Manchester Computing
Computer Graphics Unit

Review of ITTI Multimedia Related Products (Supplemental)

S Cunningham

THE UNIVERSITY
of MANCHESTER

1 Introduction

The report provides an update to the initial review of ITTI products, covering several new products released after the first report was written. These products are:

2 Software

2.1 Toolbook Tutorial 2
2.2 Authorware Tutorial for the PC 4

3 Reports and Booklets

3.1 An Introduction to Multimedia for Academic Use 6
3.2 Understanding IT: Developing Multimedia Courseware 7

2 Software
2.1 Toolbook Tutorial

Robin Shaw
email: Emashe@glasgow.ac.uk

Date:	June 1995
Format:	A4 book and 2 3.5" disks containing the tutorial files
Hardware Req:	Minimum requirements - 386 PC, 4Mb RAM, 640x480, 256 colour display, 5Mb hard disk space. Optionally - sound card and video drivers
Software Req:	Microsoft Windows 3.x or later, Toolbook 1.53 or 3.0

2.1.1 Introduction

The Toolbook tutorial has been produced as part of the EMASHE project at the University of Glasgow. In the same series tutorials are also available for Authorware on the PC and the Macintosh. These tutorials all take the user through the creation of a sample application, an information package about the department of Medieval History. The tutorial is aimed at new users of Toolbook, who have some familiarity with the Windows environment and common applications such as word processing. After working through the tutorial the users should be:

- *confident that they have an appreciation of the time, effort, skills and materials required to produce multimedia teaching materials*
- *able to create straightforward packages for use in a variety of situations*
- *aware of the next steps in authoring which will enhance their skills.*

The tutorial disks contain all the files necessary to produce the sample application, partially completed versions of the application for each unit (v 1.53) and a finished version of the application in both Toolbook 1.53 and 3.0. The tutorial is divided into four units, each of which builds on the previous unit. The units start by describing their aims, take the user through the steps and review the work covered at the end. The main topics covered are:

Unit One:	creating a new book, backgrounds, importing graphics, grouping objects and the Tools Palette
Unit Two:	creating buttons, simple scripting, handling and importing text
Unit Three:	creating hotwords and linking pages
Unit Four:	simple animation, importing sound and video clips, creating menus and more complex scripts, delivering the application

2.1.2 Conclusions

Working through the tutorial was very straightforward. At each stage, every step was explained clearly with frequent diagrams and screen snapshots. The first time a particular action was explained the user was taken through it in detail, subsequently there was less prompting, ensuring the user had absorbed the explanation. Throughout the tutorial not only are the basic actions involved in creating an application explained, but tips on the best ways to deal with common problems, such as importing large amounts of text, are given.

In Unit Two, the Toolbook scripting language, OpenScript, was introduced. Introducing a programming language to non-programmers can be very difficult, however the language was introduced simply and clearly, and again the instructions were very easy to follow and the reasoning behind the commands was explained well. Scripting was introduced with very simple scripts in Unit Two, proceeding to more complex ones in Unit Four. OpenScript has been designed to be easy to read, and the tutorial explanation of scripting stresses this point, making the simple scripts used seem obvious and easy to write. In contrast the Toolbook Manual in its chapter on 'Basics of OpenScript' begins with sections on object hierarchy and implicit and explicit referencing, an approach that may daunt those new to programming. After working through the tutorial they should, however, be better equipped to read and understand the manuals.

Overall the tutorial provides an excellent introduction to Toolbook, and certainly fulfills its intention to *'help those interested in multimedia authoring to get started with the minimum of pain'*. Sufficient topics are covered to allow the user to create their own simple applications at the end of the tutorial, and to feel more confident about working through the Toolbook manuals on their own. It would have been useful to have a unit on producing simple questions, such as multiple choice, and recording scores or other variables, as these features are often required. The lack is perhaps not only because it lies outside the scope of the tutorial, but also reflects a trend away from computer based training to computer aided learning.

Note: This tutorial covers Toolbook versions 1.53 and 3.0. Toolbook version 4.0, and 4.0 CBT version are now available. While most commands and features remain the same, there are a number of additional features and some menu commands have moved from the positions described in the tutorial, which may cause some confusion.

For more information see: *http://www.elec.gla.ac.uk/EMASHE/ToolBook.html*

2.2 Authorware Tutorial for the PC

The EMASHE Group, University of Glasgow
email: Emashe@glasgow.ac.uk

Date:	February 1996
Format:	A4 book, 3 3.5" disks
Hardware Req:	Minimum requirements: 386 PC, 4Mb RAM, 640x480, 256 colour display, 5Mb hard disk space
Software Req:	Microsoft Windows 3.x or later, Authorware 2.x or the Authorware Working Model

2.2.1 Introduction

The Authorware tutorial has been produced as part of the EMASHE project at the University of Glasgow. In the same series tutorials are also available for Authorware on Macintosh and Toolbook. These tutorials all take the user through the creation of a sample application, an information package about the department of Medieval History. As with the Toolbook tutorial the user is expected to be familiar with Microsoft Windows and using common applications under Windows, and the aims of the tutorial are very similar. That is, to give the user a good grounding in Authorware allowing them to create simple packages and to continue to work with Authorware to develop their authoring skills.

The disks provided contain all the necessary files to create the sample application, including bitmaps, icons and models, the complete application itself and partially completed applications relating to each unit. Detailed installation instructions are provided. The tutorial only uses features found in version 2.0, version 3 is similar with a small number of additions and the user should be able to work through the tutorial using version 3 without problems. Version 3.5 represents a major update to Authorware, with many new features not addressed by the tutorial.

The tutorial is divided into four units, which first describe their aims, provide step by step instructions for each stage, then provide a summary and additional notes describing some of the features covered in the unit in more detail. The main topics covered in the units are:

Unit One:	creating and running an application, the Display icon, entering and manipulating text, importing graphics, changing colours, the Wait and Erase icons, simple animation
Unit Two:	the Map, Interaction and Decision icon, custom variables, importing movie files.

Unit Three: creating pull down menus, templates, importing and formatting text, libraries
Unit Four: the Sound icon, models, Start and Stop flags, packaging the application

2.2.2 Conclusions

This is a very well laid out tutorial. Each unit contains enough material for a new user to work through in a single session, without presenting more information than they could cope with. The units start with their aims and the Demonstration Review, which clearly shows which parts of the final application will be worked on in that unit. The notes at the end of each unit cover some aspects in more detail, providing information which, although relevant, is not necessary to complete the tutorial. Sometimes after working through a tutorial you feel capable of easily reproducing the tutorial and little else, these notes provide valuable extra information, ensuring the user has a genuine understanding of the topics.

The Authorware tutorial follows very similar lines to the Toolbook tutorial, which was also produced by the EMASHE team. It covers very much the same topics, allowing for the necessary differences caused by using different packages. The tutorial notes themselves are clear and easy to follow. Step by step instructions are given the first time an action or concept is introduced, and most actions are repeated several times with less detailed instruction, but plenty of guidance should the user need it.

At the end of each unit there is a summary of Menus and Power Keys which have been used so far, and a summary of short-cuts for the unit. The short-cuts provide the minimum necessary information to perform the actions covered in the tutorial and are a valuable quick reference. All the short-cuts, menus and power keys are listed at the end of Unit Four.

Overall the tutorial provides a good basic grounding in Authorware, though like the Toolbook tutorial is would have been useful to have some examples of creating questions. After working through the tutorial the user will be in a good position to make use of the Authorware Tutorial Toolkit (ATT), which provides authors with a basic Authorware shell which can be used to produce computer- aided learning tutorials. The ATT is also and ITTI product, and the prototype version (PC only) is available free of charge by FTP at
ftp://ibis.nott.ac.uk/pub/ATT/

Note: Although it is possible to work through the tutorial using the Authorware Working Model, the model is restricted to 50 icons, and the user will not be able to save their work once they have used more than 50 icons (i.e. in Unit Three).

For more information about the tutorial see:
http://www.elec.gla.ac.uk/EMASHE/awpcc.html (PC Version)
http://www.elec.gla.ac.uk/EMASHE/awmac.html (Macintosh Version)

3 Reports and Booklets

3.1 An Introduction to Multimedia for Academic Use

Marilyn Deegan, Stuart Lee and Nicola Timbrell
E-mail: stuart.lee@oucs.ox.ac.uk

Date:	April 1996
Format :	A5 Booklet - 82 pages
Target Audience:	Anyone interested in the potential of multimedia applications who has no previous experience with multimedia.

3.1.1 Contents

This a revised eddition of Hypermedia in the Humanities, first published in 1992. Like the first edition it looks at what multimedia is, how multimedia applications can be created and what benefits they have to offer. Reflecting the changes that have occurred in the last few years an entirely new section on Multimedia and the Internet, which looks at the World Wide Web (WWW), has been included.

The booklet begins by looking at the origins and definition of hypertext, the increasing availability of CD-ROMs and some of the benefits and problems associated with them and electronic publishing in general. The second chapter deals with authoring, looking at some of the difficulties with creating multimedia applications, particularly in structuring hypertext documents. It then examines each of the component media, text, graphics, sound and video in turn, looking at possible sources and capture methods. The sections on Authoring Tools provides a brief description of the basic types of authoring tools and details of several tools:
Authorware (including 3.0), Director, Hypercard, Supercard and Toolbook
and brief descriptions of:
Guide, HyperStudio, Microsoft Viewer, VB, Apple Media tool, ScriptX and MTropolis

Multimedia and the Internet provides an introduction to the WWW and HTML (HyperText Markup Language), and a look at some of the ‘problems and possibilities’ associated with the Web.

Multimedia in the Classroom looks at why we use multimedia, and follows up with case studies of several very different applications, including an 'in-house' application produced using Toolbook (The Dream of the Rood), a commercial CD-ROMs (The Dead Sea Scrolls Revealed), a collection of WWW pages (Be Your Own Chancellor) and student-authored resources.

The final chapter provides details of how to obtain some of the products mention in the booklet.

3.1.2 Comments

This is a welcome revision to Hypermedia in the Humanities, and retains its simple, clear language making it accessible to anyone with an interest in multimedia regardless of their background. The case studies provide examples of a variety of uses of multimedia, and lay out some of the problems and benefits encountered. In general the feeling regarding these multimedia applications seems to be that although there are problems, the end result is well worth the effort, and in some cases produces unexpected benefits.

3.2 Developing Multimedia Courseware

Fred Riley
E-mail: f.h.riley@langc.hull.ac.uk

Date:	1995
Format :	A4 booklet, 40 pages, or as a Word or RTF file from *http://www.hull.ac.uk/Hull/ITTI/bk_dnld.html*
Target Audience:	Producers of small scale multimedia courseware, developed at a single site for off-site distribution

3.2.1 Contents

The first part of the book defines multimedia and hypermedia and goes on to look at the pros and cons of using them in education. In particular the non-sequential access of a hypermedia document fits in well with 'with current theories of memory and learning', but poses special problems because of the non-linearity, being undirected and requiring considerable effort to produce well. The Content section looks at the some sources of public domain materials, such as clipart, and some of the issues surrounding digitising that content, whether audio, image or video.

The largest section in the book concerns courseware production, including an outline of the software lifecycle and the different types of refinement and development that occur within the cycle. Five stages of development are identified:

- *Concepts* - why is the software necessary, what resources are available
- *Specification* - including scheduling and costing
- *Design* - planning the application, screen design, choosing the authoring tools and deciding on the distribution methods
- *Implementation*- including the importance of documentation and testing
- *Delivery* - installation, version control and evaluation

Finally a short bibliography and a guide to some media archives on the Internet are given.

3.2.2 Comments

This book is described as

> *'an attempt to impart generic guidelines of software development that can be adopted and/or adapted by developers and would-be developers of academic courseware, regardless of hardware platforms or software environments.'*

and provides a good overview of the subject from a very practical point of view. All the issues covered are discussed in more detail in other documents, (e.g. the EMASHE booklet Courseware in Higher Education: Evaluation, Planning, Developing and Testing), but this booklet does provide a good place to start. When first designing courseware it is very easy to overlook potential problems until they arise later in the development stage. This booklet, written by an experienced courseware producer, will no doubt help designers producing similar software avoid, or at least be aware of, some of the problems before they arise