size in points.	required
alignment	numeric	Text alignment. Value: "center", "left", "right". Default is "left".	optional
invert	value	Paint text in negative mode. Value: The value is a sequence of colour components and position as: R,G,G@Position;R,G,G@Position;...	optional

```

<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source ID="0" URL="@CIELab"/>
</Sources>
<Layout>
<Page Id="0">
<Objects>
  <Object Id = "1">
    <Transformations>
      <Gradient Space="LAB32" name="Color-1" alias="@CIELAB" width = "50 points"
height = "50 points" top = "0 points" left = "0
points">62.75,30.166,60.983@0;78.269,19.556,50.336@76;85.754,11.052,34.252@153;</Gradient
t>
      <Gradient Space="LAB32" name="Color-2" alias="@CIELAB" width = "50 points"
height = "50 points" top = "0 points" left = "55 points">63.960,-27.730,-
19.560@0;70.510,-24.840,-17.020@56;77.121,-18.611,-11.786@110;</Gradient>
      <Gradient Space="LAB32" name="Color-3" alias="@CIELAB" width = "50 points"
height = "50 points" top = "0 points" left = "110
points">46.200,60.860,41.970@0;49.330,60.980,42.610@24;52.040,59.970,41.920@47;55.750,57
.660,40.180@72;</Gradient>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>LAB</Space>
</Output>
</Job>

```



Transformation - Rule

Text to use as gradient percentages information as one ruler.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
value	value	Text of percentages to draw.	required
fontID	numeric	Reference to the font file from <Sources> group.	optional
fontSize	numeric	Size in points.	required
alignment	numeric	Text alignment. Value: "center", "left", "right". Default is "left".	optional
left	numeric	X starting point within <Object> bounds. Value: Default is 0.	optional
top	numeric	Y starting point within <Object> bounds. Value: Default is 0.	optional
invert	value	Paint text in negative mode.	optional
maxwidth	value	Text maximum width. By default it uses the <Object> width.	optional

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
  <Sources>
    <Source Id = "1" URL = "Arial Narrow.ttf"/>
  </Sources>
  <Layout>
    <Page Id="0">
      <Objects>
        <Object Id = "1">
          <Transformations>
            <Rule value="100%,90%,80%,70%,60%,50%,40%,30%,20%,10%,0%" fontID = "1"
fontSize = "10" alignment = "left" maxwidth = "275 points" top = "0 points" left = "0
points"/>
          </Transformations>
        </Object>
      </Objects>
    </Page>
  </Layout>
  <Output>
    <Space>LAB</Space>
  </Output>
</Job>
```

Transformation - Code

Text to use as QR code.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
value	value	Text to encode.	required
type	value	QR. Default is "QR".	required
frame	numeric	Size of the (white) frame around the code.	required

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
  <Sources>
  </Sources>
</Layout>
<Page Id="0">
<Objects>
  <Object Id="0" width="2cm" height="2cm">
    <Transformations>
      <Code value="AAAA" frame ="5mm" type="QR"/>
    </Transformations>
  </Object>
  <Object Id="1" width="2cm" height="2cm" left="2 cm">
    <Transformations>
      <Code value="AAAA BBBB CCCC DDDD" frame ="5mm" type="QR"/>
    </Transformations>
  </Object>
  <Object Id="2" width="2cm" height="2cm" left="4cm">
    <Transformations>
      <Code frame ="5mm" value="AAAA BBBB CCCC DDDD EEEE FFFF GGGG HHHH IIII JJJJ
KKKK LLLL" type="QR"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
  <ResolutionX>300</ResolutionX>
  <ResolutionY>300</ResolutionY>
  <ResolutionUnits>dpi</ResolutionUnits>
</Output>
</Job>
```

Transformation - Choke

Reduces rendering border using shapes.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
shape	value	<ul style="list-style-type: none"> squared shaped with values like: "rect", "rectangle", "square" rounded shape with values like: "circle", "oval", "ellipse" 	required
bandAlpha	value	<ul style="list-style-type: none"> specify the transparency band to use as a mask for choking -1 (default) for not using alpha band as a mask 	optional
smoothness	string	<ul style="list-style-type: none"> "none", "no", "false" (default) for not using smoothness "linear", "yes", "true" for using a linear band subtraction 	optional

SHAPE - square

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL=" Choke3pix.tif"/>
</Sources>
<Layout>
<Page ID="0">
<Objects>
  <Object Id="1" SourceID="0">
    <Transformations>
      <Choke band="0" left="3px" right="3px" top="3px" shape="square"></Choke>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
</Output>
</Job>
```

SHAPE - circle

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL=" Choke3pix.tif"/>
</Sources>
<Layout>
<Page ID="0">
<Objects>
  <Object Id="1" SourceID="0">
    <Transformations>
      <Choke band="0" left="3px" right="3px" top="3px" shape="circle"></Choke>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
</Output>
</Job>
```

Transformation - SpecColoration

Spectral Coloration filter

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
illumination	value	Spectral light. Values: A, B, C, D50, D55, D65, D75.	required
observer	value	Light angle. Values: 2 or 10.	required
Color SourceID	numeric	Reference to source CGATS file from <Sources> group that will be used for assignment.	required

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
  <Sources>
    <Source Id = "0" URL = "Sample-3.psd"/>
    <Source Id = "1" URL = "DRD_1.txt"/>
    <Source Id = "2" URL = "DRD_2.txt"/>
    <Source Id = "3" URL = "DRD_3.txt"/>
  </Sources>
  <Layout>
    <Page Id = "0">
      <Objects>
        <Object Id = "0" SourceID = "0">
          <Transformations>
            <SpecColoration illumination="D65" observer="10">
              <Color SourceID="1"/>
              <Color SourceID="2"/>
              <Color SourceID="3"/>
            </SpecColoration>
          </Transformations>
        </Object>
      </Objects>
    </Page>
  </Layout>
  <Output>
    <ResolutionUnits>dpi</ResolutionUnits>
    <Space>LAB</Space>
    <WorkingProfile></WorkingProfile>
    <BitsPerComponent>16</BitsPerComponent>
  </Output>
</Job>
```

Transformation - Mask

Mask is a transformation to apply masks over images.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
SourceID	value	ID of mask source image	required
invert	value	Invert the mask image. Value: "no" and "yes"	required

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Sample-3.psd"/>
  <Source Id="1" URL="Embedded.xcm"/>
  <Source Id="85" URL="mask.svg"/>
</Sources>
<Layout>
<Page Id="0" height="60 cm" width="100 cm">
<Objects>
  <Object Id="0" MaintainAspectRatio="true" SourceID="0" blendMode="over" height="37
cm" left="0 cm" repeat="rapport" top="0 cm" width="40 cm">
    <Transformations>
      <Coloration coloID="1" idataID="2" index="0" specialcolor="0"/>
      <Mask SourceID="85" invert="no"/>
    </Transformations>
  </Object>
  <Object Id="1" MaintainAspectRatio="true" SourceID="0" blendMode="over" height="37
cm" left="40 cm" repeat="rapport" top="0 cm" width="40 cm">
    <Transformations>
      <Coloration coloID="1" idataID="2" index="0" specialcolor="0"/>
      <Mask SourceID="85" invert="no"/>
    </Transformations>
  </Object>
  <Object Id="2" MaintainAspectRatio="true" SourceID="0" blendMode="over" height="37
cm" left="0 cm" repeat="rapport" top="37 cm" width="40 cm">
    <Transformations>
      <Coloration coloID="1" idataID="2" index="0" specialcolor="0"/>
      <Mask SourceID="85" invert="no"/>
    </Transformations>
  </Object>
  <Object Id="3" MaintainAspectRatio="true" SourceID="0" blendMode="over" height="37
cm" left="40 cm" repeat="rapport" top="37 cm" width="40 cm">
    <Transformations>
      <Coloration coloID="1" idataID="2" index="0" specialcolor="0"/>
      <Mask SourceID="85" invert="no"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Advanced Transformations

VirtualVision Transformation

Describes the way the engine will make simulation over image models.

Types

VirtualVision supports 3 simulation types:

TYPE	DESCRIPTION	REQUIREMENT
Panel	Panel of the virtual object.	required
Group	Panel group of the virtual object.	required
Collection	Group of panel group of the virtual object.	required

NOTE: One type for one virtual vision allowed. Does not allow duplicates and mix of types.

Panel:

```
<Transformations>
<VirtualVision previewMode="Normal" background="Image" shadows="yes">
<Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0" offsetY="0"
scale="1.0"/>
</VirtualVision>
</Transformations>
```

Group:

```
<Transformations>
<VirtualVision previewMode="Normal" background="Image" shadows="yes">
<Group Id="0" mode="Image" textureID="1" rotation="0" offsetX="0" offsetY="0"
scale="1.0"/>
</VirtualVision>
</Transformations>
```

Collection:

```
<Transformations>
<VirtualVision previewMode="Normal" background="Image" shadows="yes">
<Collection Id="0" mode="Image" textureID="1" rotation="0" offsetX="0"
offsetY="0" scale="1.0"/>
</VirtualVision>
</Transformations>
```


VirtualVision transformation valid tags

background

TAG	VALUE	DESCRIPTION	REQUIREMENT
normal	value	for textures and colors	required
lowquality	value	for low quality textures and colors	optional
squares	value	for automatic square textures	optional

Normal:

```
<Transformations>
<VirtualVision previewMode="Normal" background="Image" shadows="yes">
<Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0" offsetY="0"
scale="1.0"/>
</VirtualVision>
</Transformations>
```

Lowquality:

```
<Transformations>
<VirtualVision previewMode="lowquality" background="Image" shadows="yes">
<Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0" offsetY="0"
scale="1.0"/>
</VirtualVision>
</Transformations>
```

Squares:

```
<Transformations>
<VirtualVision previewMode="squares" background="Image" shadows="yes">
<Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0" offsetY="0"
scale="1.0"/>
</VirtualVision>
</Transformations>
```

background

TAG	VALUE	DESCRIPTION	REQUIREMENT
image	value	background is the image.	required
white	value	background is white.	optional
transparent	value	background is transparent.	optional

Image:

```
<Transformations>
<VirtualVision previewMode="Normal" background="Image" shadows="yes">
<Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0" offsetY="0"
scale="1.0"/>
</VirtualVision>
</Transformations>
```

White:

```
<Transformations>
<VirtualVision previewMode="Normal" background="White" shadows="yes">
<Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0" offsetY="0"
scale="1.0"/>
</VirtualVision>
</Transformations>
```

Transparent:

```
<Transformations>
<VirtualVision previewMode="Normal" background="Transparent" shadows="yes">
<Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0" offsetY="0"
scale="1.0"/>
</VirtualVision>
</Transformations>
```

shadow

TAG	VALUE	DESCRIPTION	REQUIREMENT
yes	value	to use shadow channel.	required
no	value	to not use shadow channel.	optional

Yes:

```
<Transformations>
<VirtualVision previewMode="Normal" background="Image" shadows="yes">
<Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0" offsetY="0"
scale="1.0"/>
</VirtualVision>
</Transformations>
```

No:

```
<Transformations>
<VirtualVision previewMode="Normal" background="Image" shadows="no">
<Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0" offsetY="0"
scale="1.0"/>
</VirtualVision>
</Transformations>
```

Attributes

You can configure the filter by panels, groups or collection. In all cases the valid attributes are:

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
id	numeric	identifier for panel, group or collection.	required
mode	value	apply texture mode. Values: "disabled" deactivate, "image" apply a image as texture, "color" apply a color as texture.	required
textureID	numeric	identifier of source id texture file.	required
rotation	numeric	Texture rotation in degrees.	required
offsetX	numeric	Texture horizontal offset in pixels.	required
offsetY	numeric	Texture vertical offset in pixels.	required
scale	value	Texture reduction scale.	required
repeat	numeric	repeating the texture of the grid. Values: "none" or "rapport".	required

Color configuration

To configure colors the valid attributes are:

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
ProfileID	numeric	identifier of source id profile file.	optional
Filename	value	to set the file path of the profile.	optional
Space	value	Color space. The colors values are specified between 0...255 separated by commas.	optional

```
<Transformations>
<VirtualVision previewMode="Normal" background="Image" shadows="yes">
<Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0" offsetY="0"
scale="1.0"/> <Panel Id="1" mode="Color"/>
<Color ProfileID="2" Space="RGB">222,123,42</Color>
</Panel>
</VirtualVision>
</Transformations>
```

Rapport configuration

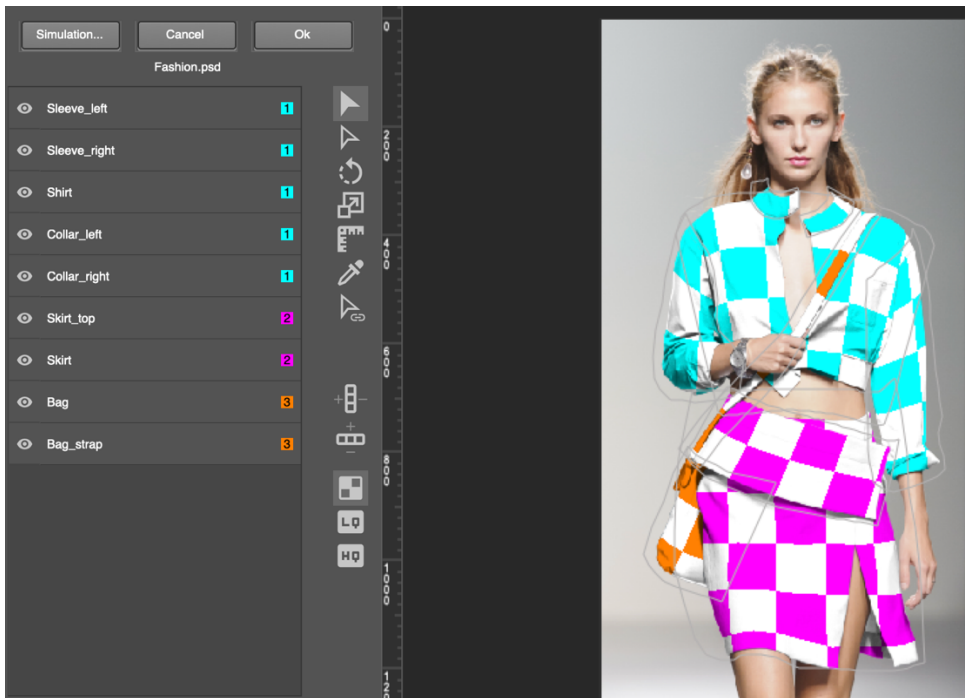
To configure the texture rapport.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
direction	value	Repeat direction. Values: "0" or "V" or "vertical" (vertical) or "1" or "H" or "horizontal" (horizontal). Default is 1.	required
fraction_high/fraction_low	value	The rapport drop as a fractional number or units. Default is 1/1.	required

```
<Transformations>
<VirtualVision previewMode="Normal" background="Image" shadows="yes">
<Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0" offsetY="0"
scale="1.0">
<RapportInfo direction="0" fraction_high="1" fraction_low="2"/>
</Panel>
</VirtualVision>
</Transformations>
```

VirtualVision Practical Examples

In the practical examples we will use a VirtualVision object with 9 panels. The panels are grouped in 3 groups: Jacket (cyan), Skirt (magenta) and Bag (orange).



Sample - Panel 1 (Sleeve_left):

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Fashion.psd"/>
  <Source Id="1" URL="Sample-3_1.jpg"/>
  <Source Id="2" URL="Sample-3_2.jpg"/>
  <Source Id="3" URL="Sample-3_3.jpg"/>
</Sources>
<Layout>
<Page Id = "0" >
<Objects>
  <Object Id="0" SourceID="0" scale="before">
    <Transformations>
      <VirtualVision previewMode="Normal" background="Image" shadows="yes">
        <Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2"/>
        </Panel>
      </VirtualVision>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
```

</Job>

inēdit

Sample - Panel 5 (Jacket):

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Fashion.psd"/>
  <Source Id="1" URL="Sample-3_1.jpg"/>
  <Source Id="2" URL="Sample-3_2.jpg"/>
  <Source Id="3" URL="Sample-3_3.jpg"/>
</Sources>
<Layout>
<Page Id = "0" >
<Objects>
  <Object Id="0" SourceID="0" scale="before">
    <Transformations>
      <VirtualVision previewMode="Normal" background="Image" shadows="yes">
        <Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2"/>
        </Panel>
        <Panel Id="1" mode="Image" textureID="2" rotation="0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2"/>
        </Panel>
        <Panel Id="2" mode="Image" textureID="2" rotation="0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2"/>
        </Panel>
        <Panel Id="3" mode="Image" textureID="2" rotation="0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2"/>
        </Panel>
      </VirtualVision>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Sample - Panel 7 (Jacket and Skirt):

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Fashion.psd"/>
  <Source Id="1" URL="Sample-3_1.jpg"/>
  <Source Id="2" URL="Sample-3_2.jpg"/>
  <Source Id="3" URL="Sample-3_3.jpg"/>
</Sources>
<Layout>
<Page Id = "0" >
<Objects>
  <Object Id="0" SourceID="0" scale="before">
    <Transformations>
      <VirtualVision previewMode="Normal" background="Image" shadows="yes">
        <Panel Id="0" mode="Image" textureID="1" rotation="0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2"/>
        </Panel>
        <Panel Id="1" mode="Image" textureID="1" rotation="0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2"/>
        </Panel>
        <Panel Id="2" mode="Image" textureID="1" rotation="0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2"/>
        </Panel>
        <Panel Id="3" mode="Image" textureID="1" rotation="0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2"/>
        </Panel>
        <Panel Id="4" mode="Image" textureID="1" rotation="0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2"/>
        </Panel>
        <Panel Id="5" mode="Image" textureID="2" rotation="0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2"/>
        </Panel>
        <Panel Id="6" mode="Image" textureID="2" rotation="0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2"/>
        </Panel>
      </VirtualVision>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Sample - Group 1 (Jacket):

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Fashion.psd"/>
  <Source Id="1" URL="Sample-3_1.jpg"/>
  <Source Id="2" URL="Sample-3_2.jpg"/>
  <Source Id="3" URL="Sample-3_3.jpg"/>
</Sources>
<Layout>
<Page Id = "0" >
<Objects>
  <Object Id="0" SourceID="0" scale="before">
    <Transformations>
      <VirtualVision previewMode="Normal" background="Image" shadows="yes">
        <Group Id="1" mode="Image" textureID= "1" rotation="0.0" offsetX="0"
offsetY="0" scale="1.0" >
          <RapportInfo direction="0" fraction_high="1" fraction_low="2" />
        </Group>
      </VirtualVision>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```



Sample - Group 3 (Jacket, Skirt and Bag):

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Fashion.psd"/>
  <Source Id="1" URL="Sample-3_1.jpg"/>
  <Source Id="2" URL="Sample-3_2.jpg"/>
  <Source Id="3" URL="Sample-3_3.jpg"/>
</Sources>
<Layout>
<Page Id = "0" >
<Objects>
  <Object Id="0" SourceID="0" scale="before">
    <Transformations>
      <VirtualVision previewMode="Normal" background="Image" shadows="yes">
        <Group Id="1" mode="Image" textureID= "1" rotation="0.0" offsetX="0"
offsetY="0" scale="1.0" >
          <RapportInfo direction="0" fraction_high="1" fraction_low="2" />
        </Group>
        <Group Id="2" mode="Image" textureID="2" rotation="0.0" offsetX="0"
offsetY="0" scale="1.0" >
          <RapportInfo direction="0" fraction_high="1" fraction_low="2" />
        </Group>
        <Group Id="3" mode="Image" textureID="3" rotation="0.0" offsetX="0"
offsetY="0" scale="1.0" >
          <RapportInfo direction="0" fraction_high="1" fraction_low="2" />
        </Group>
      </VirtualVision>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Sample - Collection 1(Jacket)

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Fashion.psd"/>
  <Source Id="1" URL="Sample-3_1.jpg"/>
  <Source Id="2" URL="Sample-3_2.jpg"/>
  <Source Id="3" URL="Sample-3_3.jpg"/>
</Sources>
<Layout>
<Page Id = "0" >
<Objects>
  <Object Id="0" SourceID="0" scale="before">
    <Transformations>
      <VirtualVision previewMode="Normal" background="Image" shadows="yes">
        <Collection Id="0" mode="Image" textureID="1" rotation="0.0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2" />
        </Collection>
      </VirtualVision>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```



Sample - Collection 3 (Jacket, Skirt and Bag)

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id="0" URL="Fashion.psd"/>
  <Source Id="1" URL="Sample-3_1.jpg"/>
  <Source Id="2" URL="Sample-3_2.jpg"/>
  <Source Id="3" URL="Sample-3_3.jpg"/>
</Sources>
<Layout>
<Page Id = "0" >
<Objects>
  <Object Id="0" SourceID="0" scale="before">
    <Transformations>
      <VirtualVision previewMode="Normal" background="Image" shadows="yes">
        <Collection Id="0" mode="Image" textureID="1" rotation="0.0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2" />
        </Collection>
        <Collection Id="1" mode="Image" textureID="2" rotation="0.0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2" />
        </Collection>
        <Collection Id="2" mode="Image" textureID="3" rotation="0.0" offsetX="0"
offsetY="0" scale="1.0">
          <RapportInfo direction="0" fraction_high="1" fraction_low="2" />
        </Collection>
      </VirtualVision>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Coloration Transformation

Describes the way the engine will make coloration over images. It is built to use colorations data to transform them in the XML.

INFO: Refer to section **Colorations XCM** to see the XCM structure and contents.

You can configure the filter by panels, groups or collection. In all cases the valid attributes are:

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
coloId	numeric	id source of xcm or image embedded colorways	required
index	numeric	index order in the xcm file. Base index is "0".	required
enable	numeric	to activate or deactivate the filter. Default is activated "0".	optional
idatID	numeric	id source of imagedata .id	optional

The following examples are showing different cases in uses for coloration attributes.

Source XCM file:

```
<Job>
<Sources>
  <Source Id = "0" URL = "Sample-3.psd"/>
  <Source Id = "1" URL = "Sample-3_Variant.xcm"/>
  <Source Id = "2" URL = "WideGamut.icc"/>
</Sources>
<Layout>
  <Page Id = "0">
    <Objects>
      <Object Id = "0" SourceID = "0">
        <Transformations>
          <Coloration coloID = "1" index = "0"/>
        </Transformations>
      </Object>
    </Objects>
  </Page>
</Layout>
<Output>
  <Space>LAB</Space>
</Output>
</Job>
```

Source embedded XCM contents:

```
<Job>
<Sources>
  <Source Id = "0" URL = "Sample-3.psd"/>
  <Source Id = "1" Type = "XCM">
    <Data>
      <Colorations Name="50-0135" UseCompositeChannels="Y">
        <Coloration BackPredominance="255" DarkMode="0" DarkPredominance="102"
ForePredominance="255" Location="Remote" LockEdit="Y" Password="InSw" MaxInk="2295"
Name="P10_MM" SimulationType="ProductionPigment" SupportDensity="255">
<IDataHex>0000003C4375444901000A457374616E7465726961CD070000000645732D303031CD4375444901
000E466F6E646F457374616D7061646FCD030000000024E6FCD</IDataHex>
        <ProfileInfo Alias="@sRGB" BlackPoint="D" Intent="Default" PreserveColors="N"
Space="RGB"/>
        <ProofingInfo Active="N" BlackInk="Y" BlackPoint="Y" GammutColor="255,0,0"
GammutSpace="RGB" Intent="Relative" PreserveColors="N" ShowGammut="N" Space="RGB"
WhitePaper="Y"/>
        <ColorationItem ChannelNo="-2" ChannelIndex="0" ID="0" Method="Disable"
Opacity="255" Transparency="255" Visible="Y">
          <Gradient Space="RGB"
UseProfile="N">255,255,255@0;255,255,255@255</Gradient>
        </ColorationItem>
        <ColorationItem ChannelNo="0" ChannelIndex="1" ID="1" Method="Multiply"
Opacity="255" Transparency="255" Visible="Y">
          <Gradient Space="LAB32" UseProfile="N">86.0,1.0,2.0@0</Gradient>
          <ColorLibData>[Name|19|13-0002 P]</ColorLibData>
        </ColorationItem>
        <ColorationItem ChannelNo="1" ChannelIndex="2" ID="2" Method="Multiply"
Opacity="255" Transparency="255" Visible="Y">
          <Gradient Space="LAB32" UseProfile="N">59.0,64.0,58.0@0</Gradient>
          <ColorLibData>[Name|19|17-1462 P]</ColorLibData>
        </ColorationItem>
      </Coloration>
    </Colorations>
  </Data>
</Source>
  <Source Id = "2" URL = "WideGamut.icc"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Object Id = "0" SourceID = "0">
    <Transformations>
      <Coloration coloID = "1" index = "0"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>LAB</Space>
</Output>
</Job>
```

Source embedded image coloration:

```
<Job>
<Sources>
  <Source Id = "0" URL = "Sample-3.psd"/>
</Sources>
<Layout>
  <Page Id = "0">
    <Objects>
      <Object Id = "0" SourceID = "0">
        <Transformations>
          <Coloration coloID = "0" index = "0"/>
        </Transformations>
      </Object>
    </Objects>
  </Page>
</Layout>
<Output>
  <Space>LAB</Space>
</Output>
</Job>
```



Repetition

The <Repetition> is a loop of items in object.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
count	number	Numbers of loops as integer value from 0 to count-1 (both included).	required
top	value	Top position of first object in the repetition.	optional
left	value	Left position of first object in the repetition.	optional
width	value	Width of each element of the repetition.	optional
height	value	Height of each element of the repetition.	optional
direction	value	Direction of the repetition. Default direction is horizontal [H/V].	optional
list	value	Container list to iterate in the repetition loop.	optional
item	value	Variable item to substitute in the iterated objects.	optional

Iteration loop process creates a variable of list as "LIST@INDEX" to set as variable to replace in repetition objects.

In the samples, iteration loop process will produce:

```
Iteration 0: aSource = sourceid@0
Iteration 1: aSource = sourceid@1
Iteration 2: aSource = sourceid@2
```

and each object will resolve their variables:

```
Iteration 0: ${sourceid@0.Id} = 0
Iteration 1: ${sourceid@1.Id} = 1
Iteration 2: ${sourceid@2.Id} = 2
```

The refactored result will look like:

```
<Object Id = "0" SourceID = "0" top = "0 points" left = "0 points">
</Object>
<Object Id = "0" SourceID = "1" top = "0 points" left = "150 points">
</Object>
<Object Id = "0" SourceID = "2" top = "0 points" left = "300 points">
</Object>
```

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Repetition_A.tif"/>
  <Source Id = "1" URL = "Repetition_B.tif"/>
  <Source Id = "2" URL = "Repetition_C.tif"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Repetition count="3" top = "0 points" direction="H" list="sourceid" item="aSource"
width = "150 points" height = "150 points">
    <Object Id = "0" SourceID = "${aSource}.Id" top = "0 points" left = "0
points">
      </Object>
    </Repetition>
  </Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

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Conditional

The <Conditional> group is an optional part of the page. It indicates what objects will be part of the page.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
condition	value	String value to compare with 'equals' attribute value or String boolean value (*)	required
equals	value	String value to compare with 'condition'.	optional
negate	value	Invert the result of the condition (*).	optional
enable	value	Activate or deactivate condition check (*).	optional

(*) Boolean values:

- TRUE: yes, true, on, enabled, 1, Y
- FALSE: no, false, off, disabled, 0, N

Conditional - Text 1

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Conditional condition="${sourceId@0.width}" equals="${sourceId@0.height}"
negate="N">
    <Object Id = "0" SourceID = "0">
      <Transformations>
        <Text value = "Square image" fontsize = "20" alignment = "left" maxwidth
= "250 points"/>
      </Transformations>
    </Object>
  </Conditional>
  <Conditional condition="${sourceId@0.width}" equals="${sourceId@0.height}"
negate="Y">
    <Object Id = "0" SourceID = "0">
      <Transformations>
        <Text value = "Rectangular image" fontsize = "20" alignment = "left"
maxwidth = "250 points"/>
      </Transformations>
    </Object>
  </Conditional>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Conditional - Text 2

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Repetition_A.tif"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
  <Conditional condition="{sourceId@0.Document.width}"
equals="{sourceId@0.Document.height}" negate="N">
    <Object Id = "0" SourceID = "0">
      <Transformations>
        <Text value = "Square image" fontsize = "20" alignment = "left" maxwidth
= "250 points"/>
      </Transformations>
    </Object>
  </Conditional>
  <Conditional condition="{sourceId@0.Document.width}"
equals="{sourceId@0.Document.height}" negate="Y">
    <Object Id = "0" SourceID = "0">
      <Transformations>
        <Text value = "Rectangular image" fontsize = "20" alignment = "left"
maxwidth = "250 points"/>
      </Transformations>
    </Object>
  </Conditional>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Output

The <Output> section describes the output general settings for a job. Output depth, resolution, color space, inkset order or file format are some of the parameters that can be customized in this section.

```
<Output>
  <OutputEncodingOptions>
    <CompressionType>lzw</CompressionType>
  </OutputEncodingOptions>
  <WorkingProfile CMM="adobe"/>
  <OutputProfile Description="" Filename="@CIELab" Space="LAB"/>
  <Space>LAB</Space>
  <BitsPerComponent>8</BitsPerComponent>
  <ResolutionX>254</ResolutionX>
  <ResolutionY>254</ResolutionY>
  <ResolutionUnits>dpi</ResolutionUnits>
</Output>
```

BitsPerComponent

The output image depth for a job.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
<BitsPerComponent>8</BitsPerComponent>	numeric	1, 2, 4, 8 or 16. As a default it uses 8 bits	optional

ResolutionX / ResolutionY

X and Y axis resolution.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
<ResolutionX>150</ResolutionX>	numeric	value in dpi for X axis.	optional
<ResolutionY>150</ResolutionY>	numeric	value in dpi for Y axis.	optional

ResolutionUnits

Output resolution units as dpi.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
<ResolutionUnits>dpi</ResolutionUnits>	value	Resolution unit: dpi .	optional

Space

The output color space.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
<Space>RGB</Space>	numeric	RGB, CMYK, LAB, GRAY and MULTICHANNEL	required

NOTE: For the color spaces RGB, CMYK and LAB the number of output channels are known, but not for MULTICHANNEL and GRAY spaces. In this case it is necessary to specify the output channels via ink set definition:

```
<Space> MULTICHANNEL</Space>
<InkSet NumChannels="6"/>
```

Inkset

Ink set definition. Used for specify the channels output number. As an option, it is possible to embed the channel information (channel name, color) as a Photoshop resource into the output image.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
NumChannels	numeric	The channels output number.	required

```
<InkSet NumChannels="5">
<Ink Id="0" LongName="Cyan" ShortName="C" RGB="0,174,239"/>
<Ink Id="1" LongName="Magenta" ShortName="M" RGB="236,0,140"/>
<Ink Id="2" LongName="Yellow" ShortName="Y" RGB="255,242,0"/>
<Ink Id="3" LongName="Black" ShortName="K" RGB="0,0,0"/>
<Ink Id="4" LongName="Alpha 1" ShortName="alpha" RGB="0,0,0"/>
</InkSet>
```

When Hueman® separation module is active the attribute "HuemanPosition" specifies the band order after filter.

```
<InkSet NumChannels="8">
<Ink HuemanPosition="0" Id="0" LongName="Cyan" RGB="0,181,255" ShortName="C"/>
<Ink HuemanPosition="1" Id="1" LongName="Magenta" RGB="225,0,225"
ShortName="M"/>
<Ink HuemanPosition="2" Id="2" LongName="Yellow" RGB="255,255,0"
ShortName="Y"/>
<Ink HuemanPosition="3" Id="3" LongName="Black" RGB="0,0,0" ShortName="K"/>
<Ink HuemanPosition="4" Id="4" LongName="Orange" RGB="220,127,0"
ShortName="O"/>
<Ink HuemanPosition="5" Id="7" LongName="Blue" RGB="0,0,255" ShortName="B"/>
<Ink Id="49" LongName="Spot Magenta" RGB="255,0,255" ShortName="M*"/>
<Ink Id="50" LongName="Spot Yellow" RGB="255,255,0" ShortName="Y*"/>
</InkSet>
```

Split

This option activated saves one file per channel.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
<Split>NO</Split>	value	YES or NO	optional

WorkingProfile

Set the CMM engine.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
<WorkingProfileCMM="adobe"/>	value	Used engine. Value: "adobe", "lcms" or optional "native". The "native" engine will use ICM© for Windows platforms and ColorSync © for Mac platforms. In 64bits "adobe" does not exists and is automatically replaced by "lcms".	optional

OutputProfile

Set the ICC profile.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
Description	value	Name of ICC	optional
Filename	value	References to source ICC profile path.	optional
Space	value	To convert to space using working profiles.	optional
Intent	value	Rendering intent . Value: perceptual, saturation, relative or absolute or match.	optional

```
<OutputProfile Intent="perceptual" Filename=" My.icc" Description="My.icc"/>
```

OutputFilename

The output file name.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
<OutputFileName>1.tif</OutputFileName>	value	The job name is used as the default output name.	optional

OutputFormat

Specifies the output file format.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
<OutputFormat>psd</OutputFormat>	value	jpg, tif, psd, psb, png. TIFF format is used as a default value.	optional

OutputPath

Specifies the output path for the job.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
<OutputPath>/Users/user/Desktop</OutputPath>	value	The job path is used as a default output path.	optional

OutputEncodingOptions

ByteOrder

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
<OutputEncodingOptions> <ByteOrder>Macintosh</ByteOrder> </OutputEncodingOptions>	value	The internal byte order for little endian. Used as default.	optional
<OutputEncodingOptions> <ByteOrder>IBM PC</ByteOrder> </OutputEncodingOptions>	value	The internal byte order for big endian	optional

Compression

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
<OutputEncodingOptions> <CompressionType>lzw</CompressionType> <CompressionValue>25</CompressionValue> </OutputEncodingOptions>	value	Used to reduce the size of a file by encoding its data information. Values: "LZW" for TIFF files. As default no compression is used.	optional
<OutputEncodingOptions> <CompressionType>jpeg</CompressionType> <CompressionValue>75</CompressionValue> </OutputEncodingOptions>	numeric	Compression rate. Values: 0 < 100	optional

Tile

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
<OutputEncodingOptions> <TileWidth>32</TileWidth> <TileHeight>32</TileHeight> </OutputEncodingOptions>	numeric	Only for TIFF format. Allows to save a fixed tiled size as TIFF.	optional

NOTE: The tiled TIFF is a special way of data storage that allows the RIP access to image data quickly, and consequently the raster process is speeded up.

Hueman

Hueman® color separation module version 1.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
BaseConfig	value	Configuration name.	required
ExtraParams	value	Customizable parameters.	required

```
<Hueman BaseConfig="HUE_PARAM_CMYK" ExtraParams="MAXINK=240;"/>
```

HuemanCMM

Hueman® color separation module version 2.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
HuemanCMMSettings	value	Settings file name.	required
HuemanCMMSettingsID	numeric	ID from <Sources> block.	required
HuemanCMMVariables	value	Variables file name.	required
HuemanCMMVariablesID	numeric	ID from <Sources> block.	required

```
<HuemanCMM HuemanCMMSettings = "HuemanData\RGB_to_CMYKRGV_v16d.xml"
HuemanCMMVariables = "HuemanData\Variables_CMYKRGV_v16d.xml"/>
```



Notifications

The <Notifications> is used to send notifications from neoStampa and Print Server to assigned URL links using token parameters when print jobs are processes on different states.

ATTRIBUTE	VALUE	DESCRIPTION	REQUIREMENT
URL	value	URL link with parameters (token).	required
printingStart	value	Sends notification to URL when print job starts printing.	required
printingEnd	value	Sends notification to URL when print job ends printing.	required
printingAbort	value	Sends notification to URL when print job aborts printing.	required
printingMessage	value	Sends specified job path name ad message text notification to URL.	required

<Notifications>

```
<printingStart URL="http://macbook.local:2001/cgi-bin/WebObjects/neoCatalogWeb.woa/wa/postNotification?userID=admin&forUserID=admin&title=Print%20Started&messagetext=Printing%20of%20&apos;jobPathName&apos;%20has%20started"/>
```

```
<printingEnd URL="http://macbook.local:2001/cgi-bin/WebObjects/neoCatalogWeb.woa/wa/postNotification?userID=admin&forUserID=admin&title=Print%20Finished&messagetext=Printing%20of%20&apos;jobPathName&apos;%20has%20finished"/>
```

```
<printingAbort URL="http://macbook.local:2001/cgi-bin/WebObjects/neoCatalogWeb.woa/wa/postNotification?userID=admin&forUserID=admin&title=Print%20Aborted&messagetext=Printing%20of%20&apos;jobPathName&apos;%20has%20aborted"/>
```

```
<printingMessage URL="http://macbook.local:2001/cgi-bin/WebObjects/neoCatalogWeb.woa/wa/postNotification?userID=admin&forUserID=admin&title=Print%20Message&messagetext=Message%20when%20printing%20&apos;jobPathName&apos;"/>
```

</Notifications>

Automatic Variables

Automatic Variables allow the User to create a collection of customizable field/value pairs that can be referenced throughout the Job Ticket. Any attribute within the Job Ticket can then contain the defined Variable name which will then be replaced by its associated value when neoRipEngine begins processing the Job Ticket. Using automatic variables helps you to expand the capabilities of XML Job Ticket, allowing you to add extra functionality or include dynamic content.

There are several providers:

- Direct variables
- Job xml
- Source

Source variables

Let you to access a source document info (a document in the sources section).

```
<Sources>
<Source Id = "0" URL = "..\Images\640x480.tif"/>
</Sources>
```

Document variables

For image sources.

VARIABLE	EXAMPLE	DESCRIPTION
\${SourceID@0.Source.URL}	640x48	Base file name (without extension). The same for URL.
\${SourceID@0.Document.Filename}	640x480.tif	File name (with extension)
\${SourceID@0.Document.Width}	640 (in, pixels)	Image width (in pixels)
\${SourceID@0.Document.Width.cm}	22,58 (in, cm)	Image width in units. Replace ??? \${SourceID@0.Document.Width.???} by any supported unit (see Supported Units A)
\${SourceID@0.Document.Height}	480 (in, pixels)	Image height
\${SourceID@0.Document.Height.cm}	16,93 (in, cm)	Image height in units. Replace ??? \${SourceID@0.Document.Height.???} by any supported unit (see Supported Units A)
\${SourceID@0.Document.Bands}	3 (RGB)	Image channels
\${SourceID@0.Document.ResX}	72 (dpi)	Image horizontal resolution
\${SourceID@0.Document.ResX.ppc}	8,346 (ppc)	Image horizontal resolution in units. Replace ??? \${SourceID@0.Document.ResX.???} by any supported unit (see Supported Units B)
\${SourceID@0.Document.ResY}	72 (dpi)	Image vertical resolution
\${SourceID@0.Document.ResY.ppc}	28,346 (ppc)	Image vertical resolution in units. Replace ??? \${SourceID@0.Document.ResY.???} by any supported unit (see Supported Units B)

<code>\${SourceID@0.Document.IData}</code>	(Empty)	Image IData (Read Photoshop resource 'IDuD')
<code>\${SourceID@0.Document.ResY.ppc}</code>	28,346 (ppc)	Image vertical resolution in units. Replace ??? <code>\${SourceID@0.Document.ResY.???}</code> by any supported unit (see Supported Units B)
<code>\${SourceID@0.Document.IData}</code>	(Empty)	Image IData (Read Photoshop resource 'IDuD')

Colorations variables

Only for XCM files or images with embedded colorway resources.

VARIABLE	EXAMPLE	DESCRIPTION
<code>\${SourceID@0.Colorations.Coloration@COLORATION_INDEX.COLORATION_TAG[.COLORATION_ATTRIBUTE]}</code>	<code>\${SourceID@0.Colorations.Coloration@0.name}</code> Return: Colorado <code>\${SourceID@0.Colorations.Coloration@0.profileInfo.space}</code> Return: RGB	The way to access to a coloration of index of any colorway information.
<code>\${SourceID@0.Colorations.Coloration@COLORATION_INDEX.COLORATION_TAG}</code>	<code>\${SourceID@0.Colorations.Coloration@0.ColorationItem@1.Channel Name}</code> Return: 001 LILA FORT <code>\${SourceID@0.Colorations.Coloration@0.ColorationItem@1.Transparency}</code> Return: 255	The way to access to a coloration of index of any color channel of colorway information.

Special colorway variables

VARIABLE	EXAMPLE	DESCRIPTION
<code>\${SourceID@0.Colorations.Coloration.count}</code>	-	Access to number of colorations of Colorations group.

Special color channel of colorway variables

VARIABLE	EXAMPLE	DESCRIPTION
<code>\${SourceID@0.Colorations.Coloration@0.ColorationItem.count}</code>	<code><Repetition count="\${sourceid@1.Colorations.Coloration@0.ColorationItem.count}" direction="H" height="71 points" item="aColorationItem" list="sourceid@1.Colorations.Coloration@0.ColorationItem" width="107.5 points"></code>	Number of color channels of Colorations group.
<code>\${SourceID@0.Colorations.Coloration@0.ColorationItem@1.Gradient.value}</code>	-	Gradient color value (gradient string values in gradient native space) of Colorations group.
<code>\${SourceID@0.Colorations.Coloration@0.ColorationItem@1.sRGBGradient.value}</code>	-	Gradient sRGB color value (gradient string values in sRGB) of Colorations group.
<code>\${SourceID@0.Colorations.Coloration@0.ColorationItem@1.FilterGradient.value}</code>	<code><Gradient Space="\${\${aColorationItem}.filtergradient.space}" UseProfile="Y" Alias="\${sourceid@1.Colorations.Coloration@0.ProfileInfo.Alias}" BorderColor="\${\${aColorationItem}.filterRGB#808080.value}" height="1.5 cm" percentages="100" percentbase="100" width="3.2 cm">\${\${aColorationItem}.filtergradient.value}</Gradient></code>	Filter gradient color value (gradient string values converted in coloration profile) of Colorations group.
<code>\${SourceID@0.Colorations.Coloration@0.ColorationItem@1.GradientWithOpacity.value}</code>	-	Gradient opacity color value (gradient string values in gradient native space applying opacity) of Colorations group.
<code>\${SourceID@0.Colorations.Coloration@0.ColorationItem@1.FilterGradientWithOpacity.value}</code>	-	Filter opacity gradient color value (gradient string values converted in coloration profile applying opacity) of Colorations group.
<code>\${SourceID@0.Colorations.Coloration@0.ColorationItem@1.FilterRGB#A02F65}</code>	<code><Gradient Space="\${\${aColorationItem}.filtergradient.space}" UseProfile="Y" Alias="\${sourceid@1.Colorations.Coloration@0.ProfileInfo.Alias}" BorderColor="\${\${aColorationItem}.filterRGB#808080.value}" height="1.5 cm" percentages="100" percentbase="100" width="3.2 cm">\${\${aColorationItem}.filtergradient.value}</Gradient></code>	FilterRGB color value (Convert a hex RRGGBB color in coloration profile) of Colorations group.

Object variables

Let you to access a objects info.

Page variables

VARIABLE	EXAMPLE	DESCRIPTION
<code>\${page.index}</code>	value = <code>"\${page.index}"</code>	Page ID
<code>\${page.id}</code>	value = <code>"\${page.id}"</code>	Page index

Job variables

VARIABLE	EXAMPLE	DESCRIPTION
<code>\${job.name}</code>	value = <code>"\${page.index}"</code>	Job name

System variables

VARIABLE	EXAMPLE	DESCRIPTION
<code>\${System.Date.formater#%d.%m.%Y}</code>	value = <code>"\${System.Date.formater#%d.%m.%Y}"</code>	System date with format. Options: <ul style="list-style-type: none"> • Day: %d • Month: %m • Short year: %y • Long year: %Y • Separator: Any
<code>\${System.Time.formater#%H:%M:%S}</code>	value = <code>"\${System.Time.formater#%H:%M:%S}"</code>	System time with format. Options: <ul style="list-style-type: none"> • Hour: %H • Minute: %M • Second: %S • Separator: Any

WorkingPaths

WorkingPaths are variables to set local paths. The supported WP are (This variables don't use {}):

VARIABLE	EXAMPLE	DESCRIPTION
\$JobsFolder	<Source Id = "0" URL = "\$JobsFolder\640x480.tif"/>	Jobs folder. The folder of the job xmlmain file
\$SourcesFolder	<Source Id = "0" URL = "\$SourceFOLDERNAMEFolderFOLDERNAME/640x480.tif">	Sources folder. The folder and subfolder of the source main file
\$ProfilesFolder	<OutputProfile Description="" Filename="\$ProfilesFolder/Generic RGB Profile.icc" Space="RGB"/>	Profiles folder. All system profiles folder (1 in Windows and 3 in Mac)
\$OuputFolder	-	Output folder. The folder of the output file
\$WorkingDirectory	-	Working directory. The folder of application that uses neoRipEngine library



Practical Examples

The practical examples are showing different cases in uses of automatic variables in XML.

Example 1

TextColoInfo

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "${SourceImage1}"/>
  <Source Id = "1" URL = "${SourceXCM1}"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
<Object Id = "1" top = "40 points" left = "5 points">
<Transformations>
<Text value = "${sourceid@0.Document.name}
${sourceid@1.Colorations.Coloration@${Coloration}.name}" fontsize = "10" alignment =
"left" maxwidth = "250 points"/>
  </Transformations>
</Object>
<Repetition
count="${sourceid@1.Colorations.Coloration@${Coloration}.ColorationItem.count}" top =
"95 points" direction="H"
list="sourceid@1.Colorations.Coloration@${Coloration}.ColorationItem"
item="aColorationItem" width = "110 points" height = "102 points">
  <Object Id = "0" top = "14 points" left = "2 points">
    <Transformations>
      <Text value = "${${aColorationItem}.index}" fontsize = "10" alignment =
"left" maxwidth = "20 points"/>
    </Transformations>
  </Object>
  <Object Id = "1" top = "5 points" left = "15 points">
    <Transformations>
      <Gradient
Space="${sourceid@1.Colorations.Coloration@${Coloration}.profileInfo.space}"
alias="${sourceid@1.Colorations.Coloration@${Coloration}.profileInfo.alias}"
profileName="${sourceid@1.Colorations.Coloration@${Coloration}.profileInfo.profileName}"
UseProfile="Y" percentages="100" percentbase="100" width = "90 points" height = "42
points">${${aColorationItem}.filtergradient.value}</Gradient>
    </Transformations>
  </Object>
  <Object Id = "2" top = "64 points" left = "15 points">
    <Transformations>
      <Gradient fontsize = "10" alignment = "left" maxwidth = "500 points"
composition="RGB" formater="R: %3d\nG: %3d\nB: %3d"
Space="${sourceid@1.Colorations.Coloration@${Coloration}.profileInfo.space}"
alias="${sourceid@1.Colorations.Coloration@${Coloration}.profileInfo.alias}"
profileName="${sourceid@1.Colorations.Coloration@${Coloration}.profileInfo.profileName}"
```

```

UseProfile="Y" percentages="100" percentbase="100" width = "90 points" height = "60
points">${aColorationItem}.filtergradient.value}</Gradient>
    </Transformations>
</Object>
</Repetition>
</Objects>
</Page>
</Layout>
<Output>
    <Space>RGB</Space>
</Output>
</Job>

```

Source TextColoInfo for XML

```

<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
    <Source Id = "0" URL = "tjb_TextColoInfo.xml" SetID = "0"/>
    <Source Id = "1" URL = "tjb_TextColoInfo.xml" SetID = "1"/>
</Sources>
<Layout>
<Page Id = "0">
<Objects>
    <Object Id = "10" SourceID = "0" top = "0 points" left = "0 points">
        <Transformations>
        </Transformations>
    </Object>
    <Object Id = "11" SourceID = "1" top = "200 points" left = "0 points">
        <Transformations>
        </Transformations>
    </Object>
</Objects>
</Page>
</Layout>
<Output>
    <Space>RGB</Space>
</Output>
<Variables>
    <Set id="0">
        <Variable name = "Coloration" value = "0"/>
    </Set>
    <Set id="1">
        <Variable name = "Coloration" value = "3"/>
    </Set>
    <Variable name = "SourceImage1" value = "Sample-3.psd"/>
    <Variable name = "SourceXCM1" value = "Sample-3.xcm"/>
</Variables>
</Job>

```

Example 2

TextImageInfo

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
  <Source Id = "0" URL = "Spring.psd"/>
</Sources>
<Layout>
<Page Id="0" height="220 points" width="400 points">
<Objects>
  <Object Id="1" autoResizeMask="Left|Width" left="100 points" top="20 points"
scale="clip">
    <Transformations>
      <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="0 points" value = "Name: ${SourceID@0.Document.Name}"/>
      <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="20 points" value = "Filename: ${SourceID@0.Document.Filename}"/>
      <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="40 points" value = "Width: ${SourceID@0.Document.Width} /
${SourceID@0.Document.Width.cm}"/>
      <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="60 points" value = "Height: ${SourceID@0.Document.Height} /
${SourceID@0.Document.Height.cm}"/>
      <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="80 points" value = "Bands: ${SourceID@0.Document.Bands}"/>
      <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="100 points" value = "ResX: ${SourceID@0.Document.ResX} /
${SourceID@0.Document.ResX.ppc}"/>
      <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="120 points" value = "ResY: ${SourceID@0.Document.ResY} /
${SourceID@0.Document.ResY.ppc}"/>
      <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="140 points" value = "IData: ${SourceID@0.Document.IData}"/>
      <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="160 points" value = "URL: ${SourceID@0.Source.URL}"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```


Example 3

TextJob: Job name TextJobVar.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
  <Sources>
  </Sources>
  <Layout>
    <Page Id="0" height="60 points" width="400 points">
      <Objects>
        <Object Id="1" autoResizeMask="Left|Width" left="150 points" top="20 points"
scale="clip">
          <Transformations>
            <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="0 points" value = "${job.name}"/>
          </Transformations>
        </Object>
      </Objects>
    </Page>
  </Layout>
  <Output>
    <Space>RGB</Space>
  </Output>
</Job>
```

Example 4

TextPageVar

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
  <Sources>
  </Sources>
  <Layout>
    <Page Id="0" height="60 points" width="400 points">
      <Objects>
        <Object Id="1" autoResizeMask="Left|Width" left="150 points" top="20 points"
scale="clip">
          <Transformations>
            <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="0 points" value = "${PageNum_${page.index}} with Id:${page.id}"/>
          </Transformations>
        </Object>
      </Objects>
    </Page>
    <Page Id="1" height="60 points" width="400 points">
      <Objects>
        <Object Id="1" autoResizeMask="Left|Width" left="150 points" top="20 points"
scale="clip">
          <Transformations>
            <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="0 points" value = "${PageNum_${page.index}} with Id:${page.id}"/>
          </Transformations>
        </Object>
      </Objects>
    </Page>
  </Layout>
  <Output>
    <Space>RGB</Space>
  </Output>
</Job>
```

```

        </Transformations>
    </Object>
</Objects>
</Page>
<Page Id="2" height="60 points" width="400 points">
<Objects>
    <Object Id="1" autoResizeMask="Left|Width" left="150 points" top="20 points"
scale="clip">
        <Transformations>
            <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="0 points" value = "${PageNum_${page.index}} with Id:${page.id}"/>
        </Transformations>
    </Object>
</Objects>
</Page>
<Page Id="3" height="60 points" width="400 points">
<Objects>
    <Object Id="1" autoResizeMask="Left|Width" left="150 points" top="20 points"
scale="clip">
        <Transformations>
            <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="0 points" value = "${PageNum_${page.index}} with Id:${page.id}"/>
        </Transformations>
    </Object>
</Objects>
</Page>
</Layout>
<Output>
    <Space>RGB</Space>
</Output>
<Variables>
    <Variable name="PageNum_1" value="Page 1"/>
    <Variable name="PageNum_2" value="Page 2"/>
    <Variable name="PageNum_3" value="Page 3"/>
    <Variable name="PageNum_4" value="Page 4"/>
</Variables>
</Job>

```

Example 5

TextSystemVar

```
<?xml version="1.0" encoding="UTF-8"?>
<Job>
<Sources>
</Sources>
<Layout>
<Page Id="0" height="80 points" width="400 points">
<Objects>
  <Object Id="1" autoResizeMask="Left|Width" left="100 points" top="20 points"
scale="clip">
    <Transformations>
      <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="0 points" value = "Date: ${System.Date.formater#%d-%m-%Y} or
${System.Date.formater#%d/%m/%y}"/>
    </Transformations>
  </Object>
  <Object Id="1" autoResizeMask="Left|Width" left="100 points" top="40 points"
scale="clip">
    <Transformations>
      <Text alignment="left" fontsize="15" left="0 points" maxwidth="500 points"
top="0 points" value = "Time: ${System.Time.formater#%H:%M:%S}"/>
    </Transformations>
  </Object>
</Objects>
</Page>
</Layout>
<Output>
  <Space>RGB</Space>
</Output>
</Job>
```

Colorations XCM

The Colorations in XCM describes the build of colors in channels, color values, color names, profiles and proofing.

XCM Structure

Every XCM file defines elements. Any other elements in the file are contained within that element. A page has a number of associated data items, so it is natural to define them as attributes.

```
<Colorations>
  <WorkingProfiles>
  </WorkingProfiles>
  <Coloration>
    <IData></IData>
    <ProfileInfo/>
    <ProofingInfo/>
    <ColorationItem></ColorationItem>
  </Coloration>
</Colorations>
```

Groups

Colorations valid groups.

GROUP	DESCRIPTION	REQUIREMENT
Colorations	for textures and colors	required
WorkingProfiles	Set of working profiles in Photoshop®	optional
Coloration	for low quality textures and colors	required
IData	custom information of the colorways	optional
IDataHex	Hex encoding of data	optional
ProfileInfo	define colorway profile	required
ProofingInfo	define proofing profile	optional
ColorationItem	items like channels, colors etc.	required

Tags

Colorations valid group's tags.

GROUP	TAG	DESCRIPTION	REQUIREMENT
WorkingProfiles	Profile	profile name and color space information	optional
ColorationItem	Gradient	color mode, use of profile and RGB color values information	required
	sRGBGradient	basecolor 1,1,1@0; (RGB and gradient index position). After separation is next color.	optional
	ColorLibData	colors name in color library	optional
	Texture	path and performance of texture	optional
	InkLevels	head for ink levels for colorspecial. Using tag <Head />	optional

Attributes

The valid attributes are:

GROUP	TAG	ATTRIBUTE	DESCRIPTION	REQUIREMENT
Colorations	-	name	name of the image file that contains color information.	required
		UseCompositeChannels	for colorations to use composite (CMYK, RGB) as coloration item.	required
WorkingProfiles	Profile	name	name of ICC	required
		space	color mode	required
Coloration	-	BackPredominance	simulate the full ink mix between back and fore ink. Value 255 is 100% (max.)	required
		ForePredominance	simulate the full ink mix between back and fore ink. Value 255 is 100% (max.)	required
		DarkPredominance	shows a fixed value of internal file darkness calculation.	required
		DarkMode	0 is automatic, 1 is looking for back or fore ink darkness	required
		Location	localization of the coloration. Values: Local, Embedded or Remote	required
		MaxInk	provides a maximum of 900 percent of ink level calculation. Value 2295 is 900% (max.)	required
		Name	name of the coloration	required
		SimulationType	simulation methods. Values: Methods, Production, ProductionPigment or ProductionDarken	required
		SupportDensity	allows to simulate different percentages of fabric density. Value 255 is 100% (max.)	required
ProfileInfo	-	Alias	internal alias name of the ICC profile.	required
		BlackPoint	black point compensation using default settings.	required

ProofingInfo	-		Value is D for for default, N for no	
		Intent	rendering intent using default settings.	required
		PreserveColors	preserve colors when converting to profile. Y or N	required
		ProfileName	ICC profile name	required
		Space	color mode	required
		Active	activated or deactivated proofing. Y or N	required
		Alias	internal alias name of the ICC profile.	required
		ProfileName	ICC profile name	required
		BlackInk	simulation of black ink. Value is D for for default, N for no	required
		WhitePaper	simulation of white paper. Value is D for for default, N for no	required
		BlackPoint	black point compensation using default settings. Value is D for for default, N for no	required
		GammutColor	color of the gamut.	required
		GammutSpace	color mode of the gamut.	required
		Intent	rendering intent using default settings.	required
		PreserveColors	preserve colors when converting to profile. Y or N	required
		ShowGammut	activated or deactivated gamut. Y or N	required
		Space	color mode	required
ColorationItem	-	ChannelName	Photoshop® image channel name	required
		ID	order to apply each channel	required
		ChannelNo	channel order. 0, 1, 2, 3 index of the document, -1 is no channel (disabled), -2 background	required
		Method	superposition methods to display the channel colors. Values: disable, multiply, pigment, addition, discharge, texture. Method texture	required

			and texture information supported in neoTextil only.	
		ProfileName	ICC profile name	required
		Space	color mode	required
		Opacity	opacity of the color. Value 255 is 100% (max.)	required
		Transparency	opacity of the color. Value 255 is 100% (max.)	required
		Visible	activated or deactivated visibility. Y or N	required
	Gradient	Alias	internal alias name of the ICC profile.	required
		ProfileName	ICC profile name	required
		Space	color mode. RGB, RGB16, RGB32, CMYK, CMYK16, CMYK32, LAB, LAB16, LAB32, MULTICHANNEL, MULTICHANNEL16, MULTICHANNEL32, NCHA5, NCHA6, NCHA7, NCHA8	required
		UseProfile	N the colors are in the coloration profile (color picker). Y use gradient profile (color lib)	required
		HSB2LCH	If value is 'N', this simulates colorations in nT Colorations 8.0 and previous versions. By default (or if not exist) the value is 'Y'.	required
	Texture	OriginH	horizontal origin position	required
		OriginV	vertical origin position	required
		Path	source path to texture image	required
		RepeatMode	Image repeating mode. Values: Infinite, Full Rapport and Repeat	required
		Scale	scale of the texture image in percentage	required
	InkLevels	Num	ink quantity	required
		ID	ink order in the print scheme	
		Level	ink level calculation. Value 255 is 100% (max.)	required

Practical Examples

The practical examples are showing different cases in uses for XCM colorations attributes.

WorkingProfiles

Photoshop working profiles:

```
<WorkingProfiles>
  <Profile Name="sRGB IEC61966-2.1" Space="RGB"/>
  <Profile Name="U.S. Web Coated (SWOP) v2" Space="CMYK"/>
</WorkingProfiles>
```

IData

Sample neoCatalog:

```
<IData>[CW_colorwayName|19|P10_MM][DS_resolutionDpi|19|719.277][CW_colorwayCode|19|][DS_numChanel|19|10][CW_id|19|2048][DS_comments|19|Created using dropbox][DS_heightCm|19|21.3822][DS_desingName|19|50-0135][CW_coloristID|19|1][DS_modificationDate|19|2016-06-07 07:34:11 Etc/GMT][DS_widthCm|19|20.5205][CW_verifyDate|19|2016-06-27 08:32:53 Etc/GMT][CW_verifyPersonID|19|1][CW_COLORIST_userid|19|MM][DS_rapportDirection|19|1][CW_creationDate|19|2016-06-27 08:32:53 Etc/GMT][CW_COLORIST_name|19| Milena(admin)][DS_designCode|19|50-0135][DS_creationDate|19|2016-06-07 07:34:08 Etc/GMT][DS_rapport|19|1/2]</IData>
```

Sample neoTextil:

```
<IData>[OldProfileName|19|Display][NewProfileName|19|sRGB IEC61966-2.1][NewProfileMethod|19|Assign][ProfileChangeDate|19|Wed, 15 Jun 2016 16:03:10 GMT]</IData>
```

Sample ldataHex:

```
<IDataHex>
>0000003C4375444901000A457374616E7465726961CD070000000645732D303031CD4375444901000E466F6E646F457374616D7061 646FCD03000000024E6FCD</IDataHex>
```

Sample with fabric info:

```
<IData>[__USR_CLR_CW_COLORIST_name|inedit@inedit.com][__USR_CLR_DS_collection|SS 2021][__USR_CLR_DS_comments|Created using dropbox][__USR_CLR_DS_exclusive|0][__USR_CLR_CW_fabricID|12345][__USR_CLR_DS_rapportDirection|1][__USR_CLR_CW_FABRIC_fabricWidth|145][__USR_CLR_CW_COLORIST_userid|User][__USR_CLR_DS_designerID|4][__USR_CLR_DS_designCode|393][__USR_CLR_CW_FABRIC_grM2|250][__USR_CLR_CW_FABRIC_fabricName|Belinda][__USR_CLR_CW_colorwayName|1][__USR_CLR_DS_resolutionDpi|508.0][__USR_CLR_DS_numChanel|2][__USR_CLR_CW_COLORIST_mail|inedit@inedit.com][__USR_CLR_CW_collection|Spring][__USR_CLR_CW_coloristID|4][__USR_CLR_DS_desingName|393][__USR_CLR_DS_widthCm|9.165][__USR_CLR_DS_rapport|1/1][__USR_CLR_DS_keywords|Animals][__USR_CLR_CW_FABRIC_fabricComposition|100% Cotton][__USR_CLR_CW_id|554][__USR_CLR_CW_creationDate|2020-12-09 16:49:24 Etc/GMT][__USR_CLR_DS_modificationDate|2020-12-09 16:49:19 Etc/GMT][__USR_CLR_DS_heightCm|9.14][__USR_CLR_DS_creationDate|2020-12-09 16:42:10 Etc/GMT]</IData>
```


ProfileInfo

CMYK

- CMYK CoatedFOGRA27.icc

```
<ProfileInfo Alias="CoatedFOGRA27.icc" BlackPoint="D" Intent="Default"
PreserveColors="N" ProfileName="Coat ed FOGRA27 (ISO 12647-2:2004)"
Space="CMYK"/>
```

- CMYK working profile

```
<ProfileInfo BlackPoint="D" Intent="Default" PreserveColors="N" Space="CMYK"/>
```

- CMYK + device color ICC

```
<ProfileInfo Alias="Epson-SP7900_MGT_720_CMYKkOT.icc" BlackPoint="D"
Intent="Default" PreserveColors="N" ProfileName="Epson-
SP7900_MGT_720_CMYKkOT.icc" Space="CMYK"/>
```

LAB

- LAB working profile

```
<ProfileInfo BlackPoint="D" Intent="Default" PreserveColors="N" Space="LAB"/>
```

RGB

- RGB AdobeRGB1998.icc

```
<ProfileInfo Alias="AdobeRGB1998.icc" BlackPoint="D" Intent="Default"
PreserveColors="N" ProfileName="Adobe RGB (1998)" Space="RGB"/>
```

- RGB working profile

```
<ProfileInfo Alias="sRGB Profile.icc" BlackPoint="D" Intent="Default"
PreserveColors="Y" ProfileName="sRGBIEC61966-2.1" Space="RGB"/>
```

- RGB + device colors ICC

```
<ProfileInfo Alias="HPT1100_CMYK8_PhotoMattePaper.icm" BlackPoint="D"
Intent="Default" PreserveColors="N" ProfileName="HPT1100_CMYK8_PhotoMattePaper"
Space="RGB"/>
```

Texture

When texture is in use

```
<ProfileInfo BlackPoint="D" Intent="Default" PreserveColors="N" Space="RGB"/>
```

ProofingInfo

- Proofing active with custom ICC

```
<ProofingInfo Active="Y" Alias="INEDIT_EPSON_720 x 720_21NOV13.icm"
BlackInk="D" BlackPoint="N" GammutColor="255,0,0" GammutSpace="RGB"
Intent="Relative" PreserveColors="N" ProfileName="INEDIT_EPSON_720 x
720_21NOV13" ShowGammut="Y" Space="RGB" WhitePaper="D"/>
```

- Proofing inactive

```
<ProofingInfo Active="N" BlackInk="D" BlackPoint="D" GammutColor="255,0,0"
GammutSpace="RGB" Intent="Default t" PreserveColors="N" ShowGammut="N"
Space="RGB" WhitePaper="D"/>
```

ColorationItem

Gradient

LAB

```
<Gradient Space="LAB" UseProfile="Y">227,133,167@0;255,128,128@255</Gradient>
```

RGB working profile

```
<Gradient Space="RGB" UseProfile="N">210,218,214@0;255,255,255@255</Gradient>
```

RGB AdobeRGB1998.icc

```
<Gradient Alias="AdobeRGB1998.icc" ProfileName="Adobe RGB (1998)" Space="RGB"
UseProfile="N">216,81,48@0;255,255,255@255</Gradient>
```

Custom ICC profile

```
<Gradient Alias="HPT1100_CMYK8_PhotoMattePaper.icm"
ProfileName="HPT1100_CMYK8_PhotoMattePaper" Space="RGB"
UseProfile="N">255,255,255@0;255,255,255@255</Gradient>
```

HSB2LCH

```
<Gradient Alias="MOREA SOLUNARIS fluor t24.icc" HSB2LCH="N" ProfileName="MOREA
SOLUNARIS C.icm" Space="RGB"
UseProfile="N">255,255,255@0;255,255,255@255</Gradient>
```

Texture

Texture embedded

```
<Texture OriginH="0.00 millimeter" OriginV="0.00 millimeter" Path="Lino.psd"
RepeatMode="Infinite" Scale="100.00"/>
```

NOTE:

When the texture is not embedded, then the tagline is not visible.

Inklevels

Using a example RGB+device colors ICC with following print scheme properties in a coloration,

```
<PrintScheme Name="MatexFabric_StxPaper_JTek_720 x 720_120418">
  <DriverName>Epson STYLUS PRO 4800</DriverName>
  <OutputProfile Description="EpsonMatex_EQL_Light100"
  Filename="MatexFabric_StxPaper_JTek_720 x 720_120418.icc"/>
  <Hueman Version="2" InputColorspace="RGB" Configuration="HuemanV2_cfg.hml"
  Variables="HuemanV2_vars.hml"/>
<InkSet NumChannels="6">
  <Ink Id="3" LongName="Black" ShortName="K" LAB="16.749241, 2.876177, -
  2.152216" RGB="53,40,47" HuemanPosition="3"/>
  <Ink Id="0" LongName="Cyan" ShortName="C" LAB="33.238350, 4.567266, -
  57.244102" RGB="66,141,232" HuemanPosition="0"/>
  <Ink Id="2" LongName="Yellow" ShortName="Y" LAB="84.379898, -3.551096,
  86.693481" RGB="245,237,37" HuemanPosition="2"/>
  <Ink Id="1" LongName="Magenta" ShortName="M" LAB="45.672485, 70.901932,
  18.496859" RGB="229,22,207" HuemanPosition="1"/>
  <Ink Id="7" LongName="Blue" ShortName="B" LAB="24.967150, 24.307430, -
  50.079823" RGB="70,58,219" HuemanPosition="4"/>
  <Ink Id="4" LongName="Orange" ShortName="O" LAB="57.930050, 55.505276,
  64.016228" RGB="239,110,143" HuemanPosition="5"/>
</InkSet>
<JobSettings>
  <WorkingPaths/>
  <ProcessingOptions>
    <RunEngine>yes</RunEngine>
    <CopyProfile>yes</CopyProfile>
    <CopySource>yes</CopySource>
  </ProcessingOptions>
</JobSettings>
</PrintScheme>
```

in the InkLevels the head attributes are displayed using the ink order ID and the calculation of the ink values 0...255.

```
<InkLevels Num="6">
  <Head ID="3" Level="0"/>
  <Head ID="0" Level="51"/>
  <Head ID="2" Level="128"/>
  <Head ID="1" Level="0"/>
  <Head ID="7" Level="26"/>
  <Head ID="4" Level="0"/>
</InkLevels>
```

neoRipEngineCGI

With neoRipEngineCGI, you can execute the images using the engine with command lines via Terminal.

Working with jobs

COMMAND	COMMAND DESCRIPTION
-p [path]	RIP settings path
-e	Export a xml file
-a [activation]	Activation code
-t	Do time
-cpu [number]	CPU's number
-preview [size X] [size Y]	Job preview. The size values must not contain units, otherwise it will return an unknown format error. Only for XML formats.
-out [output file name]	Output file name
-log [path]	Log activate. Log is not working on current versions. It was disabled intentionally because of multi thread writing issues.
-notmp	Don't use local temporary processing file
-notmpcopy	Don't use temporary destination file
-sourcecopy [y/n/auto]	Local copy source files
-info	Get job information
-mem	Maximum memory allowed
-exportjob [output folder output .xjb file name]	Job export
-compress	Compress xjb
-dontexportprofiles	Don't copy profiles exporting the job
-page [number]	Page number for multi page jobs
-size [size X] [size Y]	Page size
-bpc [16 8]	Force 16 or 8 bpc output
-timeout [sec]	Time out in seconds
-zoom [value]	Renders the file at the specified zoom factor
-icc [output icc filename]	Sets the output icc profile
-intent [absolute relative perceptual saturation matching]	Sets the output rendering intent
-prooficc [proofing icc filename]	Sets the output icc profile
-proofintent [absolute relative perceptual saturation]	Sets the proofing rendering intent
-proofwhite	Simulates paper white
-proofblack	Simulates ink black
-usecache	Forces to use system cache for file reading (Mac)
-keyserver	Uses neoKey Server Manager
-cmm [adobe,lcms,native]	Sets the cmm engine
-dontoverwrite	Don't overwrite files. Instead of this it creates the file adding a counter at the end of the filename. ex: instead of preview.jpg it generates preview-1.jpg.

-demand	Demand style (tile, fatstrip, thinstrip)
-quality	Quality mode (draft, normal)
-profilelist [path]	CMM profile list
-coverage	Coverage
-schema	Print schema XML file

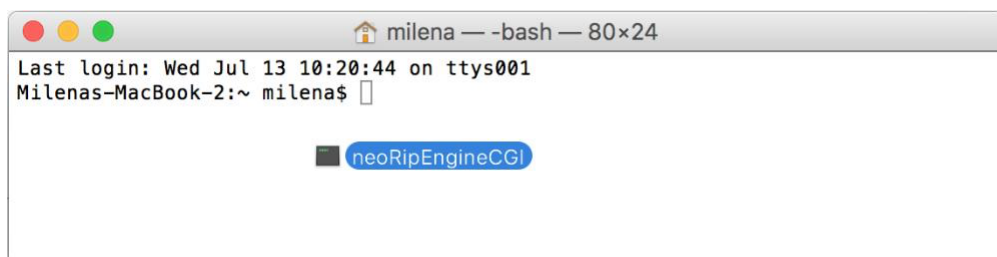
Working with image

COMMAND	DESCRIPTION
-c	Coverage
-coverage	Coverage
-console	Drops the image information to the console
-coloration [number all]	Returns colorations data embedded into image
-virtualvision	Returns virtualvision data embedded into image
-updatevirtual	Update virtualvision data embeded into image
-g2tvirtual [-p i -pt X Y]	Calculate texture position panel from a image position
-v [vendor ID]	Vendor ID used with image encryption
-k [activation code]	Activation code used for image decryption
-pause	Performs a pause at end
-version	Returns neoRipEngine version
-quantizer	Color quantizer
-rapportdetection	Calculate and detects image drop rapport information

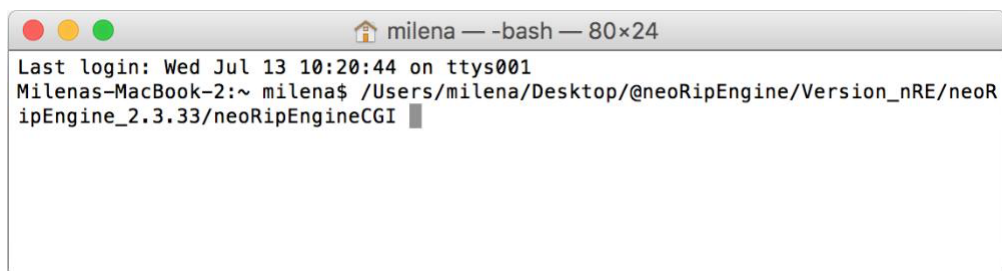
How to start the CGI in the terminal?

Drag & Drop is particularly helpful when a file is located in an obscure location that you happen to already in within the Finder, but want to quickly jump to the command line, or just make an edit. This drag & drop trick remedies that by adding the \ before the beginning of a space, and also maintaining all capitalization properly for you - leaving less room for user error and it is quicker than using tab completion for deeply buried files.

1. Open any terminal window then take the execution file neoRipEngineCGI from the Finder and drop it into that Terminal.



2. Once the file has been dropped to the active terminal window, the full path is then typed out immediately and directly into the terminal where ever the command prompt is located.



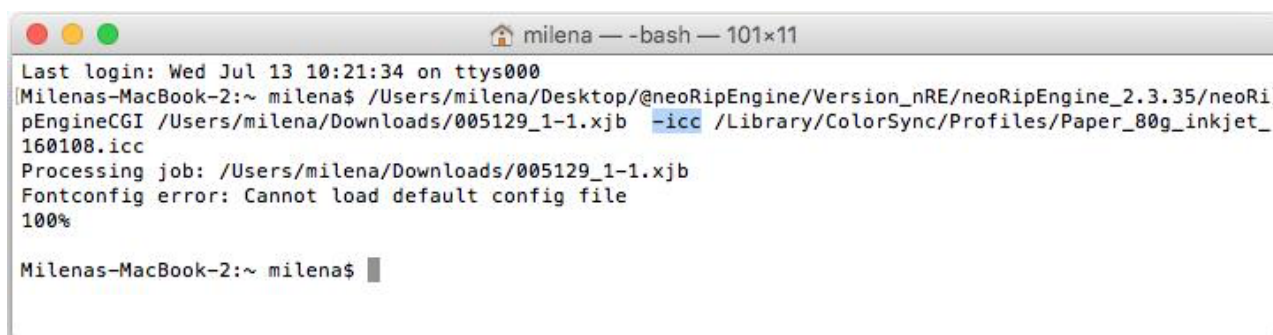
How to execute command lines with CGI in the terminal?

Prefixing the drag & drop of the CGI with a command makes it easy to execute with the path or file. Don't forget to use proper spacing after the command to execute, the path itself is precise and doesn't include any spaces or extra characters as padding.

NOTE: When you type a command in Terminal, it's executed in your current location, unless you specify otherwise. When you launch a new Terminal window, that location is at the top level of your Home directory, so every command is relative to that location. To change location, use `cd` followed by the path of the location you want to move to. To return to the default, type `cd`

`~/` and your location will change from wherever you are to your Home directory. You can view a list of the files and folders in your current location by typing `ls` to list them in Terminal.

Example Job command '-icc':



```
milena — -bash — 101x11
Last login: Wed Jul 13 10:21:34 on ttys000
Milenas-MacBook-2:~ milena$ /Users/milena/Desktop/@neoRipEngine/Version_nRE/neoRipEngine_2.3.35/neoRipEngineCGI /Users/milena/Downloads/005129_1-1.xjb -icc /Library/ColorSync/Profiles/Paper_80g_inkjet_160108.icc
Processing job: /Users/milena/Downloads/005129_1-1.xjb
Fontconfig error: Cannot load default config file
100%

Milenas-MacBook-2:~ milena$
```

Example command for <ImageInfo> '-console':

```

Last login: Wed Jul 13 16:24:49 on ttys000
Milena-MacBook-2:~ milena$ /Users/milena/Desktop/@neoRipEngine/Version_nRE/neoRipEngine_2.3.35/neoRipEngineCGI /Users/milena/Downloads/005129_1-1.tif -console
<?xml version="1.0" encoding="UTF-8"?>
<ImageInfo>
  <Pages>1</Pages>
  <width>5947</width>
  <height>8410</height>
  <ResolutionX>719.2771717071532</ResolutionX>
  <ResolutionY>719.2771717071532</ResolutionY>
  <ResolutionUnits>dpi</ResolutionUnits>
  <Space>RGB</Space>
  <InkSet NumChannels="3"/>
  <BitsPerComponent>8</BitsPerComponent>
  <Profile Description="Paper_80g_inkjet_160108.icc" Space="RGB"/>
  <Rapport>
    <direction>Vertical</direction>
    <fraction_high>1</fraction_high>
    <fraction_low>2</fraction_low>
    <offsetX>0</offsetX>
    <offsetY>0</offsetY>
    <width>17433</width>
    <height>18165</height>
  </Rapport>
  <ChannelNames>
    <channel index="0" name="Red"/>
    <channel index="1" name="Green"/>
    <channel index="2" name="Blue"/>
  </ChannelNames>
  <ChannelColors>
    <channel Space="RGB" color="0,65535,65535" index="0" kind="0" opacity="100" previewRGB="0,171,230"/>
    <channel Space="RGB" color="65535,0,65535" index="1" kind="0" opacity="100" previewRGB="218,91,158"/>
    <channel Space="RGB" color="65535,65535,0" index="2" kind="0" opacity="100" previewRGB="250,216,82"/>
  </ChannelColors>
  <Colorations>
    <Coloration Id="0" name="Coloration"/>
    <Coloration Id="1" name="Coloration-5"/>
  </Colorations>
</Format>TIFF</Format>
</ImageInfo>

Milena-MacBook-2:~ milena$

```



Example command for <ImageInfo> with XMP data '-console':

```
<?xml version="1.0" encoding="UTF-8"?>
<ImageInfo>
  <Pages>1</Pages>
  <width>512</width>
  <height>512</height>
  <ResolutionX>28.346458435058594</ResolutionX>
  <ResolutionY>28.346458435058594</ResolutionY>
  <ResolutionUnits>pixel/cm</ResolutionUnits>
  <Space>MULTICHANNEL</Space>
  <InkSet NumChannels="1"/>
  <BitsPerComponent>8</BitsPerComponent>
  <Rapport>
    <direction>Horizontal</direction>
    <fraction_high>1</fraction_high>
    <fraction_low>1</fraction_low>
    <offsetX>0</offsetX>
    <offsetY>0</offsetY>
    <width>510</width>
    <height>510</height>
  </Rapport>
  <ChannelNames>
    <channel index="0" name="Negro"/>
  </ChannelNames>
  <ChannelColors>
    <channel Space="HSB" color="19532,65535,65535" index="0" kind="2" opacity="0"
previewRGB="54,255,0"/>
  </ChannelColors>
  <Colorations>
    <Coloration Id="0" name="Coloration"/>
  </Colorations>
  <XMP>
<x:xmpmeta x:xmptk="XMP Core 5.6.0" xmlns:x="adobe:ns:meta/"> <rdf:RDF
xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#">
<rdf:Description rdf:about="">
<xmp:CreatorTool xmlns:xmp="http://ns.adobe.com/xap/1.0/">Adobe Photoshop CC 2018
(Macintosh)</ xmp:CreatorTool>
<xmp:CreateDate xmlns:xmp="http://ns.adobe.com/xap/1.0/">2018-08-
29T12:18+02:00</xmp:CreateDate>
<xmp:MetadataDate xmlns:xmp="http://ns.adobe.com/xap/1.0/">2018-08-29T13:13+02:00</
xmp:MetadataDate>
<xmp:ModifyDate xmlns:xmp="http://ns.adobe.com/xap/1.0/">2018-08-
29T13:13+02:00</xmp:ModifyDate> <dc:format
xmlns:dc="http://purl.org/dc/elements/1.1/">application/vnd.adobe.photoshop</dc:format>
<xmpMM:InstanceID xmlns:xmpMM="http://ns.adobe.com/xap/1.0/mm/">xmp.iid:8554c6e5-59c2-
4b05-a22b-e7e51799d3ef</xmpMM:InstanceID>
<xmpMM:DocumentID xmlns:xmpMM="http://ns.adobe.com/xap/1.0/mm/">xmp.did:8ee2fda8-29b2-
4ec5-ade8-58e832335803</xmpMM:DocumentID>
<xmpMM:OriginalDocumentID xmlns:xmpMM="http://ns.adobe.com/xap/1.0/
mm/">xmp.did:8ee2fda8-29b2-4ec5-ade8-58e832335803</xmpMM:OriginalDocumentID>
<xmpMM:History xmlns:xmpMM="http://ns.adobe.com/xap/1.0/mm/"> <rdf:Seq>
<rdf:li rdf:parseType="Resource">
<stEvt:action
```

```

xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/ResourceEvent#">created</stEvt:action>
<stEvt:instanceID xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/
ResourceEvent#">xmp.iid:8ee2fda8-29b2-4ec5-ade8-58e832335803</stEvt:instanceID>
<stEvt:when xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/ResourceEvent#">2018-08-
29T12:8+02:00</stEvt:when> <stEvt:softwareAgent
xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/ResourceEvent#">Adobe Photoshop CC 2018
(Macintosh)</stEvt:softwareAgent>
</rdf:li>
<rdf:li rdf:parseType="Resource">
<stEvt:action
xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/ResourceEvent#">sav</stEvt:action>
<stEvt:instanceID xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/
ResourceEvent#">xmp.iid:e2485537-ecfd-4757-a441-c2297f965840</stEvt:instanceID>
<stEvt:when xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/ResourceEvent#">2018-08-
29T12:21:57+02:00</stEvt:when>
<stEvt:softwareAgent
xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/ResourceEvent#">Adobe Photoshop CC 2018
(Macintosh)</stEvt:softwareAgent>
<stEvt:changed
xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/ResourceEvent#"></stEvt:changed>
</rdf:li>
<rdf:li rdf:parseType="Resource">
<stEvt:action
xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/ResourceEvent#">sav</stEvt:action>
<stEvt:instanceID xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/
ResourceEvent#">xmp.iid:8554c6e5-59c2-4b05-a22b-e7e51799d3ef</stEvt:instanceID>
<stEvt:when xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/ResourceEvent#">2018-08-
29T13:13+02:00</stEvt:when>
<stEvt:softwareAgent
xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/ResourceEvent#">Adobe Photoshop CC 2018
(Macintosh)</stEvt:softwareAgent>
<stEvt:changed
xmlns:stEvt="http://ns.adobe.com/xap/1.0/sType/ResourceEvent#"></stEvt:changed>
</rdf:li>
</rdf:Seq>
</xmpMM:History>
<photoshop:ColorMode
xmlns:photoshop="http://ns.adobe.com/photoshop/1.0/">7</photoshop:ColorMode>
<tiff:Orientation xmlns:tiff="http://ns.adobe.com/tiff/1.0/">1</tiff:Orientation>
<tiff:XResolution
xmlns:tiff="http://ns.adobe.com/tiff/1.0/">720000/10000</tiff:XResolution>
<tiff:YResolution
xmlns:tiff="http://ns.adobe.com/tiff/1.0/">720000/10000</tiff:YResolution>
<tiff:ResolutionUnit xmlns:tiff="http://ns.adobe.com/tiff/1.0/">2</tiff:ResolutionUnit>
<exif:ColorSpace xmlns:exif="http://ns.adobe.com/exif/1.0/">65535</exif:ColorSpace>
<exif:PixelXDimension
xmlns:exif="http://ns.adobe.com/exif/1.0/">512</exif:PixelXDimension>
<exif:PixelYDimension
xmlns:exif="http://ns.adobe.com/exif/1.0/">512</exif:PixelYDimension>
</rdf:Description>
</rdf:RDF>
</x:xmpmeta>
</XMP>
</ImageInfo>

```