

MAX 2006 Beyond Boundaries

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PDF 101: Anatomy of a PDF File
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The Basics

Inside PDFs



PDF Files: Looking Inside

- PDF files are made from “objects”
- Objects are numbered
- Objects can occur in any order in a file
- Objects can refer to each other by number
- References can create a cross-linked set of objects (mathematical graph)
- Cross reference table maps object numbers to places within the file
- PDF files contain an ordered set of fixed and independent pages



Hello World

```
%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj
2 0 obj
<<
  /Length 51
>>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  (Hello World)Tj
ET
endstream
endobj
```

```
3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R >>
>>
endobj
4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj
```

```
5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
    [ 0 0 612 792 ]
>>
endobj
6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj
trailer
<<
  /Root 6 0 R
>>
```

```
%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj
2 0 obj
<<
  /Length 51
>>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  (Hello World)Tj
ET
endstream
endobj
```

```
3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R >>
>>
endobj
4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj
```

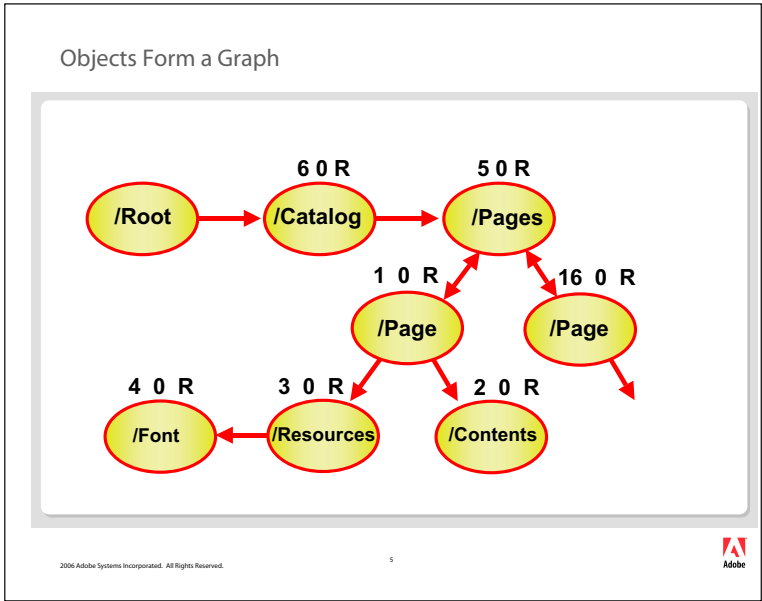
```
5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
    [ 0 0 612 792 ]
>>
endobj
6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj
trailer
<<
  /Root 6 0 R
>>
```

```

Hello World
$PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj
2 0 obj
<<
  /Length 51
>>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  (Hello World)Tj
ET
endstream
endobj
3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R>>
>>
endobj
4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj
5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
    [ 0 0 612 792 ]
>>
endobj
6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj
trailer
<<
  /Root 6 0 R
>>

```

Example 01 Page 2



Hello World

```

Hello World - 50% Gray
$PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj
2 0 obj
<<
  /Length 51
>>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  (Hello World)Tj
ET
endstream
endobj
3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R>>
>>
endobj
4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj
5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
    [ 0 0 612 792 ]
>>
endobj
6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj
trailer
<<
  /Root 6 0 R
>>

```

Example 02 Page 1

Postfix Notation

operand-1 operand-2 operand-3 operator

```

3 4 add      --> 7
3 4 add 3 mult --> 21

```

scale-x skew-x skew-y scale-y move-x move-y Tm

```

1 0 0 1 260 600 Tm

```

gray-level g

```

0.5 g

```

string Tj

```

(Hello World) Tj

```

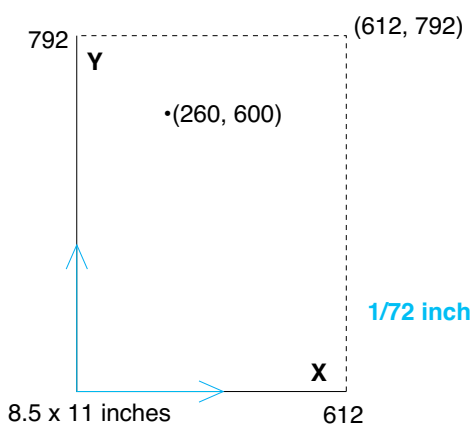
font-internal-name size Tf

```

/F1 24 Tf

```





```

Hello World - 50% Gray

%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<<
  /Length 51
>>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  0.5 g
  (Hello World)Tj
ET
endstream
endobj

3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R >>
>>
endobj

4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj

5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
    [ 0 0 612 792 ]
>>
endobj

6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj

trailer
<<
  /Root 6 0 R
>>

```

```

Hello World - 50% Gray

%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<<
  /Length 51
>>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  0.5 g
  (Hello World)Tj
ET
endstream
endobj

3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R >>
>>
endobj

4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj

5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
    [ 0 0 612 792 ]
>>
endobj

6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj

trailer
<<
  /Root 6 0 R
>>

```

```

Hello World - 50% Gray

%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<<
  /Length 51
>>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  0.5 g
  (Hello World)Tj
ET
endstream
endobj

3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R >>
>>
endobj

4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj

5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
    [ 0 0 612 792 ]
>>
endobj

6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj

trailer
<<
  /Root 6 0 R
>>

```

Basic PDF Building Blocks

- (Hello World) **Strings**
-- enclosed in ()
- 12 4.55 **Numbers**
- /Dog **Names**
- [/Dog 12 (a word)] **Arrays**
-- enclosed in []
- << /Size 12 /Color /red >> **Dictionaries**
-- enclosed in << >>
- 1 0 R 5 2 R 129 0 R **References (pointers)**

Nesting

```

[
  <<
    /Name (Jim)
    /Age 39
    /Children [(Heather) (Timothy) (Rebecca)]
  >>
  22
  44.55
]

<<
  /MORE [ 22 33 44 55 1 ]
  /LESS [ (dog) (cat) (mule) ]
  /count 88
>>

```

Objects

```
3 0 obj
(a string object)
endobj
```

Direct versus Indirect Objects

```
<< /dog (a labrador) >>
```

can also be

```
<< /dog 4 0 R >>
...
4 0 obj
(a labrador)
endobj
```

Page 3

Stream Objects

```
55 1 obj
<<
  /Length 31
  /Type /Content
  /special (true)
>>
stream
  this is the stream's content
endstream
endobj
```

Page 4

Hello World

Hello World - Device Dependent 100% Red

```
%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj
2 0 obj
<<
  /Length 51
>>
stream
BT
/F1 24 Tf
1 0 0 1 260 600 Tm
1 0 0 rg
(Hello World)Tj
ET
endstream
endobj
3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R>>
>>
endobj
4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj
5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
    [ 0 0 612 792 ]
>>
endobj
6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj
trailer
<<
  /Root 6 0 R
>>
```

Example 03

Page 1

Hello World

Hello World -- L*a*b* Red

```
%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj
2 0 obj
<<
  /Length 51
>>
stream
BT
/F1 24 Tf
1 0 0 1 260 600 Tm
/CS1 cs
/AbsoluteColormetric ri
63 127 127 sc
(Hello World)Tj
ET
endstream
endobj
3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R>>
  /ColorSpace
    <</CS1
      [ /Lab <<
        /Range
          [-128 127 -128 127]
          /WhitePoint
            [0.951 1 1.089]
          >> ]
      >>
  >>
>>
endobj
4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj
5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
    [ 0 0 612 792 ]
>>
endobj
6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj
trailer
<<
  /Root 6 0 R
>>
```

Example 04

Hello World

Hello World -- Calibrated RGB Red

```
%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<< /Length 51
>>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  /CS2 cs
  1 0 0 sc
  (Hello World)Tj
ET
endstream
endobj

3 0 obj
<</ProcSet[/PDF/Text]
  /Font <</F1 4 0 R>>
  /ColorSpace << /CS2
  [ /CalRGB << /Gamma
  [ 2.222 2.222 2.222 ]
  /Matrix
  [ 0.412 0.213 0.019
    0.358 0.715 0.119
    0.181 0.072 0.951
  ] /WhitePoint
  [ 0.951 1 1.089 ]>>
  >> >>
endobj

4 0 obj
<</Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj

5 0 obj
<< /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
  [ 0 0 612 792 ] >>
endobj

6 0 obj
<< /Type /Catalog
  /Pages 5 0 R
>>
endobj

trailer
<< /Root 6 0 R
>>

Example 05
```

Page 1

```
3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R>>
  /ColorSpace
  <</CS2
  [ /CalRGB <<
    /Gamma [ 2.222 2.222 2.222 ]
    /Matrix [ 0.412 0.213 0.019
              0.358 0.715 0.119
              0.181 0.072 0.951
            ] /WhitePoint[0.951 1 1.089]
    >>
  >>
  >>
endobj
```

Hello World



```
Blue Star

%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

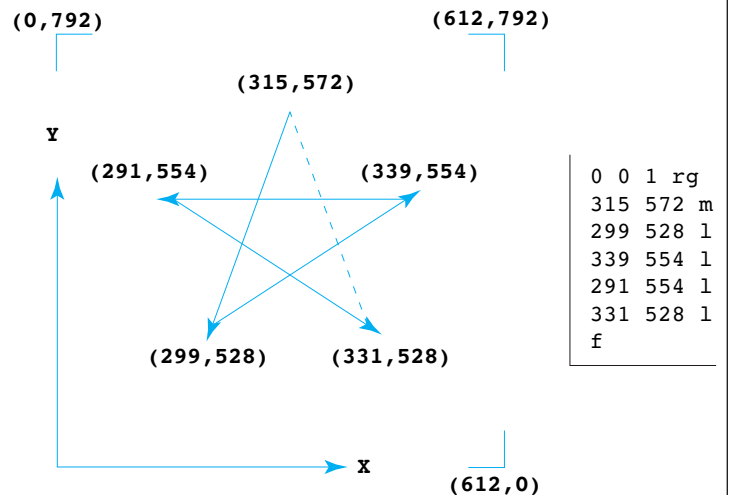
2 0 obj
<< /Length 51 >>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  (Hello World)Tj
ET
  0 0 1 rg
  315 572 m
  299 528 l
  339 554 l
  291 554 l
  331 528 l
  f
endstream
endobj

3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R >>
>>
endobj

4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj
```

Example 06

Page 1



```

Blue Star
%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<< /Length 51 >>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  (Hello World)Tj
ET
0 0 1 rg
315 572 m
299 528 l
339 554 l
291 554 l
331 528 l
f
endstream
endobj

3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R >>
>>
endobj
4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj

```

Example 06

Page 1

```

Blue Star
5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
    [ 0 0 612 792 ] >>
endobj
6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj
trailer
<<
  /Root 6 0 R
>>

```

Example 06

Page 2

Hello World



Hello World



```

Hello World -- filled with L*a*b* Red // Star -- stroked with Calibrated RGB Cyan
%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<< /Length 51 >>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  /CS1 cs
  /RelativeColorimetric ri
  [ 0.951 1 1.089 ]
  63 127 127 sc
  (Hello World)Tj
ET
/CS2 CS
/Saturation ri
0 1 1 SC
315 572 m
299 528 l
339 554 l
291 554 l
331 528 l
s
endstream
endobj

3 0 obj
<</ProcSet[/PDF/Text]/
Font <</F1 4 0 R>>
/ColorSpace
<</CS1
[ /Lab << /Range
[-128 127 -128 127]
/WhitePoint
[ 0.951 1 1.089 ]
>> ] >>
<</CS2
[ /CalRGB <<
/Gamma
[2.222 2.222 2.222]
/Matrix
[0.412 0.213 0.019
0.358 0.715 0.119
0.181 0.072 0.951]
/WhitePoint
[0.951 1 1.089]
>> ] >>
>>
endobj
4 0 obj
<<

```

Example 07

```

3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R>>
  /ColorSpace
    <</CS1
      [ /Lab <<
        /Range [-128 127 -128 127]
        /WhitePoint [0.951 1 1.089]
      >>
      >>
    >>
  >>
endobj

```

Hello World -- filled with L*a*b* Red // Star -- stroked with Calibrated RGB Cyan

```

%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<< /Length 51 >>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  /CS1 cs
  /RelativeColorMetric
  s
  63 127 127 sc ri
  (Hello World)Tj
ET

3 0 obj
<</ProcSet[/PDF/Text]/
Font <</F1 4 0 R>>
/ColorSpace
<</CS1
  [ /Lab << /Range
    [-128 127 -128 127]
    /WhitePoint
    [ 0.951 1 1.089]
    >> ] >>
<</CS2
  [ /CalRGB <<
    /Gamma
    [2.222 2.222 2.222]
    /Matrix
    [0.412 0.213 0.019
      0.358 0.715 0.119
      0.181 0.072 0.951]
    /WhitePoint
    [0.951 1 1.089]
    >> ] >>
>>
endstream
endobj
  
```

Example 07

Hello World -- filled with L*a*b* Red // Star -- stroked with Calibrated RGB Cyan

```

/Type /Font
/Subtype /Type1
/Name /F1
/BaseFont/Helvetica
>>
endobj

5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
  [ 0 0 612 792 ] >>
endobj

6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj

trailer
<<
  /Root 6 0 R
>>
  
```

Example 07

Hello World



Star -- filled with L*a*b* Yellow // Star -- stroked with Calibrated RGB Blue

```

%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<< /Length 51 >>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  /CS1 cs
  63 127 127 sc
  (Hello World)Tj
ET

3 0 obj
<</ProcSet[/PDF/Text]
/Font <</F1 4 0 R>>
/ColorSpace
<</CS1
  [ /Lab << /Range
    [-128 127 -128 127]
    /WhitePoint
    [ 0.951 1 1.089]
    >> ] >>
<</CS2
  [ /CalRGB <<
    /Gamma
    [2.222 2.222 2.222]
    /Matrix
    [0.412 0.213 0.019
      0.358 0.715 0.119
      0.181 0.072 0.951]
    /WhitePoint
    [0.951 1 1.089]
    >> ] >>
>>
endstream
endobj

100 0 127 sc
/CS2 CS
0 0 1 SC
315 572 m
299 528 l
339 554 l
291 554 l
331 528 l
b
endstream
endobj
  
```

Example 08

Star -- filled with L*a*b* Yellow // Star -- stroked with Calibrated RGB Blue

```

4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj

5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
  [ 0 0 612 792 ] >>
endobj

6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj

trailer
<<
  /Root 6 0 R
>>
  
```

Example 08

Hello World



```

Star -- in new coordinate system (device dependent RGB blue)

%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

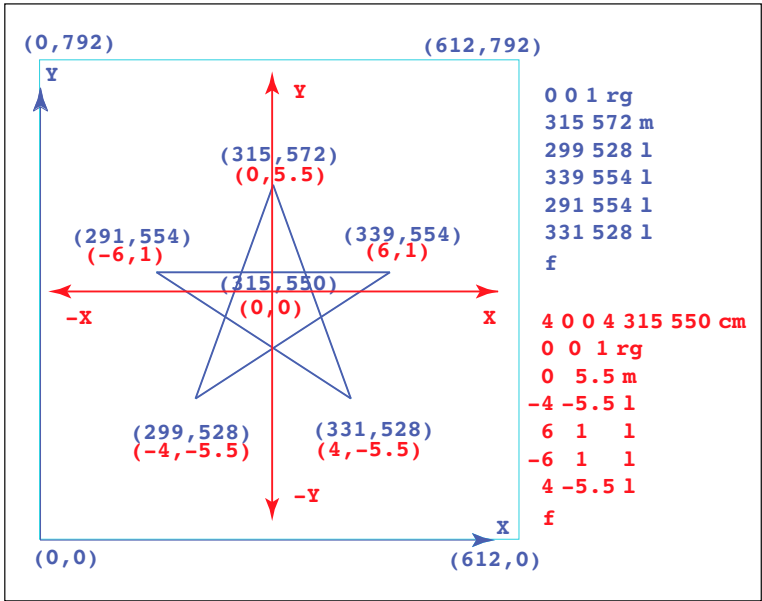
2 0 obj
<< /Length 51 >>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  (Hello World)Tj
ET
0 0 1 rg
4 0 0 4 315 550 cm
0 5.5 m
-4 -5.5 1
6 1 1
-6 1 1
4 -5.5 1
f
endstream
endobj

3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R >>
>>
endobj

4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj

```

Example 09 Page 1



```

Star -- in new coordinate system (device dependent RGB blue)

%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<< /Length 51 >>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  (Hello World)Tj
ET
0 0 1 rg
4 0 0 4 315 550 cm
0 5.5 m
-4 -5.5 1
6 1 1
-6 1 1
4 -5.5 1
f
endstream
endobj

3 0 obj
<<
  /ProcSet[/PDF/Text]
  /Font <</F1 4 0 R >>
>>
endobj

4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj

```

Example 09 Page 1

```

Star -- in new coordinate system (device dependent RGB blue)

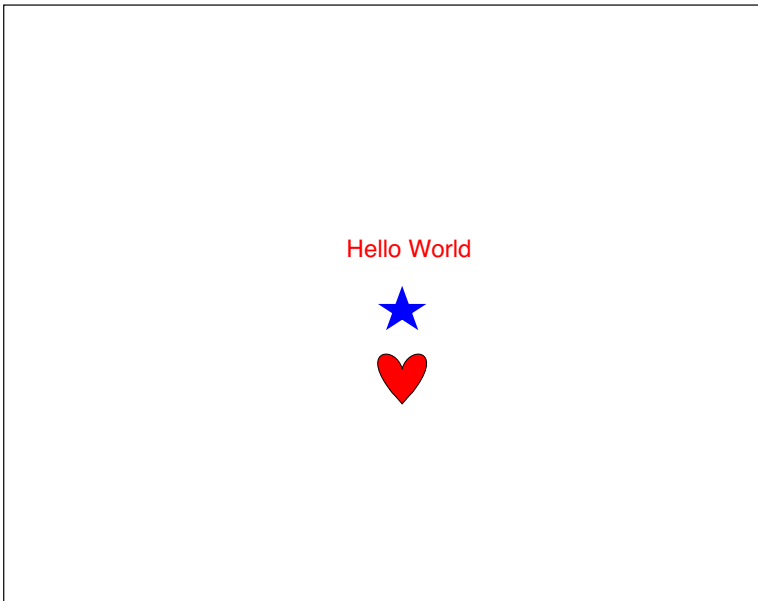
5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
    [ 0 0 612 792 ] >>
endobj

6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj

trailer
<<
  /Root 6 0 R
>>

```

Example 09 Page 2



```

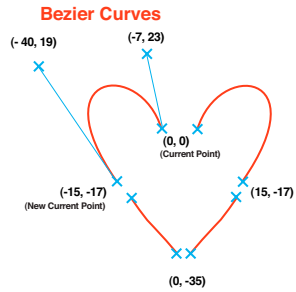
A Heart -- Using Bezier Curves (filled with L*a*b* and stroked in device black)

%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<< /Length 51 >>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  (Hello World)Tj
ET
0 0 1 rg
4 0 0 4 315 550 cm
0 5.5 m
-4 -5.5 1
6 1 1
-6 1 1
4 -5.5 1
f
q
/CS1 cs
63 127 127 sc
1 0 0 1 315 490 cm
0 0 m
-7 23 -40 19
-15 -17 c
-7.5 -27.8 -11 -22
0 -35 c
11 -22 7.5 -27.8
15 -17 c
40 19 7 23
0 0 c
b
endstream
endobj

```

Example 10 Page 1



x1	y1	x2	y2	x3	y3	c
1	0	0	1	315	490	cm
0	0	m				
-7	23	-40	19	-15	-17	c
-7.5	-27.8	-11	-22	0	-35	c
11	-22	7.5	-27.8	15	-17	c
40	19	7	23	0	0	c

```

A Heart -- Using Bezier Curves (filled with L*a*b* and stroked in device black)

%PDF-1.2
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<< /Length 51 >>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  (Hello World)Tj
ET
q
  0 0 1 rg
  4 0 0 4 315 550 cm
  0 5.5 m
  -4 -5.5 l
  6 1 l
  -6 1 l
  4 -5.5 l
f
Q

/CS1 cs
63 127 127 sc
1 0 0 1 315 490 cm
0 0 m
-7 23 -40 19
-15 -17 c
-7.5 -27.8 -11 -22
0 -35 c
11 -22 7.5 -27.8
15 -17 c
40 19 7 23
0 0 c
b
endstream
endobj

```

```

A Heart -- Using Bezier Curves (filled with L*a*b* and stroked in device black)

3 0 obj
<</ProcSet[/PDF/Text]/
Font <</F1 4 0 R>>
/ColorSpace
<</CS1 [ /Lab <<
  /Range
  [-128 127 -128 127]
  /WhitePoint
  [ 0.951 1 1.089]
  >> ] >>
<</CS2 [ /CalRGB <<
  /Gamma
  [2.222 2.222 2.222]
  /Matrix
  [0.412 0.213 0.019
  0.358 0.715 0.119
  0.181 0.072 0.951 ]
  /WhitePoint
  [0.951 1 1.089]
  >> ] >>
endobj

4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont /Helvetica
>>
endobj

5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
  [ 0 0 612 792 ] >>
endobj

6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj

trailer
<<
  /Root 6 0 R
>>
endobj

```



```

Adobe Logo as Sampled Image Data (included directly in page contents)

%PDF-1.2
% based on e08.pdf
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<< /Length 51 >>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  /CS1 cs
  63 127 127 sc
  (Hello World)Tj
ET
100 0 127 sc
/CS2 CS
0 0 1 SC
315 572 m
299 528 l
339 554 l
291 554 l
331 528 l
b
100 0 0 100 65 672 cm
BI /W 36 /H 32 /BPC 8
/CS /DeviceGray
ID
.....
endstream
EI
endobj

3 0 obj
<</ProcSet[/PDF/Text]/
Font <</F1 4 0 R>>
/ColorSpace
<</CS1 [ /Lab <<
  /Range
  [-128 127 -128 127]
  /WhitePoint
  [ 0.951 1 1.089]
  >> ] >>
<</CS2 [ /CalRGB <<
  /Gamma
  [2.222 2.222 2.222]
  /Matrix
  [0.412 0.213 0.019
  0.358 0.715 0.119
  0.181 0.072 0.951 ]
  /WhitePoint
  [0.951 1 1.089]
  >> ] >>
endobj

4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont /Helvetica
>>
endobj

5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
  [ 0 0 612 792 ] >>
endobj

6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj

trailer
<<
  /Root 6 0 R
>>
endobj

```

```

Adobe Logo as Sampled Image Data (included directly in page contents)

3 0 obj
<</ProcSet[/PDF/Text]/
Font <</F1 4 0 R>>
/ColorSpace
<</CS1 [ /Lab <<
  /Range
  [-128 127 -128 127]
  /WhitePoint
  [ 0.951 1 1.089]
  >> ] >>
<</CS2 [ /CalRGB <<
  /Gamma
  [2.222 2.222 2.222]
  /Matrix
  [0.412 0.213 0.019
  0.358 0.715 0.119
  0.181 0.072 0.951 ]
  /WhitePoint
  [0.951 1 1.089]
  >> ] >>
endobj

4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont /Helvetica
>>
endobj

5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
  [ 0 0 612 792 ] >>
endobj

6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj

trailer
<<
  /Root 6 0 R
>>
endobj

```



Hello World



Adobe Logo as Sampled Image Data -- No New Lines

```

%PDF-1.2
% based on e08.pdf
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<< /Length 1343 >>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  /CS1 cs
  63 127 127 sc
  (Hello World)Tj
ET
100 0 127 sc
/CS2 CS
0 0 1 SC
315 572 m
299 528 l
339 554 l
291 554 l
331 528 l
b
100 0 0 100 65 672 cm

/W 35 /H 32 /BPC 8
/CS /DeviceGray
ID
endstream
endobj

```

Example 12

Page 1

Adobe Logo as Sampled Image Data -- No New Lines

```

3 0 obj
<</ProcSet[/PDF/Text]
/Font <</F1 4 0 R>>
/ColorSpace
<</CS1 [ /Lab <<
  /Range
  [-128 127 -128 127]
  /WhitePoint
  [ 0.951 1 1.089]
>> ] >>
<</CS2 [ /CalRGB <<
  /Gamma
  [2.222 2.222 2.222]
  /Matrix
  [0.412 0.213 0.019
  0.358 0.715 0.119
  0.181 0.072 0.951 ]
  /WhitePoint
  [0.951 1 1.089]
>> ] >>
endobj

4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj

5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R ]
  /Count 1
  /MediaBox
  [ 0 0 612 792 ] >>
endobj

6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj

trailer
<<
  /Root 6 0 R
>>
endobj

```

Example 12

Page 2



Hello World



Hello World, Star, Logo -- With Cross Reference

```

%PDF-1.2
% based on e12.pdf
1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<<
  /Length 401
  /Filter/FlateDecode
>>
stream
HâtIqn~0 eüfñ·dvJl1+Ä öJ
DbnS*µ B ©RÇ-
# [666011Äÿ±· =\ Ä `ó
|w$ CÜB800, Ç.ø w-
w|g± cÇ-
Ighh'v/#x N,xé1" |' go
i~)-F1 v=ñ8P<Ü- g88jÜh c-
&{^â{VK*81R1-T y ,ü=üyx4E
ñü 2 ü12 NÖ-
ç818t'~ñ8h'fX'8Q-
Wä·emEiÄÄ ... öR·Äed iyâ$T-
±{
Vë8bc
±+uE5ëi1Äd fJ4mm^á r08KO#E
Pë8ü6üI'ñT' $T±-
ñ Ü'±T' ö~AQ#ÄP{m rD8PB
ÜL-
y j+~0+µZ1am^ü) K0MIGt1w#
±=6ÄT ÜH^ç80<~·fJfÄiÄ[-6Rg
&i0)Ä,Ü%F0iE]]+8040~0-
w10 ÆB1' - -ß"
endstream
endobj

```

Example 13b

Filters

- DCT (used for JPEG)
- Flate (used for PNG)
- JPEG2000
- JBIG2
- CCITT Fax (IUT)
- Run Length
- ASCII 85
- ASCII Hex



Hello World, Star, Logo -- With Cross Reference

```

3 0 obj
<</ProcSet[/PDF/Text]
/Font <</F1 4 0 R>>
/ColorSpace
<</CS1 [ /Lab <<
/Range
[-128 127 -128 127]
/WhitePoint
[ 0.951 1 1.089]
>> ] >>

<</CS2 [ /CalRGB <<
/Gamma
[2.222 2.222 2.222]
/Matrix
[0.412 0.213 0.019
0.358 0.715 0.119
0.181 0.072 0.951 ]
/WhitePoint
[0.951 1 1.089]
>> ] >>
>>
endobj

4 0 obj
<<
/Type /Font
/Subtype /Type1
/Name /F1
/BaseFont/Helvetica
>>
endobj

5 0 obj
<<
/Type /Pages
/Kids [ 1 0 R ]
/Count 1
/MediaBox
[ 0 0 612 792 ] >>
endobj

6 0 obj
<<
/Type /Catalog
/Pages 5 0 R
>>
endobj

7 0 obj
<<
/ModDate
(D:19980307173849)
>>
endobj

```

Example 13b

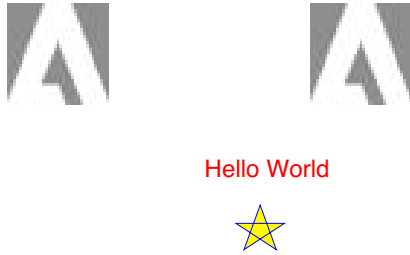
Hello World, Star, Logo -- With Cross Reference

```

xref
0 8
0000000000 65535 f
0000000016 00000 n
0000000102 00000 n
0000000626 00000 n
0000000947 00000 n
0000001033 00000 n
0000001124 00000 n
0000001177 00000 n
trailer
<</Size 8
/Info 7 0 R
/Root 6 0 R
/ID[
<516b0039a4e03b90b
d0a72f349225b02>
<516b0039a4e03b90b
d0a72f349225b02>]
>>
startxref
1228
%%EOF

```

Example 13b



One Adobe Logo Imaged Twice (sharing)

```

%PDF-1.2
% based on e12.pdf
1 0 obj
<<
/Type /Page
/Parent 5 0 R
/Resources 3 0 R
/Contents 2 0 R
>>
endobj

2 0 obj
<< /Length 239 >>
stream
BT
/F1 24 Tf
1 0 0 1 260 600 Tm
/CS1 cs
63 127 127 sc
(Hello World)Tj
ET
100 0 127 sc
/CS2 CS
0 0 1 SC
315 572 m
299 528 l
339 554 l
291 554 l
331 528 l
b
endstream

3 0 obj
<</ProcSet[
/PDF/Text]
/Font <</F1 4 0 R>>
/XObject
<</AdobeLogo 7 0 R >>
endstream
endobj

4 0 obj
<<
/Type /Font
/Subtype /Type1
/Name /F1
/BaseFont/Helvetica
>>
endobj

5 0 obj
<<
/Type /Pages
/Kids [ 1 0 R ]
/Count 1
/MediaBox
[ 0 0 612 792 ] >>
endobj

6 0 obj
<<
/Type /Catalog
/Pages 5 0 R
>>
endobj

7 0 obj
<<
/ModDate
(D:19980307173849)
>>
endobj

```

Example 14

One Adobe Logo Imaged Twice (sharing)

```

/ColorSpace
<</CS1 [ /Lab <<
/Range
[-128 127 -128 127]
/WhitePoint
[ 0.951 1 1.089]
>> ] >>

<</CS2 [ /CalRGB <<
/Gamma
[2.222 2.222 2.222]
/Matrix
[0.412 0.213 0.019
0.358 0.715 0.119
0.181 0.072 0.951 ]
/WhitePoint
[0.951 1 1.089]
>> ] >>
>>
endobj

4 0 obj
<<
/Type /Font
/Subtype /Type1
/Name /F1
/BaseFont/Helvetica
>>
endobj

5 0 obj
<<
/Type /Pages
/Kids [ 1 0 R ]
/Count 1
/MediaBox
[ 0 0 612 792 ] >>
endobj

6 0 obj
<<
/Type /Catalog
/Pages 5 0 R
>>
endobj

```

Example 14

One Adobe Logo Imaged Twice (sharing)

```

7 0 obj
<<
/Type /XObject
/Subtype /Image
/Name /AdobeLogo
/Width 35
/Height 32
/BitsPerComponent 8
/ColorSpace
/DeviceGray
/Length 1120
>>
stream
[
<<
/Type /Page
/Parent 5 0 R
/Resources 3 0 R
/Contents 2 0 R
>>
endstream
endobj

trailer
<<
/Root 6 0 R
>>

```

Example 14



Page 1



Page 2



Two Page Document ("Hello World" becomes "Page 1", "Page 2")

```

%PDF-1.2
% based on e14.pdf
5 0 obj
<<
  /Type /Pages
  /Kids [ 1 0 R 8 0 R ]
  /Count 2
  /MediaBox [ 0 0 612 792 ]
>>
endobj

1 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 3 0 R
  /Contents 2 0 R
>>
endobj

2 0 obj
<< /Length 220 >>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  /CS1 cs
  63 127 127 sc
  (Page 1)Tj
ET
100 0 127 sc
/CS2 CS
0 0 1 SC
315 572 m
299 528 l
339 554 l
291 554 l
331 528 l
b
0 0 m
q
100 0 0 100
65 672 cm
/AdobeLogo Do
Q
100 0 0 100
365 672 cm
/AdobeLogo Do
endstream
endobj

3 0 obj
<</ProcSet[
  /PDF/Text]
  /Font <</F1 4 0 R>>
>>
/Xobject
<</AdobeLogo 7 0 R >>

```

Example 15

Page 1

Two Page Document ("Hello World" becomes "Page 1", "Page 2")

```

/ColorSpace
<</CS1 [ /Lab <<
  /Range
  [-128 127 -128 127]
  /WhitePoint
  [ 0.951 1 1.089]
>> ]
>> ]

/CS2 [ /CalRGB <<
  /Gamma
  [2.222 2.222 2.222]
  /Matrix
  [0.412 0.213 0.019
  0.358 0.715 0.119
  0.181 0.072 0.951 ]
  /WhitePoint
  [0.951 1 1.089]
>> ] >>
>>
endobj

```

Example 15

Page 2

Two Page Document ("Hello World" becomes "Page 1", "Page 2")

```

8 0 obj
<<
  /Type /Page
  /Parent 5 0 R
  /Resources 9 0 R
  /Contents 10 0 R
>>
endobj

10 0 obj
<< /Length 220 >>
stream
BT
  /F1 24 Tf
  1 0 0 1 260 600 Tm
  /CS1 cs
  63 0 127 sc
  (Page 2)Tj
ET
90 -100 -50 sc
/CS2 CS
0 0 1 SC
315 572 m
299 528 l
339 554 l
291 554 l
331 528 l
b
0 0 m
q
100 0 0 100
65 672 cm
/AdobeLogo Do
Q
100 0 0 100
365 672 cm
/AdobeLogo Do
endstream
endobj

9 0 obj
<</ProcSet[
  /PDF/Text]
  /Font <</F1 4 0 R>>
>>
/Xobject
<</AdobeLogo 7 0 R >>

```

Example 15

Page 3

Two Page Document ("Hello World" becomes "Page 1", "Page 2")

```

/ColorSpace
<</CS1 [ /Lab <<
  /Range
  [-128 127 -128 127]
  /WhitePoint
  [ 0.951 1 1.089]
>> ]
>> ]

/CS2 [ /CalRGB <<
  /Gamma
  [2.222 2.222 2.222]
  /Matrix
  [0.412 0.213 0.019
  0.358 0.715 0.119
  0.181 0.072 0.951 ]
  /WhitePoint
  [0.951 1 1.089]
>> ] >>
>>
endobj

4 0 obj
<<
  /Type /Font
  /Subtype /Type1
  /Name /F1
  /BaseFont/Helvetica
>>
endobj

6 0 obj
<<
  /Type /Catalog
  /Pages 5 0 R
>>
endobj

```

Example 15

Page 4

Meta Data

otoshop/1.0/'>photoshop:headline<rdf:Seq<rdf:li></rdf:li></rdf:Seq>
</photoshop:headline></rdf:Description>
<rdf:Description
rdf:about='uid:cb29237f-8d0c-4464-9df1-de9e3db78aba'
xmlns:xap='http://ns.adobe.com/xap/1.0/'
xap:CreatorTool='Acrobat PDFMaker 6.0 for Word'
xap:ModifyDate='2004-04-01T16:12:29-08:00'
xap:CreateDate='2004-04-01T16:02:53-08:00'
xap:MetadataDate='2004-04-01T16:12:29-08:00'></rdf:Description>
<rdf:Description
rdf:about='uid:cb29237f-8d0c-4464-9df1-de9e3db78aba'
xmlns:xapMM='http://ns.adobe.com/xap/1.0/mm/'
xapMM:DocumentID='uid:f52755c8-ad06-4534-b0e1-538e1722f21e'><xapMM:VersionID><rdf:Seq>
<rdf:li>4</rdf:li></rdf:Seq></xapMM:VersionID></rdf:Description>
<rdf:Description
rdf:about='uid:cb29237f-8d0c-4464-9df1-de9e3db78aba'
xmlns:dc='http://purl.org/dc/elements/1

Example 24

Meta Data

19 0 obj
<<
/Outline /Span
/Underline /Span
/Normal /P
/Strikeout /Span
/Heading#201 /H1
/Heading#202 /H2
/Heading#203 /H3
/TextBox /Div
/Frame /Div
/Footnote /Note
/Endnote /Note
/Shape /Figure
/InlineShape /Figure
/TOA /TOC
/TOAI /TOCI
/TOF /TOC
/TOFI /TOCI
/Superscript /Span
/Subscript /Span
/DropCap /Figure
>>
endobj
22 0 obj
<<
/Normal 26 0 R
>>

Example 24

Meta Data

endobj
29 0 obj
<</O/Layout
/EndIndent 0.0
/SpaceAfter 3.0
/SpaceBefore 12.0
/StartIndent 0.0
/TextAlign/Start
/TextIndent 0.0
/WritingMode /LrTb
>>
endobj
34 0 obj
<<
/O /Layout
/EndIndent 0.0
/SpaceAfter 3.0
/SpaceBefore 12.0
/StartIndent 0.0
/TextAlign /Start
/TextIndent 0.0
/WritingMode /LrTb
>>
endobj
55 0 obj
<<
/Length 892
>>
stream
/P <</MCID 0 >>
BDC
0 g
1 i
BT
/TTO 1 Tf
-0.00079 Tc 0.00011 Tw 0 Tm
100 Tz 0 Tr
16.02 0 0 16.02 90 693.06 Tm
[(1.0 Import) 15 (ant N) -5
(o) 1 (tice)]TJ
ET
EMC
/P <</MCID 1 >>
BDC
BT
/TTO 1 Tf

Example 24

Meta Data

-0.00011 Tc 0.0023 Tw 12 0 0 12 90
675.47998 Tm
(This is a paragraph.)Tj
BT
EMC
/P <</MCID 2 >>
BDC
BT
/TTO 1 Tf
0.00079 Tc 0.00031 Tw 13.98 0 0
13.98 90 647.70007 Tm
(1.1 Second Notice)Tj
BT
EMC
/P <</MCID 3 >>
BDC
BT
/TTO 1 Tf
-0.00011 Tc 0.0023 Tw 12 0 0 12 90
630.60004 Tm
(Another paragraph.)Tj
BT
EMC
/P <</MCID 4 >>
BDC
BT
/TTO 1 Tf
0.0002 Tc -0.0038 Tw 13.02 0 0 13.02
90 603.77997 Tm
(1.3 Third Notice)Tj
BT
EMC
/P <</MCID 5 >>
BDC
BT
/TTO 1 Tf
0 Tc 0.0022 Tw 12 0 0 12 90
586.85999 Tm
(And my final paragraph.)Tj
BT
EMC
/P <</MCID 6 >>
BDC
BT
/TTO 1 Tf
0 Tw 12 0 0 12 90 573.06006 Tm
()Tj
BT
EMC
/P <</MCID 7 >>
BDC
BT

Example 24

Meta Data

/TTO 1 Tf
12 0 0 12 90 559.26013 Tm
()Tj
ET
EMC
endstream
endobj
20 0 obj
<<
/K 0
/C /Heading#201
/P 41 0 R
/S /Heading#201
/Pg 1 0 R
>>
endobj
24 0 obj
<<
/K 1
/C /Normal
/P 41 0 R
/S /Normal
/Pg 1 0 R
>>
endobj
27 0 obj
<<
/K 2
/C /Heading#202
/P 41 0 R
/S /Heading#202
/Pg 1 0 R
>>
endobj
30 0 obj
<<
/K 3
/C /Normal
/P 41 0 R
/S /Normal
/Pg 1 0 R>>
endobj
32 0 obj
<<
/K 4
/C /Heading#203
/P 41 0 R
>>
endobj

Example 24

Meta Data

/S /Heading#203
/Pg 1 0 R
>>
endobj
35 0 obj
<<
/K 5
/C /Normal
/P 41 0 R
/S /Normal
/Pg 1 0 R
>>
endobj
37 0 obj
<<
/K 6
/C /Normal
/P 41 0 R
/S /Normal
/Pg 1 0 R
>>
endobj
39 0 obj
<<
/K 7
/C /Normal
>>
endobj
/P 41 0 R
/S /Normal
/Pg 1 0 R
>>
endobj
41 0 obj
<<
/Lang (EN-GB)
/K [20 0 R 24 0 R 27 0 R 30 0 R]
/P 18 0 R
/S /Sect
>>
endobj
43 0 obj
<< /Nums [0 44 0 R] >>
endobj
44 0 obj
[20 0 R 24 0 R 27 0 R 30 0 R 32 0 R 35 0 R 37 0 R 39 0 R]
endobj
1 0 obj
<<
/Contents 55 0 R
/Type /Page
/Parent 10 0 R
>>
endobj

Example 24

Meta Data

```

/Resources <</Font <</TT0 8 0 R>>
/ProcSet [/PDF/Text] >>
/StructParents 0
>>
endobj
10 0 obj
<<
/Type /Pages
/Count 1
/Kids [1 0 R]
/MediaBox [0 0 612 792]
>>
endobj
8 0 obj
<<
/Type /Font
/Subtype /Type1
/Name /F1
/BaseFont /Helvetica
>>
endobj
trailer
<<
/Root 16 0 R
>>

```

Example 24

Meta Data

```

<?adobe-xap-filters esc="LF"?>
<x:xmpmeta xmlns:x="adobe:meta/"
x:xmpk="XMP toolkit 2.9.1-14, framework 1.6">
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
xmlns:ix="http://ns.adobe.com/ix/1.0/">
<rdf:Description rdf:about="uuid:ad0dab0d-84e1-11d8-8dfc-
00306577a5e6"
xmlns:pdf="http://ns.adobe.com/pdf/1.3/">
<pdf:Producer>Acrobat Distiller 6.0.1 (Windows)</pdf:Producer>
</rdf:Description>
<rdf:Description rdf:about="uuid:ad0dab0d-84e1-11d8-8dfc-
00306577a5e6"
xmlns:pdfx="http://ns.adobe.com/pdfx/1.3/">
<pdfx:Company>Adobe Systems</pdfx:Company>
<pdfx:SourceModified>D:20040402000249</pdfx:SourceModified>
</rdf:Description>
<rdf:Description rdf:about="uuid:ad0dab0d-84e1-11d8-8dfc-
00306577a5e6"
xmlns:photoshop="http://ns.adobe.com/photoshop/1.0/">
<photoshop:headline>
<rdf:Seq>

```

Example 24

Meta Data

```

</rdf:li></rdf:li>
</rdf:Seq>
</photoshop:headline>
</rdf:Description>
<rdf:Description rdf:about="uuid:ad0dab0d-84e1-11d8-8dfc-
00306577a5e6"
xmlns:xap="http://ns.adobe.com/xap/1.0/">
<xap:CreatorTool>Acrobat PDFMaker 6.0 for
Word</xap:CreatorTool>
<xap:ModifyDate>2004-04-01T16:12:29-08:00</xap:ModifyDate>
<xap:CreateDate>2004-04-01T16:02:53-08:00</xap:CreateDate>
<xap:MetadataDate>2004-04-01T16:12:29-08:00</xap:MetadataDate>
</rdf:Description>
<rdf:Description rdf:about="uuid:ad0dab0d-84e1-11d8-8dfc-
00306577a5e6"
xmlns:xapMM="http://ns.adobe.com/xap/1.0/mm/">
<xapMM:DocumentID>uuid:f52755c8-ad06-4534-b0e1-
538e1722f21e</xapMM:DocumentID>
<xapMM:VersionID>
<rdf:Seq>
<rdf:li>4</rdf:li>
</rdf:Seq>
</xapMM:VersionID>

```

Example 24

Meta Data

```

</rdf:Description>
<rdf:Description rdf:about="uuid:ad0dab0d-84e1-11d8-8dfc-
00306577a5e6"
xmlns:dc="http://purl.org/dc/elements/1.1/">
<dc:format>application/pdf</dc:format>
<dc:title>
<rdf:Alt>
<rdf:li xml:lang="x-default">Important Notice</rdf:li>
</rdf:Alt>
</dc:title>
<dc:creator>
<rdf:Seq>
<rdf:li>James C. King</rdf:li>
</rdf:Seq>
</dc:creator>
</rdf:Description>
</rdf:RDF>
</x:xmpmeta>

```

Example 24

And Much More We Won't Cover

- Object Streams
- Optimized for the Web
- Digital Signatures
- Certified Documents
- Encrypted Documents
- File attachments
- Table of Contents (bookmarks)
- Subset definitions: PDF/X, PDF/A, PDF/E, PDF/H
- Character encoding, fonts and font embedding
- Hyperlinks
- Forms and interactive features
- Transparency
- Multimedia (movies, 3D, sound)
- Functions



PDF – The Open Specification

- Now nearly 12 years old
- Widely used-cornerstone of Publishing Industry
 - PDF/X
- Platform independent
- High fidelity
- No restrictions on applications that read or write
- Easily created from any application that prints
- Well documented
- ISO Standard (PDF/A)



References

- PDF Reference, 5th Edition
 - http://partners.adobe.com/public/developer/pdf/index_reference.html
 - (or <http://www.google.com> and look for "PDF Reference")
- PDF/A
 - <http://www.aiim.org/standards.asp?ID=25013>
 - (or <http://www.google.com> and look for "PDF/Archive")
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- Contact me:
 - jking@adobe.com



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