The Development of the Database System for Facilitating the Readily Easy-to-use Digital Media.

Saowalak Leelawongsaroj[1], Pongpisit Wuttidittachotti[2]

Technological Education Department, Faculty of Technical Education[1]
King Mongkut's University of Technology North Bangkok.
Bangkok, Thailand, doramon86@hotmail.com
Department of Data Communication and Networking, Faculty of Information Technology[2]
King Mongkut's University of Technology North Bangkok.
Bangkok, Thailand.

Abstract— This research aims to develop a database to support the creation of digital media in the convenient usability form, performance evaluation of database systems to support the creation of digital media in the convenient usability form, and study about satisfaction of several users.

We development was base on theory of the system development life cycle (System Development Life Cycle or SDLC. We Analysis system using data flow diagrams (Data Flow Diagram or DFD) and database design method which are concept shows the relationship (Entity Relationship Model or ER Model). This system developed by database is Microsoft SQL Sever combine with Microsoft Visual Basic 6.0

The output of the development as follows;

1) Database support the digital media in the convenient usability form which easy to use in storage process. It has performance in query data, manipulation and reporting accordance to analysis and design that it is specific systems.

2) Review of Users to this systems, we found to suitable in terms of convenience is first topic. Secondary, the complacency responded to the requirement of user and the integrity of data. It was optimal in a high level.

Keywords- Database system, File system manager, Digital media;

I. Introduction

Current, we found education reform policy to accord with the Education Act of Nation year 2542, we use of information technology in educational development effect to most effective which is new concept of modern information technology. Most institutions have adopted information technology to education development in the process of the educational reform. It focuses on learner-centered learning and the use of information technology as a tool to create a comprehensive learning and educational opportunities at all levels, both formal and informal. So, the pattern of education must be improved response to learning.

Figure 1. Policy of improve quality education in Thailand

From traditional pattern of teaching approach (Traditional Education) become to style of teaching through electronic device even more. With the concept of teaching through a new educational paradigm that can be used to improve efficiency teaching and more effective teaching base on network and online technology (Online Instruction). Due to information used to create educational materials have several formats and disrupted. It was effect to restrictions of teacher in the retrieval information. Include selection to appropriate information use as an education media, spend the most time to gather this information. The instructor must transfers as knowledge of the true global integration, foster cooperation and the exchange of learning, provide opportunities to cooperative learning for student in the urban place. Media is compatible with all media type. There is several information to response satisfy of individual user which is differences. Internet has become part of the culture and takes much

information to learning management in the classroom as well.

So, researcher develop optimal database to support the creation of digital media in the several form by expect in convenient usability. It is able to exchange of content (Share Content) and recycled content, (Reusability), and the lesson material which is compatibles with several platforms to storage for media training. The standard compatible for data exchange developed a new database to support the re-use of digital media in several formats that collected document prepared searchable database by allows search data follow user requirement. It make more convenient and efficient to support users in the optimal access, scattered data properly linked into a single source. The teachers can access to the require information to learning quickly.

In the process of develop a database to support the creation of digital media in several formats that can be easily, the crucial concept is design a database step which used to store information and plan used to store data.

It have many types in database .Include the pictures are stored as another objects which the large size (Object), the developers to store a large file system is suitable method such as images, audio, animation, etc.

II. Research objectives

2.1 To develop a database system to support the creation of digital media for the several formats in convenient usability.

2.2 To performance evaluate of database systems to support the creation of digital media for several formats in convenient usability.

2.3 To survey the satisfaction of the users in the test database systems of digital media for several formats in convenient usability.

III. Hypothesis of research

3.1 The database support the creation of digital media for several formats in convenient usability, they have feedback for quality is good level.

3.2 The database to support the creation of digital media for several formats in convenient usability by recognized expert in the high level.

3.3 Satisfaction of users, after receiving the training for media database to support the creation of digital for several formats in convenient usability, they have feedback for quality is high level.

IV. Conceptual of Research

This research have concept as following ;

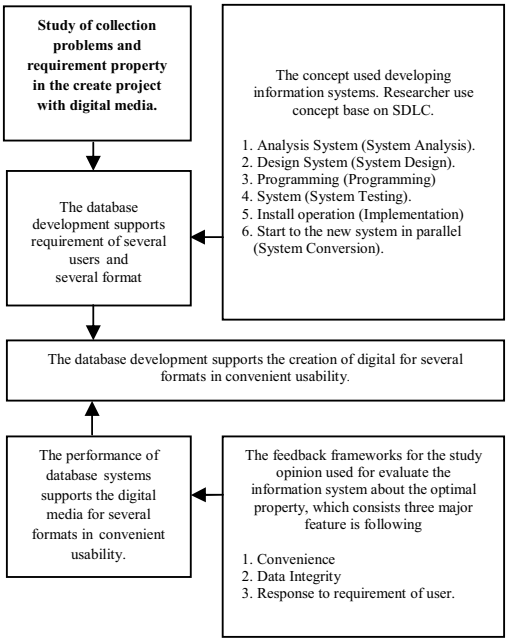

Figure 2. Show conceptual framework of research.

V. Research Method

5.1 Design System

We analyze design a database to support the digital media for several formats in convenient usability. The researchers analyzed the system using data flow diagrams (Data Flow Diagram or DFD) reference in figure 3.

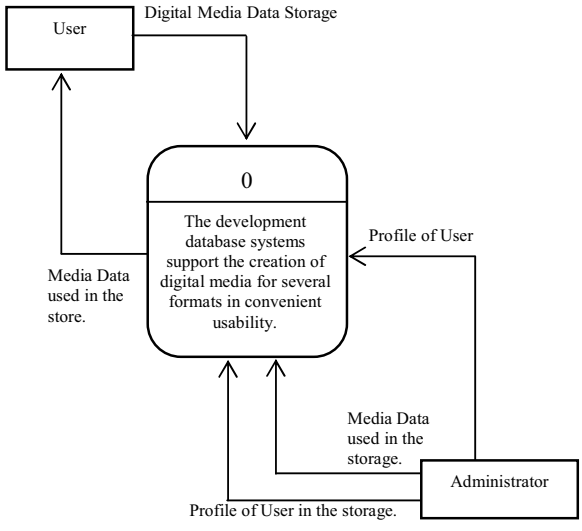

Figure 3. Show system analysis process.

5.2 database design

In the analysis design systems process, it focuses to support the creation of digital media for several formats in convenient usability. We analyzed the data system. Include database design in concept expressed level base on the relationship (Entity Relationship Model or ER Model) Figure 4.

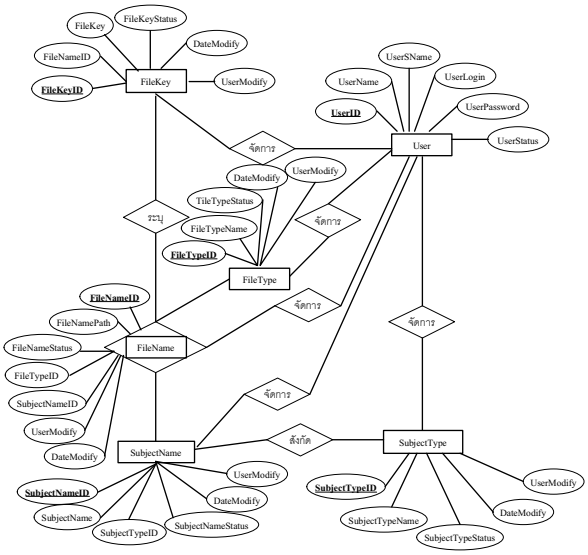

Figure 4. Show details of attributes in the ER Diagram.

Table 1: show several types of files in storage media.

No.	Attributes	Data type	Details
1	FileTypeID	Number	Code of file type
2	FileTypeName	Text	Name of file type
3	TileTypeStatus	Yes/No	Status of file type
4	DateModify	Date/Time	Date of revision
5	UserModify	Number	Editor

Table 2: Show FileName in data storage each file.

No.	ชื่อแอทริบิวต์	ชนิดข้อมูล	รายละเอียด
1	FileNameID	Number	Code of file
2	FileNamePath	Text	Code of address
3	FileNameStatus	Text	Status of file
4	FileTypeID	Number	Code of file type
5	SubjectNameID	Number	Code of Subject
6	DateModify	Date/Time	Date of revision
7	UserModify	Number	Editor

Table 3 : Show FileKey (Keyword) each of the storage media.

No.	Attributes	Data type	Details
1	**FileKeyID**	Number	Keyword
2	FileNameID	Number	Code of file
3	FileKey	Text	Word Key
4	FileKeyStatus	Yes/No	Keyword status
5	DateModify	Date/Time	Date of revision
6	UserModify	Number	Editor

Table 4 : Show SubjectName of course

No.	Attributes	Data type	Details
1	**SubjectNameID**	Number	Code of subject
2	SubjectName	Text	Name of subject
3	SubjectTypeID	Number	Type of G-Subject
4	SubjectNameStatus	Yes/No	Status of subjects
5	DateModify	Date/Time	Date of revision
6	UserModify	Number	Editor

Table 5 : Show SubjectType of subject group

No.	Attributes	Data type	Details
1	**SubjectTypeID**	Number	Type of G-Subject
2	SubjectTypeName	Text	Name of G-Subject
3	SubjectTypeStatus	Yes/No	Status of G-subject
4	DateModify	Date/Time	Date of revision
5	UserModify	Number	Editor

Table 6 : Show Profile of user

No.	Attributes	Data type	Details
1	**UserID**	Number	User ID system
2	UserName	Text	Name of user
3	UserSName	Text	Surname of user
4	UserLogin	Text	User login
5	Userpassword	Text	User Password
6	UserStatus	Yes/No	Status of user

VI. Conclusions Discussion and Recommended

This research is the research and development type for a new database to support the creation of the digital media for several formats in convenient usability. Result of the experimental as following.

6.1 Conclusions and development.

6.1.1 Data analysis

The researchers analyzed whole data which is collected with statistics in mean (X) values and standard deviation (SD). We compare with opinions in various fields three sides, we using data analysis with software packages, and interpretation of the criteria which we define previous time.

6.1.2 Summary of research and development.

We study and develop the system database to support the creation of the digital media for several formats in convenient usability. Which they can be used to keep records cooperate with another type. Users can then save, edit and copy each object of database to generate new project.

The results of the opinion analysis about the database evaluated users to support the creation of digital media for several formats in convenient usability. In the overall evaluation of the third aspect, the database system to support the creation of digital media for several formats in convenient usability has appropriate in high level.

Considering in each dimension, we found that convenience usability and search rapidly is the first priority. Secondary is compliance with the requirements of user and the data perfection, respectively. This is consistent with the conceptual of Jiraporn Laksakaew .(2539: 59-66) about Perfect Information should be the key features as following.

1. Convenience property, only accuracy of the data may not be enough for performance. Also requires quickly keeping, calling object for use, update and ready present to the executive immediately.

2. The Completely of the data, the information derived from gather the facts, fragmented data within the organization for volume enough to generate new information.

3. Compliance with the requirements of user, status essential Information and can be conveyed understand to executives and can be used to decision making.

6.2 Recommendations

6.2.1 Recommendations for implement.

1. Server should be prepared to architecture of storage with systemic approach for the sharing information.

2. Should have update information for modern project.

3. Should ask about requirement of user in another organization for plan the supply information of user in the future.

4. Should be checked in each periodically to prevent errors which may occur.

6.2.3 Suggestions for further research.

1.Should be other system then connect to the database support the creation of digital media for the several formats in convenient usability connect to same system.

2.Should the support of Hardware and Software, together with any supporting documentation.

3.Training of staff to have a better understanding and aware to benefits of the information resource.

Reference

[1] Hoffer, J. A., Prescott, M. B., and McFadden, F.R., 2002. Modern Database Management. 6 th ed. N.J.: Prentice Hall.

[2] Microsoft SQL Server Development Team. Personal communication. August, 2005.

[3] Russell Sears, Catharine van Ingen, Jim Gray. “To BLOB or Not To BLOB: Large Object Storage in a Database or a Filesystem?”, Microsoft Research, University of California at Berkeley, 2006.