

## Putting the public in the picture: an interactive video applications generator

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### 4.1 Introduction

The York Archaeological Trust Interactive Videodisc project aims to allow the general public direct access to the Trust's pictorial archive. The project is based at the Trust's newly opened Archaeological Resource Centre (the ARC) at St. Saviour's church in York.

The medieval church of St Saviour stands in what was once a fashionable Georgian area of York. It was made redundant in 1952 and from that time has been used by various organisations as a warehouse. The York Archaeological Trust acquired it for this purpose in 1974 as sub-tenants of the York Civic Trust.

The building was already in a very poor condition and if demolition was to be avoided a programme of costly and extensive restoration needed to take place. A 75 year head lease was acquired from the York Civic Trust in 1984 for a pepper-corn rent. The York Archaeological Trust was then in a position to put money into the building. To date, a total of £545,000 has been spent.

It was the York Archaeological Trust's intention to renovate and save this historic building whilst at the same time provide storage and office space in the centre of York. St. Saviour's Church was also to house the ARC.

The ARC is an extension of the Trust's charitable aims; to educate the public in archaeology. The ARC allows people of all ages to work alongside professional archaeologists, to handle objects from excavations and to explore how they were made as apposed to the traditional museum approach. Visitors are actively encouraged to touch the exhibits and to use reconstructed technologies such as Viking age weaving looms. It is into this environment that computers and interactive video have been introduced.

The public are able to use three different computer applications: a finds recording system, a computer aided design (CAD) system and an interactive video. All three try to illustrate the different uses to which archaeologists put the computer.

The finds systems mimics the computerised recording system in use by finds research staff on the first floor of the ARC. The public are able to enter information about a selection of small finds. The 'conversational' approach of the software combined with extensive data verification makes it impossible to enter incorrect information. They can then produce a report complete with their own name. The CAD system allows a less extensive level of interaction and is intended more as a demonstration of such a package.

The interactive video application preempts the way in which archaeologists will handle site archives in the future. Initial software development has taken place using an assemblage of excavation slides from the Coppergate excavation in York. These slides were included on the videodisc

pressed in 1988 by the Leicester Interactive Videodisc project (see Ruggles 1988 and Ruggles, this volume).

Existing authoring software was either found to be unsuitable or very expensive. The Trust decided, therefore, to write its own applications generator using CLIPPER, the language in which all the Trust's existing in house database applications are written.

### 4.2 The Coppergate interactive video application

#### 4.2.1 Hardware

The equipment used for both development and applications is the Microvitec 'Insight' system, Incorporating a Videologic M.I.C. 3000 card and touch screen. The M.I.C. 3000 card allows the 'playing' of analogue images and has its own set of rather limited commands such as 'PLAY', 'STEP', 'FADE' etc. It does not allow the conversion of analogue images into digital form.

#### 4.2.2 Initial design and linking of slides

The applications generator created is extremely flexible and allows any computer-generated images or text to be changed at any time during the running and building up of an application.

It therefore enabled the Trust to make excellent use of a set of interesting but quite disjointed slides of the Coppergate excavation to build up an exciting application specifically for use in ARC.

The Coppergate application allows the public to journey along different paths through the videodisc images of the Coppergate excavation. The pathways linking images are all predetermined but the choice of route is interactively decided by the users at a run time by touching the appropriate area of the screen.

These pathways are depicted by symbols which overlay the video image, the symbols only appearing for existing relationships. The user may choose to go 'LEFT', 'RIGHT', see the 'NEXT' slide in a sequence or even 'ZOOM' to another slide. The 'ZOOM' gives a closer look at a particular detail of the previous slide. All 'ZOOMS' are remembered by the system, enabling the user to retrace his steps back through the slides; a 'MOVE BACK' symbol is displayed in the bottom left corner of the screen.

As the user views the slides, relevant textual information is displayed, questions are asked, and features meriting special attention are highlighted. A more advanced level of information can be accessed by the more specialist user.

It would even be possible to present such information in other languages.

#### 4.2.3 'MAP' facility

At key points, a simplified site map may be accessed indicating the users current visual position on the excavation. From here, the user may select a particular period that is of interest or choose to run an introductory sequence that sets both Coppergate and the interactive video in context. To recreate the idea of 'digging down' into history, the slides are separated into five different periods: modern, medieval, Viking, Anglian and Roman. A 'MAP' symbol at the bottom right of the screen indicates possible access to the map.

Each period is given a brief introduction, and the user is then free to 'walk' around the slides as desired.

#### 4.2.4 'Hidden' zones

After undergoing trials with groups of 8-10 year old children, it became obvious that young children are often uninterested in reading any text at all, unless directed by an adult. They are more interested in touching the screen symbols and watching the computer respond. They are therefore learning how to use the system, but not gaining any knowledge of the archaeology. By introducing 'hidden touch' areas of the slide the children are unwittingly informed as to the content of the slides.

#### 4.2.5 Applications Generator

An application may be developed by using the edit facility. In edit mode, links and text may be created, deleted or changed.

Some links between slides represent physical, spatial movements whilst other links may be continuations of a

theme or just the next slide in a sequence. These two types of link are fixed and represented by the screen symbols 'RIGHT' and 'NEXT'. When created or altered by the edit facility, the target slide is automatically given the reciprocal relationship of 'LEFT' or 'LAST'. The reverse is also true. Other pairs of fixed relationships may also be defined as required e.g. 'UP', 'DOWN'.

'ZOOMS' and 'hidden touches' may be created or edited, allowing a maximum of 10 for each slide in this application. The system maximum is 1920. The size, location and target of a 'ZOOM' can all be determined. Text can be input for 'Hidden touches'.

Slides may also be given a physical location on the site map.

### 4.3 Conclusion

The flexible nature of the software also has many research and archive implications. The applications generator may be used by research staff to build their own links through archive material, each researcher constructing their own individual pathways. New pictures from the disc may be added to existing pathways at any time.

This project, aimed primarily at schools and the general public, has already led archaeologists in York to take a new approach to the photographic recording of sites and objects and created an appreciation of the archive as a flexible research tool.

### Bibliography

- RUGGLES, C. L. N. 1988. "Software for the Leicester Interactive Videodisc project", in Rahtz, S. P. Q., (ed.), *Computer and Quantitative Methods in Archaeology 1988*, International Series 446, pp. 523-542. British Archaeological Reports, Oxford.