MULTIMEDIA BASED DATA BASE PRESENTATION TOOL

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ABSTRACT

Multimedia technology promises an exciting tool, to the library by providing an environmental friendly system supporting different media, like audio, graphics, and text including animation on the same platform for efficient information handling. The multimedia workstation, can be made to present various databases, to the viewer alegantly by incorporating a multimedia presentation authoring tool. This authoring tool can have various modules such as slide editor, slide integrator, audio studio, video studio, presentation player and installation modules.

This paper attempts to describe the various modules needed to have in a presentation authoring tool. Presently all these modules are under development in the Department of Computer Engineering, K.R.E.C, Surathkal on Microsoft Windows 95 and Microsoft Power Point environment.

1. INTRODUCTION

Multimedia is a technology that attempts a harmonious realtime integration of different media like images, full motion, video, voice, text, graphics and other computer data for enhanced man-machine interaction encompassing the audio-visual senses.

Multimedia technology promises to radically alter our library by providing an environment friendly system supporting different media like video, audio, graphics and text all on the same platform for efficient information handling.

Today a wide variety of resources ranging from business directories to encyclopedia are available in various format either bibliographical or statistical or simply infotainment form. They include databases on mathematical operations, advanced word processing, legal search systems, corporate annual reports, business analysis, design tools for complex design process, simulation, forecasting models, cash flow models, market research information, foreign marketing aids, I R systems for books, technical reports, news about games, stock market data and many more. Today a ;arge number of databases provide information on given products and markets. These have been developed by analysts who systematically shift through a wide range of periodicals, reports and books in different languages. Though databases cover almost all subjects, however some subject areas are relatively well covered by databases of this type especially raw materials, chemicals and hitech products. Consumer goods however such as toys, garments, furniture and handicrafts are often not treated to the same extent. Further many of the databases are biased, tend to focus on North American and West European markets, although many databases providers are making efforts to diversity their geographical coverage.

This paper gives a brief introduction of a Multimedia Presentation Authoring Tool (MPAT) which will allow a developer to make state of art multimedia presentations. This authoring tool can help the user in many ways. A person sitting in one terminal can run the tool from remote side and prepare presentations using it. This is an important advantage because multimedia files (sound, video and animation) occupy so much memory that it is difficult and impractical to take them in floppies. The user would either have to take it in a high capacity catridge or copy the presentation on video tape and take with him\her.

The MPAT is made up of six modules.
   Slide Editor.
   Slide Integrator.
   Audio Studio.
   Video Studio.
   Presentation Player.
   Installation Module.

2. SLIDE EDITOR :

This module is responsible for creating the slides needed for presentation. This forms the first phase

of development in the MPAT.

The Slide Editor will allow for two types of slides to be created.

    a. Non-animated slides
    b. Animated slides

a. Non-animated slides :

In this case, each slide will consist of a series of text or saved images. The maximum movement allowed in this case is the movement of text across the screen. There are various methods allowed for the movement of text-special effects like fail from left, fall from right, etc., used for fading-in and fading-out of text. In this case, each frame constitutes one slide.

b. Animated slides :

This feature allows for animation-where each object can be associated with movement along a given path. The inputs will be the starting position of the image, the ending position and the number of frames in which to achieve the animation. In this case, several frames constitute one slide.

3. SLIDE INTEGRATOR

This module will be instrumental in integrating all the slides together. Once all the slides are made individually using the slide editor (or from a predefined library) , they have to be linked together into a single presentation. To do this, it has been decided that all the slides will be stored in a standard format, which standardises the procedure for loading a slide. To interate them thus, we will need another file format to hold the integrated presentation. The authoring of the slides will be done in a visual manner, where a flowchart based path will describe the motion of presentation. Each slide will be node in the flow-chart, and successive slides will be connected with a flow path between them. Drag and drop functionality will allow a developer to change the sequence of slides within the presentation.

Another important feature that will be present in the software, will be the ability to describe a single background sound file, which will run throughout the presentation, immaterial of which slide is being played. This file will usually be a .MID file, since long .WAV files are too big in size to be practically used as background audio.

To describe how a slide phases in and out of the presentation, one of many options may be chosen. A subset of the options allowed by Microsoft

Powerpoint will be used, since the company employees are familiar with that software. For example, Blocks, fade out, fade in, spiraling etc., The developer may also choose whether the next slide will appear on user interrupt only (like a mouse click) or after a specified amount of time. Paths to the earlier slide will also be provided, and since the first version of the package will allow only a linear flow, this will be the only interactivity allowed. An extension to the software may be to allow the user to go to an arbitrary slide (identified by either name or number of the slide) while keeping the linear flow of the presentation.

While making the presentation, a developer will want to preview the presentation. A special preview option will provide this functionality, and thus help in fine tuning of presentations.

4. AUDIO STUDIO

This module can be run independently or can be called from
within the slide Editor. It is implemented as an object. It supports 3 types of sound.

a. Digital Audio (.WAV) files.

The Audio Studio provides for manipulating the .WAV files. Each .WAV file will be an object. The object will have the following functions built into it,

-     to play the file.
-     to give a graphical display of the file
-     to cut a specified part of the file and copy it to the clipboard
-     to paste mix one .wav file with another. This facility will allow the user to mix two .wav files.
-     to change the sampling rate and the number of bitss used in sampling of the file.
-     To creat a sound file by recording sound from mike.

Other features like rap, insert silence, etc., can be provided later as extension of the software.

b. MIDI (Musical Instrument Digital Interface).

The audio Studio provides the facility to play a .MID file. It also allows create a .MID file by recording from a musical instrument.

c. CD player.

The Audio Studio has a built-in CD player. This CD player gives the following facilities,

- To select a track
- To play the CD from the selected track onwards.
- to pause a CD
- to eject the CD tray
- to stop a CD
- to rewind trackwise
- to froward trackwise

5. VIDEO STUDIO

Like Audio Studio, the Video Studio module can be run independently or can be callled from within the Slide Editor. It allows the creating , running and modifying of the video files.

This module will be designed and implented by our guide Mr. Nikhil Hoskeri seperately in the company and later on intergrated with our tool.

6. PRESENTATION PLAYER

A presentation will not be stored as a .EXE file, so it is not standalone. Instead of having to carry the entire software with him, a developer will just have to carry this small package along with, of course, the presentation itself. Also, since the disk space, this module, may as an enhacemnet, provide compression utilities for transportation. Decomposers will not be on the fly, but before the presentation.

7. INSTALLATION MODULE

To free the user from the hassles of installation, this module will be priovided. This module will request some basicinputs from the users, such as the directory to be installed to the modules to be installed etc., This module will be implemented right at the end, when all other modules are completely working.

8. CONCLUSION

Today a wide variety of resources ranging from business directories to text books are available in various data bases. These have been developed by researchers, who have taken lot of pains in compiling them. Now it is necessary to properly present these data bases to the viewer effectively by judicious mix of audio, video and animation.

In this paper an authoring tool for presenting data base on a multimedia workstation is discussed. This kind of presentation tool are bound to increase in future.

9. REFERENCES

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