TN 95

Interactive Media Systems
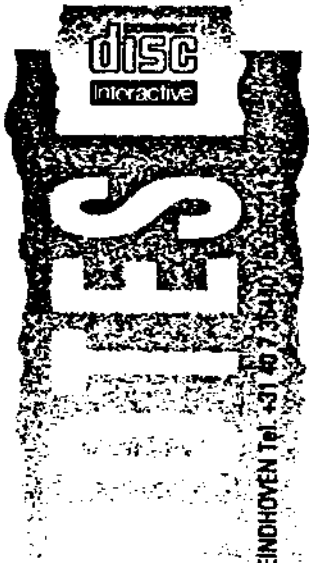
CD-I

TSA APPLICATION NOTES   NR. TSA-005 | July-24-1992
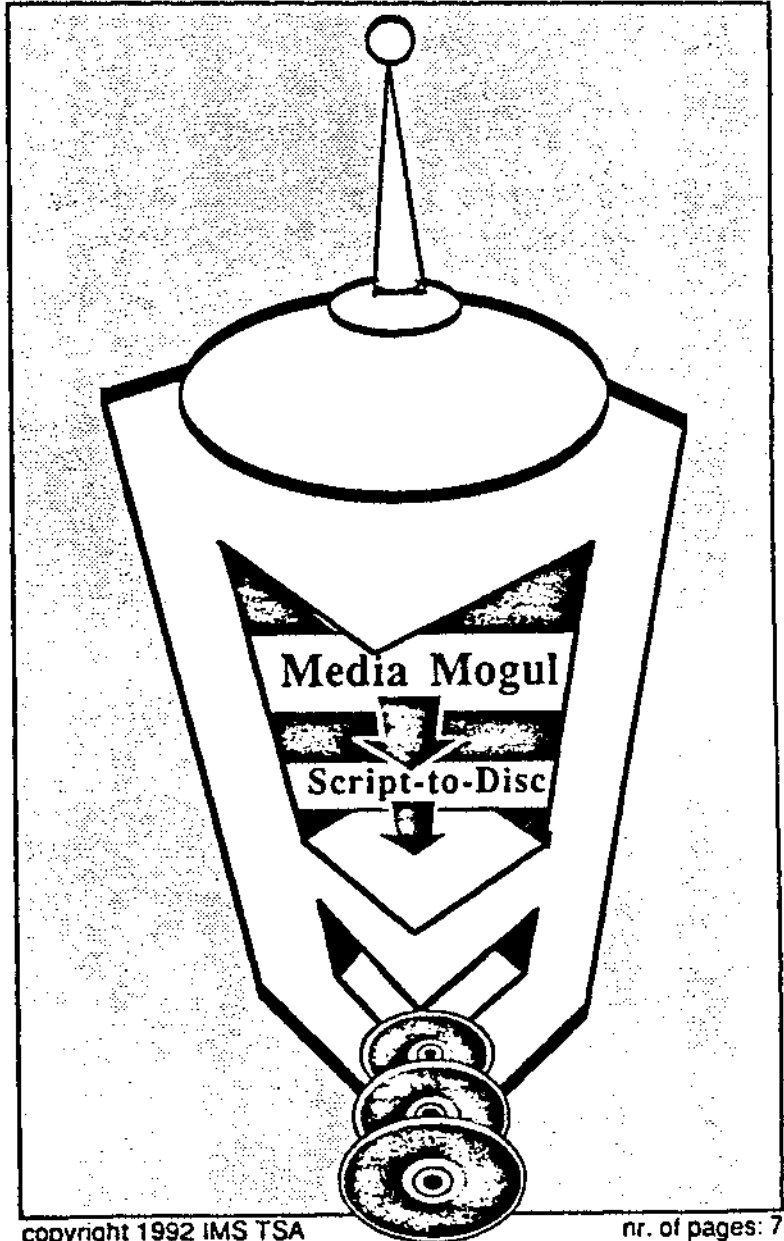
Media Mogul Script-to-Disc

The Media Mogul authoring software requires the Script-to-Disc software to create CD-I images to be tested out on an emulator. This Note describes two options for Script-to-Disc: running it in-house or at Philips IMS in Eindhoven

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Media Mogul
Script-to-Disc

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PHILIPS

1. introduction

CD-I titles created with Media Mogul (MM) software must be converted into a CD-I disc image file with the Script-to-Disc (S2D) software. The created image can be tested on an emulator system for final verification before pressing CD's.

There are two options for running S2D sessions:

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one can acquire the necessary hard- and software and execute the run in-house.

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one can use the S2D facility at IMS TSA in Eindhoven.

We hope third party facilities will start offering this service as well.

2. running S2D in-house

To run S2D in-house certain hardware and software is required.

On the software side one will need

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Media Mogul software

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S2D software

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A suitable text editor (edt, memacs, vi)

On the hardware side one will need

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Sufficient Hard disk space

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A host sytem to run the S2D software

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A console terminal (like a VT100) or some terminal emulation programme running on a host (like: Red Ryder or White Knight on a MacIntosh computer, procomm or telix on a PC, or tipcu on a Sun)

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The MM hard disk with the scripts and assets (at SCSI id 1)

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Additional goodies like cables, terminators, keyboards and mice

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If one wants to test out the image (and one usually does, of course) the following is needed:
. an emulator
. a CD-I player

Optional are

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A WORM system to burn WORM's from the tested image

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A tape drive (+ software to control the tape unit) to store the image for backUp and as delivery medium to the manufacturing plant.   -

Please Note:

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It is stated that one needs sufficient Hard Disk space:
There's space needed to: store the S2D software, the generated real time files and (!) your disc image. Therefore your assets will be stored on this disk twice. So if your image will require more then half of the size of a currently connected hard disk, you'll need a second hard disk for the S2D run.

Furthermore your disc image will be substantially greater then the amount of disk space taken by the assets on your Mogul disc: e.g. a certain 40 M Mogul application turned out to be 228 M of disc image. This is because Real Time Files spread out the information, so that it is loaded just before the presentation.

The actual final size of the image depends on the nature of scripts (timing, audio quality and whether or not Compacted or Non-Compacted RTF are used).

Thus one will need disc space for the MM assets and scripts (on h0) + space for the S2D software + twice the space of your final disc image (on h2 and maybe h3).

In the above example this would mean; 44 M for the Mogul disc, 2 M for the S2D software, and 2 * 228 M for the S2D run:
total: 502 M (divided over 2 or maybe 3 HD's)

Please Note:

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It is stated that one needs a host to run the S2D software:
Currently 2 options are available. The choice for a certain platform depends on the setUp of the CD-I facility, the required speed for the S2D run and the maximum nr. of Scripts to be processed.

S2D can be run:
1.
on an emulator: this will allow to create images for projects up to +1400 scripts in an average speed. The above example: a 40 M Mogul application processed into an image of 228 M took about 3 hours

One can use a stand alone emulator or one connected to a host (Macintosh, PC, Sun; if this emulator is also connected to an OS-9 formatted HD).

2.
On a CD-I player with at least 5 Megabyte RAM: this will allow to create images for projects up to + 4000 scripts in a far lower then average speed. For example a project consisting out of 3500 scripts took about 8 hours to run through the first pass of S2D; a process that took about 30 minutes on an emulator.

One could use a CD-I player with 2 Megabyte RAM; however this is not recommended since it will have a far lower then average speed and will only allow to process projects up to + 1400 Scripts.

Currently there's no solution available for projects with over 4000 separate Scripts. However at Philips IMS TSA in Eindhoven there's a pre-release S2D software version running on Sun3/4 workstations that will allow for S2D session on larger then + 4000 scripts projects at high speed (approx 4 times the speed of the emulator set-up).

If a project draws near or overshoots the 4000 scripts one is advised to make use of the Script-to-Disc facility at IMS TSA in Eindhoven to make an image. The procedure is described in chapter 3 of this Note.

Philips IMS offers the following recommended products for Media Mogul and S2D:

MM Software
22SW1620/11 S2D for Media Mogul 1.1
22SW1662/00 Media Mogul 1.1

Player based Tools
.CDI 115/00 SCSI Emulator w 650 Mb HD for MediaMogul incl S2D
.CDI 135/00 SCSI Emulator w Yamaha PDS interface and 650 Mb HD for MediaMogul incl S2D
22ER9413/00 SCSI HD 600 Mb
22ER9414/00 SCSI HD 1.2 Gb in cabinet
22ER9406/00 Combined Ethernet and SCSI board for CD-I 180 series with NFS software
.CDI 605 authoring player

optional tools
.22ER9402/00 1/4" Cartridge Tape Drive (150 Mb)
.22ER9403/00 !50 Mb Tape Cartridge for Tape Drive .(22ER9402/00)
.22ER9408/00 Exabyte tape drive 2.2 Gb
.22ER9410/00 Terminal keyboard for Cd-I 180 series
.YOD 201/00 Recordable Optical disc for Yamaha PDS System
.YPE 102/00 Yamaha PDS Encoding Unit
.YPE 201/00 Yamaha PD Recording Unit
.CDD521 CD Recorder, available later this year

Philips offers suitable hardware/software solutions matching your current studio set-up as well. For more information please contact your local IMS Organization.

3. Script-to-Disc fascility at IMS TSA

IMS TSA offers the facility to CD-I developers to run S2D sessions for their projects. Before contacting Eindhoven, please check with your local IMS Organization if other facilities are operational locally.

The costs are:
-       fl 1000,- for a S2D run, some simple debugging and 1 final run (max 1 day of work)
-       further debugging and runs at fl 1000,-- a day
-       fl 500,- for the burning of a WORM disc.

Typical cost for an average project (consisting out of 2 run's and some debugging and the burning of a WORM) will be 1500,--

The following procedure has been specified
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the application must be built with the latest version of MM and the analyser (current versions as of 7/22/1992: Media Mogul1.1.1; analyser : 1.1.1. If one has doubts on the status of the version please contact Philips IMS TSA in Eindhoven.
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One has to deliver the Media Mogul Hard disk with the assets and scripts + a back up on tape (Exabyte or streamer tape) + a project description (flowchart and printout of all scripts clearly communicating the structure and working of the application).
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One has to deliver information on the size of the disk image   (or the current size of your MM application; along with the amount of compacted/non-compacted files); as well as the number of scripts and the name of the root script.
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The application (all scripts) must have passed the analyser giving the latest update safety factor for compacted files being inserted in the /h0/Mogul.config file on your MM hard disk. Current value : 156 (as of 7/22/1992). If one has doubts on the current values, please contact Philips IMS TSA in Eindhoven.
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One has to book time, 10 working days in advance of the run;
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Results (working disc images) can be expected in (through-put period):
. 5 working days for a simple applications
. 10 working days for a complex application (e.g. using Mogul plug-ins or external commands; etc.).
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During the through-put period an employee of the CD-I developer, who is familiar with the project should be available for assistance with the runs. Please Note that the presence of the mentioned employee is not required during the actual run of

the S2D software: these runs can take take up a considerable amount of time depending on the nature of the application

Please Note:

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MM's analyser is not a100% secure checking device. Therefore S2D is not a routine procedure. However, usually it is possible, with a few simple adaptations in the Script, to create a working disc image (from a MM application that passed the analyser; bearing in mind the latest safety factor).

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It is strongly requested to name your directories in "UPPER CASE" and your files in "lower case". Please be consistent on this naming. The CD-I and the emulator platform will not complain. The Sun platform will complain if one names the same file in lower and UPPER case, throughout the application.

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External routines should be written according to information in the latest version of the Media Mogul User Notes and information in the MM manual (current versions as of 7/22/1992: MM Manual: May 15 1992, revision B, document partNumber OPT100; User Notes: latest Update May 15 1992). If one has doubts on the version numbers, please contact Philips IMS TSA in Eindhoven.

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The sizes of partial images must be in multiple factors of 4 pixels

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The analyser does not check whether or not partial images can be pasted on the desired location within the currrent screen; S2D will complain if they can't; please be sure that they can.

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Cursor_pos can be used now (as of version 1.1.1 of S2D)

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There can be sufficient differences in seek times witnessed in the MM application and in the final Disc image. This is especially the case for projects that deal with a lot of scripts (upwards of 10 seconds seek time on the disc image, for projects with some 3500 scripts). This is expected to be partially solved in the up-coming S2D release.

4. Summary
This application Note describes the two options for the S2D session to create CD-

I disc images from MM projects. It describes a short overview of the necessary hard and software.

It describes the Script-to-Disc facility at IMS TSA and the proper procedure to make use of this service.

For more information on the available products please contact your local Philips organization.

More information on hardware- and software requirements, hardware connections, the S2D run and the emulation of a disc image can be found in IMS technote #6: Emulator and emulations.

For more information on the Script-to-Disc facility at IMS TSA please contact:

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