

The Internet

In this section of notes you will learn about the history of the Internet, how it works and techniques that can be used to more efficiently search for information.

James Tam

Origins Of The Internet

- History: what was happening in the 1950's



Rock and
roll was in
it's infancy

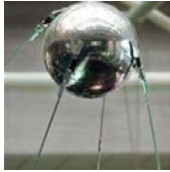


The Cold War
was on

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Origins Of The Internet (2)

- The cold war spilled over into space.
- Both sides tried to be the first to send a satellite into space.
- Americans in 1957: A sophisticated three stage rocket was planned as the first man-made vehicle to be sent into space.
- The USSR in 1957: surprised the world by launching Sputnik I (first artificial satellite).



- The launch of Sputnik motivated the creation of ARPA (Advanced Research Projects Agency) in the US.

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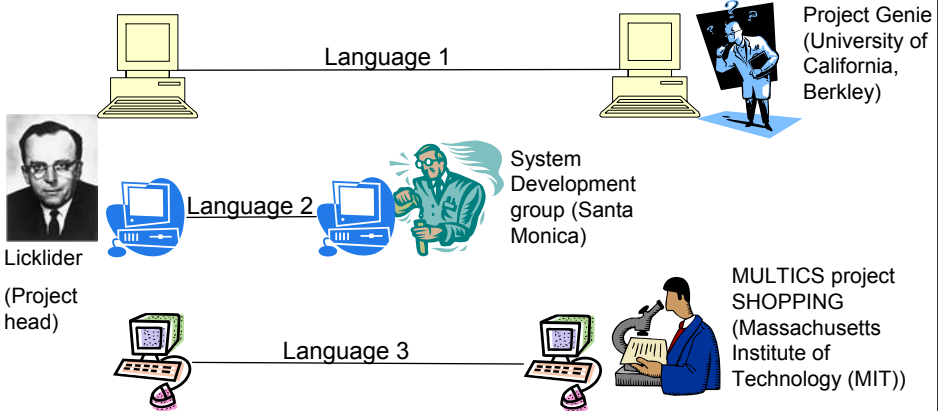
ARPA

- ARPA was a branch of the ministry of defense.
- The focus was on:
 - Getting different types of computers communicating
 - Creating a mechanism to allow networks to operate even in the event of disaster.

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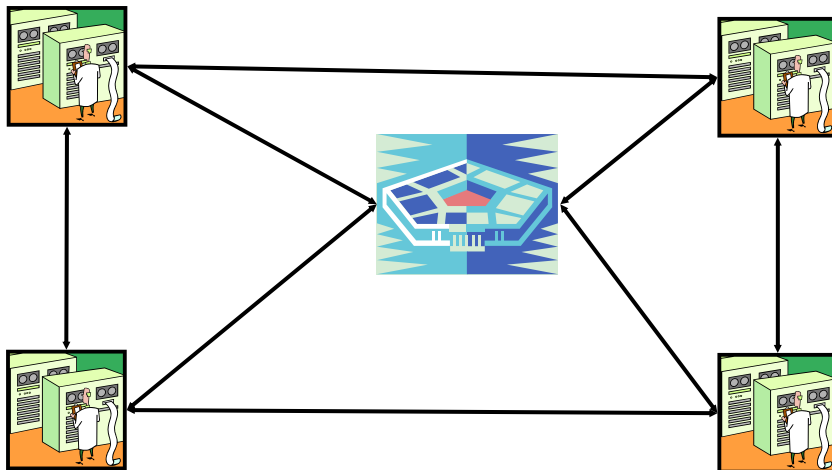
Getting Computers To Communicate

- Researchers working for ARPA needed computers to communicate and to share information
- Current approaches weren't satisfactory.



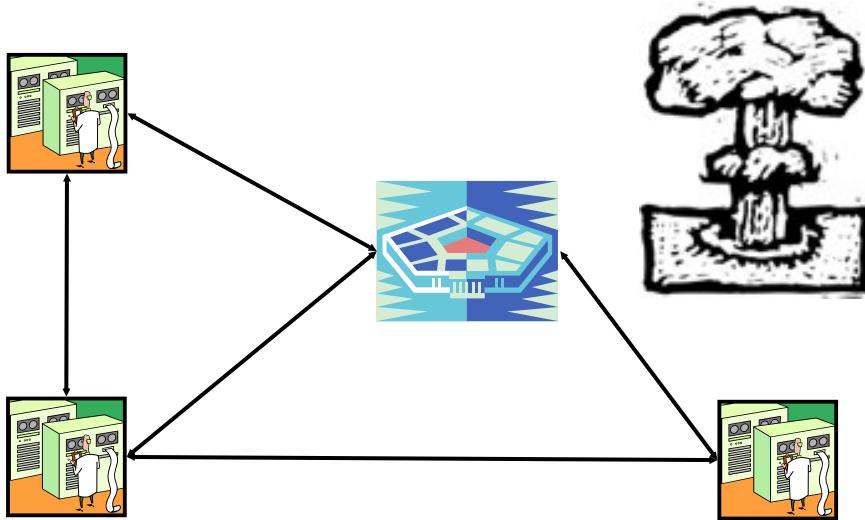
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Allowing Networks To Survive Disasters



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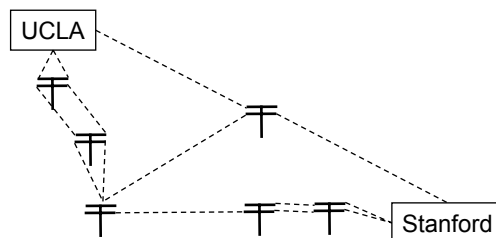
Allowing Networks To Survive Disasters (2)



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ARPANET

- The first computers were connected via ARPANET (Advanced Research Projects Agency Network).
- The initial ARPANET consisted of 2 host computers which were connected at the start of 1969 from the following locations:
 - UCLA
 - Stanford

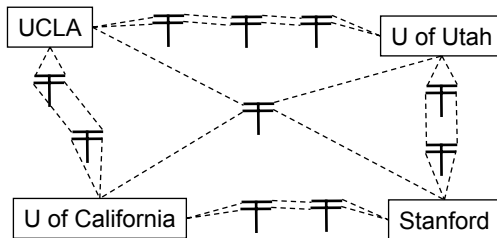


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ARPANET (2)

- Later additional hosts were added to the network (end of 1969) from:

- The University of California (Santa Barbara)
- The University of Utah



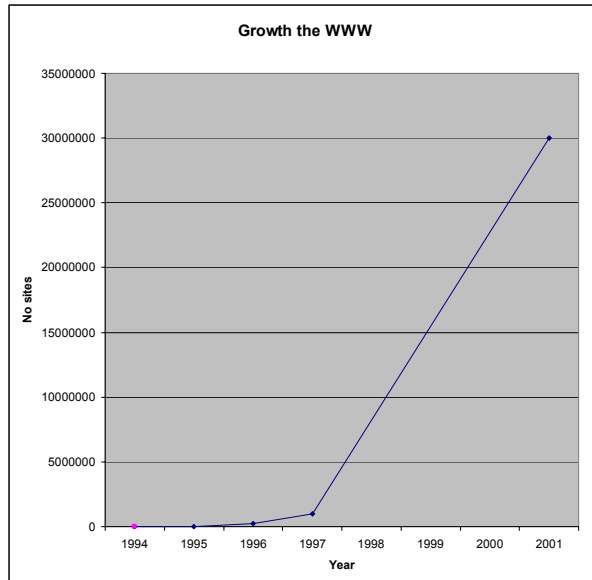
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Important Milestones Of The Internet

- In 1972
 - The first "hot application" (something that really caught on) was introduced by Ray Tomlinson.
- 1989:
 - The ideas behind the World Wide Web were first described in a paper.
- 1990:
 - The ARPANET was shut down.
 - The first Internet search program Archie was developed at McGill university.
- 1991:
 - The World Wide Web was released to the public.

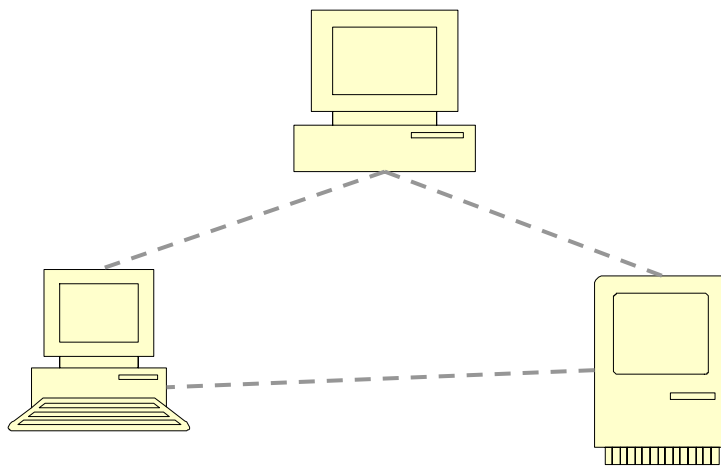
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The Growth Of The World Wide Web



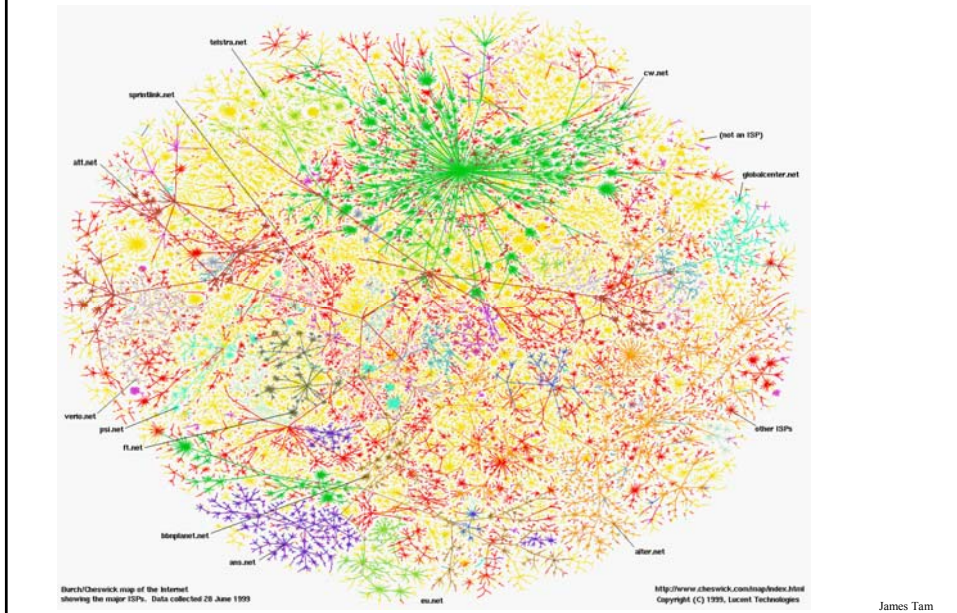
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A Network: Computers That Are Connected



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The Internet: A Gigantic Network Of Networks



What Makes This Connectivity Possible?

- Recall: the motivation for connecting computers came out of the ARPA project.
- The protocols (rules) of the Internet is what allows the connections (and therefore the Internet) to exist:
 - HTTP (**H**yper **T**ext **T**ransfer **P**rotocol): rules for linking documents on the WWW.
 - SMTP (**S**imple **M**ail **T**ransfer **P**rotocol): rules for sending simple English text messages.
 - MIME (**M**ultipurpose **I**nternet **M**ail **E**xtensions): allows messages in other languages to be sent, provides the ability to send non-text attachments in the mail.

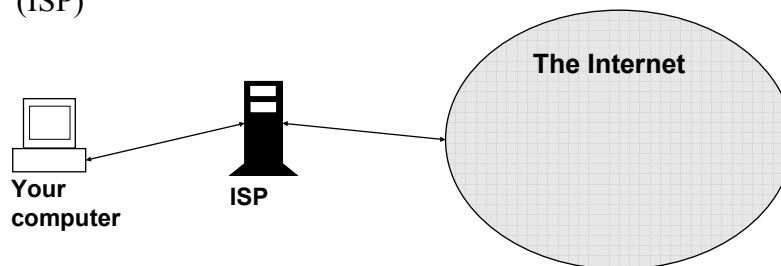
“Who” Of The Internet

- Who invented the Internet:
 - The US government team at ARPA first led by JCR Licklider and later by Larry Roberts. However no one person can take credit for ‘creating’ the Internet.
- Who owns the Internet:
 - Not the US government (although it still has some influence).
 - The networks that make up the Internet are owned by companies, non-profit organizations, governments and individuals.
- Who funds the Internet:
 - Originally it was the US government.
 - Now it’s the owners of the networks that make up the Internet.

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Connecting Your Computer To The Internet

- Requires that you sign up with an Internet Service Provider (ISP)



- Types of Internet connections
 1. Old phone dialup connections (narrowband)
 2. Faster phone line connections (broadband)
 3. Cable connections (broadband)
 4. Satellite connections (broadband)

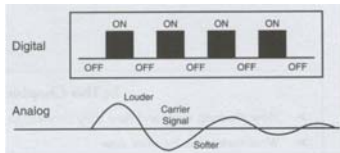
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1. Phone Dialup Connections

- Having your computer call another computer to connect to the Internet:



- Problem: Phone lines and computers don't easily mix

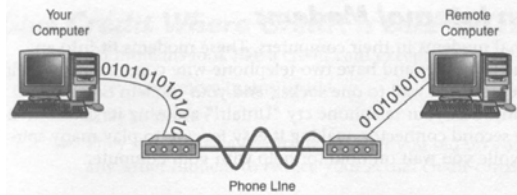


From "The Complete Idiot's Guide to High Speed Internet Connections" by Soper

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1. Phone Dialup Connections (2)

- Requires a modem (modulator/demodulator).



From "The Complete Idiot's Guide to High Speed Internet Connections" by Soper

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1. Phone Dialup Connections (3)

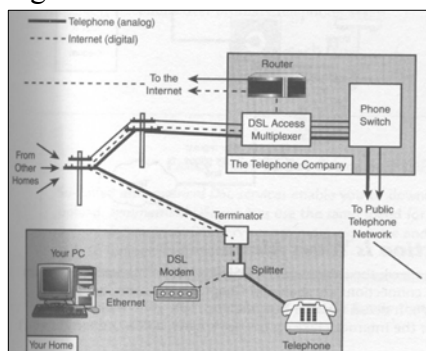
- Important characteristics:

- Least expensive method for getting an Internet connection (free for UC-Calgary students, for now): <http://www.ucalgary.ca/it/node/426>
- Very slow (300 – 56,000 bps/56Kbps)
 - A 1 MB image would take ~42 seconds to transfer.
 - A 4 GB movie would take ~166 hours (~1 week) to transfer.
- Ties up a phone line (either you connect to the Internet or you can talk on your phone but not both on the same line).
- Not usable for many situations / not a continuous connection
- Recommended usage: low bandwidth applications (e.g., sending text only email messages, editing text files with little or no formatting effects)

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2. Faster Phone Line Connections (DSL/ADSL)

- DSL (Digital Subscriber Line) / ADSL (Asymmetrical DSL)
- Uses a single wire for voice and data (computer)
- The phone lines are still used to transmit data but a different signal is used from standard dialup (faster)



From "The Complete Idiot's Guide to High Speed Internet Connections" by Soper

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2. Faster Phone Line Connections (DSL/ADSL)

- Important characteristics:

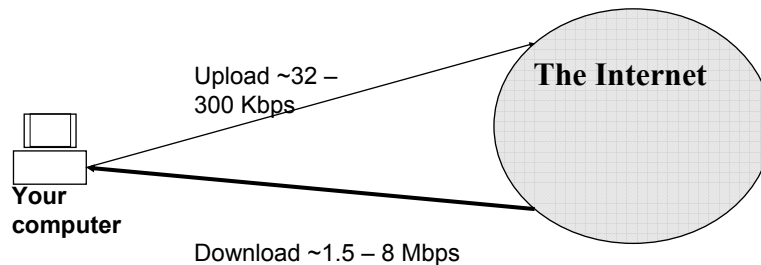
- Fast connection: ~ 100's Kbps – several Mbps.
- Doesn't tie up a phone line.
- Allows for an always on (continuous) connection.
- 1 MB image would take at least a second to download
- 4 GB movie would take at least 4,000 seconds (66.7 minutes, 1.1 hours) to download

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2. Faster Phone Line Connections (DSL/ADSL): 2

ADSL (Asymmetrical DSL)

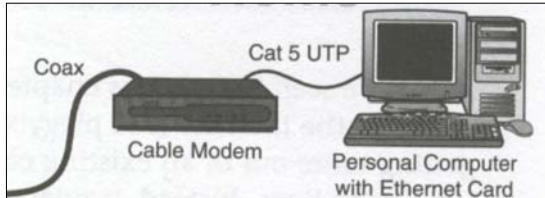
- You can download information (get information from the internet) faster than you can upload it (send information somewhere to the internet)



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3. Cable Connections

- Uses a coaxial (cable TV) connection.



From the The Complete Idiot's Guide to High Speed Internet Connections by Soper

- The Internet connection occurs on the same coaxial cable used for television.
- Important characteristics
 - Download: ~several Megabits (~1 – 6+ Mbps) per second.
 - Upload: approximately several hundred Kilobits (200 – 300 Kbps).
 - Allows for an always on (continuous) connection

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ADSL/DSL Vs. Cable

•ADSL/DSL

- Typical transfer rates are slower
- Internet connection is not shared
- ADSL/DSL Internet service is highly restricted
- (Calgary): The service is targeted more for 'experienced' computer users

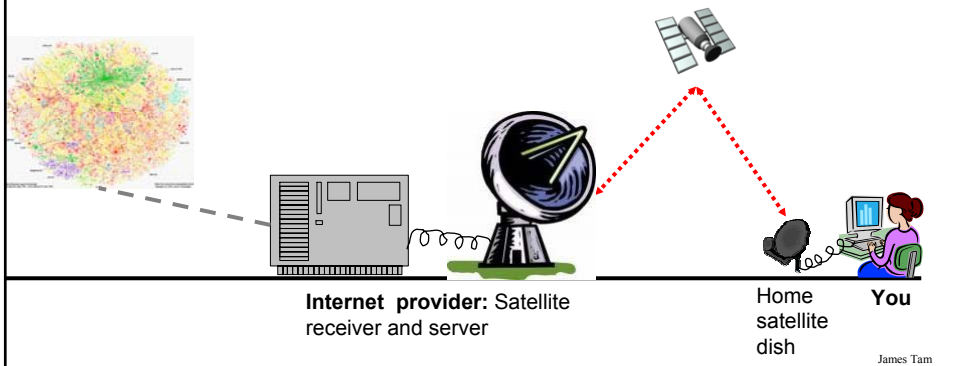
•Cable

- Typical transfer rates are faster
- Internet connection is among shared subscribers
- Cable Internet service is widely available
- (Calgary): The service is targeted to the general population.

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4. Satellite connections

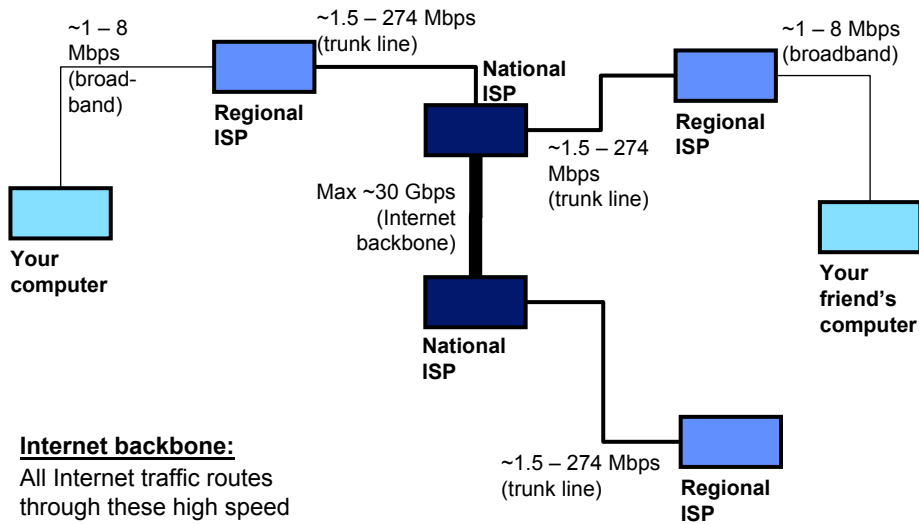
- Typically if a broadband connection is desired then a standard wired ADSL/DSL or cable connection should be chosen.
- Some remote locations don't allow for either service (DSL/ADSL connections won't work only standard dial-up).
 - In this case the only broadband connection available is via satellite:



4. Satellite connections (2)

- Satellite connections are faster than dialup but slower than other broadband connections:
 - Upload ~ 100 Kbps
 - Download ~ 500 Kbps
 - 1 MB picture would take to 16 seconds to download
 - 4 GB movie would take to 64000 seconds (1066.7 minutes, 17.8 hours) to download

Transmission Speeds



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Transmission Of Information

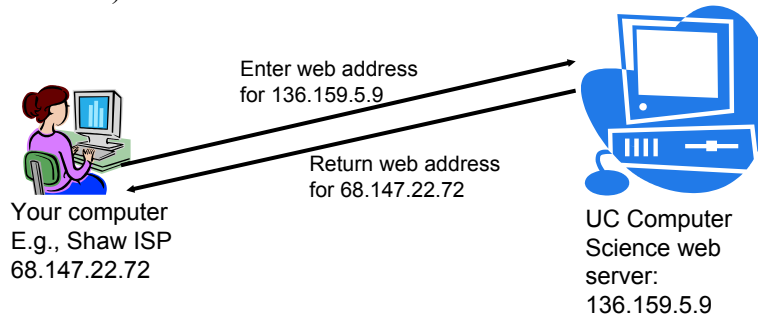
- Similar to transmitting information on a single network.
- Information that is transmitted on the Internet is broken down into parts (packet) at the source computer.
- The route taken may vary from packet-to-packet depending upon:
 - Network availability
 - Network congestion
- The packets are reassembled in their proper order at the destination computer.

PACKET			
Address of source computer	Data to be sent	Instructions for dissembling / reassembling the data	Address of destination computer

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IP (Internet Protocol) Addresses

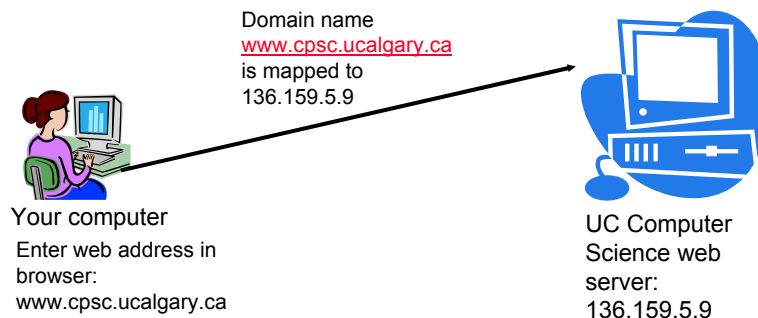
- Needed to properly route information on the Internet.
- Every computer connected to the Internet has an IP Address (IP for short):



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IP Addresses Are Mapped To Domain Names

- Because numeric addresses are hard to remember (and may change) domain names are typically used instead



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High Level Control Of Internet Addresses

- Different organizations (Registrars) provide Internet Addresses for Internet providers or websites:
 - VeriSign: dot-com (“.com”), dot-net (“.net”)
 - RegistryPro, NeuLevel and Public Interest Registry: dot-biz (“.biz”), dot-pro (“.pro”), dot-org (“.org”)

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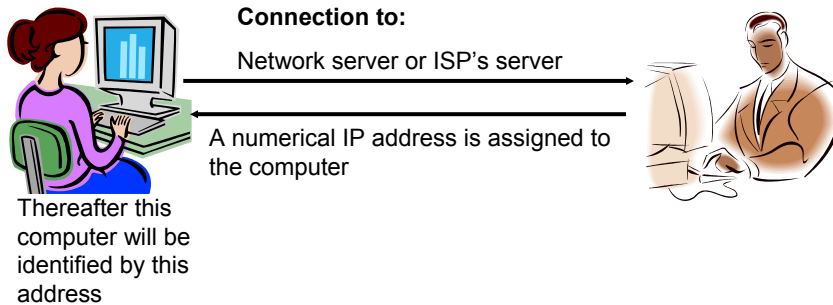
How IP Addresses Are Assigned

- Because of IP addresses the Internet is not an anonymous network!
- Internet service providers purchase a number of addresses for their computers and for the computers of their subscribers.
- When you turn on your computer and modem an IP address is assigned to your computer from your ISP:
 - Dynamic addressing
 - Static addressing

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Static Addressing

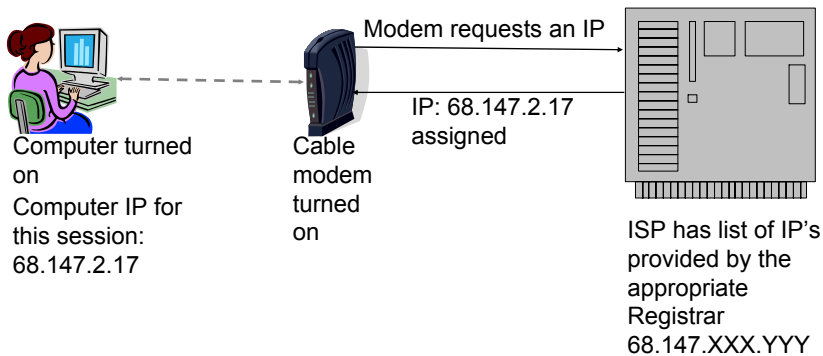
- When a computer is first connected to a network or the Internet it receives an IP address:



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Dynamic Addressing

- Whenever a computer is connected to a network or the Internet it's assigned a IP address from the existing pool of free addresses:



- Consequently the address may or may not be the same as ones that have been previously assigned.

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Dynamic Addressing (2)

•Advantages:

- Moving machines around the network to a different (sub)net is trivial. When the machine is connected at it's location it will learn it's new IP.
- Resource efficient (not every computer needs it's own IP so fewer IP's need to be purchased).

•Disadvantages:

- Some Internet services (e.g., web, ftp) require a fixed IP address. They won't work with dynamic addressing.

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Static Addressing

•Advantages:

- Other computers may reliably make connections to this computer using certain protocols (e.g., FTP, web).

•Disadvantages:

- Machines cannot be simply be physically moved around the network to another (sub)net but must be electronically reconfigured.
- It's less resource-efficient (every computer must have it's own IP). It's more expensive to get a static connection.
- It's less secure (the computer is "an unmoving target" because once a malicious program has found it's IP address, returning to that computer is trivial).

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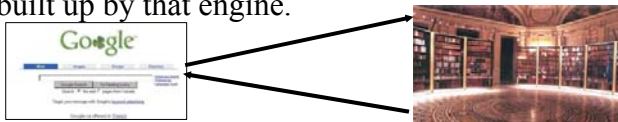
Intranets

- A network that is a mini version of the Internet.
- Provides the features of the Internet (e.g., web pages) but is self enclosed:
 - Cannot be accessed from an outside computer (e.g., \\qatar.ucalgary.ca\coursefiles)
 - Uses the protocols of the Internet.
- Extranet: the part of a company's or organization's intranet that is extended to non-employees or non-members.

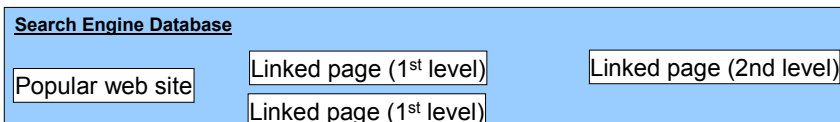
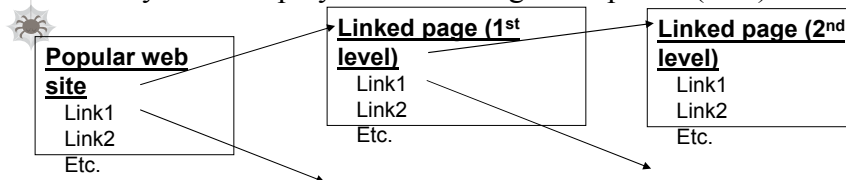
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How Do Search Engines Work

- Using a search engine involves searching the library of pages built up by that engine.



- The library is built up by the search engine's spiders (web)



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Some Search Engines Use People Instead Of Technology

- Rather than using search programs to build the database some search engines organize results based on human scrutiny.



Person submits page



Yahoo librarian



Yahoo database



Person searching for info



Database is organized by Yahoo librarians (a person not automated)

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Search Results Are Ranked According To Relevance

Google "james tam" [Advanced Search](#) [Preferences](#)

Web Results 1 - 10 of about 16,600 for "james tam" (0.06 seconds)

The faculty home page of James Tam
The faculty home page of James Tam. Contact information. Office: Email: Phone: ICT 707. tam@cpsc.ucalgary.ca (403) 210-9455 ...
[www.cpsc.ucalgary.ca/~tamj/](#) - 3k - [Cached](#) - [Similar pages](#)

The Scripps Research Institute - Faculty
Faculty **James Tam**, PROFESSOR CHEMISTRY TSRI, 2006, Education: B.S., Chemistry, University of Wisconsin Ph.D., Medicinal Chemistry, University of ...
[www.scripps.edu/research/faculty.php?rec_id=12066](#) - 12k - [Cached](#) - [Similar pages](#)

A little bit about James Tam!
James Tam. My interests and the major parts of my life. I've been working as a full time faculty member for the Computer Science department since August ...
[pages.cpsc.ucalgary.ca/~tamj/personal/index.html](#) - 37k - [Cached](#) - [Similar pages](#)

James Tam
James Tam arrived in Toronto in 1972 and soon after took up martial arts in Karate under Sensei T. Masuko, who was 2nd dan and head of the Garwaka school ...
[www.chenqionghua.com/Freggie/Disciplin/Resumes/TamResume.htm](#) - 4k - [Cached](#) - [Similar pages](#)

LinkedIn James Tam
James Tam's professional profile on LinkedIn. LinkedIn is a networking tool that helps users like **James Tam** discover inside connections to recommended jobs ...
[www.linkedin.com/pub/1/667/238-9k](#) - [Cached](#) - [Similar pages](#)

DBLP James Tam
James Tam. List of publications from the DBLP Bibliography Server - FAQ ... 3. EE. **James Tam**, Saul Greenberg: A framework for asynchronous change awareness ...
[www.informatic.uni-trier.de/~ley/indices/a-tree/UTam_James.html](#) - 5k - [Cached](#) - [Similar pages](#)

DBLP Wa James Tam
Wa James Tam. List of publications from the DBLP Bibliography Server - FAQ ... 4. Liang Zhang, **Wa James Tam**, Demin Wang: Stereoscopic image generation ...
[www.informatic.uni-trier.de/~ley/indices/a-tree/UTam_Wa_James.html](#) - 7k - [Cached](#) - [Similar pages](#)

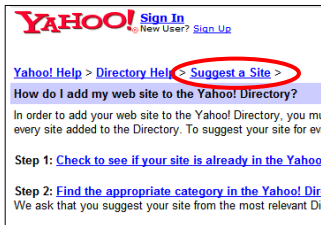
"WA James Tam" on Find Articles
Find Articles results for "WA James Tam" ... Canadian Journal of Experimental Psychology, 31:58 by **WA James Tam**. More from publication: Save ...
[findarticles.com/p/search/tb=art&q=%22W+A+James+Tam%22](#) - 26k - [Cached](#) - [Similar pages](#)

E A James Tam on Find Articles
Find Articles results for EA James Tam
[findarticles.com/p/search/tb=art&q=E+A+James+Tam&q=1&bt=art&pn=%22W+A+James+Tam%22&qt=all](#) - 30k - [Cached](#) - [Similar pages](#)

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Making A Site More Noticeable

- Search database built via search spiders (e.g., Google):
 - Add relevant keywords to your page.
 - The frequency and location of keywords may play a role in determining relevance.
 - Engaging in spamdexing¹ may result in a page being put at the bottom of the list
- Search databases built via human researchers (e.g., Yahoo):
 - Make sure that your site is examined by the people who build the database.



1 Spamdexing refers to the process of trying to artificially increase the ranking of a web page.

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Searching For Information On The Internet: Google

- Easy? Just type in what you're searching for...



- ...you may get the information that you were looking for plus much more!



James Tam

You Will Learn Strategies For Narrowing Your Search Results:

1. Reducing the number of unrelated results.
2. Explicitly avoiding pages with certain words.
3. Searching for information from select pages.

Source: <http://www.google.com/support/websearch> and <http://www.googleguide.com>

James Tam

Employing These Search Strategies

- Many (but not all) of the features can be found through the “Advanced Search” link on the Google site.



- This leads you to a page with several options (to be covered shortly):

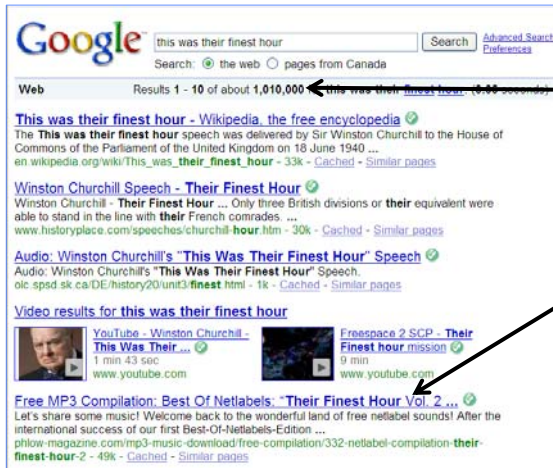


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Searching For Exact Phrases

- Sometimes you may be looking for information about a famous quote.

- "This was their finest hour?" – Winston Churchill



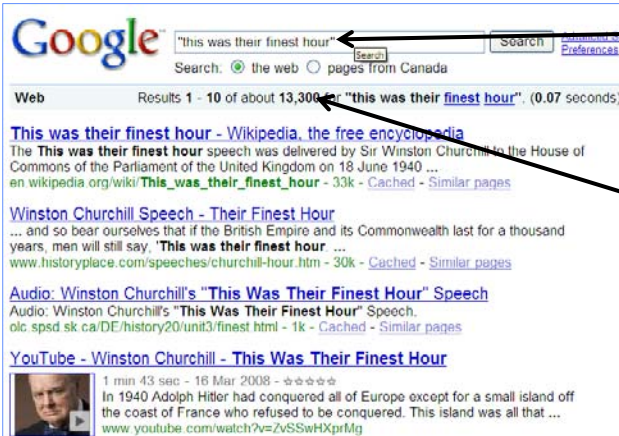
The number of results that must be reviewed is quite high.

Unrelated websites show up

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Searching For Exact Phrases (2)

- Enclosing the phrase that you are searching for in quotes will search for pages that contain that specific phrase.



The desired phrased enclosed quotation marks.

Fewer, more relevant results show up

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Searching Exact Phrases: Advanced Search

No other combinations are possible

The screenshot shows the Google Advanced Search interface. At the top, the Google logo is on the left, and 'Advanced Search' is in the center. On the right, there are links for 'Advanced Search Tips' and 'About Google'. Below the header, there is a search bar containing the text '"james tam"'. Underneath the search bar, there are several sections for refining the search:

- Find web pages that have...**
 - all these words: [input field]
 - this exact wording or phrase: james tam [input field] [to](#)
 - one or more of these words: [input field] OR [input field] OR [input field] [to](#)
- But don't show pages that have...**
 - any of these unwanted words: [input field] [to](#)
- Need more tools?**
 - Results per page: 10 results [dropdown]
 - Language: any language [dropdown]
 - File type: any format [dropdown]
 - Search within a site or domain: [input field] (e.g. youtube.com, edu)

At the bottom left, there is a link for 'Data, usage rights, numeric range, and more'. At the bottom right, there is an 'Advanced Search' button.

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Words That Are Commonly Ignored By Google

- Stop words are ignored by search engines such as Google:
 - Common words
 - Reserved words
- The search engine can be forced to include the stop words:
 - Use quotes
best places to eat in Calgary
Vs.
"best places to eat in Calgary"
 - Use the 'plus' operator.
Star Wars I
Vs.
Star Wars +I

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Words That Are Commonly Ignored By Google (2)

- Use the 'plus' operator.
how select phone service
- Vs.
+how select phone service

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What If More Than One Word Can Be Used?

- Some concepts can be represented by using different words.
- The '~' operator includes synonyms in the search.
- Example:
~cheap computers

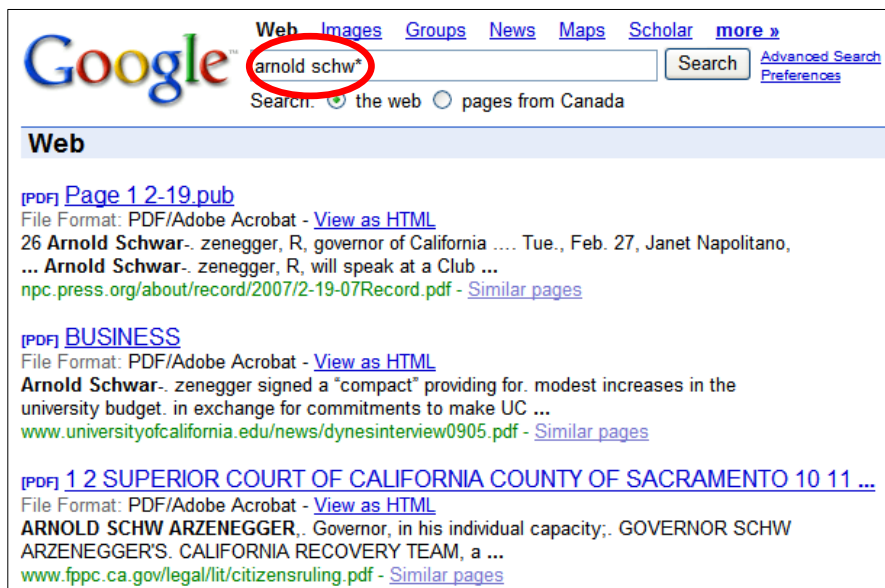
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Searching If The Search Criteria Is Incomplete/Partially Unknown

- For example: “Arnold Schwarzenegger”
- How is it spelled?
 - Arnold Schwartzengger?
 - Arnold Schwartzenger?
 - Arnald Schwartzencker?

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Using The Wildcard In Searches



The screenshot shows a Google search interface. The search bar contains the text "arnold schw*" and is circled in red. The search results are displayed under the "Web" tab. The first result is a PDF document titled "Page 1 2-19.pub" with a file format of PDF/Adobe Acrobat. The second result is a PDF document titled "BUSINESS" with a file format of PDF/Adobe Acrobat. The third result is a PDF document titled "1 2 SUPERIOR COURT OF CALIFORNIA COUNTY OF SACRAMENTO 10 11 ..." with a file format of PDF/Adobe Acrobat. Each result includes a "View as HTML" link and a "Similar pages" link.

Google [Web](#) [Images](#) [Groups](#) [News](#) [Maps](#) [Scholar](#) [more »](#)

[Advanced Search](#)
[Preferences](#)

Search: the web pages from Canada

Web

[\[PDF\] Page 1 2-19.pub](#)
File Format: PDF/Adobe Acrobat - [View as HTML](#)
26 **Arnold Schwar-** zenegger, R, governor of California Tue., Feb. 27, Janet Napolitano,
... **Arnold Schwar-** zenegger, R, will speak at a Club ...
[npc.press.org/about/record/2007/2-19-07Record.pdf](#) - [Similar pages](#)

[\[PDF\] BUSINESS](#)
File Format: PDF/Adobe Acrobat - [View as HTML](#)
Arnold Schwar- zenegger signed a "compact" providing for. modest increases in the
university budget. in exchange for commitments to make UC ...
[www.universityofcalifornia.edu/news/dynesinterview0905.pdf](#) - [Similar pages](#)

[\[PDF\] 1 2 SUPERIOR COURT OF CALIFORNIA COUNTY OF SACRAMENTO 10 11 ...](#)
File Format: PDF/Adobe Acrobat - [View as HTML](#)
ARNOLD SCHW ARZENEGGER, Governor, in his individual capacity;. GOVERNOR SCHW
ARZENEGGER'S. CALIFORNIA RECOVERY TEAM, a ...
[www.fpcc.ca.gov/legal/lit/citizensruling.pdf](#) - [Similar pages](#)

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Searching A Range

- Searching numerical values within a certain min – max range
- Range operator .. (multiple dots)
- Example:
 - United Arab Emirates history 1971..2009
 - ~Cheap Computers \$200..\$500

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Range Searching: Advanced Search

The screenshot shows an advanced search interface with the following elements:

- Find web pages that have...**
 - all these words: (An arrow labeled "Search criteria" points to this field.)
 - this exact wording or phrase:
 - one or more of these words: OR OR
- But don't show pages that have...**
 - any of these unwanted words:
- Need more tools?**
 - Results per page:
 - Language:
 - File type:
 - Search within a site or domain:
 - (e.g. youtube.com, .edu)
- [-] Date, usage rights, numeric range, and more**
 - Date: (how recent the page is)
 - Usage rights:
 - Where your keywords show up:
 - Region:
 - Numeric range: .. (An arrow labeled "Numerical range" points to this field.)

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Searching Among Alternatives

- Normally when a word is included in the search box Google will try to find web pages that include all those words.

- Example:

cute wallpapers cats dogs

Vs.

cute wallpapers cat OR dogs

Example:

“Bruce Lee” OR “Little Dragon” OR “Lee Siu Lung”

James Tam

Searching Among Alternatives (2)

Note: Google is case sensitive in this situation! (OR must be upper case in order to search for alternatives).

To be or not to be

Vs.

To be OR not to be

James Tam

Searching Alternatives: Advanced Search

The screenshot shows the Google Advanced Search form. It is divided into several sections:

- Find web pages that have...**
 - all these words:** A text input field containing "Cute wallpapers".
 - this exact wording or phrase:** An empty text input field.
 - one or more of these words:** A series of text input fields. The first contains "cats", the second contains "OR", the third contains "dogs", and the fourth is empty. "OR" is also present between the empty and "cats" fields.
- But don't show pages that have...**
 - any of these unwanted words:** An empty text input field.
- Need more tools?**
 - Results per page:** A dropdown menu set to "10 results".
 - Language:** A dropdown menu set to "any language".
 - File type:** A dropdown menu set to "any format".
 - Search within a site or domain:** An empty text input field with a small example "(e.g. youtube.com, edu)" below it.

At the bottom left, there is a link: [+ Date, usage rights, numeric range, and more](#). At the bottom right, there is a button labeled "Advanced Search".

All words that must appear

One of more of these words can appear

James Tam

Using 'OR': Exceptions¹

- Google was designed to approximate how people think and behave when searching for information.
- Consequently exceptions to the rules are sometimes made.
- Example:
For better OR for worse

¹ From <http://www.google.com/support/websearch>

James Tam

Excluding Words

- There may be times when you want Google to exclude sites with certain words or phrases.
- This can be done with the subtraction operator (subtract the words that follow the operator from search results).
- Example:
“James Tam”
Vs.
“James Tam” -ucalgary

James Tam

Excluding Words: Advanced Search

Find web pages that have...

all these words:

this exact wording or phrase: [tip](#)

one or more of these words: OR OR [tip](#)

But don't show pages that have...

any of these unwanted words: [tip](#)

Need more tools?

Results per page: [v](#)

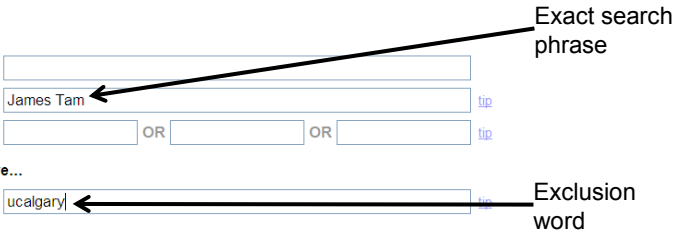
Language: [v](#)

File type: [v](#)

Search within a site or domain:

(e.g. youtube.com, .edu)

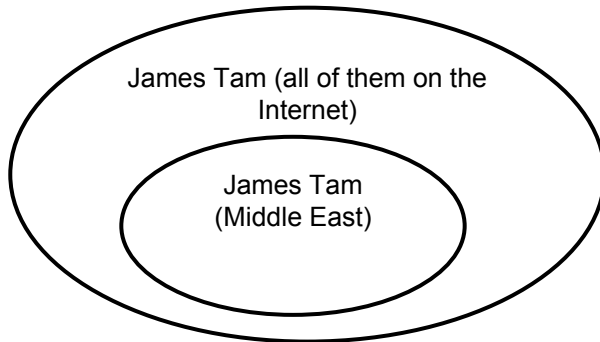
[+ Date, usage rights, numeric range, and more](#)



James Tam

Searching Within Previous Results

- Sometimes you will perform a search and come up with too many results.
- You can search within the set of previous results in order to narrow down the list of results.



James Tam

Searching Within Previous Results (2)

Perform the search

A screenshot of a search engine interface. It shows a search box containing the text "james tam" and a "Search" button to its right. Below the search box, there are several links: "Search within results", "Language Tools", "Search Tips", and "Dissatisfied? Help us improve". An arrow points from the text below to the "Search within results" link.

Select the option to narrow down the search results

Enter the additional search criteria to narrow down the search



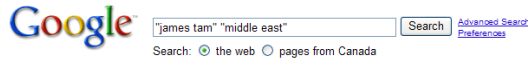
There were about **10,600** Google results for "james tam". Use the search box below to search within these results.

A screenshot of a search engine interface showing a search box containing the text "middle east" and a "Search within results" button to its right.

James Tam

Searching Within Previous Results (3)

- Of course these steps could have be consolidated into one step as well.



Web [Show options...](#)

[Hospitality News -- Events](#)

4 May 2009 ... The Senior Vice President Mr. **James Tam**, the Vice Presidents of Vietnam, Indonesia and The **Middle East**, Mr. G. Michael Bischof (Vietnam) Mr. ...
[www.hospitalitynewsmag.com/events.asp](#) - [Cached](#) - [Similar](#)

[\[PDF\] Page 1 PRESS RELEASE \(for immediate release\) SWISS-BELHOTEL ...](#)

File Format: PDF/Adobe Acrobat - [View as HTML](#)

serviced residences in Asia and the **Middle East** gears up for the Group's ... was attended by: Gavin Fauli, Chairman and President, **James Tam**, Senior Vice ...
[www.swiss-belhotel.com/doc/Swiss-Belhotel%20International%20-%20VP%20Conference.pdf](#) - [Similar](#)

[\[PDF\] Memorandum](#)

File Format: PDF/Adobe Acrobat - [View as HTML](#)

Mr. **James Tam**, Senior Vice President ... The **Middle East** - SBI Regional Office ... Vice President - Operations and Development, The **Middle East** ...
[www.swiss-belhotel.com/doc/Janeth%20Borlagdan%20-%20SBEC%20and%20Branding%20Manager,%20SBI.pdf](#) - [Similar](#)
[More results from www.swiss-belhotel.com »](#)

[ICME 2006](#)

Co-Chairs: Liang Zhang, Communications Research Centre Canada, Wa **James Tam**, Communications ... Gozde Bozdagi Akar, **Middle East** Technical University ...
[www.icme2006.org/Papers/PublicSessionIndex3.asp?Sessionid=1136](#) - [Cached](#) - [Similar](#)

[speaking peace](#)

hey **james!** tam here. i was deeply moved by this entry, really met my need for especially in conflict-ridden areas like the **Middle East**, Sierra Leone, ...
[community.livejournal.com/speakingpeace](#) - [Cached](#) - [Similar](#)

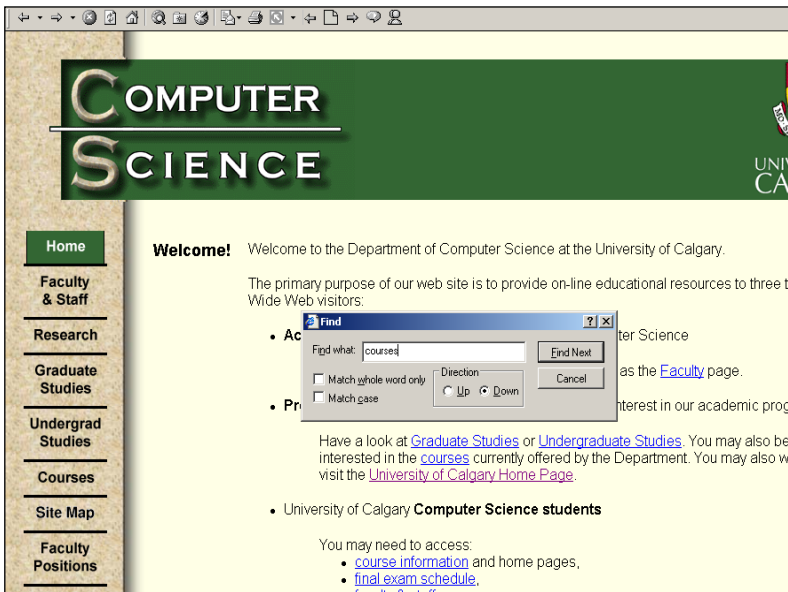
James Tam

Site Searches

- Useful when a webpage is large and/or not well organized:
 - Searching the viewed loaded page
 - Searching the entire site

James Tam

Searching The Currently Viewed Web Page



The screenshot shows a web browser window displaying the University of Calgary Computer Science department page. A search dialog box is overlaid on the page, with the text 'Find what: course' entered. The dialog box includes options for 'Match whole word only' and 'Match case', and buttons for 'Find Next', 'Cancel', 'Up', and 'Down'. The background page features a green header with 'COMPUTER SCIENCE' and 'UNIVERSITY OF CALGARY' logos. A sidebar on the left contains navigation links: Home, Faculty & Staff, Research, Graduate Studies, Undergrad Studies, Courses, Site Map, and Faculty Positions. The main content area has a 'Welcome!' message and a list of links for 'Academics' and 'Programs'. A 'Find' dialog box is open, showing 'Find what: course' and 'Find Next' button.

James Tam

Searching An Entire Site

- Involves searching one entire site (and not just the one page from the site that is currently loaded into the web browser). Results from other sites will not be shown.

- Example:

Search only the Computer Science website for the desired text

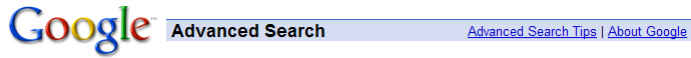


The screenshot shows a Google search interface. The search box contains the text "star trek" site:pages.cpsc.ucalgary.ca. The search button is highlighted. Below the search box, there are radio buttons for "the web" (selected) and "pages from Canada".

Results are only from the Department of Computer Science

- [Microsoft PowerPoint - logic](#)
File Format: PDF/Adobe Acrobat - [View as HTML](#)
(Fascinating). In this section you will learn some basic logical operations and how to evaluate expressions. Image from [Star Trek © Paramount](#). James Tam ...
[pages.cpsc.ucalgary.ca/~tamj/2008/217W/notes/acrobat/logic.pdf](#) - [Similar](#)
- [Microsoft PowerPoint - logic](#)
File Format: PDF/Adobe Acrobat - [View as HTML](#)
In this section you will learn what are the basic logical operations and how to evaluate different logical expressions. Image from [Star Trek © Paramount](#) ...
[pages.cpsc.ucalgary.ca/~tamj/2008/217W/notes/acrobat/logic.pdf](#) - [Similar](#)
- [QuickTime VR - An Image-Based Approach to Virtual Environment ...](#)
File Format: PDF/Adobe Acrobat - [View as HTML](#)
commercial CD-ROM title: [Star Trek/The Next Generation®](#)- Interactive Technical Manual ...
The making of the [Star Trek](#) title in a rather short time frame ...
[pages.cpsc.ucalgary.ca/~samavati/papers/others/tele-Ant/p29-chen.pdf](#) - [Similar](#)
by SF Chen - 1996 - cited by 1184 - Related articles

Searching An Entire Site: Advanced Search



"star trek" site:pages.cpsc.ucalgary.ca

Find web pages that have...

all these words:

this exact wording or phrase: [tip](#)

one or more of these words: OR OR [tip](#)

But don't show pages that have...

any of these unwanted words: [tip](#)

Need more tools?

Results per page: ▾

Language: ▾

File type: ▾

Search within a site or domain:
(e.g. youtube.com, .edu)

[+ Date, usage rights, numeric range, and more](#)

Information sought

Site being searched

James Tam

Other Advanced Search Features

Need more tools?

Results per page: ▾

Language: ▾

File type: ▾

Search within a site or domain:
(e.g. youtube.com, .edu)

[+ Date, usage rights, numeric range, and more](#)

Click

[- Date, usage rights, numeric range, and more](#)

Date: (how recent the page is) ▾

[Usage rights:](#) ▾

Where your keywords show up: ▾

Region: ▾

Numeric range: ..
(e.g. \$1500 - \$3000)

[SafeSearch:](#) Off On

Additional search parameters

James Tam

Meta-Search Engines

- Searches the databases of multiple search engines automatically.
- Examples:
 - www.metacrawler.com
 - www.dogpile.com
 - www.profusion.com
 - www.search.com
 - www.mamma.com
- Drawbacks:
 - Searches occur in the simplest form
 - Timeouts
 - Number of results returned

James Tam

After This Section You Should Now Know

- What motivated the development of the Internet
- How long has the Internet existed
- What were the two things that was the main focus in the early development of the Internet
- What was the name of the first version of the Internet
- Some important milestones in the development of the Internet
- What is the Internet and how do protocols allow it to exist
- The important 'Who's' of the Internet
- Three different ways of connecting to the Internet and the characteristics of each
- Typical transmission speeds of the different Internet providers and the role of the Internet backbone

James Tam

After This Section You Should Now Know (2)

- How information is transmitted on the Internet using packets
- IP addresses: what is their purpose, how are they assigned
- What is an Intranet and an Extranet and how they differ from the Internet
- How do search engines work
- Techniques for narrowing your search results and increasing the efficiency of your searches using Google
- Meta search engines: what are they, how do they work, what are some of their drawbacks/weaknesses