

# BIBFRAME AV Assessment: Appendix E - Example Video Resources (Video-physical-analog, Video-physical-digital, and Video-file)

AVPreserve, 23 September 2015 (revised January 4, 2016)

The resources featured in this scenario are three instances of the work Blade Runner (Resource1). Resource2 is a 1981 VHS distribution copy of the work. Resource3 is an MXF-wrapped JPEG2000 file generated by the institution holding the VHS for preservation purposes. Resource4 is a 2008 DVD distribution copy of the work, acquired by the institution after the creation of Resource3.

Note that this example uses the BIBFRAME vocabulary 1.0 as it existed in February 2015.

```
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix bf: <http://bibframe.org/vocab/> .
@prefix bfe: <http://bibframe.org/vocabExtended_toBeDone/> .
@prefix ebucore: <http://www.ebu.ch/metadata/ontologies/ebucore/ebucore> .
@prefix rdam: <http://rdaregistry.info/Elements/m>
@prefix rdae: <http://rdaregistry.info/Elements/e>
@prefix schema: <http://schema.org/>
```

## Resource1

```
a bf:MovingImage, bf:Work ;
bf:title "Blade Runner" ;
bf:hasInstance Resource 2 ;
bf:hasInstance Resource 3 ;
bf:hasInstance Resource 4 .
```

## Resource2

```
a bf:Instance ;
bf:isInstanceOf Resource1 ;
bf:hasDerivative Resource3 ;
bf:mediaCategory <http://id.loc.gov/vocabulary/mediaTypes/v> ; # video
bf:carrierCategory <http://id.loc.gov/vocabulary/carriers/vf> ; # videocassette
bf:extent "1 videocassette (VHS)" ;
bf:format <http://metadataregistry.org/concept/show/id/2190.html> ; # VHS
bf:date "1981-10-20" ;
bfe:width "½ in." ; # see note [1]
rdam:baseMaterial <http://www.rdaregistry.info/termList/RDABaseMaterial/#1029> ; # polyester;
see note [2]
rdam:generationOfVideotape <http://pbcore.org/vocabularies/instantiationGenerations#master-program>
; # Master-program; see note [2]
bfe:typeOfResource <http://rdaregistry.info/termList/typeRec/1001> ; # analog; see note [3]
rdam:playingSpeed "LP" ; # see note [2]
ebucore:audioTrackConfiguration
<http://www.ebu.ch/metadata/ontologies/skos/ebu_AudioFormatCodeCS.rdf#_4> ; # 2/0 (Stereo); see
note [2]
rdam:presentationFormat "pan-and-scan" ; # see note [2]
ebucore:frameRate <http://www.ebu.ch/metadata/ontologies/skos/ebu_VideoFrameRateCS.rdf#_6> ; # 25
fps; see note [2]
rdam:broadcastStandard <http://www.rdaregistry.info/termList/broadcastStand/#1003> ; # NTSC; see
note [2]
bf:duration "01:23:12" ;
bf:soundContent <http://rdaregistry.info/termList/soundCont/1001> ; # sound
bf:colorContent <http://pbcore.org/vocabularies/instantiationColors#color> ; # color
ebucore:hasColourSpace <http://cv.iptc.org/newscodes/colorspace#RGB> ; # RGB; see note [2]
```

bf:aspectRatio <http://www.ebu.ch/metadata/ontologies/skos/ebu\_VisualAspectRatioCS.rdf#\_1> ; # 4x3  
ebucore:startTimeCode "01:00:00" ; # see note [2]  
ebucore:hasDataFormat <http://www.ebu.ch/metadata/ontologies/skos/ebu\_TextUsageTypeCodeCS.rdf#\_6> ;  
# Closed captioned; see note [2]  
ebucore:hasDataFormat <http://www.ebu.ch/metadata/ontologies/skos/ebu\_TextUsageTypeCodeCS.rdf#\_2> ;  
# Subtitles; see note [2]  
bf:language <http://id.loc.gov/vocabulary/languages/ger> ; # German  
bf:language <http://id.loc.gov/vocabulary/languages/spa> ; # Spanish  
ebucore:scanningFormat  
<http://www.ebu.ch/metadata/ontologies/skos/ebu\_VideoSamplingStructureCodeCS.rdf#\_1> . # interlaced;  
see note [2]

### Resource3

a bf:Instance ;  
bf:isInstanceOf Resource1 ;  
bf:isDerivativeOf Resource2 ;  
bf:mediaCategory <http://id.loc.gov/vocabulary/mediaTypes/v> ; # video  
bf:carrierCategory <http://id.loc.gov/vocabulary/carriers/cr> ; # online resource  
bf:extent "1 video file (MXF) ;  
rdam:generationOfDigitalResource <http://pbcore.org/vocabularies/instantiationGenerations#master-  
preservation> ; # Master-preservation; see note [2]  
bfe:typeOfResource <http://rdaregistry.info/termList/typeRec/#1002> ; # digital; see note [3]  
bf:format <http://udfr.org/onto/#ulr95> ; # MXF; see note [4]  
ebucore:audioTrackConfiguration  
<http://www.ebu.ch/metadata/ontologies/skos/ebu\_AudioFormatCodeCS.rdf#\_4> ; # 2/0 (Stereo); see  
note [2]  
rdam:presentationFormat "pan-and-scan" ;  
ebucore:frameRate <http://www.ebu.ch/metadata/ontologies/skos/ebu\_VideoFrameRateCS.rdf#\_6> ; # 25  
fps; see note [2]  
rdam:broadcastStandard <http://www.rdaregistry.info/termList/broadcastStand/#1003> ; # PAL; see  
note [2]  
ebucore:fileSize "63000000000" ; # see note [2]  
ebucore:width "640" ; # see note [2]  
ebucore:height "480" ; # see note [2]  
ebucore:bitRate "90 Mbps" ; # see note [2]  
bf:duration "01:23:12" ;  
bf:soundContent <http://rdaregistry.info/termList/soundCont/#1001> ; # sound  
bf:colorContent <http://pbcore.org/vocabularies/instantiationColors#color> ; # color  
ebucore:hasColourSpace <http://cv.ipc.org/newscodes/colorspace#RGB> ; # RGB; see note [2]  
bf:aspectRatio <http://www.ebu.ch/metadata/ontologies/skos/ebu\_VisualAspectRatioCS.rdf#\_1> ; # 4x3  
ebucore:startTimeCode "01:00:00" ; # see note [2]  
ebucore:sampleRate <http://pbcore.org/vocabularies/essenceTrackSamplingRate#48> ; # 48; see  
note [2], [5]  
ebucore:bitDepth <http://pbcore.org/vocabularies/essenceTrackBitDepth#10> ; # 10; see note [2],  
[6]  
ebucore:hasDataFormat <http://www.ebu.ch/metadata/ontologies/skos/ebu\_TextUsageTypeCodeCS.rdf#\_6> ;  
# Closed-captioned; see note [2]  
ebucore:hasDataFormat <http://www.ebu.ch/metadata/ontologies/skos/ebu\_TextUsageTypeCodeCS.rdf#\_2> ;  
# Subtitles; see note [2]  
bf:language <http://id.loc.gov/vocabulary/languages/ger> ; # German  
bf:language <http://id.loc.gov/vocabulary/languages/spa> ; # Spanish  
ebucore:hasVideoEncodingFormat  
<http://www.ebu.ch/metadata/ontologies/skos/ebu\_VideoCompressionCodeCS.rdf#\_6> ; # JPEG 2000  
Lossless reversible 5/3; see note [2]  
ebucore:scanningFormat  
<http://www.ebu.ch/metadata/ontologies/skos/ebu\_VideoSamplingStructureCodeCS.rdf#\_1> ; # interlaced;  
see note [2]

bf:chromaSubsampling  
<http://www.ebu.ch/metadata/ontologies/skos/ebu\_VideoSamplingHierarchyCodeCS.rdf#\_5> . # 4:4:4; see note [7]

#### Resource 4

a bf:Instance ;  
bf:isInstanceOf Resource1 ;  
bf:mediaCategory <http://id.loc.gov/vocabulary/mediaTypes/v> ; # video  
bf:carrierCategory <http://id.loc.gov/vocabulary/carriers/vd> ; # video disc  
bf:extent "1 video disc (DVD)" ;  
bf:width "12 cm." ; # see note [1]  
rdam:baseMaterial <http://rdaregistry.info/termList/RDABaseMaterial/1014> ; # plastic; see note [2]  
rdam:generationOfDigitalResource <http://pbcore.org/vocabularies/instantiationGenerations#master-program> ; # Master-program; see note [2]  
bf:typeOfResource <http://rdaregistry.info/termList/typeRec/#1002> ; # digital; see note [3]  
ebucore:audioTrackConfiguration  
<http://www.ebu.ch/metadata/ontologies/skos/ebu\_AudioFormatCodeCS.rdf#\_4> ; # 2/0 (Stereo); see note [2]  
rdam:presentationFormat "pan-and-scan" ; # see note [2]  
ebucore:frameRate <http://www.ebu.ch/metadata/ontologies/skos/ebu\_VideoFrameRateCS.rdf#\_6> ; # 25 fps; see note [2]  
bf:format <http://metadataregistry.org/concept/show/id/2040.html> ; # DVD  
rdam:broadcastStandard <http://www.rdaregistry.info/termList/broadcastStand/#1003> ; # NTSC; see note [2]  
rdam:regionalEncoding "1" ; # see note [2]  
bf:duration "01:23:12" ;  
bf:soundContent <http://rdaregistry.info/termList/soundCont/#1001> ; # sound  
bf:colorContent <http://pbcore.org/vocabularies/instantiationColors#color> ; # color  
ebucore:hasColourSpace <http://cv.ipc.org/newscodes/colorspace#RGB> ; # RGB  
bf:aspectRatio <http://www.ebu.ch/metadata/ontologies/skos/ebu\_VisualAspectRatioCS.rdf#\_1> ; # 4x3  
ebucore:startTimeCode "01:00:00" ; # see note [2]  
ebucore:hasDataFormat <http://www.ebu.ch/metadata/ontologies/skos/ebu\_TextUsageTypeCodeCS.rdf#\_6> ; # Closed captioned; see note [2]  
ebucore:hasDataFormat <http://www.ebu.ch/metadata/ontologies/skos/ebu\_TextUsageTypeCodeCS.rdf#\_2> ; # Subtitles; see note [2]  
bf:language <http://id.loc.gov/vocabulary/languages/ger> ; # German  
bf:language <http://id.loc.gov/vocabulary/languages/spa> ; # Spanish  
ebucore:hasVideoEncodingFormat  
<http://www.ebu.ch/metadata/ontologies/skos/ebu\_VideoCompressionCodeCS.rdf#\_2> ; # MPEG-2; see note [2]  
ebucore:scanningFormat  
<http://www.ebu.ch/metadata/ontologies/skos/ebu\_VideoSamplingStructureCodeCS.rdf#\_1> . # interlaced; see note [2]

[1] We are proposing that BF be extended to document specific dimensions rather than a single bf:dimensions property. This would include bf:width, bf:diameter, bf:length. These could be subproperties of bf:dimensions if users desire to be more specific.

[2] Although we are using a property from RDA RDF here (e.g., rdam:baseMaterial), we feel that LC and the BIBFRAME community should decide whether to borrow properties from other vocabularies (as we have done here) or to extend BIBFRAME to support the expression of new attributes. In this case, an alternative approach would be to extend BIBFRAME to include property, e.g., bf:baseMaterial.

[3] We are proposing an extension of an attribute found in the content standards called Type of Recording. This attribute is used to distinguish between analog and digital sound recordings. In

MARC it exists as field 344 subfield a as well as fixed field 007 position 13, when the resource is a sound recording. We feel that this distinction between analog and digital resource can be made across all audiovisual resources and propose an extension of its applicability and the establishment of a new BIBFRAME property for Type of Resource, bf:typeOfResource. (LC note: The Resource Types scheme at <http://id.loc.gov/vocabulary/resourceTypes.html> includes the value "digital"; analog could be added.)

[4] We were originally unable to find an AV-specific RDF/SKOS vocabulary that has a value for MXF as a file format. In this example we first used the dbpedia entity ([http://dbpedia.org/resource/Material\\_Exchange\\_Format](http://dbpedia.org/resource/Material_Exchange_Format)). Now we are using the UDFR property for MXF.

[5] Need to verify whether this is used with audio resources only.

[6] Do we need to repeat bit depth here? In the case of this video file, the video has a bit depth of 10 and the audio has a bit depth of 24. How do we express both and how do we distinguish between them?

[7] Because none of the RDF siblings to BIBFRAME support the expression of the chroma subsampling attribute for digital image data compression, we are proposing that BF be extended to document this attribute with a new property, bf:chromaSubsampling.