
Leonard Lopate Show
WNYC
LLSH Box #040
Leonard Lopate Show
2004/09/13 to 2004/10/20
WNYC
LLSH Box #041
Leonard Lopate Show
2004/10/21 to 2004/11/29
WNYC
LLSH Box #042
Leonard Lopate Show
2004/11/30 to 2005/01/07
WNYC
LLSH Box #043
Leonard Lopate Show
2005/01/08 to 2005/02/18
WNYC
LLSH Box #044
Leonard Lopate Show
2005/02/17 to 2005/03/28
WNYC
LLSH CD Box #045
Leonard Lopate Show
2005/03/29 to 2005/05/05
WNYC
LLSH CD Box #046
Leonard Lopate Show
WNYC
LLSH CD Box #047
Leonard Lopate Show
WNYC
LLSH CD Box #053
Leonard Lopate Show
WNYC
LLSH CD Box #054
Leonard Lopate Show
2006/03/13 to 2006/04/20
WNYC
LLSH CD Box #055
Leonard Lopate Show
WNYC
LLSH CD Box #056
Leonard Lopate Show
2006/06/01 to 2006/07/11
WNYC
LLSH CD Box #057
Leonard Lopate Show
WNYC
LLSH CD Box #058
Leonard Lopate Show
2006/08/22 to 2006/09/
WNYC

http://johnpassmore.net/wnyc/bad_audio_sample.mp3

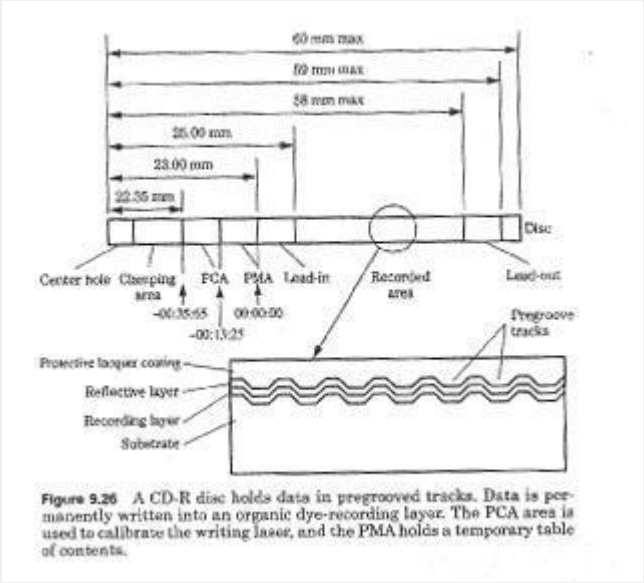


Figure 9.26 A CD-R disc holds data in pregrooved tracks. Data is permanently written into an organic dye-recording layer. The PCA area is used to calibrate the writing laser, and the PMA holds a temporary table of contents.

The CD-DA

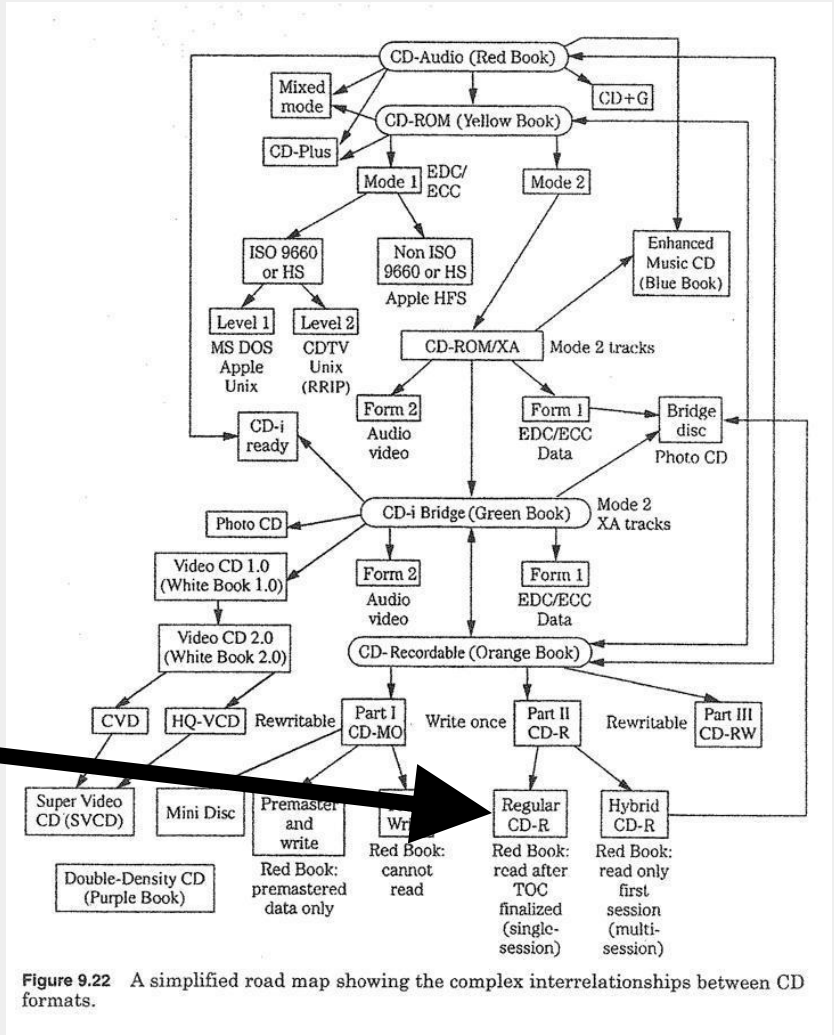
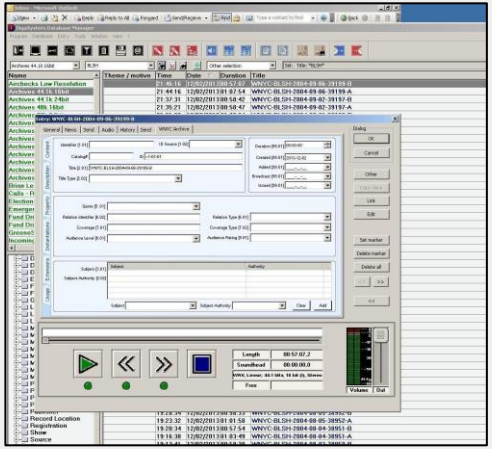


Figure 9.22 A simplified road map showing the complex interrelationships between CD formats.


RipStation
MF DIGITAL
MF DIGITAL
Certified Publishing Partner
MF Digital
Authorized Reseller

YES – 44.1/16 WAV



MediaInfo XML > PBCORE XML

YES – 44.1/16 WAV

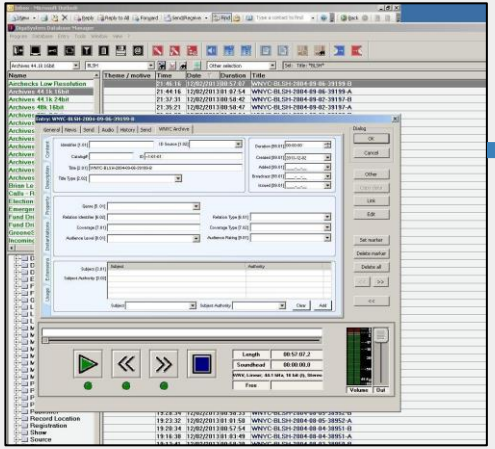
Show 1 essence track

Instantiation

Format ID (David Title):	WNYC-BLSH-2007-09-28-52941-A
Date (Created):	2014-02-21
Date (broadcast):	2007-09-28
Format:	BWF
Format Location:	DAVID
Media Type:	Sound
Generation:	Master: preservation
Duration:	00:54:00
Data Rate:	1411201
Tracks:	1 audio track
Channel Configuration:	2

Hide 1 essence track

Identifier	WNYC-BLSH-2007-09-28-52941-A
Standard	PCM
Encoding	Captured from MFDigital Ripstation
Data Rate	1411200
Duration	00:54:00.000
Bit Depth	16 bit
Sampling Rate	44.1 kHz



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595 MiB
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MediaInfo XML > PBCORE XML

YES – 44.1/16 WAV

Show 1 essence track

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Encoding	Captured from MFDigital Ripstation
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Duration	00:54:00.000
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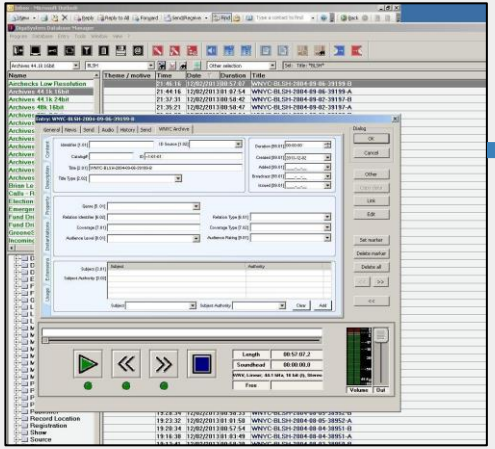
Sampling Rate	44.1 kHz



MediaInfo XML > PBCORE XML

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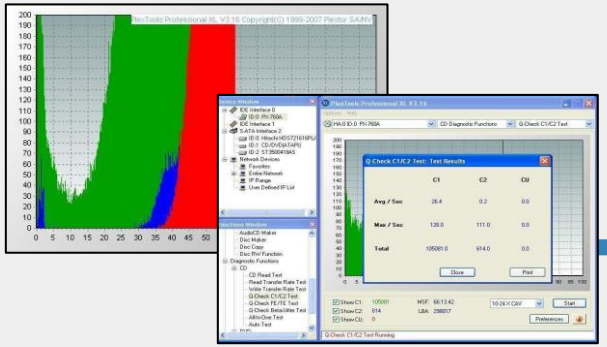
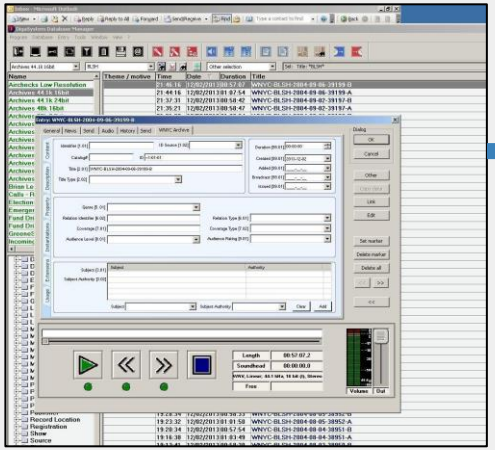
YES – 44.1/16 WAV

NO



YES – 44.1/16 WAV



MediaInfo XML > PBCORE XML

Show 1 essence track

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Data Rate	1411200
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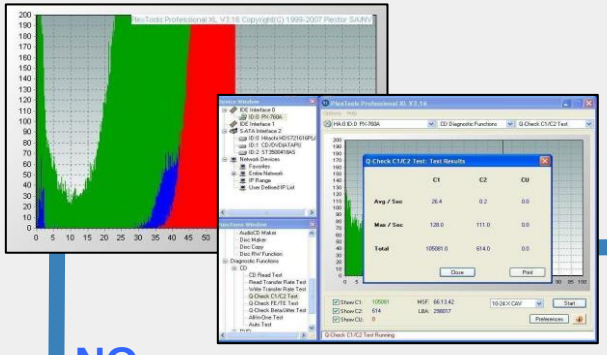
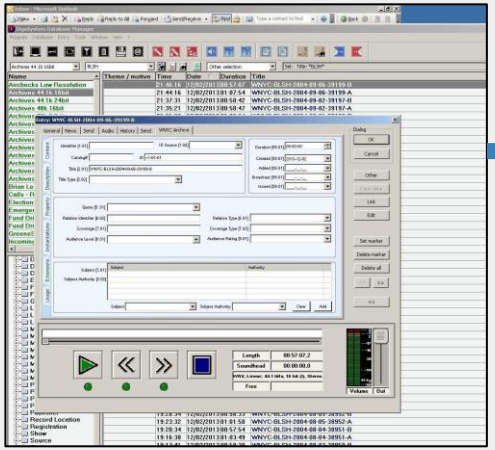


YES – 44.1/16 WAV



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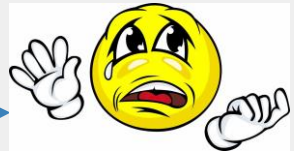

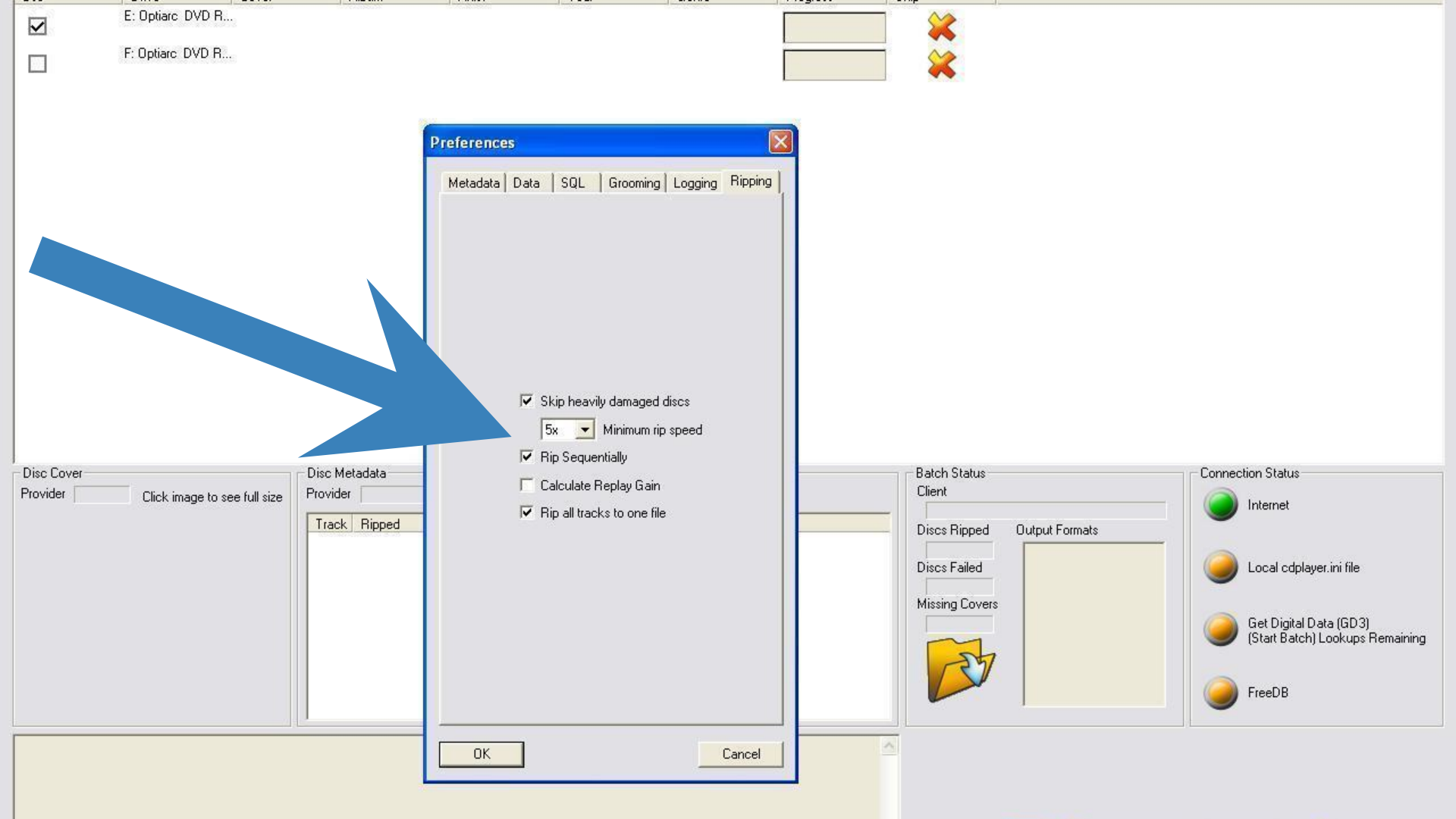
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F: Optiarc DVD R...
Preferences
Metadata
Data
SQL
Grooming
Logging
Ripping
Skip heavily damaged discs
5x
Minimum rip speed
Rip Sequentially
Calculate Replay Gain
Rip all tracks to one file
OK
Cancel
Disc Cover
Provider
Click image to see full size
Disc Metadata
Provider
Track
Ripped
Batch Status
Client
Discs Ripped
Discs Failed
Missing Covers
Output Formats
Connection Status
Internet
Local cdplayer.ini file
Get Digital Data (GD3)
(Start Batch) Lookups Remaining
FreeDB

XSL STYLESHEETS
https://github.com/johnnypass/cavafy-xsl-stylesheets

MEDIAINFO CLI
http://mediaarea.net/en/MediaInfo

PBCORE MEDIA CMS
https://github.com/mlc/wnetpbcore

PLEXTOOLS UTILITY
http://www.plextoramericas.com/

DAVID MEDIA SYSTEMS
http://www.davidsystems.com/

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Data Rate	1411200
Duration	00:54:00.000
Bit Depth	16 bit
Sampling Rate	44.1 kHz

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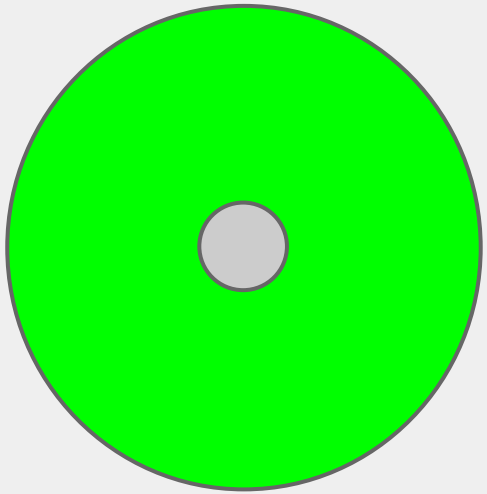
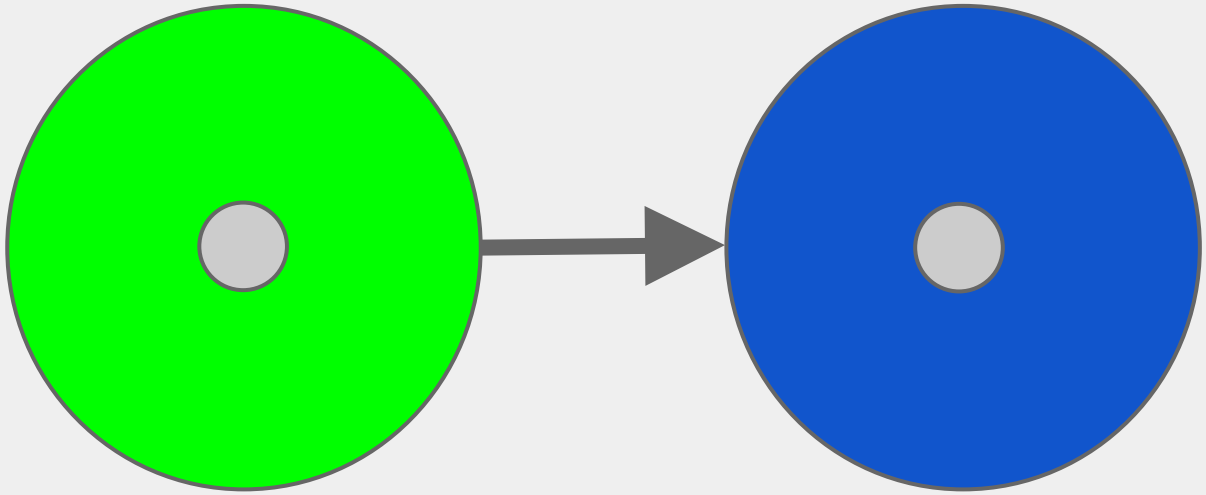
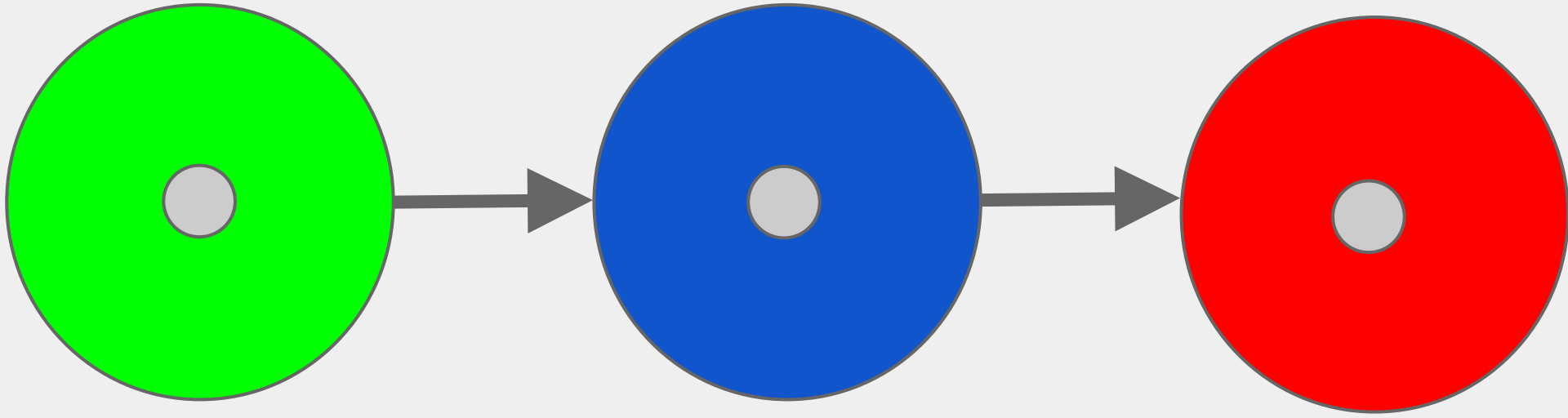


The Good



The Good

The Bad



The Good

The Bad

The Ugly

IASA TC-04 8.1.9 Errors, Life Expectancy and Testing and Analysis

A comprehensive testing regime allows for best possible planning of preservation strategies by acting on the known, objective and measurable parameters that digital archiving make possible.

Plextools

The results of the tests may differ from system to system, and should always be viewed in context, like test environment, used hardware, software, media, etc.

C1(BLER) - It represents correctable random error and is generally not used as an indicator of failure or lost information.

C2 (E22) - The second tier of error correction. Correctable errors but require more robust methods of correction.

CU (E32) - Uncorrectable errors that are present after C2 error correction. cannot be played at all because they contain data that cannot be recovered.

IASA TC-04
8.1.9 Errors, Life Expectancy and Testing and Analysis

BLER average < 10

BLER peak < 220

E 22 (correctable errors) 0

E 32 (uncorrectable errors 0

- 2398 silver Mitsui Silver CD-Rs ripped (CDs were created from 2001 - 2003)

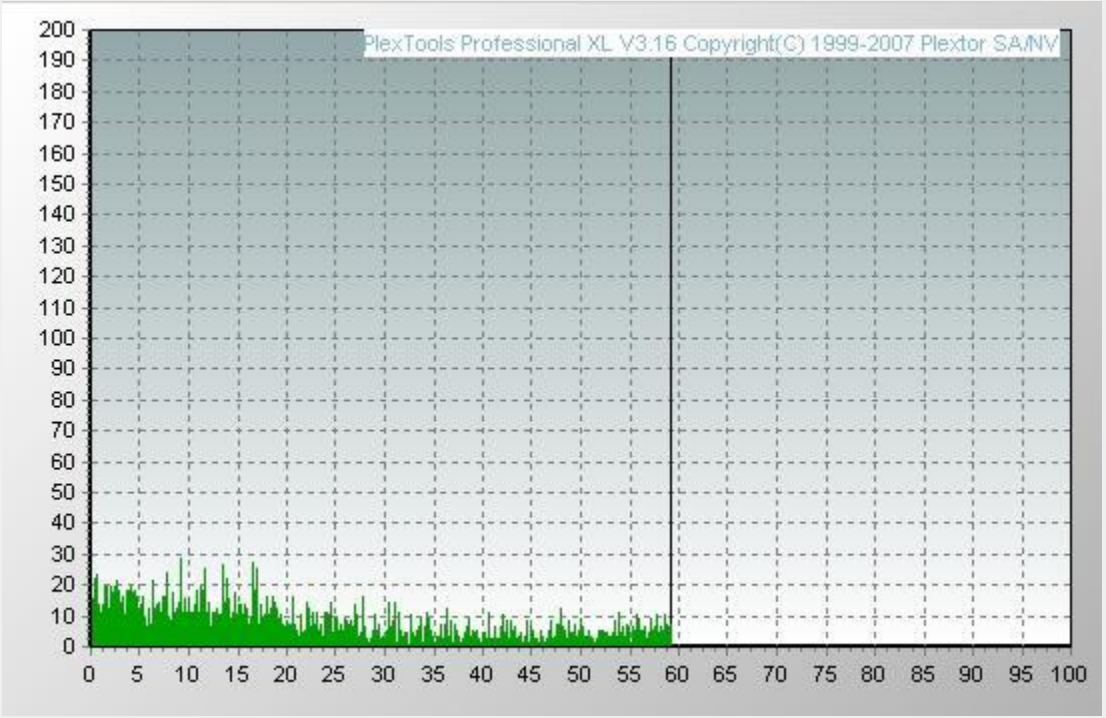
- Tested 20% of the silver CDs randomly using Plextools, measuring for BLER, E22, E32 errors

IASA TC-04
8.1.9 Errors, Life Expectancy and Testing and Analysis

BLER average < 10

34% had a BLER average < 10

66% had BLER average > 10


PlexTools Professional XL V3.16 Copyright(C) 1999-2007 Plextor SA/NV
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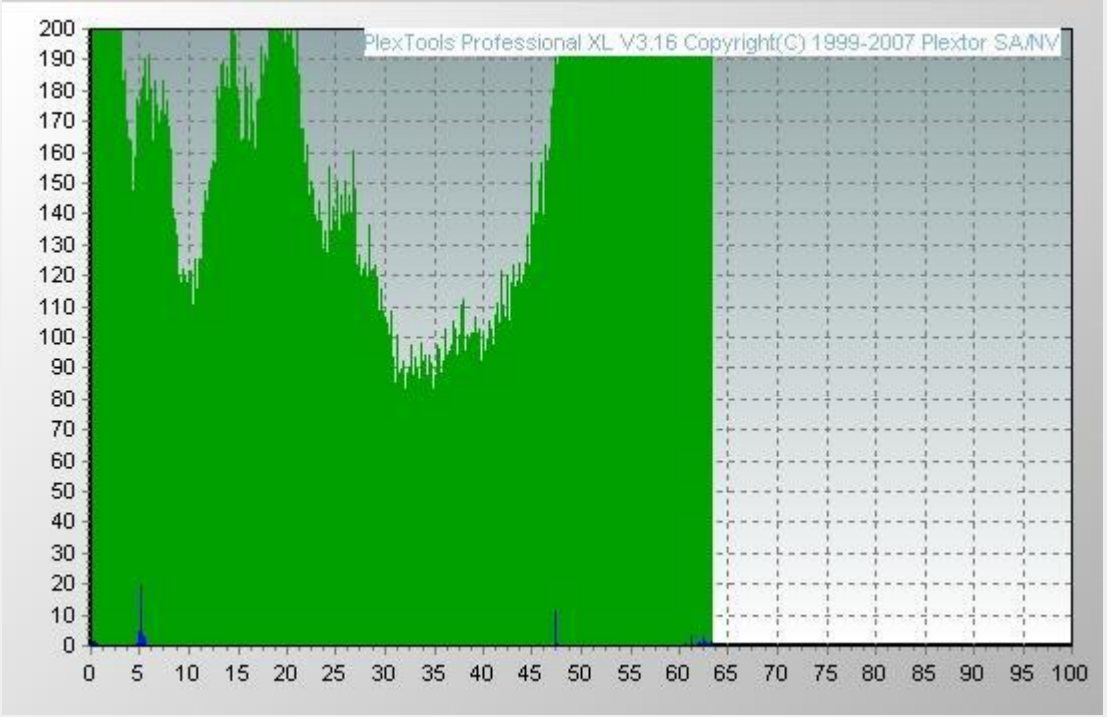
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100


PlexTools Professional XL V3.16 Copyright(C) 1999-2007 Plextor SA/NV
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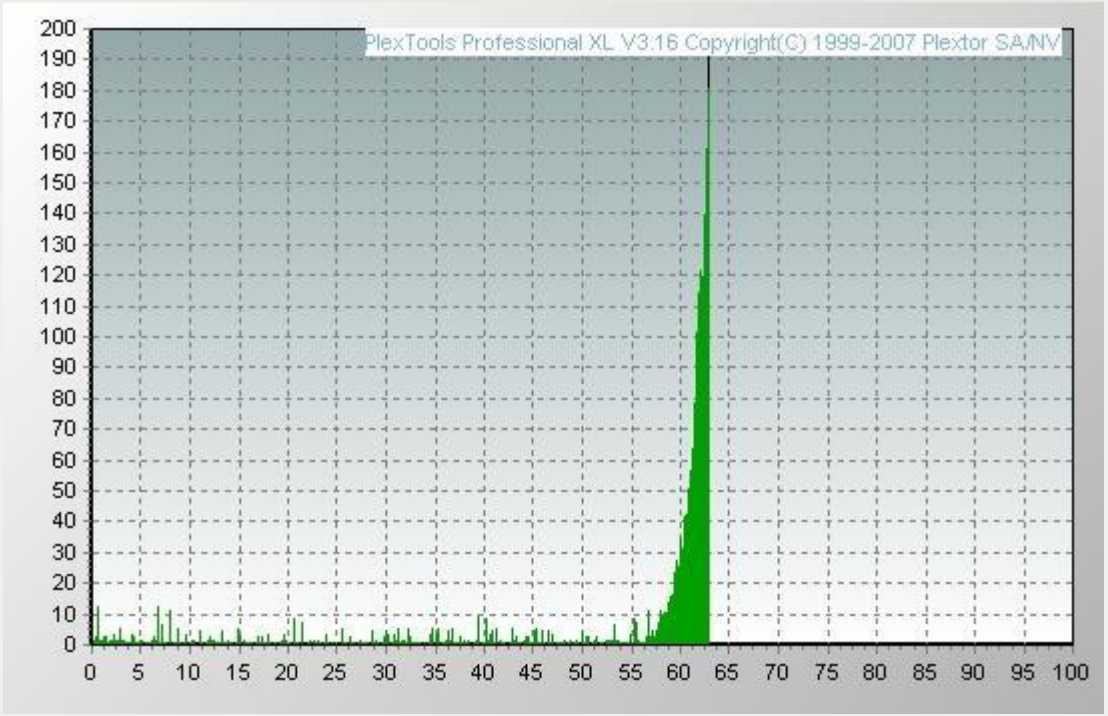
20
10
0
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

IASA TC-04
8.1.9 Errors, Life Expectancy and Testing and Analysis

BLER peak < 220

33% had a BLER peak < 220

67% had BLER peak > 220


PlexTools Professional XL V3.16 Copyright(C) 1999-2007 Plextor SA/NV
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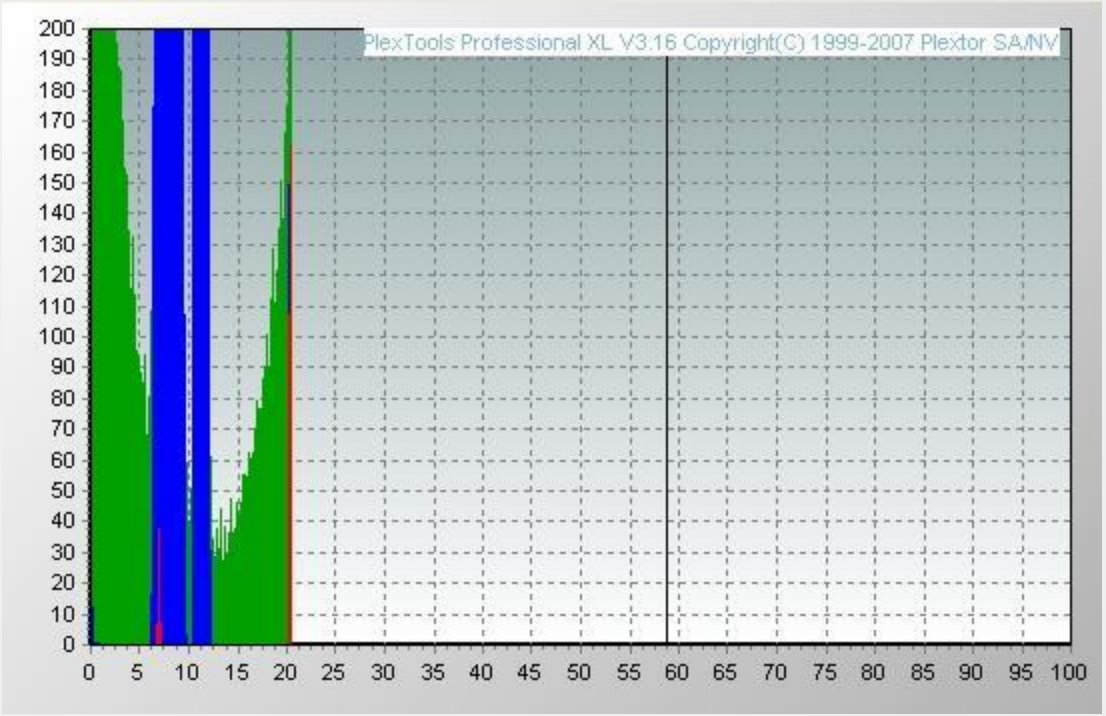
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

IASA TC-04
8.1.9 Errors, Life Expectancy and Testing and Analysis

E 22 (correctable errors) 0

54% had 0 E22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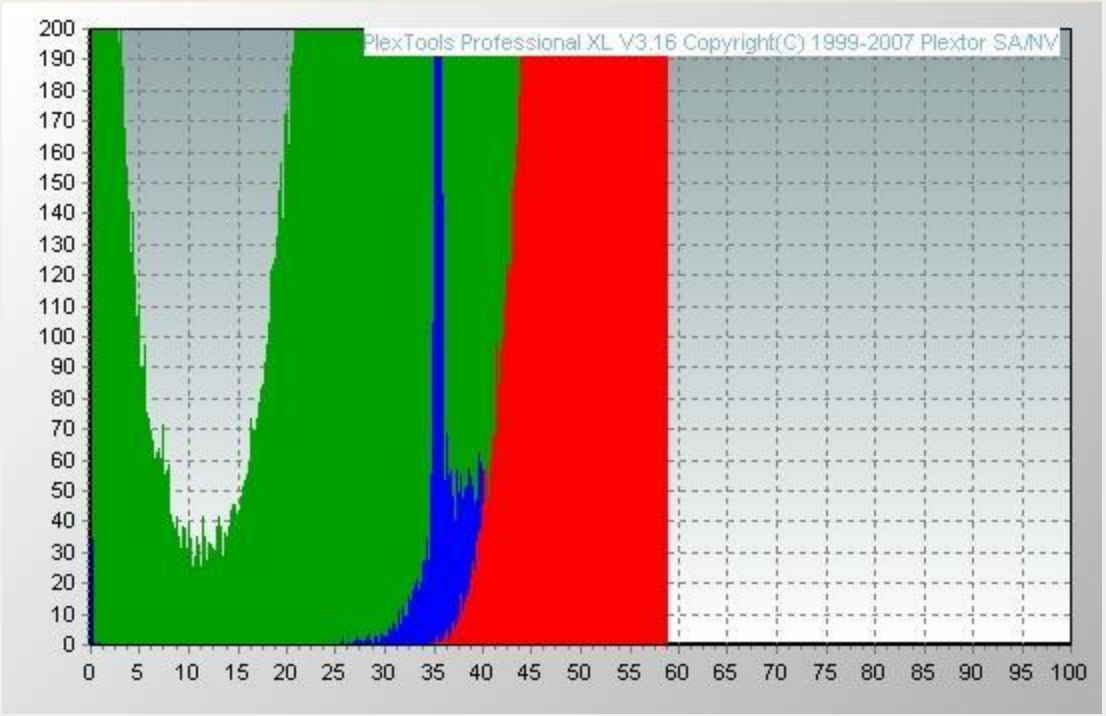
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

IASA TC-04
8.1.9 Errors, Life Expectancy and Testing and Analysis

E 32 (uncorrectable errors) 0

45% had 0 E 32


PlexTools Professional XL V3.16 Copyright(C) 1999-2007 Plextor SA/NV
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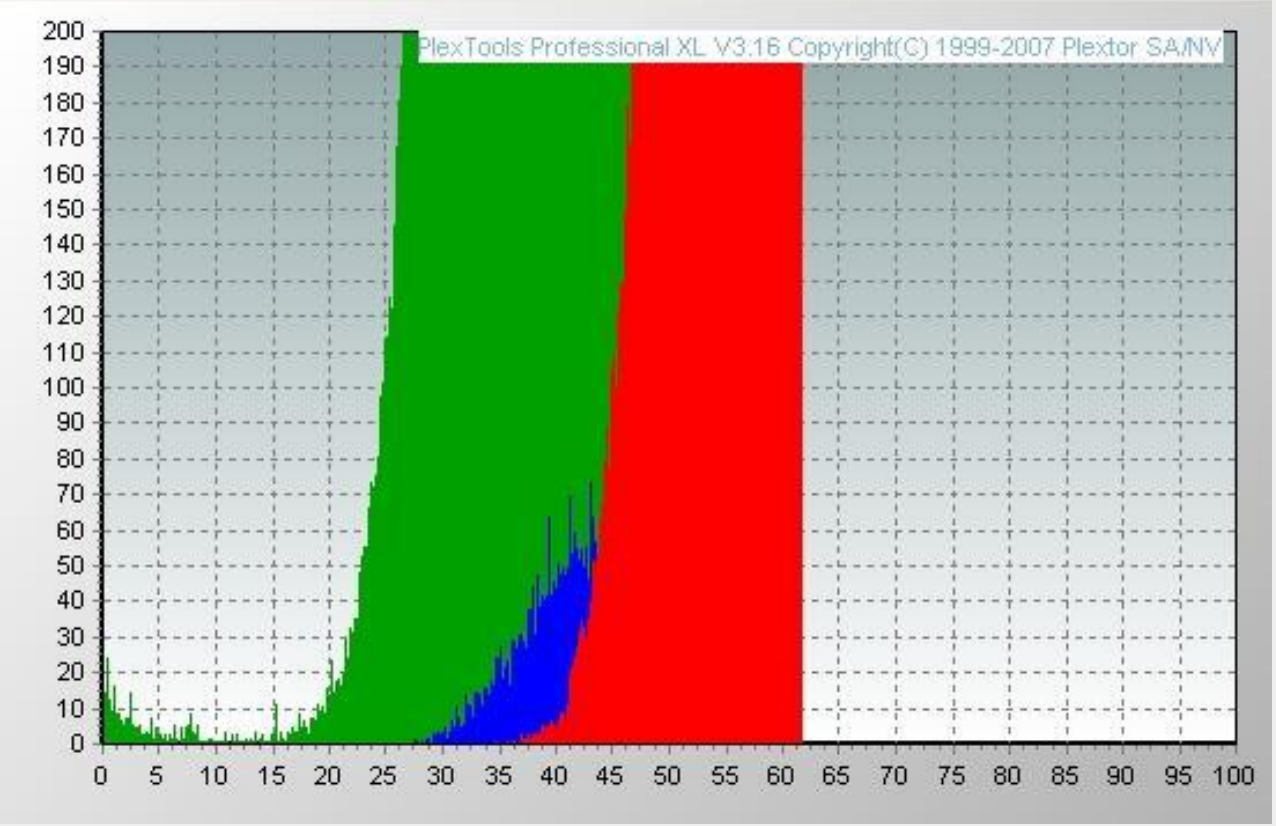
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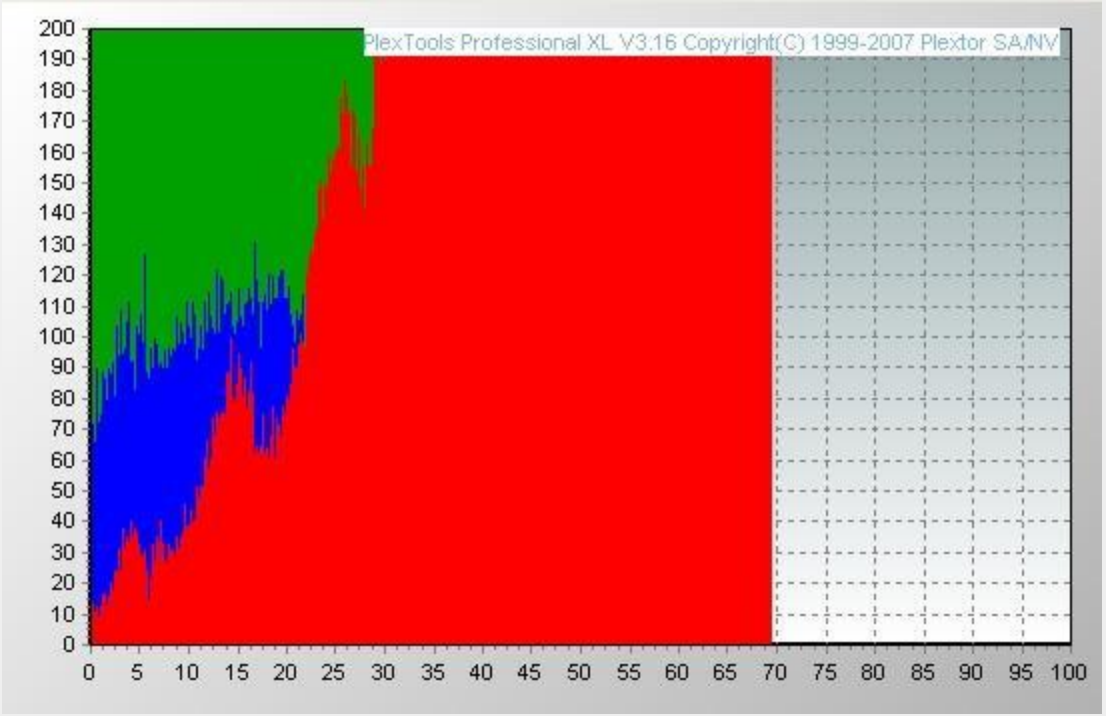
PlexTools Professional XL V3.16 Copyright(C) 1999-2007 Plextor SA/NV
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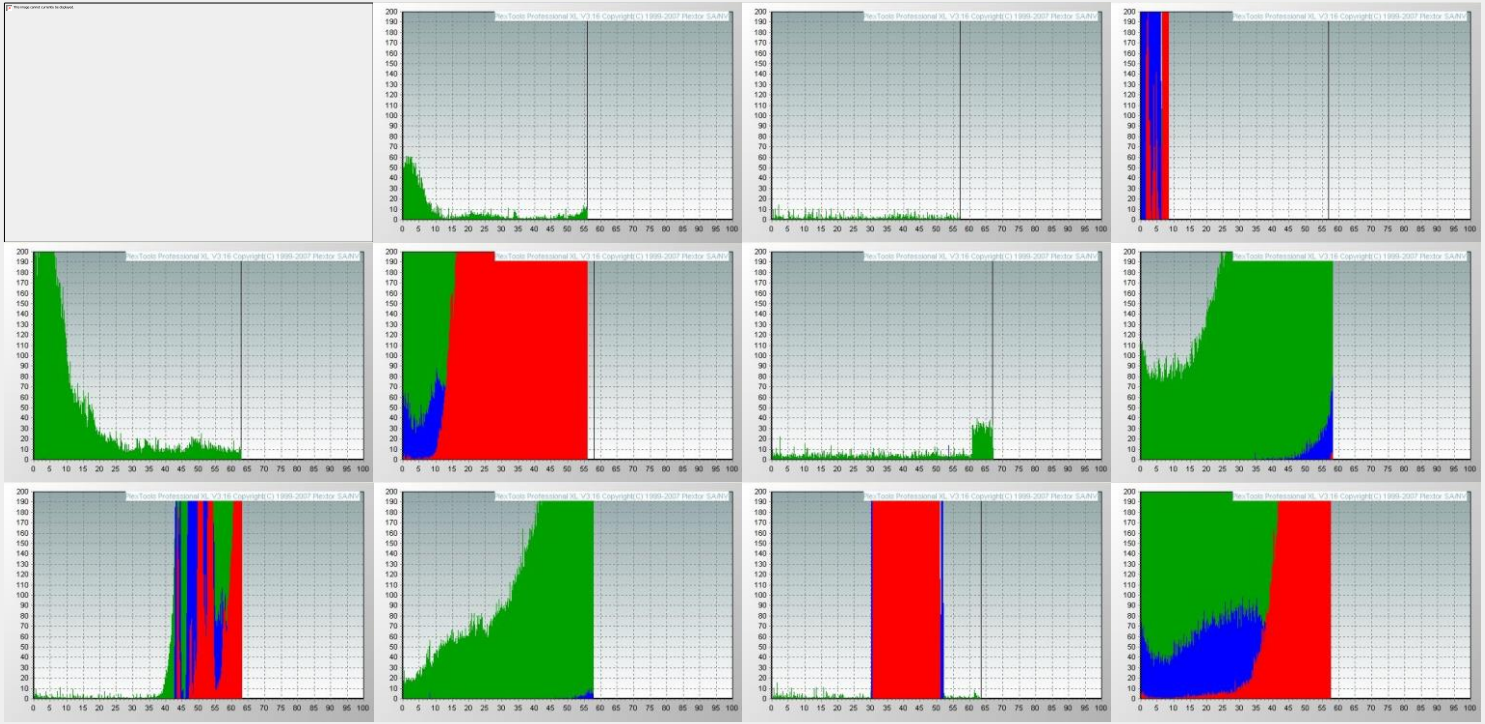
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

No discs passed the IASAs specifications for errors, even though the test results varied widely.



TAKEAWAYS

1. CD-DA don’t last long and decay appears largely unpredictable.

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2. It is virtually impossible to know why CD-DAs go bad.

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1. CD-DA don’t last long and decay appears largely unpredictable.
2. It is virtually impossible to know why CD-DAs go bad.

3. Accelerating aging tests only tell a part of the story.

4. New solutions for comprehensive testing and ripping of CD-DAs into archives.

Thanks!
questions?
jpassmore@nypublicradio.org