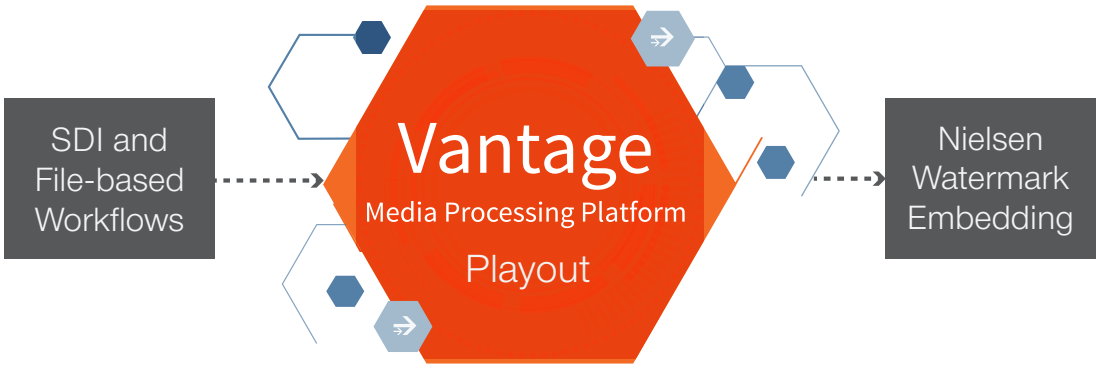


Solution Brief: Vantage with Nielsen technology

Overview

Television and the way it is watched has come a long way since measurement of audiences began. Today, the ability to watch shows at anytime, anywhere, and on a multitude of devices magnifies the importance of understanding your audience. Telestream Vantage integration with Nielsen technology provides all of the tools you'll need to measure and monetize your content.

Nielsen measurement technology – Traditional and New Media distribution

In the Media and Entertainment world content producers and distributors spend valuable time and resources developing content and planning media strategies. The constant question has always been whether they are reaching the right audiences, on the right device, at the right time. Nielsen audience measurement solutions provide a comprehensive picture of the times; places and methods media consumers are using to connect with content and advertising.

Telestream's Vantage Media Processing Platform with the integrated Nielsen technology provides the onramp that helps our customers gather the data required to understand how valued content is viewed.

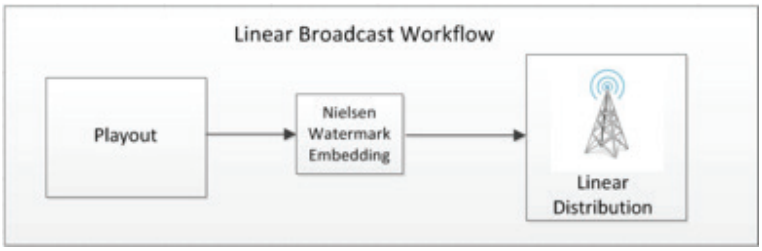
Nielsen Content types and how Vantage can mark them for tracking

Linear Broadcast

Nielsen watermarks are applied at the time of an on-air linear broadcast. Nielsen audience measurement systems require that this watermark be added to the audio within the linear broadcast chain. This is done in order to place the initial Nielsen watermarks used to track the linear broadcast's audience.

Vantage:

This is strictly an on-air broadcast workflow that does not involve Vantage.



telestream

Program Content (C3/C7 VOD)
C3/C7 VOD media can be created by capturing the Linear Broadcast's baseband signal into the file formats required for VOD delivery. A baseband capture device such as a VTR or digital capture encoder is used to create Program Content C3/C7 VOD media files for VOD distribution. This allows credit for VOD viewing of the program within the C3/C7 time window.

Vantage/Pipeline:

Both baseband SDI and file based workflows can be used to create C3/C7 VOD files. The combination of a Pipeline HD Dual and Vantage can be used to capture and create Program Content C3/C7 VOD media files. This workflow can also be achieved with media files captured by non-Pipeline capture devices that contain Nielsen audio watermarking. The Vantage Nielsen option is not required for this workflow since the audio being processed contains the appropriate watermark which was applied during the linear broadcast.

Products supporting C3/C7 VOD:

File Based workflows:

- Vantage IPTV VOD Transcoder (V-XCODE-IP-TV-SW), VOD Producer (V-VODPRODUC-ER-SW) or VOD Producer DAI (V-VODPRO-DUCER-DAI-SW)
- Vantage Nielsen option is not required

For Baseband SDI workflows add:

- Pipeline HD Dual – SDI network encoder (PLHD-DC)

Benefit of using Pipeline/Vantage:

This is strictly a Pipeline/Vantage (without the Nielsen option) sale since no additional watermarking is added by Vantage (It already exists in the source's audio stream). The combination of Pipeline and Vantage is the ideal solution for customers who are airing Linear Broadcast content. This combination can capture a watermarked baseband feed (after Nielsen embedding – see the diagram presented later in this document) and transcode it on the fly and then deliver a C3/C7 VOD media asset just seconds after the broadcast is done. Supporting both baseband SDI and non-Pipeline file-based workflows makes for a highly flexible, cost effective solution. Combined with Vantage workflow management capability makes this solution the most flexible and cost effective system available today.

Program Content (C3/C7 VOD) with RTVOD (Recently Telecast VOD)*
RTVOD flags can be added to Program Content (C3/C7 VOD) media previously captured from the linear broadcast baseband signal, then repurposed for IPTV VOD distribution. The addition of a RTVOD flag allows Nielsen to distinguish between content that is being viewed as IPTV VOD and linear broadcast content being viewed on a DVR.

Vantage/Pipeline:

The combination of a Pipeline HD Dual and Vantage can be used to capture and create Program Content C3/C7 VOD (see C3/C7 VOD description) media files and add the RTVOD flag in parallel. This workflow can also be achieved with media files captured by non-Pipeline capture devices that contain Nielsen audio watermarking.

Products supporting C3/C7 VOD with RTVOD:

File Based workflows:

- Vantage IPTV VOD Transcoder (V-XCODE-IP-TV-SW), VOD Producer (V-VODPRODUC-ER-SW) or VOD Producer DAI (V-VODPRO-DUCER-DAI-SW)
- Vantage Nielsen option (V-NIEL)

For Baseband SDI workflows add:

- Pipeline HD Dual – SDI network encoder (PLHD-DC)

Benefit of using Pipeline/Vantage

This solution provides the ability to add the RTVOD flag concurrently with the capture and creation of C3/C7 VOD content .

The combination of Pipeline and Vantage is the ideal solution for customers who are airing Linear Broadcast content. This combination can capture a watermarked baseband feed (after Nielsen embedding – see the diagram presented later in this document) and transcode it on the fly, adding the RTVOD flag and then deliver a C3/C7 VOD media asset that includes the RTVOD flag, along with all the respective Nielsen metadata just seconds after the broadcast is done. Supporting both baseband SDI and non-Pipeline file-based workflows makes for a highly flexible, cost effective solution. Combined with Vantage workflow management capability makes this solution the most flexible and cost effective system available today.

Program Content (D4 VOD)*

The availability of non-traditional viewing of Program content beyond the C3/C7 time window is increasing rapidly. Nearly every home now has a Set Top Box (STB) containing a DVR which allows for delayed, time shifted and VOD viewing. The addition of this type of watermarking (D4) allows for these programs to be delivered through an STB while allowing for continued audience viewer monitoring beyond the C3/C7 window. After the C3/C7 time window, Program Content (C3/C7 VOD) media files are replaced with Program Content (D4 VOD) media files. This watermarking can be done by capturing a clean baseband feed of the program or within a file based workflow using media files that do not contain any audio watermarking.

Vantage/Pipeline:

The combination of a Pipeline HD Dual and Vantage can be used to capture a clean (non-watermarked) version of the program (with or without ads), to create Program Content D4 VOD media files. This workflow can also be achieved with clean media files captured by non-Pipeline capture devices.

Products supporting D4 VOD:

File Based workflows:

- Vantage IPTV VOD Transcoder (V-XCODE-IP-TV-SW), VOD Producer (V-VODPRODUC-ER-SW) or VOD Producer DAI (V-VODPRO-DUCER-DAI-SW)
- Vantage Nielsen option (V-NIEL)

For Baseband SDI workflows add:

- Pipeline HD Dual – SDI network encoder (PLHD-DC)

Benefit of using Pipeline/Vantage:

Vantage allows for an easy SDI/file based application of D4 VOD watermarking; this solution can be coupled with Vantage VOD Producer DAI for a complete system. Supporting both baseband SDI and file-based workflows makes for a high degree of flexibility. Combined with Vantage workflow management capability makes this solution the most flexible and cost effective system available today.

Note: Program Content (D4 VOD) watermarking must be applied to clean non-watermarked content files.

ID3 Metadata for HLS

When creating content for Adaptive Bitrate HLS delivery Nielsen use ID3 metadata tags embedded in the HLS stream to monitor audience.

Vantage:

Vantage Transcode Multiscreen can be used with media files that already contain Nielsen audio watermarks. Vantage converts the existing watermarks into ID3 metadata tags embedded in the HLS stream output.

Products supporting ID3 for HLS:

File Based workflows

- Vantage Multiscreen (V-XCODE-MULTI-SW)
- Vantage Nielsen option (V-NIEL)

For Baseband SDI workflows add:

- Pipeline HD Dual – SDI network encoder (PLHD-DC)

Benefit of using Pipeline/Vantage:

The combination of Pipeline and Vantage is the ideal solution for customers who are creating Adaptive Bit-Rate HLS content. This combination can capture a watermarked baseband feed (after Nielsen embedding – see the diagram presented later in this document) and transcode it on the fly, convert the embedded watermarks to HLS tags and then deliver the HLS media packages, including all the respective Nielsen metadata just seconds after the broadcast is done. Supporting both baseband SDI and non-Pipeline file-based workflows makes for a highly flexible, cost effective solution. Combined with Vantage workflow management capabilities makes this solution the most flexible system available today.

Commercial Ad Content (SpoTTrac)

Commercial (Advertisements) are tracked separately from the Program content. Nielsen watermarking for commercial spots, commonly known as “SpoTTrac”, is embedded in commercial spot media within file based workflows prior to being delivered to a commercial ad distribution server.

Vantage:

Vantage can be used to add an audio watermark that is used by Nielsen to monitor the broadcast of Ad content and report to the content owner when and where the content was broadcast. Use Vantage to embed commercial watermarking into the commercial advertisement files prior to them being delivered to a commercial distribution server. Both SDI/Tape and file-based workflows are supported. This type of watermarking is also known as Nielsen “SpoTTrac”.

Products supporting Commercial Content:

File Based workflows:

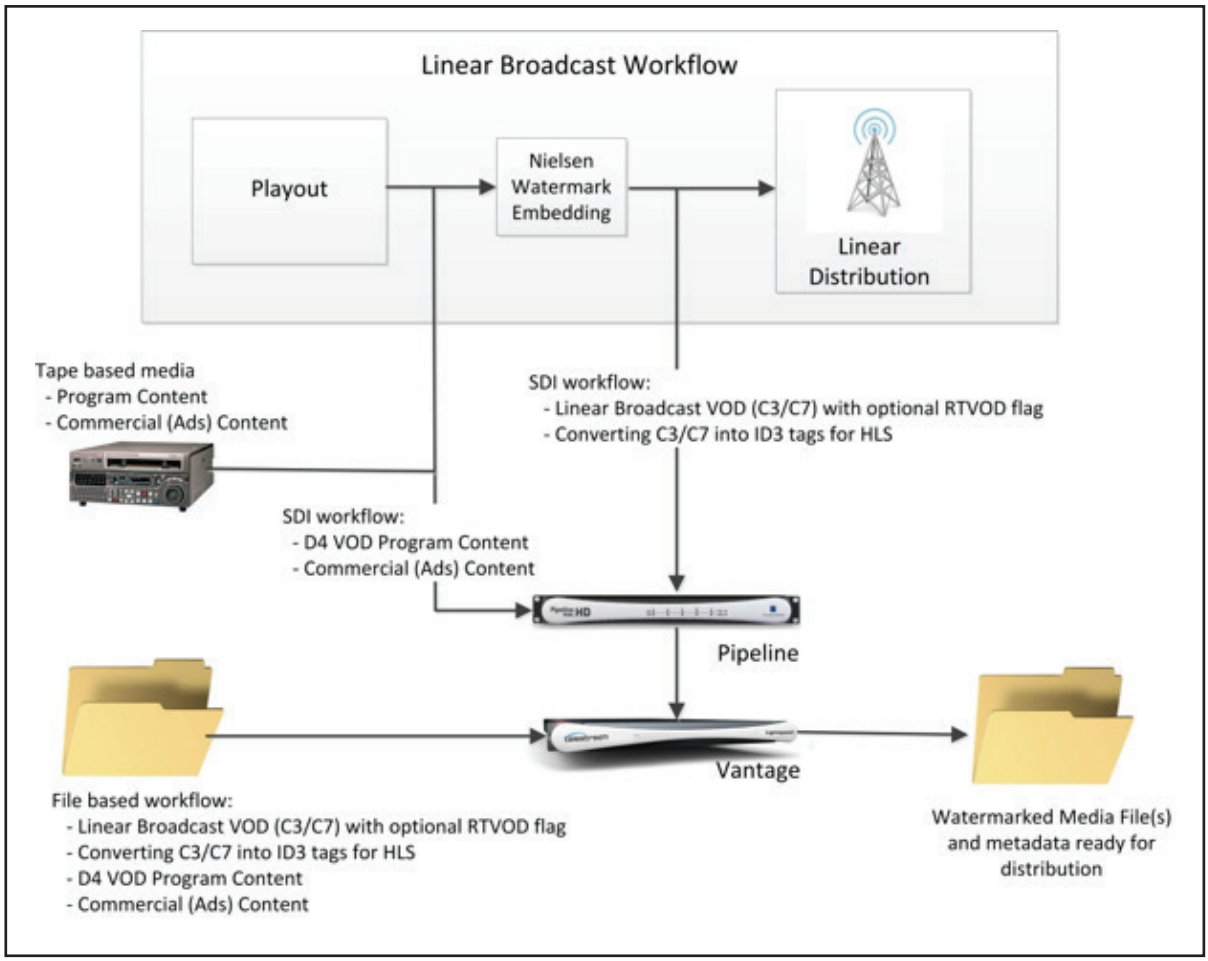
- Vantage Transcoder (V-XCODE-SW) or
- Vantage Transcoder Pro (V-XCPRO) or
- Vantage IPTV VOD Transcoder (V-XCODEIPTV-SW) or
- VOD Producer (V-VODPRODUCER-SW) or
- VOD Producer DAI (V-VODPRODUCER-DAI-SW)
- Vantage Nielsen option (V-NIEL)

For Baseband SDI workflows add:

- Pipeline HD Dual – SDI network encoder (PLHD-DC)

Benefit of using Pipeline/Vantage:

Vantage allows for an easy file based application of Commercial Ads Content watermarking; can be coupled with VOD Producer DAI for the complete system. Used with Pipeline this solution can ingest tape based material and process them through Vantage as they are being captured for immediate delivery, along side all Nielsen output metadata. Combined with Vantage workflow management capability makes this solution the most flexible and cost effective system available today.



Nielsen Watermarking Workflow

Products

Products and required Options	Linear Broadcast	C3/C7 VOD	C3/C7 VOD with RTVOD	D4 VOD	ID3 for HLS	Commercial 'SpoTTrac'
Transcode IPTV VOD (*V-XCODE-IPTV-SW*)		X				
Transcode (*V-XCODE-SW*) OR Transcode Pro (*V-XCPRO*) and Nielsen Watermarking Option (*V-NIEL*)						X
Transcode IPTV VOD (*V-XCODE-IPTV-SW*) and Nielsen Watermarking Option (*V-NIEL*)			X	X		X
VOD Producer (V-VODPRODUCER-SW) OR VOD Producer DAI (V-VODPRODUCER-DAI-SW)			X	X		X
Transcode Multiscreen (*V-XCODE-MULTI-SW*) and Nielsen Watermarking Option (*V-NIEL*)					X	
Other Available Options						
Pipeline HD Dual - SDI network encoder (*PLHD-DC*)		•	•	•	•	•
Vantage SDK and SDK Support (*V-MS-SDK*)		•	•	•	•	•
Vantage Workflow Portal (*V-PORTAL*)		•	•	•	•	•

Professional Services

Commissioning of a Vantage system that includes Nielsen technology will likely require Professional Services support from either Telestream or a System Integrator.

Estimated Telestream Services costs:

- Configuring the Vantage Portal and SDK submission framework
  - Metadata inputs and log/metadata file outputs are critical to a Nielsen workflow. There are multiple ways to configure the input data, and compile and deliver the output data.
  - Estimated: 1 to 3 days plus 1 day testing
- Training (metadata input and metadata log file delivery)
  - 1 to 2 day of training.

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