Using the EclipseSuite ImageSignature feature

Signature support is a function of ImageIntegrity and is supported as of EclipseSuite 4.0. Use of Signatures is controlled by a Behavior in the EclipseSuite applications. To enable Signature use, check the Signature box in the General Behavior section of ImageAnalysis, ImageCopy and ImageVerify.

Behaviors	
Eile	
General Output Postgap Speed Decoder Verify	1
Description	·
Prompt for DDP on Disc action	
Prompt for Media Key Block (MKB) location	
Prompt to erase rewritable disc before copy	
Quick RW scan when copying from CD to tape	
Set CU bytes to zero	
✓ Signature	
Store LSS Keys during archive	
UDF analysis	
Write RID/SID	~
Behavior File Name:	
<u>U</u> se Default	<u>Help</u> Close

Figure 1: Enabling Signature Behavior

Once the Signature behavior is enabled, ImageCopy will calculate a signature value for all supported images. The value will be stored in a .ESG file that will be placed in the image directory. The file will be named the same as the image name, for example, an image with the name 123ABC will have a signature file 123ABC.esg.

Example of .ESG file contents:

[Signature] Version=1.00 Signature=8B661D9D86DEAC8A487FE07A94AEB9CD

[LogfileName] *123ABC*

[SignatureDisplay] *8B661D9D86DEAC8A487FE07A94AEB9CD* The signature file can also be stored in the directory of your choice by specifying a "Signature Directory" in the Preferences screen as shown in Figure 2.

Preferences
Image File Options Default Root Directory: C:\Images Browse
□ Delete image files and directory on abort or error □ Restrict browsing of files to default root directory □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
Archive and Output Options
Archive Images Temp Dir: C:\Temp Browse
🗖 Dual Output 🔲 Incremental archive 🔲 Compression
Log File Options
Default Directory: C:\LClipse\Logs Browse
I Save log in the default directory Log File Naming Convention
Automatically save log file
☐ Ask to save log before discarding
🔲 Save AudioViewer data in log file
Tape Options Signature Directory
Mark tape as blank on abort or error Browse
Completion Options
🔽 Show Status Dialog upon Completion 📃 Repeat Sounds
Successful Sound: Browse
Unsuccessful Sound: Browse
Macrovision (MV) Options
Disable log VideoTitle Naming Convention
Log only if detected C Volume ID C Always prompt C Prompt when Volume ID undefined
OK Cancel Help

Figure 2: Setting Default Signature Directory

In addition to storing the Signature value in an .esg file, the Signature will be displayed on the analysis screen of all EclipseSuite programs (Figure 3).

A ImageAnalysis - C:\Eclipse\Logs\test1.ia	×
<u>Eile Vi</u> ew <u>H</u> elp	
🔊 Media Selection 🕥 Progress 🕎 ETOC 🔺 Analysis 🎢 Books 💹 Performance 🚺 Info	
Mode Location Length Error Description Additional Info	
DDP level 2.00	
DVD Duall and (Paracite trade anth)	
ISO9660 Data	
Non-zero reserved bits in Control data region code LI: RMA=40	
number of Audio Title Sets 0	
Number of Video Title Sets	
👷 Region 1 United States & its territories, Canada	
Hegion 2 Europe, Japan, Greenland, Egypt, South Africa, M Bagion 2 Karas, Thiwan, Masay, Hang Kang, South East A	
Region 3 Rolea, Falwan, Madau, Horry Rong, South 2 ast A Begion 4 Mexico, South & Central America, Australia, New Z	
Region 5 Russia, Eastern Europe, India, Africa	
🐧 Region 6 China	
Region 8 In-flight entertainment	
SSCRST 0 Src not encrypted, tgt not encrypted	
Signature 88661D9D86DEAC8A48/FEU/A94AEB9CD	
DVD 30139h 1h Non-zero reserved bits in main data region code VIDED TS IED: BMA=40	
A DVD 3014Ch 1h Non-zero reserved bits in main data region code VIDEO TS.BUP: RMA=40	
Total Errors:0 Track: 1 of 1 Elapsed Time: 00:10:22	•
Total Warnings: 3 Location: 2250B0h of 2250B0h	<u>•</u>
Rules: [Using Default Rules]	
Behaviors: C:\Eclipse\ImageTools40\Ed.beh	
Start Stop Version: 4.0	

Figure 3: Signature Displayed during ImageAnalysis

Use	of]	ImageSi	gnature	with	ImageV	erifv
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a ImageVerify		
<u>File View H</u> elp		
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Source Inputs:	📾 Signature File	
Set DDP Location	🕰 Signature File	
Set File Location	C:\Images\123abc\123abc.esg	
Set RW Location	Signature File	
Set Partner Location		
Target <u>I</u> nputs:	File 🗸	
Set DDP Location	C:\Images\123abc	
Set File Location	C:\Images\123abc	
Set RW Location	C:\Images\123abc	
Set Partner Location		
Description:		
Source Errors: n/a	Track: Elapsed Time:	
Source Warnings: n/a	Location:	
Rules (Source): [Using L Bules (Target): [Using I	Default Rules]	
Behaviors: C:\Eclin	Jerault Rulesj	
Start St	on I V	ersion: 4.0
	52	

Figure 4: ImageVerify with Signature File verification

Signature verification takes place using ImageVerify. There are two different methods available for Signature verification. One option is to use the .Signature file that was created for the image. To use the .esg file, select "Signature File" from the ImageVerify media selection drop down menu. You then need to locate and specify the proper file location using the "Set File Location" button. Figure 4 shows the Media Selection tab settings when using the Signature File as the source for verification.

This method offers a simple and effective way to input the signature data via a file. It is necessary, however, that the signature file be available to the ImageVerify workstation. This has posed a challenge for some customers who do not want the ImageVerify workstation networked and who do not want to manage removable media associated with each job. The signature file will fit on a floppy disk.

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<u>File View H</u> elp		
🛛 🖓 Media Selection 🖉) Progress 🚺 ETOC 🕦 Analysis 🎬 Books 💹 Performance 🚺 Infi	0
Source Inputs:	 Signature Value 	
Set DDP Location	Signature Value	
Set Signature Value:	88661D9D86DEAC8A487FE07A94AEB9CD	
Set RW Location	😥 Signature Value	
Set Partner Location		
Target <u>I</u> nputs:	File 💌	
Set DDP Location	C:\Images\123abc	
Set File Location	C:\Images\123abc	
Set RW Location	C:\Images\123abc	
Set Partner Location		
Description:		
Source Errors: n/a Source Warnings: n/a Bules (Source): Il Ising F	Track: Elapsed Time: Location:	
Rules (Target): [1]sing [)efault Rules]	
Behaviors: C:\Eclip	ise\ImageTools40\Ed.beh	
<u>Start</u>	V	/ersion: 4.0

Figure 5: ImageVerify with Signature Value Entry

An alternative to the Signature File verification is "Signature Value" verification. Using this approach, the actual signature value is entered into ImageVerify. The 128 bit signature is represented in a 32 character value which can be typed or input via a barcode reader. Figure 5 shows the media selection screen set for this type of verification.

Using the Signature Value method allows the ImageVerify workstation to be totally isolated and free from the problems associated with managing removable media such as a floppy diskette.

Apart from properly selecting the Signature source, ImageVerify is operarated in the same manner as any other job. In the event of a data mismatch, the rule "Signature Comparison Error" will be triggered and displayed in ImageVerify analysis screen. This is shown in Figure 6. In the event of this condition, the results need to be thoroughly investigated.

ImageVerify - Signature Value
Eile <u>Vi</u> ew <u>H</u> elp
Media Selection Progress EDDC Analysis Books Performance Into M L Error Description Additional Info Signature comparison error Source = 88661D9D86DEAC8A487FE37A94AEB9CD Target = 88661D9D86DEAC8A487FE07A94AEB9CD Signature comparison error Source = 88661D9D86DEAC8A487FE37A94AEB9CD Target = 88661D9D86DEAC8A487FE07A94AEB9CD Signature comparison error Source = 88661D9D86DEAC8A487FE37A94AEB9CD Target = 88661D9D86DEAC8A487FE07A94AEB9CD Source Target
Verify Errors: 1 Track: 1 of 1 Elapsed Time: 00:08:51 Verify Warnings: 0 Location: Rules (Source): [Using Default Rules] Rules (Target): [Using Default Rules] Behaviors: C:\Eclipse\ImageTools40\Ed.beh Start Stop Version:

Figure 6: Signature Comparison Error