

**To:** Eclipse Support Agreement & Warranty Customers

**Date:** January 27, 2010

**Subject:** EclipseSuite 7.0 Release

**Summary:**

This TechFlash is to notify all support agreement & warranty customers of the availability of EclipseSuite 7.0. This version is available to all support agreement and warranty customers.

**IMPORTANT:** A CD-TEXT limitation was discovered with the Plextor PX-850A drive. It does not support the maximum number of CD-TEXT Packs allowed by the specifications (256). Although images using the maximum number of Packs are rare, it is still a limitation of this drive. If a CD containing the maximum number of Packs is encountered, the drive ignores the CD-TEXT and will appear to the EclipseSuite tools as though no CD-TEXT was present on the media. The latest firmware appears to have enhanced the drive's ability to read the maximum number of CD-TEXT packs. However, there have been reports that CD-TEXT is not detected in some cases. Note that this limitation was also seen on Plextor models PX-860, PX-870 and PX-880.

**Below are the fixes and enhancements since the release of EclipseSuite 5.2.**

- **Enhance the CD-Text Editor to allow the user to enter a TAB character in any title field.**

For example, when two consecutive tracks have the same title, the TAB character is used on the title for the second track to indicate that the same title as the previous track.

- **Fixed a problem that would cause ImageCopy to hang when writing a multisession CD-R.**

If the image included RW data, it could sometimes cause ImageCopy to hang writing lead-out. Aborting would stop the job and the CD-R would be ok.

- **Corrected a problem that was causing ImageCopy to crash at the end of a job when the dual output option was selected and ImageIntegrity counts were zero.**

- **Change behavior "Sync audio only at the beginning of a disc" to be enabled by default.**

- **Updated main window user interface of the EclipseSuite tools.**

The main window of ImageAnalysis, ImageCopy and ImageVerify has been enhanced to include additional information such as Signature and Master ID values.

- **The Media Selection tab includes an eject/load button that users can use to eject or load media from a drive.**

When a drive is selected as the Input, Output, Source or Target, the user can click the eject button and the drive tray will open. On drives with slot loading method, any media in the drive will be ejected. This can be used as a convenient way to identify the drive being used for the operation. On a system with multiple drives, it is sometimes difficult to identify each drive. This feature solves that problem.

- **Consolidated the EclipseSuite Preferences by category.**

As more options have been added to the EclipseSuite Preferences, the Preferences window had become too big and too crowded. In EclipseSuite 7.0, all preferences are now displayed in separate tabs by category in a smaller window.

- **Added new preferences:**

**FILE LOCATIONS:**

**Verify scanner input** – This new preference is used when using a barcode scanner to scan an image name/path into the Media Selection tab. If the user then clicks on the Set DDP Location and chooses an image from the list, the EclipseSuite tools will validate that the scanned name/path matches the one selected by the user. This was requested by users using barcode data who wanted an additional check that the input data was correct.

**Export HTML and Export XML** – These two options are now independent of the "Automatically save log file" option as in previous versions.

- **Move UDF behaviors to new behavior category.**

Since there are four UDF behaviors, a new UDF category has been created. Now these behaviors are displayed under the UDF tab in the behaviors window.

- **Added new behaviors:**

#### **GENERAL:**

**Prompt for CMF/DDP on Disc action** – This behavior was renamed from "Prompt for DDP on Disc action" to include CMF and BDCMF images.

**Prompt for ISO on Disc action** – This behavior is used to prompt the user to specify how to proceed when an ISO image is detected on the input media.

**Prompt for ISO on Disc type (CD or DVD)** – This behavior prompts the user to specify whether an ISO image is CD or DVD. The reason is that an ISO image does not specify the format. If the behavior is not selected, then the EclipseSuite tools will determine the format based on the size of the ISO image file.

**Quick RW scan when copying from CD** – This behavior name was changed from "Quick RW scan when copying from CD to tape".

**Retry reading CD-DA TOC 2 time(s)** – This new behavior causes the EclipseSuite tools to force a drive to re-read the TOC on an audio disc twice; each time ejecting the disc before retrying. If the CDTOC information is not the same as the first read, then the job is aborted. This is useful when troubleshooting drives that may have problems detecting CD-TEXT.

**Scan up to 3 levels deep for CMF/DDP on Disc** – This behavior was renamed from "Prompt for CMF/DDP on Disc action" to include CMF and BDCMF images.

#### **OUTPUT:**

**Generate SHA-1 integrity file** - Selecting this behavior causes ImageCopy to generate a file (SHA1.CHK) containing SHA-1 hash values when copying a DVD image to hard disk. The file will include a SHA-1 hash value for each file of the image.

A SHA-1 hash is similar to a signature in that it is used to check the integrity of a file. However, unlike a signature, a SHA-1 hash is based on standards that are used by many applications. Signatures, on the other hand, are unique to EclipseSuite.

*Note This behavior requires the "SHA-1 integrity file" dongle option. If this is not activated, then the behavior is not enabled. Also, this behavior is a custom option developed for a specific customer and is generally not applicable to most users.*

#### **SPEED:**

Added more speed selections for all speed behaviors.

#### **VERIFY:**

**Verify using Signature file** –If Verify After Copy is enabled, this behavior causes ImageCopy to verify the source image signature against the output image. This only works if the source image includes a signature.

**BDCMF SHA-1 hashes** – This behavior applies to Blu-ray images which are not supported in this version of EclipseSuite.

- **Fixed a problem where the Main Channel Viewer couldn't access the Control Data information.**

Previously, when launching the Main Channel Viewer by right-clicking on a rule that does not have an address associated with it, the Main Channel Viewer would default to first sector of the Control Data. Unfortunately, when analyzing a hard disk image, this resulted in an error indicating that the sector was invalid and could not be read.

Now, the Main Channel Viewer will default to the first sector of user data (196608). Users can still access the control data information but must manually enter the sector address (193024).

- **Enhanced ImageArchive by adding a disabling option to each of the outputs.**

When enabling the Dual Output preference, previous versions of ImageArchive required the user to run use both outputs. Therefore, if not making a Dual Output copy, the user had to turn off this option in the

preferences as needed for the current job. Now, each of the output locations has the ability to be disabled. This allows the user to specify one or both output locations.

- **Added import and export features to the ISRC/UPC/MID and CD-Text editors within ImageCopy.**

The ISRC/UPC/MID Editor import/export allow users to import or export information from/to an XML file (ISRC.XML). Similarly, the CD-TEXT Editor allows import/export from/to a binary file (CDTEXT.BIN).

- **Fixed a problem where recordable output devices were not uninitialized when the job was aborted abnormally.**

Previously, when Eclipse encountered an abnormal termination or recording error, the drive in use would not be uninitialized properly. When this happened, the device could not be used for another job. An error would be displayed indicating that the device was in use.

- **Fixed a problem where ImageCopy process was left running after receiving an abnormal termination.**

When an abnormal program termination occurred, the ImageCopy process would have to be manually shutdown.

- **Enhanced ImageCopy to have the ability to copy non-CSS dual layer DVD images to recordable media.**

Previously, only single layer images were supported. Requirements are DVD+R DL media only.

- **Fixed the checksum calculation for the file ddpid.edz.**

Previous versions of EclipseSuite were not properly calculating the checksum for the file DDPID.EDZ used in ImageSend and compressed archives.

- **Fixed EclipseSuite to properly handle an incrementally written multisession disc.**

When processing a multisession CD-R where the track on the second session is incrementally written, it caused previous versions of EclipseSuite to abort with the error "Not enough space in output volume". Previous versions were not identifying incrementally written multisession discs correctly. This lead to an invalid image length.

- **Fixed a problem where the analysis of a wave file was incorrectly triggering the rule "Multiple UDF sessions."**

The data pattern in a wave file which was included in an image was causing the EclipseSuite tools to think that another UDF file system was recorded. This caused it to incorrectly trigger the error "Multiple UDF sessions".

- **Enhanced ImageCopy to use CSS keys from the output partner location.**

When loading layer 0 of a dual layer image, users can specify the Partner Location where layer 1 will be loaded. Normally, the layer 1 folder will not exist so when specifying the Partner Location, the user must create it. Once this is done, ImageCopy will create a link between the two layer folders.

When ImageCopy loads layer 0, it will copy the layer info file to the layer 1 partner folder. When loading layer 1 into the folder that was created earlier, ImageCopy will automatically check the layer 0 folder to see if CSS keys were specified. If so, then it will copy the CSS keys from layer 0 and copy them onto the layer 1 folder. This ensures that the same CSS keys are used on both layers.

- **Enhanced ImageAnalysis and ImageVerify to automatically validate a partner layer.**

When the EclipseSuite tools process a DVD DDP image on hard disk and they find that the image folder contains a link to a partner layer, then the EclipseSuite tools will check to make sure that the partner layer matches with the current image.

Note that if the user manually specifies a partner location, it is assumed that the partner location given is the correct one.

- **Fixed a problem where ImageCopy was showing the error "Unreadable Sector" during an ImageArchive dual output process.**

When using this dual output process previous versions ImageCopy would try to read past the last recorded sector on the media. This in turn would report an unreadable sector and the job would abort for "LBA out of Range".

- **Fixed a problem with the Subchannel Viewer hanging when a CRC is encountered.**

- **Fixed a problem in ImageCopy that prevented the PX-716 drive from recording RW data.**

- **Fixed a problem in ImageCopy where the Print and Print Screen functions did not print the correct Analysis sections.**
- **Fixed a problem in ImageCopy where an exported HTML log file had the incorrect Analysis sections output.**
- **Fixed a problem where the Main Channel Viewer would not display the Source and Target data when accessed from the Verify analysis.**

- **Added support for a short 6-byte signature display for DVD.**

Users can use the original 16-byte signature or the new 6-byte signature for comparing signature values to images. The signature is also displayed at the bottom of the main window of the EclipseSuite tools. For ImageVerify, the signature for both Source and Target are displayed. The 6-byte signature represents the last 12 characters of the full 16-byte signature.

- **Include updated Plug-Ins for AlphaDisc, Patronus, ProtectDisc and RipGuard copy protections.**
- **Automatic detection of RipGuard when no Plug-In is configured.**

EclipseSuite 7.0 includes a 'Lite' version of the RipGuard Plug-In. This is used to detect if an image contains the RipGuard copy protection. If RipGuard is detected on an image but the RipGuard Plug-In is not configured, an error will be triggered in the analysis alerting the user.

Although the RipGuard Plug-In is not absolutely required in ImageAnalysis or ImageCopy, current implementations of the RipGuard copy protection trigger certain errors that are normally suppressed if the Plug-In is configured. If not configured, then the user might think that the image is bad. Configuring the Plug-In also ensures that ImageCopy generates the correct signature for the image. Otherwise, signature comparison errors may occur when the image is compared to the replica.

- **Enhanced the Plug-In Manager to allow disabling of individual Plug-Ins.**

In previous versions, the Plug-In Manager offered an option to disable ALL Plug-Ins. In EclipseSuite 7.0, users can disable all or individual Plug-Ins.

- **Store dongle and EclipseSuite tool configuration information in log files.**

When saving a log file, the EclipseSuite tools will now include the dongle status information. This includes a list of all the options that are active on the dongle and their status. Also included is the settings of all the preferences for the program that ran the job.

- **Fixed a problem where some UDF analysis checks were not being performed on some DVD recordable formats.**
- **Enhanced the EclipseSuite tools to verify that ISRC numbers conform to ISO3901.**

The ISO3901 specifications no longer accept numeric digits in the first two characters. Also, lower case letters are no longer accepted.

- **Enhance the EclipseSuite tools to allow the user to select a CD/DVD reader device for the Partner Location.**

This may be useful if the Partner Location is a DDP on Disc archive.

#### **Support for New Devices:**

- **Pioneer BDC-202 – CD/DVD reader/writer**
- **Pioneer BDR-203, BDR-205 – CD/DVD reader/writer**
- **Plextor PX-860, PX-870 and PX-880 – CD/DVD readers/writers**

#### **EclipseSuite Rules:**

There are several new rules as well as some changes to existing rules.

#### **New Rules:**

- **"Track Subcode start location misaligned"**

This rule is triggered during the prescan process when there is a difference between the start of an index zero subcode point and its associated listing in the TOC. The rules additional information column will specify the starting time for each location.

- **"Number of VTS in VMG and ISO9660 file mismatch"**

The EclipseSuite tools will now check the number of Video Title Sets defined in the Video Manager (VIDEO\_TS.IFO) and compare that to the number of Video Title Sets that the EclipseSuite tools find when analyzing the ISO9660 file system. If the two do not match then this rule is triggered.

- **"Nested UDF Partitions"**

This rule will be triggered when a UDF partition descriptor is found within the current UDF partition being analyzed. This rule will be flagged as a warning and the additional information will display the file(s) which contain this nested UDF descriptor. In previous versions of EclipseSuite we would display the rule Multiple UDF file system. When this happened the end user didn't know if this was an illegal multisession disc or an image with other image files written into it.

- **"Overlapped UDF partitions"**

The rule is triggered when two partition descriptors share allocation space. Normally, each partition would allocate its own space. However, multisession recording on some formats may allow for this overlapping of partitions, which is not valid on read-only media. This rule is triggered when this condition is detected.

- **"DDP/CMF file found on input media."**

This rule will be triggered as a flag indicating that a DDP or CMF image was detected on the input media. This also indicates that the automatic CMF/DDP detection did not detect the image. A possible reason can be that the image uses only UDF file system and not ISO9660. Operating systems that do not support UDF will not be able to read the contents of a disc that does not have ISO9660.

When searching for a CMF/DDP image, the EclipseSuite tools use a Windows function to search for the following files: DDPID, DDPMS, DDPPQ or BDCMF.CMF.

- **"DDPID has an incorrect number of bytes", "DDPMS has an incorrect number of bytes" and "DDPPQ has an incorrect number of bytes"**

These rules are triggered if the files DDPID, DDPMS or DDPPQ are not the correct size.

- **"Multiple CD-Text map stream entries found."**

This error will get triggered when multiple CD-Text entries are found inside the source DDPMS map stream file. When this happens the Additional Info column in the Analysis will indicate whether the entries were the same or different based on the file names and sizes. When copying, the resulting DDPMS output file will only contain the first CD-Text map entry.

- **"Reserved DVD name letter case mismatch."**

This rule gets triggered when any of the DVD-Video filenames or directory names are not in upper case.

- **"Appendable DVD."**

This rule gets triggered when DVD recordable media is recorded "incomplete" and it is used as a master in ImageCopy.

#### **CHANGED RULES:**

- **"Index 1 Not Found"**

This rule has been modified to check if any track entry is missing an index 1 point. Previously this rule was shown only when index 1 for the first track was missing.

- **"Read Retry"**

Previous versions did not trigger this rule for DVD images. Now it will be triggered when a multiple read operations are required on a DVD disc.

- **Rename the rule "Unallocated Space Allocation Descriptor Exceeds Logical Sector Size" to "Unallocated Space Descriptor Extent Length is not a multiple of a Logical Sector Size."**

This rule will be triggered whenever the extent length of an Extent Descriptor is not a multiple of the logical sector size 2048.

- **Rename the rule "Multiple UDF sessions" to "Multiple UDF partitions"**

This rule is triggered only when multiple non-overlapping partition descriptors are found on an image. An image with this characteristic could have been produced during multisession recording of a recordable disc if the previous partition was ignored or its full content discarded.

- **Enhanced the rule "M2F2 EDC with Zeroes Detected" to display the location where the error was triggered.**

- **"CD-Text contains inconsistencies in number of packs/size record"**

The default severity has been changed from a Warning to an Error. There have been reports of this inconsistency causing playability problems.

- **Allow users to specify the location of custom copy protection rule files.**

Starting with EclipseSuite 5.2, when a copy protection is detected on an image, the EclipseSuite tools automatically check the local folder for a rules file with a name that matches the Plug-In that detected the copy protection. If found, the rules from that file are merged with any rules file that is already configured in the EclipseSuite tool being used. The requirement was that the custom rules file needed to be located in the same folder as the EclipseSuite tools.

In EclipseSuite 7.0, the user can specify an alternate location. However, this must be specified manually in the ProtectionDetectionManager section of the registry of each EclipseSuite program.

**Registry Key:**

HKEY\_CURRENT\_USER\Software\Eclipse\[*EclipseSuiteProgramName*]\ProtectionDetectionManager

**Data Type:** DSTRING

**Name:** Matching filename of copy protection Plug-In (without the extension)

**Data:** Path & Filename of custom rules file

Example:

**HKEY\_CURRENT\_USER\Software\Eclipse\ImageAnalysis\ProtectionDetectionManager**

Name	Data Type	Data
RipGuard	REG_SZ	C:\Eclipse\ImageTools70\MyRipGuardRules.rul

**System Requirements:**

EclipseSuite 7.0 is available to all warranty and support agreement customers. Customers who are already running a Beta version of EclipseSuite 7.0 only need to install the new version. Customers who are running prior versions will need a dongle activation. Please submit a dongle number and system code to Eclipse Customer Support and an activation code will be emailed back to you.

Customers running ImageVerify CSS will need to upgrade this application as well. The ImageVerify CSS installation set is typically provided via email. However, a CD-R can be shipped if required. Please make your request to Eclipse Customer Support and specify the method you would like to receive ImageVerify CSS.

**Download Instructions:**

The EclipseSuite 7.0 Release software is available from the following link. Note that there are two different installations, the second one (es70a.zip) is for customers that have the ImageArchive option.

<ftp://ftp.eclipsedata.com/es70/es70.exe>

<ftp://ftp.eclipsedata.com/es70/es70a.exe>

Password: 70RelEDT98