

© 2008 Autodesk Canada Co. All rights reserved. Except as otherwise permitted by Autodesk Canada Co., this publication, or parts thereof, may not be reproduced in any form, by any method, for any purpose.

Certain materials included in this publication are reprinted with the permission of the copyright holder.

Portions relating to MXF-SDK were developed by Media, Objects and Gadgets – Soluções de Software e Hardware, S.A. (<http://www.mog-solutions.com>) in co-operation with Institut für Rundfunktechnik GmbH (<http://www.irt.de>).

Portions relating to JPEG © Copyright 1991-1998 Thomas G. Lane. All rights reserved. This software is based in part on the work of the Independent JPEG Group.

Portions relating to JPEG are copyright © 1991-1996, Thomas G. Lane. All Rights Reserved except as specified below. The authors make NO WARRANTY or representation, either express or implied, with respect to this software, its quality, accuracy, merchantability, or fitness for a particular purpose. This software is provided "AS IS", and you, its user, assume the entire risk as to its quality and accuracy.

Portions relating to LAPACK v. 3 © 1999. LAPACK Users' Guide Third Edition is the official reference for LAPACK.

Portions relating to BLAS v. 3 © 2005. ACM Transactions on Mathematical Software.

Portions relating to MD5 Copyright © 1991-2, RSA Data Security, Inc. Created 1991. All rights reserved. License to copy and use this software is granted provided that it is identified as the "RSA Data Security, Inc. MD5 Message-Digest Algorithm" in all material mentioning or referencing this software or this function. License is also granted to make and use derivative works provided that such works are identified as "derived from the RSA Data Security, Inc. MD5 Message-Digest Algorithm" in all material mentioning or referencing the derived work. RSA Data Security, Inc. makes no representations concerning either the merchantability of this software or the suitability of this software for any particular purpose. It is provided "as is" without express or implied warranty of any kind. These notices must be retained in any copies of any part of this documentation and/or software.

Portions relating to DIRAC Time Stretch/Pitch Shift technology licensed from The DSP Dimension, <http://www.dsdimension.com> Developed and © 2005 Stephan M. Bernsee.

Portions relating to GLEE v. 5.21 Copyright © 2006 Ben Woodhouse. All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer as the first lines of this file unmodified. 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. THIS SOFTWARE IS PROVIDED BY BEN WOODHOUSE "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL BEN WOODHOUSE BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Portions powered by Automatic Duck. © 2006 Automatic Duck, Inc. All rights reserved.

Portions relating to Glibc v. 2.3.4 file contains the copying permission notices for various files in the GNU C Library distribution that have copyright owners other than the Free Software Foundation. These notices all require that a copy of the notice be included in the accompanying documentation and be distributed with binary distributions of the code, so be sure to include this file along with any binary distributions derived from the GNU C Library.

Portions relating to Firefox 2 are © 2005-2008. Mozilla. All rights reserved. Distributed under the Mozilla Public License Version 1.1.

Portions relating to GnuPlot v. 4.0 Copyright ©1986 - 1993, 1998, 2004 Thomas Williams, Colin Kelley. 1. distribute the corresponding source modifications from the released version in the form of a patch file along with the binaries, 2. add special version identification to distinguish your version in addition to the base release version number, 3. provide your name and address as the primary contact for the support of your modified version, and 4. retain our contact information in regard to use of the base software.

Portions relating to "dslib" C/C++ Copyright 1988-1989 Eugene Dronek and Rich Morin

Portions relating to TiC++ v. 1.0 Copyright 2006 Ryan Puzstai, Ryan Mulder

Portions relating to NumPy v. 1.0.4 Copyright ©2005, NumPy Developers. All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. Neither

the name of the NumPy Developers nor the names of any contributors may be used to endorse or promote products derived from this software without specific prior written permission. THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Portions relating to PostgreSQL v. 7.4.8-1 Copyright ©1996-2003, PostgreSQL Global Development Group.

Portions relating to PostgreSQL v. 7.4.8-1 Copyright © 1994, The Regents of the University of California. Permission to use, copy, modify, and distribute this software and its documentation for any purpose, without fee, and without a written agreement is hereby granted, provided that the above copyright notice and this paragraph and the following two paragraphs appear in all copies. IN NO EVENT SHALL THE UNIVERSITY OF CALIFORNIA BE LIABLE TO ANY PARTY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS, ARISING OUT OF THE USE OF THIS SOFTWARE AND ITS DOCUMENTATION, EVEN IF THE UNIVERSITY OF CALIFORNIA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. THE UNIVERSITY OF CALIFORNIA SPECIFICALLY DISCLAIMS ANY WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE SOFTWARE PROVIDED HEREUNDER IS ON AN "AS IS" BASIS, AND THE UNIVERSITY OF CALIFORNIA HAS NO OBLIGATIONS TO PROVIDE MAINTENANCE, SUPPORT, UPDATES, ENHANCEMENTS, OR MODIFICATIONS.

Portions relating to PostgreSQL Server v. 7.4.8-1 Copyright ©1996-2003, PostgreSQL Global Development Group.

Portions relating to PostgreSQL Server v. 7.4.8-1 Copyright © 1994, The Regents of the University of California. Permission to use, copy, modify, and distribute this software and its documentation for any purpose, without fee, and without a written agreement is hereby granted, provided that the above copyright notice and this paragraph and the following two paragraphs appear in all copies. IN NO EVENT SHALL THE UNIVERSITY OF CALIFORNIA BE LIABLE TO ANY PARTY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS, ARISING OUT OF THE USE OF THIS SOFTWARE AND ITS DOCUMENTATION, EVEN IF THE UNIVERSITY OF CALIFORNIA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. THE UNIVERSITY OF CALIFORNIA SPECIFICALLY DISCLAIMS ANY WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE SOFTWARE PROVIDED HEREUNDER IS ON AN "AS IS" BASIS, AND THE UNIVERSITY OF CALIFORNIA HAS NO OBLIGATIONS TO PROVIDE MAINTENANCE, SUPPORT, UPDATES, ENHANCEMENTS, OR MODIFICATIONS.

Portions relating to Mesa v. 6.5.1 Copyright © 1999-2007 Brian Paul. All Rights Reserved. Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions: The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software. THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL BRIAN PAUL BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Portions relating to pySerial Copyright © 2001-2004 Chris Liechti cliechti@gmx.net; All Rights Reserved.

Portions relating to OpenExr v. 1.2.1 Copyright © 2004, Industrial Light & Magic, a division of Lucasfilm Entertainment Company Ltd. Portions contributed and copyright held by others as indicated. All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. Neither the name of Industrial Light & Magic nor the names of any other contributors to this software may be used to endorse or promote products derived from this software without specific prior written permission. THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Portions relating to libtiff are Copyright © 1988-1997 Sam Leffler. Copyright © 1991-1997 Silicon Graphics, Inc. Permission to use, copy, modify, distribute, and sell this software and its documentation for any purpose is hereby granted without fee, provided that (i) the above copyright notices and this permission notice appear in all copies of the software and related documentation, and (ii) the names of Sam Leffler and Silicon Graphics may not be used in any advertising or publicity relating to the software without the specific, prior written permission of Sam Leffler and Silicon Graphics. THE SOFTWARE IS PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL SAM LEFFLER OR SILICON GRAPHICS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND,

OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER OR NOT ADVISED OF THE POSSIBILITY OF DAMAGE, AND ON ANY THEORY OF LIABILITY, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Portions relating to MPEG Layer- 3, supply of this product does not convey a license under the relevant intellectual property of Thomson multimedia and/or Fraunhofer Gesellschaft nor imply any right to use this product in any finished end user or ready-to-use final product. An independent license for such use is required. For details, please visit <http://www.mp3licensing.com>.

Trademarks

The following are registered trademarks or trademarks of Autodesk, Inc., in the USA and other countries: 3DEC (design/logo), 3December, 3December.com, 3ds Max, ADI, Alias, Alias (swirl design/logo), AliasStudio, AliasWavefront (design/logo), ATC, AUGI, AutoCAD, AutoCAD Learning Assistance, AutoCAD LT, AutoCAD Simulator, AutoCAD SQL Extension, AutoCAD SQL Interface, Autodesk, Autodesk Envision, Autodesk Insight, Autodesk Intent, Autodesk Inventor, Autodesk Map, Autodesk MapGuide, Autodesk Streamline, AutoLISP, AutoSnap, AutoSketch, AutoTrack, Backdraft, Built with ObjectARX (logo), Burn, Buzzsaw, CAICE, Can You Imagine, Character Studio, Cinestream, Civil 3D, Cleaner, Cleaner Central, ClearScale, Colour Warper, Combustion, Communication Specification, Constructware, Content Explorer, Create>what's>Next> (design/logo), Dancing Baby (image), DesignCenter, Design Doctor, Designer's Toolkit, DesignKids, DesignProf, DesignServer, DesignStudio, DesignStudio (design/logo), Design Web Format, DWF, DWG, DWG (logo), DWG Extreme, DWG TrueConvert, DWG TrueView, DXF, Ecotect, Exposure, Extending the Design Team, FBX, Filmbox, FMDesktop, Freewheel, GDX Driver, Gmax, Green Building Studio, Heads-up Design, Heidi, HumanIK, IDEA Server, i-drop, ImageModeler, iMOUT, Incinerator, Inventor, Inventor LT, Kaydara, Kaydara (design/logo), Kynapse, Kynogon, LocationLogic, Lustre, Matchmover, Maya, Mechanical Desktop, MotionBuilder, Movimento, Mudbox, NavisWorks, ObjectARX, ObjectDBX, Open Reality, Opticore, Opticore Opus, PolarSnap, PortfolioWall, Powered with Autodesk Technology, Productstream, ProjectPoint, ProMaterials, RasterDWG, Reactor, RealDWG, Real-time Roto, REALVIZ, Recognize, Render Queue, Retimer, Reveal, Revit, Showcase, ShowMotion, SketchBook, SteeringWheels, Stitcher, StudioTools, Topobase, Toxik, TrustedDWG, ViewCube, Visual, Visual Construction, Visual Drainage, Visual Landscape, Visual Survey, Visual Toolbox, Visual LISP, Voice Reality, Volo, Vtour, Wiretap, and WiretapCentral.

The following are registered trademarks or trademarks of Autodesk Canada Co. in the USA and/or Canada and other countries: Backburner, Discreet, Fire, Flame, Flint, Frost, Inferno, Multi-Master Editing, River, Smoke, Sparks, Stone, and Wire.

The following are registered trademarks or trademarks of Moldflow Corp. in the USA and/or other countries: Moldflow MPA, MPA (design/logo), Moldflow Plastics Advisers, MPI, MPI (design/logo), Moldflow Plastics Insight, MPX, MPX (design/logo), Moldflow Plastics Xpert.

Automatic Duck and the duck logo are trademarks of Automatic Duck, Inc. FFmpeg is a trademark of Fabrice Bellard, originator of the FFmpeg project. All other brand names, product names or trademarks belong to their respective holders.

Disclaimer

THIS PUBLICATION AND THE INFORMATION CONTAINED HEREIN IS MADE AVAILABLE BY AUTODESK, INC. "AS IS." AUTODESK, INC. DISCLAIMS ALL WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE REGARDING THESE MATERIALS.

Published by: Autodesk, Inc.
111 McInnis Parkway
San Rafael, CA 94903, USA

Title: Autodesk Smoke and Autodesk Backdraft Conform 2009 Extension 1 Release Notes
Document Version: 1
Date: October 3, 2008

Contents

Chapter 1	Release Information	1
	About these Release Notes	1
	Related Documentation	1
	Contacting Autodesk	2
Chapter 2	System Information	3
	Release Requirements	3
	New DKU Version 3.5.0	4
	Mandatory AJA OEM 2K Firmware Upgrade	4
	Licensing	5
	Compatibility	5
	Additional Software for this Release	5
	About the new vref Tool	6
	Troubleshooting Missing Frames	7
	Setting the Start-up Screen Message	8
	Removing Invalid Frame References from the Stone and Wire Database	9
	Disabling Local Stone and Wire I/O on Burn Nodes	10
	DKU Installation in Text Mode on GPU Burn Nodes	11
Chapter 3	Application Feature Changes	13
	Introduction	13
	Changes to 1D and 3D LUT Hot Keys	14

Image Data Type Hot Keys	14
Colour Decision List Spark	14
Adjusting Resolution of DVCPro HD MXF Media	15
Improved RED Relink Workflow for XML	16
Exporting QuickTime MPEG-4	16
Smoke/Flame: Preparing Timelines for Autodesk Lustre	16
New Sapphire Sparks from GenArts	17

Release Information



Topics in this chapter:

- [About these Release Notes](#) on page 1
- [Related Documentation](#) on page 1
- [Contacting Autodesk](#) on page 2

About these Release Notes

This document provides requirements and last-minute information for the following Autodesk® applications:

- Autodesk Smoke® 2009 Extension 1
- Autodesk Backdraft® Conform 2009 Extension 1

Related Documentation

This release has documentation that helps you install, configure, and use your product. It is available from your product as a Web-based help system and as PDF files.

- To view the Help from anywhere in the application, press **Ctrl+=**.

- To view PDF documentation from the application, go to the Preferences menu and select a document from the PDF Preference box.

For complete information on viewing PDF documentation and Help, see the “Introduction” chapter of your application User Guide.

For a list of all the latest documentation that is available to you, see:

- www.autodesk.com/smoke-documentation
- www.autodesk.com/backdraftconform-documentation

Contacting Autodesk

For Autodesk Media and Entertainment Customer Support, visit <http://www.autodesk.com/support>.

Customer support is also available through your Autodesk reseller. To find a reseller near you, consult the reseller look-up database at <http://www.autodesk.com/resellers>.

System Information

2

Topics in this chapter:

- [Release Requirements](#) on page 3
- [Licensing](#) on page 5
- [Compatibility](#) on page 5
- [Additional Software for this Release](#) on page 5
- [About the new vref Tool](#) on page 6
- [Troubleshooting Missing Frames](#) on page 7
- [Removing Invalid Frame References from the Stone and Wire Database](#) on page 9
- [Disabling Local Stone and Wire I/O on Burn Nodes](#) on page 10
- [DKU Installation in Text Mode on GPU Burn Nodes](#) on page 11

Release Requirements

Consult the following table to verify that your system meets the minimum requirements for this release.

Component:	Requirement:	See:
Workstation	<ul style="list-style-type: none">■ HP xw8600■ HP xw9400■ HP xw8400	Hardware setup guide for your workstation

Component:	Requirement:	See:
	<ul style="list-style-type: none"> ■ IBM® 6217 DC ■ IBM 6217 SC ■ IBM 6224 	
Operating system	<ul style="list-style-type: none"> ■ HP workstations: Red Hat® Enterprise Linux® WS 4, Update 3 (64-bit) ■ IBM workstations: Red Hat Enterprise Linux WS 4, Update 2 (64-bit) 	<i>Autodesk Visual Effects and Finishing Red Hat Enterprise Linux Workstation 4 Installation and Configuration Guide</i>

New DKU Version 3.5.0

The current release of your Visual Effects and Finishing application requires version 3.5.0 of the *Discreet Kernel Utilities* (DKU). If you are upgrading from a previous release, you need to perform a DKU upgrade.

For information about upgrading the DKU on your workstation, see the *Red Hat Enterprise Linux Workstation 4 Installation and Configuration Guide*, Update 2 or Update 3.

Mandatory AJA OEM 2K Firmware Upgrade

If your HP workstation is equipped with an AJA OEM 2K board, the firmware of the board must be upgraded to version 0x73 to use it with the current release of your Visual Effects and Finishing application.

To verify the AJA PCI-X firmware version:

- 1 Open a terminal and type:
cat /proc/driver/aja

If `PCI version` lists a different version than the required one, then you must upgrade the firmware. For upgrade instructions, see the Hardware Setup Guide for your workstation.

NOTE Before upgrading the AJA firmware, make sure you have upgraded the DKU, and that you have restarted the system.

Licensing

As an eligible subscription customer, you will receive a new license for the 2009 Extension 1 version of your product. See the Software Installation Guide for instructions on installing your license code.

Compatibility

Projects and clip libraries created in previous releases are read-only in your Extension application.

To access media in projects created in previous releases, you must first create new projects in the Extension release. Then, you must transfer the media from your old projects to the new ones using the Network panel in the Clip Library (Autodesk Wire®).

There is a new tool that copies your old projects to new projects, which can ease the process of migrating many projects to the new version. For details, see the “Compatibility” topic of your application Help or user guide.

Previous releases cannot read clip libraries from this release.

Autodesk recommends archiving your media and project data before you upgrade.

Additional Software for this Release

The following table lists the version numbers for supporting software for this release.

Software	Version
Autodesk Backburner™	2008.1.1
Autodesk Lustre® Color Management	2008
Autodesk WiretapCentral™	2009.1
Autodesk Cleaner® XL	1.5.2

About the new *vref* Tool

vref is a tool that automatically starts with Visual Effects and Finishing applications, and runs in the background. When a frame or audio segment is deleted from the application, *vref* checks that the respective media was not in use by a clip, in order to prevent missing frames.

In the unlikely event that the media was in use, an error message is displayed. Autodesk strongly recommends you to run the *vic* utility, and to contact Customer Support to report this event. See the application user guide for information on the *vic* utility.

If you are using a Stone® filesystem volume, *vref* attempts to repair the problem and recover the deleted media. Deleted media from standard filesystem volumes cannot be recovered by *vref*.

When *vref* is running in the background, deleting large numbers of frames takes longer, and the application might take longer to exit, as it waits for *vref* to finish checking frames.

You may disable *vref* if the checking takes too long. Be aware that doing so will reduce your protection against lost frames.

To disable *vref*:

- 1 Exit the Visual Effects and Finishing application.
- 2 As the application user, open a terminal and type the following command on one line:

```
touch  
/usr/discreet/<application_directory>/bin/.no_vref
```

For example:

```
touch /usr/discreet/flame_2009.1/bin/.no_vref
```

A file named *.no_vref* is created in the *bin* directory of the application.

- 3 Start the application.
vref no longer starts with the application.

To re-enable *vref*:

- 1 Exit the Visual Effects and Finishing application.
- 2 As the application user, open a terminal and type the following command on one line:

```
rm /usr/discreet/<application_directory>/bin/.no_vref
```

For example:

```
rm /usr/discreet/flame_2009.1/bin/.no_vref
```

The *.no_vref* file is removed from the *bin* directory of the application.

- 3 Start the Visual Effects and Finishing application.
vref now starts with the application, and runs in the background.

Troubleshooting Missing Frames

If the application cannot find some of the frames referenced by your clips, the following error message is displayed when the application starts:

- In the terminal:

```
WARNING: <nnnn> <volume_type> frames are missing on  
this volume; see Release Notes for corrective  
measures.
```

Where <nnnn> represents the number of missing frames, and <volume_type> can be *stonefs* or *standardfs*.

- In the application start-up screen:

```
VOLUMEMGT: WARNING: Some frames not found; see  
Release Notes for corrective measures.
```

NOTE By default, the message only appears in the terminal. To have it appear also in the start-up screen, you must configure the application. See [Setting the Start-up Screen Message](#) on page 8.

The error message appears in one or both of the following situations:

- Some clips in your libraries or desktops reference missing frames on a remote volume.
- Some clips in your libraries or desktops reference local frames that no longer exist.

To identify the type of issue:

- 1 Open a terminal and type:

```
vic -v <volume_name> -s remote -s lost
```

where <volume_name> is the name of the affected volume, for example stonefs or standardfs.

The output of this command should be similar to the following:

```
Checking libraries for remote and lost frames...  
/usr/discreet/clip/stonefs/My_Project1/editing.000.desk  
has none  
/usr/discreet/clip/stonefs/My_Project1/Default.000.clib  
references 30 missing frames.  
/usr/discreet/clip/stonefs/My_Project2/editing.000.desk  
has none  
/usr/discreet/clip/stonefs/My_Project2/from_caplan.000.clib  
references 70 remote frames
```

Depending on the result of the previous command, do one of the following:

- For clips with frames listed as missing, contact your local Autodesk support representative for help on resolving this issue.
- For clips with frames listed as remote, perform the following procedure.

To recover remote frames:

- 1 Archive all clip libraries that are reported as containing remote frames. In the previous example, the fourth library (from_caplan) contains remote frames.
- 2 Rename the libraries you just archived, such as by adding the remote suffix to the library name.
- 3 Restore the clip libraries from the archive. All the frames referenced by the clips should now be stored locally.
- 4 Delete the original libraries.

Setting the Start-up Screen Message

By default, the message about missing frames only appears in the terminal. To make it appear in the application start-up screen, create an environment variable called `DL_IC_NOTIFY_MISSING`. Open a terminal and type:

```
setenv DL_IC_NOTIFY_MISSING 1
```

NOTE The environment variable is set for the current session only. To set it permanently, open the `~/.cshrc` file in a text editor and add the following on a new line: `setenv DL_IC_NOTIFY_MISSING 1`

Removing Invalid Frame References from the Stone and Wire Database

The current release of Stone and Wire introduces a new database inconsistency detection mechanism.

If you change the framstore ID of a Stone filesystem or standard filesystem partition in your system without reformatting the Stone and Wire database, when you restart Stone and Wire the inconsistency check mechanism detects invalid frame references in the database, and prevents the Stone and Wire database server (*sw_dbd*) from starting.

If you receive an error message that *sw_dbd* could not be started when you start a Visual Effects and Finishing application or Stone and Wire, perform the following steps to determine if the problem is related to invalid frame references, and to remove those references from the Stone and Wire database.

To remove invalid frame references from the Stone and Wire database:

- 1 Open a terminal and log in as root.
- 2 Search the `/usr/discreet/sw/log/sw_dbd.log` file for the text “Bad framstore ID”:

```
cat /usr/discreet/sw/log/sw_dbd.log | grep -i bad/  
framstore/ id
```

- If the search returns one or more lines, the problem is related to invalid frame references. Perform the remaining steps in this procedure to clean up the Stone and Wire database.
 - If the search returns no results, the problem is not related to invalid frame references. Read the `/usr/discreet/sw/log/sw_dbd.log` file to determine the cause of the problem.
- 3 Stop Stone and Wire by typing:

```
/etc/init.d/stone+wire stop
```
 - 4 Clean up the Stone and Wire database by typing:

```
/usr/discreet/sw/sw_dbd -C
```

A message is displayed in the terminal asking you to confirm the deletion of invalid entries from the database.

- 5 Type **Y** to confirm the operation.

Invalid entries are removed from the Stone and Wire database.

- 6 Restart Stone and Wire by typing:

```
/etc/init.d/stone+wire start
```

Disabling Local Stone and Wire I/O on Burn Nodes

In cases where a Burn render node has a slower connection to a shared storage device (such as a SAN) than the Visual Effects and Finishing workstation it is preferable for Stone and Wire I/O operations to be performed on the Visual Effects and Finishing workstation, rather than on the render node.

Perform the following procedure to disable all local Stone and Wire I/O operations on a Burn render node.

To disable local Stone and Wire I/O operations:

- 1 Open a terminal on the Burn render node, and log in as root.

- 2 Stop Stone and Wire by typing:

```
/etc/init.d/stone+wire stop
```

- 3 Open the `/usr/discreet/sw/cfg/stone+wire.cfg` configuration file in a text editor.

- 4 Locate the `DisableLocalIO` keyword in the `[Initialization]` section.

- 5 Uncomment the keyword if necessary, and set its value to true:

```
DisableLocalIO=True
```

- 6 Save and close the configuration file.

- 7 Restart Stone and Wire by typing:

```
/etc/init.d/stone+wire start
```

DKU Installation in Text Mode on GPU Burn Nodes

After installing Linux on Burn nodes equipped with the NVIDIA® Quadro® FX 3700 graphics board, you need to boot Linux in text mode and install the latest version of the DKU before being able to use Linux in graphic mode on the Burn node.

The DKU installs and configures the driver for the new graphics card, and makes the appropriate changes in the `/etc/X11/xorg.conf` file.

To boot Linux in text mode and install the DKU:

- 1 Once Linux is installed, reboot your Burn node.
The Linux boot loader appears.
- 2 Press any key to stop the normal boot process and enter the GRUB boot menu.
- 3 Using your keyboard up and down arrows, select your Linux kernel (usually the first one in the list), and press **A** to edit its boot parameters.
- 4 Add a 3 to the end of the kernel line to force Linux to boot into text mode.
The modified line should be similar to the following:

```
ro root=LABEL=/ hdc=ide-scsi selinux=0  
bigphysarea=73729 powernow-k8.disable=1 3
```
- 5 Press ENTER to accept changes and boot the kernel.
Linux boots into text-only mode.
- 6 Log in as root and follow the normal DKU installation procedure. See the *Red Hat Enterprise Linux Workstation 4, Update 3 Installation and Configuration Guide*.
- 7 When the DKU installation completes, reboot your Burn node.
Linux boots in normal graphic mode.

Application Feature Changes

3

Topics in this chapter:

- [Introduction](#) on page 13
- [Changes to 1D and 3D LUT Hot Keys](#) on page 14
- [Image Data Type Hot Keys](#) on page 14
- [Colour Decision List Spark](#) on page 14
- [Adjusting Resolution of DVCPro HD MXF Media](#) on page 15
- [Improved RED Relink Workflow for XML](#) on page 16
- [Exporting QuickTime MPEG-4](#) on page 16
- [Smoke/Flame: Preparing Timelines for Autodesk Lustre](#) on page 16
- [New Sapphire Sparks from GenArts](#) on page 17

Introduction

This chapter describes changes to the application that were not documented in the user guide or new features guide.

Changes to 1D and 3D LUT Hot Keys

The 1D and 3D LUT hot keys are different from those documented previously.

Press:	To:
Ctrl+Shift+(1-0)	Apply a gamma correction or 1D LUT based on its position in the 1D LUT list.
Ctrl+Shift+' (on the tilde key)	Toggle ID LUT display mode.
Alt+Shift+(1-0)	Apply a 3D LUT based on its position in the 3D LUT list.
Alt+Shift+' (on the tilde key)	Toggle 3D LUT display mode.

Image Data Type Hot Keys

The Bypass button, located in the Image Data Type panel of the Player and View menu, has a hot key assigned to it. Use **Ctrl+Shift+B** to toggle the Bypass button.

The Bypass button in the Image Data Type panel of the Preferences now has an empty hot key entry that can be customized by the user.

NOTE The **Ctrl+Shift+B** hot key was applied to the Ripple command in the Batch timeline, and this entry is now empty.

Colour Decision List Spark

Using a new Spark[®], you can load and apply files that use the American Society of Cinematographers Color Decision List (ASC CDL) format.

Using SparkCDL, you can load an XML-based file that includes basic colour grading metadata and apply it to a clip.

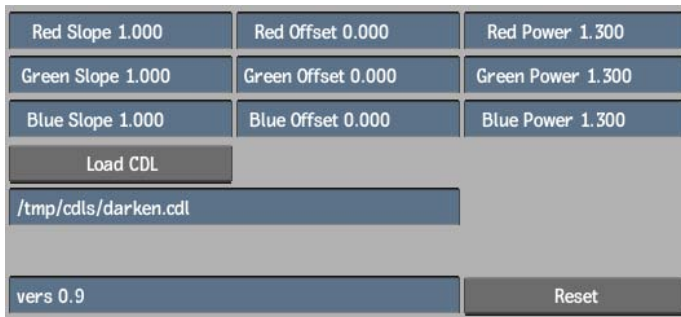
The following is an example of a colour decision list that uses an XML schema:

```

<ColorDecisionList xmlns="urn:ASC:CDL:v1.01">
  <ColorDecision>
    <ColorCorrection>
      <SOPNode>
        <Description>dark blue</Description>
        <Slope>1.0000 1.0000 1.4000</Slope>
        <Offset>0.000 0.0000 0.0000</Offset>
        <Power>1.3 1.3 1.3</Power>
      </SOPNode>
      <SatNode>
        <Saturation>1.000000</Saturation>
      </SatNode>
    </ColorCorrection>
  </ColorDecision>
</ColorDecisionList>

```

For each colour channel, the Sparks menu displays the slope (gain), offset, or power (gamma) values. You can manually adjust or reset these values.



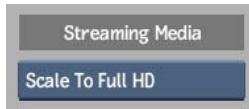
See Using Sparks® as a Plug-in in the Sparks chapter of your application help or user guide.

Adjusting Resolution of DVCPro HD MXF Media

The standard resolution for HD is 1920 x 1080 pixels for 1080p, or 1280 x 720 pixels for 720p. However, some digital cameras that output media to files, may use a different resolution (such as 1280 x 1080 or 1440 x 1080 pixels). This size discrepancy can sometimes lead to problems when conforming. It can often be remedied by applying a Resize operation on the media. However, depending on the media and the offline process, this is not always the solution.

When importing DVCPro HD files by means of MXF, you can now set how best to handle the DVCPro HD media in the Preferences menu.

On the General tab under Streaming Media, use the appropriate option to suit your media and conform workflow.



Use	To
Use Native Resolution	Maintain the original resolution of the media, without making any performance-affecting Resize operations.
Scale to Full HD	Resize the media (of any resolution) to the full HD resolution of 1920 x 1080 pixels. This on-the-fly resize is embedded in the decoding process, and may adversely affect real-time performance.

Improved RED Relink Workflow for XML

When importing FCP XML pointing to DPX media (originating from RED media), your application now uses a heuristic method to determine the correct reel name. This eliminates the need to change the path manually for every file during the Relink process, when using Normal mode.

Exporting QuickTime MPEG-4

When exporting QuickTime® MPEG-4 files, ensure that you export the clip in Progressive mode, rather than Interlaced mode. QuickTime MPEG-4 clips exported in Interlace mode are not supported properly on most QuickTime applications.

Smoke/Flame: Preparing Timelines for Autodesk Lustre

Smoke and Flame optimize timewarps to speed up processing. As a result of the optimization, timewarps appear as multiple shots when the Smoke or

Flame timelines are brought into Autodesk Lustre. Multiple shots can be more difficult to grade in Lustre.

To prevent the optimization you can either:

- Use Autodesk Burn™ to process your timeline, or
- Turn off timewarp optimization for processing

To turn off timewarp optimization for processing, enable the following environment variable before you start Smoke or Flame. Open a terminal and type:

```
setenv DL_DISABLE_NOOP_SOFT_FX_OPTIMISATION
```

After you enable this environment variable, you must process all timelines you want to share with Lustre to remove the optimization.

When timewarp optimization is off, processing time slows down and more space is consumed on your framestore.

NOTE The environment variable is set for the current session only. To set it permanently, open the `~/.cshrc` file in a text editor and add the following on a new line: `setenv DL_DISABLE_NOOP_SOFT_FX_OPTIMISATION`

New Sapphire Sparks from GenArts

If you are using Sapphire® Sparks from GenArts®, please upgrade to the latest version (at least 4.061). See your GenArts representative for information.

