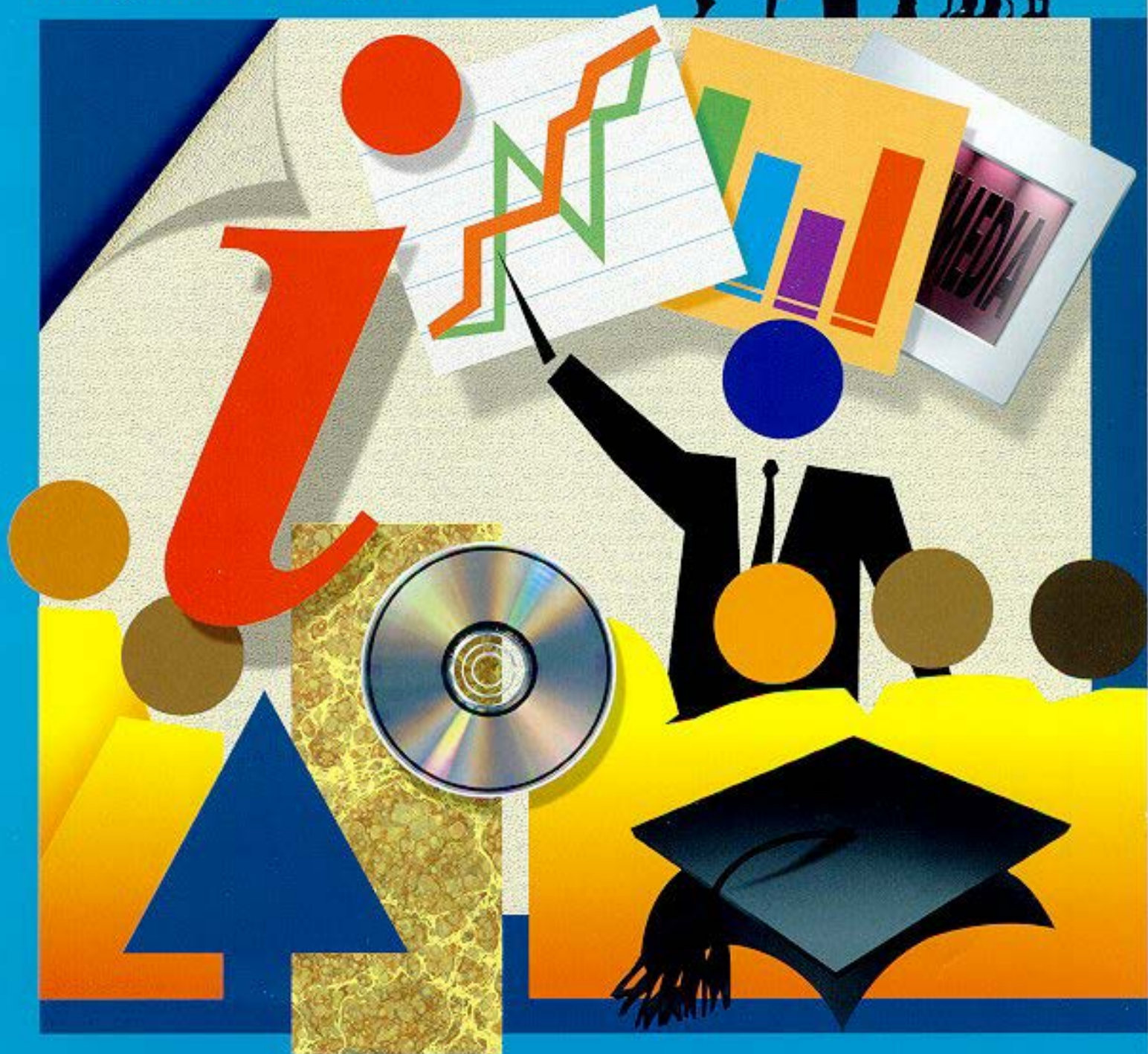


Philips Media

Authoring Tools

**Compact Disc Interactive
using MediaMogul®**



PHILIPS

CD-i, already

a major force in the home entertainment market, is set to dominate the

Professional

Communications business where getting the message across is the key to success. CD-i will win your audience with the instant appeal of video, the simplicity of audio Compact Disc and the interactive power of a computer. And most surprisingly, the production systems for CD-i start at an affordable price.

What is CD-i?

CD-i stands for Compact Disc Interactive - a new medium invented by Philips and Sony which allows TV-quality sound and visuals to be delivered on a Compact Disc. It combines the realism of video presentation with the power of a computer to create interactivity: enabling the user to interact with the program and determine its flow and content. The CD-i disc is both inexpensive to produce and robust in use: the CD-i player is simple to operate, resembling a CD-Audio player, except that it connects to a normal TV set. Philips even has a range of portable CD-i players which require no additional equipment - just the thing for the roving salesman, on-the-job training support or checking out the latest action game without disturbing the kids!

CD-i has major impact in both consumer entertainment and professional communications. Your opportunity is to lead the changeover



Use the creative power of your PC or MAC to capture your visuals and audio



Convert your pictures and sound into CD-i format



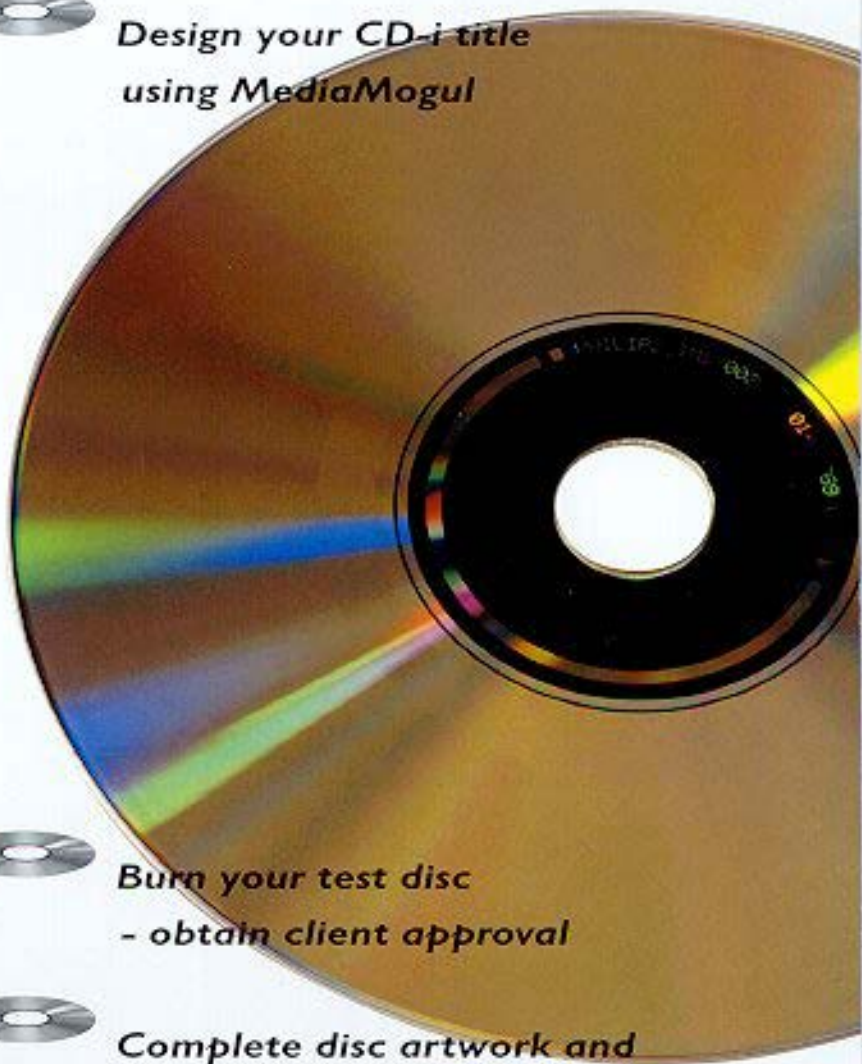
Design your CD-i title using MediaMogul



Burn your test disc - obtain client approval



Complete disc artwork and send for mass duplication



from A/V, videotape, slide and IV productions with this new and exciting medium, converting existing markets and reaching new business areas that can take advantage of the appeal, convenience and added value of CD-i.

How are CD-i titles made?

CD-i is simply a marriage of existing computer and video production techniques. The title design is storyboarded in the traditional manner, with the exception that the programme flow can be dictated by

the user at the time of presentation. This allows incorporation of

features such as Q & A sessions, user selections and browsing, into the title design. With the storyboard completed the audio and visuals are prepared.

The Macintosh™ computer is a good platform for this task, but it is also possible on a PC.

Examples of how to acquire audio, graphics and video on a Mac are given below. The production assets are converted to the CD-i format and assembled into a set of sequences according to the storyboard. After checking and verification, the CD-i

CHECKLIST

CD-i PRODUCTION



Rough out concept



Storyboard title



Shoot and encode video



Commission music



Design graphics



Record narrations, sound FX



Convert production assets



Complete interactive design



Verify title look and feel with client



Contact bureau for test WORM



Present to client for final approval



Send WORM to plant for duplication

title may be taken to a bureau where it can be burnt onto a recordable CD. (A so-called WORM disc).

This disc is playable on any CD-i player and can therefore be used to confirm the title design with the client. The WORM disc is then sent to a CD-i plant for pressing, at a unit cost which can be less than that of videotape duplication.



What equipment and skills will I need?

The acquisition and conversion of assets can be carried out using a Macintosh computer equipped as follows:

Graphics Production:

Scanner, Tablet, Photo CD Drive with Adobe Photoshop™ software

Animations:

Macromind Director™ software

Sound:

AudioMedia™ Audio digitiser card with Sound Designer™ software

Digital Video:

Either delivered by a bureau or in-house using the Philips real-time encoder.

Conversion is carried out using Philips CD-i Conversion Utilities

Graphics:

Photoshop Plug-ins allow direct save of Photoshop files in CD-i format

Animations:

Animation Stack converts PICS animations into CD-i format

Sound: - Audio Stack converts AIFF files into CD-i format.

Title design is carried out using the MediaMogul software on a Mac with a CD-i Authoring and Playback board or on a Philips CDI605 player. MediaMogul allows the visual and audio production assets to be easily assembled according to the title storyboard with instant replay for

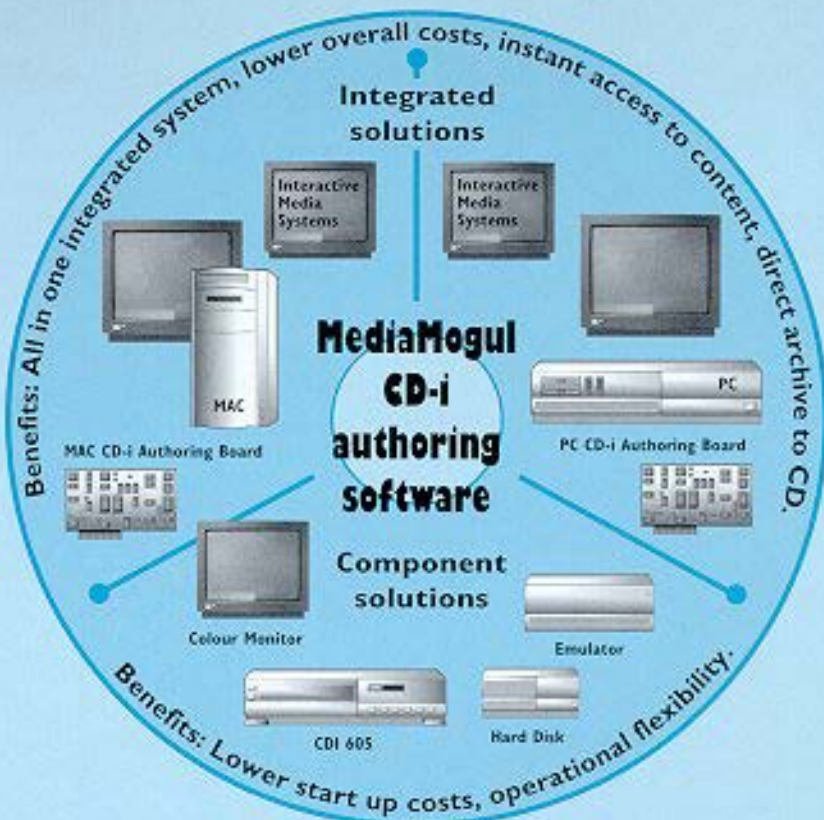


checking of content and interactivity. Philips has a similar MediaMogul solution for PC.

What will my CD-i system look like?

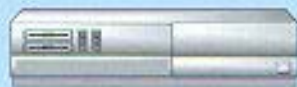
The essential starting point is a Mac or PC equipped for Graphics and Audio capture - the rest is up to you. Having invested in the Starter System, you can begin making CD-i productions, relying on bureau services for emulation and WORM burning, deferring purchase until your project commitments mean that you require these facilities in-house. As well as continually adding to the functionality of the core MediaMogul software, additional programme features are possible using software plug-in modules. These allow you to tailor your production system to your specific needs. The range of software plug-in enhancements is continually expanding.

What will my system look like?



Enhancement

Digital Video Development Upgrade



MediaMogul Plug-ins for Digital Video

Software Plug-ins*



Talking Hot-spots



Irregular Hot-spots



Scrolling Window



Pointerless Hot-spots

Production option

Disc Building and Emulation



Script to Disc



Philips Emulator or CD-i Authoring board

WORM Burning



CD recording



Philips CDD522 WORM burner

* Other plug-ins available - please ask dealer for information

MediaMogul production overview

The MediaMogul CD-i production software runs on a Mac, PC or on a Philips CDI605 player and allows the title designer to incorporate the Audio, Graphics and Video production assets into a script. The Designer works on a simple grid with time progressing from left to right and separate rows for Video, Audio and Hot-spots. Each column represents a time at which a video and/or audio event occurs. A set of columns constitutes a sequence. Play control commands and effects such as cut, wipe, dissolve, play video and play animation are selected from a pop-up menu for each column thus defining the programme flow. The desired video asset is then selected from a list of files by the point and click of a mouse.

Audio soundtracks or voice-overs are added in the appropriate column, again using a simple pop-up menu and point and click interface.

At any point in the assembly of the programme, a simple mouse click allows the sequence to be replayed instantly for evaluation and editing.

Sequences are linked by defining hot-spots: areas of the screen which cause the programme to jump to the next script when 'clicked'. In this manner an interactive disc is produced, with the viewer selecting the programme flow. Alternatively, the hot-spots can time out to allow automatic play for the lazy user. Hot-spots are drawn onto the screen using hot-spot editor within the MediaMogul package. The appropriate video image is automatically displayed to allow the correct positioning of the

hot spots on the screen.

When the CD-i title has been completed and checked, the script sequences can be automatically combined with the production assets into a single computer file ready for transferring to a disc. This phase is called disc building: the resulting file may be checked for timing and correctness by means of a process called emulation. Software tools for the disc building and emulation processes are carried out on an Emulator or with the CD-i authoring board. These units are also capable of controlling the Philips CDD522 compact disc recorder thus enabling test discs to be produced immediately after building and emulation.



The screenshot shows a software window titled 'File Edit Options'. It features a grid with time intervals in the first column and various event types in the subsequent columns. A horizontal timeline bar is positioned above the grid. On the left side, four black arrows point to the grid rows, labeled 'Time line', 'Video line', 'Audio line', and 'Programme controlline'. The grid contains the following data:

Time	Event 1	Event 2	Event 3	Event 4
00:00		00:00	00:00	00:00
02:00		01:00	03:00	01:15
Fade up	Cut	Dissolv	Cut	
Title 1	Title 2	Play	Gerry	
01:00	00:00	01:00	00:00	
Play			Play	
Theme 1			Welcome	
01:00			30:00	
			Menu	
			Go on	



CHECKLIST

CD-I SYSTEM



- ✓ **Is my Mac fully equipped?**

Graphics

scanner, tablet, Photoshop,
Director.

Audio

16 bit sound card or
internal - software

Networking

TCP/Connect and Transceiver?



- ✓ **Production requirements checked?**

Digital Video Development upgrade
Software plug-ins.



- ✓ **Component solution?**

CDI 605, RGB monitor,
Hard disk, System Software,
MediaMogul Mac Pack.



- ✓ **Complete studio?**

MediaMogul Studio Package,
RGB monitor,
CD recorder.



- ✓ **Training?**

Contact your CD-i dealer or
PIMC Belgium for the course
program.

All trademarks™ are hereby
acknowledged

For further information on MediaMogul,
CD-i Production Systems and Marketing
CD-i, please contact your nearest CD-i
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PHILIPS