

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

**Date:** May 27, 2010

**Subject:** EclipseSuite BD 2.0 Release

**Summary:**

This TechFlash is to notify all support agreement & warranty customers of the final release of EclipseSuite BD 2.0. This version is available to all support agreement and warranty customers.

This version should be used for all BD production except 3DBD images.

**Below are the fixes and enhancements since the release of EclipseSuite BD 1.0.**

**Enhancements:**

- **Check to make sure that M2TS files that are referenced in PlayLists exist.**  
Previous versions checked to make sure that any file referenced in a PlayList existed and that it was recorded in the correct order. This check was performed only on a disc or on BDCMF images if the 'ParseBDTitles' registry entry was set. Now, this check is performed on any image type. No registry setting is required.
- **Updated and renamed rule ' Unallocated Space Allocation Descriptor exceeds logical sector size'.**  
This rule has been updated so that it gets triggered when an Unallocated Space Descriptor extent is not an integer multiple of the logical sector size. It has also been renamed to 'Unallocated Space Descriptor extent length is not a multiple of Logical Sector size'.
- **Forgive BDCMF file start address errors if it is missing when image is Type C or Type B, in some cases.**  
The address location for certain files (such as ContentHash, ContentCert, etc) are only required when the image is Type A. Once the image is encrypted, the entries for these files are either removed or ignored. Previous versions of EclipseSuite tools were triggering an error if the start address was missing from these files.
- **Trigger the rule 'Read retry' for Blu-ray and DVD analysis.**  
Previously this rule only applied to CDs. This rule has been enhanced to include DVD and Blu-ray media and will be triggered when the EclipseSuite software perform a retry.
- **Report an error is the CCI and EPN flags in a CPS Unit Usage file are both zero.**  
In a CPS Unit Usage file, both flags cannot have a zero value.
- **Enhanced rule 'PAC Content Error' to let the user know that the EclipseSuite tools will generate default PAC data.**
- **Check to make sure that all streams listed in a PlayList exist in the related Clip AV file.**

The rule 'Elementary HDMV stream not found' will be triggered if a stream referenced in the PlayList is not found in the Clip AV file.

- **Enabled BD-Java security checks.**
- **Enhanced the XML Schema analysis to detect missing elements such as the BDCMF SHA-1.**
- **Added a Copy button in the Debug tab to add the ability to copy debug information.**
- **Enhanced support of file extraction and replacement.**

When files are replaced, the checksums will be updated automatically. However, on a BDCMF image, the SHA-1 will not be re-calculated. Therefore, it will be removed to prevent a SHA-1 mismatch image is later analyzed.

- **Change severity for rule 'BD+ processing required' from ABORT to ERROR to allow a Type V image to be analyzed.**
- **Added the behavior 'BDCMF SHA-1 hashes' to the Verify behaviors.**

When this behavior is selected, a Verify After Copy process will be forced on a BDCMF image even if the Verify After Copy behavior is turned off. This is to calculate the SHA-1 hash values for the UD.DAT and UCD.DAT files.

- **Disable signature calculation for Type V and Type VU images.**

These images must first go through BD+ processing. Any signature prior to this process cannot be used since the image will be modified during BD+ processing.

- **Support copying of Type V images.**

This type of image normally has to go through BD+ processing. However, for the purpose of analysis and copying, ImageCopy will be allowed to analyze and copy the image. No AACS encryption will be applied.

- **Trigger the rule 'Compressed file found on input media' when a file with extension of \*.tar, \*.gz, \*.tgz and \*.tz is detected in an image.**

In some cases, a customer submits an image in a compressed file. This rule will help identify those cases. Note that the detection of compressed files is dependent on the UDF behaviors which can limit the number of directory levels that the EclipseSuite tools will scan.

- **Support BD-ROM layer of BD-ROM/BD-R Hybrid format by recognizing new PIC/DI settings and allowing them.**
- **Added support for BD-R single and dual-layer media.**
- **Added the 'AACS' button in the Info tab to display Clip AV Stream related information.**
- **Display an error if layer 0 of a BDCMF image is longer than the maximum allowed by the specifications.**

The length will also be verified to the PIC information.

- **Trigger the rule 'BD-ROM AACS robustness requirement failure' for DVD titles that include Blu-ray Video content without AACS.**
- **Changed and renamed the function of the eject button in the media selection tab.**

The button is now labeled as 'Eject/Load' and will eject the drive if closed or close if the drive is open.

- **Added miscellaneous enhancements to the BD region code analysis.**
- **Report whether an image is Managed Copy compliant.**

The EclipseSuite tools will trigger one or more new rules if an image is not Managed Copy compliant.

- **Enhanced the ImageVerify completion status in the Progress tab to make it consistent with other EclipseSuite programs.**

#### **Fixes:**

- **Trigger the appropriate rule if the \DisclInfo\BD9Info\TrackPath element is missing.**

In previous versions, no error would have been triggered. In version 2.0, this will trigger the rule 'BDCMF required Element or Attribute missing'.

- **Fix the PIC output when transferring from BD-Re and the DDS field PSN of LSN 0 is not 0x100000.**
- **Disable the Start button immediately after job starts.**

There is a small delay after the Start button gets clicked and when the EclipseSuite tools start the pre-scanning of an image. This delay caused operators to think that the software did not start so they would click the button again. This sometimes resulted in unexpected results. Now, the button is disabled as soon as it is clicked to prevent any problems.

- **Add memory checks while analyzing PlayList files.**

These checks are being done to prevent application crashes if analyzing a corrupt PlayList file.

- **Fixed a problem that was causing the EclipseSuite tools to miss files inside small JAR files.**

As part of the JAVA security analysis, the EclipseSuite tools will analyze all files inside JAR files. A problem occurred where if the JAR file was small, the EclipseSuite tools failed to find any files inside it.

- **Support for XML attributes that are broken into multiple lines and forgive comment element errors.**

Internally, the EclipseSuite tools did not support these and was causing internal memory corruption.

- **Fixed a problem that caused the Royalty Report to have no data.**
- **Make sure that the last sector on layer 0 and the PIC Last AUN of a BDCMF image is divisible by the cluster size.**
- **Fixed a problem that caused the Royalty Report filename prompt to appear even though there was no option selected to save the log.**
- **Fixed a problem that incorrectly triggered the rule ' BDCMF and image content disagree' for a Type V image.**
- **Fixed a problem that was incorrectly triggering the rule ' Elementary HDMV stream not found' on images with secondary video streams.**
- **Fixed a problem where the UDF analysis stopped searching for a file is a directory with the same name was encountered.**
- **Fixed a problem in the behaviors window where clicking the Use Default button toggles the 'Sony CMF to BDCMF' behavior options.**
- **Fixed a problem where selecting File|Save from the menu did not save the log file.**

- Fixed a problem that was causing the ImageCopy analysis to display the 'BDCMF Type" rule twice.
- Fixed a problem that was causing the verify analysis tabs to show no Verify After Copy analysis information.

The problem occurred when opening a log from a job that included analysis messages related to the Verify After Copy process. This occurred only if the local Verify After Copy behavior was turned off.

- Fixed a problem where ImageCopy was aborting on Type P images.

If a Type P image was copied, ImageCopy would abort with the error "Abnormal program termination".

- Fixed a problem that would randomly cause the error "Clip AV Stream not assigned to a CPS Unit".

In previous versions of EclipseSuite BD it was possible to randomly see this error when analyzing a Blu-ray BDCMF image.

- Check the length of each layer in a dual-layer BD image to make sure is within spec.

Previous versions did not check whether the length of layer 0 or layer 1 was within specification. If an image was authored with more data on either layer than what the specifications allowed, it may result in playability problems. The EclipseSuite tools now verify each layer to make sure that they do not exceed the specification maximum.

- Fixed a problem that would sometimes cause ImageCopy not to shutdown properly.

When ImageCopy is launched via one of the scheduler applications (IEScheduler/ImageNet Scheduler/RemoteScheduler), it can sometimes not shutdown properly. The ImageCopy window will close but the process remains running. This prevented any other job from running on the same drive that was used previously.

- Fixed a problem in ImageCopy where no Verify Analysis or Verify Analysis Summary data was being printed.

When printing the results of an ImageCopy job, there was no Verify Analysis or Verify Analysis Summary data (present only if Verify After Copy is active).

- Fixed a problem that caused ImageCopy to output empty HTML & XML elements when saving the HTML & XML log.
- Fixed a problem where long analysis messages were being cut-off in the log files.
- Fixed a problem that was causing the EclipseSuite tools to show an invalid ISAN number.

#### **Implement Support for BDCMF 1.10**

The primary enhancement in BDCMF 1.10 is support for the Highly Confidential Information (HCI) file where the encryption keys are stored. After encryption, the Title Keys are no longer left in the open in the Unit\_Key\_RO.Inf file. Now, they are removed and stored in the secure file KEY.DAT.

- Include the file 'KEY.DAT' in checksum calculations.

This file is generated during the encryption process and contains the Title Keys. A checksum for it will be generated automatically.

- **Clear the keys in the Unit\_Key\_RO.inf file if they exist when outputting a Type BS or CS image.**

If a source image already includes keys (Type AX) and ImageCopy is outputting a Type BS or CS, the keys should be cleared from the Unit\_Key\_RO.Inf file since they will be stored in the KEY.DAT file instead. References to UKF.DAT, SKF.DAT, UKFx.DAT and SKFx.DAT will also be removed from the output BDCMF.CMF file.

- **Removed behavior 'Generate 1.03 BDCMF.SHA file' and replaced it with 'Generate Secure BDCMF'.**

The SHA file will now be generated automatically when outputting BDCMF 1.03 or later. During encryption of a BDCMF image, the new behavior will output BDCMF 1.10 and a secure Type BS or CS image, depending on the source image.

- **Implement support for Bus Encryption flag detection.**

#### **Improved creation and handling of Type AX BDCMF images**

Remove reference to 'KEY.DAT' when creating a Type AX BDCMF image.

- **Retain SHA-1 hash values for PIC, PACLO and PACL1 files in the Type AX image.**

Don't create a SHA-1 for RPC-BDCMF.CMF since it only applies to BDCMF.CMF.

- **When copying a Type AX image and no CC Order file is available, output a Type B or Type BS according to BDCMF version and 'Generate Secure BDCMF' output behavior.**

Normally, a Type AX image will include a CC Order file and the output of ImageCopy will be a Type C image. However, if no CC Order file is available, ImageCopy will generate a Type B or BS, depending on the output behavior 'Generate Secure BDCMF'. The same will occur if no MKB file is present (AACs\_Keys.bin or \*.FMT).

#### **Fox Title Structure Analysis Enhancements**

EclipseSuite BD 2.0 includes several new enhancements to the Fox Title Structure Analysis. Customers still using EclipseSuite BD 1.0 for Title Structure Analysis are encouraged to upgrade to this new version.

#### **New Rules:**

Refer to the EclipseSuite help for more details on each rule. An updated Blu-ray Rules Manual will be mailed to all warranty and support customers.

AACS Managed Copy Manifest file error

Authentication message attribute case mismatch

BCA Override

BDCMF Bus Encryption Flag Mismatch

BDCMF subfolder not found

BDCMF Type A

BDCMF Type AX

BDCMF Type B

BDCMF Type BS

BDCMF Type C  
BDCMF Type C1  
BDCMF Type C2  
BDCMF Type CS  
BDCMF Type D  
BDCMF Type DK  
BDCMF Type P  
BDCMF Type V  
BDCMF Type VU  
BDCMF Version 0.90  
BDCMF Version 0.97  
BDCMF Version 0.98  
BDCMF Version 0.99  
BDCMF Version 1.01  
BDCMF Version 1.02  
BDCMF Version 1.03  
BDCMF Version 1.10  
BD-J application profile  
BD-J application signer  
BD-ROM directory and file names should not contain space characters  
BDR/BDR Hybrid Format Error  
Binding Unit Root Certificate  
Blu-ray AACs File on layer 1  
Blu-ray Last User Data Address too large  
Blu-ray Layer 1 length greater than layer 0  
Blu-ray Unit Usage File Error  
Can't trust JAR Manifest file  
Can't trust JAR Manifest file entry  
Can't trust JAR Signature file  
CC/UCD Bus Encryption Flag Mismatch  
ClipInfo file structural error  
Common CPS Unit Key not available  
Content owner configuration file  
Content owner configuration file error  
Different BDCMF subfolder file count  
Drive laser disabled  
Elementary HDMV stream not found  
Failed to load file  
File out of name space  
HDMV transport stream PAT interval exceeded  
HDMV transport stream PMT interval exceeded  
Image Constraint Token enabled: High Definition Analog Output prohibited  
Index Table file error  
Invalid entry in Managed Copy Manifest  
Invalid UTF-8 octet sequence  
Job Aborted  
Managed Copy - Image not compliant  
Managed Copy compliant  
Managed Copy Manifest file - No URI found  
Missing Movie Object

Missing required AACS file  
Movie Studio required file missing  
Multi-angle PlayItem requires at least two angles  
Multiple UTF-8 octet sequence  
Nested UDF partitions  
Network connection not found  
No AACS Managed Copy Manifest file  
Number of VTS in VMG and ISO9660 mismatch  
Overlapped UDF partitions  
Partial BDCMF missing CPS Unit Key file  
Partial BDCMF missing Order Delivery file  
PIC BCA Flag Comparison Error  
Placeholder Title component not as recommended  
PlayList file structural error  
Producer Application ID mismatch  
Producer Organization ID mismatch  
Replaced UDF file  
Secure BDCMF KEY.DAT file missing  
Shared UDF data allocation  
Title Structure not checked  
UDF file replacement error  
Unexpected Application Root Certificate  
Unexpected BDCMF path  
Unexpected Binding Unit Root Certificate  
Unexpected Disc Organization ID  
Unexpected Producer JAR file name  
Using newer Title Structure file  
Xlet permission not allowed by application profiles

**Download Instructions:**

The EclipseSuite BD 2.0 software is available from the following link.

<ftp://ftp.eclipsedata.com/es20bd/esbd20.exe>

Password: Bd20rELeDt9