PERFORMANCE, EVALUATION OF THE SERVICES PROVIDED BY GOOGLE SEARCH ENGINE AND THE NETWORK SERVICE PROVIDERS IN NIGERIA (A CASE STUDY OF SOME SELECTED LOCAL GOVERNMENT AREA IN OGUN STATE)

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JULY, 2009

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A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF COMPUTER SCIENCE, ABRAHAM ADESANYA POLYTECHNIC, IJEBU-IGBO, OGUN STATE.

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CERTIFICATION

I profoundly certify that this Research Work was carried out by MISS OGUNDAINI BUKOLA DEBORAH, Matriculation Number 06/189 in the Department of Computer Science, in partially fulfillment of the requirement for the award of National Diploma (ND) in ABRAHAM ADESANYA POLYTECHNIC Dagbolu/Akanran Ibadan Road, Atikori, Ijebu-Igbo, Ogun State.

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27/07/09
DATE

Head of Department

DATE

DEDICATION

This research work is dedicated to Almighty God, the most Beneficent, Most Merciful and the Most Gracious. He is the source and support who gave the inspiration, coverage and intelligent in putting together some pieces of information in this research project to became a whole.

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I fervently show my unreserved appreciation to no one else except Almighty God, who sees me through my education pursuit. The Giver, The Taker, The Sustainer, The Protector and The Prime mover who nothing else can be moved. All praises and adoration are due to Him.

For whatever success that may be attributed to this project, I owe gratitude and indebtedness to a number of people for the role they have played in my life. Firstly, my parents Mr. and Mrs. Ogundaini, there is no way of qualifying their effort on me because they really made an indelible mark toward my success in life.

My deepest appreciation goes to the Odubanjo's Family who contributed immensely towards my success financially and morally. I also show my sincere appreciation to my siblings Tunde, Ayo, Eyitayo and Joy who have contributed in no small measure to my success and my cousins, nieces and friends in school Dayo, Sanya, Alawode Bamidele, Funke, Nurudeen, Seun, Gbotemi, Olatoro, Bolatito and other colleagues in my department, All the pioneering student of ABRAHAM ADESANYA POLYTECHNIC.

Similarly, there is one adage which says "it is very difficult to make it in life: it's even difficult to explain WHY. So life is a challenge to everyone".

Therefore, I recognize the effort of my supervisor Mr. Odulaja G.O., May God grants you success in your endeavours.

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Millions of thanks go to the Almighty God who endows me with abundant knowledge and wisdom to champion my course in spite of strains and stresses.

ABSTRACT

Immediately a country attains the use of Information Technology through Computer System, globalization of Internet Service could then be widely utilized to cater for the interest of the system Users. This project observes the Performance Evaluation of Google Search Engine in some selected Local Government Area of Ogun State, determined by System Users and the café attendants of each sampled Cyber cafes.

Analysis of the results revealed that the alternative hypothesis drawn up for the study were accepted and validated, one of the hypothesis is that there is a significant difference between the performance and attitude of the system users of the Google search engine on World Wide Web.

Consequently, it was discovered that the personal interest of each system user determines the performance and utilization of the Google search engine on World Wide Web; it also discovered that freedom of practices would enhance the usability of the Network service. This project recommends some ways by which the Government, Internet Service Provider and the stakeholders can direct the interest of the people toward computer literacy.

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CHAPTER ONE

1.0 BACKGROUND OF THE STUDY

The Web has rapidly gained popularity and has become one of the most widely used services of the Internet. Its friendly interface and hyper media features attract a significant number of users, finding information that satisfied a particular operation in the World Wide Web (www). The explosive growth of the World Wide Web makes it difficult for a user to locate information that is relevant to his/her interest, because there are just many servers to access the pages to browse through. Even keeping track of new information as it becomes available online is very time consuming.

Various methods have been proposed to alleviate this so-called Internet Resource Discovery Problem. In situation whereby system searchers is index with different users having different information needed on a particular task. Web search engine such as Ask Search, Fast Search, Personal Search Assistant, Yahoo and Google are essential tool for Web surfers to access information on the global Web, the search engine poses a set of different requirement than traditional database application.

According to the results of a report published in the Institute of Science, the World Wide Web is estimated to contain 500 million pages as of 2003, another fact is that the Web continues to grow exponentially double every few month, as a result of this the Web is highly instructed and locating information on the Web is getting more difficult Search services appeared on the scene in 1994 when Yahoo (http://www/yahoo.com) was conceived as the first portal site. In the year 1995, there were about 12 search services interviewed. Today there are various search engines such as, AltaVista (http://www.altavista.com). Infoseek (http://www. infoseek.com) and Personal Search Assistant (http://www. metacrawler.com). Due to the extremely rapid growth of the web, this technical of indexing surfers needs to update the existing index result through Performance Evaluation of Search Engine and Network Service Providers in the World Wide Web rather than adding new Web pages unto the Web.

1.1 STATEMENT OF THE PROBLEM

This project is interested in finding solution to the problem of performance Evaluation of Service Provided by Google Search Engine and Network Service Providers in Nigeria. More specifically, this project wants to find answer to the following. The discovered

level of association of resources on World Wide Web search engine to users.

1. The level of adaptation of search engine on World Wide Web by the user in term of language usage.
2. The level of accessibility of the search engine in World Wide Web by the user's e.g. Ask Search, Fast Search, Personal Search Assistant, Yahoo and Google.
3. The techniques required in advancing the performance of the Search Engine on World Wide Web.
4. Impact of Network Service Providers to users.

1.2 SIGNIFICANT OF THE STUDY

The project write up is set on Performance Evaluation of Services Provided by Google Search Engine and Network Service Providers in Nigeria. It is to look into the trend level of actualization, usage, accessibility and easiness to locating information and majorly among all to evaluate the extent of the performance of the search engine. It is also meant to open up the modern search engine presently under over two billion Web pages, manipulated terabytes of data as a result.

1.3 OBJECTIVE OF THE STUDY

There are certain objectives which are mapped out to be achieved at the end of this project.

The objectives are as follows:

i. To view the World Wide Web Resource Discovery System

ii. To give concrete conceptual analyses of commercial search engine (Google) and Personal Search Assistant (Meta crawler).

iii. Examine the availability and utilization of search engine on World Wide Web.

iv. Analyses various application impact on the users

v. Examine the performance of Google Search Engine and cluster computation.

vi. Examine the problem faced by Internet Service Providers (ISPs)

1.4 RESEARCH QUESTIONS

Among some of the question available to draw attention to the Performance Evaluation of Service Provided by Google Search Engine and Network Service Providers in Nigeria.

i. Factors military against the accessibility of the Google search engine i.e. cost, time etc.

ii. How vulnerable are the users of the Google search engine?

iii. Discussed various limitation faced by Network Service Providers and list out the possible solutions.

iv. To what extent are the search engine beneficiaries to its users to actually draw their attention?

v. Dose the cyber café have any significant effect on search engine?

1.5 RESEARCH HYPOTHESIS

In order to provide solution to the problem of the study, the following Null hypotheses are set:

Hypothesis one

H_0: 1 (Null Hypothesis): Service provided by Internet Service Providers (ISPs) is not good enough for the National economy.

H_1: 1 (Alternative Hypothesis): Service provided by Internet Service Providers (ISPs) is good enough for the National economy.

Hypothesis Two

H_0: 2 (Null Hypothesis): Google search engine do not contribute positively to information technology of Nigeria Economy.

H_1: 2 (Alternative Hypothesis): Google search engine contribute positively to information technology of Nigeria economy.

1.6 SCOPE OF THE STUDY

This research work is meant to Performance Evaluation of the Service Provided by Google Search Engine and Network Service Providers in Nigeria and as earlier said about two pages are available this project is therefore restricted to Google as a search engine on a World Wide Web (www). The project is also expected to be carried out in fifty (50) cyber café with one thousand (1000) system users and Two hundred and fifty (250) Café attendants to serve as a global parameter in some selected Local Government Area of Ogun State in Nigeria.

1.7 LIMITATION

As mentioned in the scope, the problem that might likely be faced in the course of this research includes:

i. Financial constraint as regards printing and distributing of questionnaire.

ii. Time allotted to each respondent in answering question cannot be enforce since its voluntary.

iii. Cooperation of respondent, some of the chosen respondent in an attempt to keep the "secret" may not want to give a true and genuine responses

1.8 DEFINITION OF TERMS

1. Sitemap: (Webmaster center) is a file that can be made available on a Website and act as a maker for search engine to crawl certain pages and index their Webmaster to make their site more search engine friendly.
2. Robot TXT: Is a file that gives Web crawler director when they visit a Website.
3. Query: Is a question, especially one asking for direction or information.
4. URLs: (Uniform Resource Locator) this is the strategy which allows a user to locate World Wide Web page.
5. Tags: A small piece of paper, fabric, plastic attached to something to identify it or give information about.
6. Cluster: Is a programmable Model from input and output devices for job scheduling choice mode of operation system, often constructed to support class application.

7. Index: A file of instruction in which a record is associated with the database to presented or accessed.

CHAPTER TWO

2.0 LITERATURE REVIEW

There has been a substantial amount of recent research on the design and efficient implementation of various features of Search Engine. As the World Web grows at an increasing rate, efforts to make the technology more manageable are highly in demand. In particular Ribeiro-Neto et al (2002) described an inverted index construction scheme carefully optimized for cluster execution and Bharat et al (1997), also described this experience to build a server that can constructs and queries a compact representation to forward common property.

Their aim and objective is to make each person to concentrate on one or few search engine, several design and decision are made when building the early prototype of Google Search Engine and Personal Assistant. This search strategy complements browsing or hypertext navigation which is the dominant method of the World Wide Web, by providing Users with potential relevant starting points for browsing. World Wide Web (www) resources discovery systems which employs Web robot to build and maintain an index database for keyboard searching as opposed to manual indexing, is suitable for

the size and the dynamical nature of the World Wide Web environment.

2.1 THE WORLD WIDE WEB

The World Wide Web is an architectural framework for accessing linked document spread out over millions of machines all over the internet. 10 years ago it went from being a way to distribute high-energy physics data to the application that millions of people think of its enormous popularity stems from the fact that is has a colourful graphical interface that is easy for beginners to use, and it provides an enormous wealth of information on amount every conceivable subject.

The World Wide Web (www) began in 1989 at CERN (Center European Organization for Nuclear Research). It's one of the world target and most respected center for scientific research. Its business is fundamental physics, finding out what the universe is made of and how it works. At CERN, the world's largest and most complex scientific institutions are used to study the basic constituent of matter on fundamental particles. By studying what happen when these particles collide, physicists learn the laws of nature. These instruments used at CERN are particles acceleration and detectors.

Accelerations boost beams of particles to high energy before they can make to collide with stationery target. Detectors observe and record the result of these collisions founded in 1954, the CERN laboratory sits astride the Franco Swiss border near Geneva. I was one of the Europe's first joint venture and have twenty state members. Most experience are highly complex and require years of advance planning and equipment construction. The Web grew out of the need to have these large of international dispersed researchers collaborates using a constantly changing collection of reports, blueprint drawing, photo and other documents. A web linked document came from CERN physicist.

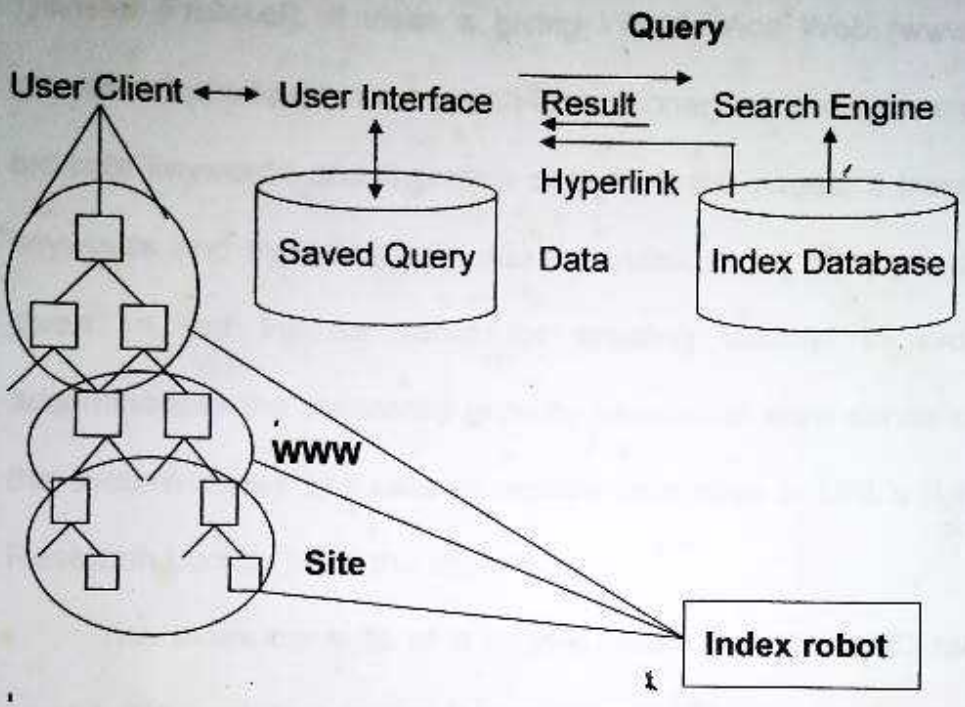
Tim Berners-Lee in March (1989). The first (text-based) prototype was operation 18 months later in December (1991) a public demonstration was given all the Hypertext 91 conference in San Antonia and Texas. This demonstration and its attendant publicity caught the attention of other researchers which led Marc Andreessen at the University of Llinois to start developing the first graphical browser, Mosaic. It was released in February 1993, Mosaic was so popular that a year later Andreessen left to from a company Netscape Communication Corp., who's global was to develop client, server, and

other software. When Netscape started growing in 1995, investors think this was the next Microsoft. For the next three years, Netscape navigator and Microsoft's internet explorer engaged in a 'browser war' each one trying to frantically add more dugs than other. In 1998, American Online bought Netscape Communication Corp. In 1994, CERN signed agreement of setting up World Wide Web Consortium (W3C), an organization devoted to further develop the Web standardizing protocols, and encouraging relationship between sites, Berners-Lee become the director.

Since then, several hundred University and company have joined the consortium. Base to development of World Wide Web during the 1990s was fueled by companies called **Internet Service Providers (ISPs).** These are companies that offer individual users at home the ability to call up one of their machines and connect to the INTERNET, thus gaining access to e-mail, the World Wide Web and other Internet service. These companies signed up tens of millions of new user a year during the 1990, completely changing the character of the public utility, much like the telephone system. The number of Internet users now is unknown, but is certainly Billions at 2000s.

2.2 COMPONENT OF WORLD WIDE WEB (WWW)

System Description



2.2.1 INDEXER ROBOT

The indexer robot is an autonomous www browser, which communicate with World Wide Web server using HTTP (Hypertext Transfer Protocol). It visits a giving World Wide Web (www) site, traverses hypertexts in a breadth-first manner, retrieves www pages, extracts keywords and hyperlink data from the pages, it inserts the keywords and hyperlink data into the index. A list of target sites is given to the indexer robot for creating initially. In order to accommodate the constantly growing number of www server online, the system allows any user to register new sites or URL's (Uniform Research Locator) with the system.

The index consists of a page-ID table, a keyword-ID table, a page-table and two index tables, namely "an inverted-date" and "forward index". The page-ID tables maps each URL to a unique page-ID, while the keyword-ID table maps each keyword to a unique page-ID. The page-title maps every page-ID to the page title, the page modification-date table maps every page-ID to the data when the array representing a list of pages reference the page (incoming hyperlinks) and the other array representing a list of pages reference the page (outgoing hyperlinks). The inverted index table maps each

keyword-ID to an array of page-ID, word-position pairs, each of which represents a page containing the keyword and he position of the word in a page.

This word-position is used in query by phrase, or keyword-order specific search and the relevance feedback mechanism. The forward index is used in the search algorithm that is for computing the occurrence frequency of word in document, the relevance feedback mechanism and in various index maintenance function in order to obtain a fast access speed, hashing method is used to index each of the table on the page-ID or keyword-ID attributes.

The indexer robot has the capability of detecting looping paths, and later made possible by supplying the last access data and time into the hypertext protocol. Indexer robot is writing in C-language and all index files are implemented using the database.

2.2.2 THE CONCEPT OF SEARCH ENGINE

Search Engine it is the various sites of World Wide Web unlike Google, Yahoo, Ask, Fast, How stuff work, Mamma, Alta Vists.com etc. Search Engine unite or unified sitemaps system, Danny Sullivan was the editor-in-chief of Search Engine, Ken Moss the Manager of

Window line search at Microsoft and Narayanan Shivakumar was one of the entrepreneur to Google Search Engine.

Yahoo, Google and Microsoft have agree to support a unified system of submitting Web pages through feeds to their crawlers called Sitemaps, they took its name from the precursor system that Google launched 2005. Sitemaps is to be provided through the new sitemaps.org site and the existing sitemaps protocol from Google get a version upgraded to sitemaps 0.9, the new version number was simply done to reflect the protocol moving from an exclusive Google system to one that three search engine support.

Las Vegas, November 16th 2006, the first joint and open initiative to improve the Web crawl process for search engines, Google, Yahoo and Microsoft today give support for the invention of Sitemaps 0.90 (www.sitemaps.org), the free and easy way for webmaster to notify search engine efficiently and resulting in better representation in search indices. Sitemaps enables higher quality, fresher search result for the users. Sitemaps build upon the pioneering sitemaps which is 0.84 released by Google in June 2005, which is now being adopted by Yahoo and Microsoft to offer a single protocol to enhance Web crawling effort sitemaps allow Webmaster

to list all of the URLs along with optimal Metadata, such as the last time the page change to improve how search engine crawl and index their Website.

SITEMAPS CONSIST OF THE FOLLOWING

i. Sitemaps enhance the current model of Web crawling by allowing Webmasters to notified search engine of change, and identified unchanged pages to prevent unnecessary crawling and saved bandwidth. Webmaster can universally submit their content in a uniform manner and any search engine that has adopted the protocol.

ii. The sitemaps protocol used by Google engine has been widely adopted by many Web properties include site from Wikimedia foundation and the New York times company, example: if a company utilizes a content management system (CMS) to deliver custom, Web content that is pricing, availability and promotional offer to thousand of URLs place a sitemap file on its Web server, so that the search engine crawler will be able to discover that the page are present and which have recently change in order to crawl them accordingly.

iii. Sitemaps also provides new links which can reach search engine users more rapidly by informing search engine 'spider' and

helping them to crawly more page than discover new content faster. This can drive online traffic and make search engine marketing more effective by delivering better results to users.

iv. Sitemaps useful at industry conferences, Webmaster have asked for open standard such as robot.txt.

v. Sitemaps supported industry as an important milestone for all searcher because it help Webmaster and search engine to get relevant information to user faster, search engine to each other and enabling Web crawl with better result.

According to Narayanan Slivekumar the distinguish entrepreneur of Google search engine says their initiative effort have provide Webmaster with useful information about their sites and information we've received in turn has improve the quality of Google's Search Engine. Tim Mayer, senior director of product management, Yahoo search said the launch of sitemaps is significant because it allows for a single easy way for Websites to providing content and Metadata to search engine. Sitemaps helps Webmaster surface content that is typically difficult for crawler to discover, leading to a more comprehensive search experience for users. The search engine

employed frequency search and algorithm which assigns relevance score to document using the vector space model.

2.2.3 USER INTERFACE

The user interface to the search engine is the Hypertext Make-up Language (HTML) form, which can be invoked by standard World Wide Web (www) client program such as Mosaic and number of hits, access documentation pages about our server access sample queries or saved queries. The modular design of the search engine makes it easy for the user to plug in and out new algorithm for experimentation. After the users type in the keywords, the query can be sent to the search engine by clicking on the search Web submit button. Upon receiving the result from the search engine, the users interface display a list of URLs and their respective title ordered in descending order relevance score, the users can physically access these URLs by clicking on the title, the result page also show other information and buttons for various function.

2.3 GOOGLE SEARCH ENGINE

Internet search engine enable internet users to search for information on Net by entering specific keywords. A widely used search engine (Google) uses cluster computing to meet the huge

quality of World Wide Web search requests that comprise of a peak of thousand queries per seconds, a single Google query needs to use at least ten billions of processing cycles and access a few hundred of data in order to return satisfactory search results. Google uses cluster computing as its solution to the high demand of system resources since cluster has better prices-performance ratios than alternative high-performance, computing platforms with less electrical power. Google focuses on two important design factors: reliability and request throughout. Google search engine is able to achieved reliability at the software level so that a reliable computing infrastructure can be constructed on cluster of 1500 commodity PCs (Personal Computer) distributed World Wide, the service for Google search engine are also replicated across multiple machines in the clusters to provide the necessary tools, Google search engine maximizes over request throughout by performing parallel execution of an individual search request. This means that more search request can be completed within a specific time interval

2.3.1 GOOGLE SEARCH ENGINE OPERATIONS

Google consist of the following operations:

i. An internet users enter a query at the Google Web page

ii. The Web browser searches for the internet protocol (IP) address via the www.google.com Domain Name Server (DNS).

iii. Google uses a DNS-Base load balancing system that maps the query to a cluster that is geographically nearest to the users so as to minimize Network Communication delay time. The Internet Protocol (IP) address of the selected cluster is returned.

iv. The Web browser then sends the search request in Hypertext Transfer Protocol (HTTP) format to the selected cluster the specified address.

v. Selected cluster the process the query locally.

vi. A hardware base load balances in the cluster monitor, the available set of Google Web Server (GWS) in the cluster and distributes the request evenly within the cluster.

vii. A Google Web Server (GWS) machine receive the request, coordinate the query execution and send the search result back to the user's browser.

2.3.2 SEARCH ENGINE LANGUAGE

i. Localization support of interface this featured highly important as many users have basic or no knowledge of English Language.

Although search engine have uncomplicated and minimalist interface their adaptation to the local language is essential as users could easily comprehend, the available option from the (.com) only Google automatically detects local setting and adapts to Greek Language. In all case the international search engine returned more result than that of local ones. Google is the search engines that recognized the difference and try to improve its searching mechanism than any other local search engine.

ii. Stemming which is another factor that influence searching related to the suffixes of the users request word, the retrieval system and application should be at least studied in use of language that have conjugations of Noun and Verb unlike in Greek, Google partially support conjugation of English Language.

iii. Stop-word is the removal of grammatical errors which is not appropriate in a sentence of a query, example: of, Google and other international search engine remove this when begin sentence so, as not to damage the retrieval system or to give wrong answer.

Most of the International search engine did not automatically adopt interface to other use of language than English and some do not even support other use language that is Greek language with

usual alphabets. Google is the only search engine that differs, from Yahoo its seem to be in a process of adopting and assimilating the additional characteristics of English Language.

2.4 APPLICATION OF GOOGLE O`N WORLD WIDE WEB

One category of application where cluster computing is becoming architecture choice, the Grand challenge Application (GCA) which is the fundamental problem in science, engineering, economics and scientific impact on the solution that can be advance by applying High Performance Computing and Communication (HPCC) technology. The high scale of complexity in GCAs demand enormous amount of resource needed, such as processing time, Memory space and communication bandwidth. A common characteristics of GCAs is the involve simulation computationally intensive, example of GCAs is applied fluid dynamics, environment modeling, and cognition and computation science.

Furthermore, GCAs cluster computation is also being applied in order applications that demand high availability and performance. Cluster are being used as replicated Storage and backup server that provider the essential fault tolerance and reliability for critical

application, the Internet search engine, Google uses cluster to provide efficient Internet search service.

2.5 PERSONAL SEARCH ASSISTANT

Meta search service has been described as the next level up information food chain. Meta search engine provide a common interface to query multi search at the same time. Meta search engine did not maintain an index or spider; instead reply on the underline search service. Development of an Internet at the higher rate today, the amount of user time spend in location relevance information will increase. In such search service would move toward becoming an integral part of Internet usages, Personal search assistant as a Meta search architecture providing a framework to solve of the problem that may occur on World Wide Web.

Advantages of using Meta search engine service

i. The needs access to single Web for presenting a query

ii. Needs to learn a single search interface and query format.

iii. Can perform search across a wider range of search engines.

iv. Can get integrated set of result (often with duplicate removed).

2.6 COMPONENTS OF PERSONAL SEARCH ASSISTANT

The personal search assistant consists of the following components.

(a) Collector (b) Update subsystem (c) Local repository (d) Personal Agent

(a) Collector

Whenever the users submit a search query to Personal Search assistant it begins collection phase, the collector phase beings with simultaneous query submission to multiple search service on the Web. The collector uses an efficiently and upgrade way of locating and retrieving resource information.

Personal search assistant can be configured to retrieved URLs and document released to a particular query each terms. The collector is an equivalent to the broker in the resource discovery system. Since PSA relies on the other research service for resource identification, it does not need to spider and instead only communication with the search service.

The collector needs to understand and query each service in its own interface and involves integrating varied search interface into a generic format, this collector works in the background and more that

one collector session can be initiated and terminal, the needs for this was to enable PSA to reside in a local internet and in a multi-user environment. The collect interact with the user before conducting a search and result get returned into the users own table space, problem any also occur if not handled carefully. It would be necessary for PSA to make check of resource available before making any use of Network resource and System resource. Decision is made on how search engine would be in query in parallel.

(b) Update Subsystem

This is responsible for loading result into the appropriate able space inserting links to the formation of a concept database, it also retrieve results from research query and does not loaded the result into the local repository. This was a conscious policy decision made in order to ensure a user aware of what result are being loaded into the local repository by making its manual users also have a choice of not doing so but losing the results obtained. They are converted and store in a unified format.

(c) The Personal Agent

The agent is responsible for personalizing the system and constructions of profile, the agent continue to work as a demon

process in respect of whether a search has been initiated or not. The agent observes various users action that may be useful for constructing a user profile, there are two major user sessions when the agent collects user's information.

Initially when the users configure a fresh search the agent collects the following information form the repository. The search terms, the preference search engine and their priority, the number of levels through which a collection phase take place and whether document needed to be download. When the local repository is browse by the user browsing pattern can be used to construction a user profile and a search plan for the users.

2.7 CURRENT PROBLEM WITH WEB SESSION

i. **None of the search engines are comprehensive:** With the phenomenal growth of the Web most of the search service have accepted the fact that it should be almost impossible to index the entire Web, the instead concentrate on a specialized subset of the Web and user ranking techniques to determine which of the Web page to index. The user are slowly growing aware of this and the fact that a service which will not result a single hit, not implies that such a

resource would not exit but, implies that service does not have its index.

ii. **Most of the popular search service is used on-line:** Most of the search service allocated on the Web and submission of queries and the browsing result is done on-line. The availability of the sufficient bandwidth is an increasing problem in many part of the World and the users browsing through result returned it considerable more than the response time of service. None of the service allows this phase to continue off-line that will be possible if the results are downloading. However the user is averse to this because of the large proportion of the irrelevant hits.

iii. **None of the search service on the Web sort user information:** None of the search service on the Web store information about the user as a result of each search is a fresh start through millions of pages and returning result. Search services have no way of storing similar or same search queries initiated by the users or other users to present the result immediately. Studies have shown by the users generally restrict themselves to a particular subset to topic when they initiate a web search. This can be used to

construct a user profile that should be extremely useful in search optimization.

iv. **Search Service provide no information they do not index:** None of the Search Service provides information to the users on query, and would not return any result to the users. Instead the users need to submit a query and later present it with no hits.

v. **None of the Meta Search/ Search Service makes sufficient use of historical information:** Every time a search query is submitted and results are obtained a large amount of historical information available to Meta-Search service in term of which search service results a greater proportion of relevant query and shorter time with reference to search query. Using such information for a future and recommendation could improve relevant of sites as evident from user's perception.

2.8 COMPARISONS OF GOOGLE AND PERSONAL SEARCH ASSISTANT SEARCH ENGINE

Using Meta Search techniques for resources information gathering on the Web is an already developed field with numerous search services that will be available. The Meta Crawler (http://www.metacrawler.com) and Savvy Search

(http://www.savvysearch.com) are two well established search services. Meta crawler utilizes nine search engines to which it submits its queries. The service removes duplicate from the result turned and present to the user in a clickable format, all Meta search engine would provide result from multiple resource application which include Gopher, Hyper text Protocol (HTTP) and others.

Personal Search Assistant (PSA) is a Mata tool which is based on architecture that deviate from search utilizes availability on the Web due to the advantages presented by using such architecture; the tool is expected to reside on the local intranet or user system. The fundamental task ahead of Personal Search Assistant is to reduce the amount of the user interaction and the user time spends in scanning through irrelevant information return from the search engine. For the proper analyze based on the comparison of the two search engines the basic problem will be examined.

The Personal Search Assistant as a Meta search tool, does not perform the following task:

i. Spider the Web for a new and update pages.

ii. Storing the Web page with an index.

None of the search engine are comprehensive they only provide access to a part of Web, this problem could only grow as internet keeps increase the information on the Web page get more unstructured, this does not determine the need for search engine but search engine are unsuitable interaction among users. Personal Search Assistant works like a conventional Meta submitting query to multiple search engines and the result are collected and return to the system, this search engine allows users to specify the needs for a second or multiple retrieve level while Google also have the features.

The issue of storage Personal Search Assistant prepares fresh storage compares to that of Google none of the Web search service provide such feature since it could led to storing of enormous database result and would only be possible on search service funning from the local system. If the search engines have hardly pages related to particular topic, for example: The terms 'entertainment corpus' returns few hits from one of the search engine while Google will return a greater number of hits.

Personal Search Assistant (PSA) in the process of searching for a particular term, will keep track of search engine with no hit returned and will not submit the query to those search engine again.

The users would also be saved of anytime spend in submitting the query personally to a search engine that indexes no pages on the topic. The benefit of using (PSA) from a personal computer and not the Web is personalization of the search, search engine on the Web do not provide any facilities for registering a user and keeping track of his previous search since this would mean browsing through another enormous database. Storing user searching and the links followed could be used to construct a user profit to make suggestion on a variety of issue including the query level, which search engine to used.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

The purpose of this chapter is to determine the extent of the Performance Evaluation of Service Provided by Google Search Engine and Network Service Providers in Nigeria in the selected places in some selected Local Government Area of Ogun State.

It is not meant to investigate the specific hypothesis formulate for the research work. This chapter describes the research design, population, instrument used and the validity of the research work.

3.1 RESEARCH DESIGN

The design method used in this project work is a descriptive research design that is scientifically inquisitive with the objective supporting the part of the research. It is in effect a survey.

3.2 POPULATION

In view of the global nature of the research work, the research population focused on cyber cafes in Ijebu-North Local Government of Ogun State in Nigeria. Therefore the population consists of Fifty (50) cyber cafes, One thousand (1000) systems Users and Two hundred and fifty (250) Café attendants

The cyber cafes are as follows:

1. Alakara cyber café
2. Beta com
3. Geet-café
4. Quickshift
5. Henry café
6. Mac Jay
7. All – Net
8. O 'Net'
9. Bart-Net
10. Network Link
11. Salam-Salam
12. Key stone café
13. Hert – Link
14. Hyper –Link
15. Bartech café
16. Kenneth
17. Alpha - Net
18. Konnet
19. Net – One
20. Sonnet café
21. Greek - Link
22. De Lord
23. Cyber – Link
24. Mandom
25. D – One Solution
26. Samrotad
27. Vague Net
28. Royal Hat
29. Hyper tech
30. Random Net
31. The Crown
32. Grey Link
33. Smart Link
34. Topmost
35. Utmost coms
36. Link serve
37. Admiralty cyber
38. Resurgence

39. Surveillance-Link
40. Auto solution
41. Meritan world
42. Infinity cyber
43. Reality world
44. Affordable cyber
45. Tempo cyber
46. Rollinger
47. Sabz coms
48. Satellite Link
49. Global
50. Link World

3.3 SAMPLE AND SAMPLING TECHNIQUE

To get a convincing result in the research project a systematic sampling technique is used. The choice of this is not far from the fact that it serves as a true representation of the population from which it is drawn. This is done using random sampling technique. This contain the name of fifty (50) selected Cyber cafes in some selected Local Government Area Ogun State used for the data collection of this research work.

3.4 INSTRUMENT FOR DATA COLLECTION

This subsection contains the research instrument which was used for collecting the data for the study. The instrument therefore used in the questionnaires administered to System users and Café attendants.

3.5 DATA COLLECTION PROCEDURE

The data collection in this research work of the performance Evaluation of Service Provided by Google Search Engine and Network Service Providers in Nigeria was collected through the administration of questionnaires. The data gathered in this research work would be analyzed using simple percentage and the chi-square text (x^2) methods. This is because of the significant distinction

needed in order to performance evaluation of the use of a popular search engine (Google) from others and the services provided by the Network Service Providers.

The formula for the computation of chi-square statistics is given as:

$$X^2 = \frac{(O - E)^2}{E}$$

Where;

O = Observed frequency

E = Expected frequency

$\sum$ = Summation

N = Number of items

3.6 VALIDITY OF THE RESEARCH INSTRUMENT

Here the questionnaires were validated by the researcher's supervisor. The study was also subjected to face content validity. Corrections were made in the research instrument including addition of cogent items to make the questionnaire effective and efficient.

3.7 RELIABILITY OF RESEARCH INSTRUMENT

The instrument used in the research work is determining the performance Evaluation of the search engine (Google) on World Wide Web is effectively and efficiently correlated. A copy of the questionnaire used is attached to this project which is;

a. System User's type

b. Café attendant's type

CHAPTER FOUR

4.0 PRESENTATION OF RESULT AND DISCUSSION

This chapter presents the result of findings and the collection of data on Performance Evaluation of the use of a popular Search Engine on the World Wide Web in some selected Local Government Areas of Ogun State. An attempt was made to analysis the data collected from the sample cyber café. The analysis was based on the aforementioned research **hypothesis** in chapter one of this study as follows:

H0: 1 (Null Hypothesis): Google search engine do not contribute positively to information technology of Nigeria economy.

H1: 1 (Alternative Hypothesis): Google search engine contribute positively to information technology of Nigeria economy

H0: 2 (Null Hypothesis): Service provided by internet service providers (ISPs) is not good enough for the National economy.

H_1: 2 (Alternative Hypothesis): Service provided by Internet service providers (ISPs) is good enough for the National Economy

4.1 DISCUSSION OF FINDINGS

Hence the collation of the data and information received from the respondents at the visited cyber cafes namely System users and

café attendants through questionnaires using simple percentage method. However to make it both dependable and reliable, the hypotheses shall be put to test, in order to test the validity of hypothesis and Chi-Square (x^2) method is used. After using chi-square (x^2), their outcome would determine if there is conformity of responses. The chi-square test is used in goodness to assess whether a particular set of observation is sufficiently reliable for the purpose for which it has been collected.

The result of the questionnaires used for the survey variables observed, pattern of frequency while the questions in the questionnaires were administered as related to the main study and hypothesis would have the total number of expected responses. In other words, there are some expected responses for each question constructed by the researcher, which will be based on the number of options given to each respondent as a reply to the questions been asked. 1250 questionnaires were distributed to 50 cyber cafes in some selected Local Government Areas of Ogun States. In relevance to the research carried out by, the questionnaire having, Agree, Strongly agree strongly disagree, disagree (SA, A, SD, D) reply options, the questionnaire constructed has a total of 30 questions.

The decision rule is to accept the null hypothesis, if (x^2) value calculated is less than (<) the table Chi-Square value and to be rejected if the null hypothesis if the (x^2) calculated value is greater than (>) the table Chi-Square.

Formula: $(x^2) = \sum(O-E)^2/E$

Where:

$\sum$ = Sum

O= Observed frequency

E = Expected frequency

N = Number of options

Critical value which determine the degree of freedom (K) is calculated as follows

K = (r-1) (c-1)

Therefore K = Degree of freedom (df)

Where R ⟶ Row, C ⟶ Column

Level of significant 5% = 0.05

Calculated Chi –Square value = X^2_c, Table Chi – Square value = X^2_t

4.2 DATA ANALYSIS

The collation and analysis of data and information received from the respondents to the Performance Evaluation of the Services

provided by Google Search Engine and Network Service Providers in Nigeria. Findings gathered from the use of questionnaires are presented below with the use of simple percentage method.

SECTION A

Respondents on the Performance Evaluation of the use Google Search Engine (**Café attendant/System Users Response Type**)

S/N	NAME OF CYBER CAFÉ	PLACES
1.	Alakara	Ijebu Igbo
2.	Geet	Ijebu Igbo
3.	Henry café	Ijebu Igbo
4.	All-Net	Ijebu Igbo
5.	Bart-Net	Ijebu Igbo
6.	Salam-Salam	Ijebu Ode
7.	Hert-Link	Ijebu Ode
8.	Hyper-link	Ijebu Igbo
9.	Alpha-Net	Ijebu Ode
10.	Konnet	Ijebu Ode
11.	Beta com	Ilishan
12.	Quick shift	Ilishan
13.	Mac jay	Ijebu-Igbo

14.	"O "Net	
15.	Network Link	Ijebu-Ode
16.	Key stone café	Ilishan
17.	Bartech café	Ilishan
18.	Kenneth	Ilishan
19.	Sonnet café	Ijebu-Igbo
20.	Greet-Link	Ilishan
21.	Net-One	Ago-Iwoye
22.	De Lord	Ijebu-Ode
23.	Cyber-Link	Ijebu-Ode
24.	Madom	Ago-Iwoye
25.	D-One Solution	Ijebu-Ode
26.	Samrotad-Link	Ijebu-Ode
27.	Vague Net	Ijebu-Ode
28.	Royal Hat	Ijebu-Igbo
29.	The Crown	Ijebu-Ode
30.	Hyper tech	Ijebu-Igbo
31.	Random-Net	Ilishan
32.	Smart-Link	Ago-Iwoye
33.	Grey-Link	Ilishan
		Oru

34.	Topmost cyber	
35.	Utmost coms	Ilishan
36.	Link serve	Ago-Iwoye
37.	Admiralty cyber	Oru
38.	Resurgence	Ilishan
39.	Surveillance-Link	Ago-Iwoye
40.	Tempo cyber world	Oru
41.	Auto solution	Oru
42.	Rollinger café	Ilishan
43.	Meritan world	Ago-Iwoye
44.	Sabiz coms	Ago-Iwoye
45.	Infinity cyber	Oru
46.	Satellite	Oru
47.	Reality world	Ago-Iwoye
48.	Global	Oru
49.	Affordable cyber	Ago-Iwoye
50.	Link-World	Oru
		Ago-Iwoye

INTERPERTATION:

The above listed name shows that 10% cyber attendant and 2% System Users of the visited cyber café responses in some

selected Local Government Area Ogun State, on the Performance Evaluation of the use of Google Search Engines respectively.

TABLE: 2 RESPONDENTS GENDERS ANALYSIS

SEX	Respondent Type: System Users	Percentage	Respondent Type: System Users	Percentage
MALI	200	80%	575	57.5%
FEMALE	50	20%	425	42.5%
TOTAL	250	100%	1000	100%

INTERPRETATION:

The above table depicts that 57.5% of the respondents' were male, while 42.5% were female.

selected Local Government Area Ogun State, on the Performance Evaluation of the use of Google Search Engines respectively.

TABLE: 2 RESPONDENTS GENDERS ANALYSIS

SEX	Respondent Type: System Users	Percentage	Respondent Type: System Users	Percentage
MALI	200	80%	575	57.5%
FEMALE	50	20%	425	42.5%
TOTAL	250	100%	1000	100%

INTERPRETATION:

The above table depicts that 57.5% of the respondents' were male, while 42.5% were female.

TABLE: 3 RESPONDENTS AVERAGE AGE ANALYSIS

AGE	Respondent Type: Café attendants	Percentage	Respondent Type: System Users	Percentage
16-25	125	50%	450	45%
26-35	100	40%	500	50%
36-45	25	10%	50	5%
TOTAL	250	100%	1000	100%

INTERPRETATION:

The above table review shows that 45% of the respondents' were 16-25 years of age, 50% of the respondents' were 26-35 years of age while 5% of the respondents' were 36-45 years of age respectively.

TABLE: 4 RESPONDENTS QUALIFICATIONS ANALYSIS

QUALIFICATION	Respondent Type: Café attendants	%	Respondent Type: Café attendants	%
S.S.C.E	25	10%	250	25%
N.C.E	50	20%	250	25%
O.N.D	75	30%	150	15%
H.N.D	100	40%	200	20%
1ST DEGREE AND ABOVE	0	0%	150	15%
TOTAL	250	100%	1000	100%

INTERPRETATION:

The above table state clearly that 25% of the respondents' have S.S.C.E qualification, 25% have N.C.E, 15% have O.N.D and 20% have H.N.D, while 15% have of 1st DEGREE and above.

SECTION B:

In order to interpret the data collected, agree and strongly agree were merged together while disagree and strongly disagree were also merged together.

Question 5: Business transaction is better performed on Google search engine rather than on other search engines.

TABLE: 5

OPTIONS	Respondent	Percentage
Agree	575	57.5%
Strongly Agree	175	17.5%
Disagree	150	15%
Strongly Disagree	100	10%
Total	1000	100%

INTERPRETATION:

The above table depicts that 750 (75%) of the respondents agree that Business transaction is better performed on Google search engine rather than on other search engines while 250 (25%) disagreed.

IMPLICATION:

From investigation that the research gathered business transaction on Google search engine enhance the progress of the nation toward standard of living once you are computer literate.

Question 6: Google search engine is more effective for night browsing than other search engine.

TABLE: 6

OPTIONS	Respondent	Percentage
Agree	300	30%
Strongly Agree	425	42.5%
Disagree	125	12.5%
Strongly Disagree	150	15%
Total	1000	100%

INTERPRETATION:

The above table shows that 725 (72.5%) of the respondents agreed that Google search engine is more effective for night browsing than other search engines, while 275 (27.5%) disagreed.

IMPLICATION

From the result of the researcher, Google search engine encourage system user's attitude towards night browsing, because the server will be easy to have access to by that time of the day.

Question 8: Monitoring of the Computer Users should be adequately performed to avoid unwanted accident.

TABLE: 7

OPTIONS	Respondent	Percentage
Agree	52	52.5%
Strongly Agree	275	27.5%
Disagree	100	10%
Strongly Disagree	100	10%
Total	1000	100%

INTERPRETATION

The above table shows that 800 (80%) of the respondents agreed that monitoring of the Computer Users should be adequately performed to avoid unwanted accident while 200 (20%) disagreed.

IMPLICATION

From the above table, in case of assistants and monitoring, qualified personnel should be employed in order to bridge the gap between highly experienced users and less experienced café attendants.

Question 12: Home and offices computers equipped with internet facilities have contributed to the expansion of the user of Google Search Engines.

TABLE: 8

OPTIONS	Respondent	Percentage
Agree	450	45%
Strongly Agree	500	50%
Disagree	25	2.5%
Strongly Disagree	25	2.5%
Total	1000	100%

INTERPRETATION:

The above table state clearly that 950 (90%) of the respondents agreed that Home and offices computer equipped with internet facilities have contributed to the expansion of the users of search engines. While 50 (5%) disagreed.

IMPLICATION:

The Government and other stakeholder should collaborate to ensure that there is adequate power supply, computers, and Multilink interconnection availability and avoidable then encouraging an individual's to become computer literate.

Question 15: Google search engine has global user appeal on the World Wide Web.

TABLE: 9

OPTIONS	Respondent	Percentage
Agree	525	52.5%
Strongly Agree	300	30%
Disagree	75	7.5%
Strongly Disagree	100	10%
Total	1000	100%

INTERPRETATION:

The above table shows that 825 (82.5%) of the respondents agreed that Google Search Engine has global user appeal on the World Wide Web, while 175 (17.5%) disagreed.

IMPLICATION:

From the above table Google Search Engine has contributed positively on utilization of the World Wide Web, also reduces customers stress and lesser time of server booting.

Question 17: The use of search engines on World Wide Web has contributed positively to the National economy.

TABLE 10:

OPTIONS	Respondent	Percentage
Agree	100	40%
Strongly Agree	125	50%
Disagree	0	0%
Strongly Disagree	25	10%
Total	250	100%

INTERPRETATION:

The above table shows clearly that 225 (90%) of the respondents agreed that the use of search engines on World Wide Web has contributed positively to the National economy while 25 (10%) disagreed.

IMPLICATION:

From the above table Google engine has contributed positively on utilization of the World Wide Web, it also reduces customers stress along with query and lesser time of server booting.

Question 24: The costs imposed by internet service providers (ISPs) on subscribing subscribers are on the high side and impacts negatively on National economy.

TABLE 11:

OPTIONS	Respondent	Percentage
Agree	75	30%
Strongly Agree	25	10%
Disagree	25	10%
Strongly Disagree	125	50%
Total	250	100%

INTERPRETATION

The above table review shows that 100 (40%) of the respondents agreed that, the costs imposed by internet service providers (ISPs) on subscribing subscribers are on the high side and impacts negatively on National economy while 150 (50%) disagreed.

IMPLICATION

From the above table internet service provider (ISP) has to reduce the cost impose on the cyber cafes owners so that they would be able to manage and pay the tariff regularly.

4.3 TEST OF HYPOTHESIS

To ascertain the validity of the hypothesis stated in chapter one, two operational hypotheses were tested. The perceptions of the respondents on the study of the Performance Evaluation of the use of a Google Search Engine on World Wide Web were measure on the related questions from the questionnaires used for the efficiency of the search engines in World Wide Web through the Café attendants' questionnaire and System Users questionnaire. The hypotheses for the study will be tested by using chi-square method and the level of significant will be 0.05.

Research hypothesis 1:

H_0 1 (Alternative Hypothesis): Google search engine do not contribute positively to information technology development of Nigeria economy.

H_1 1 (Null Hypothesis): Google search engine contribute positively to information technology development of Nigeria economy.

Question 15: Google search engine has global user appeal on the World Wide Web.

TABLE: 9

OPTIONS	Respondent	Percentage
Agree	525	52.5%
Strongly Agree	300	30%
Disagree	75	7.5%
Strongly Disagree	100	10%
Total	1000	100%

Objective: To test the hypothesis that Google search engine do or not contribute positively to information technology of Nigeria economy, using significance level of 0.05.

OPTIONS	O	E	(O-E)	$(O-E)^2$	$(O-E)^2/E$
Agreed	525	250	275	75625	302.5
Strongly Agreed	300	250	50	2500	10
Disagreed	75	250	-175	30625	122.5
Strongly Disagreed	100	250	-150	131250	960
Total	1000	1000	0	587501	$X^2_c = 960$

Expected frequency:

$$E = \frac{O}{N} = \frac{1000}{4} = 25$$

Decision:

Degree of freedom;

Number of options minus 1.

df = (N - 1)

= (4 - 1)

df = 3

Level of significant 5% = 0.05

Table value $X^2_t = 7.82$, Calculated value $X^2_c = 960$.

PRESENTATION OF RESULTS

OPTIONS	O	E	X^2_c	DF	X^2_t	REMARK
A	525	250				
SA	300	250	960	3	7.82	REJECTED
D	75	250				H_1
SD	100	250				

Note:

Significant at 0.05 with df = 3

Since $X^2_c > X^2_t$ i.e. 110 > 7.82, the result is **rejected**

The above analysis demonstrated that the calculated chi-square value is greater than the table value. (Google search engine contribute positively to information technology of Nigeria economy).

Since $X^2_c > X^2_t$ i.e. 110 > 7.82 therefore, Null Hypothesis (H_1) is **rejected** and the Alternative Hypothesis (H_0) is **accepted.**

Research hypothesis 2:

Question 17 observations will be used to test for hypothesis two.

H_0: (Null Hypothesis): Service provided by internet service providers (ISPs) is not good enough for the National economy.

H_1: (Alternative Hypothesis): Service provided by internet service providers (ISPs) is good enough for National economy.

Question 17: The use of search engines on World Wide Web has contributed positively to the National economy.

TABLE 10

OPTIONS	Respondent	Percentage
Agree	100	40%
Strongly Agree	125	50%
Disagree	0	0%
Strongly Disagree	25	10%
Total	250	100%

Objective: to test the hypothesis that service provided by internet service provider (ISPs) is or is not good enough for the national economy, using significance level 0.05

Expected frequency

N = 4

$E = \frac{O}{N} = \frac{250}{4} = 62.5$

Decision:

Degree of freedom

Number of options minus 1

df = (N – 1)

= (4 – 1)

Df = 3

Level of significant 5% = 0.05

Options	O	E	(O – E)	$(O - E)^2$	$(O - E)^2/E$
Agreed	100	62.5	37.5	1406.25	22.5
Strongly Agreed	125	62.5	62.5	3906.25	62.5
Disagreed	0	62.5	-62.5	3906.25	62.5
Strongly Disagreed	25	62.5	-37.5	1406.25	22.5
Total	250	250	0	10625	X^2_c = 170

PRESENTATION OF RESULTS

OPTIONS	O	E	X^2_c	DF	X^2_t	REMARK
A	100	62.5				
SA	125	62.5	170	3	7.82	REJECTED
D	0	62.5				H_0
SD	25	62.5				

Note:

Significant at 0.05 with df = 3

Since $X^2_c > X^2_t$ i.e. 170 > 7.82, the result is rejected.

The above analysis demonstrated that the calculated value is greater than the table value $X^2_c > X^2_t$ i.e. 170 > 7.82. (This simply means that, Service provided by Internet service providers (ISPs) is not good enough for the National economy). Therefore, the Alternative Hypothesis (H_1) is **accepted** while Null Hypothesis (H_0) is **rejected**.

4.4 SUMMARY OF FINDINGS

The main objectives of this research work, is to assess and look at the effectiveness of Google search engine and other search engines as well as the service provided by Network Service Providers to the development of National economy. To bring this to reality, hypotheses were proposed and tested. Analyses were made on the data collected through the questionnaires distributed to the selected sample cyber cafes and these were collated. From the study, the Google Search Engine plays a vital role in the National economic development.

In terms of:

- Creating and sending E-mail to people
- Chatting with friends within the country and outside the Country
- Searching on a research work for a project or assignment etc.

Hence introduction of computers into the country bring about growth and development through the utilization of Google search engine which is one of the oldest search engines and the easiest way of link up with Global world.

The following advantages can be achieved on Google search engine compared to other search engines.

- Easy to learn and operate if one is computer literate
- Quick access during browsing
- Lesser tariff imposed by the Internet Service Providers (ISPs)

However, though the Services provided by Network service providers is not encouraging for the national development, in the area of effective information transmission by the Network service providers like MTN, Global com (GLO) and Zain. Such that, it is observed that when users intend to called or receive calls from one Network service provider or within the same Network services, there comes the popular statement "NETWORK BUSY", "NETWORK CONGESTION", "TRY AGAIN LATER" etc. Due to the failure of the services provided, many users complained and some later changed from one Network service to another.

Hypothesis H_1: States that Google search engine do contribute positively to the information technology development of National economy. This was tested using Chi-square method. It was discovered that is Google search engine as the best among other search engines, in areas such as business transactions through Internet services, research topics, chatting etc.

Hypothesis H_2: States the Services provided by Internet Service Providers (ISPs) are not good enough for the National economy. When tested using chi-square method, it was found that Internet Service Providers does not give better services to the users. More so, the tariff imposed by the Network Service Providers has negative impact on users. Many users complained and some remain with the specific Network Providers while some others changed from one Network service to another for the attainment of better services.

CHAPTER FIVE

5.0 SUMMARY, RECOMMENDATIONS AND CONCLUSION

This study is concerned with the Performance Evaluation of the Services Provided by Google Search Engine and Network Service Providers. The summary of findings of the study forms the basis from which conclusions were drawn and some recommendations are made for further study.

5.1 SUMMARY

This project was carried out to investigate on the performance evaluation of the services provided by Google Search Engine and Network service providers. Having gone through the related problems associated with Google search engine, the research work also looked into the tariff imposed by the Network Service Providers and the quality of their services, it was discovered that these have negative effects on the users. I also discovered during this research exercise that Google search engine is highly demanded for in various ways which brings growth and development to the National Economy. The research help to see the effective use of the Google search Engine in keeping the students (Users) enlightened to the advancement of the World Wide Web (www) prototype, its Web pages and designs. The

components of World Wide Web were also considered where the system description was emphatically analyzed and designed.

It is also understood that the exercise helps to identify certain problems that often confront the search engine; among which were:

(1) None index from Google search engine

(2) Insufficient use of historical information

(3) Inadequate power supply

(4) Lack of personnel (qualified café attendants) etc.

In addition, it was discovered during this research exercise that Google search engine which is the umbrella name for prototype World Wide Web Site compliment all navigational hypertext, discovered by Ribeiro-Neto et al (2000) that an invert index construction scheme if carefully optimized for cluster computing can bring about a cluster execution in programming.

5.2 RECOMMENDATION

In view of the findings from this project, the following actions are being recommended as ways of improving the Google search and the Network Services.

- Time management: this is to encourage and developed the positive interest in computer usage and quick access to

Network in term of searching for research topic, creating e-mail, chatting, etc. within short period.

- Government and the Private Bodies are also encouraged to provided adequate power supply to the country as a whole
- Internet Service Providers (ISPs) are to lower the tariff imposed on cyber cafes so that the cyber café managers would also reduce the cost imposed on each individual during browsing, calls and received calls or etc.
- Employment of qualified personnel: This goes to the cyber cafes owners to try and employed qualified computer operators.

With this income Google search engine would definitely need rethinking due to enormous growth of the Web pages and the premium on user time. Also the search services for future references need to merge new agent architecture with existing ones.

More so, cyber cafes owners are advised to employ qualified and competent operators or engineers in order to assist the people effectively. It also suggested that other methods of data analysis and research instrument could be used for further findings on this study in order to attest to the validity and reliability of the findings. Researchers should be properly trained and be more committed to

their study and write a good project while avoiding any infringement on others' original works.

5.3 CONCLUSION

This project, describes the usability and performance of the Google Search Engine on World Wide Web and evaluated the Service of Network service providers i.e. MTN, Global com, Zain and problems associated in delivery of their services.

As the World Wide Web (www) develops at an increasing rate, efforts to make the technology more manageable are highly demanding, even having access to the Web page and applying advanced information with retrieval techniques and more. The potential benefits of this technique include reducing users' information over head, improving the effectiveness of having access to on-line information and affordable cost to users. I believe that there is still room for improvement and many strategies yet to be explored, that the search engine can be more intuitive for average users to use. Yet the effectiveness of search engine with the Network services brought vast innovation, information, improvement to the life of man today.

The Personal Search Assistant (Meta clawer) comparison, similarities and problem were shown to know how it differs from

Google Search Engine and others, since it work is by gradually updating a local repository rather than present the result immediately to the users. Thus the impact of Internet Service Providers which gave room for individual users at home at call, receive call, browse etc was explored.

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APPENDIX 1: COMPUTER USER'S QUESTIONNAIRE

This Questionnaire is to assess the Evaluation, Utilization and the Performance of popular search engine on World Wide Web, in Ijebu-North Local Government Area of Ogun State

SECTION A

Name of Cyber café .....

Sex..... Age.....

Qualification.....

SECTION B

Tick the appropriate column (√) to match yours response to the items below:

SA - Strongly Agree

A - Agree

SD - Strongly Disagree

D - Disagree

S/N	ITEM	SA	A	SD	D
1.	Cost and time used during browsing, searching and chatting etc. should be economical				
2.	Night browsing is more preferable than day time				

3.	Every home computer/personal computer should be linked with internet				
4.	Government makes vital contribution to the development of computer literacy in the country				
5.	Business transaction is better performed on Google search engine compare to other search engines				
6.	Google search engine is more effective for night browsing than other search engine.				
7.	It is not advisable for computer users to use Google search engine at night				
8.	Monitoring of computer users should be adequately performed to avoid unwanted accident				
9.	Safety precautions should always be encouraging in every cyber café.				
10.	Only people above 18 years of age should be allowed to enter cyber café for internet browsing				
11.	The student registration on Net affects those that are not computer literate				
12.	Home and office computers equipped with internet facilitates have contributed to the expansion of the user of Google				

	search engine.				
13.	People should look down on the side effect of computer science courses before chose it as a career				
14.	The approval given to secondary school student on browsing creating e-mail etc contributes to their level of understanding				
15.	Google search engine has global user appeal on the World Wide Web				

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APPENDIX II: CAFÉ ATTENDENT'S QUESTIONNAIRE

This questionnaire is to asses the Evaluation, Utilization and the Performance of popular search engine on which on World Wide Web in Ijebu-North Local Government Area of Ogun State.

SECTION A

Name of Cyber café.....

Sex..... Age.....

Qualification.....

SECTION B

Tick the appropriate column (√) to match yours response to the items below:

SA - Strongly Agree
A - Agree
SD - Strongly Disagree
D - Disagree

S/N	ITEM	SA	A	SD	D
16.	Little time spent in cyber café may lead someone to join internet fraudsters				
17.	The use of search engines on World Wide Web has contributed positively to the National company				
18.	Cyber café is the best business sector to invest on				
19.	Cyber café should be limited to people above 18 years of age				
20.	Maximum security should be given to the customers				
21.	The mistake made by users while using Google search engine during registration, browsing, creating e-mail etc of student affect them in terms of cost and time spent				
22.	Encouragements of floppy, compact disk and flash drive to copy or save a				

	document from the Net usually result in computer virus infection				
23.	There should be regular monitoring of the users activities of a cyber café				
24.	The cost imposed by internet service provider on subscribing subscribers are on the high side and impact negatively on national economy				
25.	To protect the image of Google, Yahoo search engine should be checked				
26.	Search engine can be use for another purpose apart from browsing.				
27	Google search engine it is the simplest engine to work upon				
28.	Google search engine cover a wider range of participation (Population) on World Wide Web compare to Personal Search Assistant				
29.	The use of Google search engine is more efficient than most others				
30.	Visiting any search engine library for any research work which cannot be found on its site page should be ignored.				