CHRISTIAN SERVICE UNIVERSITY COLLEGE

KUMASI

DEPARTMENT OF COMPUTER SCIENCE

TOPIC: IMPROVING VOLUME COMPUTATION AND DATA

MANAGEMENT IN THE SAWMILL INDUSTRY: A CASE STUDY OF

FABI TIMBERS LIMITED

 $\mathbf{B}\mathbf{Y}$

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DATE MAY, 2012

DECLARATION

I declare that I have personally under supervision taken the study herein submitted.

George Yeboah (Mr.) (Student) Date

I declare that I have supervised the student in undertaking the study submitted herein and confirm that the student has permission to present it for assessment.

Thomas Yeboah (Mr.) (Supervisor) Date

AKNOWLEDGEMENT

To the almighty God, to whom we owe our existent, may His name praise.

Special thanks go to my supervisor, Mr. Thomas Yeboah, for his support, thorough review, and constructive criticism, valuable suggestions and patience.

To the head of department and lecturers of computer science department (Christian Service

University College, Kumasi) for their patience and support during my period of study.

DEDICATION

dedicate this work to Him, my dear wife, Mrs. Josephine Yeboah, my parents, Mr. Joseph Yeboah& Madam AkuaAfriyie, of blessed memory, and to my lovely children-AkuaBrempomaahOwusuwaah&AntwiwaahYeboah and Maame Abena Tawiah Afriyie-Yeboah.

ABSTRACT

Assessment of the gradual collapse of over 20 timber milling companies in the Kumasi Metropolis revealed a number of reasons which necessitated this research. Inefficient volume computation, data storage coupled with primary processing of timber in the Ghanaian sawmills has resulted in lower lumber recoveries/yields hence generating too much waste.

The management software system for the timber industry is aimed at enhancing the operations and processes of these companies in achieving a more and quicker access to data in terms the type of species in stock, calculate volume of log electronically.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Survival and growth are very necessary in every business environment. To be able to survive and compete favourably, one of the most important areas to watch is the management aspect of the business. In order to survive the hush business environment the integration of Information and Communication Technology (ICT) into the management aspect of the business is inevitable.

According to Cohen G.et al. (2002), Information and Communication Technology is a collection of technologies and applications which enable electronic processing, storing and transfer of information to a wide variety of users or clients.

Technology is a scientific knowledge used in practical ways while application is software that can be used to perform useful work on a computer.

. Among such technology is Information and Communication Technology (ICT), which has an important role to play in helping to boost productivity, particularly when combined with strong skills, management and innovation.

It is rapidly transforming the lives of human beings, the way we do business, access to information and communication, entertainment and fuels the global economy. The world, in no doubt, has become a global village. This is clearly an achievement that borders on technology

Well-planned use of ICT resources by businesses can help achieve increased productivity and continue to compete in the global economy through better management practices. It is therefore imperative that utmost care is taken in the capture, process and maintenance of data to ensure an incident-free retrieval and usage of information in any organization.

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Most sawmills andtimber companies in Ghana have difficulty maintaining and retrieving records/data resulting in number of failures or lose probably because of the improper handling of data or due to wrong perceptions about data. This has contributed in a way, to the collapse/closure of most of the sawmilling companies in Ghana.

1.2 STATEMENT OF THE PROBLEM

Timber companies play an important role in the socioeconomic development of Ghana. Their timber products milling for local market and export, employment generation etc., have not recognized the need to incorporate ICT into their operations. They fail to recognize the fact that information and data are the most important and valuable resources (asset) in the operations of any organization, be it state- owned enterprise and private- owned company and that there is the need to manage and process this resource well.

. All data/ records and information including contracts and their deliveries are kept on sheets of paper in files, books, writing boards and registers. Records on trucks dispatched to the various forest operation sites scattered over country are kept on time cards. These trucks convey logs of different species to sawmill for processing. Upon arrival, each log is measured and its volume determined and stored manually.

Also summary of species of logs in stock and their volume is shown on writing board located at office of the Operations Manager and are updated weekly. d. This can results in failure to keeping to contract obligations and subsequent loss of revenue/income.

Retrieving and searching for records and information where one would have to go through myriads of files, books and papers manually is very laborious and cumbersome.

Reports on the operations of the various sections/departments are duplicated during collation and updating, thus causing data redundancy. It has been observed that the use of ICT services like software have not been incorporated to improve the management and operations of sawmills in Ghana. It is against background that this research was designed.

1.3 PURPOSE OF STUDY

The study is to examine how sawmills in Ghana can apply Management Softwareinto theiroperations to improve effectiveness and efficiency.

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Some of the problems associated with this existing system enumerated below can be managed by the proposed system:

- Inaccurate record on logs stocked and firm's productions.
- Loss of production of hours when manual computations are employed
- Wrong volume calculations results in conflicting information
- Repetition of data on the records cannot be instantly detected (Data integrity)
- Maintenance of Data Stored in the form of Files and Registers are Expensive and time consuming
- Searching and Sorting of Data is highly time Consuming.
- Storage capacity of this manual System is limited.
- Increase in the volume of data increases complexity.
- Bulk files and folders require space to store.

1.4 RESEARCH QUESTIONS:

The main objective of the study is to find out how sawmills can make use of software to improve business in effective and efficient manner.

Based on this objective the following questions are asked:

- What type of storagefacility/method does the company use?
- How can software improve their operations?
- How does sawmill solve or minimize problems/challenges associated with the existing system?
- What benefit will the organization derive?

1.5 SIGNIFICANCE OF THE STUDY:

The demand for wood in the building, furniture and construction industries locally and internationally, have placed sawmills in a position to reach various customers and partners at ease will stem from how management of these sawmills are improved to render the kind of services being provided

It is in this vane that the research of the study sought to enhance the operations of these mills in the use of technology in reducing waste and improve efficiency of their operations.

Redundancy in the company's records will be avoided and manual routines of going through heaps of files, books and papers to have the needed records and information will also be avoided with this automated system.

1.6 DELIMITATIONS

The study was limited to only the management and operations of Messrs.' Fabi Timbers Limited in particular. Any conclusions arrived at and the generalization made therefore would apply to this aspect only. This means that for a more complete study, the management and operations of other sawmills will have to be considered.

1.7 LIMITATIONS OF THE STUDY

The study has some aspect which was beyond the reach of the researcher. There were potential shortcomings that could influence the results or its generalization but the researcher had no or little control over. These limitations include time and financial constrains with which this study was conducted. Also access to certain information and data were limited and for matter the generalization of the findings could be affected.

1.8SCOPE OF PROJECT:

The project is aimed at addressing issues that are seen as draw backs associated with manual operations and the difficulties of accessing the right information for decision making.

The computerized software System will also improve and facilitate the process of volume computation in Timber industry in Ghana.

Once networked, all branches and affiliates of the organization will be linked and each can access information at any point in time.

The various departments' operations can also be monitored without any constraints

It also hopes to maximize the use of resources to avoid waste and make data available at any time upon request by the right users and this would be achieved through a centralized system with the necessary built in security mechanisms put in place.

System features:

Listed below are some advantages of the proposed system:

Data Processing: This has lifted the heavy data processing constraint with the manual system and has opened up new avenues for planning, control and data experimentation

- Accuracy: The data processed by the computer are highly accurate. The programs written on the system check and control data before and during processing.
- Management information: They can be used to provide useful information of management for control and decision making
- Speed: Computerization helps in processing the data placed in several data files in no time
- Database: Computer facilitates the establishment of database. Such a database integrates data records and reduces data redundancy.
- Flexibility: Modern digital computers can be used for a variety of purposes. (e.g.) online processing, multiprogramming and others
- Reduction in paper work: The use of computers for data processing has helped management of business organizations to cope with paper utilization reduction.
- Storage capacity: Large volumes of data can be conveniently stored, accessed and modified.
- Volume: Computers can store volumes of data and can retrieve the desired information quickly.

1.9 RESEARCH METHODOLOGY:

Microsoft Visual Basic.Net will be used in developing the front-end. The designing of the Database Management System which will serve as the back-end will be done with Microsoft Structured Query Language 2008 (SQL)

Data used: The manual system of record taking and keeping will be observed through interviews. Quality field research approach will be needed to make sure accurate data is stored in the database.

Database Structure: A database and its required tables will be created. This database will be encrypted password protected. Accessing data from the database will necessitate authentication by users.

All the appropriate data normalization and redundancy techniques will be applied to promote data accuracy. Data modification techniques like store procedures and triggers will be incorporated to facilitate queries.

1.9.1 JUSTIFICATION OF TOOLS

Why Visual Basic .Net:

- VB.NET provides managed code execution that runs under the Common Language Runtime (CLR), resulting in robust, stable and secure applications. All features of the .NET framework are readily available in VB.NET.
 - VB.NET is totally object oriented.
 - VB.NET uses XML to transfer data between the various layers in the DNA Architecture i.e. data are passed as simple text strings.
 - Security has become more robust in VB.NET. In addition to the role-based security in VB6, VB.NET comes with a new security model, Code Access security. This security controls on what the code can access. For example you can set the security to a component such that the component cannot access the database. This type of security is important because it allows building components that can be trusted to various degrees.

MS SQL Server:

- SQL Server 2008 has reduced application downtime, increased scalability and performance, and tight yet flexible security controls.
- SQL Server 2008 makes it simpler and easier to deploy, manage, and optimize enterprise data and analytical applications. It enables one to monitor, manage and tune all of the databases in the effective way.
- SQL Server 2008 provides a new capability for the partitioning of tables across file groups in a database.
- SQL Server 2008 has unlimited database as compared to Microsoft Access database which all data across will be conveniently saved.

1.9.2 SYSTEM SPECIFICATION:

The minimum system requirements for a computer that would run for the project:

The Server

- A minimum of windows server 2003 operating system.
- Pentium IV one Gigahertz and above.
- Keyboard and mouse.
- Hard disk of 200 gigabyte and above.
- Memory of 3 gigabyte and up
- Raid Card configured

THE CLIENT:

- Pentium III 500 MHz or higher.
- Hard disk 20 gigabyte.
- Memory 256 MB.
- Keyboard and mouse.
- Microsoft Windows XP
- Windows Vista
- Windows

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This chapter discusses the relevant literature review. Also, it aims at summarizing the results of the previous studies carried out on the relevance of data storage, the benefits of ICT tobusinesses and how management soft can bring about efficiency.

2.1 Management

Many working definitions have been given to management, in and acceptable manner, Richard L et al (2010) defines management as "the attainment of organizational goals in aneffective and efficient manner through planning, organizing, leading and controlling organizational resources".

Management helps businesses focus on setting and meeting goals efficiently and effectively so that a profit can be made. The word management also refers to the people who are in charge of running a business. Managers need a thorough understanding of business operations, which involve all the activities of a company. They develop the objectives for a firm or a department and then figure out how to meet those objectives through people, work processes, and equipment.

Most managers carry out four different functions of management: planning, organizing, leading, and controlling. Some managers may primarily focus on one or two of them. These functions are indicated in the order in which they occur. Planning must be completed first, and then organizing can take place. Organizing allows managers to lead and control employees and activities to get work done. Leading involves providing guidance to

employees so they can fulfil their responsibilities effectively. Controlling involves measuring how the business performs to ensure that financial and operational goals are met.

Managers are usually task-oriented. This means that they can handle many tasks at the same time. They have to plan their time and decide which tasks are most important. They also must keep accurate business records. A manager often has to work under pressure and solve many problems. Every manager must communicate well. Most of a manager's day is spent interacting with other people. Managers need human relations skills, or skills in dealing with people. All managers must have some knowledge about the technical aspects of their business.

Based on the above definition of management, it can be inferred that it is the responsibility of every manager to coordinate resources in an effective and efficient manner to accomplish the organization's goals.Managers should remember thatmanagement is about getting things done through other people. They can't do it themselves. It is their responsibility to create the environment and condition that engageother people in goal accomplishment.

2.2 SOFTWARE

Computer software, or software, is a collection of computer programs or a set of instructions that tells a compute<u>r</u> how to perform a given task. In other words, software is a conceptual entity which is a set of computer programs, procedures, and associated documentation concerned with the operation of a data processing system. We can also say software refers to one or more computer programs and data held in the storage of the computer for some purposes. http://en.wikipedia.org/wiki/computer_software accessed on 16/11/11

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2.3 SAWMILL

A sawmill is a facility which processes raw timber into dimensional lumber for eventual sale locally or internationally (http://en.wikipedia.org/wiki/sawn) accessed on 15/11/11.Working at sawmill can be dangerous, especially if the sawmill handles a high volume oftimber.A number of different types of saws are used, along with other heavy equipment, and workers can easily injure themselves, especially along the green chain, the system ofconveyorbelts which runs through a sawmill to carry timber and lumber as it is finished.Many old sawmills were located near rivers, because the water was used to float logs downstream from logging sites. The tradition of using water to move logs around endures inmany sawmills, some of which establish artificial waterways on site to move unfinished timber. Most sawmills are trying to improve their environmental record, focusing on utilizing a high percentage of the total volume of a logs that they bring in, and finding efficient and environmentally friendly ways to handle the inevitable waste of the milling process.

2.4 DATABASE

A **database** is an organized collection of data for one or more purposes, usually in digital form. The data are typically organized to model relevant aspects of reality (for example, the availability of rooms in hotels), in a way that supports processes requiring this information (for example, finding a hotel with vacancies). This definition is very general, and is independent of the technology used.

The term "database" may be narrowed to specify particular aspects of organized collection of data and may refer to the logical database, to physical database as data content in computer data storage or to many other database sub-definitions.

The term database is correctly applied to the data and their supporting data structures, and not to the database management system (referred to by the acronym DBMS). The database data collection with DBMS is called a database system.

The term database system implies that the data is managed to some level of quality (measured in terms of accuracy, availability, usability, and resilience) and this in turn often implies the use of a general-purpose DBMS. A general-purpose DBMS is typically a complex software system that meets many usage requirements, and the databases

The database concept has evolved since the 1960s to ease increasing difficulties in designing, building, and maintaining complex information systems (typically with many concurrent endusers, and with a diverse large amount of data). It has evolved together with database management systems which enable the effective handling of databases. Though the terms database andDBMS define different entities, they are inseparable: a database's properties are determined by its supporting DBMS and vice-versa.

The Oxford English dictionary cites a 1962 technical report as the first to use the term "database."<http://en.wikipedia.org/wiki/Database > accessed on 19/11/11. With the progress in technology in the areas of processors, computer memory, computer storage and computer networks, the sizes, capabilities, and performance of databases and their respective DBMSs have grown in orders of magnitudes. For decades it has been unlikely that a complex information system can be built effectively without a proper database supported by a DBMS. The utilization of databases is now spread to such a wide degree that virtually every technology and product relies on databases and DBMSs for its development and commercialization, or even may have such embedded in it. Also, organizations and companies, from small to large, heavily depend on databases for their operations.

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According to Ward P. et al (2006) in their book entitled Database Management Systems, defines DBMS as "a collection of programs that allow users to specify the structure of a database to create, query and modify the data in the database and to control access to it." . However, a system needs to provide considerable functionality to qualify as a DBMS. Accordingly its supported data collection needs to meet respective usability requirements. Thus, a database and its supporting DBMS are defined here by a set of general requirements.

Well known DBMSs include Oracle, IBM DB2, Microsoft SQL Server, MySQL and SQLite

"The unemployed problems that could possibly result from increased efficiency and productivity in the business process has been cited as one of the fallouts and undesirable consequences of rapid adoption of ICT in the developing countries" (Meng &Li, 2002)

While it is acceptable that the acquisition of necessary technology is crucial for improving productivity, it must also be realized that efficiency would not automatically follow the wholesale acquisition of new technology dependent machineries without the domestic capabilities to generate and manage development in the technologies (Carayannis &Sagi, 2002)

Technology has influence businesses in the past 20 years and help management /business streamline processes, trade online, store and share information and replace low-value and repetitive work with more diverse and higher value ones.

CHAPTER THREE

METHODOLOGY

3.0 INTRODUCTION:

This section outlines the techniques, procedures and processes used in the collection and analysis of the needed requirements in the development of the sawmill software. It also explains how the software is supposed to function in order to meet the clients' request. The research design, population sample, sampling techniques and research instrument are treated in this section.

3.1 RESEARCH DESIGN

The research design attempts to provide the best information possible subject to the variant constraints which the research wasconducted in other to answer the research objectives.

The research employed the descriptive and analytical method which seek to describe the phenomena, gives a clear picture of trends, an event or situation. The study employed the descriptive survey method in looking at the data storage system in the sawmilling industry. It is in the view of the nature of the population under study and the respondents involved and their easy accessibility that called for the research design chosen.

3.2 RESEARCH APPROACH

The purpose of this study is to improve the data storage system in the sawmill industry, a case study of Fabi Timbers Limited at Sepaase in the Ashanti Region. The research questions was stated in a way where the answers would contribute to understanding how an improved volume computation and data storage system can help increase the efficiency and effectiveness of the business operations of an organization, facilitate coordination of activities within the organization and enable management to effectively control the operations of the organization

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3.3 RESEARCH STRATEGY

Volume computation and improved data storage system plays an important role in the management of sawmills in Ghana and for that matter the researcher used a descriptive research method which allows the use of direct observation and unstructured interviews to ascertain the functional and non-functional requirements for the project.

Yin (2003), states that a case study gives the researcher the opportunity to conduct direct observation and systematic interviewing. The centraltendency among all types of case study is that it tries to illuminate a decision or a set of decisions:

The case study is considered by Benbasat et al. (1987, p.370) to be viable for three reasons:

- It is necessary to study the phenomenon in its natural setting;
- The researcher can ask "how" and "why" questions, so as to understand the nature and complexity of the processes taking place;
- Research is being conducted in an area where few, if any, previous studies have been undertaken.

The above mentioned reasons support the use of case study in answering the research questions, and by that reach the purpose of the study.

3.4 POPULATION OF THE STUDY

The population for this study was the management and staff of Fabi Timbers Limited However, due to the large size of the population, the research wasrestricted to the top andmiddle level managers as well as key administrative and operational staff due to financial and time constraints.

3.5 DATA COLLECTION METHOD

Data collection techniques employed in this studywere direct observation and unstructured interviews.

The interviews and the observation were guided by the primary research question: "How to improve volume computation and datastorage in sawmills." These methods wereused to elicit information from interviewees on their perception onhow data or records are collected, processed, stored and the need to improve data the storage system in sawmills. They alsoshared their views on the current system being used. The respondents' views and requirements of the new system, which has the appropriate and secured means of data storage, were asked. The medium of communication used during the study were English and Twi where appropriate.

3.5.1 OBSERVATION

Observation, a fact-finding technique, involves the researcher becoming an observer of people and activities in order to learn about the system. This technique was used when the validity of data collected through other methods is in question or when the complexity of certain aspects of the data system prevents a clear explanation by the end users. Data gathered through observation are very reliable and relatively inexpensive compared to other factfinding techniques.

3.5.2 INTERVIEW

The personal unstructured interviews which involve asking open-ended questions were recognized as the most important and most often used fact-finding technique to get the end users involved in identifying requirements, and solicit ideas and opinions.. The interviews placed emphasis on people, the most important elements of information gathering, to respond freely and openly to questions. By establishing rapport, the researcher was able to give the interviewees a feeling of actively contributing to the software development and probe for more feedback from the interviewees.

3.6 SYSTEM REQUIREMENT

Computer software requires certain hardware components, known as system requirement, to be present in order to function effectively. Verification of the finished product to ascertain if requirements have been met ensures that the software works efficiently with respect to time, money and other resource include:

The Server

- A minimum of windows server 2003 operating system.
- Pentium IV one Gigahertz and above.
- Keyboard and mouse.
- Hard disk of 200 gigabyte and above.
- Memory of 3 gigabyte and up
- Raid Card configured

THE CLIENT:

- Pentium III 500 MHz or higher.
- Hard disk 2 gigabyte.
- Memory 256 MB.
- Keyboard and mouse.
- Microsoft Windows XP or windows 7, windows vista

3.6.1 FUNCTIONAL REQUIREMENTS

The software, designed to be user-friendly to both beginners and experts, ensures that sequence of action to achieve a task is as simple as possible, thus, reducing the amount of reading and manipulations a user has to do.

- The new system is be able to accept data on employees, store, allow for modifications and has the ability to support presentation (output) of exact information whenever needed.
- 2. The new system is able to calculate volume of logs and lumber and generate a report on it.
- 3. The new system is flexible enough for the purpose of updating stored data i.e. insert and delete data.
- 4. The new system is able to capture employees' personal data including their

🖳 Add_Worker		
Worker Id		Registration Date 06 / 08 / 2012
Title 🔍	Name [First - Mid - Last]	
CountryOccupationNHIS NumberSSNIT NumberAddressP. O. BoxHouse No.Home Town	Import Picture	Sex Marital Status Date of Birth Age Contact Phone Number Phone Phone Mobile E - Mail
Accounts Level Education Level Eank	Reason Of Recruitment Probation Period	Date Of Appoint Date Cf Joining
Help Entered By	Add New	Update Delete Next Home

photographs.

Fig. 1 Employee information /Registration form

5. The system is able to issue the detailed daily expenditure of the company.

Pnnt						=	
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	Main Repur L						
	Date Printed: 10-Jun-2012	, ,	FABI TIMBER LT POST OFFICE DOX 47 KUMASI	D			
	Name Of Collector	Position Of Collector	Name_Of_Cashier	Details Of Use	Date	Amount	
	Kwame Yamfi	Teacher	Frank Asare	For Building	07 Oct 2011	200	E
	Thomas Yebcah	Manager	George Yeboah	Buy Petrol	31 May2012	230	
	Josephine	Manager	Accountant	ent	01 Jun 2012	350	
	e		11		TOTAL	760.00	+

Fig. 2Expenditure report form

Salary_Advance						
I	Worł Reason for Adv	ker ld		^ ^		
	Am	nount]		
		Date				
	N	Ionth		•		
	Pay	Advance	lit Delete	Clear	ome	
	Worker_Id	Reason_For_Advar	Amount	Date	Month	^
•	06071698	for resaerch facilit	300.00	10/10/2011	Septamber	
	00254	RESEACH	400.00	05/10/2011	October	
	00255	KUMI MARK	0	0	0	
	000678	Operator	0			
	00254	School fees	350	31/5/2012	February	
	00254	Fees	400	31/05/2012	Match	Ŧ

Fig 3Salary Advance form

🖳 Log_Volu	me		
	Record Details		
	Wood ID		
	Wood Name		
	Radius of Larger End		
	Radius of Smaller End		
	Lenght of Wood		
	Wood Type	•	
	VOLUME OF WOOD		
	Calc	ulate Save Record Clear	
	Sub Calculation		
	Length	Breadth Height	
	Volume		
	Quantity of Sub		
		Calculate	

Fig 4Volume computation form

3.6.2 USER DESIGN INTERFACE

This to make users interaction with system as simple as possible in accomplishing their objectives, i.e. the proposed system provides user friendly interface with the Microsoft Visual Basic 2010 as depicted in the figure below.

PLEASE LOGIN WITH USER ID AND PASSWORD			
User Code	lord	Log In	
Password	0000	Exit	



Add_User	
Addnew U	Jser 🔘 Edit User Account 🔘 Delete Acounts
User Id	George Search
Password	*****
Confirm Password	*****
Position	Accountant
Add New Update	Delete Next Cancel

Fig 6Add new user form

CHAPTER FOUR

RESULT OF THE STUDY

4.0 INTRODUCTION:

This chapter is concerned with the results of the developed sawmill software for Fabi Timbers Limited. It deals with the analysis of the new software as well as findings and discussions made on it.

4.1 Analysis of the New System

The proposed system components were integrated and tested for errors and interoperability in the Company's working environment. After the trial session, it was obvious that the new standalone registered all employees of the company, calculated the volumes of logs and lumber, and was able to generate report on all bank transactions.

The table 1 below, shows the distribution of employees who were interviewed after they have tested the software.

UNIT/OFFICE	NUMBER OF PEOPLE INTERVIEWED
Director's Office	2
General Manager' Office	2
Operations Manager's Office	4
Personnel Manager's Office	4
Accounts Office	3

Table 1Distribution of the interviewees

The graph below shows the evaluation of the softwareby thetop management. ,on the scale of 1-5, in meeting their expectations.



Fig.7Evaluation of the software by Top Level Management

<u>KEY</u>

- D/O Director
- G/M General Manager
- O/P Operations Manager
- P/M Personnel Manager
- A/C Accountant

The users were trained on how to use the software to improve their tasks and to identify, if possible the shortfall in the systems. The use of the software made it easier to enter, modify and retrieve needed information and provides the most appropriate way for storing the Company's ever growing data / information as the years go by.

The use of the sawmill software can help in volume computation, processing, retrieving, modifying and storing records very easily and securely. To prevent data loss, a backup storage taken so that in the event of data corruption or loss on the software, there can be another source of getting such data. The new system improves efficiency, effectiveness and saves time when compared to the old system.

CHAPTER FIVE

Summary

5.0 Introduction

This chapter deals with general perceptions gathered on the project by users/clients and the developer. The topic therefore covers twoareas namely;

- Conclusions
- Recommendations.

5.1 Conclusions

The following conclusions were made from the findings;

- A considerable or appreciable level of interest on the part of management and staff were expressed. They were highly curious to experiencing a taste of technology at their doorstep
- Power The software will surely, as proposed, provide security for data / information and promote privacy for users.
- Failure will be the number one setback for the new system but clearly will not be vulnerable to rainfall, winds and floods that cause data destruction.
- The rate at which information isprocessed, retrieved and updated will be on the higher side thus time wastage will be reduced drastically.
- A large volume of data / information can be stored and thus congestion of offices with papers will be minimized drastically.

From the Operations Manager, the new system is a 'saviour' as far as volume computation andbank transactions is concerned.

5.2 Recommendations

Owing to our submissions by way of findings and conclusions, we are of the view that;

- 1. The use of software in sawmills must be a necessity and not a luxury to order to increase productivity.
- 2. These recommendations if adhered to will go a long way to quicken the development in the timber milling industry and the nation as a whole.

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PROJECT PRESENTATION

BY

GEORGEYEBOAH

TOPIC: IMPROVING VOLUME COMPUTATION AND DATA STORAGE IN THE SAWMILL INDUSTRY: A CASE STUDY OF FABITIMBERS LIMITED

AIM OF THE STUDY

To identify the reason(s) for the gradual collapse of the timber industry in Ghana.

REASONS FOR THE COLLAPSE

>Unfaviourable Government policies
>Financial constraints
>Poor data maintenance
>Poor management practices

WHY THIS AREA OF RESEARCH

 Failure to recognize the importance of information and data
 Problem of computing, storing, maintaining and retrieving

records/data

LITERATURE REVIEW

"The most valuable asset of any organization is data. Loss of data results in a significant loss of revenue. While the importance of data is based on its value to an organization, effort spent to create it, the costs involved and often the significance of the data/information is not realized until it is temporarily or permanently unavailable". By Devaraj Parthasarathy(www.expresscomputeronline.com

PROBLEM WITH THE EXISTING SYSTEM

Volume calculations
 Duplication of data (Data integrity)
 Maintenance of stored Data
 Storage capacity of current System

OBJECTIVE OF THE RESEARCH

To improved volume computation and data storage system in the operations of sawmills in Ghana.

FEATURES OF PROPOSED SYSTEM ≻Accuracy.

Management information ➢Speed Storage capacity Searching and Sorting ➢ Database > Flexibility



LIMITATIONS

- Time constraints
- Financial constraints
- Access to certain classified information and data

DELIMITATION

The study was limited to the management and operations of Messrs.' Fabi Timbers Limited

RESEARCH METHOD

The study employed a qualitative research approach, which focuses on analysis and solving social and real life problems.

- Direct observation
- Unstructured





	USERS ACCOUNT
\bigwedge	Add_User
	Addnew User Edit User Account Delete Acounts
	User Id Search
	Password
	Confirm Password
	Position
	Add New Update Delete Next Cancel



STAFF DATA

Add_Worker		Benistration Date / /
Title 🔹	Name [First - Mid - Last]	
Country Occupation		Sex Marital Status
NHIS Number SSNIT Number		Date of Birth / / Age
Address P. O. Box		Contact Phone Number Phone () -
House No. Home Town	Import Picture	Mobile () - E - Mail
Accounts		
Level	Reason Of Recruitment	Date Of Appoint
Education Level	Probation Period	Date Of Joining
Bank 🗸 🗸]	
Help Entered By	Add New	Update Delete Next Home



BANK DEPOSITS

Amount_to_Bank	
Name Of Sender	
Position Of Sender	
Name Of Bank	
Amount GH Cedis	
Details Of Amount	
Date Of Sending 01 Jun 2012	
Month 06	
Year 2012	
Save Next Cancel	
	Amount_to_Bank Name Of Sender Position Of Sender Name Of Bank Amount GH Cedis Details Of Amount Date Of Sending 01 Jun 2012 Month 06 Year 2012 Save Next Cancel

CASH EXPENDITURE

Expinditure				
	Name Of Collector			
	Position Of Collector			
	locued By			
	ISSUEU Dy			
	Amount		GH Cedis	
	Dataile Of Lice			
	Details Of Use			
			~	
	Date Issued	01 Jun 2012		
	Month	06		
	World			
	Year	2012		
	Sav	e Next	Cancel	

VOLUME COMPUTATION

🖳 Log_Volume

Record Details	
Wood ID	
Wood Name	
Radius of Larger End	
Radius of Smaller End	
Lenght of Wood	
Wood Type	
VOLUME OF WOOD	

	Calculate	Save Record	Clear	
Sub Calculation				
Length	Breadth	Heig	jht	
	Volume			
Quant	ity of Sub			
		Calculate		



RECOMMENDATION

It is recommended that the software be accepted and implemented in all the sawmills in Ghana.

THANK YOU