

To: Eclipse HD & BD Customers
Date: November 26, 2007
Subject: EclipseSuite 6.0 Beta Z6 Release Notice

Description:

This TechFlash document is to notify all customers running EclipseSuite for the High Definition formats of the availability of EclipseSuite **6.0 Beta Z6**. 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:

- Corrected a problem in ICHECK where it was not saving the calculated SHA-1 for BD images. The problem did not occur if ICHECK was being used through automation or if the "Auto-Save Actual Values" option was being used.
- Enhanced ImageCopy to detect the file structure of a 3X DVD image when it is delivered on a DVD-R. Since the control data is pre-embossed on the recordable disc, there is no way to specify that the content is 3X Speed DVD. Previously, ImageCopy would load the contents of the disc and create a standard DVD-ROM image. Now ImageCopy has been enhanced to check the file structure of the content and determine if it conforms to the HD DVD-Video specifications. If so, then ImageCopy will output a 3X SPEED DVD CMF 2.00 image.
- Enhanced the EclipseSuite software so that if the AutoSave log file preference is enabled it will also save an HTML version of the log.
- Display the error "Title missing from Unit Key RO file" when a title is found in the index.bdmv file but not in the Unit_Key_RO.inf file. This is considered a serious error and the image should be rejected since it causes playability problems. Previously, the missing title caused ImageVerify to incorrectly create duplicate entries in its CC and CHT memory tables resulting in CC and CHT header errors. Now this condition is recognized and the appropriate error is displayed.
- Corrected a problem where the Blu-ray CHT tables were not being checked to make sure that the clip number were in the proper sequence. Previously, there were conditions where this was not checked.
- Enhanced the EclipseSuite tools to parse all HD DVD XML files used by Advanced Content to check for any errors. This includes Manifest files (*.XMF), Markup files used for menus (*.XMU, *.XTS and *.XSS) and Manifest files for Advanced Subtitle (*.XAS and *.XSS). When an error is found, the rule "Advanced Resource XML parse error" will be triggered including the resource file name and the archive file in which it was included if any. The Additional Info column for this message will provide more details.
- Added support for XML files with UTC-16 encoding (UNICODE). Previously the software only supported UTC-8.

- HD DVD Advanced Resource files include a CRC that the EclipseSuite tools validate. Unfortunately, this was not validated on non-AACS images. This has now corrected.
- The rule "Incorrect Encapsulation Format" has being added to check that AACS HD-DVD Advanced resources used for Manifest files, Markup files and Java scripts are always encapsulated with "Encapsulation Format for Hash" or "Encapsulation Format for Encryption and Hash".
- Corrected a problem that prevented successful verification of a 3X SPEED DVD replica.
- Re-activated a check of the Key Conversion Data (KCD) in the DDP/CMF files when the Device Keys Type A are available. If the Device Keys Type A are available and this check is performed, the new rule "Key Conversion Data verified" is triggered. If the Device Keys Type A are not available, the rule "Key Conversion Data not verified" is triggered with the Additional Info "Device keys not available". This check had been in place early on but then discontinued when Device Keys Type C started being used. It has now been re-activated since corrupt KCD caused playability problems.
- Enhanced the EclipseSuite tools to check the PAC cluster data in layer 1 to match the setting of the Status bits of INFO1/PAC1 and INFO2/PAC2 in the Primary Pack Header. The status bits indicate whether the PAC clusters contain zeros or other valid data. Previously, the EclipseSuite tools only checked to make sure all data was zeros regardless of the Status bits. Note, however, that during mastering the ImageEncoder will reset the PAC clusters to zeros. This is done per the specifications.
- If the CPSUnitNo XML tag is missing from the AACS1.DAT file (or the BDCMF XML tag in BDCMF version ≥ 0.92), then trigger the rule "Invalid BDCMF CPS Unit number" and default to the highest CPS Unit Number (currently 1).
- Do not show the rule 'Clip AV Stream not assigned to a CPS unit' when we are analyzing a hard drive image, the CMF is 0.90 and the TYPE is 'B', 'C' or 'D'. It is legal to have no entries in the AACS1.DAT file when the image is not type 'A' using CMF version 0.90.
- Rule "Anchor Point" renamed "Anchor Volume Descriptor Pointer" to match other rules that reference the same subject. The rule will be shown with the sector number where the anchor was found.
- Implemented the new rule "Anchor Volume Descriptor Pointer at unexpected location" to be triggered when an Anchor Point is found outside the locations allowed by the UDF specifications. Typically Anchor Points will be recorded at logical sector 256 and the last sector of user data, as per the UDF specifications. If an image is padded with extra sectors, this will break the UDF requirements for the location of the last Anchor Point. It will no longer be at the last sector of user data.
- Enhanced the EclipseSuite tools to validate all Blu-ray and HD DVD XML files according to the BD/HD XML schema. In order for this to happen, the schema files must be present in the same directory where the EclipseSuite tools are located.

In BDCMF version 0.90 the XML schema files for BD are expected to be named:

CMF_090_TypeA.xsd
CMF_090_TypeB.xsd
CMF_090_TypeC.xsd
CMF_090_TypeD.xsd.

The schema files for the same version for the AACSDAT file are expected to be named:

AACS1_090_TypeA.xsd
AACS1_090_TypeB.xsd
AACS1_090_TypeC.xsd
AACS1_090_TypeD.xsd

The schema file for the HD Disc information file DISCINFO.DAT or DISCINFO.XML is expected to be named:

CmfDiscInformation.xsd

When copying an image using the schema files, ImageCopy will ensure that elements that do not belong in an XML file of the source image are removed in the copy. ImageCopy will also ensure that the element and attribute sequence is according to the schema. The same will apply to the CMU when editing an image.

If a schema violation is found then the rule "XML Schema violation" will be triggered. However, currently the rule is being triggered only for found elements that are not part of the schema.

The rule "No XML Schema document in use" will be triggered DDP/CMF XML file is being processed and the corresponding schema file is not found.

- Corrected a problem that caused duplicate file locations for the file ContentRevocation.lst when converting from Sony CMF to BDCMF.
- ImageAnalysis now checks whether more than one EVOBU points to the same CHT_PTR# entry in the Content Hash Table of an unencrypted image. Previously this check was done only for encrypted images.
- Ignore UDF read errors that occur during the UDF analysis during the pre-scanning of an image. Previously, if a read error occurred, it caused the EclipseSuite tools to abort. Now, the read error will be ignored and the analysis will continue. If the read error occurs during the media analysis, it will be reported as an unreadable sector or a file read error.

These errors refer to file system read errors that occur on recordable media containing a DDP image (DDP on Disc). On a DDP on Disc image, the EclipseSuite tools use standard file system commands to read the DDP image files. These errors are similar to the unreadable sector error that occurs when analyzing a DVD (Recordable) disc.

Ignoring the error does not mean that bad data may be copied. The error is being ignored to continue past the UDF analysis portion of the pre-scanning process. The error should be detected again during the image analysis and an

error will be triggered. The purpose of this enhancement is to allow the EclipseSuite tools analyze the complete image and discover any other errors if present rather than aborting immediately before the analysis takes place.

- Corrected a problem that was causing the error "Required element or attribute missing" to be triggered on all BDCMF images when parsing a BDCMF.CMF file.
- Corrected a problem where the MKB verification was not being performed for Type C BD images. Now the MKB is verified for both Type C & D images.
- When saving an XML file, ImageCopy will remove the unused elements and attributes before saving, but will keep them internally in memory in case they are used later on in the analysis.
- Added support for the Sony BD drive BWU-200S.

New Rules:

1. Anchor Volume Descriptor Pointer at unexpected location
2. Incorrect Encapsulation Format
3. Input longer than expected
4. Key Conversion Data not verified
5. Key Conversion Data verified
6. No XML Schema document in use
7. Title missing from Unit Key RO file
8. XML parse error
9. XML Schema violation

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Version	6.0 Beta Z6
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