THE BBC DOMESDAY PROJECT

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Less than two years old, the BBC Domesday Project is nearing successful completion of a dramatic new mixed-media information resource on all aspects of UK life in the 1980s. With the hardware manufacturers Philips Electronics and Acorn Computers, the BBC has developed an advanced form of interactive videodisc that stores huge quantities of digital data alongside analog television on an optical disc. This technology has been used to compile a comprehensive selection of the UK's holdings of public information, combined and contrasted with new data and views contributed by schools and other members of the general public.

HISTORICAL BACKGROUND

In 1086, William I ("The Conqueror") completed a survey of his new territory in England, recording details of the land: its ownership, usage, value and tax liability. The results of this remarkable work were written carefully on sheets of parchment for public reference. Being the first national survey it was, by definition, the only documentary evidence available and therefore incontrovertible. In the public mind the survey had an authority comparable with the day of judgement itself and hence the survey came to be known as "The Domesday Book".

For centuries the Domesday Book has been a benchmark for historians and researchers as a unique encapsulation of a whole era. Its fiscal data quickly became out of date but the peripheral details included in the sworn testimonies of the ordinary people of the time provide much additional colour and amount to a revealing portrait of daily life in the eleventh century.

Nine hundred years later, the Domesday Book still physically exists, preserved by the Public Records Office in London. Its durability and continuing importance is worth commemorating and throughout 1986 there has been a series of celebratory events. As part of the planning for these celebrations, BBC Television was approached with the idea of producing documentary programmes on a Domesday theme. This suggestion was developed by Peter Armstrong, an Executive Producer in BBC TV's Network Features department and the man responsible for major programs such "Everyman", "Sea of Faith" and "Global Report". In thinking about Domesday, Peter had the idea of creating a new Domesday survey to be for our time what the original had been for the Norman era. He broached this idea with the BBC who accepted the concept as a new but relevant adjunct to public service broadcasting, and so the Domesday Project was born.

THE DOMESDAY CONCEPT

Despite its historical significance, the original Domesday Book was limited in scope, being primarily a fiscal document. The new Domesday was always conceived to be far more general, aiming to make a comprehensive compilation of what there is to know about UK life in the 1980s.

Such a compilation would be a valuable legacy for the future, but also of great...
practical use today. Whilst there seems to be

copious data in the public domain, in fact
much of it is difficult, if not impossible for

most people, including professionals to

access. It resides in printed reports or in

expensive and exclusive databases. Often

the material is stored in obscure formats and

collected on bases which defy inter-

comparability. If the new Domesday could

bring together a sufficiently large and

broadly-based collection of general

information and present it in a compact and

manageable form, it would have clear and

immediate potential for education and

information generally.

Some important guiding principles were

established. First and foremost this must not

be the "BBC" view of things but, as far as

possible, the collective and objective view by

and of the whole nation. Secondly, the

resource would need to encompass material

in a variety of media, including pictures,

maps, film, and sound as well as

conventional text and data. Thirdly the cold

view portrayed by the "official" records

preserved in archives, libraries, databanks and

government statistics would be

inadequate without some expression of the

popular view by the people themselves,

revealing how they felt about it all, from their

local point of view.

From the very beginning, therefore, the

Domesday Project set out to harness the

advice and the active co-operation of

virtually everyone in the UK, from the

experts familiar with the UK's store of factual

information, through the education system,

to the general public itself.

THE TECHNICAL FORMAT

A modern Domesday should make use of

new technology and incorporate audio-

visual material as well as digital data.

Interactive video was a logical choice.

However, when the project started in late

1984, interactive video dealt only with the

analog television, with digital software, and

indexes supplied to the controlling

microcomputer on separate magnetic

media, usually floppy discs. The capacity of

magnetic media was quite inadequate for the

Domesday purpose so, in co-operation

with Acorn Computers, the BBC's

established partners in computer literacy,

Philips Electronics, the European

manufacturer of Laservision videodisc

systems and supported by the Department

of Trade and Industry, the Project set out to

harness the phenomenal data-storage

capacity of the optical disc and devise a new

system whereby digital data could be stored

alongside analog television on the videodisc

itself.

In the format which has been achieved:

LV-ROM (Laservision read-only memory),

each disc holds, in addition to its full

complement of 108,000 video images, 324

megabytes of digital data. Philips have

developed a new generation of Laservision

television videodisc players capable of replaying

the data as well as the video from an LV-

ROM disc and Acorn have devised a new filing

system and interface to allow one of the new

BBC Master Series microcomputers to

control the system. On publication of the

Domesday Discs later in 1986, the

Domesday system will be complete.

It is unlikely to remain long as a single

hardware configuration. Other micro-

computer manufacturers are already

working to make machines in their ranges

compatible with the Domesday system and

very shortly after the publication of the discs

it is likely that Research Machines "Nimbus"

and the IBM PC family will be Domesday-

compatible.

Domesday is a flexible technology, adaptable to meet various needs and cost-
ranges. The initial version announced in

1986 will be a powerful configuration

demonstrating much of the potential of this

new information medium. We have plans,

however, quickly to develop adapted

systems to meet users' specific needs. For

example, not all educational establishments

will be able to afford the cost of the full data-

processing system. An economical, primary

access version designed for use in schools,

focussing on the use of the visual material

as an add-on to existing and conventional

hardware, will be available in the first half of

1987. At the other end of the scale we will

be interested to hear from more

sophisticated users whether we ought to be

considering advanced versions of the system

capable of network use, possibly in

conjunction with cable systems. Finally the

implications of CD-ROM technology, used in

conjunction with LV-ROM, are also under

active consideration.

THE DISC CONTENTS

There are two Domesday Discs:

"Community" and "National".

THE COMMUNITY DISC holds maps

pictures and text portraying areas of the UK

at various scales. There are 24,000 maps

photographed from Ordnance Survey sheets

and varying in scale to show the whole

country on the screen, down to areas only

4 km level, this material has been

contributed by a nationwide volunteer

survey spearheaded by schools. All the UK's

primary and secondary schools were invited

to take part in this effort and 14,250

accepted: nearly 50%. Beyond schools,

Scout and Guide troops, Women's Institutes,

Nature Conservancy Groups, Rambling and

Walking Societies, community groups of all

kinds and even individuals and families took

part in the survey. Each group "adopted" a

4km x 3km block of the map and, within a

general briefing provided by the Project,

prepared up to 20 pages of written

description and four photographs about what

they, in conjunction with local

residents, considered interesting, relevant or

even worrying about the area. They also

collected some statistical data for each

individual kilometre square in the block,

including an assessment of land-cover and a

count of important amenities. At higher

levels, the text and pictures on the

Community Disc derive from professional

sources with topographical essays written by

members of the Geographical Association

and important material prepared by the

Automobile Association. There is also

complete coverage of the country in aerial

and satellite photography.

Use of the Community Disc is by locating

a map which covers an area of interest and

calling up the related text and photographs.

Maps can be located directly or by stepping

cross the country, a technique known as

"map-walking". There are also

comprehensive indexes on the disc so that

pages of text and photographs can be

retrieved by topic or grid reference and maps

can also be identified by over 250,000 place-

names in the Ordnance Survey Gazetteer

stored on the disc.

THE NATIONAL DISC holds the material

collected from the UK's recognised sources

of public information, ranging from

government surveys to information from

universities and research groups, libraries

and archives, picture agencies, commercial

researchers, companies, professional

associations, private individuals and the

BBC's own holdings. Text is included from

published sources, together with new essays

commissioned by the Project from eminent

experts. There are also 60 minutes of

moving video with sound.

Retrieval of all this material is by topic,

using a variety of index-search methods.

Results are presented to the user in a variety

of colourful and dramatic displays which can

be modified interactively to highlight

precisely the effect required by each


Page 46

AUSTRALIAN EDUCATIONAL COMPUTING OCTOBER 1987
particular user. The National Disc also includes a number of "surrogate walks", a unique feature of interactive video in which a physical environment is photographed exhaustively, every view from every viewpoint, and all resulting pictures — perhaps several thousand — are stored in an organised sequence on the disc so that each can be retrieved by the controlling system. The user can them "walk" at will in the environment, with the system always displaying the correct view on the screen. In this way the National Disc has captured six different kinds of house, a farm, a city centre, a market town, a farm and a moorland walk.

EDITORIAL PHILOSOPHY
The choice of material for the Domesday Discs was guided by our aim to show what it is (or ultimately was) like to live in the UK in the 1980s. In this we have been guided by an Editorial Board of professional experts and a variety of advisory committees on specialist matters. The discs are a "slice through time" and contain no real historical data, other than that necessary to illustrate a current trend. Neither are they encyclopaedic in scope. They do not seek to provide answers to all questions. For instance, they will contain virtually nothing on nuclear physics, but a lot on the nuclear debate.

THE EDUCATIONAL CONTRIBUTION
Although it will benefit a wide variety of users, the Domesday Project has its roots firmly in education. In opening up the discs for schools and others to record their personal views we recognised great educational value in the data collection process as well as the use of the final discs. From the beginning, therefore, we have involved educational and local authorities in the community aspects of the Project. All confirmed that the kind of project work envisaged was in line with perceived initiatives to increase pupils' awareness of environment and community issues and to promote greater contact between school and community.

Tested in a pilot study, the Domesday data collection was carefully designed to form part of the mainstream curricular work in school and reaction to its benefits has been universally good.

THE IMPLICATIONS: IMMEDIATE AND LONGER TERM
The Domesday Discs are not in themselves a learning package. "They are simply a powerful resource and the imagination of a teacher or other user will be required to derive maximum benefit from their use. As such, they are a challenge to the very role of information in education and daily life. The good teacher may well appreciate not being "cut-out" of the dialogue between system and user. The less creative teacher will be dismayed by the lack of pre-prepared courseware. Where there is a need for specific educational software packages, of course, the Domesday Discs provide a tremendous fund of raw material with which future software producers can work.

BBC plans to follow up the Domesday Discs with further electronic publications capitalising on this new medium. We also plan to co-operate with any other publishers or manufacturers who wish to take part.

In the longer term we hope to have provided education with a powerful new generation of teaching aids, but even more importantly, we see this as the first step towards meeting the challenge of a new generation who are beginning to perceive the television screen as much more than a passive, linear medium. The need to stop and enquire further, to explore, control, manipulate and alter course, all present a challenge to the producers of electronic media. Broadcasters as well as educationalists must gear up to meet this challenge and in this context we felt that in the Domesday Discs we may be catching our first glimpse of television in the 21st century.