

## **ELECTRONIC RESOURCE AND SERVICES GATEWAYS: A COMPARATIVE STUDY OF GOOGLE AND YAHOO**

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### **ABSTRACT**

*Nowadays, electronic tools, resources and services are very essential for the users to acquire, retrieve, and disseminate the required tools and information. The Google and Yahoo electronic resource management system is a web-based system, that manages the tools, services and licensing, of electronic resources and services. Google and Yahoo Multinational Corporation, that provide Internet and ICT related products and services. The objective is to evaluate the popular application available in both Google and Yahoo information systems. This study is attempting to evaluate the effectiveness of electronic resources and services, in Google and Yahoo system, on the basis of tools resources, and services available at both sites. This article also highlights the popular information resources, tools, services and other active programs, provided by the Google and Yahoo companies, to their end users. These tools also support as a gateway for finding, downloading and uploading the information in a proper manner.*

**KEYWORDS:** *E-Resources, E-Services, E-Tools, E-Gateways, Google, Yahoo, Internet Tools and Web Services*

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### **INTRODUCTION**

The e-resources include information communication technology and any equipment or interconnected system, or subsystem of equipment that is used in the creation, conversion, duplication, or delivery of data or information. The Google and Yahoo provide major e-resources and services, to the public and few resources and services are free of cost. Google and Yahoo, both are the e-resources and services portal, that incorporates a search engine and a directory of World Wide Web sites, organized in a hierarchy of topic categories. The ICT trends library like. It also provides one of the best ways to search the web, for a given topic for better result.

### **ELECTRONIC INFORMATION RESOURCES AND SERVICES**

The rapid growth of new technologies has changed the communication process, and reduced the cost of communication for individuals. Electronic information resources can be defined as the electronic representation of information, which can be accessed via electronic system and computer network. Libraries are increasingly considering, if and how to provide access to relevant internet resources, for their users. Library and information centers have transformed into digital and virtual libraries, where library materials have changed into e-resources, leading to the increase in the global dissemination of information. The e-resources such as e-journals, e-books, e-databases, web resources, and others are made easier, to be accessible in remote areas as well as desktop access. Accessing electronic resources is as good as the resources, that can afford the skill to work with the tools efficiently, while the network communications that supports fast and suitable connections.

## Google

Google is an American multinational technology company, specializing in Internet-related services and products, that include online advertising technologies, search, cloud computing, software, and hardware. The world's biggest internet company Google, is celebrating its 18th birthday. In the present scenario, Google is one of the world's largest data storage company, with servers to store people's work, photos, emails and everything else. Larry Page and Sergey Brin, the Ph.D. students of Stanford University, California were started the Google, in 1996. Overall activities of Google are the main Achievements, as follows;

- Google launches the Gmail service on 1st April 2004, with 1 GB of free storage
- The social networking site of Orkut was launched in the year 24th January 2004, with 45 languages.
- The video sharing site, YouTube was launched in the year 14th February 2005.
- There are 209 mergers and acquisitions subsidiaries, available within Google.

## Yahoo

Yahoo was founded, by Jerry Yang and David Filo, in the year January 1994, and was incorporated on March 2, 1995. It is an American multinational technology company, headquartered in Sunnyvale, California. One of the pioneers of early internet era, in the 1990's. It was known for its Web portal, search engine and related services, including Directory, Mail, News, Finance, Groups, Answers, advertising, mapping, video sharing, and many more. Overall activities of yahoo and the main achievements are as follows;

The Yahoo Mail Plus provides accounts with a capacity of 2 GB of data storage. Later, in 2007, Yahoo took out the storage meters and made the storage limit unlimited. Yahoo has upgraded its mail service, by providing various tools and add-ons, such as creating an avatar, changing the color of mail window, various themes and much more.

Yahoo is regarded as the most visited websites on the internet, by Web traffic analysis companies Comscore, Alexa Internet and Netcraft, with more than 130 million unique users.

## OBJECTIVES OF THE STUDY

The main objectives of the study are;

- To find out the different tools and services of Google and Yahoo companies
- To identify the popular tools and services and their status;
- To discuss web-based resources offered through the end users;
- To analyze the origin, status and existing functions of these web-based services; and
- To suggest the new approaches for effective use of web-based services.

## BACKGROUND

### Literature Review

Efforts were made to use available original articles/abstracts, for the review. Many numbers of studies have been conducted on the overall product and services, its awareness of Google and Yahoo companies. ChangeWaveResearch

(2005), provides the pin to pin **general online usage trends, of both Google and Yahoo products and services.**

The importance of three electronic information products and their services, highlighted by Peter & Finlayson (2005), on their book entitled “How to Make Money Online with eBay, Yahoo!, and Google”. They have clearly mentioned that, the eBay is the world’s most important online marketplace, Yahoo, is the e-commerce tool to manage their online sales, and Google is a business needs traffic. Google and the other “Pay Per Click” advertising systems, can help us to generate that traffic. Past research in India and other country has often focused on:

Google vs Yahoo!: The Importance of Brand and Design (Bunny foot, 2003).

Home Online Usage: Yahoo vs. Google: Head-to-Head Fight Continues Between The Two Online Heavyweights (Change Wave Research, 2005).

Google vs Yahoo (Clippingpathhouse.com, 2014).

Yahoo Vs Google (CYBION, 2008).

Google vs Yahoo: Difference and Comparison (Diffen, 2014).

Google and Yahoo: Their Similarities and Distinctions (Fita, 2012).

18 facts that you didn't know about Google, on its 18th birthday (Independent, 2016).

A Comparison of Google and Yahoo: Which is More Cost Effective, When Using Sponsored Links for Small Companies? (Kennedy & Kennedy, 2009).

Precision and Relative Recall of Search Engines: A Comparative Study of Google and Yahoo (Kumar & Prakash, 2009).

Google vs. Yahoo! Interface Design (Luke, 2005).

Over 101 Google products and services, you probably don't know (Mohan, 2014).

How to use Internet Tools and Services (Naik & Shivalingaiah, 2008).

Top 10 Yahoo! Properties (Readwrite, 2007).

Digital Library Services: A Comparative Study of Google and Yahoo Technology (Sasikala, Joselyn, Poornima & Vennila, 2011).

List of Google products (Wikipedia. 2016).



List of Yahoo! -owned sites and services (Wikipedia, 2015).

## **RESEARCH METHODOLOGY**

Research is a systematic process of collecting, analyzing the data on any specific subject and to interpret the results meaningfully, for common understanding. The study identified the internet based electronic information resource gateways, and the comparative study of Google and Yahoo products and services, only. In this study, the only two popular web based service providers have been included. The information about these products and services was retrieved from the internet. The methodology is a content analysis, of the websites of the Google and Yahoo only. There were more web based services, offered by some other companies, but this study has focused on categories like, general information about

products, service, status, and use. The content analysis work was done during January to November, 2016. The following are the list of electronic information resource gateways, selected for the study:

**Table 1: Selected E-Resource Gateways of Google and Yahoo**

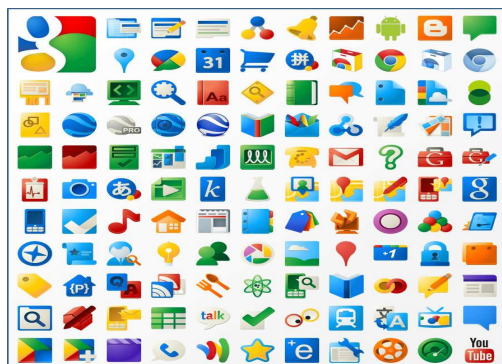
Sl. No.	e-Resource Gateways	Emblem	Founded	Rank from Alexa
1	Google		1997	1
2	Yahoo		1995	5

**SCOPE AND LIMITATIONS**

In order to realize the objectives, the study has been restricted only Google and Yahoo’s, online products and services. The selection of study Electronic Information Resource Gateways of Google and Yahoo, was based on its availability, functions, status and the use for the active users. The tools and services, considered for the present study fall under Google and Yahoo product and services only. No sampling method was adopted in view of comprehensive coverage and consistency, in interpretations of the findings of the study. The study deals with internet related tools and services of Google and Yahoo, available during January 2016 to November 2016. There are a number of sites available on the internet, but the investigator selected only two popular sites, for better results.

**PRESENTATION AND DISCUSSION OF FINDINGS**

Both Google and Yahoo are two major internet industries, striving for their name to be at the top of the chart. Both Google and Yahoo provide almost the same services like mail, search engines, weather forecast, news and other services, for the ease of their users on a single website.



**Figure 1: Google Products and Services**







































**Figure 2: Yahoo Services**













The Figure 1 and 2, focus on product and services, available on Google and Yahoo companies. Here, the icons are highlighted Google and hyperlinks highlighting in Yahoo products and services. Once again, the Google has more than Yahoo products and services.

Table 2, shows the major products and services, and their detailed tools, features, and functions, of both Google and Yahoo. But, Google has always been way ahead than Yahoo, by providing a bit of more convenience and better services results. Google is the number 1 search engine, whereas Yahoo manages for 2nd place, worldwide. Google provides services like Books, Ad words, Admob, which are missing in Yahoo. Although, Yahoo, as they also have several products and services, which are missing in Google, but keeping it short and simple, Google is the best service oriented tools,

compared to Yahoo.











**Table 2: Major Products and Services by Google and Yahoo**

Products and Services	Google	YAHOO!
	Global Organization of Oriented Group Language of Earth	Yet Another Hierarchical Official Oracle
Type of site	Public	Public
Started	September 1998	January 1994
Traded as	NASDAQ: GOOG	NASDAQ: YHOO
Money earned	US\$ 59.82 billion (2013)	US\$ 4.968 billion (2015)
Employees	47,756	10,400
Localized & regional domains	198	59
Products and services	42	34
List of mergers and acquisitions	201 (2001 - 2016)	114 (1997-2015)
Purchase or Free	Free	Free
Company type	Public	Public
<b>Error! Bookmark not defined.</b> as on Sep. 2016	1	5
 as on Sep. 2016	1	5
Founder	Larry Page and Sergey Brin	Jerry Yang and David Filo
Begin	September 7, 1998	March 1, 1995
Alerts		
Answer		
Blogs		
Book Search		No
Bookmarks		
Browser		
Calendar		
Directory		
Documents		-
Drive		
Emblem		
Employees	53,600 (Q2 2014)	12,200 (Dec 2013)
Finance		
Fire Eagle	-	
Groups		
Groups		
Image Search		
Mail	 (15 GB)	 (1 TB)
Maps		
Movies		

Products and Services	Google	YAHOO!
	Global Organization of Oriented Group Language of Earth	Yet Another Hierarchical Official Oracle
News		
Page Creator		
Page Ranking Facility	Yes	No
Scholar		
Social Network		
Started Year	March 1996	January 1994
Translate		
Type of Access	Public	Public
Users (Monthly)	2 Trillion	1 Billion
Web Album		
Website	www.google.com	www.yahoo.com
Contacts	Yes	Yes
Slogan	Don't be evil	Do you Yahoo?
Free / Commercial	Free	Free
Headquarters	Mountain view, California, USA	Sunnyvale, California, USA
Instant Message	Yes	Yes
Download	Yes	Yes
Company Type	Public	Public
Profile	Yes	Yes
Themes	No	Yes
Games	No	Yes
Finance Portal	Yes	Yes
Job Site	No	Yes
Video	Yes	Yes
Services	Free	Free

E-resources are becoming more and more important, for the academic community. The study highlights the resources and services available on both Google and Yahoo gateways, based on the Google Dashboard like web, Business, Media, Geo, Specialized Search, Home & Office, and Social. Google has 204 product and services (Mohan, 2016), and Yahoo listed only 26 products and services (Wikipedia, 2015). The investigator selected only few popular products and services.

**Table 2: Product and Services of Google and Yahoo**

Google				YAHOO!		
Category	Name	Emblem	Found	Name	Emblem	Found
Web	Web Search		1997	Web Search		1995
	Bookmarks		2005	Bookmarks		2005
Business	Google Apps for Work / G Suite		2006	Yahoo's Aabaco Small Business		1998
	AdSense		2003	Yahoo's Media		2015
	AdMob		2009	Yahoo Mobile		2007











































Google				YAHOO!		
Category	Name	Emblem	Found	Name	Emblem	Found
Media	Books		2004	-	-	-
	Image Search		2001	Image Search		2008
	News		2002	Yahoo News		1996
	Google Videos		2005	Yahoo! View		2006
	Google Photos		2015	Yahoo Photos		2000
	Google Cardboard		2014	-	-	-
Geo	Google Maps		2005	Yahoo! Maps		2002
	Google Earth		2001	-	-	-
	Custom Search		2006	Yahoo! BOSS		2012
Specialized Search	Google Scholar		2004	Yahoo Research		2004
	Google Trends		2006	-	-	-
	Google Flights		2011	2011		1997
Home Office &	Gmail		2004	Yahoo Mail		1997
	Google Drive		2012	-	-	-
	Google Docs		2006	-	-	-
	Google Sheets		2006	-	-	-
	Google Slides		2006	-	-	-
	Google Forms		2006	-	-	-
	Google Drawings		2010	-	-	-
	Sites		2008	Yahoo! Site Explorer		19902011
	Google Calendar		2006	Yahoo Calendar		1998
	Translate		2006	-	-	-
Hangouts		2013	Yahoo Messenger		1998	
Social	Google+		2011	Yahoo! 360°		2005
	Blogger		2003	Yahoo! 360°		2005
	Groups		2001	Group		1998
	Spaces		2016	-	-	-

Table 3, shows that, based on the categories of products and service, the Google has more number of products and services. Under media category book and Cardboard, Geo category Earth/Map, specialized search trends, home and office related Translator, Drive, Doc, Sheet, Form, Slides, and Drawings, are not available on Yahoo.

Table 3

Basis	Google	Yahoo
Nature	Simple	Complicated
Relevant	More relevant	Less relevant
Search technology	Similar to yahoo	Similar to Google
Ranking links	Inbound links differently	Inbound links differently
Redundancy	Redundancy present	Less redundancy
Update	Update more frequently	Update less frequently
Algorithm	More concern about off-page factors	Much concern about on-page factors
Page rank	Have own page ranking features	Doesn't have a page ranking features?
Index the sites	More Faster	Faster
Search Engines	Much concern about off-page	Much concern about on-page factors
Decentralization and Redundancy	Yes	No

## FINDINGS

Both, Google and Yahoo are the web based service providers, but yahoo has received criticism for funding spy and advertisement technologies. In this case, advertising from Yahoo's clients appears on-screen in pop-ups. Google has been criticized for many of its new services, like Book Search's effort to digitize millions of books and make the full text searchable, has led to copyright disputes with the Authors Guild. Geographic details, provided by Google Earth's satellite imaging have resulted in disputes with governments, who assert that, terrorists can get the full details of landmarks and their surrounding areas.

## CONCLUSIONS

In conclusion, the advanced technology behind both Google and Yahoo is very similar, but Google and Yahoo rankings are different. It is obvious that, Google has some most important tools like search engine to enter and achieve high positions, for competitive keywords. But Yahoo has recently changed its policy and is now harder to manipulate, and to its merit also holds the most accurate back link count. Yahoo is more complicated and advertiser-focused. Both the companies have internet tools and services, in their product and services list, but Google is number one in a search engine and Yahoo is very popular in e-mail services, because it is older than Google. This article focused on the popular tools and services, provided to the public, and how the users access its benefits for their day to day work.

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