Carbon 3.19.2 Release Notes

New Features, Known Issues and Bug Fixes

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Introduction

Carbon 3.19.2 is a full Carbon release that extends Carbon 3.19.1. Carbon 3.19.2 does not contain any new features but fixes three bugs. The fixed bugs are:

- CCDR-225: in certain cases the H.264 Exporter causes Carbon to abort unexpectedly due to a memory leak. The section "Bug Fixes and Improvements" has details.
  Fix: the memory leak has been fixed.

- CCDR-221: The frame time code contained in the Generic Container System Item of MXF OP1a clips created with Omneon Exporter v2 is always all zeroes (00:00:00:00).
  Fix: this frame time code was removed. This makes the behavior of the Omneon Exporter v2 the same as in releases prior to 3.19.1.

- CCDR-255: The value of the firstFrame field for clips created with the Omneon Exporter v2 is always equal to zero.
  Fix: the firstFrame field value is now derived from the start time code, for all Omneon formats and wrappers.

Please read the Upgrade Considerations section before deciding to install or upgrade to 3.19.2.

Software Versions

Application	**Build Number**
Carbon Coder	3.19.2.36234
Carbon Server	3.19.2.36234
Carbon Agent	3.19.2.36234

Carbon 3.19.2 is compatible with Rhozet Workflow System (WFS) versions 1.4.3 and later.

System Specifications and Requirements

System Requirements

- Microsoft Windows 32- or 64-bit operating system from the following list
  (64-bit Windows operating system recommended for multi-layer video exporters)
  (Windows Server 2008 R2 64-bit recommended for Carbon Server).
    - Workstation OS versions:
        - Windows XP SP3

        - Windows Vista SP2
        - Windows 7
    - Server OS versions:
        - Windows Server 2003 R2 SP1 or R2 SP2
        - Windows Server 2008 SP2
        - Windows Server 2008 R2

- A Windows Server OS is required for export to ProRes 422.
- Please note that the old Carbon Server Web Interface does not work on any Windows Server 2008 or Windows 7 systems. This interface has been deprecated and is no longer maintained.
- QuickTime v7.6.8 is the newest version of QuickTime that has been tested to work correctly with Carbon. Other versions may or may not work correctly with Carbon.
- USB 1.1 or 2.0 port for USB Hardware Key
- 500 MB free hard disk space

Minimum System

- Intel Pentium 4 or AMD Athlon
- 2 GHz CPU or faster
- 2 GB RAM (4GB RAM for HD encoding)
- Windows XP SP3

Recommended System

- Dual Intel Xeon E54xx series processors
- 3.0 – 3.4 GHz processor clock
- 8 or 16 GB RAM
- Windows Server 2008 SP2 64-bit
- Omneon MediaGrid or other high performance storage system

Upgrade Considerations

Un-installing Earlier Versions

In order to upgrade from 3.19.2 from 3.19.1 it is necessary to first un-install 3.19.1.

Apple ProRes 422 System Requirements

Please refer to the 3.19 Users Guide or the Release Notes for version 3.18.1 or 3.18.2 for system requirements related to writing Apple ProRes 422 clips.

Known Issues – Overview

This section lists known limitations of Carbon as well some other issues potentially perceived as Carbon limitations.

- Due to the version of install shield used, .NET 2.0 is not automatically installed on 64-bit Operating Systems.
  WORKAROUND: One way to find out which version .NET is installed is to go to the C:\Windows\Microsoft.NET\Framework folder and observe the names of the subfolders. Alternatively, look in the list of installed Windows features. If version 2.0 is not installed, then depending on the OS and its version, the .NET 2.0 (or higher) Framework may already be available but it still needs to be turned on in the OS. For example, in Server 2008 R2, navigate to Control Panel, then Programs, then Programs and Features, then select "Turn Windows features on or off". If .NET 2.0 or higher is not available then manually download from Microsoft and install before installing Carbon Coder:
  http://www.microsoft.com/download/en/confirmation.aspx?id=6523

- It is possible that Carbon API responses will include a parameter "AspectRatio.DWD" with no value (NULL character). Carbon API calls should not include this parameter. Note: the AspectRatio.BIN parameter can still be used.
  WORKAROUND: There is no workaround; Carbon API calls should not include this parameter.

- There is a known Windows memory leak in Windows Server SP2 that may be observed when a Carbon output folder is shared with a Mac. See the following Microsoft article:
  http://support.microsoft.com/default.aspx?scid=kb;EN-US;976618
  WORKAROUND: Install Windows Server 2008 R2.

- In certain cases Carbon can stall on a system with 24-core CPUs. There is a known case of Carbon stalling during transcodes from QuickTime DVCPro HD to MPEG2 TS with the [Legacy] MPEG-2 Exporter v1 using the Cable Lab (HD) profile (CCDR-57).
  WORKAROUND: Reduce the number of cores for instance by turning off hyperthreading.

- Carbon Coder stalls after resubmitting a job that uses the Omneon Exporter v2 with a QuickTime reference target (CCDR-98).
  WORKAROUND: Must close the Carbon Coder application and reopen it.

- Carbon Admin window does not resize properly (B-5890, T-13624).
  WORKAROUND: Must close the Carbon Admin application and reopen it.

- A letter preceding the wildcard in FTP retrieval does not work (B-8375).
  WORKAROUND: Must type the URL path preceding the wildcard.

- Using a Leading/Trailing clip that differs from the aspect ratio of the video being encoded will generate black bars (B-7015, T-07420).
  WORKAROUND: There is no workaround for this issue.

- Files created by Encoding from ProRes source to MPEG4 (H.264) with channel mixer audio filter (Channels 7 and 8) will have audio sync issues when played back in QuickTime Player (B-8241, T-13045).
  WORKAROUND: This is a bug in the QuickTime Player. There is no workaround.

- Project fails with "Terminated: No Progress Timeout" (B-8296, T-13432).
  WORKAROUND: Increase the timeout values from the default settings.

- Transcode stalls on some GXF files (B-8392, T-13262).
  WORKAROUND: There is no workaround for this issue.

- Injected TeleText does not show up in the encoded file (B-8493, T-15430).
  WORKAROUND: Ensure that the source file has valid time code and that the "ignore Source Video Timecode" check box is disabled.

- Repeat frames observed in the WindowsMedia video output (B-8503).
  WORKAROUND: This is a normal Windows Media CODEC behavior.

- Cannot generate PCM audio file larger than 4GB (B-8653, T-09227).
  WORKAROUND: No workaround. This is a limitation of the wave file format. PCM WAV files have a file size limit of 4GB.

- Carbon decodes and scales the source in the XML, even though it is not being used (B-8411).
  WORKAROUND: Unused source files should be removed from the API.

- For some MPEG2 to MPEG2 conversions, output file has a shorter duration than the original source (B-8536, T-14883).
  WORKAROUND: There is no workaround for this issue.

- Converting from 8-bits 5.1 or 8-bits 7.1 audio source will produce audio noise in the output file (B-8564).
  WORKAROUND: There is no workaround for this issue.

- Network license has a higher priority than local license (B-8604).
  WORKAROUND: There is no workaround for this issue.

- Carbon Coder GUI and Nexus may crash when AVI exporter is selected as target because of an incompatible DirectShow CODEC (B-8654).
  WORKAROUND: The offending DirectShow CODEC must be uninstalled, or the AVI Exporter must be disabled by removing the CMLDSTAVI2.dll.

- Some MPEG4 files using the .mov extension do not encode (B-8655).
  WORKAROUND: Rename files to .MP4.

- Carbon on 32-core AMD machine does not transcode any H.264 MP4 source to any target. (B-8664, T-09693).
  WORKAROUND: There is no workaround for this issue.

- MPEG4 source file created by the Sony PMV-350-K camera will transcode but the resulting output file may have interlacing artifacts and extreme jitter (B-8669, T-08354).
  WORKAROUND: There is no workaround for this issue.

- Transport Stream file fails to load (B-8673).
  WORKAROUND: This may be caused by the file not having the correct Frame Rate information. There is no workaround for this issue.

- Expression Encoder is not showing proper aspect ratio for the video stream (B-8674).
  WORKAROUND: There is no workaround for this issue.

- HTTP Live Streaming Exporter: cannot create more than 16383 files.
  WORKAROUND: Choose segment size and number of layers in such a way that number of files does not exceed 16383.

- When using the Flash Exporter with source media that exceeds five hours, the resulting target file is truncated to approximately one hour.
  WORKAROUND: There is no workaround for this issue.

- A job for transcoding to ProRes 422 with the QuickTime 7 Exporter will stall if there are one or more source files that have a bit depth of more than 8-bit (B-8807).
  WORKAROUND: Split the job into multiple jobs using queue mode or watch folders for different types of source material so that the valid, 8-bit sources will be transcoded.

- Smooth Streaming H.264 Exporter sometimes crashes
  WORKAROUND: The crash can be caused by the system running out of desktop heap memory. See http://support.microsoft.com/kb/184802. To increase the size of the desktop heap, modify the following registry key:
  HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\Session Manager\SubSystems\Windows
  The numeric values following "SharedSection=" control how the desktop heap is allocated. The setting that needs to be modified is the third one; it needs to be modified to 10MB.

- Some MPEG Transport stream files will fail to transcode due to "Unspecified Transport System Target Decoder (T-STD) error".
  WORKAROUND: Change the transport rate from (0 automatic selection) default, to the desired rate.

- When using Omneon V2 exporter and writes to a Omneon Media Grid mapped drive, an unknown error occurs (CCDR-75).
  WORKAROUND: There is no workaround for this issue.

- "Unspecified Transport System Target Decoder (T-STD) error" occurs when MP@ML, 15Mbps, CBR and VBV Buffer Size is 224KB (CCDR-80).
  WORKAROUND: Use a lower video rate (less than 14.95Mbps) for conversion.

- Transcoding jobs will fail when Avid MXF exporter is used and encode to DNxHD 120/185/185X with 1080i at 25fps. Error "Failed to write samples" occurred (CCDR-151).
  WORKAROUND: There is no workaround for this issue.

- For 29.97 and 59.94 fps, the time code of the proxy storyboard thumbnails will drift over time. His is because the thumbnail interval is chosen as an integer number of seconds, which internally is translated into an integer (whole) number of frames (RMP-63).
  WORKAROUND: There is no workaround for this issue.

- Source Clips of several hours often fail when transcoding to Smooth VC-1 (CCDR-208).
  WORKAROUND: There is no workaround for this issue.

- Creation of H.264 proxies from Spectrum source clips will fail if
  - the source clips are QuickTime reference or MXF reference clips, and
  - the source clips are still growing while the proxy is generated, and
  - the Spectrum systems used to record the clips are Media Center or MediaDeck II, and
  - Carbon accesses the source clips directly on the Spectrum file system

  WORKAROUND: There is no workaround for this issue.

- XDCAM EX 422 mov files cannot be imported after upgrading to QuickTime 7.7 (CCDR-148).
  WORKAROUND: This is a QuickTime 7.7 bug. There is no workaround for this issue.

- MPEG-2 Exporter v2 sometimes throws error 'Unspecified Transport System Target Decoder (T-STD) error' when Transport Rate setting for Transport Streams is zero (CCDR-80).
  WORKAROUND: Set the Transport Rate to the desired rate.

Bug Fixes and Improvements

This section lists bugs that have been fixed and other improvements that have been made in this release.

Exporter – H.264

Nr.	Description
CCDR-225	In certain cases, H.264 Exporter causes Carbon to abort unexpectedly due to a memory leak. Case 1: • The H.264 Exporter is configured with ATSC type Closed Captions, and • the target has a frame rate other than 29.97 fps, and • the source clip contains no Closed Captions. Case 2 • The H.264 Exporter is configured with ATSC type Closed Captions, and • the source clip has a different frame rate than the target, and • the source clip has both DTV-CC and 608 compatibility bytes.

Exporter – Omneon v2

Nr.	Description
CCDR-221	The frame time code contained in the Generic Container System Item of MXF OP1a clips created with Omneon Exporter v2 is always all zeroes (00:00:00:00).
CCDR-255	The value of the firstFrame field for clips created with the Omneon Exporter v2 is always equal to zero.