

## CONTACT REPORT

28th April 89

Seymour Powell

Present

Mr Van Dijk

Polygram

Mr Wirtz

Philips

Dick Powell

SP

Matthew Wright

SP

Patrick Hunt

SP

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Mr Wirtz and Mr Van Dijk presented a written brief and associated technical information.

### Project Background

The objective with Project Decor is to set a new standard - not just for Philips but for all major manufacturers. This must therefore be a combination software/hardware standard.

Six years ago the software industry was heading for bankruptcy; CD was introduced and positioned as a higher quality system than either vinyl or cassette, with the ultimate intention of replacing vinyl in the long term future. Cassete sales are still booming especially in the USA where CD has yet to become firmly established. As a result the software industry has recovered and is now a profitable business.

### Compact Disc

Positioned as a high quality, digital medium which does not deteriorate over time. After its initial introduction it succeeded in cutting through market prejudices that normally make the launch of a new standard very difficult.

### DAT

This is disappearing in the consumer market but may still survive in the professional market. Its problems are that it is excessively bulky, incompatible with other formats, and creates problems of copyright.

### Compact cassette

Partly as a result of the superior digital reproduction of CDs, the compact cassette has a lower quality image and market position. It has a number of negative points (see brief) and is in urgent need of re-presenting and repackaging.

There are around 900 million pre-recorded cassette tapes sold annually around the world and 1.5 - 2.0 billion blank tapes. While CD is ultimately intended to replace vinyl which is predominantly an indoor medium, cassettes are more flexible with enormous usage outside the home - in-car, walkmans, portables etc. The hardware manufacturing industries sell 180 million players pa

|                   |            |
|-------------------|------------|
| Serious recording | 22 million |
| Playback only     | 90 million |
| Misc              | 78 million |

Compare this with:

|            |            |
|------------|------------|
| CD players | 15 million |
| Videos     | 40 million |

This adds up to around three mechanisms of one type or another in every household of the developed world. They are sold right across the market spectrum to every class of customer and type of user. Project Decor must therefore retain compatibility with this enormous base of users with their library of prerecorded material. The new format will play on new machines but not on old ones. The sound quality will be approximately the same as CD (perhaps the audiophile will be able to tell the difference with sophisticated measuring equipment). Playing time will be the same as traditional cassettes but with CD type facilities such as easy track retrieval, track timing etc. It will be both **recordable** and erasable: the former is the essential difference in what will eventually become a dual market - CD and Digital Cassette. The new format will be able to make a true digital copy from a master tape or CD but it will not be possible to make another digital copy from this second tape - thus a massive proliferation of pirated material will be largely avoided. The consumer will be able to play pre-recorded material and his/her own recorded material; for the consumer there will be no perceivable difference between the new format and DAT. The objective for the industry is to add to

or at least maintain growth over the next 15 years to a point where the new format totally replaces the older analogue cassette.

The following additional information was discussed: (not in any particular order)

1. Project Decor will be introduced in 1991 and will eventually replace analogue cassettes. The concept work should be fixed and finalised by early June with dimensions established.
2. The design of the tape housing should emphasise a high quality digital image but still capable of high speed mass production.
3. The concept design work should include the packaging (box or container etc), facilities for printed information, labelling on the cassette casing including space for promo stickers and bar coding.
4. If at all possible SP should also try to generate a new name for the format that expresses the Digital, high quality nature of the concept.
5. The design should include a window (or equivalent) for the consumer to see the position of the tape, and a record protect device of some sort which should be low cost but not be over emphasised.
6. The new format will be positioned above the top of the range existing cassette options (such as chrome, metal chassis etc).
7. A side track on the tape will carry additional information such as track number, track length etc.
8. Compact cassette positives and negatives:

**Strengths**

Well identified and understood  
Consumers know how to use it  
User friendly  
Can be inserted in the dark (blind use)  
Simple and easy

**Weaknesses**

No appeal  
Low cost  
Old fashioned  
No future development  
Doesn't stack (without pack)  
Packaging is weak

9. When then current CD 'Jewel box' was first launched consumers found

it difficult to open and use - but this quickly became accepted. In a sense, this initial difficulty was a plus point with consumers as it implied membership of a new 'club' of knowledgeable users.

10. The cassette market is quite conservative. 50% of blank tapes sold are at the top end of the price/quality spectrum. This is because people distrust the quality of the product - it rattles for example, and they feel that buying the best will, to an extent, overcome some of the fundamental weaknesses of the system.
11. It is not inconceivable to envisage 2 types of packaging for the new cassette: one for pre-recorded material and one for blank tapes.
12. The new product should :
  - Be evident that it is a compact cassette
  - Reflect the future
  - Relate to existing CD, Digital, Sound mastering imagery
  - Have immediate appeal
  - Be 'collectable'
  - Stimulate people to spend.
  - Be recognisable in store
13. Merchandising compatibility is important and was discussed but not decided. Ideally, the new format should slot into existing POS systems but this implies a dimensionally identical casing which militates other requirements in the brief such as expressing 'difference' from the older medium. Alternatively the new format may require new POS systems that give retailers problems, much as with CDs. This ensures that there is a point of difference and that Digital material is segregated from analogue and therefore positioned as 'something new'. A further advantage of this approach is that it limits the risk of someone buying Digital when they intended to buy analogue, or more likely didn't understand the difference, and returned home to find the tape wouldn't play. This potential user dissatisfaction could be a

problem in the initial launch period.

14. The new design should protect against analogue imitators.
15. It is not yet decided whether the new cassette could be made without the 'ship'. However, if there is no 'ship' development will certainly take longer; if a 'ship' is retained it can be bigger or smaller.
16. There remains the possibility of making the cassette a physically different shape that allows downward compatibility but not upward compatibility for the analogue cassette. One alternative discussed was a radical physical difference that totally prevented the use of a standard cassette in a digital mechanism without some kind of adaptor - the best analogy to this is the VHS-C formats relationship with the VHS mother cassette. This idea was not liked by Philips but, nonetheless, we feel it is too early to throw it out yet and it should be worked on.
17. The minimum repertoire information is roughly the equivalent of four folds of the current cassette size.
18. For fast rewinds and searching the capstan will half retract.  
**The supplied brief from Philips and this document together constitute the brief for the project.**



## DCC OUTER PACKAGING

The Compact Disc has revolutionised recorded music and the packaging very much reflected the new digital age, futuristic, shiny, new and valuable.

DCC in many ways must carry on this digital image in the packaging setting itself apart from the MC, which will become the budget image, at least in the initial period. The looks will very much influence the price the consumer is willing to pay.

### OBJECTIVE

To design a new high-tech, beautiful housing for the DCC, which will be the carrier of the cassette and the carrier of added information, such as title, track listing and credits, lyrics, and biographical material, as well as product number, bar code and other legal requirements.

The first objective is to create a permanent box which the consumer will keep with the product, or leave at home if he decides to take the DCC only. A box which must also enhance the value of the product to sell at a rate of CD's (initially), but not be so expensive as to hinder a price drop eventually.

Any consideration for longbox merchandising must be done outside the actual consumer packaging requirements.

We must not forget that we are principally designing a portable sound carrier therefore the size of the package must be small.

One recommendation repeated both in Europe and the USA is that we should stick to the exact outside dimensions as the current MC since that may solve the merchandising problems.

Everyone has developed their own method of display for the MC already which could be adapted for DCC.

This means an open display in Europe with the possibility of storing the DCC away from the exposed DCC package.

In the States current re-merchandisable Longboxes exist which could be used for DCC as well it may be possible to supply a generic DCC strip to identify the long box.

A small package can not carry all the information visibly on the outside which an LP can carry and needless to say the age old problem of in-store merchandising information will once again come up again. We however must remind our self that we are designing a package which is ideal for the customer after he has purchased the Tape.

For MC's this problem has never been solved and at the same time has not interfered with cassettes becoming the worlds most prolific configuration.

## Function.

### Analogue musicassette box.

To case, protect the tape. (Cassette is half-open)

For marketing the product, create attention, appeal, the cassette is clearly "unfinished" without packaging.

To stock the literature.

To display product info

### DCC-cassette packaging

We do not need the box for protection. In mobile, car and walkman applications, handling the cassette should be simple, with one hand only. Target is to use the cassette in these applications without extra box.  
BOX MIGHT NOT STAY WITH CASSETTE IN MOBILE APPLICATIONS

For marketing the product, to create appeal, to raise the image to "high value".

Musicassette is more a disposable than a collectable like e.g. CD is and LP was.

It is our objective that the Pre-recorded cassette becomes more of a collectable. (The blank cassette can remain a disposable)

To further support this change in image of cassette, the BOX COULD GET A NEW FUNCTION AS A HOME-CONTAINER WHICH CONSUMERS LIKE TO STACK AND DISPLAY AS WITH CD.

If the cassette is being used outdoors without a box, the empty box shall still look nice. Therefore, only a subtle indication whether the box is empty or loaded with a cassette (info in spine ?)

To stock the literature.

The text of the literature which is packed today with the analogue cassette can be recorded on the digital cassette. It is questionable whether because of this feature, the folder can be left out or reduced in size with a digital cassette.

The folder either spoils a slim-line packaging or makes the packaging large. Can we limit the amount of pages ?

Should we expect different package for Classical, opera with thick booklets in many language ?

Display product info.

The digital cassette is designed to display product info on the cassette rather than on a box which gets separated from the cassette.

Do we repeat the artwork or will the cassette remain visible or even stick through the packaging ? (Or both)



## Music Trade

Shoplifting of high value small items.  
Will the retailer remove the cassette from packaging ?

We could propose to introduce a anti shoplifting provision in the cassette rather than the box. It is not clear, whether the various anti-shoplifting systems installed and in use now would operate with one common provision in the cassette, e.g. the magnetic stripe.

Rackshelving. See notes under "Seize". General comment is great reluctance of the trade to (re)invest on this. Is there a standard racking.

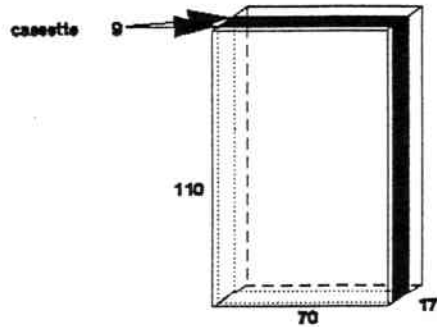
Barcodes etc. on packaging, not on cassette ?

Shrink-wrapping, stickering desired ?

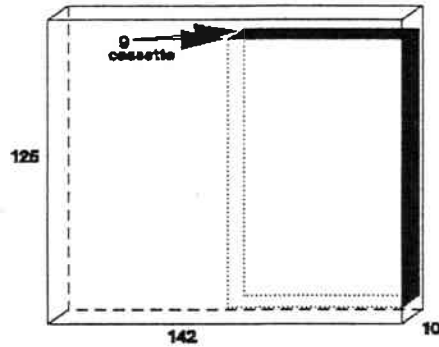
PACKAGING ISSUES.

Dimensions of packaging:

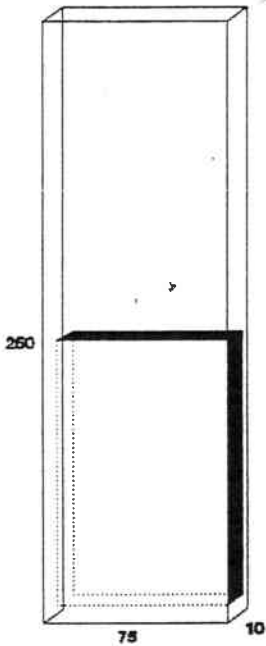
- Within actual MC-packaging format to fit actual MC-rack shelving.



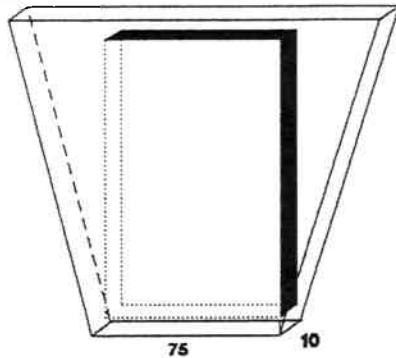
- Or within actual CD-Jewel box format to fit actual CD-rack shelving. To create maximum reference to CD-quality and image.



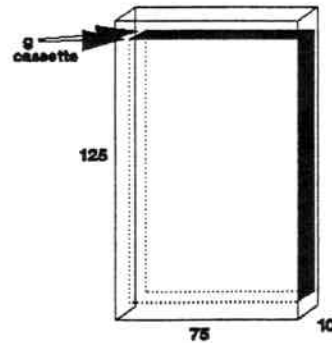
- Or new format to generate maximum attention that a new carrier is in the record shop. If possible the new format should fit actual shop space e.g. within actual LP-racks.
- Examples:



Long-slim box "New format"



Half CD-box



# PolyGram

**FAX** - 010 31 40 736355

TO R Martijnse

FROM Dieter Radecki

cc D Fine  
A J Morris  
G Wirtz (pls copy locally)  
C van Dijk  
P Strooker  
P Doodson  
P Meller Marcovicz

Ext

RE DCC Packaging Meeting: 11.9.90

DATE 12 September 1990

**Attending:**

EMI Alexis Rotelli, MD Europe  
EMI Richard Burkett, MD EMI Music Operations  
BMG Stefan McCaughley, Director International Marketing  
G Wirtz (presenting)

The conclusion and recommendations by EMI and BMG were to go with a box of MC outer dimensions.

Preferably a one piece box with no moveable parts where the DCC can be firmly clicked in and, if possible, slid out using one hand only so it could be possible to slide the cassette directly from its housing into a car player (this would not be possible with home players, however, which take the product horizontally).

The added information could be located below the cassette and slid out with one hand in the same way and must act at the same time as the backer card.

Incidentally, WEA's Dave Evans had made a very similar recommendation in an earlier meeting.

An interesting suggestion came from Mr Stefan McCaughley who recommended that the additional information (backer card, titles, credits and lyrics) could be embedded in plasticised information cards instead of a paper inlay to give it a new dimension. This could be explored at least for pop products.

These suggestions are consistent with the objective of having a portable product, therefore small outer box, fitting international merchandising fixtures. It will however be a formidable task to come up with something which also gives a more valuable impression.

Page 2  
12 September 1990  
DCC Packaging Meeting

EMI and BMG also expressed great interest in the text subcode which they feel can ultimately enhance the back catalogue by including discographies, background stories and lyrics for the next round of exploitations, but this time at higher prices.

At a subsequent meeting with Richard Lyttleton, President EMI Classics, the same interest was voiced, but with the hope that expensive booklets could be eliminated in the future.

With four of the largest international record companies agreeing on the major features of this box, we must not lose time now and concentrate on developing the ultimate DCC box fitting this description.

Richard Burkett voiced his displeasure at the handling of the licence fee for CDs by Philips, and the settlement Philips made with DVI and Thompson which will increase the licence fees for CDs to nearly double. Burkett is specifically upset that Philips, the licence holder, has settled when the other companies have not yet settled, including EMI. He is very concerned that similar patent problems could arise with DCC.

All parties were extremely interested and supportive of the DCC project.

Sincerely



Dieter Radecki



FAX

PHILIPS

From P. Doodson 525/PD/hva  
Corporate Industrial Design  
P.O. Box 218, building SX  
5600 MD Eindhoven, The Netherlands  
Fax 31.40.733482

To Mr. Dieter Redecki No of pages  
Polygram International incl this one: 3  
09-44-71-499-2596

Copy Mr. J. Duurland/Mr. O. van Ommereren  
Polygram Record Service  
02154-23728

Mr. A. Stöger  
Magnetic Media Development  
09-43-160-1044-800

Mr. R. Schouw  
Polygram N.V.  
02154-21238

Mr. H. Grobecker  
P.D.O. Hannover  
09-49-511-694-121

Mr. R. Martijnse/Mr. G. Wirtz  
DCC Group SFF-2  
34426

Mr. van Weele  
Patents & Trademarks  
43489

7 juni 1991

Further to our phone discussion on June 5th about DCC double pack design directions. After receiving the 'side by side' direction line drawings I sent you, you comment that there is now increasing interest within the software industry for a 'double thickness' solution.

To help you further with your industry discussions I enclose a couple of new line drawings to illustrate this other design concept.

For a complete assessment of both solutions perhaps its a good idea to make a model of each!

I look forward to your comments.

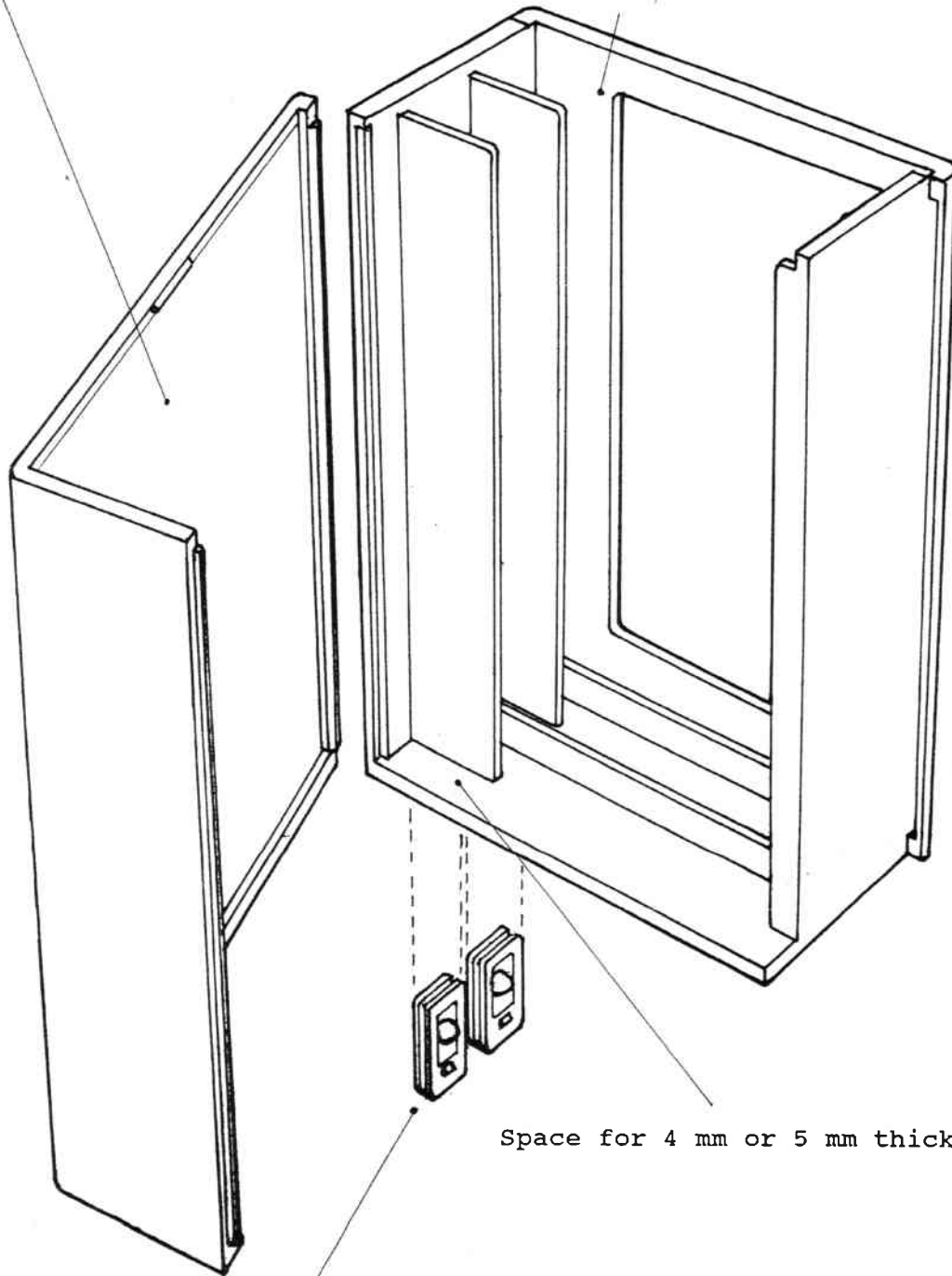
Regards,

Peter Doodson

1/4

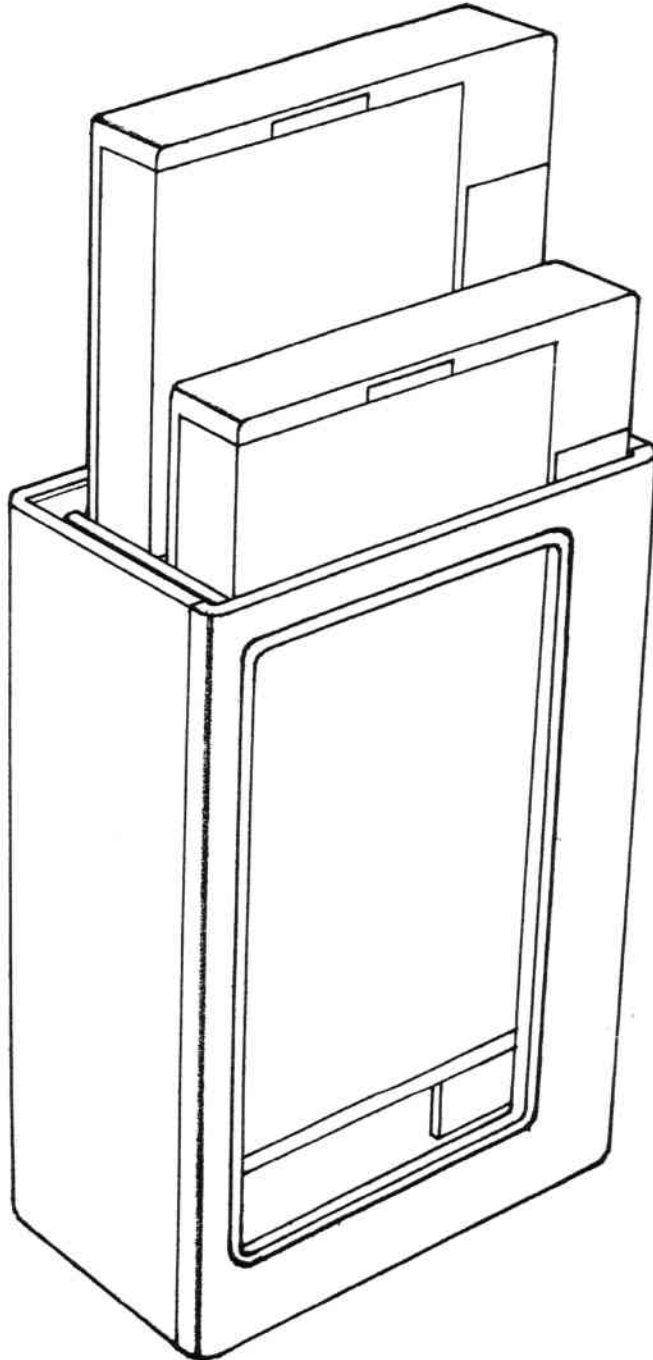
Paper sheet with 1 spine held inside transparent back.

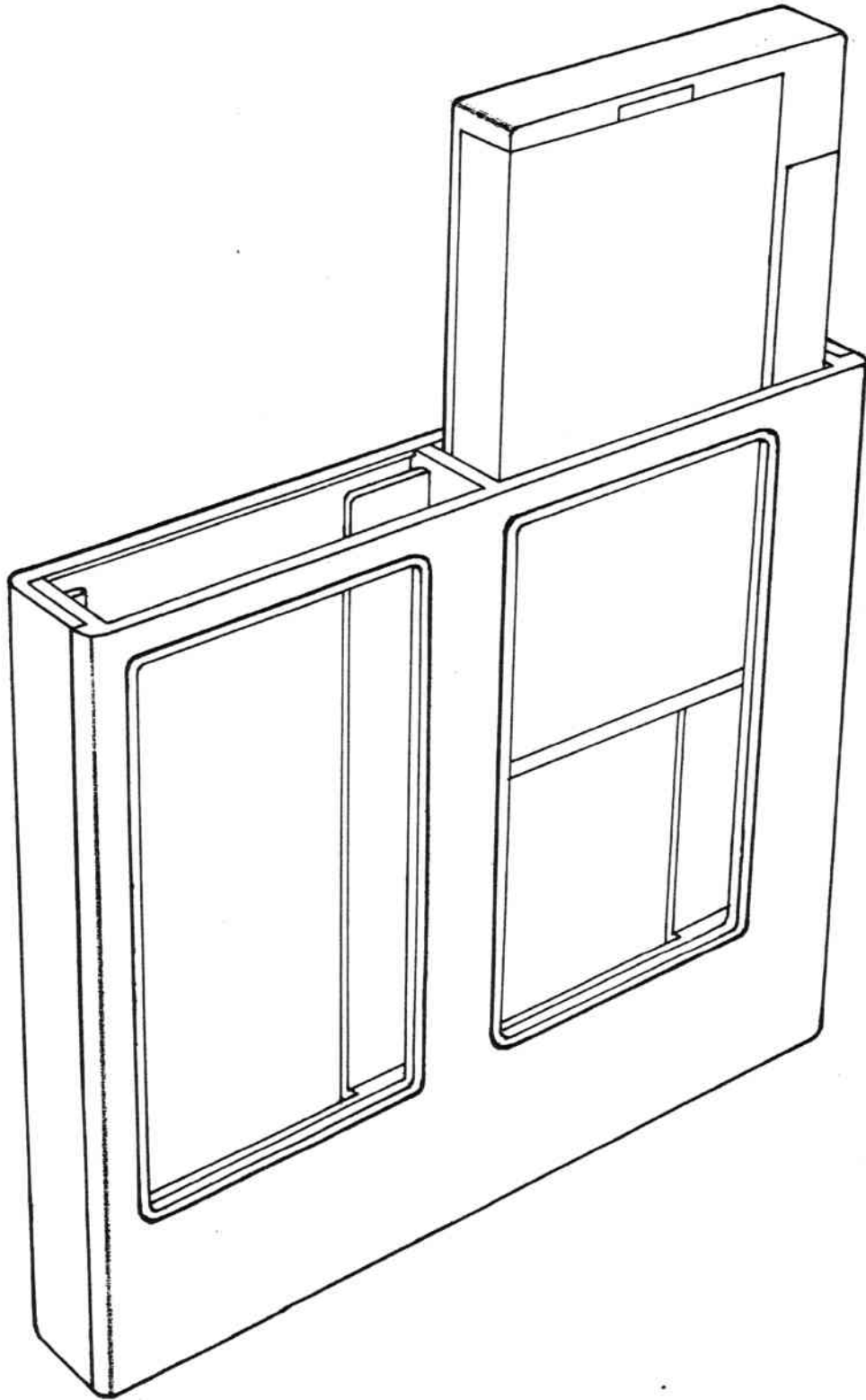
Moulded front holding 2 cassettes



Space for 4 mm or 5 mm thick booklet

Rubber cassette grips inserted like in single pack







**SMULDERS C&MC**

CORPORATE &amp; MARKETING COMMUNICATIONS B.V.

**FACSIMILE MESSAGE****URGENT**

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**TO:** Philips Corporate Design**ATT.:** Peter Doodson**FAX NUMBER:** 040-732364**DATE:** 2 May 1994**NUMBER OF PAGES:** 4 (INCL. THIS PAGE)

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**FROM :** SMULDERS C&MC  
WILHELMINALAAN 3  
5707 AA HELMOND  
THE NETHERLANDS**TEL.:** + 31 492028700**FAX.:** + 31 492053283

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**COMMENTS :**

Dear Peter,

Following is the concept-text regarding DCC design. I would appreciate receiving your comments as soon as possible.

Thank you very much. Best regards,

SMULDERS CORPORATE & MARKETING COMMUNICATIONS B.V.

  
Leonie Vink

# SMULDERS C&MC

CORPORATE & MARKETING COMMUNICATIONS B.V.

[concept text \* DDC product PR \* 29/4/94]

**DCC designer Peter Doodson:**

**"DCC IS A VERY EMOTIONAL THING"**

"For the designer, a music carrier is a very emotional thing. If successful, it will become an everyday artifact, seen all over the world. It will be in everybody's home."

Peter Doodson, senior product designer at Philips Corporate Design, is the leading force behind the team of designers who gave the Digital Compact Cassette a face. As far back as 1989 he became involved in the development of the new tape format. "The challenge in the designing process", he says, "was that the format of the Musicassette had to be maintained, while at the same time creating a 'digital' and futuristic look. Of course there were also the technical aspects to be reckoned with."

The brainstorming sessions and many efforts paid off. The result is a streamlined music carrier with a new, high-tech image, that will not go into history unnoticed. The sliding metal protection of the DCC was inspired by that of the floppy-disk.

# SMULDERS C&MC

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Autoreverse was specified as a system standard for DCC resulting in a 'free' side that became available for artwork (on pre-recorded cassettes) or personalization (on blank cassettes). Non-flippable cassettes with two-way audio tracks and one-sided spool access turned out to have the ability to show an impressive amount of art work on their front sides.

"In the process we differentiated more and more between the pre-recorded DCC, which was the main focus, and the blank cassette. On the final design of the blank cassette range the closed front layout incorporates a transparent window to check tape position and a circular form detail to make the cassette easier to grip."

"Because the tape hardly needs to be protected, packaging was initially thought irrelevant. However, functional packaging was necessary, since the digital information on the tape is sensitive to fingerprints" says Peter Doodson. An economic holder was therefore designed using a minimal amount of material and without any moving parts. The holder is ergonomically correct, in that the cassette can be easily extracted with one hand. What's more, because the size of the packaging is similar to that of Musicassettes, DCC

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tapes may be fitted in existing storage systems both in consumers' homes and in record stores.

"I imagine that second-generation DCC cassettes will feature some changes. For instance, different colours may be used for the plastic housing or the metal sliders. We have also designed holders for double-DCCs. These are not being produced yet, but things are definitely on the move."

**Photo suggestion:**

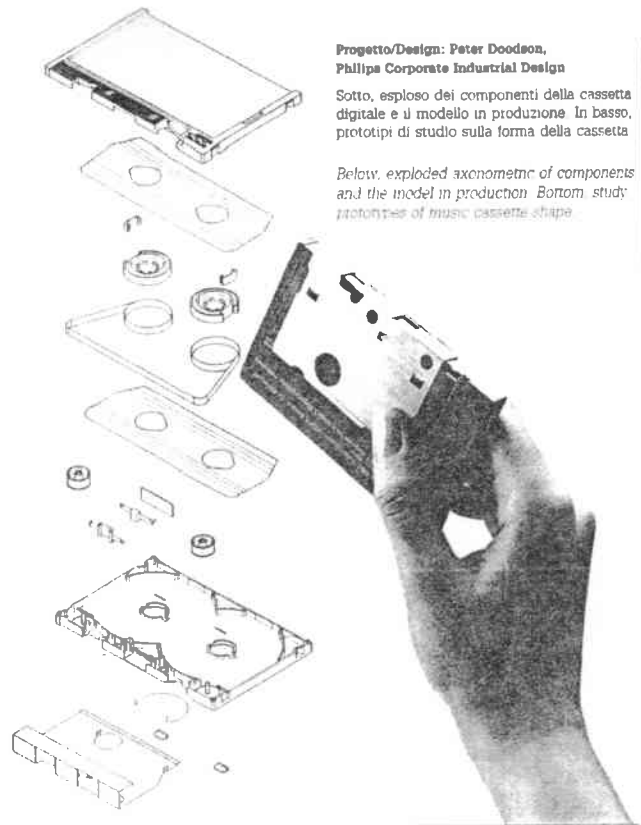
A collage of initial DCC design sketches (via Peter Doodson).

## L'evoluzione della musicassetta The evolution of the music cassette

La tradizionale cassetta Philips si converte nella funzione e nell'estetica digitali. *The traditional Philips cassette converts to digital functions and aesthetics.*

Philips is traditionally a great innovator of sound support systems: the MusiCassette (1963) and the Compact Disc (1983) were revolutionary milestones in the making of music and means of listening to it. A popular system par excellence, the musicassette owes its success primarily to its utility. Its compactness allowed it to escape from the walls of a home (thanks especially to portables, offspring of the transistor: first the tape-

player then the car radio, finally the walkman). The possibility of home-recording allowed the musical message to be cloned, thus evading copyright regulations and making consumers active and creative participants in their sound support systems. Precisely this characteristic contributed to an incredible sales achievement: 3 billion cassettes every year, over 50% of which are «virgin». A genealogically élite system, the



Progetto/Design: Peter Doodson, Philips Corporate Industrial Design

Sotto, esplosione dei componenti della cassetta digitale e il modello in produzione. In basso, prototipi di studio sulla forma della cassetta

Below, exploded axonometric of components and the model in production. Bottom: study prototypes of music cassette shape

Compact Disc on the other hand owes its success to the exceptional quality of its sound. CD digital technology offers performances previously unobtainable from LPs, compared to which it is technologically revolutionary (it does not wear out, it is portable, and interfaceable with other digital reader systems) but conceptually evolutive (it still being a disc). Rather than attempting a further revolution in the over-saturated emporium of consumer electronics, the Digital Compact Cassette (1993) is a summa of the two previous experiences. Moreover it witnesses today's shifting technological research front, where user-interfaces and software are preferred to hardware. Interpreting consumer needs and with an eye on life expectancy surveys of this product type, the design briefing required the new support to possess the typical sound quality of a CD - plus compatibility downwards with the present music-cassette. Conceptually, the choice was thus made: except for a few amendments, the format of the MusiCassette had to be maintained. Into the creation of the new «digital» look went the whole of Philips Corporate Design. The first brainstorming, in 1989, served to outline three substantial alterations. First, the cassette was given a sliding metal protection (inspired by that of the floppy-disk), with the dual function of protecting the tape and creating a high-tech image. Next, autoreverse reproduction was imposed as a system standard. The resulting free side becomes a product personalization factor and, in the pre-recorded version, allows the iconographic part to be kept in the «full-page» space. Finally, the cassette was formally «purified» both by utilizing a system of ultrasonic welded shell pairing and by abolishing the double projection on the tape exposure zone. The rest



of the work was essentially graphic, from the choice of a name to the creation of a logo, right up to the definition of the closed front layout, which incorporates a transparent window (to check tape position) and a circular hollow to make the cassette easier to grip. The adoption of a holder similar to that of the Compact Disc (to emphasize its digital associability) was dropped in favour of a minimalist solution taking into account the fact that there is really no need to protect the tape. A proposed throwaway packaging was rejected, both for image reasons and due to the necessity to link the product with an accompanying «literature». The result achieved with the push-back system is ergonomically correct (the cassette can be extracted easily with one hand), ecologically acceptable (minimum amount of material) and productively economical (only one mould, no moving parts)

Paolo A. Tumminelli



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**Tegenstrijdigheden**  
De verkiezingscampagne van de

## Voorbespeelde DCC's van markt gehaald

(Van onze redactie financiën)  
EINDHOVEN - Philips en het Japanse Matsushita hebben besloten alle voorbespeelde DCC's (digitale compact cassettes) van de Japanse markt te halen wegens technische onvolkomenheden. Eerder moest de introductie van de DCC - de opvolger van de analoge geluidscassette - tot tweemaal toe worden uitgesteld wegens problemen bij de productie van de spelers.

Een woordvoerder van Philips stapte gisteren nogal luchtig over de nieuwe problemen heen. Volgens haar betekent het slechts dat de software - de voorbespeelde bandjes -, die vandaag in de winkel moest

liggen twee weken later in Japan te koop is. De DCC is op 21 september op de Japanse markt geïntroduceerd.

De introductieplannen voor Europa (tweede helft oktober) en de Verenigde Staten (begin november) zullen volgens de Philips-woordvoerder niet door de nieuwe tegenslag worden beïnvloed. Vóór het begin van de kerstverkoop zullen volgens haar 500 DCC-titels in de winkel liggen.

Ook is het volgens de woordvoerder niet zo dat de honderdduizenden voorbespeelde cassettes die Philips-dochter Polygram de afgelopen maanden in een nieuwe fabriek in Amersfoort heeft geproduceerd alle-

maal onbruikbaar zijn. "Van de 100 zijn er misschien 99 goed. Wij willen bij de wereldintroductie van een nieuw systeem echter geen risico lopen. DCC moet synoniem zijn voor kwaliteit. Dat voeren wij consequent door."

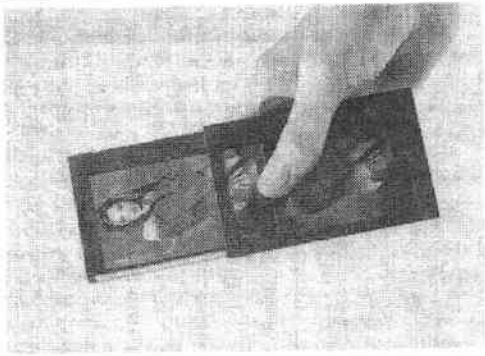
De problemen met de voorbespeelde DCC's betreffen de door Philips geleverde behuizing, die in sommige gevallen iets te ruim is en daardoor niet perfect in het laagje van de speler past. Dat probleem is volgens de woordvoerder inmiddels opgelost.

### Positief

Over de eerste verkopen van DCC-spelers in Japan is Philips

heel tevreden. "Het ziet er heel positief uit", aldus de woordvoerder. Een Philips-fabriek in Japan produceert 20.000 DCC-spelers per maand. Voor het eind van dit jaar moeten ook fabrieken in Oostenrijk en België beginnen met de productie.

Uit de Verenigde Staten komen berichten dat de verkoop van de door Philips ontwikkelde CD-I-spelers daar de verwachtingen ver overtreft. Sinds de introductie een jaar geleden zouden er 60.000 spelers zijn verkocht, het dubbele van de doelstelling. De compact disc interactive, die sinds kort ook in Nederland op de markt is, combineert beeld, geluid en computergegevens. De markt is in Nederland op de markt is combinereerd en biedt de gebruiker de



• Een DCC-cassette met opbergdoosje.

mogelijkheid om daarmee te manipuleren.

Ik wil  
ontv:  
 pe  
 pe  
 pe  
U kunt  
Prijs  
Post/  
Naar  
Adres  
Post  
Tel -  
(i.v.m. )  
Hand  
Stuur  
postz  
Afd. I  
's-Hei  
JE  
EIJ





# PHILIPS NEWS

Vol. 21 no. 12 - September 28, 1992.



AMERSFOORT: Mr Jan Timmer, president of Philips, studies one of a selection of the 500 DCC titles that have been produced at the Amersfoort plant. Also pictured, from left, are: Mr Tim Hurrold, executive vice-president of classic music, PolyGram; Mr Jan Cook, executive vice-president and chief financial officer, PolyGram; Mr B. Verheek, secretary to Philips' Board of Management; Mr W. Wielens, managing director of the Audio business group within Philips Consumer Electronics; Mr Rien van Regteren, managing director of PolyGram Record Service; and Mr R.L. Boer, Alderman of Amersfoort.

## President opens tape factory DCC goes on sale

EINDHOVEN: Philips' Digital Compact Cassette (DCC) music system went on sale in Japan on September 21. This will be followed by sales launches in France, Germany, the Netherlands and the United Kingdom during the second half of October and the United States in the first week of November, at which time it is believed that the Audio Home Recording Act will be passed.

Also on September 21, PolyGram began shipping more than 100 pre-recorded DCC titles to major record company distribution centres around the world. In total it is producing some 500 DCC titles, 400 of which are for record companies BMG International, EMI Music Group, MCA Music Entertainment and the Warner Music Group.

These are all being produced at PolyGram's DCC tape factory in Amersfoort, the Netherlands. The world's first such plant, it was opened by Mr Jan Timmer,

president of Philips, on September 18 (see story on Page 5).

Initially, only the DCC900 player/recorder will be on sale, but, throughout the 12 months following the launch, Philips will introduce a full range of DCC player/recorders, including two personal headphone stereo models (DCC130 playback only and DCC170 playback/record); three car stereo models (DCC800 series); a Mini system component (DCC93) and a portable personal system (DCC280).

Blank DCCs will be available in 45, 75, 60 and 90-minute lengths from a variety of manufacturers including TDK, BASF, Panasonic and Philips. The Philips 90-minute blank tape will retail at about 17 guilders (9.99 dollars).

The DCC900 decks are being produced at Philips' factory in Sagamihara, Japan, at the rate of 20,000 per month and are retailing at about 1,360 guilders (799 dollars).

Additional production of DCC player/recorders will begin in Austria and Belgium before the end of this year.

Artists first to appear on DCC include Bryan Adams, Prince, Frank Sinatra, Sir Georg Solti, U2 and Luciano Pavarotti. These first DCCs are ready to appear on record store shelves simultaneously with the introduction of the DCC player/recorder.

## Profits warning makes cost savings essential

EINDHOVEN: Philips has announced that it expects net income from normal business operations for 1992 will amount to about half the 1991 level of 981 million guilders.

The profits warning was given on September 18 as there are no signs of economic recovery, problems persist in the consumer electronics industry and the US dollar's exchange rate has continued to deteriorate. Philips had earlier said (in its report on the second quarter of 1992) that it would be unlikely that sales and net income from normal business operations in 1992 would reach the level achieved in 1991 if economic trends failed to improve.

### Inspired

The expected profit deterioration has inspired a further, massive cost-cutting campaign throughout the company. It is felt that the sooner and the more costs that are cut, the better prepared the Company will be for a healthy recovery, once the economy picks up.

Business units, product groups, divisions, national organizations and corporate departments world-wide are all actively

involved in reducing cash expenditure to an absolute minimum.

All employees are actively encouraged to make all possible economies in their own area of operations. And if they see potential for making savings in other areas, they are asked to bring these to the attention of management.

### Affect

The cost-cutting measures will affect people at all levels in the Company. Nobody is exempt, for example, from switching out the light in an empty room, from reducing photocopying to the bare minimum, or from - in the context of bought-in services - doing a bit of extra work oneself. It is expected that in the true spirit of Centurion, employees do not merely wait for instructions from the top, but develop cost saving actions on their own initiative. It is in everybody's interest to help the Company regain its former strength.

### 3rd quarter

The results for the third quarter of 1992 will be announced on November 5.

## Delisting in Tokyo

EINDHOVEN: An application was submitted by Philips to the board of the Tokyo Stock Exchange on September 16 for delisting of its shares on this exchange.

The decision results from a continued lack of interest in Philips shares in Japan, both at retail and at institutional levels. Since the share was first listed in September 1988, the number of shares and shareholders, as well as the volume of trade, on the Tokyo Stock Exchange have fallen short by far of expectations.

This situation has caused Philips to decide to no longer bear the relatively high costs that are incurred through being listed on this stock exchange.

## Clear messages on Hong Kong railway

HONG KONG: Passengers on Hong Kong's Mass Transit Railway will soon benefit from clear pre-recorded announcements over the public address system on all trains, following the signing of a contract between Philips Hong Kong and the Mass Transit Railway Corporation (MTRC).

This covers the provision of

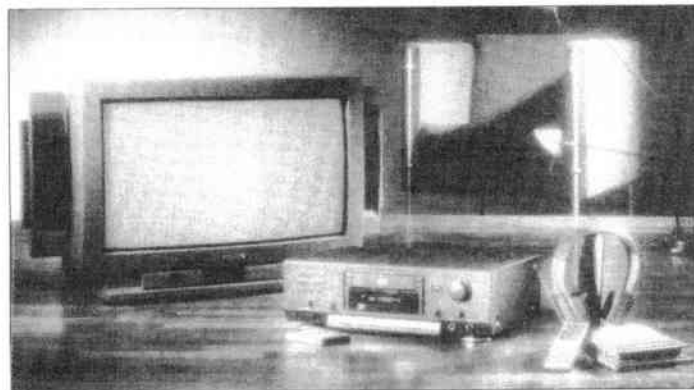
a digital voice announcement system, for which installation of equipment on MTRC trains will be carried out in phases, commencing mid-1993 and ending by September 1994.

With the system, routine, special and emergency messages will be recorded digitally on memory IC chips, using state-of-the-art coding technology pioneered by Philips. Similar to that used in DCC and CD-I, this greatly reduces memory size, while maintaining Hi-Fi sound quality reproduction.

Announcements, in both English and Chinese, will be semi-automatically controlled, allowing drivers to concentrate on train operation and passenger safety. A further enhancement to boost safety will be the sounding of chimes to warn passengers that the train doors are about to close.

### Quotations

AMSTERDAM: Philips shares stood at 24.60 guilders on the Amsterdam Stock Exchange at the close of business on Thursday, September 24. This compares with 24.80 guilders on August 7. Twelve month high: 39.50 guilders, low: 21.20 guilders.



The winning three products.

## Topping the product class

COLOGNE: Three Philips products received prestigious European awards at a ceremony held on September 16 during the Photokina exhibition in Cologne, Germany. The widescreen TV set, DCC player and portable CD player were chosen by a panel of representatives of leading European audio and video magazines, following extensive testing of a range of new products.

In designating the 28-inch widescreen TV as 'European Television of the Year', they said that "at the dawn of a new European broadcasting age, [this set] offers the first step into the future. It is a compilation of innovative technologies, inclu-

ding 100 Hz digital scanning for impressive picture and sound quality in the new 16:9 screen ratio".

Mr Han Avot, editor of the Dutch publication 'Audio Video Total', presented the award to Mr A.E.J.M. Dassen, managing director of Video Display Products within Philips Consumer Electronics, saying that it showed that Philips remained an innovator in the field of television.

Mr Dassen replied that the

very fact that it was the 16th day of the ninth month showed that it was a widescreen day. "I hope we have many more such days in the future," he added.

The two audio awards were presented to Mr L. van Leeuwen, director of Audio within Philips Consumer Electronics.

Commenting on the DCC designation as 'European Innovation of the Year', the panel said: "As the second digital

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PHILIPS





