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Internal: 734-00750A-EN Rev A
Release date: 4 March 2008

Technical Bulletin

RealTimeProof Partner Metadata Structure

This document describes the metadata structure of the Kodak® RealTimeProof™ (RTP) Partner software, and indicates the RTP Partner metadata elements that are mapped in Kodak Smart Review System (SRS).

GetMetaData Method

The GetMetaData method returns the following structure:

MetaData[0].Data = [**Binary Data**]
MetaData[0].Name = [**Notes**]
MetaData[0].Updated = [12/24/2007 23:45:57]
MetaData[1].Data = [**Binary Data**]
MetaData[1].Name = [**DataRepository**]
MetaData[1].Updated = [12/25/2007 00:00:55]

Binary Data from Data Field

[Binary Data] contained in the Data return fields is in a base64 encoded text stream.

Notes

The Notes Data stream decodes to XML that contains the list of all Annotation Notes for the source element. The following example contains two notes:

```
<?xml version="1.0" encoding="UTF-8"?>
<NotesList>
   <Note>
      <Id>1</Id>
      <Ver>1</Ver>
      <Type>Text</Type>
      <Page>1</Page>
      <Ctime>2007-12-24T23:34:24Z</Ctime>
      <Author>
         <F>Jack</F>
         <L>Frost</L>
         <Aid>Snowman</Aid>
      </Author>
      <Label>Snowman</Label>
      <Text>This is a Text Annotation</Text>
      <ReviewStatus>1</ReviewStatus>
      <PublishingStatus>1</PublishingStatus>
      <Anchor>
         <Xcoord>1195.23145</Xcoord>
         <Ycoord>1196.49976</Ycoord>
      </Anchor>
      <Offset>
         <Xcoord>1</Xcoord>
         <Ycoord>0</Ycoord>
      </Offset>
      <Extent>
         <Xcoord>200</Xcoord>
         <Ycoord>200</Ycoord>
      </Extent>
      <Color>
         <R>0</R>
         <G>255</G>
         <B>255</B>
      </Color>
      <Blob>BINARY DATA</Blob>
      <Permissions>1</Permissions>
      <Extended>EBc=</Extended>
      <CoordsRange>
         <Xcoord>10200</Xcoord>
         <Ycoord>13200</Ycoord>
      </CoordsRange>
      <CalibrationStatus>0</CalibrationStatus>
   </Note>
   <Note>
      <Id>2</Id>
      <Ver>1</Ver>
      <Type>Oval</Type>
      <Page>1</Page>
      <Ctime>2007-12-24T23:35:25Z</Ctime>
      <Author>
         <F>Kris</F>
         <L>Kringle</L>
         <Aid>SC</Aid>
      </Author>
      <Label>SC</Label>
      <Text>This is an Oval Annotation</Text>
      <ReviewStatus>1</ReviewStatus>
      <PublishingStatus>1</PublishingStatus>
      <Anchor>
         <Xcoord>4576.51855</Xcoord>
         <Ycoord>2983.23877</Ycoord>
      </Anchor>
      <Offset>
         <Xcoord>1</Xcoord>
         <Ycoord>0</Ycoord>
      </Offset>
      <Extent>
         <Xcoord>200</Xcoord>
         <Ycoord>200</Ycoord>
      </Extent>
      <Color>
         <R>0</R>
         <G>255</G>
         <B>255</B>
      </Color>
      <Blob>BINARY DATA</Blob>
      <Permissions>1</Permissions>
      <Extended>EBc=</Extended>
      <CoordsRange>
         <Xcoord>10200</Xcoord>
         <Ycoord>13200</Ycoord>
      </CoordsRange>
      <CalibrationStatus>0</CalibrationStatus>
   </Note>
</NotesList>
```

Each note's structure contains a <Blob> element. The Blob contains annotation position information that is base64 encoded. Every annotation type has at least five numbers: two pairs of points and the count of how many more data points follow. The general form of the Blob data is:

```
startpoint_X startpoint_Y endpoint_X endpoint_Y numberofdatapoints dataPoint1_X
dataPoint1_Y dataPoint2_X dataPoint2_Y...
```

Specific examples of each RTP Partner annotation type follow:

Text and Color Annotations

Decoded <Blob> = 1195.231 1196.500 0.000 0.000 0

These annotation types only contain a start point pair. The remaining data points are zero.

Oval Annotation

Decoded <Blob> = 4208.502 2396.599 7189.069 4182.024 0

The start point pair is where the user clicked to start the oval and the end point pair is where the user stopped drawing. The oval fills the rectangle bounded by the two points.

Rect and MeasureRects Annotations

Decoded <Blob> = 7801.215 1201.457 8996.356 2389.312 0

The start point pair is where the user clicked to start the rectangle and the end point pair is where the user stopped drawing. The rectangle boundary is the four lines that connect these two points.

MeasureLine Annotation

Decoded <Blob> = 2401.162 7789.290 5396.211 8394.286 0

The start point pair is where the user clicked to start the line and the end point pair is where the user stopped drawing. The line connects the two points.

Freehand (Grease Pen) Annotation

Decoded <Blob> = 1796.356 10813.604 4835.223 11367.450 49 1825.506 10777.167 1912.128 10746.677 2085.373 10685.697 2211.741 10631.418 2447.316 10530.231 2681.694 10423.424 2911.336 10310.770 2939.184 10297.108 2962.512 10274.170 2984.211 10252.471 2994.091 10242.591 3007.656 10204.952 3006.073 10216.033 2993.081 10306.976 2955.905 10443.762 2940.486 10558.543 2934.042 10606.515 2940.486 10655.709 2940.486 10704.292 2940.486 10748.017 2936.114 10796.114 2940.486 10835.467 2940.972 10839.839 2950.203 10835.467 2955.061 10835.467 3018.219 10835.467 3082.534 10829.830 3144.535 10835.467 3162.696 10837.118 3178.176 10850.974 3195.547 10857.329 3377.366 10923.849 3557.839 10994.828 3742.105 11054.090 4041.240 11150.294 4343.336 11242.052 4645.749 11323.726 4676.130 11331.931 4710.266 11317.970 4740.486 11323.726 4761.278 11327.686 4781.307 11341.950 4798.786 11352.875 4800.740 11354.097 4796.794 11359.366 4798.786 11360.163 4808.940 11364.225 4826.462 11366.375 4835.223 11367.450

The start point pair is where the user clicked to start the drawing and the end point pair is where the drawing stops. In this example, there are 49 point pairs between the start and end point pairs. Note that the 49th point pair contains the same X Y values as the end point pair.

Loose Grease Pen Annotation

Decoded <Blob> = 6591.499 11396.600 7210.932 11965.021 59 6613.361 11433.037 6714.510 11539.818 6916.808 11753.382 7072.470 11906.722 7079.561 11913.706 7091.871 11911.715 7101.620 11914.009 7133.166 11921.432 7168.085 11923.502 7196.356 11935.871 7206.952 11940.507 7214.170 11956.924 7218.219 11965.021 7219.028 11966.641 7213.361 11965.021 7210.932 11965.021 7210.932 11965.021 7210.932 11965.021 7210.932 11965.021 7801.215 11965.021 7899.566 11895.147 8096.269 11755.400 8238.462 11644.373 8273.597 11616.939 8301.620 11581.216 8333.199 11549.637 8362.349 11520.487 8396.850 11494.486 8420.648 11462.188 8430.857 11448.332 8430.951 11428.261 8435.223 11411.175 8435.810 11408.828 8435.223 11406.316 8435.223 11403.888 8435.223 11403.888 8435.223 11403.888 8435.223 11403.888 8435.223 11403.888 8413.360 11986.884 8478.369 11884.200 8608.387 11678.834 8697.571 11520.486 8727.415 11467.498 8746.447 11408.871 8770.445 11352.875 8797.459 11289.843 8829.951 11228.321 8850.607 11163.401 8863.959 11121.438 8865.976 11076.063 8872.470 11032.228 8875.692 11010.476 8873.171 10987.500 8879.758 10966.641 8902.320 10895.192 8940.720 10801.934 8959.920 10755.305

This is the more complex drawing tool. The user can draw several shapes joined together in one note. The start point pair is where the user clicked to start the drawing and the end point pair is where the *first* drawn shape stops. Pairs of data points follow. Each shape, *except* the last drawn shape, is terminated with duplicate points. The actual number of duplicate points can vary.

Here is the sample data separated with line feeds to more clearly convey the format. This example has duplicate points to mark the end of a shape.

6591.499 11396.600
7210.932 11965.021

(59 point pairs to follow)

6613.361 11433.037
6714.510 11539.818
6916.808 11753.382
7072.470 11906.722
7079.561 11913.706
7091.871 11911.715
7101.620 11914.009
7133.166 11921.432
7168.085 11923.502
7196.356 11935.871
7206.952 11940.507
7214.170 11956.924
7218.219 11965.021
7219.028 11966.641
7213.361 11965.021
7210.932 11965.021
7210.932 11965.021
7210.932 11965.021

7210.932 11965.021
7210.932 11965.021
7801.215 11965.021
7899.566 11895.147
8096.269 11755.400
8238.462 11644.373
8273.597 11616.939
8301.620 11581.216
8333.199 11549.637
8362.349 11520.487
8396.850 11494.486
8420.648 11462.188
8430.857 11448.332
8430.951 11428.261
8435.223 11411.175
8435.810 11408.828
8435.223 11406.316
8435.223 11403.888
8435.223 11403.888
8435.223 11403.888
8435.223 11403.888
8435.223 11403.888
8413.360 11986.884
8478.369 11884.200
8608.387 11678.834
8697.571 11520.486
8727.415 11467.498
8746.447 11408.871
8770.445 11352.875
8797.459 11289.843
8829.951 11228.321
8850.607 11163.401
8863.959 11121.438
8865.976 11076.063
8872.470 11032.228
8875.692 11010.476
8873.171 10987.500
8879.758 10966.641
8902.320 10895.192
8940.720 10801.934
8959.920 10755.305

DataRepository

The DataRepository Data stream decodes to XML that contains the list of all Approval data for the source element. The following example contains Source DocRoot Path, Color Profile Applied, Approval Status Descriptions Applied, Individual User Approval Statuses Applied, and Document Approval Status Applied:

```
<?xml version="1.0" encoding="UTF-8"?>
<Parameters>
   <Name>/annotations1200.pdf</Name>
   <ColorParameters>
      <ColorProfile>
         <CMYKPrintingProcess>Custom MatchPrint Virtual Color</CMYKPrintingProcess>
         <ProofingCondition>v3 coated</ProofingCondition>
         <ProfileID>0d427b22c74ceec70cb68c62477e063b</ProfileID>
      </ColorProfile>
   </ColorParameters>
   <RIPParameters>
      <RipID>HarlequinRIP</RipID>
      <DefaultFontName>Times-Roman</DefaultFontName>
      <RIPPageSize>
         <AsInFile>true</AsInFile>
      </RIPPageSize>
      <RIPRotate>
         <Enabled>false</Enabled>
      </RIPRotate>
      <RIPOverPrint>
         <Support>true</Support>
         <ForceBlackOverPrint>false</ForceBlackOverPrint>
      </RIPOverPrint>
      <MessageLevel>0</MessageLevel>
      <ResolutionHigh>1200</ResolutionHigh>
      <ResolutionLow>300</ResolutionLow>
   </RIPParameters>
   <Approval>
      <StatusDescription>
         <SystemID>Approved</SystemID>
         <Status>Approved</Status>
         <Description>Approved</Description>
         <ReadOnly>false</ReadOnly>
         <DisplayStamp>true</DisplayStamp>
         <NoAction>false</NoAction>
      </StatusDescription>
      <StatusDescription>
         <SystemID>ApprovedWithChanges</SystemID>
         <Status>ApprovedWithChanges</Status>
         <Description>Approved With Changes</Description>
         <ReadOnly>false</ReadOnly>
         <DisplayStamp>true</DisplayStamp>
         <NoAction>false</NoAction>
      </StatusDescription>
      <StatusDescription>
         <SystemID>RequestChanges</SystemID>
         <Status>RequestChanges</Status>
         <Description>Changes requested</Description>
         <ReadOnly>false</ReadOnly>
         <DisplayStamp>false</DisplayStamp>
         <NoAction>false</NoAction>
      </StatusDescription>
      <UserStatus>
         <UserID>Snowman</UserID>
         <UserF>Jack</UserF>
         <UserL>Frost</UserL>
         <Status>ApprovedWithChanges</Status>
         <Comment>Approved with changes by Jacki Frost</Comment>
         <Updated>2007-12-24T23:55:32Z</Updated>
         <Calibration>Undefined</Calibration>
      </UserStatus>
      <UserStatus>
         <UserID>SC</UserID>
         <UserF>Kris</UserF>
         <UserL>Kringle</UserL>
         <Status>ApprovedWithChanges</Status>
         <Comment>Approved with changes by S.C.</Comment>
         <Updated>2007-12-24T23:57:27Z</Updated>
         <Calibration>Undefined</Calibration>
      </UserStatus>
      <DocStatus>Approved</DocStatus>
      <DocStatusUpdated>2007-12-24T23:59:59Z</DocStatusUpdated>
   </Approval>
   <Messages>
   </Messages>
</Parameters>
```

RTP Metadata Elements

Element Name	Description	Content Type	Utilized in Partner	Mapping Exists in SRS
Aid	Annotation Author ID	string	✓	✓
Anchor	Annotation Anchor Location; contains Xcoord and Ycoord	complex	✓	✓
Approval	Document Approval Information; contains StatusDescription, UserStatus, DocStatus, DocStatusUpdated	complex	✓	✓
AsInFile	RIP Page Size matches As In File	boolean	X	X
Author	Annotation Author; contains F, L, and Aid	complex	✓	✓
B	Annotation Header Blue Value	short (from 0 to 255)	✓	✓
Blob	Annotation Position Data	string (base64-encoded)	✓	✓
CMYKPrintingProcess	CMYKPrintingProcess	string	✓	X
ColorParameters	Document's last set Color Parameters; contains ColorProfile	complex	✓	X
ColorProfile	Color Profile; contains CMYK PrintingProcess, ProofingCondition, ProfileID	complex	✓	*
Calibration	Calibration Status at time of User Approval	string (enumerated values are: Undefined, Uncalibrated, or Calibrated)	✓	✓

CalibrationStatus	Calibration Status at time of Annotation Note placement	short (enumerated values are: 0, 1, or 2 representing Undefined, Uncalibrated, or Calibrated)	✓	X
Color	Annotation Header Color; contains R, G, and B	complex	✓	✓
Comment	User Approval Status Comment	string	✓	✓
CoordsRange	Annotations Coordinate Range; contains Xcoord and Ycoord; equivalent to the size of the RIPed page at the time of the annotation placement	complex	✓	X
Ctime	Annotation Date Time	dateTime	✓	✓
DefaultFontName	RIP Default Font Name	string	✓	X
Description	Approval Status Displayed in User Approval Dropdown	string	✓	✓
DisplayStamp	Approval Status Display (Document Approval) Stamp Option	boolean	✓	✓
DocStatus	Document Approval Status	string	✓	✓
DocStatusUpdated	Document Approval Status Date Time	dateTime	✓	✓
Enabled	RIP Rotate is Enabled	boolean	X	X
Extended	Extended	string (always “Ebc=”)	X	X
Extent	Annotation Extent; Contains the size of the Annotation in on-screen pixels	complex	✓	X

F	Annotation Author First Name	string	✓	✓
ForceBlackOverPrint	RIP Forces Black OverPrint	boolean	X	X
G	Annotation Header Green Value	short (from 0 to 255)	✓	✓
Id	Annotation ID	short	✓	✓
L	Annotation Author Last Name	string	✓	✓
Label	Annotation Header Label	string	✓	X
Messages	RIP Processing Error Messages	string	✓	X
MessageLevel	RIP Error Message Level	short (enumerated values are: 0 or 1 representing Normal or Expert)	✓	X
Name	Source Name in Docroot/Filename format	string	✓	✓
NoAction	Approval Status No Action (or Update) on Server Option	boolean	✓	✓
Note	Annotation; contains Id, Ver, Type, Page, Ctime, Author, Label, Text, ReviewStatus, PublishingStatus, Anchor, Offset, Extent, Color, Blob, Permissions, Extended, CoordsRange, CalibrationStatus	complex	✓	✓
NotesList	Annotation Notes Wrapper	complex; contains 0 to unlimited Note elements	✓	✓

Offset	contains Xcoord and Ycoord	complex; (Xcoord value always 1; Ycoord value always 0)	X	X
Page	Annotation Page	short	✓	✓
Parameters	DataRepository Wrapper; contains Name, ColorParameters, RIPParameters, Approval, Messages	complex	✓	✓
Permissions	Document Permissions	short (always 1)	X	X
ProfileID	Color Profile ID	string	✓	✓
ProofingCondition	Color Proofing Condition	string	✓	X
PublishingStatus	Annotation Publishing Status	short (always 1)	X	X
R	Annotation Header Red Value	short (from 0 to 255)	✓	✓
ReviewStatus	Annotation Review Status	short (always 1)	X	X
ReadOnly	Approval Status Read Only (Non-Display) Option	boolean	✓	✓
ResolutionHigh	RIP LW Resolution	short	✓	X
ResolutionLow	RIP CT Resolution	short	✓	X
RipID	RIP ID	string (enumerated values are: HarlequinRIP and None)	✓	X
RIPOverPrint	RIP OverPrint; contains Support and ForceBlackOverPrint	complex	X	X
RIPPageSize	RIP Page Size; contains AsInFile	complex	X	X

RIPParameters	RIP Parameters; contains RipID, DefaultFontName, RIPPageSize, RIPRotate, RIPOverPrint, MessageLevel, ResolutionHigh, and ResolutionLow	complex	✓	X
RIPRotate	RIP Rotate; contains Enabled	complex	✓	X
Support	RIP OverPrint Supported	boolean	X	X
Status	User Approval Status	string	✓	✓
StatusDescription	Available Approval Status Descriptions; contains SystemID, Status, Description, ReadOnly, DisplayStamp, and NoAction	string	✓	✓
SystemID	Approval Status System ID	string	✓	✓
Text	Annotation Text	string	✓	✓
Type	Annotation Type	string (enumerated values are: Color, Freehand, LooseGreasePen, Oval, Rect, or Text)	✓	✓
Updated	Date Time of User Approval Status	dateTime	✓	✓
UserF	First Name of User assigning Approval Status	string	✓	✓
UserID	User ID of User assigning Approval Status	string	✓	✓

UserL	Last Name of User assigning Approval Status	string	✓	✓
UserStatus	User Approval Status; contains UserID, UserF, UserL, Status, Comment, Updated, Calibration	complex	✓	✓
Ver	Annotation Version; Highest Ver per each Annotation Id is the Current Annotation	short	✓	X
Xcoord	Annotation-related X coordinate in pixels	decimal	✓	✓
Ycoord	Annotation-related Y coordinate in pixels	decimal	✓	✓

** An equivalent mapping exists, but cannot be utilized until other measures to create actual SRS color targets are taken.*