

Developing on-line information systems for searching digital media

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ABSTRACT: This paper describes a project to develop information systems to search digital media and books on-line. The development was guided by the System Development Life Cycle (SDLC) theory. The development has demonstrated a good score of 4.37 for system quality. It was found that users can search effectively at a good level which, in this case, scored 3.94.

INTRODUCTION

Information is provided by information services in the form of books, newspapers, journals, newsletters, tape material, CD-ROM, DVD, VCD, TV and microfilm. Information services, located in a library, are operated by the librarian who organises them for users. Searching is an important basic need in libraries. Searching can collect data and monitor communications. Communication technology provides search tools that maximise user benefits.

Using the Internet, information systems can be available not just within an organisation but anywhere and anytime. Advances in information technology have led to innovative developments that have tremendously improved lifestyles. Technology facilitates the production of higher quality and yet cheaper goods and services. Technology has also transformed society; transportation connects people over the world; print and media technology have increased text and language communications; pictures, television, radio, voice, including satellite broadcasting reports of live events. It is clear that technology has become a significant force in the development of computer equipment, with components and products being continuously developed.

The importance of information technology changes society in several ways. Following J. Ndicebitt, referred to in Y. Poovorawan:

1. Information Technology transforms industrial society into an information society.
2. Technology joins national economies in a combined global economy. Information networks facilitate this globalisation.
3. IT organisations have made business commitments matter. Businesses are becoming smaller and connect with other businesses using the network. Businesses are competitive because of the speed of the computer network. Telecommunications support the quick and easy exchange of information.
4. Using information technology is a simple, aesthetic experience, meeting diverse needs.
5. Information technology enables work anywhere, anytime.
6. Producing information technology systems requires longer-term planning with detailed decisions and choices.

In conclusion, information technology plays a critical role in all areas involved with global changes, i.e. society, economy, education, agriculture, industry, medicine, and politics, as well as research and development.

Given the importance of information technology and the importance of searching, the aim of this project was to develop an on-line information system for searching digital media. It includes system administration, Web site management, database and includes animation.

As a result, this provides quick access and ease of use.

OBJECTIVES

The project has the following objectives:

- To design and develop an on-line information system for searching digital media and books.
- To assess the quality of the on-line information system.

RESULTS

The results were as follows:

- The on-line information system was produced for searching digital media and books.
- The developed system's quality was good.

PROCEDURES

The on-line information systems for searching digital media and search books was developed using the System Development Life Cycle (SDLC):

- *Problem Recognition* and the difficulty of finding materials and books in the department of Computer and Information Technology. It showed that the digital media and books were not organised.
- *Feasibility Study* of the possible solution and techniques, such as using the Internet, cost and time, benefits, availability and the possibility of developing a usable information system.
- *Analysis* of system needs. The Fact-Gathering Techniques used analysis tools such as Data Dictionary, Data Flow Diagram, Process Specification and system Flowcharts.
- *Design* process leading to system design specification. Tools for designing include System models and Data models.
- *Construction* of programs and testing. Errors were identified using Structure Walkthroughs.
- *Using* the new on-line system in parallel with the old system; the same set of data was used in the old and new systems to compare results.
- *Maintenance*: record errors during use, and further system requirements. The project did not find user errors but further system requirements did emerge from the executive users. In conclusion, the project will be fully developed eventually.

SUMMARY

The statistic data of on-line information systems for searching digital media and books are presented in Table 1 and Table 2.

Table1: Data analysis of the system quality.

Topic	Mean.	S.D	Level of Satisfaction
1. Input of the data (Input)	4.33	0.72	Good
2. The data processing (Process)	4.22	0.55	Good
3. The data display (Output)	4.44	0.55	Good
4. The data Storage (Storage)	4.50	0.58	Very Good
Total Average	4.37	0.60	Good

Table 2: Data analysis of users' satisfaction.

Topic	Mean.	S.D	Level of Satisfaction
1. Input of the data (Input)	3.89	0.74	Good
2. The data processing (Process)	3.90	0.72	Good
3. The data display (Output)	4.03	0.67	Good
Total Average	3.94	0.71	Good

DISCUSSION

The on-line information system for searching digital media and books on-line was convenient for data entry and provided flexibility in searching. The system helps understanding, real time viewing of data and prevents duplication of data. It also allows the modification of the information, which helps reduce errors in data entry and helps ease of recording.

The project evaluation found that the quality of the system was good. The system can help reduce duplication of operations, for experts and users. New and old systems displayed in two browsers showed similar results. The font size must be not too small or too large. Results were accurate and complete. Data displays are of a consistent standard. Security permissions are used to restrict access to specific information for specific users.

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