

To: Eclipse BD Customers

Date: July 7, 2008

Subject: EclipseSuite 6.0 Beta Z25 Release

Description:

This document is to notify all customers running EclipseSuite for the High Definition formats of the availability of **EclipseSuite 6.0 Beta Z25**. The following is a list of the changes since the last beta notification. This beta software has undergone limited testing and is being made available as-is. Please review the following list of changes to determine if any are applicable to your needs.

Fixes & Enhancements:

- **Added support for BDCMF 1.02.**

As of the writing of this document, BDCMF 0.90 was the only officially released version. However, BDCMF 1.01 is also currently undergoing round-robin testing prior to final release. Nevertheless, some users are already receiving production images authored with BDCMF 1.01.

The changes between BDCMF 1.01 and 1.02 are purely editorial. However, due the version change, the EclipseSuite and ImageEncoder programs have been enhanced to recognize this version.

- **Added the ability to compare the Volume ID between images.**

ImageVerify has been enhanced with the ability to compare the Volume ID between the two BD images being compared. If the Volume ID is not the same, the new error "Different Volume ID" will be triggered to alert the user.

- **Fixed a problem in which the rule "Incorrect CHT header" was triggered incorrectly.**

When a Clip file spanned layers but the portion of the file on layer 1 was too small to complete a Hash Unit, this caused the EclipseSuite software to incorrectly trigger the rule "Incorrect CHT header".

- **Re-instate the region code reporting.**

Region code reporting was disabled in an earlier version due to problems that caused the EclipseSuite tools to hang. The problem has been corrected. In addition, the region code reporting has been changed into a configurable behavior that can be turned on or off.

- **Change the PMSN attribute to "PMSN=USE-NORM" for Sony CMF images when outputting BDCMF 1.01, 0.99 or 0.98.**

Previous versions of EclipseSuite would set the attribute as "PMSN=USE". However, in BDCMF 1.01, 0.99 and 0.98, this has been changed to "PMSN=USE-NORM".

- **Fixed a problem that caused ImageCopy to miss some Clip files entries in a Sony CMF image.**

An internal program error sometimes caused ImageCopy to miss some of the last Clip file entries in the CPTBL.DAT file.

- **Add new folder icon for identification of Sony CMF images.**

In order to identify and differentiate from a BDCMF image, the EclipseSuite tools will now use a green folder icon for the identification of a Sony CMF image.

- **Add support for identification of Sony CMF images on disc.**

Sony CMF images are sometimes delivered in BD-Recordable media. If the media was used as a source, previous versions of EclipseSuite would process the media as though it was the image. Now the EclipseSuite tools will check the contents of the media to see if it contains a Sony CMF image. This is similar to the detection of BDCMF and DVD images on media (DDP on Disc detection).

- **Add new methods to the ImageCopy COM Interface.**

The ImageCopy COM interface has been expanded with new methods that allow a calling client to set the Title Keys (CPS Unit), the Content Certificate and Content Revocation List or the order delivery CC and the MKB. Different method combinations allow binary data or file paths to be referenced.

- **Enhanced error reporting of certain conditions that cause ImageCopy to abort.**

There are conditions that cause ImageCopy to immediately abort processing of a BD or HD image. The error reported is "High Definition processing halted" and the Additional Info column in the Analysis will display the generic message "AACs Decryption error". Now, the Additional Info column will display a more specific message about the cause.

NOTE: This abort conditions occur only when ImageCopy is running via IEScheduler, RemoteScheduler or ImageNet Scheduler.

- **Enhanced the EclipseSuite Analysis Engine - Better handling of Blu-ray images that use multiple CPS Units**

Up until recently, all Blu-ray Video images only used one CPS Unit. Therefore, when the EclipseSuite tools encountered an encrypted orphan Clip file (*.m2ts), the software always assumed that it belonged to the only CPS Unit (#1) and the file was encrypted/decrypted with no problem.

Some images are being authored using multiple CPS Units. Therefore, the software does not know which CPS Unit to assign to orphan Clips. This caused several errors in the analysis of such images. EclipseSuite 6.0 Beta Z20 has been enhanced to handle multiple CPS Units.

NOTE: As mentioned above, when an image uses only one CPS Unit, the EclipseSuite software automatically assign the same CPS Unit to any orphan Clip that may exist on an image. The same may be true of BD players. When an image is authored with more than one CPS Unit, the EclipseSuite software and BD players can no longer make the same assumption. While the EclipseSuite tools version 6.0 Beta Z20 may be able to determine the correct CPS Unit for the orphan Clips, this may not be true of BD players and can lead to playability problems.

- **New rules added to detect new image problems**

The following rules were added to the analysis engine.

CPS Unit Key changed at layer break - Detects when a different CPS Unit key was used between layer 0 and layer 1.

Clip AV Stream encrypted with unknown CPS Unit Key - The EclipseSuite tools are unable to find the CPS Unit key that was used to encrypt a Clip file.

Unencrypted Clip AV Stream found in encrypted CPS Unit - A Clip file belongs to a CPS Unit that is encrypted. However, the Clip file indicates that it is not encrypted.

Clip AV Stream mapping is incorrect - Used to detect when a Clip file is assigned to different CPS Units.

Clip encryption status does not match CPS Unit – This rule is being renamed to "BDCMF Clip encryption status does not match CPS Unit" since it applies to a BDCMF image.

- **Clean EclipseSuite debug information**

During the analysis of an image, the EclipseSuite tools save additional information into a hidden debug section of the log file. This information is often useful in the troubleshooting of problems. In the case of Blu-ray, many debugging messages are generated as the format has evolved. In some cases, many debugging messages are repeated many times due to problems on the image. This causes the EclipseSuite tools to become slow as the system resources (memory and CPU) are being consumed as the log file in memory kept growing.

Many of these messages have now been removed and replaced by rule messages that are displayed in the Analysis. Although the rule can be triggered multiple times, the user has the option to limit the number of instances it can be displayed (and saved) in the analysis, therefore, limiting the size of the log file.

- **Enable the behavior "Basic Advanced UDF info" to limit the size analysis log.**

Some images may trigger large number of analysis messages making the analysis log very large. Enabling this behavior limits the amount of UDF information that is stored in the log. This does not mean that the UDF analysis is not being performed. A full UDF analysis is still being performed. The difference is that not all UDF information is being stored in the log for display purposes.

- **Limit logging of HDMV commands to decrease log file size.**

Previous versions of EclipseSuite logged several HDMV commands in the log file. These could be used for troubleshooting image problems. However, they also increase the log file size when images include many Titles. In this version of EclipseSuite, the logging of these commands is limited to a few branch instructions. However, full command logging can be re-enabled by setting the following registry entry:

```
\HKEY_CURRENT_USER\Software\Eclipse\Type: String Value  
Values: YES/NO (Default)
```

Where: <AppName> is ImageAnalysis, ImageCopy or ImageVerify.

- **Report region code information for Blu-ray per M2TS file.**

The EclipseSuite tools will now report the region code for each Clip file. Currently this only works with HDMV titles only. Region code reporting on Java titles will be supported in a later version. The region code information is displayed in the Video Attributes section (Info|VideoAttr).

- **Do not abort when file fails to load for comparison.**

During processing of a Blu-ray image, several files are modified as the image moves from one step of the AACs process to another. During verification, these files are compared between the source and target. Previously, if an error occurred while loading a file for comparison, ImageVerify would abort. This has been changed so that the appropriate error is displayed and the job is allowed to continue.

- **Continue analysis when comparison errors are found between an original and a video backup file.**

When differences between original and backup versions of the same files were discovered, previous versions of the EclipseSuite tools aborted. Now the proper error is reported in the analysis and the job is allowed to continue.

- **Errors in the recordable MKB for HD and Blu-ray (file MKB_RW.inf) won't stop the analysis.**

When errors were encountered in the recordable MKB file, previous versions of EclipseSuite tools aborted. Now the proper error is reported in the analysis and the job is allowed to continue.

- **Corrected a problem that caused the rule "Unencrypted CPS Unit contains Enhanced Title" to be triggered incorrectly.**

An internal program error in the EclipseSuite tools was causing this rule to be triggered randomly.

- **Correct a problem when encrypting a BD image using a CPS Unit Key from a different image.**

When trying to encrypt a BD image using the same CPS Unit keys from a different image, this was not working for dual layer images since ImageCopy was assuming it was always processing layer 0 only. This is now corrected.

- **Corrected a character casing problem during processing of XML files when searching for similarly named elements or attributes.**

When iterating through all **File** elements, if the previous element was named <File...> but the next element was named <FILE...>, the next entry would not be found since the search algorithm was case sensitive. This is now corrected.

- **Corrected a problem where the EclipseSuite tools were reporting unusually large codec times in the BD Royalty Report.**

Revert back to BDCMF 0.90 when converting Sony CMF images to BDCMF.

When converting Sony CMF images to BDCMF, ImageCopy 6.0 Beta Z16 would output the image using BDCMF 0.99. Unfortunately, this version was not supported by most users so it was decided to revert back to the more common BDCMF 0.90.

- **Disable the Apply button if the user is non-Administrator or if the *.key files are read only.**

When applying an activation code in the Additional Dongle Features window of the EclipseSuite tools, previously the read-only attributes of the key files were not being checked. If the key files are read-only, the EclipseSuite tools fail to update the keys and the activation failed without alerting the user. The same would occur if the user did not have administrative privileges. Now, the Apply button will be disabled letting the user know that the key files may be set to read-only or that the user is not logged in with administrator privileges.

- **New Rules**

The following are the new rules that have been added since the last beta release.

An AACCS related file could not be loaded or read

Content Certificate File Hash Error

BDCMF File Missing

Severe Error encountered

Transport stream recording rate exceeded

CPS Unit Key changed at layer break

Clip AV Stream encrypted with unknown CPS Unit Key

Unencrypted Clip AV Stream found in encrypted CPS Unit

Clip AV Stream mapping is incorrect

Different Volume ID

- **Renamed Rules**

The following rules were renamed in order to reflect support for detection of BDCMF and Sony CMF images that are submitted on recordable media.

Old: DDP on Disc Detected - Using DDP on Disc for operation

New: **CMF/DDP on Disc detected - using CMF on Disc for operation**

Old: DDP on Disc detected on input media

New: **CMF/DDP on Disc detected on input media**

Old: DDP on Disc detected, but file set incomplete

New: **CMF/DDP on Disc detected, but file set incomplete**

Old: DDP on Disc detected, but overridden - using Disc as an Image

New: **CMF/DDP on Disc detected, but overridden - using Disc as an Image**

Old: DDP on Disc detection failed

New: **CMF/DDP on Disc detection failed**

Download Instructions:

You can download the EclipseSuite 6.0 Beta Z25 from the following link:

ftp://ftp.eclipsedata.com/es60/es60z25.zip

Password: **ECL8ES60Z258**