To:	Eclipse BD Support Agreement & Warranty Customers
Date:	April 2014
Subject:	EclipseSuite BD 5.0 Release

Summary

This TechFlash is to notify all BD support agreement & warranty customers of the availability of the final release version of EclipseSuite BD 5.0. This version is available to all support agreement and warranty customers.

Key Features

- Enhancements to ImageArchive BD option and new BD Restore Only option feature
- Added log file naming preferences to ImageAnalysis and ImageVerify to reduce operator input.
- Enhanced Royalty Report filename preferences
- Support for Resizing BD type P dual layer images.
- Support for the new Fox Derivative CMF Configuration specifications dated on June 6th 2013
- New Device Support

ImageArchive BD option Enhancements

1. New Preference settings

- 'Validate directory name'

  If ImageCopy is restoring an image and the output directory does not match the base directory stored in the database, prompt for action.

  In many cases, the image directory is used as an image unique identifier. When a BD image is archived, its source full path is also stored in the database. When the image is restored, ImageCopy will prompt the user if the chosen output directory does not match with the original directory.

  This directory validation occurs only when the option 'Validate directory name on restore' is selected in the 'ImageArchive BD' preferences of ImageCopy.

  When using ImageVerify to compare a replica to a BDCMF image, the directory can also be validated. This function can be enabled with the option 'Validate directory name' in the ImageVerify preferences.

- "Abort on directory name mismatch" and "Display the image attributes"

  These settings are located in the ImageCopy 'ImageArchive BD' Preferences.

  - *'Abort on directory name mismatch'* is used on a restore operation to alert the user when the output image directory does not match the directory of the archive record. This is useful for customer that use the directory name as the unique identifier of an image. Specifying a different name can lead to problem later in the process if the image directory name is used in the mastering/replication process.

  - *'Display the image attributes'* will display a window prior to the start of a restore operation, which will show image attributes such as the signature, Volume ID, MID and the original directory name. This gives the user a chance to validate that they are restoring the correct image.

2. When archiving and restoring a BD image, there must be 2 public keys and one of them must be the Eclipse key.

    When an image is archived, part of the data is encrypted using an encryption key that was installed with the ImageArchive BD option. The key is unique to each company. A second key is installed for backup purposes. However, the second is a global Eclipse key.

    The keys play an important part in the archive and restore operations. In some cases, however, these keys are removed from the Windows Personal key store and archiving and restore operations may fail. The EclipseSuite tools will now confirm that both keys exist and if they do not, they will be installed from the EclipseSuite installation directory.

3. If doing an ImageArchive restore and the BDCMF data can't be found in the database, use the BDCMF that ImageCopy creates instead of aborting the whole operation.

    Early versions of the ImageArchive BD database did not include the contents of the BDCMF.CMF file. If running a recent version of ImageCopy to restore an old image that did not include this in the database, it would result in an abort. This new version of ImageCopy will, instead, use the BDCMF information created during the pre-scanning of the replica.

4. ImageCopy now prevents restoring from a BD replica if ImageCopy is being executed in a remote desktop connection.

5. When restoring from replica, ImageCopy will now create the FAI.DAT file which is required for BDCMF 1.01 and later.

6. When restoring from replica, ImageCopy will now create the PACL1.DAT file for BD50.

    Although it is optional, some tools require this file to be included.

7. Allow archiving of BDCMF images to recordable media with the 'BD Restore Only' dongle option.

    Initially, this option only allowed restore operations. Now users can also create archives.

8. New Gear libraries have been updated for better performance when creating BD and DVD archives.

9. Support incremental archives of Blu-ray images and also to Blu-ray recordable media for all image types.

10. Increase usable space for non-incremental archives to 98% from 90% for all media and formats.

    Previous versions of EclipseSuite would reserve 10% of the media's capacity for storage of miscellaneous files such as the ImageCopy logs. This would sometimes cause ImageCopy to abort an archive operation indicating that there was not enough space on the output medium if the size of the image being archived was between 90% and 100% of media's capacity.

11. Enhanced ImageCopy to check the recordable media capacity for incremental archives. If there isn't enough space on the output media, display a more meaningful error rather than the generic 'aborted' error.

12. Enhanced the ImageArchive BD option by adding registry parameters that will enable logging of information that can be used for troubleshooting when problems occur.
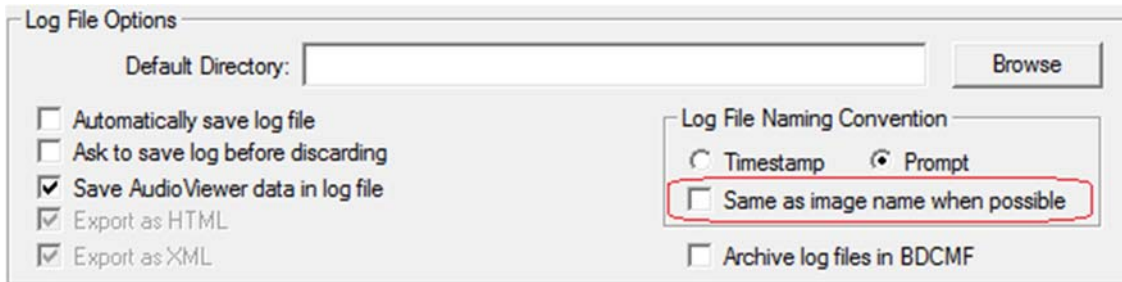
    The following registry settings must be enabled.

    HKEY_CURRENT_USER\SOFTWARE\Eclipse\ImageCopy\Settings\ArchiveDbg
    HKEY_CURRENT_USER\SOFTWARE\Eclipse\ImageCopy\Settings\ArchiveDbgDir

    Both parameters should be of type REG_SZ where ArchiveDbg is set to 'YES' to enable the debug logging and ArchiveDbgDir is the set to the directory where the logs will be created. Some or all of the following files will be generated: CPY_BD.log, DI.log, NV_BD.log, RI.log, WRTCD_BD.log and NT.log

Miscellaneous Fixes & Enhancements

13. Added log naming option "Same as image name when possible" to the Preferences in ImageAnalysis and ImageVerify. This saves the operator from the need to type a log file name, or cut and paste it from the BDCMF image directory name.

14. Added new warning rule "No Playing Time specified".

    This rule will be triggered if the PlayingTimeInfo element is not specified in the BDCMF.CMF file. In previous versions, this element was not required. In current versions, however, it is required. Previously this was reported with a general error message. In this version, this new rule will be triggered instead allowing users to change the severity to INFO or other less severe level since it does not affect the processing of images with this problem.

15. Added rule "BD+ SVM file contains all zero".

    This rule is triggered if a *.svm file in the BDSVM directory contains all zeroes. This only applies to non-Type V images after the BD+ process.

16. Added rules "BD-Video" and "BD-Data".

    These rules are triggered according to the Content Category element in the BDCMF.

17. "Invalid UDF version" rule severity changed from Warning to Error.

    Formats such as DVD-Video and Blu-ray require specific versions of the UDF File System.

18. Renamed the rule "File Allocated on the wrong layer" to "Blu-ray AACS File on layer 0" to be consistent with the other "Blu-ray AACS File on layer 1".
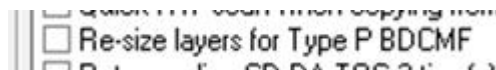
19. Added rule "Application location at layer break". This rule shows the first clip data address after the layer break of a BDCMF image.

20. Identify a BDCMF Type C as 'Type C' rather than 'Type C2' in the Info | BD-ROM tab.

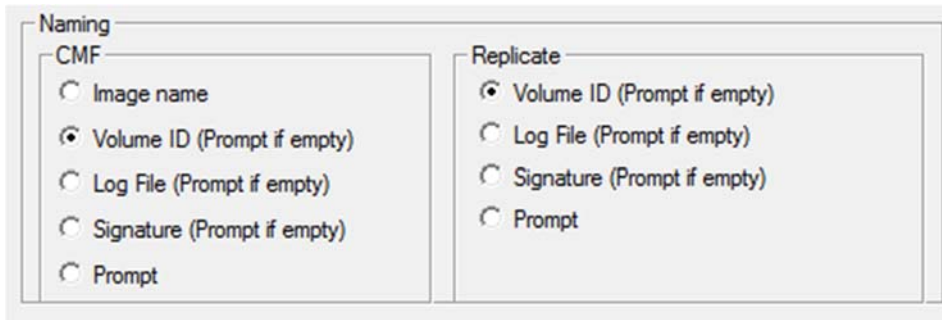21. Report an error if the UDF file system is not found in a BD image.

22. Corrected a problem in ImageVerify where the HTML log does not display the behavior file name and target rule file names correctly.

23. Support for resizing the layers of a BD Type P image via a new Behavior.

    In mastering and replication, it may sometimes be difficult to process a BD layer if it is filled to capacity. In cases where layer 0 is filled to capacity but layer 1 is not, the new behavior 'Re-size layers for Type P BDCMF' allows ImageCopy to modify the image and balance the data between layers by moving some of the data into layer 1, thereby, ending layer 0 earlier. Note that once the layers are resized, the original source image can no longer be used for comparison to the output or replicates.

24. Corrected a problem in ImageVerify where the royalty report is not generated in the central location if the Source input is a Signature File or Signature Value.

25. Enhanced Royalty Report preferences to have the options of naming the files based on the log filename or the signature.

   There is also an option to save the royalty report to a Comma Separated Value file (CVS). The following is the syntax of the registry entries to be added in order to enable this option in the EclipseSuite applications. You can copy the text into a file with a *.reg extension. Then you can double-click on the file to add the settings to the registry.

```
Windows Registry Editor Version 5.00
[HKEY_CURRENT_USER\Software\Eclipse\ImageCopy\Settings]
"SaveToCSV"="Yes"
[HKEY_CURRENT_USER\Software\Eclipse\ImageAnalysis\Settings]
"SaveToCSV"="Yes"
[HKEY_CURRENT_USER\Software\Eclipse\ImageVerify\Settings]
"SaveToCSV"="Yes"
#
```

26. Removed "Single File" checkbox from Royalty Report Preferences as it was unused.

27. ImageCopy now uses the output image name for the royalty report filename when the option "Same as image name when possible" is selected in the Preferences.

   Previously it would default to the source input image name. If the output is a recordable, then the royalty report will use the input name instead.

28. Corrected a problem in ImageCopy where the royalty report will not be created in the output folder if Verify-After-Copy is disabled.

29. Corrected a problem in ImageCopy where the royalty report file was not being generated for BD images when the behavior "Verify using Signature file" was enabled.

30. Enhanced ImageCopy so that during a Verify-After-Copy operation ImageCopy will not be using data from the Windows File Cache for comparison. This will force Windows to read the source/target images instead of using cached information.

   For performance reasons, Windows caches data to file. If this data is needed later, Windows uses the data from the cache instead of re-reading from the original source. This feature is not suitable for the processing of images since it could cause the EclipseSuite tools to not detect media errors.

31. Corrected a problem in ImageCopy where the completion dialog does not show up.

32. Signature file extension "esg" is now automatically appended to the name of a signature file if the input device in ImageVerify is a Signature File and the name does not have an extension.

33. Added index numbering to the extents for Clip AV Information under the BD ROM category in the Info tab.

The extents displayed in Info|BDROM are identified with an index number and displayed as "Index #". This is done for easy identification and for display purposes only.

34. Corrected a problem where the "Retry Scanning TOC" behavior was being triggered with BD discs.

35. ImageCopy no longer copies *.map files to the output directory if the file is not a copy protection script file.

    Some authoring applications create a *.map file in the image directory. The file is delivered along with the image. The Eclipse software uses *.map files for certain copy protections. When they encountered the *.map file created by the authoring application, it resulted in errors since the structure of the file did not match that of the *.map file used by copy protections. ImageCopy will now validate the content prior to analyzing and transferring this file.

36. Always display the rule "Dual-Layer (Opposite track path) for BD dual layer since there is no PTP.

37. Corrected a problem in ImageCopy where rules and behavior files set via the DCOM interface are not applied to the job.

38. Corrected a problem that was causing log files to fail to load.

    The ISO9660 debug information will not save the ISO tag as hex code instead of string because it is possible for the tag to have 0x1A which is interpreted as EOF, thereby, causing log parsing errors.

39. Corrected a problem where log saving errors aren't displayed.

40. Add additional space for device name display in ImageAnalysis and ImageVerify.

    The ImageAnalysis and ImageVerify boxes where the devices are listed are now wider to support longer device names.

41. Do not add a device to the list of EclipseSuite devices if no drive letter is found.

    This only applies when running in SCSI Pass-through mode. This solves a problem where the address settings in the registry entry for a device don't match the settings retrieved directly from the device.

42. Corrected a problem in ImageCopy where the OUT DDPID and OUT DDPMS Info tab sections were displayed for BD images.

43. Always save the PACL0.DAT file in 64k size packs when a valid PAC is returned but with shorted size.

    Some drives return a valid PAC but with a size less than that of a PAC structure.

44. Corrected a problem in ICheck where the **/c** command line option was not working.

45. When validating the BDCMF.CMF version number, make sure that it includes the correct number of decimal digits to the right of the decimal point.

46. Corrected a problem where the HDMV Region playback analysis is stuck in an infinite loop which eventually causes the application to crash for certain images.

47. Remove excessive debug messages that may be triggered during HDMV analysis.

48. Don't do extent size check on last extent of a SSIF file of a 3D image.

49. Do not use the SetOutputMode command to identify a 3D Blu-ray image.

    This was causing non-3D images to be incorrectly identified as 3D.

50. Changed the BD-Live, BD-3D and BD-Java flags shown under the BDCMF section of the Info | BD-ROM to be the original values from the BDCMF file.

    These flags were supposed to represent the original source image settings. Unfortunately, the EclipseSuite tools were incorrectly displaying the 'corrected' flag values.

51. Add the ability for users to select between SCSI Pass-through (SPTI) or ASPI interfaces.

The EclipseSuite tools can use ASP or SPTI to command devices for any operation. This is actually a function of the Windows operating system. ASPI was used in older Windows versions. In Windows XP, support for SCSI Pass-through Interface was added. In Windows 7, only SCSI Pass-through Interface is supported.

Most new devices will use SCSI Pass-through Interface. Therefore, if using Windows XP, users can force the EclipseSuite tools to use SCSI Pass-through Interface or ASPI via the registry.

\HKEY_LOCAL_MACHINE\Software\Eclipse\EclipseSuite
Key Name: ForcePassThrough
Type: REG_DWORD
Value: [0 = SPTI] or [1 = ASPI]
Default: 0

Note that in Windows 7, this parameter has no effect since the EclipseSuite tools will always use STPI regardless of this setting. The only exception is for Tape drives where it will still use ASPI. However, note that in Windows 7 64-bit, tape drives may not work since there is no 64bit ASPI driver support.

New Device Support

- Hitachi-LG 'HL-DT-ST BD-RE BE14NU40' (external USB) and 'HL-DT-ST BD-RE WH14NS40' as a BD readers/writers.

  While these drives are recognized as both readers and writers, Eclipse has only tested them as readers. This is not to say that they do not work as writers but it is something that has not been tested yet.

- LiteOn iHES312 is recognized as a BD reader only

- Pioneer BD-RW BDR-207 and 208 drives as BD/CD/DVD readers and writers.

New BD Rules

Rule Title	Severity	Category	Rule ID
Application location at layer break	Info	Blu-ray	1891
BD Type P Layers resized	Flag	Blu-ray	1899
BD+ SVM file contains all zero data	Error	Blu-ray	1887
BDCMF Type P TL	Info	Exclude	1900
BD-Data	Info	Exclude	1888
BD-Video	Info	Exclude	1889
ImageArchive BD base directory does not match target	Flag	Blu-ray	1893
ImageArchive base directory overridden	Flag	Blu-ray	1894
Missing BDCMF LayerInfo L1SectorSize attribute	Error	Blu-ray	1901
No Playing Time specified	Warning	Blu-ray	1903
Triple layer (Opposite Track Path)	Info	Exclude	1902

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Download Instructions:

The EclipseSuite BD 5.0 software is available from the following links. This version does not require dongle activation is you are already running a Beta version of EclipseSuite BD 5.0. However, you may need an activation code for unlimited use. Contact Eclipse Customer Support with your system code if you need an activation code.

EclipseSuite BD 5.0:

ftp://ftp.eclipsedata.com/es50bd/esbd50.zip

EclipseSuite BD 5.0 (ImageArchive with 32bit Gear Drivers)

This installation is intended for users running EclipseSuite BD w/ ImageArchive on a 32bit version of the Windows operating system.

ftp://ftp.eclipsedata.com/es50bd/esbd50a.zip

EclipseSuite BD 5.0 (ImageArchive with 64bit Gear Drivers)

This installation is intended for users running EclipseSuite BD w/ ImageArchive on a 64bit version of the Windows operating system.

ftp://ftp.eclipsedata.com/es50bd/esbd50a64.zip

The password for all zip installation files mentioned above is as follows:

Password: 2S8B39d9reL1

You may be required to login to Eclipse's FTP site. Contact Eclipse Customer Support if you don't already have the username and password.

<u>NOTE</u>: The software download links and passwords in this email are provided to you as a benefit to your Eclipse software support contact. Please do not forward or share this information outside of your company.⌗