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“SYSTEM AND METHOD FOR GENERATION OF MULTIMEDIA LEARNING FILES”

TECHNICAL FIELD

This invention relates to a method and system for the creation of
5 multimedia files in particular for the creation of flash learning files by a non-
technical user.

BACKGROUND ART

Learning systems are well know, creating the content for such systems
requires a great deal of technical knowledge. Flash files are often used in this
10 environment but creating the rich content is beyond the average educator.
Accordingly what is needed is a system and method that allows a user in
particular to create rich multimedia learning materials without having to
acquire programming skills

DISCLOSURE OF INVENTION

15 It is an object of the present invention to overcome the above
disadvantages or at least provide the public or industry with useful choice.

Accordingly what is needed is a method of creating a multimedia file
comprising the steps of:

providing a user input interface, said user interface allowing a user to
20 select a template and to input data and other content;

receiving user data including user template selection, input data and
other content;

extracting from said received user data said template selection, input
data and other content; and

25 merging said user data with said selected template to produce an output
file.

Preferably said output file is a flash file.

Preferably said data and other content are binary merged with said
template.

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Preferably said template includes references to external files and said wherein said data and other content are stored in said external files

Preferably said output file allows a user to play a game or sit a test

Preferably the results of said test or said game are exported to an
5 external database in a format said able for said database.

Preferably said method is implemented as part of a learning environment and said user is a student.

Accordingly in a second embodiment the invention can be said to consist in a system implementing the method above.

10 Accordingly in a third embodiment the invention can be said to consist in software for affecting the method above.

Accordingly in a fourth embodiment the invention can be said to consist in storage media containing software for affecting the method above.

15 BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a schematic diagram of the input system of the present invention,

Figure 2 is a schematic diagram of the processing system of the present invention,

20 **Figure 3** is a schematic diagram of the processing system of the present invention,

Figure 4 is a schematic diagram of the processing system of the present invention,

25 **Figure 5** is a schematic diagram of an alternative input system of the present invention,

Figure 6 is a schematic diagram of the processing system of the an alternative embodiment of the present invention,

Figure 7 is a screen shoot of a user interface in one embodiment of the present invention, and

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Figure 8 is a screen shoot of a user interface in alternative embodiment of the present invention.

BEST MODES FOR CARRYING OUT THE INVENTION

The present invention consists of a system and method allowing a user without programming skills to create rich multimedia content for use in particular in a learning environment.

Referring to Figure 1 the process starts 101 and the user may be presented with a login screen 102. The user input screen is presented to a user, which allows a user to choose a template 103 for the multimedia content they wish to create. The user then adds their content based on the template or templates they select 104. Content that may be added includes but is not limited to text, images, movies and sound. As the user adds content the system automatically converts the content to the most efficient format for the type of content added for example sound is converted to the mp3 file format and notifies the user of the size of the added content. Further the total size of content is also displayed through the use of a file size counter.

Templates may either be static or dynamic, that is the template may change to accommodate the information the user has input rather than providing the user predetermined blanks requiring the user to provide information to compete.

A user can then choose to save or view the page 106 they have just created the content for or to preview a chapter 105, which is a collection of pages. The system also allows a user to download a chapter 107 and to exit 108 the system.

Referring to Figures 7 and 8 a user interface is shown, the save page 701, preview page 702, view chapter 703 and download chapter buttons are provided. The users enter the content into template 710.

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Likewise in an alternate embodiment the interface is shown in Figure 8. The user has access to save page etc via a list 803 and means to select templates 802 and enters data into the templates via interface 801

Referring to Figure 2 when the user has selected to save and or preview
5 a page the system checks if related files exist 202. Related files such as previously created templates; if they exist they are deleted 203. Then the selected related files such as new content, games, test templates are copied 204 to a folder along with the inputted user content. The files may also be stored in a database 205. If a preview is to be generated the process continues or if not
10 the save process ends 207.

To generate a preview the selected template is copied 208 to a folder. Character templates related to the master template are also copied 209 to the folder. The system then generates instruction files for compression and creates
211 and generates 212 the template file including the user content. The user
15 content is added to the templates using binary replacement of placeholders. Once the user content has been added the files are compressed 213 using the previously generated file from step 210. An html wrapper 214 is created and files are created with instructions on how to encode the files within the html wrapper. Once executed 216 a preview is created and run 217. The preview
20 process then ends.

Referring to Figure 3 to preview a chapter the system based on the user input selects which template(s) to copy 302 and the appropriate templates are copied 303, 304. A chapter is defined as one or more individual pages. Character templates are also copied 305. The system creates instruction files to
25 compress the output file 306. The system also creates a template file 307, which is the instruction file for the binary replacement, and a list of files to be included 308. The template file is then generated 309 and the instruction files created at step 306 are run 310. An html chapter file that acts as a container to the swf file is created 313 and instruction files are created 314 to encode the

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html file so that the javascripts that are written cannot be seen/read. The compiler files are then executed 311 to encode an html file but not the multimedia content. The html file is run to preview to the user. The html file is run 312 which in turn shows the embed flash file.

5 Referring to Figure 4 when the user selects chapter download 107 the system links 402 to the first chapter's url allowing the user to easily find the first chapter of the whole course. Instruction files 404 are created and a container file 405 to hold the files is also created.

The system checks if the flash swf files exist 406 and if not exits 417. If
10 the swf files exist and there are multiple chapters to be downloaded 408, the process starting from create chapter html is repeated 403.

If there are multiple chapters to be downloaded 408 then for each chapter an html chapter file 403 and instruction files 404 are created and a container file 405 to hold the files is also created.

15 The (html) file format is created according to user's choice, depending on the format selected, LRM – (Microsoft's LMS format) file format is created 420, 421. Alternative formats include Pocket PC 422, 423, J2ME 424, 425, X-Box 426, 427 and Avalon 428, 430.

Once the files of the correct format are created the system creates an
20 instruction file 413 encodes all the html files 414 and finally zips the files together 15. Finally the zip file will be downloaded 416.

Referring to Figure 5 an alternative embodiment will now be described. Users using a user interface such as Microsoft TM PowerPoint 502 or another interface 501 access the system. The user may be asked to authenticate
25 themselves 503 with a user database 504.

A template is opened 505 allowing the user to add data and to input multimedia resources 506. The user is presented with an interface 507 that allows them to select different output file format options. The user imputed data is made available to the backend system 508. Various methods can be

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used to make the data available to the backend system, scripts or executables at the front end can extract the necessary data or the backend can perform the data extraction.

Referring to Figure 6 the incoming file stream is received 601 if it is
5 resources such as images, video, audio or flash files it is stored either in a database or in a folder 603. The incoming text is extracted 604; the system then creates an index html file 605 and a chapter html file 620. An instruction file is also created 621 as is a container to hold all the chapter files 622. If the flash file exists 623 and there is only one chapter 624 or this is the last chapter
10 625 the system then proceeds to create the desired output format. If multiple chapters are to be created then the index, html, instruction and container files are created for each chapter 605, 620, 621, 622.

The user's selection of output format is considered 606 and using the previously stored resources 603 and predefined flash files 607 the required
15 output is generated. Choices include html 608, 609, LRM (Learning Resource Management Files) 610, 611, file suitable for pocket pc 612, 613, java files 614, 615 and x-box files 616, 617. Other formats could be added without departing from the scope of the invention such as Avalon 618, 619 a graphics format for Microsoft Longhorn.

20 To those skilled in the art to which the invention relates, many changes in construction and widely differing embodiments and applications of the invention will suggest themselves without departing from the scope of the invention as defined in the appended claims. The disclosures and the descriptions herein are purely illustrative and are not intended to be in any
25 sense limiting.

CLAIMS

1. A method of creating a multimedia file comprising the steps of:
providing a user input interface, said user interface allowing a user to
5 select a template and to input data and other content;
receiving user data including user template selection, input data and
other content;
extracting from said received user data said template selection, input
data and other content; and
10 merging said user data with said selected template to produce an output
file.
2. A method of creating a multimedia file as claimed in claim 1 wherein said
output file is a flash file.
- 15 3. A method of creating a multimedia file as claimed in claim 1 or claim 2
wherein said data and other content are binary merged with said template.
4. A method of creating a multimedia file as claimed in claim 1 or claim 2
20 wherein said template includes references to external files and said wherein
said data and other content are stored in said external files
5. A method of creating a multimedia file as claimed in any one of claims 1 to
4 wherein said output file allows a user to play a game or sit a test.
- 25 6. A method of creating a multimedia file as claimed in claim 5 wherein the
results of said test or said game are exported to an external database in a format
said able for said database.

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7. A method of creating a multimedia file as claimed in claim 6 wherein said method is implemented, as part of a learning environment and said user is a student.
- 5 8. A system implementing the method of anyone of claims 1 to 7.
9. Software for affecting the method of any one of claims 1 to 7.
- 10 10. Storage media containing software for affecting the method of any one of claims 1 to 7.