

SNS COLLEGE OF ENGINEERING



Kurumbapalayam (Po), Coimbatore - 641 107

An Autonomous Institution

Accredited by NAAC – UGC with 'A' Grade Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE NAME: 19CS732 INFORMATION RETRIEVAL TECHNIQUES

IVYEAR / VIII SEMESTER

Unit 1- INTRODUCTION

Topic 5: The Web, The e-Publishing Era and How the web changed Search



The Web, The e-Publishing Era and How the web changed Search - Problem



- ➤ The web is really infinite
 - ➤ Dynamic content, e.g., calendars
 - ➤ Soft 404: <u>www.yahoo.com/<anything></u> is a valid page
- \triangleright Static web contains syntactic duplication, mostly due to mirroring (\sim 30%)
- ➤ Some servers are seldom connected

Who cares?

Media, and consequently the user

Engine design

Engine crawl policy. Impact on recall.



The Web



>THE IMPACT OF THE WEB ON IR

The world wide web is development by Tim Berners in 1990

Idea- documents available by FTP with the idea of hypertext to link documents

Finding needed information and matching – documents, emphasizing documents as the basic

unit.

Finding documents to user queries.

IR studies the acquisition ,organization ,storage, retrieval, and distribution of information

Web robot - wanderer, worm, walker and spider etc.,

Web robot – 1.Received query from user.

- 2. Located documents
- 3. evaluate their relevance and return a ranked list of documents to the users.



The Web-Cont...



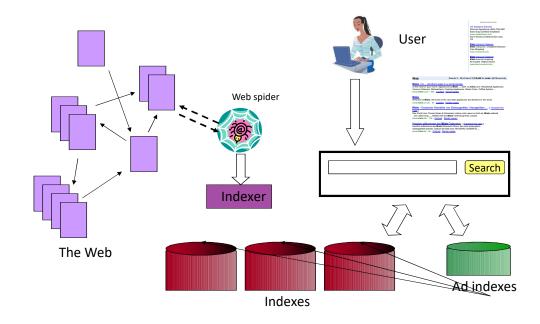
- ➤ The Web very large, public, unstructured but ubiquitous repository
- > need for efficient tools to manage, retrieve, and filter information
- ➤ search engines have become a central tool in the Web
- >Two characteristics make retrieval of relevant information from the Web a really hard task the
- ► large and distributed volume of data available the
- ➤ fast pace of change



How the web changed Search



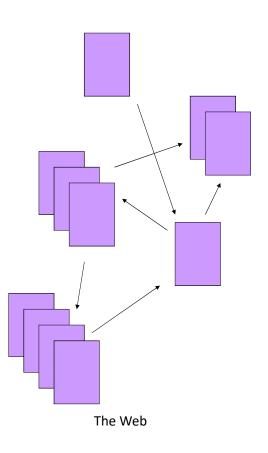
Web search basics





The Web document collection



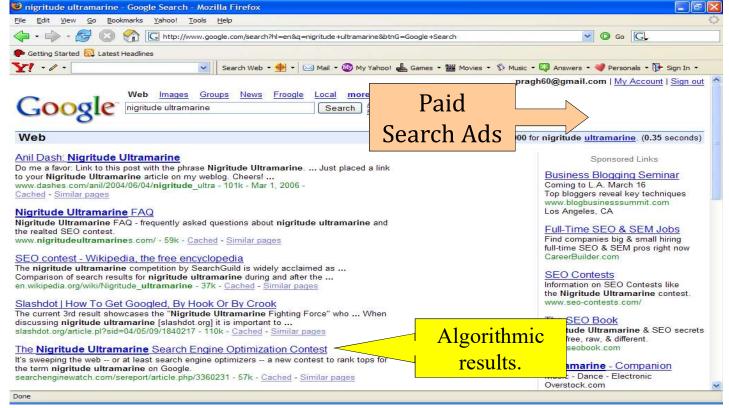


- •No design/co-ordination
- •Distributed content creation, linking, democratization of publishing
- •Content includes truth, lies, obsolete information, contradictions ...
- •Unstructured (text, html, ...), semi-structured (XML, annotated photos), structured (Databases)...
- •Scale much larger than previous text collections ... but corporate records are catching up
- •Growth slowed down from initial "volume doubling every few months" but still expanding
- •Content can be *dynamically generated*



Web Search-Cont...









Activity





Advantages and Disadvantages of Search Engines

Feature	Advantage	Disadvantage
Keyword query	Ease of use	Lost productivity due of poor precision
Instant response	Increased productivity, If user knows what he Is looking for	Decreased productivity, due to chasing links
Hierarchical subject categories	Increased productivity due to high precision	Low recall in response to user needs
Information discovery via spiders	Reduced user workload	Lack of scalability and bandwidth inefficiency

S TENOTE S T

Assessment 1



- 1. List out the Advantages of retrieval ranking
 - a)_____
 - b)_____
 - c)_____
 - d)_____
- 2. Identify the Applications of retrieval ranking
 - a)_____
 - b)_____
 - c)_____
 - d)_____







TEXT BOOKS:

- 1. Ricardo Baeza-Yates and Berthier Ribeiro-Neto, —Modern Information Retrieval: The Concepts and Technology behind Search, Second Edition, ACM Press Books, 2011.
- 2. Ricci, F, Rokach, L. Shapira, B.Kantor, —Recommender Systems Handbook||, First Edition, 2011.

REFERENCES:

- 1. C. Manning, P. Raghavan, and H. Schütze, —Introduction to Information Retrieval, Cambridge University Press, 2008.
- 2. Stefan Buettcher, Charles L. A. Clarke and Gordon V. Cormack, —Information Retrieval: Implementing and Evaluating Search Engines, The MIT Press, 2010.

THANK YOU