

Appendix 2K - metadata per page MIX v2

Appendix 2K – metadata per page MIX

Revised for second bid.

For each page there should be a file with technical metadata concerning each page's JP2 image, where the MIX 2.0 schema must be used. It can be found here: <http://www.loc.gov/standards/mix/>

Technical metadata concerning each JP2 file – MIX 2.0

| Data Description | Data type | Example | Notes | Repeatable R=yes NR=non-repeatable | Mandatory M=yes MA=yes, if available O=optional F=fixed | Xpath (see XML templates) |
|--|-----------|----------------------|--|--|---|--|
| object Identifier | String | 123456789-14-0010 | [Film-id]-[Billed-id], cf. appendix 2f | NR | M | mix:mix/mix:BasicDigitalObjectInformation/mix:ObjectIdentifier[mix:objectIdentifierType="Image Unique ID"]/mix:objectIdentifierValue |
| File size | integer | 53153644 | Size of the file in bytes | NR | M | mix:mix/mix:BasicDigitalObjectInformation/mix:fileSize |
| File format name | string | JPEG2000 – part 1 | Format name | NR | F | mix:mix/mix:BasicDigitalObjectInformation/mix:FormatDesignation/mix:formatName |
| File format version | string | ISO-IEC 15444-1:2004 | Format version | NR | F | mix:mix/mix:BasicDigitalObjectInformation/mix:FormatDesignation/mix:formatVersion |
| Compression algorithm | string | JP2 lossless | Which type of compression does the file use? | NR | F | mix:mix/mix:BasicDigitalObjectInformation/mix:Compression/mix:compressionScheme |
| Checksum algorithm | string | MD5 | Checksum algorithm | NR | F | mix:mix/mix:BasicDigitalObjectInformation/mix:Fixity/mix:messageDigestAlgorithm |
| Checksum | string | | Checksum | NR | M | mix:mix/mix:BasicDigitalObjectInformation/mix:Fixity/mix:messageDigest |
| Organisation which calculated the checksum | String | | Organisation that calculated the checksum | NR | M | mix:mix/mix:BasicDigitalObjectInformation/mix:Fixity/mix:messageDigestOriginator |
| Image width | integer | 6121 | Width of image in pixels | NR | M | mix:mix/mix:BasicImageInformation/mix:BasicImageCharacteristics/mix:imageWidth |

| | | | | | | |
|-----------------------------|---------|---|---------------------------------|----|----|--|
| Image height | integer | 8661 | Height of image in pixels | NR | M | mix:mix/mix:BasicImageInformation/mix:BasicImageCharacteristics/mix:imageHeight |
| colorSpace | string | greyscale | The colorspace the image uses | NR | M | mix:mix/mix:BasicImageInformation/mix:BasicImageCharacteristics/mix:PhotometricInterpretation/mix:colorSpace |
| Image source | string | microfilm | Source media it is scanned from | NR | M | mix:mix/mix:ImageCaptureMetadata/mix:SourceInformation/mix:sourceType |
| FilmID | string | 123456789-12 | Film ID, cf. appendix 2F. | NR | M | mix:mix/mix:ImageCaptureMetadata/mix:SourceInformation/mix:SourceID[mix:sourceIDType="Microfilm reel barcode #"]/mix:sourceIDValue |
| Location on film | string | 0010 | Billed ID, cf. appendix 2F | NR | M | mix:mix/mix:ImageCaptureMetadata/mix:SourceInformation/mix:SourceID[mix:sourceIDType="Location on microfilm"]/mix:sourceIDValue |
| Scanning date | date | 2010-03-02T11:48:06 | When was the image scanned? | NR | M | mix:mix/mix:ImageCaptureMetadata/mix:GeneralCaptureInformation/mix:dateTimeCreated |
| Scanner-organisation | string | State and University Library; Proquest; Operator ID | Who produced the image? | NR | M | mix:mix/mix:ImageCaptureMetadata/mix:GeneralCaptureInformation/mix:imageProducer |
| Scanner manufacturer | String | Wicks and Wilson | Scanner manufacturer | NR | M | mix:mix/mix:ImageCaptureMetadata/mix:ScannerCapture/mix:scannerManufacturer |
| Scanner model name | String | Scanstation | Scanner model name | NR | M | mix:mix/mix:ImageCaptureMetadata/mix:ScannerCapture/mix:ScannerModel/mix:scannerModelName |
| Scanner model number | String | RS325 | Scanner model number | NR | MA | mix:mix/mix:ImageCaptureMetadata/mix:ScannerCapture/mix:ScannerModel/mix:scannerModelNumber |
| Scanner model serial number | String | SN#8060359 | Unique scanner serial number | NR | MA | mix:mix/mix:ImageCaptureMetadata/mix:ScannerCapture/mix:ScannerModel/mix:scannerModelSerialNo |
| Software used on the image | String | Rollfilm | Software used on image | R | M | mix:mix/mix:ImageCaptureMetadata/mix:ScannerCapture/mix:ScanningSystemSoftware/mix:scanningSoftwareName |

| | | | | | | |
|-------------------------|---------|--------|---|----|---|--|
| Software version | string | 2.6g | Software version. NB Software name and version are repeatable as pair, not as individual values. | R | M | mix:mix/mix:ImageCaptureMetadata/mix:ScannerCapture/mix:ScanningSystemSoftware/mix:scanningSoftwareVersionNo |
| sampling Frequency Unit | String | in. cm | Unit of the next two fields | NR | M | mix:mix/mix:ImageAssessmentMetadata/mix:SpatialMetrics/mix:samplingFrequencyUnit |
| x Sampling frequency | integer | 400 | NB You can use the denominator field if this is not to be an integer. | NR | M | mix:mix/mix:ImageAssessmentMetadata/mix:SpatialMetrics/mix:xSamplingFrequency[mix:denominator=1]/mix:numerator |
| y Sampling frequency | integer | 400 | NB You can use the denominator field if this is not to be an integer. | NR | M | mix:mix/mix:ImageAssessmentMetadata/mix:SpatialMetrics/mix:ySamplingFrequency[mix:denominator=1]/mix:numerator |
| bitsPerSampleValue | string | 8 | Number of bits per colour channel. If there are several colour channels, then use a comma separated list. | NR | M | mix:mix/mix:ImageAssessmentMetadata/mix:ImageColorEncoding/mix:BitsPerSample[mix:bitsPerSampleUnit="integer"]/mix:bitsPerSampleValue |
| bitsPerSampleValue | integer | 1 | Number of colour channels per pixel, i.e. always 1 for grey tones. | NR | M | mix:mix/mix:ImageAssessmentMetadata/mix:ImageColorEncoding/mix:samplesPerPixel |

MIX example

```

<mix:mix xmlns:mix="http://www.loc.gov/mix/v20">
  <mix:BasicDigitalObjectInformation>
    <mix:ObjectIdentifier>
      <mix:objectIdentifierType>Image Unique
      ID</mix:objectIdentifierType>
    <mix:objectIdentifierValue>123456789-14-0010</mix:objectIdentifierValue>
    </mix:ObjectIdentifier>
    <mix:fileSize>53153644</mix:fileSize>
    <mix:FormatDesignation>
      <mix:formatName>JPEG2000 - part 1</mix:formatName>
      <mix:formatVersion>ISO-IEC 15444-1:2004</mix:formatVersion>
    </mix:FormatDesignation>
    <mix:Compression>
      <mix:compressionScheme>JP2 lossless</mix:compressionScheme>
    </mix:Compression>
    <mix:Fixity>
      <mix:messageDigestAlgorithm>MD5</mix:messageDigestAlgorithm>
      <mix:messageDigest>239.....</mix:messageDigest>
    </mix:Fixity>
  </mix:BasicDigitalObjectInformation>
</mix:mix>

```

```
<mix:messageDigestOriginator>Microfilm-scanning.com</mix:messageDigestOriginator>
  </mix:Fixity>
</mix:BasicDigitalObjectInformation>
<mix:BasicImageInformation>
  <mix:BasicImageCharacteristics>
    <mix:imageWidth>6121</mix:imageWidth>
    <mix:imageHeight>8661</mix:imageHeight>
    <mix:PhotometricInterpretation>
      <mix:colorSpace>greyscale</mix:colorSpace>
    </mix:PhotometricInterpretation>
  </mix:BasicImageCharacteristics>
</mix:BasicImageInformation>
<mix:ImageCaptureMetadata>
  <mix:SourceInformation>
    <mix:sourceType>microfilm</mix:sourceType>
    <mix:SourceID>
      <mix:sourceIDType>Microfilm reel barcode
#</mix:sourceIDType>
      <mix:sourceIDValue>123456789-12</mix:sourceIDValue>
    </mix:SourceID>
    <mix:SourceID>
      <mix:sourceIDType>Location on microfilm</mix:sourceIDType>
      <mix:sourceIDValue>0010</mix:sourceIDValue>
    </mix:SourceID>
  </mix:SourceInformation>
  <mix:GeneralCaptureInformation>
    <mix:dateTimeCreated>2010-03-02T11:48:06</mix:dateTimeCreated>

<mix:imageProducer>Statsbiblioteket;Proquest</mix:imageProducer>
  </mix:GeneralCaptureInformation>
  <mix:ScannerCapture>
    <mix:scannerManufacturer>Wicks and
Wilson</mix:scannerManufacturer>
    <mix:ScannerModel>
      <mix:scannerModelName>Scanstation</mix:scannerModelName>
      <mix:scannerModelNumber>RS325</mix:scannerModelNumber>

<mix:scannerModelSerialNo>SN#8060359</mix:scannerModelSerialNo>
  </mix:ScannerModel>
  <mix:ScanningSystemSoftware><!--Repeatable-->

<mix:scanningSoftwareName>Rollfilm</mix:scanningSoftwareName>

<mix:scanningSoftwareVersionNo>2.6g</mix:scanningSoftwareVersionNo>
  </mix:ScanningSystemSoftware>
</mix:ScannerCapture>
</mix:ImageCaptureMetadata>
<mix:ImageAssessmentMetadata>
  <mix:SpatialMetrics>
    <mix:samplingFrequencyUnit>in.</mix:samplingFrequencyUnit>
    <mix:xSamplingFrequency>
```

```
        <mix:numerator>400</mix:numerator>
        <mix:denominator>1</mix:denominator>
    </mix:xSamplingFrequency>
    <mix:ySamplingFrequency>
        <mix:numerator>400</mix:numerator>
        <mix:denominator>1</mix:denominator>
    </mix:ySamplingFrequency>
</mix:SpatialMetrics>
<mix:ImageColorEncoding>
    <mix:BitsPerSample>
        <mix:bitsPerSampleValue>8</mix:bitsPerSampleValue>
        <mix:bitsPerSampleUnit>integer</mix:bitsPerSampleUnit>
    </mix:BitsPerSample>
    <mix:samplesPerPixel>1</mix:samplesPerPixel>
```

```
</mix:ImageColorEncoding>  
</mix:ImageAssessmentMetadata>  
</mix:mix>
```