

BRITISH BROADCASTING CORPORATION  
**aiv**  
ADVANCED INTERACTIVE VIDEO

T H E D O M E S D A Y P R O J E C T



The first Domesday Project was completed in 1086. The survey took a year, and the results were recorded on parchment with quill pens. William the Conqueror commissioned the Domesday Book to assess the wealth and resources of the kingdom after 20 years of his rule. A great achievement for its day, it is still a main source of information on 11th century England.

The next Domesday Project, finished 900 years later, took two years to complete. It uses Advanced Interactive Video technology to present, as no other survey before, a detailed portrait of the United Kingdom and the life of its people, around a million of whom helped to bring the project to a successful conclusion.

If printed, the results of the 1986 Domesday Project would fill over 300 volumes, and would be deposited in libraries to be consulted by a small band of scholars. Instead they are recorded on discs which are 'read' by a laser in an advanced computer-controlled interactive videodisc system.

This system, which includes a BBC Master Series Microcomputer and a BBC AIV LaserVision player, manages and presents a massive amount of information with speed and simplicity. Using keyboard or trackball, the enquirer has immediate access to maps, photographs, aerial views, descriptions, statistics, charts and moving video sequences. Never before has so much information been available in so small a compass, and never has it been easier to use.



AIV SYSTEM

### Using Domesday

Since the high technology looks after all the complexities of accessing the information, using the Domesday discs could not be simpler.

The *National Disc* contains information on the *economy, culture, society and the environment*. You can locate the information you want by starting at one of these and specifying progressively more precise keywords—using the trackerball—as you home in to the subject. For example, at each stage the system will tell you what it has available as text, data or pictures on the subject of your choice (see example below). Alternatively, if you can already specify the keyword you want, you can type this in immediately. At whatever level you start to explore the subject you can find your way to what you need to know.

This 'discovery learning' aspect is illustrated in an informative and entertaining way by the Domesday Gallery, a visual index for the user, and by what are

known as 'surrogate walks'. Some of the 20000 photographs on the national disc are used to present a series of contemporary environments: typical houses, a market town, a farm, and a nature reserve. Using the trackerball you can explore these environments as if you were walking into them, going through doors, round corners and discovering what is going on there in precise photographic detail.

The *Community Disc* is based on Ordnance Survey maps and the information it contains can all be accessed from these maps. The user moves from map to map, either horizontally (moving across the country on maps at the same scale) or vertically (moving to a map at another scale). At each level, text and photographs are instantly available, including satellite views for the larger areas.

It is even possible to use the system to measure accurately and automatically the distance between two points on the map, either directly or by road, or the

area covered within any boundaries you set.

The user can move through the system in four ways:

- by entering a place-name
- by entering a grid-reference
- by specifying a keyword
- by 'map-walking'—i.e. moving across the map by means of the trackerball.

Using the Community Disc in this way is like a journey of exploration. At any point you can move along a road, check where you are generally by 'zooming out' to a larger scale map, or find out more about places of interest by 'zooming in' and requesting photographs and text information. As a desk research tool for anyone who wants to know where places are, what they look like, and what goes on there, the Community Disc is an unrivalled resource.

### Hardware and Software

Information on the Domesday discs is made simply and instantly available through an Advanced Interactive Video system—the most advanced system of its kind commercially available today. There are four main elements:

- the National and Community Discs
- a Master AIV microcomputer from Acorn Computers, incorporating a Master I28 with Turbo Coprocessor, Videodisc Filing System, Small Computer System Interface (SCSI) and a trackerball
- a front-loading BBC AIV LaserVision player specially developed by Philips Electronics, incorporating LV-ROM
- a colour monitor with audio.

The system is able to access and display both visual material and data from the same disc. So, for example, you may wish to call up a map of an urban area and superimpose data on it.

For example, the enquirer might select CULTURE from the first menu ...



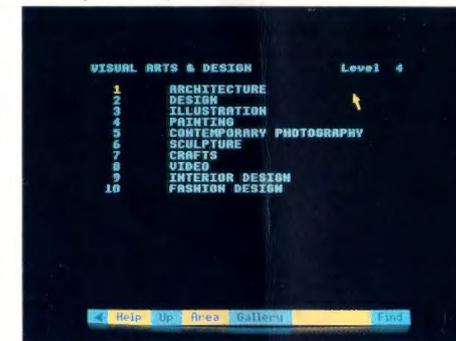
then narrow the focus by selecting ARTS and ENTERTAINMENT ...



moving quickly from VISUAL ARTS & DESIGN ...



to the specific subject area of ARCHITECTURE.



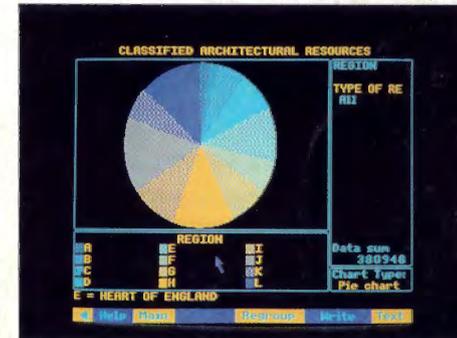
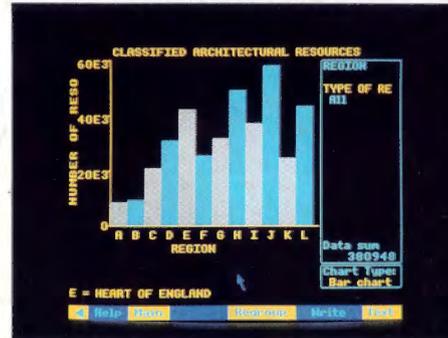
It is also possible to compare data in various ways, and the system will present it in bar charts or pie charts, at your choice. All this is done by combining visual information with data which in turn is managed and presented by the microcomputer.

Not only does the system offer the ability to access an extensive and varied database and to use it in conjunction with high quality still and moving pictures and sound. It also produces a superior still-frame display and allows the accurate overlaying and mixing of pictures with computer-generated data and graphics.

Quite apart from the value of the information on the discs, the system itself is a milestone in the development of information technology.



The enquirer is now offered a choice of data, text or pictures, from which a suitable photograph might be chosen. Alternative data might be selected and displayed in a variety of ways.



THE FRIENDLY SYSTEM

Domesday is not merely an improved information system. It is the first system to assemble so wide a range of information at a single source, and to present that information *interactively*, responding constantly to the needs of the enquirer.

**Schools and colleges** will have a discovery-learning system on a scale never imagined before: a nationwide, multi-level, multi-media collection of facts and images, organised for rapid access. If you enjoy, and benefit from, explorative learning, Domesday is for you.

**Libraries** will have a rapid and interactive method of locating information. Instead of scanning subject catalogues, locating books, finding pages and searching text—and then doing it all again for the next reference—the system will lead readers straight to their subject material. This will be particularly valuable for enquirers who have to look through the subject before knowing exactly what they need—as a browsing tool, the Domesday System is unrivalled.

**Commercial organisations** will have a means of assessing likely market areas. National and local government statistics, locally written descriptions, maps, pictures, charts and tables can be accessed without moving from the office desk. Facts can be checked without so much as picking up the telephone. Most important of all, the speed and accessibility of the Domesday System allows you to locate and compare information on demand, as you plot your transportation network, select sites for warehouses, or solve any other problem that requires detailed local information.

**Tourism and travel organisations** will have the technology to provide answers to all those broader questions with which the timetables and travel brochures cannot help. For the first time it is possible to explore the country on screen, plotting routes, measuring distances, viewing the landscape, displaying prominent features, locating descriptions of an area.

**Land and estate agents** will have unique and very impressive technology to demonstrate the characteristics and amenities of their area. Maps can be displayed at many levels of scale. Photographs both from the air and from ground level can show the style and appearance of an area, and save a good deal of



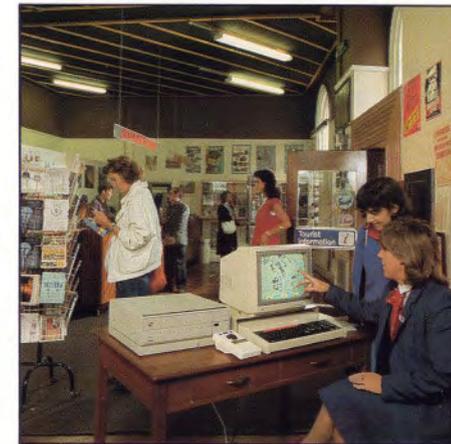
travelling time both for the agent and for his client. Local and regional information can be presented instantly.

**Courier and distribution services** will have instant access to large-scale maps, with associated information. Imagine being able to measure any distance by road, simply by tracing along the line from the start to the

end of the journey and then asking the computer to work it out for you, or planning routes with a multi-level, nationwide set of maps, instantly available on screen.

**Local and national government offices** will have an instant database which not only gives them facts, but which assembles associated information from a wide

perspective. There is no such thing as an isolated fact in the Domesday System. Every list, every table, every map, plan and photograph is linked to everything else in the system, and it is all available at the touch of a key.

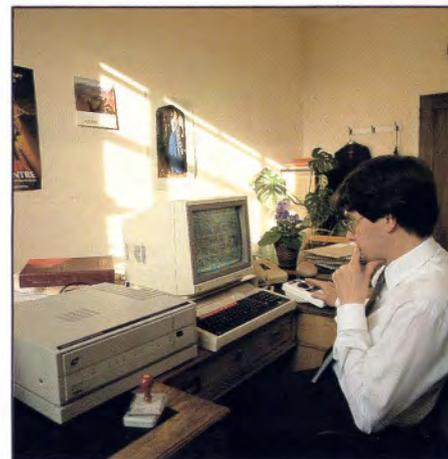


*Writers and journalists* will be able to assemble facts, events, opinions and images relevant to their interests in a comprehensive and coherent way never possible until now from any single source. In the right hands the Domesday System could work as an ideas-generator, tracing connections never noticed before, and giving the writer a new and striking view of a wide variety of subjects.

*Film and television companies* searching for locations will be able to check the appearance and facilities of an area without leaving the office, calling up aerial photographs, maps and plans, descriptions, pictures of prominent features, and a mass of background information. In all such applications where a wide survey is needed before getting down to detail, Domesday saves time and money.

*Regional Development Agencies* and local and district development organisations will have the means of displaying facilities of their areas, comparing them with other areas, answering questions, and presenting facts. Domesday's high technology presentation could be a crucial factor in convincing would-be investors.

For all who share an interest in the world around us, here is a new dimension in our experience: a uniquely simple way of exploring our surroundings in the broadest sense. It is also, in its technology, a look into the future.



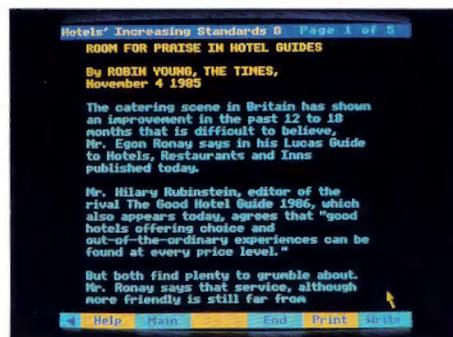
# TECHNOLOGY FOR IDEAS

### The National Disc

This brings together data, text, and pictures on a wide range of subjects, including a substantial video record of Britain in the 1980s. Sources include the 1981 population census, the General Household Survey, the Family Expenditure Survey, and the BBC's own *Daily Life in the 1980s*. The texts are drawn from newspaper and magazine articles, extracts from *Hansard*, and specially commissioned essays. Local information includes land cover and amenities.

The information is organised into four main groups:

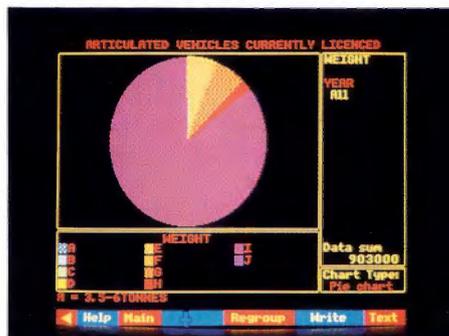
**CULTURE**—including arts, beliefs, language, leisure, religion, sports, customs, fashion, media, crafts, festivals . . .



**ECONOMY**—including personal finance, national economy, industry, public sector finance, labour relations, prices, consumption . . .



**SOCIETY**—including education, health, housing, defence, welfare, people, events, transport, communications, law and order . . .



**ENVIRONMENT**—including conservation, climate, agriculture, ecology, pollution, soil surveys, water resources, urban environments, wildlife, landscape, oceanography, energy . . .



In all there are some 9000 sets of data on the National Disc, all organised for rapid access through a simple system of keywords, which allows you to range widely over the subject matter of the disc, and to home in on the subjects that interest you.

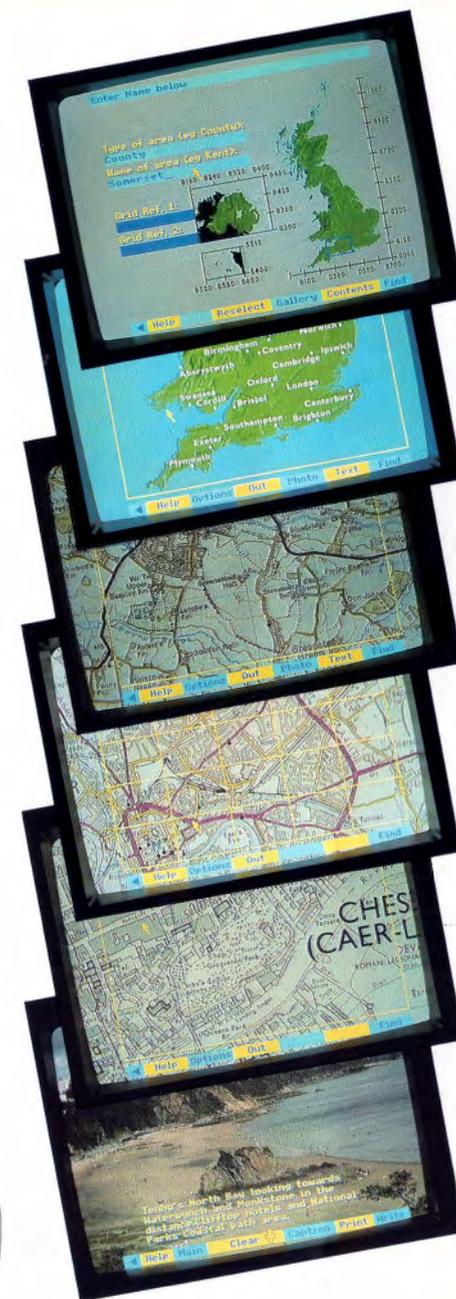
### The Community Disc

The Community Disc contains some 150000 screen pages of text and 20000 photographs, yet in spite of this massive amount of data it is probably the easiest part of the system to use.

The organisation of the disc is based on some 24000 Ordnance Survey maps arranged in six levels with text and photographs available at each level.

- Level 0—The United Kingdom, including the Channel Islands, Orkneys and Shetlands: satellite photograph, text
- Level 1—Countries and island groups: satellite photograph, text
- Level 2—40 X 30 km regions: satellite and aerial photograph, text, maps
- Level 3—4 X 3 km local blocks: community photographs, text, maps
- Level 4—Street maps: special feature photographs, text
- Level 5—Floor plans of special sites: special feature photographs, text.

The enquirer can enter the system at any level, by typing in a place name, a regional description, a grid reference, or by using the trackerball to move a pointer on the screen. At any level it is simple to move across the map, to access photographs, descriptions and data, or to move to levels above and below.



The work of gathering the facts was managed by the British Broadcasting Corporation. The project team, together with data sub-contractors at universities and research institutions, sifted and collated vast quantities of information from all over the country, and coordinated software and technical teams, system designers and manufacturers.

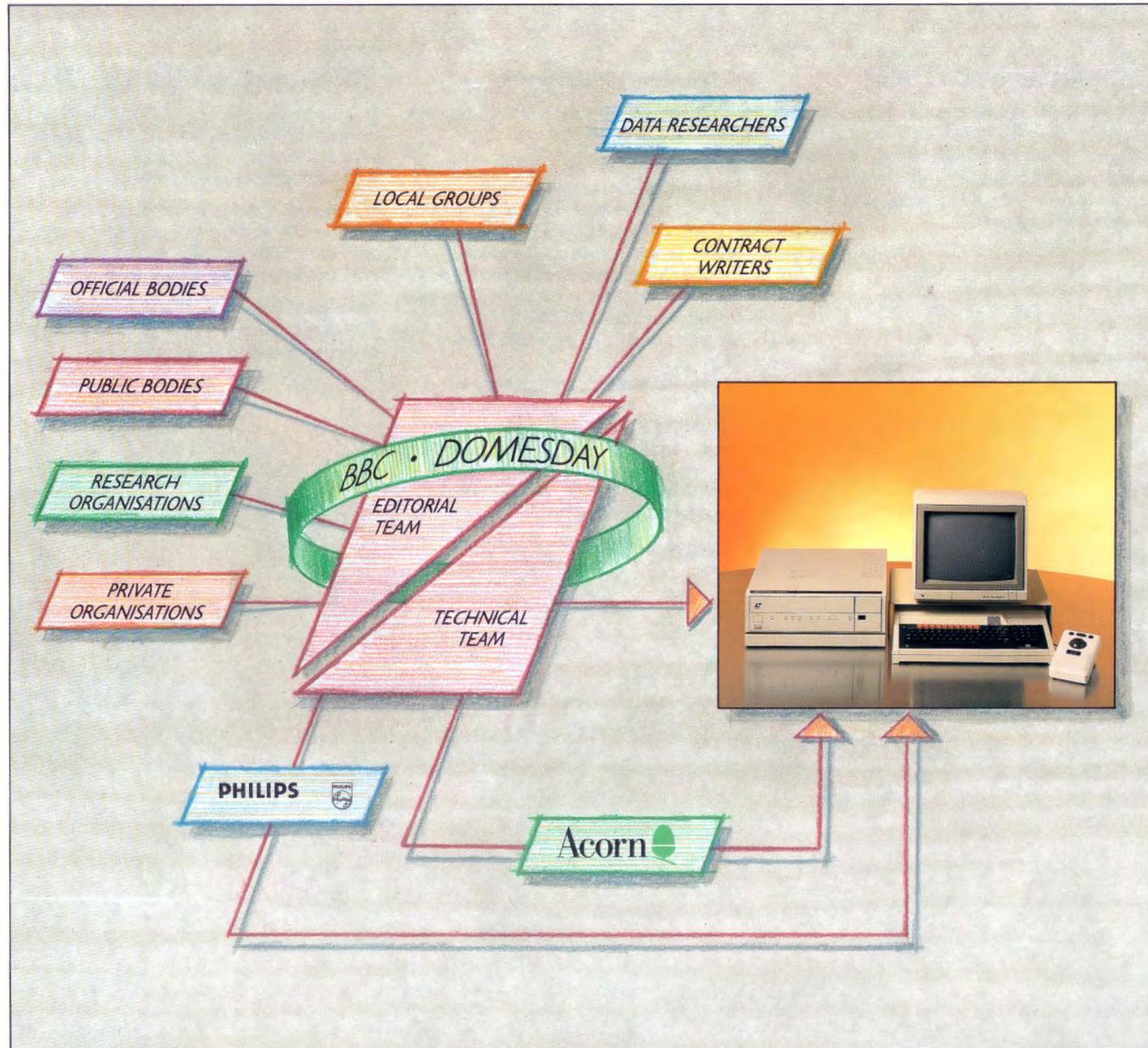
#### Data from national sources

Vast quantities of data available from official and public sources were assembled and presented as text, statistics, diagrams and overlays on maps. Some 22000 photographs have been selected to illustrate almost every facet of Britain in the 1980s. Representative contemporary articles and reports have been selected and over 2000 text items and specially commissioned essays have been included.

The result is the most comprehensive source of information on the life of the nation available today.

#### Data from local groups

Over 15500 schools and community groups gathered local information. Each covered one or more 4 x 3 kilometre blocks, sending in data, descriptions and photographs of their local communities. A team of specially trained readers at Loughborough worked for eight months scanning and processing this material.



### Domesday Discs (LV-ROM format)

The LV-ROM format allows up to 324 Mbytes of digital data to be stored on the LV-ROM disc (read only) as well as up to 54000 analogue video frames. Data may be replaced with analogue audio where required on disc, allowing either video/data or video/audio to exist simultaneously at any point.

### BBC Master AIV Microcomputer

This is a derivative of the Master Series microcomputer made by Acorn Computers Ltd incorporating:

- all the features of the Master 128, with 128 Kbytes of memory, including 64 Kbytes main memory; 64 Kbytes sideways memory; 128 Kbytes ROM (BASIC, EDIT, VIEW, VIEWSHEET, ADFS, DFS, and operating system with extended graphics); interfaces for disc, cassette, parallel printers, serial RS232, user port, 1MHz bus, analogue, RGB, video)
- the Turbo Coprocessor (65C102)
- the internal Small Computer Systems Interface (SCSI)
- a trackerball for selecting items on the system display
- a Video Filing System ROM. This is a combined filing system and service ROM for reading data and programs from LaserVision discs in the LV-ROM format. It also provides software support for the trackerball and display pointer.

A kit to upgrade the Master 128 to Master-AIV is available.

### BBC AIV VP415 LaserVision Player

Front-loading BBC AIV LaserVision player specially developed by Philips Electronics to read and transfer digital data to a host computer system, and to read and display video pictures from a LaserVision disc.

The LaserVision Disc Player incorporates a semi-conductor laser, electronic time-base corrector with sync inserter, RGB output, RGB graphics overlay, LV-ROM decoder, and RS232 interface.

An integral SCSI allows data down-loaded from an LV-ROM to be output to an external computer as well as enabling commands to be sent to the player.

### Colour Monitor

14 inch medium resolution (600 lines) monitor with 0.42 mm dot pitch etched tube and amplifier/loudspeaker.

Inputs are provided for CVBS (via phono socket), linear (analogue), RGB (via Euroconnector), TTL RGB (via DIN) and audio (via phono socket).

User controls allow adjustment of brightness, contrast, saturation, sharpness, height, width, horizontal centring, vertical centring, green screen only, scanning time constant, and volume.



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The monitor stand in the photographs in this brochure is not part of the AIV System as supplied by Acorn Computers Ltd, British Broadcasting Corporation and Philips Electronics Ltd.

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