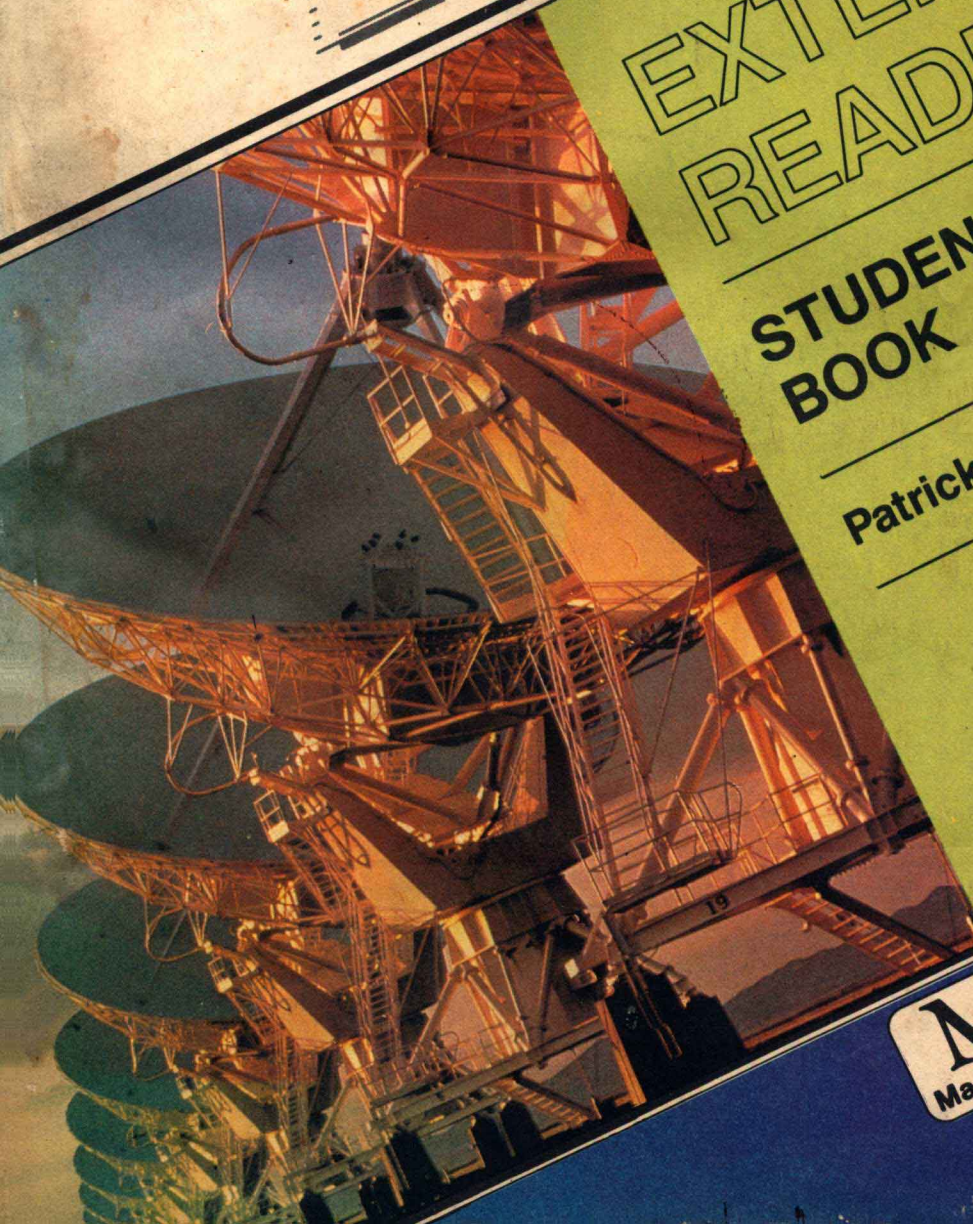
4TH GRADE

现代英语 第四级 泛读

EXTENSIVE READING

STUDENTS' BOOK 4B

Patrick Goldsmith



Macmillan
China HEP

MODERN ENGLISH

for University Students

Extensive Reading

Students' Book

Grade 4 B

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参加《现代英语》审稿的有上海交通大学杨惠中，重庆大学韩其顺，北京外国语学院周献桃和高等教育出版社曹根望。

现代英语

泛读B

第4级

帕特里克·戈德史密斯

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中国高等教育出版社
英国麦克米伦出版公司 出版

新华书店北京发行所发行

外文印刷厂印装

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开本787×1092 1/16 印张4 字数100 000

1988年3月第1版 1988年3月第1次印刷

印数 000 001－114 300

ISBN 7－04－000197－7/H·21

定价 0.86元

ACKNOWLEDGEMENTS

The author and publishers wish to thank the following who have kindly given permission for the use of copyright material:-

BBC Enterprises for extracts from **The Domesday Disks** by Amanda Wood.

Financial Times for an adaptation of **Unnatural Selection** from 5.9.87 issue of Financial Times.

Grafton Books and Roxby & Lindsey Press for extracts from **Future Man** by Brian Stableford.

MacDonald Publishers Ltd. for extracts from **Cosmos** by Carl Sagan.

National Geographic Society for an extract from **Every Day is a Gift When You Are Over 100** by Alexander Leaf in National Geographic Magazine Vol. 143, No. 1 Jan. 1973.

Personal Computer World for **Memory Media and Optical Disk Hardware** (September 1987 issue).

Time for an extract from **Time Magazine** 11.5.87.

Every effort has been made to trace all the copyright holders but if any have been inadvertently overlooked the publishers will be pleased to make the necessary arrangement at the first opportunity.

Contents

UNIT 7

BEFORE READING

1 (a) The following words are important in this text. As in previous units, look through the list and tick those words whose meanings you are familiar with, but do not look the others up in your dictionary at this stage.

animation	consistent	overlay
background	decline	satellite
caption	gain	scale
census	imagery	statistical
circulation (of a newspaper)	menu (on a computer)	tabular
closeup	mouse (on a computer)	zoom in

(b) Remember what you read in Unit 7 of Reading and Writing about the Domesday Project and try to decide whether the following statements are true or false *before* reading this text. Correct your answers once you have read it.

1 The Domesday Project gives information about Britain in the 1980s only.	T	F
2 The information is on two disks only: the Community disc and the National disk.	T	F
3 The disks will provide information about any town in Great Britain.	T	F
4 The Domesday Project system is interactive.	T	F
5 The information on the disks was all provided by experts.	T	F

READING TEXT ONE

THE DOMESDAY DISKS

The Community Disk

I can move the pointer on the screen with a mouse, and indicate the area I'm interested in. It might be Scotland, Orkneys and Shetland, Northern Ireland, the Isle of Man or the Channel Islands. Let's say I'm interested in Southern Britain and I want to zoom in there. The system takes me into the next level down, and then I can choose again. Let's say I'd like to go to Cornwall. Now I go on to an Ordnance Survey map to a scale of 40 kilometres across. Now I want to go in a little further. Let's go down here to Falmouth. And now it's only 4 kilometres across, and I've got a closeup view which shows me individual roads and even buildings; and I can travel the whole country at this scale. Just moving to the north now very quickly we have arrived in Truro. And we're going further north still. Let's go to the east. Now here's a place,

Probus. What does it look like? We can always call up some pictures of the area: pictures that have been taken by the local people who live there. We select 'photo' from the menu bar, and up comes a picture of Probus. Let's put on a caption — 'Probus village centre in winter'. In fact, there are three pictures for every community covered on disk. They've also written about every community, which we can see under 'text'. Select that. Here's the index of text that they've written. And here we are: how to look after cows and sheep in the winter. Of course, there's a massive amount of text on the disk as a whole, and we need the index to search it. There's a 'find' command here, which enables us to search the disk by topic, by place name or by map reference.

So let's put in Probus again, and see if it will find us the appropriate map. There we are, there's a map, and it's showing the area we want. Let's come out wider, to our general Cornwall map.

Now, you look at a photograph, and like the map it's wider — it's an aerial view. And this process continues whichever level you're on. Come out wider still, to the whole of Southern England, and wider still to the whole of the UK. Take a photo, and now we have satellite imagery.

Another option is scale. With so many maps involved, it's important to know what scale we're working with. This is a scale in kilometres, and it can be changed to miles if you would rather work in miles. And you can use the micro to measure directly from the screen.

The National Disk

Here's a tabular display. And you can see from the right-hand side that this is indicating how many people read the *Daily Mail* in the south-east region. And at the bottom it's given in years — from 1973 to 1984. And you can see from the scale on the left-hand side that it's about 3 million readers and that it's fairly consistent for the *Daily Mail* throughout the 1970s.

Well, that's a fairly standard form of display. What's different on the Domesday disk is that it's interactive. I can change any of those labels on the screen. Let's change the *Daily Mail* to the *Telegraph*. Immediately the display responds, and I can see a comparison. The *Telegraph* readership is that much lower, and also it's declining. If I want to make a direct comparison, I can put the four papers on a horizontal axis, so now I'm looking at the market share for 1973 between the *Daily Mail*, the *Telegraph*, the *Times* and the *Guardian*. And, of course, I can change the year now, so I can step through time in a kind of slow animation and look at the newspaper circulation battles of the seventies. The *Telegraph*'s declining, so is the *Guardian*; the *Times* declines a bit in '78 and disappears in '79 when it goes on strike. It's back again. The *Guardian*'s gaining and so on. Then I can compare the regions on the horizontal axis; and this is showing a comparison between the sales of the *Telegraph* in the south-east, the south-west and Scotland in 1981. And if that's not quite clear as it is there, I can change it from a bar chart to a pie chart.

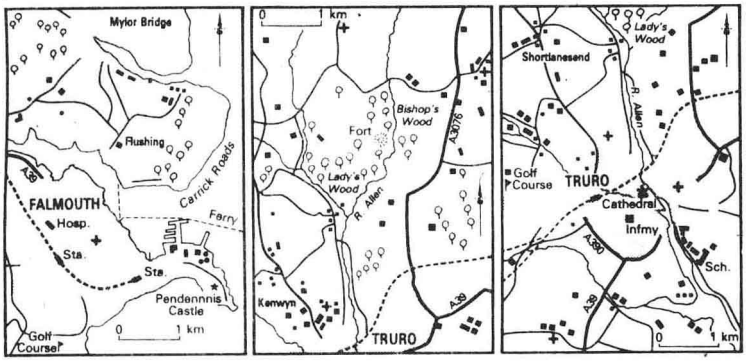
Suppose we are interested in population. Let's select something on Greater London from the 1981 census. The system gives us first a background map of the area and then uses the power of the computer to overlay that with a transparent coloured map of the district population, which goes, as you see from the white squares, where fewer than fifty people live, right through to the dark blue squares. And it shows you all kinds of interesting features: for example, when the population rose. And then I can ask it detailes questions: for example, the little pink spot in the top left — when was the exactly? How many people does that represent? How many people live within a radius of ten kilometres of that spot? And so on.

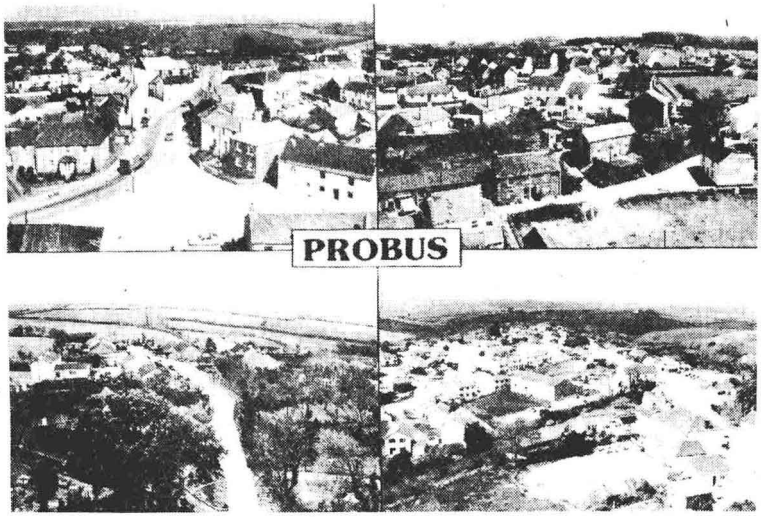
Take for example, the question, 'How many people own their own houses in this area?' Back to my menu, and this time enter Housing, and the same background map should produce a quite different overlay, with a new pattern of information contained in it for every kilometre square of Greater London, and immediately you will see a big change. In the centre of London where most people live, as we saw from the last display, in fact the fewest number of people own their own houses in this area so there's a striking comparison there. And we can ask the system to make a statistical comparison between these two displays.

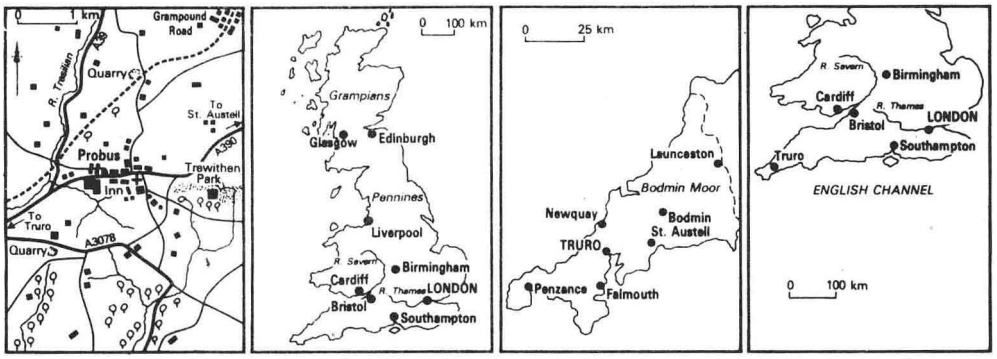
INFORMATION TRANSFER

2 (a) **Put the pictures below into an order that corresponds with the text, and place each of the captions under the correct picture.**

area north of Truro
Probus
Falmouth
Probus village centre in winter
Great Britain
Truro
Southern Britain
Cornwall







(b) **Draw the charts described below as accurately as you can, basing them on the information contained in the passage. The figures you use will have to be approximate.**

1 The readership of the *Daily Mail* in the south-east region, 1973-1984
2 The readership of the *Daily Telegraph* in the south-east region, 1973-1984
3 The regional sales of the *Telegraph* in 1981 presented as a bar chart
4 The same information presented as a pie chart

(c) **Draw a picture showing what you might see on the video screen at any point in the last section (on population density), saying which lines you are illustrating.**

COHESION

3 Choose the most suitable completion for each of the following sentences.

1 *it* (line 6) refers to
   A Falmouth.
   B the map.
   C the TV screen.
2 *we* (line 8) refers to
   A the speaker and the friends she is travelling with.
   B the speaker and the reader.
   C the speaker and the audience.
3 *up comes* (lines 11-12) means
   A moves upward.
   B moves.
   C appears.
4 *it* (line 18) refers to
   A Probus.
   B the system.
   C nothing.
5 *this* (line 29) refers to
   A the right-hand side.
   B a tabular display.
   C the system.
6 *it* (line 30) refers to
   A how many people read the *Daily Mail.*
   B the *Daily Mail.*
   C the south-east region.
7 *comparison* (line 35) means a comparison between the readership of
   A the *Telegraph* in different years.
   B the *Telegraph* and the *Daily Mail.*
   C the *Telegraph* and the other three quality newspapers.
8 *this area* (line 54) refers to
   A the little pink spot.
   B an area within a radius of 10 km of that spot.
   C Greater London.

BEFORE READING

4 **The following words are important in the next text. Proceed in the same way as in exercise 1 (a)**

above, without using your dictionary unless absolutely necessary.

access
alloy
almanac
application
archives
audio compact disc
bit (of information)
byte (of information)
catalogue
data
database
data communication (datacom)
digital
distribute
drive (noun)
economical/ly
hardware
laser
layer
mainframe
media
metallic
metallised
online
optical disc
output
pit
software
spiral
storage
thesaurus
track
update
widespread

READING TEXT TWO

MEMORY MEDIA

The idea of having over 500Mbytes of data storage attached to your personal computer may seem to be a prospect that is both exciting and a little worrying. After all, that is sufficient memory to store over a quarter of a million pages of written text — or enough books to fill over 50 feet of shelf space. However, this is the prospect offered by optical disk technology — an entirely new form of computer data storage media, a media which uses light rather than magnetism.

This media, in the form of the audio compact disc, has become familiar to most of us as a means of reproducing, and economically mass distributing, very high-quality sound recordings. The use of this technology for computer data storage has been a subject of much discussion over the last ten years, but little has been seen apart from a few very complex and expensive products aimed at the mainframe computer market. However, in the last two years this technology has started to become a reality, and promises to bring to personal computer users enormous data storage capacity and economical access to large commercial databases.

The development of optical disk technology for personal computer data storage has resulted in two different forms of optical drive and media. The most widely available and best developed is the CD-ROM. This is a read-only form of optical media which has been directly developed from the audio CD and is being used by an increasingly wide range of information suppliers to commercially distribute very large databases.

The other form of optical disk technology is just beginning to come on the market and is called WORM, which stands for Write Once Read Many. As this name implies, it is possible for the user to write data onto such optical disks as well as read data from them.

Applications

Visually, a CD-ROM is identical to a standard audio CD: it is a 12cm disk of plastic with a metallised layer sandwiched in the middle. The digital data is recorded on this reflective metallic layer on a long spiral track, with over 16,000 turns of the spiral on each inch of the disk surface. The data is stored on this spiral track as a sequence of tiny pits in the reflective metallic layer; these are read by a laser beam which scans along the track. Each pit corresponds approximately to a single 'one bit' and each reflective space to a 'zero bit'.

CD-ROMs are likely to attract a considerable number of users even though they cannot be used for recording user data; one reason being that they offer a serious challenge to online

databases and microfilm for the supply of specialist information. It is far more economical to put a 500Mbyte database onto a CD-ROM and distribute it to a range of customers than to perform an update of their databases using telecommunications links. To some extent the widespread application of CD-ROMs will be at the expense of datacom facilities and services. Data communications will only retain the advantage when database updates are very frequent.

The vast storage capacity of CD-ROMs, coupled with the relatively low cost of producing and distributing them, makes the optical disk the ideal medium for supplying databases which are not subject to rapid change. Databases which are suitable for putting on CD-ROM range from parts catalogues through collections of scientific abstracts, lists of all current books in print, and the financial history of all public companies.

The list of databases which are being placed on CD-ROM is growing daily. So far most are internal applications within large companies, but an increasing number are now being sold to the general public as either one-off publications or information services.

Another area of application for CD-ROMs is as computer-based reference books, which range from encyclopaedias and dictionaries to trade directories. Typical of this type of product is Microsoft's Bookshelf, which provides the user with a range of standard reference books on a single CD which can be accessed from a word processor or other program. The text can be examined and, if required, pasted into the user's text. The reference books available on this CD include a full dictionary, a thesaurus, a dictionary of quotations, works on writing style, grammar, an almanac of useful up-to-date information, plus a comprehensive guide to the best sources of business information. At the moment this is a US-orientated product, but it will not be long before a UK or European version is produced.

The price of material being produced for CD-ROM varies from under £100 to several thousand pounds; again, as the volume of sales increases, so prices should fall.

For the publisher, CD-ROM technology offers a whole new publishing medium which can mix standard text with static or moving graphics as well as sound or speech. Drive manufacturers are already producing hardware which can output high-quality sound as well as digital data, and a technique was recently demonstrated for storing up to 30 minutes of video film on a single disk, thereby opening up further opportunities for the publication of interactive video products.

The CD-ROM is also a product which is quite cheap to produce, thanks mainly to the enormous investment which has already been made in facilities to mass-produce and master audio CDs. Cost savings resulting from the similarity between audio CDs and CD-ROMs have also substantially reduced the cost of CD-ROM drives, where the hardware and much of the electronics are identical for the two applications.

Now let's look at WORM drives. Data is stored on a WORM disk in much the same manner as on a CD-ROM: as a long spiral of pits in a reflective metallic layer. The disks are, however, slightly larger at 133 mm and the metallic layer is a special alloy of Selenium-Tellurium which is sandwiched between two sheets of glass mounted in a protective cartridge. The special metallic film has been designed to evaporate easily and produce small pits when exposed to the light from a low-power laser.

Whereas the CD-ROM is essentially a means of cheaply and easily distributing large amounts of information, the WORM disk is a mass date storage device which complements existing magnetic data storage in the form of either floppy of hard disks. WORM disks will probably find their greatest application in creating information and data archives, where they will be used to replace paper and microfilm.

This is potentially a very large market, since over 95 per cent of the world's information is still stored on either paper or microfilm. The use of optical disks for such data archiving will have radical effects on the way people utilise and recover information since, like CD-ROMs, the WORM disks are also able to store digitised images, sounds and computer programs.

Although the user can write data onto a WORM disk, it is impossible to change the data once it has been written without writing a new copy of it. This means that systems utilising WORM disks will store a full record of all changes which have been made to a database. This feature will

prove very attractive to financial users since it will automatically provide them with data security.

COMPREHENSION

5 **Answer the following questions.**

1 What is an audio compact disc?
2 What do you think the letters ROM stand for?
3 What do the letters WORM stand for?
4 Explain in not more than 20 words the basic difference between what you can do with a CD-ROM disk and what you can do with a WORM disk.

COHESION

6 **Choose the most suitable completion for each of the following sentences.**

1 *This media* (line 7) refers to
  A a media which uses light.
  B a media which uses magnetism.
  C the audio compact disc.
2 The subject of *promises* (line 12) is
  A a reality.
  B this technology.
  C enormous data storage capacity.
3 *The most widely available* (line 15) means the most widely available
  A form of optical disk and media.
  B audio CD.
  C personal computer data storage.
4 *they* (line 30) refers to
  A CD-ROMs.
  B users.
  C user data.
5 The subject of *range* (line 38) is
  A parts catalogues.
  B databases.
  C CD-ROM.
6 *an increasing number* (line 42) means an increasing number of
  A internal applications.
  B large companies.
  C databases.
7 *it* (line 51) refers to
  A product.
  B this CD.
  C nothing.
8 *The disks* (line 67) refers to
  A CD-ROM disks.
  B WORM disks.
  C Both CD-ROM and WORM disks.

9 *when exposed* (line 70) means
A when the film is exposed.
B when the pits are exposed.
C when a low-power laser is exposed.

10 *they* (line 75) refers to
A information and data archives.
B WORM disks.
C floppy or hard disks.

REFERENCE BOOKS

7 **Look at the following extracts from different types of reference book. Label each of them correctly from the list below.**

1 dictionary
2 thesaurus
3 dictionary of quotations
4 work on writing style
5 grammar
6 almanac

(a)

Dayak 243 **dead**

of day; MAKE[1] one's *day*; MAKE[1] *a day of it*; **not** one's ~, time when things go badly for one; **on** one's ~, at time of one's best achievement etc.; ONE *day*; **one of these (fine)** ~**s**, before long; ORDER[1] *of the day*; *the* OTHER *day*; **some** ~, ***so'meday**, *adv.*, in the future; **that will be the** ~, it will be worth waiting for, (iron.) it will never happen; **(in) these** ~**s** *adv.*, nowadays; **those were the** ~**s**, past times were better or (iron.) worse; **one of those** ~**s**, a day of misfortune; TIME[1] *of day*; *a good day's* WORK[1]. **10.** ~**-bed**, bed for daytime sleep or rest; ~**-book**; account-book in which esp. sale transactions are entered at once came into use; day on which any operation is scheduled to begin. [f. *D* for *day* + DAY]

DDT (dĕdētē') *n.* white chlorinated hydrocarbon used as insecticide. [f. Chem. name *dichlorodiphenyltrichloroethane*]

de- *pref.* meaning (1) down (*depend*, *descend*), away (*defend*, *deduct*), removal (*decapitate*), completely (*declare*, *denude*), in a bad sense (*deceive*, *defame*, *deride*); (2) [thr. OF *des-* f. L *dis-*] removal or reversal, forming compd. vbs. (w. derivs.) from vbs. (*de-acidify*, *decentralize*, *decentralization*, *de-escalate*, *demoralize*, *demoralization*, *depressurize*, *desegregate*) and ns. (*defuse*,

---

decline

(b)

debtor
debtor 803 n.
debug
unravel 62 vb.
computerize 86 vb.
rectify 654 vb.
debunk
disclose 526 vb.
ridicule 851 vb.
shame 867 vb.
humiliate 872 vb.

decease
end 69 n.
decease 361 n.
die 361 vb.
deceit
deception 542 n.
deceitful
false 541 adj.
deceiving 542 adj.
cunning 698 adj.
deceive
shadowy 419 adj.
appearing 445 adj.
sophistical 477 adj.
erroneous 495 adj.
disappointing 509 adj.
false 541 adj.
deceiving 542 adj.
dechristianization, dechristianisation
irreligion 974 n.
decibel
commanding 737 adj.
decisive factor
cause 156 n.
deck
compartment 194 n.
layer 207 n.
basis 218 n.
paving 226 n.
roof 226 n.
overlay 226 vb.
dress 228 vb.

(c)

Collins 108

There Honour comes, a Pilgrim grey,
To bless the turf that wraps their clay,
And Freedom shall a-while repair,
To dwell a weeping hermit there!
Ode written in the Year 1746, 7

91 When Music, heavenly maid, was young.
The Passions, An Ode for Music, 1

which the OED gives precedence are *jailer & jaileress.*

(d) **garage,** like many other French words in constant necessary use (e.g. *billet-doux, bulletin, cadre, chaperon, commissionaire, cordon, coupon, employé, liqueur, restaurant,*

France or Frenchman is poetic or facetious. See SOBRIQUETS.

Gaulish. See GALLIC.

gauntry. See GANTRY.

gay makes *gayer, gayest, gaily, gaiety.*

gazogene. See GASOGENE.

1. BASICS
What is a sentence?

(e) **1.1** Traditionally the basic unit of language for the purpose of analysing its grammar is the sentence. But this immediately presents a problem: what is a sentence? There is no easy definition but, roughly speaking, an English sentence must have
(a) a subject (often a noun) that 'governs' the verb
(b) a finite verb (that is, a verb with tense).

GENERAL INDEX

(f)

BEFORE READING

8 **On the basis of the information in the previovs reading passage, try to decide whether the following statements are true or false *before* reading the next text. Correct your answers once you have read it.**

1 Optical disks hold more information than magnetic discs. T F
2 CD-ROM disk drives have not been made commercially yet. T F
3 There is now an internationally agreed standard for CD-ROMs. T F
4 Magnetic media will soon be replaced totally by optical media. T F
5 Magnetic media lasts longer than optical media. T F
6 Magnetic fields and X rays affect magnetic media. T F

READING TEXT THREE

OPTICAL DISK HARDWARE

CD-ROM disk drives for personal computers have been *commercially* available for nearly three years. The reason why they have not been *widely* available was not that they were initially rather

expensive, but that until September 1986 there was no internationally agreed standard for CD-ROMs. This lack of standards held up development of the market, as publishers of CD-ROM material were unwilling to invest in the production of disks in a range of different formats. The standards agreed by an association of all the major drive manufacturers and software companies known as the High Sierra Group and published as the *Yellow Book* have now removed this obstacle, and sales of both drives and CD-ROM publications are starting to boom. One manufacturer alone is making over 5000 drives a month and has plans for substantial increases in this volume of production.

Comparison

Besides the greatly increased storage capacity of optical media, in excess of ten times that of a magnetic hard disk of comparable size, the principal difference between optical media and magnetic media is that optical media is currently non-erasable. This non-volatility imposes limitations on the user which make it particularly important that designers of optical disk-based systems do not think of optical media in terms of conventional magnetic disk usage and programming practices. This primarily means that optical disks cannot be used as virtual memory in the way that most system designers use magnetic disks.

Virtual memory systems are those where disk storage is used to enlarge the system's memory by temporarily storing any data which is not currently required by the program. As soon as this data is required it is loaded back into RAM, a process which is entirely transparent to the user.

The non-volatility of optical disks also means that their file structure has to be carefully designed in order to make the best use of the system. Many CD-ROM systems exhibit poor performance because of the designers' 'magnetic disk think' which has considerably reduced the optical disk's performance. This file structure is further complicated by the large amount of data which can be stored on an optical disk and the fact that the data is stored in what is essentially a serial format.

The differences between optical disks and magnetic media mean that they cannot, given the current state of development, be considered as replacements for conventional magnetic disks. Optical disks must instead be seen as complementary products which have their own unique strengths in certain specific applications, and which overcome some of the weaknesses of magnetic disks.

The non-volatility and relative durability of optical media has given it considerable appeal in applications involving data archiving. The reliable life of magnetic media is quite short — it is usually recommended that valuable data is re-recorded every four years. Optical media has a much longer life — well over ten years — and is far less vulnerable to environmental hazards such as magnetic fields or X-rays than any other form of data storage.

The future

The application of optical disk technology to computer data storage is in its infancy. Large sums of money are being invested by companies like Sony, Kodak, Hitachi and 3M in the development of new optical media, and in particular media which is capable of true multiple read/write. There have been some major advances in the laboratories of these companies over the last few months, and it looks increasingly likely that these new forms of media will start to come onto the market within the next five years.

With the advent of multiple read/write media, the optical disk will at last take its place as a competitor and replacement for magnetic disks.

The other branch of the optical disk family, the CD-ROM, is now a relatively mature technology and has a considerable number of users and manufacturers. This is a product which we will all probably be using within the next few years, with the number of users accelerating rapidly as prices fall and the number of CD-ROM publications increases. Many people have predicted that the CD-ROM will replace books as a publishing medium: this I doubt, but optical disks will certainly occupy an important position in the supply of information. The importance of CD-ROMs in the supply of information is underlined by a recent report from the market research company, Frost and Sullivan, which showed that by 1990, the market for CD-ROMs in the US alone would be worth over $2.5 billion per year. All the indicators seem to

point to the rumblings of an optical disk revolution.

COHESION

9 **Choose the most suitable completion for each of the following sentences.**

1 *published* (line 7) refers to
- A the standards.
- B the High Sierra Group.
- C an association.

2 *both* (line 8) refers to
- A drives and CD-ROM publications.
- B optical drives and magnetic drives.
- C CD-ROM and WORM drives.

3 *it* (line 21) refers to
- A the program.
- B this data.
- C nothing.

4 *they* (line 28) refers to
- A the differences.
- B optical disks and magnetic media.
- C optical disks.

5 *which* (line 31) refers to
- A applications.
- B complementary products.
- C strengths.

6 *which* (line 41) refers to
- A media.
- B development.
- C money.

7 The subject of *has* (line 48) is
- A a relatively mature technology.
- B the CD-ROM.
- C the optical disk family.

8 *which* (line 54) refers to
- A a recent report.
- B the market research company.
- C Frost and Sullivan.

FURTHER PRACTICE

10 **Scan reading texts 2 and 3 to find the following information as quickly as possible.**

1 The diameter of a CD-ROM disk _____.
2 The diameter of a WORM disk _____.
3 The maximum amount of data that can be stored on a CD-ROM disk _____.
4 The number of turns of the spiral on an inch of the surface of a CD-ROM disk _____.
5 Price range of material being produced for CD-ROM from _____ to _____.
6 Maximum amount of video that can be stored on a CD-ROM disk _____.

7 The alloy used in WORM discs is a combination of Selenium and _____.
8 _____ per cent of the world's information is stored on paper or microfilm.
9 Magnetic disks have a life of about _____ years.
10 Optical disks have a life of about _____ years.