



Woody Ingest

Technical specifications v 2.8

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1. File analysis and smart processing

Woody ingest engine decides automatically which processing to apply, depending of

- . target format
- . source essence format (codec), regardless of its container

- **Transcode.** If the 2 formats are different, an audio and/or video transcode is performed before the wrapping.
- **Rewrap.** If the 2 formats are identical, Woody is only rewrapping from the source container to the target container. Rewrap is made if the target format is defined as "same as source" or if **Woody Ingest** detects that the source format is the same than the target format configured.

Audio tracks are transcoded, if necessary.

The rewrap saves the source quality as it is completely non-destructive, and is also much faster than a transcode : the processing time will be similar to a simple file copy.

- **Audio.** When a source clip contains only audio tracks or when the target is defined as « Audio only », the clip is processed transcoding only the audio tracks. In Avid Interplay or Avid MediaFile mode, the target clip is an audio only masterclip.
- **Photo.** Picture files are processed as a video target file. The duration of the generated clip can be defined in the configuration of **Woody Ingest**.

Edit While Ingest – Avid Interplay mode

Woody Ingest handles *Edit While Ingest* feature of Avid Interplay. If the *Edit While Ingest* is enabled in the profile configuration, the generated masterclip is regularly updated in Avid Interplay. This makes possible editing or viewing while ingest. The check-in frequency can be configured in number of frames (please not that a high refreshing frequency can affect ingest performances).

2. Recognized source formats

Audio-video containers

4X, ASF, AVI, AVS, Bink, CDXL, DV, FLV, GXF, Matroska, Microsoft XMV, MLV, MP4, MPEG Systems, MPEG-TS, MTV, MXF Op1a, MXF Op1b*, MXF OpAtom, MxPEG, NUT, Ogg, QuickTime / MOV, RealMedia, RedCode R3D, RL2, WebM.

Audio containers

3GPP, ACT, AFC, AIFF/AST, Apple CAF, Audio IFF, AVR, BRSTM, Creative, CRI ADX, CRYO APC, D-Cinema, IRCAM, LOAS, MD STUDIO, Microsoft xWMA, Monkey's Audio, MP3, Musepack, NIST, NTT TwinVQ, PVF, QCP, Sony OpenMG, Sony Wave64, Sun AU, True Audio, WAV / WAVE, Westwood, Yamaha SMAF.

Video codecs

4X Movie, AJA Kona, AMV Video, Apple MJPEG-B, Apple ProRes , Auravision, AVC-Intra, AVC-LongG*, AVS, BBC Dirac, Beam Software, Bethesda, Bink, CamStudio, Canopus Lossless Codec, Chinese AVS, Chronomaster, Cinepak, Cirrus Logic AccuPak, Commodore CDXL, CPiA, Dirac, DNxHD, Duck TrueMotion, DV, DVCPPro, DVCPProHD, Electronic Arts, Feeble Files, FFmpeg video codec, FLV / Sorenson Spark, Google VP9, H.261, H.263, H.264, HEVC, IBM UltiMotion, IFF, Intel Indeo, Lagarith, Microsoft RLE, Video 1, MJPEG, MPEG-1, MPEG-2, MPEG-4, NuppelVideo, On2 VP3 - VP5 - VP6 - VP7 - VP8, RealVideo 1.0 - 2.0 - 3.0 - 4.0 - RL2, Sierra VMD, Silicon Graphics Motion Video, Silicon Graphics RLE, Smackvideo, VC-1, Sony MDEC, Theora, Ut Video, VC3/DNxHD, VP8, VP9, Windows Media Video 7 - 8 - 9, XAVC-Intra.

Audio codecs

8SVX, AAC, ADPCM, ADU, ALAC, ALS, AMR-NB, ATRAC1 - 3, ATSC, Bink, DCA, DPCM, DSD, FLAC, G.722, G.723, G.726, G.729, Gecko, GSM, IAC, IMC, LucasArts VIMA, MACE, MLP, Monkey's Audio, MP1, MP2, MP3, Musepack, On2 Audio, Opus, PCM, QCELP, RealAudio 1.0 - 2.0 - Lossless - SIPR, Sierra VMD audio, Smack, SMPTE 302M, Sonic, True Audio, TrueHD, Vorbis, Voxware MetaSound, VQF TwinVQ, Westwood Audio, Windows Media Audio 1 - 2 - 9 - Lossless – Voice.

Animations and still images

Apple QuickDraw, Autodesk Animator, Deluxe Paint Animation, QuickTime Animation, QuickTime Graphics, Westwood Studios VQA, Alias/Wavefront PIX image, BMP, BRender PIX image, DPX, GIF, JPEG 2000, JPEG, OpenEXR, PAM, PBM, PCX, PGM, Pictor/PC Paint, Pinnacle Targa, PNG, PPM, SGI, SMV, TIFF, Truevision Targa, WebP, XBM.

Notes

- All containers do not support all codecs.
- Some containers and unusual codecs not listed here may be supported.
- *Copy only

3. Supported PAL target formats

4. Supported target formats

a. SD PAL and HD 25/50 fps

Depending on the workflow	Modes Avid Interplay Avid Mediafiles		Mode A/V File + Metadata	
Depending on the source format	Same as source Rewrap	Transcode	Same as source Copy / Rewrap	Transcode
AVC-Intra 100 (HD1080i) 50	✓	✓	✓	✓
AVC-Intra 100 (HD1080p) 25	✓	✓	✓	✓
AVC-Intra 100 (HD720p) 25	✓	✓	✓	✓
AVC-Intra 100 (HD720p) 50	✓	✓	✓	✓
AVC-Intra 50 (HD1080i) 50	✓	✓	✓	✓
AVC-Intra 50 (HD1080p) 25	✓	✓	✓	✓
AVC-Intra 50 (HD720p) 25	✓	✓	✓	✓
AVC-Intra 50 (HD720p) 50	✓	✓	✓	✓
DNxHD 120 (1080i/50)	✓	✓	✓	✓
DNxHD 120 (1080p/25)	✓	✓	✓	✓
DNxHD 185 (1080i/50)	✓	✓	✓	✓
DNxHD 185 (1080p/25)	✓	✓	✓	✓
DNxHD 185 X (1080i/50)	✓	✓	✓	✓
DNxHD 185 X (1080p/25)	✓	✓	✓	✓
DNxHD 36 (1080p/25)	✓	✓	✓	✓
DV 25 411 i(PAL)	✓	✓	✓	✓
DV 25 411 p(PAL)	✓	✓	✓	✓
DV 25 420 i(PAL)	✓	✓	✓	✓
DV 25 420 p(PAL)	✓	✓	✓	✓
DV 50 i(PAL)	✓	✓	✓	✓
DV 50 p(PAL)	✓	✓	✓	✓
DVCPro HD (1080i/50) 50i	✓	✓	✓	
DVCPro HD (720p/50) 50p		✓	✓	
MPEG 30 i(PAL)	✓	✓	✓	✓
MPEG 40 i(PAL)	✓	✓	✓	✓
MPEG 50 i(PAL)	✓	✓	✓	✓
XDCAM EX 35Mbits (1080i/50)	✓	✓	✓	✓
XDCAM EX 35Mbits (1080p/25)	✓	✓	✓	✓
XDCAM EX 35Mbits (720p/50)	✓	✓	✓	✓
XDCAM EX 35Mbits (720p/25)	✓	✓	✓	✓
XDCAM HD 35Mbits (1080i/50)	✓	✓	✓	✓
XDCAM HD 35Mbits (1080p/25)	✓	✓	✓	✓
XDCAM HD 50Mbits (1080i/50)	✓	✓	✓	✓
XDCAM HD 50Mbits (1080p/25)	✓	✓	✓	✓
XDCAM HD 50Mbits (720p/25)			✓	
XDCAM HD 50Mbits (720p/50)	✓	✓	✓	✓
Others codecs / formats *			✓	
Personnalized presets **				✓

b. SD NTSC and HD 29.97/59.94 fps

Depending on the workflow	Modes Avid Interplay Avid Mediafiles		Mode A/V File + Metadata	
	Same as source Rewrap	Transcode	Same as source Copy / Rewrap	Transcode
AVC-Intra 100 (HD1080i) 59.94	✓	✓	✓	✓
AVC-Intra 100 (HD1080p) 29.97	✓	✓	✓	✓
AVC-Intra 100 (HD720p) 29.97	✓	✓	✓	✓
AVC-Intra 100 (HD720p) 59.94	✓	✓	✓	✓
AVC-Intra 50 (HD1080i) 59.94	✓	✓	✓	✓
AVC-Intra 50 (HD1080p) 29.97	✓	✓	✓	✓
AVC-Intra 50 (HD720p) 29.97	✓	✓	✓	✓
AVC-Intra 50 (HD720p) 59.94	✓	✓	✓	✓
DNxHD 110 (720p/29.97)	✓	✓	✓	✓
DNxHD 145 (1080i/59.94)	✓	✓	✓	✓
DNxHD 145 (1080p/29.97)	✓	✓	✓	✓
DNxHD 145 (720p/59.94)	✓	✓	✓	✓
DNxHD 220 (1080i/59.94)	✓	✓	✓	✓
DNxHD 220 (1080p/29.97)	✓	✓	✓	✓
DNxHD 220 (720p/59.94)	✓	✓	✓	✓
DNxHD 220x (1080i/59.94)	✓	✓	✓	✓
DNxHD 220x (1080p/29.97)	✓	✓	✓	✓
DNxHD 220x (720p/59.94)	✓	✓	✓	✓
DNxHD 290 (1080p/59.94)	✓	✓	✓	✓
DNxHD 440 (1080p/59.94)	✓	✓	✓	✓
DNxHD 440x (1080p/59.94)	✓	✓	✓	✓
DNxHD 75 (720p/29.97)	✓	✓	✓	✓
DNxHD 90 (1080p/59.94)	✓	✓	✓	✓
DV 25 411 i(NTSC) 29.97	✓	✓	✓	✓
DV 50 i(NTSC) 29.97	✓	✓	✓	✓
DVCPro HD (1080i/59.97)	✓	✓	✓	
DVCPro HD (720p/59.94)	✓	✓	✓	
XDCAM HD 50Mbits (1080i/59.94)	✓	✓	✓	✓
XDCAM HD 50Mbits (1080p/29.97)	✓	✓	✓	✓
XDCAM HD 50Mbits (720p/59.94)	✓	✓	✓	✓

* In **A/V File + Metadata** mode with a "same as source" target format defined in the profile, Woody Ingest generates a copy of the source files.

** In **A/V File + Metadata** mode, the administrator can creates its own presets based on MXF Op1a et MP4 containers.

Audio target formats

In Avid Interplay and Avid MXF+AAF modes, audio tracks can be transcoded to :

- Codec PCM 16 or 24 bits
- Frequency 44100 or 48000 Hz

1. Metadata management

A. Metadata supported by Woody Ingest

Audiovisual technical metadata

These data come from the analysis of media files.

The analyzed data are described in the following fields:

<i>Metadata</i>	<i>Details</i>
AV Type	Video, Audio, Photo
Date	Video creation time or File last modified date
Duration	Clip duration
TC Start	Start of the clip Timecode
Container	+ [Container settings] if available
Streams	Stream type [+ Channels number]. e.g V-A1-A1-A1-A1ou V1-A4-D
Video	
Codec	+ [profile@level] if available
+ Pixel format	4:2:0, 4:2:2, ...
+ Width x Height	Dimensions
+ DAR	Display Aspect Ratio
+ FPS	Frequency (images per seconde)
+ Bandwidth	If available
+ Interlace mode	Progressive, TFF, BFF
+ [Avid Codec]	If Avid Codec in the clip essence
Audio	
Codec	
+ Sampling frequency	If available
+ Sampling depth	If available
+ Channels number	
Device	Manufacturer – Model – Serial number – if available

Files metadata

These data correspond to the processed files. They give the possibility to reuse the tree structure and the name of source files in the naming rules.

<i>Metadata</i>	<i>Details</i>
File Name	
Path	Of source clip.
Folder	Of source clip.
Disk letter	Of the disk where the source clip is located.
Volume name	Of the disk where the source clip is located.

Ingest metadata

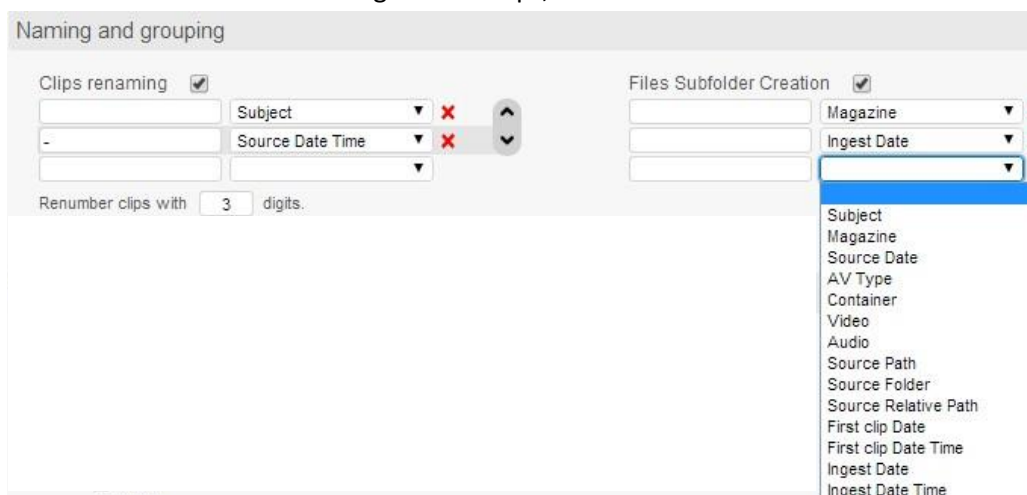
These data correspond to the clip or group of clips after ingest.

Metadata	Details
Ingest Date	Date of ingest
Avid MobId / Avid URI	Clips created into Interplay
Target Name	As defined by the naming rule
Target Folder	As defined by the subfolder creation rule
Target Path	As defined by the subfolder creation rule

B. Metadata uses

Metadata above can be used into [Woody Ingest](#)

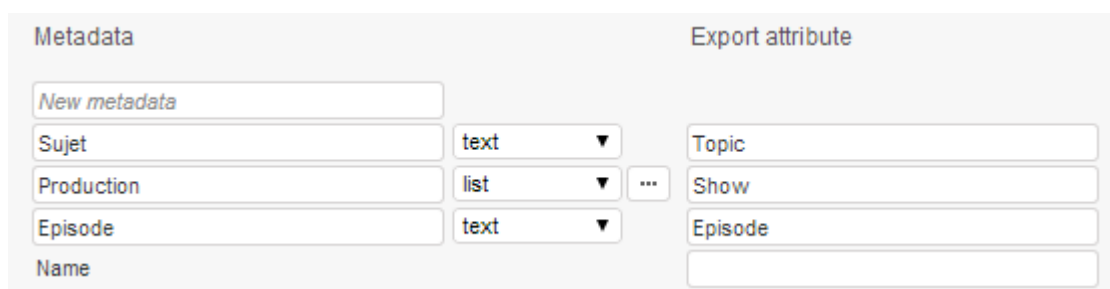
- Within the creation and naming rules of clips, folders.



- In [Avid Interplay](#) and [Avid MXF+AAF](#) modes, to fill Custom *Interplay Attributes* and *User Columns* in MediaComposer



- In [Cantemo Portal](#) mode, to fill Cantemo metadata fields



- In **A/V File + Metadata mode**, all metadatas are provided as a XML structure output.

This structure is available as a XML file (see exemple below) and usable in the post-processing notifications. Profiles configuration allows to apply a XSL transformation to the metadata.

```
<?xml version="1.0" encoding="UTF-8" ?>
<WoodyAsset version="1.0">
  <Process>
    <Status>Success</Status>
    <Date>2017-02-09 17:25:21</Date>
    <Profile>Nearline</Profile>
    <IngestMode>File</IngestMode>
    <ProcessMode>Transcode</ProcessMode>
    <MetadataDeliveryMode>SMB</MetadataDeliveryMode>
    <MediaDeliveryMode>SMB</MediaDeliveryMode>
    <Station>DESKTOP-6JFB734</Station>
    <User>aurel</User>
    <Application>Woody in2it 2.7.002</Application>
  </Process>
  <Sources>
    <Source>
      <Name>0010YK</Name>
      <Path>E:/LB1</Path>
      <RelativePath>LB1</RelativePath>
      <VolumeName>Elements</VolumeName>
      <CreationDate>2000-05-06 10:32:43</CreationDate>
      <AVStructure>PANASONIC_P2</AVStructure>
      <AVType>VIDEO</AVType>
      <ClipId>1486656295241091</ClipId>
      <ClipUmid>060A2B340101010501010D4313000000C39E9D6C701605E7008045822D1A1627</ClipUmid>
      <CardId>F4ADE791-184C6986-1ACAD10C.PANASONIC_P2</CardId>
      <Container>MXF OP-Atom</Container>
      <Video>DVCPPro HD (1080i/50) 1440x1080 - 16:9 - 25fps</Video>
      <Audio>PCM - 48000Hz - 16bits - 4 channels</Audio>
      <fps>25</Fps>
      <Spans>1</Spans>
      <Start_seconds>36340.4</Start_seconds>
      <Start_SMPTE>10:05:40:10</Start_SMPTE>
      <Duration_seconds>43.72</Duration_seconds>
      <Duration_SMPTE>00:00:43:18</Duration_SMPTE>
      <isSubclip>>false</isSubclip>
      <SourceMetadata>
        <Metadata source="PanasonicP2" name="UserClipname">060A2B340101010501010D4313000000C39E9D6</Metadata>
        <Metadata source="PanasonicP2" name="DataSource">SHOOTING</Metadata>
        <Metadata source="PanasonicP2" name="CreationDate">2000-05-06T10:32:43+00:00</Metadata>
        <Metadata source="PanasonicP2" name="LastUpdateDate">2000-05-06T10:33:27+00:00</Metadata>
        <Metadata source="PanasonicP2" name="StartDate">2000-05-06T10:32:44+00:00</Metadata>
        <Metadata source="PanasonicP2" name="EndDate">2000-05-06T10:33:27+00:00</Metadata>
      </SourceMetadata>
    </Source>
  </Sources>
  <Target>
    <Name>Toyota Q4 results - 001</Name>
    <Start_seconds>36340.4</Start_seconds>
    <Start_SMPTE>10:05:40:10</Start_SMPTE>
    <Duration_seconds>43.72</Duration_seconds>
    <Duration_SMPTE>00:00:43:18</Duration_SMPTE>
    <MetadataFolder>C:\Woody Demo\Output\XML\2017-02-09\Toyota Q4 results</MetadataFolder>
    <MetadataFile>C:\Woody Demo\Output\XML\2017-02-09\Toyota Q4 results\Toyota Q4 results - 001.xml</MetadataFile>
    <MediaFolder>C:\Woody Demo\Output\MXF\2017-02-09\Toyota Q4 results</MediaFolder>
    <MediaFile>C:\Woody Demo\Output\MXF\2017-02-09\Toyota Q4 results\Toyota Q4 results - 001.mxf</MediaFile>
    <Video>AVC-Intra 100 (1080i/50)</Video>
    <Audio>48000Hz - 16bits - 4 channels</Audio>
  </Target>
  <DescriptiveMetadata>
    <Metadata source="user" name="Show">Business</Metadata>
    <Metadata source="user" name="Journalist">Laura</Metadata>
    <Metadata source="user" name="Topic">Toyota Q4 results</Metadata>
  </DescriptiveMetadata>
</WoodyAsset>
```

Notes

- Metadata related to a single clip, such as name, duration, date, moId,... cannot be used for grouping functions (subfolders)
- Ingest metadata cannot be used for the clips renaming.
- The configuration of Woody Ingest profiles is described in the dedicated Setup Guide.

2. Webservices

Woody Ingest offers webservices that allow it to be controlled from an external workflow engine. Through the REST webservices, it is possible to create a job (submit a file and a profile, or overwrite profile parameters) and to follow the processing of this job.

The full documentation of Woody Ingest webservices is available upon request.

3. Technical requirements

Recommended hardware

- CPU Quad Core Xeon E5-2620 2,1 GHz or higher
- 8GB RAM
- HDD 500 GB
- Gigabit Ethernet network, connection to Avid ISIS storage in zone 1, 2 or 3.
- Operating System : Windows 2008 Server R2 and Windows 2012 Server are supported
- Optimal screen resolution to use Woody Ingest : 1920 x 1080

Pre-requisites

- Google Chrome is recommended to display Woody Ingest configuration and monitoring pages.

Requirements for Avid Interplay mode

- Avid ISIS client v 1.4 or higher (Nexis supported)
- Interplay Server v 1.2.3 or higher
- Interplay WebServices v 2.2 or higher
- Interplay account with read and write permissions in the target folders

<http://support.woody-technologies.com>