CHAPTER I

**THE PROBLEM**

**Background of the Study**

We are now living in the world of modernization wherein every aspect of our lives is now technologically advanced. Our generation is now dubbed as the “Information Era” wherein every piece of information is essential in the sense that a single mistake would cause a lot of trouble.

As one of the developing and progressing country, Philippines now is trying to innovate in terms of technology for us not to be left by the trends in Information and Communications Technology (ICT). From manual procedures, we try to automate our transactions. One good instance is the Civil Registry System of the National Statistics Office which involves the computerization of the civil registry operations of NSO. NSO-CRS is a centralized information system designed to collect, store and manage civil registry documents (CRDs) and the specimen signature of all city and municipal registrars including all CRS authorized signatories, using the imaging technology.

As we can perceive, every establishments are also leveling up their awareness in technologies. The supermarkets, malls, grocery stores, offices, gasoline stations, restaurants, hotels, lodges, banks, offices and even the smallest business enterprise uses computerized programs to fasten their transactions specially in transactions which involves documents, files, records and money.

The inspiration behind the conceptualization of this study is the perceived transaction in the *Serbilis* Center at the National Statistics Office in the province. The idea is that if they can have that kind of transaction why not apply to the churches for them to experience this new trend of technology considering that churches are not exempted from progress. One more inspiration is that the curiosity that bugs the mind of the researcher on how the NSO employee can download the certificate without using the internet.

It is for this reasons that the researcher have sought of conducting a study for the benefits of the church and its members entitled “CENTRALIZED BAPTISMAL CERTIFICATION RECORD MANAGEMENT AND INFORMATION SYSTEM FOR CATHOLIC CHURCHES in the Diocese of Bayombong”. Although churches have separate legislation from the government, they still are entitled to sustain progress not only spiritually but technologically as well. The researcher has chosen to propose the study to the Catholic parishioners of the Diocese of Bayombong, because according to researches that the researcher has made, aside from the fact that the researcher is located in the research locale, the diocese consists of numbers of churches which has numerous devotees.

**Theoretical Framework**

**Figure 1. The Input-Process-Output (IPO) Diagram**

* Implementation of the “Centralized Baptismal Certification and Record Management System for Catholic Churches of the Diocese of Bayombong”

- Gather data/information of new applicant availing baptismal certification

-Upload duplicates of the baptismal certificates

-enter information of the officiating priest and parish secretary

-enter amount of payments

**INPUT**

**PROCESS**

**OUTPUT**

-Analyze the manual record management of the existing System used in the transactions

- Identify the problem

- Conceptualize an alternative solution

- Develop and establish the Centralized Baptismal Certification and Record Management System for Catholic Churches

**FEEDBACK**

**Conceptual Framework**

The research entitled “Centralized Baptismal Certification and Record Management System for Catholic Churches of the Diocese of Bayombong” has a framework which is included in the discussion as basis for developing the system. The concept of the researcher on the study was stated below:

The researcher has identified that the Catholic churches is not yet technologically equipped, thus the process for their record management is too slow. When a person is trying to acquire a baptismal certificate for her children from the parish secretary, he/she needs to fill in the necessary information required by the form. For issuance of certification, the parish secretary type in the information on the readymade form using the typewriter. Certain improvements and changes shall be made when the system is implemented. The authorized personnel or the parish secretary will gather the information from the availee of the baptismal certificate. Same procedure will be applied for the second time availee of the certification. All records and informations will be kept in the database. The old records will be uploaded also in the system for the benefit of the members who did not reach the implementation of the system.

Research has been made by the researcher and went to three Catholic churches (St. Louis Beltran Parish of Solano, St. Jerome Parish of Bagabag and St. Dominic Parish of Bayombong) in the province to gather some important information. After some interview with regards to their transactions and data was enough, the researcher analyzed the existing system which is the manual procedure, identify and analyze the problem and come up with solutions which will suit the needs of the applicant getting a baptismal certificate and to have a fast, reliable computerized and centralized record management system software for the benefit of the Catholic churches.

When the study is realized, a centralized baptismal certification and record management system will be developed and will be installed to every Catholic Churches in the Philippines.

If there are some errors, bugs, or modifications with the implemented system, then the researchers have to evaluate, change or to modify the system for a better or best result/outcome of the project.

**Statement of the Problem**

The main problem which the researcher has found is that whenever a person needs his/ her baptismal certificate, he/she will need to go to her parish to avail the needed document. The question is that “What if the person is based on Quirino and his/her parish is located on Bayombong, Nueva Vizcaya? Will she spend money going to the proximity just to avail the files?” That would be problem to be solved and one more problem is that they have no definite records for the availee. They still used the typewriter in typing their information and that they still have to repeat inputting the records and put them to drawers and cabinets for filing so when a person will come to avail they would dig those files in the cabinets most especially when the records is dated way back many century, decade and years ago.

The researcher has also found out that these employees in the parish hall are not technically equipped and has a minimal knowledge on operating the computer. Some problems have been identified regarding their process of manual record management. Below are the specific problems identified by the researcher that she attempts to solve:

1. How can the parishioners adopt the changes from the manual to a computerize way of managing their records?
2. How fast will they understand the system if they are not aware of this technologies?
3. Does the system benefits the church and its congregation?
4. Will the proposed system help the church and its members to have a better transaction and source of information?
5. How reliable is the system in terms of generating reports, certifications and uploading of old records?
6. How secured is the system from hackers and other evil-hearted who attempts to corrupt the system?
7. How does the system cope up with the changes of the technologies?

**Scope and Delimitation**

The study is only intended for the benefits of Catholic churches in the Diocese of Bayombong. The primary user of the system will be the church/parish secretary covered by the diocese (Province of Nueva Vizcaya and Quirino). The system will only cover inputting, searching, updating, downloading, generating and printing records. Security within the system and database is also incorporated. The software will run only with Windows platform (e.g. Windows XP, Windows Vista, and Windows7).

The study is limited only for the school year 2010 because it is only the allotted time for the researcher to finish the document of the study.

**Importance of the Study**

TO THE COMMUNITY - The study entitled “Centralized Baptismal Certification and Record Management System for Catholic Churches of the Diocese of Bayombong” is significant to the persons who are in need of baptismal certificate, but his/her place of baptism is away from the locality. He/she can avail of those pertinent documents without going to their original parish in which they received the Sacrament of Baptism because of its centralization. For instance, when a person is baptized at Aglipay, Quirino and is working at Nueva Vizcaya, he/she can now avail of his/her baptismal certificate at the nearest parish wherein there is an installed system.

TO THE CHURCH - The study will benefit the church in terms of accuracy, reliability, efficiency, fast and centralized issuance of baptismal certificates. It can also be a great help in their record management. Instead of searching for so many folders and cabinets, they will be equipped with technology which is the computerized record management with information system where they only search the name of the person and at the wink of an eye the record will appear and will be printed.

TO THE PARISH SECRETARY - It will be a great help for him/her to search for old files and generate records at a timely manner.

TO THE RESEARCHER - Through this study, the skills, talents and expertise of the researcher in computer programming and writing a research paper will be developed.

TO THE FUTURE RESEARCHERS - The study entitled “Centralized Baptismal Certification and Record Management System for Catholic Churches” will be a great help to the future researchers who have the same topic and scope of study as it will become their reference.

**Definition of Terms USED IN THE STUDY**

The following terms stated below are defined according to its concept and how it is used in the study:

1. APPLICATION – a computer program designed for a specific task or use
2. BAPTISMAL – A religious sacrament marked by the symbolic application of water to the head or immersion of the body into water and resulting in admission of the recipient into the community of Christians.
3. CENTRALIZED – To bring under a single, central authority
4. CERTIFICATION – The state of being certified
5. CLIENT – The client is the user's machine, which contains the user interface
6. DATABASE – Application use to store data and manipulate data, the application maybe as simple that provides from the files only and that cannot be programmed, ir it may have capability of privacy databases test all programmable and relational
7. Data Flow Diagram – is the graphical representation of the flow of data through an information system.
8. FLOWCHART – A schematic representation of a sequence of operations, as in a manufacturing process or computer program.
9. HARDWARE – Computer machinery and equipment, including memory, cabling, power supply, peripheral devices, and circuit boards
10. Hierarchy – a body of clergy organized into successive ranks or grades with each level subordinate to the one above

CHAPTER II

**Review Of Related Literature**

This chapter includes the review of literature and studies from local and foreign sources, which are related to the study. The discussions are organized by sections as follows:

**Foreign Literature**

Computer systems and communication technologies are making a strong and influential presence in the different fields of the lives of people. The cornerstone of a functional information system represents the electronic records management system. Due to a very sensitive nature of information, such systems are faced with a number of stringent requirements, like security and confidentiality of persons’ related data, different media type’s management, diversity of data that need to be processed etc. At present software systems are closed with little or no operability between them and the information are locked in a variety of different incompatible databases. As the result of these facts, it is very hard for the developers to provide the solution for an integrated record computing environment, which would considerably improve the quality of record management in general. This presents the framework for a functional Record management system that meets these demands, but also follows the initiative taken by the Next Generation Network (NGN) approach, which includes user mobility, service transparency and common communication platform for transferring and serving different types of information, services and media. Integration and development of information and communication systems in different field represents a challenging task. Various implementations have proven the usability of such systems, which all have the same starting point – to improve manual transactions. Caused by the rapid development in the computer science, communication technologies and especially by the growth of the Internet, centralize record management has become possible in every aspect of its’ essence. Distance in no longer a factor, and it is feasible to provide every person with high quality informations, independent of their current location.( *Concepts for integrated electronic records management system MiroslavKonar, Sven Lonaric, Faculty of Electrical Engineering and Computing, Zagreb, Croatia , Source: http:/www.engr-comp.edu.ph/concepts\_ERM.htm*)

Discussing records management from an RIM perspective is becoming common as much of the literature in the field now approaches the subject from this aspect. However, writing on records management from the IT perspective is likely to be more common in the near future as the creation of electronic records becomes more pervasive.

It is difficult to define or determine the scope of information science as it brings together many different intellectual disciplines (Olsgaard, 1989: 8). The nature of the discipline is such that it is changing, enriching and developing itself. However, the discipline is accepted as an empirical science, observing phenomena associated with various processes such as information generation, transmission, transformation, compression, storage and retrieval with the ultimate purpose of gaining a better understanding of the nature of information (Zunde, 1985: 35).

In quoting Borko (1968), Vakkari and Cronin (1992: 9-10) spelt out that information science is: “a discipline that investigates the properties and behavior of information, the forces governing the flow of information, and the means of processing information for optimum accessibility and usability. It is concerned with that body of knowledge relating to the origination, collection, organization, storage, retrieval, interpretation, transmission, transformation, and utilization of information ... It has both a pure science component, which inquires into the subject without regard to its application, and an applied science component, which develops services and products.”

Borko’s definition was later expanded and simplified by Vakkari and Cronin (1992: 11) who define information science as “a field devoted to scientific inquiry and professional practice addressing the problems of effective communication of knowledge and knowledge records among humans in the context of social, institutional and/or individual use or need for information.”

The definition accorded to information science is closely related to the wide meaning of information itself. Information has been described as a commodity which generates economic value; as energy that can be transmitted by, or embedded in, ordinary forms of energy; as communication that involves exchange of data or transferring of data; as facts that serve as evidence; as data that needs to be processed; and as knowledge that implies a state of understanding beyond awareness (Debons, Horne, and Cronenweth, 1988: 2-3).

The concerns of information science are many, but for this study, it is the discipline which emphasizes the need to develop scientific principles governing the storage and retrieval of information. Information specialists regard the organization and storage for retrieval of information as the most familiar area of information science (Olsgaard, 1989)

Information system develops procedures and principles to be applied in practice alongside its aim to further what is known and utilize the flow of information in order to improve the living and working environment. Information retrieval has been one of the foci of information science. Information needs a system to be effectively stored and retrieved. Information retrieval systems involve matching the information needs of users with items that resolve those needs (Turner, 1987: This includes supplying users with documents and providing access to information via technology. Information retrieval systems include a population of documents; selection and acquisition; conceptual analysis; translation (by mean of description and indexing); document storage; and users. Selection and acquisition is crucial, for without the relevant information in the systems, all else fails (Turner, 1987: 4). The elements of acquiring current and relevant information in a fast and efficient manner are vital in the information retrieval process.

The description and indexing subsystems in information retrieval involves the process of identifying what an item is about or what it is trying to say and then describing it in a way which will match the search requirements of the user. The subsystem will require vocabularies or lists of indexing terms, or classification schemes, as well as systems that will allow the users to describe precisely the subject content of an item in a consistent manner.

The principles discussed above are adopted by records management in its seeking to enhance the access and use of records. It is in this context that principles and techniques developed in information science which have been widely accepted by library science, are applicable to records management. These procedures have been adopted in an empirical way, since records management does not limit itself to its traditional activities. Within this framework, records are not, in the first place, created for posterity (as might have been perceived in the past), but are utilized in helping to achieve a better decision-making process. Thus the adoption of information record management techniques and principles enhances the comprehension/understanding of the benefits of records management as it improves access to records.

A record can be either a tangible object or [digital](http://en.wikipedia.org/wiki/Digital) information: for example, [birth certificates](http://en.wikipedia.org/wiki/Birth_certificate), [medical x-rays](http://en.wikipedia.org/wiki/X-ray), [office](http://en.wikipedia.org/wiki/Office) [documents](http://en.wikipedia.org/wiki/Document), [databases](http://en.wikipedia.org/wiki/Database), [application](http://en.wikipedia.org/wiki/Application_software) [data](http://en.wikipedia.org/wiki/Data), and [e-mail](http://en.wikipedia.org/wiki/E-mail). Records management is primarily concerned with the evidence of an organization's activities, and is usually applied according to the value of the records rather than their physical format.

As of 2005, records management has increased interest among corporations due to new compliance regulations and statutes. While government, legal, and healthcare entities have a strong historical records management discipline, general record-keeping of corporate records has been poorly standardized and implemented. In addition, scandals such as the [Enron](http://en.wikipedia.org/wiki/Enron_Corporation)/[Andersen](http://en.wikipedia.org/wiki/Arthur_Andersen) scandal, and more recently records-related mishaps at [Morgan Stanley](http://en.wikipedia.org/wiki/Morgan_Stanley), have renewed interest in corporate records compliance, [retention period](http://en.wikipedia.org/wiki/Retention_period) requirements, litigation preparedness, and related issues. Statutes such as the US [Sarbanes-Oxley Act](http://en.wikipedia.org/wiki/Sarbanes-Oxley_Act) have created new concerns among corporate "compliance officers" that result in more standardization of records management practices within an organization. Most of the 90s has seen discussions between records managers and IT managers, and the emphasis has expanded to include the legal aspects, as it is now focused on compliance and risk.

[Privacy](http://en.wikipedia.org/wiki/Privacy), data protection, and [identity theft](http://en.wikipedia.org/wiki/Identity_theft) have become issues of interest for [records managers](http://en.wikipedia.org/wiki/Records_manager). The role of the records manager to aid in the protection of an organization's records has often grown to include attention to these concerns. The need to ensure that certain information about individuals is not retained has brought greater focus to records retention schedules and records destruction.

The most significant issue is implementing the required changes to individual and corporate culture to derive the benefits to internal and external stakeholders. Records management is often seen as an unnecessary or low priority administrative task that can be performed at the lowest levels within an organization. Publicized events have demonstrated that records management is in fact the responsibility of all individuals within an organization and the corporate entity.

An issue that has been very controversial among records managers has been the uncritical adoption of Electronic Document and Records Management Systems (EDRMS). One well known RM thinker, Steve Bailey, has stated: "As far as the average user is concerned, the EDRMS is something they didn’t want, don’t like and can’t use. As such, its no wonder that so few users accept them – as one person once said to me “making me use an EDRMS is like asking a plasterer to use a hammer”!

An [Electronic Document and Records Management System](http://en.wikipedia.org/wiki/Electronic_Document_and_Records_Management_System) (EDRM) is a [computer program](http://en.wikipedia.org/wiki/Computer_program) (or set of programs) used to track and store records. The term is distinguished from [imaging](http://en.wikipedia.org/wiki/Imaging) and [document management](http://en.wikipedia.org/wiki/Document_management) systems that specialize in paper capture and document management respectively. ERM systems commonly provide specialized security and auditing functionality tailored to the needs of records managers.

The [National Archives and Records Administration](http://en.wikipedia.org/wiki/National_Archives_and_Records_Administration) (NARA)has endorsed the [U.S. Department of Defense](http://en.wikipedia.org/wiki/United_States_Department_of_Defense) standard 5015.2 as an "adequate and appropriate basis for addressing the basic challenges of managing records in the automated environment that increasingly characterizes the creation and use of records."[[7]](http://en.wikipedia.org/wiki/Records_management#cite_note-6)[[8]](http://en.wikipedia.org/wiki/Records_management#cite_note-7) Records Management Vendors can be certified as compliant with the DoD 5015.2-STD after verification from the [Joint Interoperability Test Command](http://en.wikipedia.org/wiki/Joint_Interoperability_Test_Command) which builds test case procedures, writes detailed and summary final reports on 5015.2-certified products, and performs on-site inspection of software.

[The National Archives](http://en.wikipedia.org/wiki/The_National_Archives_(UK)) in the UK has published two sets of functional requirements to promote the development of the electronic records management software market (1999 and 2002).[]](http://en.wikipedia.org/wiki/Records_management#cite_note-9) It ran a program to evaluate products against the 2002 requirements. While these requirements were initially formulated in collaboration with central government, they have been taken up with enthusiasm by many parts of the wider public sector in the UK and in other parts of the world. The testing program has now closed; The National Archives is no longer accepting applications for testing. The National Archives 2002 requirements remain current.

The [European Commission](http://en.wikipedia.org/wiki/European_Commission) has published "[MoReq](http://en.wikipedia.org/w/index.php?title=MoReq&action=edit&redlink=1)," the Model Requirements for Electronic Records and Document Management in 2001.[]](http://en.wikipedia.org/wiki/Records_management#cite_note-10) Although not a formal standard, it is widely regarded and referred to as a standard. This was funded by the Commission’s IDA program, and was developed at the instigation of the [DLM Forum](http://en.wikipedia.org/wiki/DLM_Forum). A major update of MoReq, known as MoReq2, was published in February 2008.[[17]](http://en.wikipedia.org/wiki/Records_management#cite_note-16) This too was initiated by the DLM Forum and funded by the European Commission, on this occasion by its IDABC program (the successor to IDA).[]](http://en.wikipedia.org/wiki/Records_management#cite_note-17) A software testing framework and an XML schema accompany MoReq2; a software compliance testing regime was agreed at the DLM Forum conference in Toulouse in December 2008.

The [National Archives of Australia](http://en.wikipedia.org/wiki/National_Archives_of_Australia) (NAA) published the Functional Specifications for Electronic Records Management Systems Software (ERMS)[]](http://en.wikipedia.org/wiki/Records_management#cite_note-18), and the associated Guidelines for Implementing the Functional Specifications for Electronic Records Management Systems Software, as exposure drafts in February 2006.

**COMPARISON OF THE FOREIGN LITERATURE GATHERED TO THE PROPOSED SYSTEM**

**Similarities**

The foreign system is similar to the proposed system in the sense that they are integrated, centralized, and purposely focused in managing private and important records referred to as electronic document. Both systems are particular with the [imaging](http://en.wikipedia.org/wiki/Imaging) and [document management](http://en.wikipedia.org/wiki/Document_management) systems that specialize in paper capture and document management respectively. These systems commonly provide specialized security and auditing functionality tailored to the needs of the record managers.

**Dissimilarities**

Both systems may have similarities however; they also have its differences. The foreign system is web-based while the proposed system is application-based.

**LOCAL LITERATURE**

CIVIL REGISTRY SYSTEM –

INFORMATION TECHNOLOGY PROJECT (CRS-ITP)

National Statistics Office (Civil Registry System) or the NSO-CRS involves the computerization of the civil registry operations of NSO. NSO-CRS is designed to collect, store and manage civil registry documents (CRDs) and the specimen signature of all city and municipal registrars including all CRS authorized signatories, using the imaging technology.

*Census Serbilis Centers* are the virtual offices of NSO in different regions and provinces. These CenSCs can accept and process requests for copies of birth, marriage and death certificates regardless of whenever the event was registered.

A big step towards improving the delivery of services to the Filipinos and increasing the efficiency of the administration towards e-governance, the Civil Registry System – Information Technology Project (CRS-ITP) is a joint undertaking between the National Statistics Office (NSO) and Unisys Public Sector Services Corporation (UPSSC). The US$65M project is under a Build-Transfer-Operate (BTO) scheme which will last for twelve years. The multi-phase CRS-ITP involves the automation of the document copy issuance, authentication, and certification of civil registry documents; the conversion of over 120M civil registry documents into digital format; the establishment of CRS outlets nationwide; the building of a wide area network infrastructure for the communication requirements of the CRS outlets; the development of application and support systems that will run the CRS, and the redesign of business processes to support the CRS.

The NSO-CRS project is a 12-year, multi-phase computerization project. Using imaging technology, the project is designed to collect, store and manage civil registry documents, and the specimen signatures of all the city and municipal registrars, including all CRS authorized signatories.

Way back in 1995, NSO had already foreseen the increase in the demand for its services. NSO also realized that in order to respond to that future need and accomplish its vision of improving the quality of life of the Filipinos through the generation of vital statistics critical to the implementation of development policies and programs, computerization must be undertaken to improve the civil registry system and the organization’s computing capabilities. In early 2000, the demand for the issuance, authentication, and certification of civil registry documents has already increased to an average of 10,000 to 12,000 requests daily. This situation is compounded by the burgeoning volume of civil registry documents that must be handled by NSO, and of statistical reports required from its office by different government institutions for their development programs.

  With this project, NSO and Unisys envision enhanced public service delivery through expeditious processing of requests, shorter lines at the application and payment counters, and improved facilities for the convenience of the public. After full system implementation, NSO customers will be experiencing "while-you-wait" processing of requests and the nationwide service capability that will provide them the convenience of applying at the nearest CRS outlet. It will also alleviate the plight of applicants from the provinces who have to travel to Manila for their document copy issuance/authentication/certification requests. It will prove to be much cheaper for applicants in the future since their requests can be processed at the nearest CRS outlet.

Converted civil registry documents are those that have undergone the process of scanning, indexing and transformation into digital format through imaging technology. Once loaded in the database, document retrieval is made faster and more efficient, which emboldened the NSO to promise "while-you-wait" processing.

The CRS-ITP is also aimed at minimizing cases of falsification and fabrication of civil registry documents, as well as eradicating the fixers who take advantage of the public. Moreover, the CRS-ITP will be able to address NSO’s vital statistics production backlog because of the enhancement of NSO’s computing resources and capabilities. Information from these statistics are used for administrative planning for such undertakings as education, social welfare, and health programs, housing programs, and other development programs.

     Unisys is committed in providing a modern and effective computing platform to address the needs of NSO, and in helping the organization change to be a more successful arm of the government in moving the country forward.

**COMPARISON OF THE LOCAL LITERATURE GATHERED TO THE PROPOSED SYSTEM**

**Similarities**

The Civil Register System (CRS) is similar to the Centralized Baptismal Certification and Record Management System through its goals. The goal of the National Statistics Office (NSO) is to automate their transactions through the CRS particularly in issuing authenticated birth, marriage and burial certificates. Likewise, the proposed Centralized Baptismal Certification and Record Management System for the Diocese of Bayombong possess the same goal in automating the baptismal records of the Catholic devotees. Both are application based and is working through a client-server situation.

**Dissimilarities**

The only difference is that CRS is purposely made for birth, marriage and burial certificates while the proposed system is for baptismal certificate and record management of the necessary files on every church.

SYNTHESIS OF THE STUDY

The combined studies of the foreign and local literature helped the researcher in formulating an idea to use the centralized civil registry system of the National Statistics Office combined with the record management information standards of the foreign studies. The figure below shows how the combined studies will be utilized in the proposed system.

Application-based

Centralized/Client-Server Application

PROPOSED CENTRALIZED BAPTISMAL CERTIFICATION AND RECORD Management System for the diocese of bayombong

Record Management Standards

Imaging Technology

**The System Development Cycle**

This method is used to illustrate the beginning up to the ending in composing the proposed system. This can be seen in Chapter 3: Research and Procedures.

CHAPTER III

**RESEARCH METHODOLOGY**

This section describes the steps and procedures that were followed in order to accomplish the project. The study was conducted as follows:

The researcher acquired the descriptive-interpretative-theoretical types of research utilizing interviews, observations, theories and concepts that were later interpreted for the analysis of the study. This method was done in order to determine the flow of transaction in the proposed company and in conceptualizing an alternative solution to the determined problem. Comments and criticisms will be the deciding factor of the researcher for the improvisation of the study.

**Research Design**

The study is designed to cover the transactions of the Roman Catholic churches with regards to their issuance of baptismal certificates and other pertinent records and for their record management. The study was conceptualized to improve the existing system of the proposed company/church particularly in their manual issuing of certificate of baptism and generating reports in the church.

In this study, the researcher conducted a survey and interview method to determine the flow of transactions efficiently and accurately. An alternative solution was found and that is to transpose their existing manual system to the proposed computerize system. The researcher proposed a design to the client (parish secretary) and explained the differences that will be made when the system will be implemented. The results of the proposition were used by the researcher, the system designer itself, in creating modules and database that will be integrated in the system. The researcher also surfed for similar systems in the internet as basis for the construction of the designs and schemes and also considered the client requirement in translating their manual system. The process of reviewing the system requirement was done repeatedly to ensure that the requirement basis is met and that the client will be satisfied in the proposed system.

**RESEARCH LOCALE**

This study entitled “CENTRALIZED BAPTISMAL CERTIFICATION RECORD MANAGEMENT INFORMATION SYSTEM FOR THE DIOCESE OF BAYOMBONG” was developed at Aldersgate College and will be implemented at the Parish Halls of the respective Catholic churches in the Diocese of Bayombong.

**RESEARCH SUBJECTS**

The study mainly focuses on the job of the parish secretary especially in issuing baptismal certificate. Personnel information, parish priest and church information is also incorporated.

**SOURCE OF DATA**

In identifying the problems of the study, requirements of the system and basis for creating documentation, the researcher made use of an interview with the propose company personnel. The researcher was also given a chance to observe the transactions at the church.

**Research Tools**

In this section the researcher studied the existing system to establish its weak and strong points. The information acquired from this study gave the basis for the design of the new system. A number of steps, procedures and tools were employed as shown below:

***Interviews -*** The researcher conducted face-to-face interviews with the corresponding personnel. Catechists, parish secretaries, priests and catholic devotees and other person who were baptized in the Catholic churches were interviewed to fully understand their experiences. Also an interview guide with open ended questions was prepared and administered to the respondents so as to enable them give their views freely. This technique was chosen because:

1. It permits clarification of questions

2. It has high response rate than written questionnaires

3. It is suitable for use with both literate and illiterates

4. It gets full range and depth of information

5. It develops relationship with client

***Observation -*** This technique was used to gather accurate information about how the system actually operates, particularly about processes. This involved the researcher to systematically watch and record the behaviors and characteristics of operations and processes in the parish hall for issuing baptismal certificate. Although the method was time consuming, it had a number of advantages, which include:

• It gives more detailed and context related information

• It permits the collection of information on facts not mentioned in the interview

• It permits tests of the reliability of the responses to the questionnaires

• It view operations of a program as they are actually occurring

• It can adapt to events as they occur

***Document Review -*** A thorough review of the documents used in the church such as the forms and certificates was made with the intent to study how things are done and discover areas where improvement is necessary. A number of documents were reviewed including information gathered in issuing certificates, payments, filing the duplicate copies and also records of the employees, priests, and sacristans of the church. This method was used because of its advantages, which include:

1. It is inexpensive because the data is already there

2. It permits examination of trends over the past

3. Doesn’t interrupt program or client’s routine in program

4. There are few biases about the information

**RESEARCH PROCEDURE**

***Determining the Problems of Existing System***

Considering the previous section, there are many problems associated with the existing manual system, they include the following:

1. It is evident that there is a lot of duplication in recording personal information.

2. There is a problem of storage of these registers and forms

3. Information retrieval from these sources is not easy because there are a lot people who are baptized in that particular church.

4. Some records might get lost or misplaced. This is a problem in decision making as there is inadequate information.

5. The availee has to wait for a long time as church workers are looking for their records.

***Software Development***

In the developing the model software, a brainstorming, researching and reviewing of the requirements needed in the system was done. At the initial phase of the development, the desired outcome, system requirement and specifications was defined based from the gathered informations. These requirements were utilized in the conceptualization of the design for the software. After all the requirements are gathered a design must be conceptualized. The researcher then, started to create forms and modules appropriate to the requirements of the proposed system. A design for the database was also incorporated for the retrieval and restoration of the informations that will be stored in the system. After the design, coding and debugging was done. The source codes were obtained and designed using the VB.net language for programming. The researcher has also done reviewing of the codes to point possible errors which may occur. It was later debugged when there were found errors.After the design and coding of the proposed software, it was later compiled and tested through functionality testing. Each modules and forms were tried and tested to find if it meets the requirement of the system and to see how it relates to the other functions of the system. A return to the design conceptualization phase was done when a particular module failed to function accordingly based on the requirements.

1

Identify the System Requirement

2

Design the Software Hierarchy

3

Develop the

Software

4

Implement and Evaluate the System

5

Analysis of Data

**Figure 2. Phases in Conducting the Study**

**Figure 3. Software Development Process**

Formal Testing and Documentation

FAIL

Functional Testing of System

PROGRAM ERRORS

Functional Testing of the Forms and Modules

Programming and Debugging

Design Conceptualization

Identifying Requirements and Specifications

***System Implementation***

System implementation was achieved using MySQL for database design. Microsoft Visual BASIC.Net scripting language was used to develop the codes that link up the system interfaces

***Program and System Testing***

System testing is the process of testing the modules and its functionality. Determining the functional requirement and non-functional requirement is important to see if the developer’s view of the system commensurate with the clients written requirements. It is also to see whether the system is accepted and ready for installation testing and if the clients are satisfied with the output.

***Deliver the System***

When the system is already finished with her documentation and developing the system then the developer/researcher is now able to deliver the system to the main server of the system which is at the St. Dominic Cathedral for their own benefit.,

***Maintenance***

The researcher allotted a 5 consecutive year for the maintenance of the system because upon delivery there may be some risks and problems in operating the system. Although the all the personnel will be oriented and trained with regards to the functionality of the system there will still be risks.

CHAPTER IV

**PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA**

***ANALYSIS OF THE Existing System***

The existing system was found to be completely manual, i.e. person’s record is captured by writing the necessary information at a printed form. After which, the parish secretary will type the written information in the allotted form for certificate of baptism through a typewriter. Same procedure is given to the second time availee of the baptismal documents. For the employees, such as the catechist, sacristans and officiating priest, a bio-data is issued and will be filled by the respective personnel of the church and will be kept in the filing cabinet for filing purposes.

All the persons duplicate certificates and information are collected and kept with the records department of the church particularly at the parish hall. Filing and organization of the records are done in the records department. Payments, summaries and reports are also generated there.

The flowchart located at the appendix A was made to interpret more of their manual and existing transactions.

***ANALYSIS OF THE PROPOSED System***

On the question “How can the parishioners adopt the changes from the manual to a computerize way of managing their records?”, it is evident that the parishioners have little knowledge to the computer technology. It is very important to get users of the system fully involved such that the problem of change management does not arise. Trainings and orientation of the system is proposed in order to update and renew their knowledge on the technology. The parishioners, who will use the system therefore, were approached during the study and were asked what they expected of the proposed system and the following were the findings:

1. A system that is easy to learn and use

2. A system that improves on the efficiency of information storage and retrieval

3. A system that is fast in producing/generating results which will be ready at the point of time therefore reducing on waiting time and increasing on time to attend the applicants of the documents.

4. A system that has an element of error validation, i.e. one that prompts the user on entering unusual command or data format inconsistent with the database.

5. A system that provides attractive interfaces with easy navigation through the system

6. A system that is faster, flexible and convenient.

7. A system that stores data and produces reports timely and accurately

8. A system that restricts access to information to only authorized personnel

9. A system that is safe and secured most especially from the hackers.

On the problem of reliability of the proposed system in terms of generating reports, certifications and uploading of old records, a functional requirement was required to capture the intended behavior of the system and the desired outcomes of the respondents. This behavior may be expressed as services, tasks or functions the system is required to perform. Therefore the proposed system is able to:

1. Capture the person information, store it and make it available at the time of need.

2. Present the users with a real-time display of the number of records in a database.

3. Allow the sharing of the data by the users

4. Generate reports accurately and timely

5. Search and display person information details

On the problem of coping with the changes of the technologies, a non-functional requirements are established which specify criteria that can be used to judge the operation of a technology. This is contrasted with functional requirements that specify specific behavior or functions. The technology must exhibit software quality attributes, such as accuracy, performance, cost, security and modifiability plus usability, i.e. easy to use for the intended users to cope up the with the standards of the desired software. Thus the proposed system does the following:

1. The system has high performance and reliability level. The mean time between failures, mean time to repair, and accuracy are very high.
2. The system has user-friendly interfaces. This ensures the ease with which the system can be learned or used. The system can allow users to install and operate it with little or no training.
3. Handles growing amounts of work in a graceful manner as can be readily enlarged i.e.the ease with which the system can be modified to handle a large increase in users,workload or transactions.
4. The system prevents unauthorized access to the system with user authentication vialog-on system.

**System Design**

On the problem of security and functionality, the system was designed on Microsoft windows platform, using Apache server, MySQL for database design and Microsoft Visual BASIC.NET 2008 scripting language. It is application-based and therefore can be installed on a computer (server) on a Local Area Network (LAN) or Wide Area Network (WAN) depending on the environment being used. Once the application is installed, any authenticated user can access it from any work station by using hypertext protocol, server name, and port number. For example, the system is located at the address <http://localhost/home.php>. The system is composed of two sections; the database server and the graphic user interface (GUI).

**SYSTEM FUNCTIONS**

The following are the main modules/forms and their brief descriptions which are functioning in the system:

Log-in form – This form prompts user to input their username and password before going to the main form. This is done so to prevent unauthorized persons in accessing personal and confidential files stores in the system.

Main Form - This form is considered the work area or the transaction area of the user. This mainly consists of functions that are required for the transactions of the users such as printing baptismal certificate; generating receipts; uploading certificates and others.

Integrated Web Browser – The system is also capable of providing internet web browser as the developer integrated a module of which can surf the internet while the Information System is running along.

CHAPTER V

**SUMMARY OF FINDINgS, CONCLUSIONS AND RECOMMENDATIONS**

This chapter discusses the work carried out in this project. It examines how the objectives of the project were achieved at the course of the study. The summary of findings, conclusions and recommendations are discussed.

The purpose of the study was to build a centralized baptismal certification and records management system to replace the existing manual system. The case study was centralizing baptismal certification and records management system wherein no one goes to the place of baptism just to acquire the needed baptismal certificate. To achieve the objectives of study, the existing systems was studied and analyzed, by comparing the strong and weak points of the system. Involved persons such as the catechist, parish secretaries and employees were interviewed, documents reviewed and observation techniques were employed. Existing literature was also analyzed. Implementation was done using VB.net scripting language for the user interfaces and MYSQL for database design. The system has enabled Apache web server to effect the connections between the databases and the application. The new system is therefore able to do capturing of personal / bio data is done once as opposed to the manual system where the person baptismal information would be recorded at every time he will avail of the certification. This avoids duplication and saves time. Retrieval of information from the database is very quick as one searches on the screen compared to the old system which involved paper files which were vulnerable to displacement and damage. Authentication of the users with the access control facility to prevent unauthorized users from accessing the data. The system has also the capability of validating the entries by prompting the user whenever a wrong command is entered to avoid unnecessary errors that can distort information. It can also update the database whenever new information is entered. Reports are generated quickly and correctly, unlike in the old system where information would be scattered.

Basing on the findings and analysis, centralization of issuing baptismal certificate and installing a record management system is a venture worth to invest in. Once taken seriously and embraced, there are a lot of benefits that can be realized therein. Both the church and the community will benefit from it. For example persons availing certificate will no longer wait for long hours to be certified or to make a certification waiting for the priest’s signature or the record itself that would be spent looking for information would be saved.

Clerical errors that were resulting to availing of baptismal certificate will be minimized. Records which were stored in the records center will now be stored electronically and will be safer. Therefore there will be the right information at the point of care. Periodic reports which are generated with the help of a computer are more accurate and quick. Therefore with the introduction of computerization, the problem of late reporting and errors in the reports will be no more.

It is important to note that this system is based on a local area network or wide area network. This facilitates the sharing of data in different places. This helps personnel access the data at their locality instead of returning from their place of baptism looking for information which is time consuming and money wasting.

The researcher further recommends a more comprehensive study to exploit the full benefits of the new technology in this field of records management. This may unveil more gaps and improve the system more than this study could ever do. The Roman Catholic Churches on the Diocese of Bayombong should adopt and computerize their records management systems by providing the necessary funds for such projects. Given the current power situation in every place, the system would be useless if such measures are not put in place to avert power problem. The researcher therefore recommends that a standby generator be considered such that when power goes wrong, the system will not stop working.

Training for the parish workers with minimum computer skills is paramount. It was found out that almost workers at the churches are computer illiterate as perceived using typewriter due to lack of technologies such as computers. Without these skills system implementation it will be difficult for them to adopt the system. Therefore it is recommended that a training program be made a priority.