grass valley

APPLICATION
NOTE

Aurora 7

Preserving Ancillary Data and Displaying Closed Captions

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This application note details Aurora 7's ancillary data and closed caption display support.

Introduction

This application note details what is supported with regard to preserving ancillary data and displaying closed captions. Grass Valley™ Aurora™ Edit 7.x can now preserve ancillary data tracks. This means that if an item is rendered or sent from the Aurora Edit application, the ancillary data track may also be sent along with the other tracks (previous Aurora versions ignored the ancillary data track).

Also, supported types of closed captions can now be previewed on an external monitor with the use of the AJA LHi card.

Software Prerequisites

• Aurora Edit: 7.0 or above

• Conform Server: 7.0 or above

• AJA LHi (for external display of closed captions): Requires Aurora Edit HDR license

Preserving Ancillary Data

For users that wish to use closed captions or other data that can be stored in an ancillary data track, Aurora Edit now provides a way for that data to be preserved.

For Clips

When a feed is recorded on a Grass Valley K2, K2 Summit™ ,or K2 Solo™ media server:

If the K2/K2 Summit/K2 Solo is configured to record ancillary data, additional data such as closed captions will be stored in the ancillary data track. If Aurora Edit now sends one of these clips via winking, GXF FTP, or as a GXF file, the ancillary data will be preserved.

For Timelines

If a clip with ancillary data is placed on a timeline, the user will have the option to preserve the ancillary data for renders and sends.
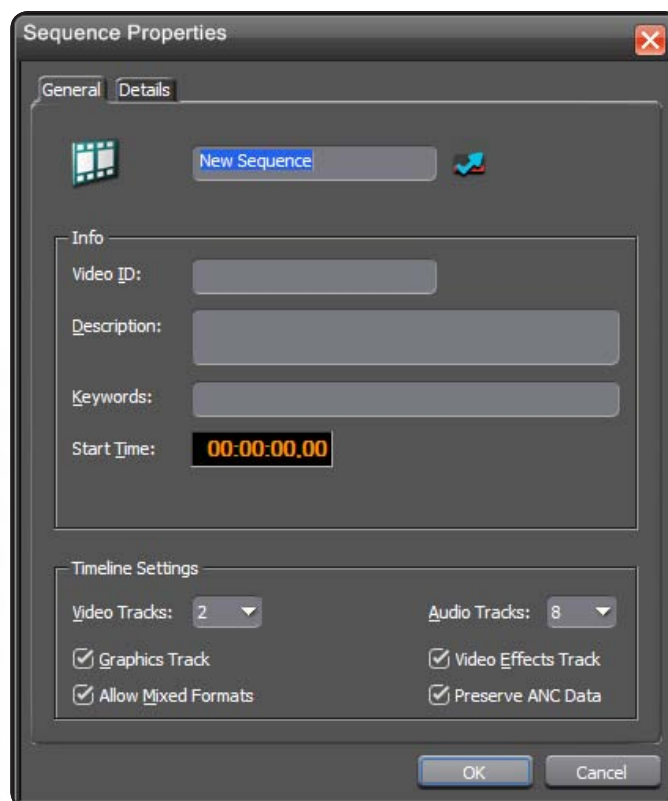

Figure 1 – *Users may select the option to preserve ancillary data on timelines with this checkbox.*

Preserving Ancillary Data (cont.)

If graphics or effects are over a clip on a timeline:

When the render occurs, the ancillary data will be preserved on a frame-by-frame basis. If the user is running Aurora Edit LD and sends the timeline to the Conform Server for rendering, the Conform Server will also preserve the ancillary data.

Note: Clips on the second video track always take precedence, so if the clip on the second video track does not contain ancillary data, the final render for that portion of the timeline will not contain ancillary data either.
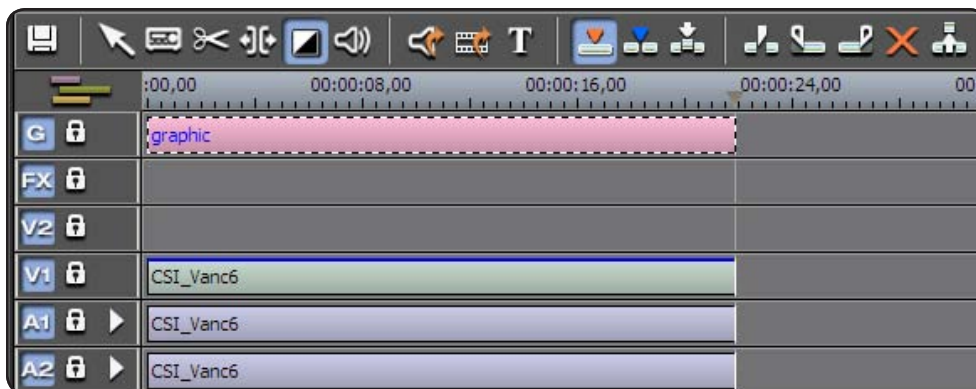

Figure 2 – *Rendered graphics will preserve ancillary data that may exist on the underlying video track.*

Please note that the following cases are not supported:
• Ancillary data is not supported over transitions (dissolved, wipes, etc.)

• Interlaced to progressive transcodes, and progressive to interlaced transcodes, will not preserve ancillary data

• VBI (vertical blanking interval) data is not preserved on renders. Only data in an ancillary data track will be preserved
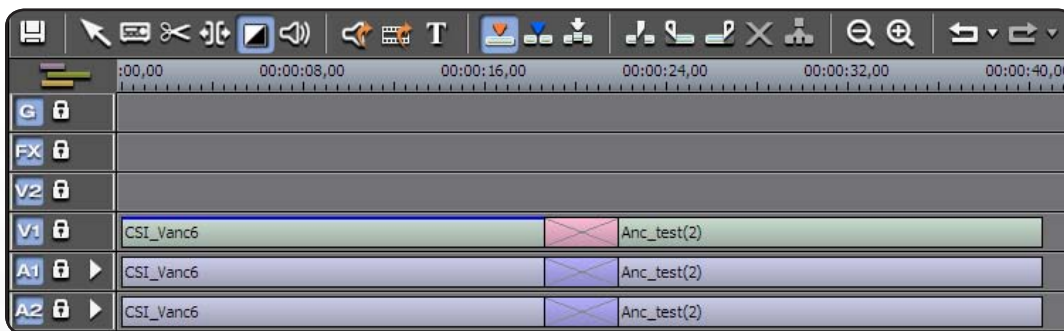

Figure 3 – *Ancillary data will NOT be preserved across transitions.*

Note: Due to the nature of closed captions, editing clips with ancillary data may introduce errors into the closed caption, as crucial commands and/or characters could be trimmed out.

Viewing Closed Captions

For users running Aurora HDR with an AJA LHi card, closed captions in an ancillary data track may be viewed on an external monitor.

When playing back material that has closed caption data in the ancillary data track, a single clip, or a timeline, the closed caption data can be read from the ancillary data track and inserted into the SDI output signal. If the SDI output is fed into a monitor with closed caption decoding capabilities, or first fed into a closed caption decoder, the captions will be present on the monitor.

It should be noted that Aurora Edit does not decode the closed captions for display. It simply reads the data from the ancillary data track and inserts that data in the appropriate location for a closed caption decoder to understand.

The following rules must be adhered to for the closed captions to be displayed:

- The closed caption data must reside in an ancillary data track. Closed captions in the VBI will not be displayed

- The data must be VANC (vertical ancillary). HANC (horizontal ancillary) data will be ignored

- The currently supported types of closed captions are OP-42, OP-47, EIA-608, and EIA-708

- If playing back a timeline, closed captions will not be displayed during transition playback (dissolves, wipes, etc.)

Summary

For users that need ancillary data support, the ability of Aurora products to preserve this data will improve the workflow for these users. For customers that wish to view closed captions while editing, the ability to view this data will also improve workflow and usability.

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