



The ITrain Group

Effective Internet Searching

Instructor's Manual

November 1999

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PREFACE

The “Effective Internet Searching” Instructor manual is part of a series of Internet training (ITrain) materials developed by the ITrain Collective with the financial assistance of the Bellanet International Secretariat. The complete set of materials can be obtained from <http://unganisha.idrc.ca/itrain/>. The ITrain Collective consists of a small number of selected individuals and institutions around the world with a wide range of technical and training expertise in the Internet field.

The training material methodology is the result of a needs analysis conducted in November and December of 1997 and subsequent consultations with experts and users, including field testing. The materials are developed for use by Internet trainers and users in developing countries. If you are an individual or an institution engaged in delivering basic or advanced Internet training course or a user who is seeking a simple, flexible and effective Internet training guide, these materials are for you.

The Effective Internet Searching - Instructor manual will enable you to deliver comprehensive training on Internet searching. A key component of the ITrain package is the Instructor Notes, a separate 30-page document that provides useful guidelines on how to deliver effective training. It is crucial that you read this in conjunction with the Overview manual. This document can be downloaded in Zipped MSWord format from: http://unganisha.idrc.ca/itrain/final/instructor_notes.zip or in PDF format from: http://unganisha.idrc.ca/itrain/final/instructor_notes.pdf.

These materials are distributed under the OpenContent License (<http://www.opencontent.org/>) the full text of which can be found on page 29.

Users of the ITrain materials, instructors and participants, are invited to join the ITrain mailing list for discussions about the use, customisation, and adaptation of the ITrain materials. To subscribe to the mailing list, send a message to <subscribe-itrain-l@lyris.idrc.ca>

You can send your evaluation of the ITrain materials as well as other information requests concerning the ITrain project to ITrain@unganisha.idrc.ca or to Steve Song at the Bellanet International Secretariat, P.O.Box 8500, Ontario, Canada, K1G 3H9. Tel. +1 613 236 6163 or Fax. +1 613 238 7230.

PREPARATION CHECKLIST

We have written the following checklist to help you to prepare and conduct ITrain sessions. Each item in the checklist is explained in a 30 page document called Instructor Notes. It is an integral part of the ITrain programme. Please use it.

Topic	Done	To be done
Preparing to conduct an ITrain course		
1. Learn about participants		
2. Identify the training context		
3. Assess the information sharing culture		
4. Inform yourself about ITrain		
5. Address your participants' learning styles		
6. Produce and select effective learning tools		
7. Develop 'what' and 'why' questions		
8. Plan ways to demystify technology		
9. Design a flexible schedule for the training programme		
10. Choose an appropriate training venue		
11. Practice making demonstrations		
12. Arrange supplies and materials		
13. Announce the training		
Conducting ITrain courses		
1. Get to know your participants: before and during the course		
2. Use principles of adult education		
3. Ask questions effectively		
4. Handle questions effectively		
5. Link your material to what participants know		
6. Show the benefits of what you are teaching		
7. Be prepared for last minute surprises		
8. Use appropriate language		
9. Use appropriate non-verbal behaviour		
10. Be aware of culture or gender signals you send		
11. Check your assumptions		
12. Address negative experiences and remarks		
13. Use reviews and repetition		
14. Make sure that all trainees have equal access to computers		
15. Deal positively with technical problems		
16. Conclude sections on a high point		

PLANNING TO DELIVER “EFFECTIVE INTERNET SEARCHING” COURSE

Time to start planning our session. That is an important point — planning is an essential ingredient of solid training. Later in this manual we include a session plan. However, the plan is not cast in concrete. You will need to adapt it to the group you are instructing and also to your preferred way of instructing.

This is a broad course. Keeping to a schedule while teaching a course like this takes skill and planning. In the course outline that follows, we have placed the estimated time for each section in the heading for each section. This information, in a stopwatch, does not appear in the participant materials. While you are giving the course, you will need to monitor your time so you can see how you are doing compared to the planned use of time.

Timing of sections

This course is designed to be conducted in one or two days. The following table outlines the sections within the Overview course and indicates the amount of time we have estimated for teaching them. There are leader-led components where the instructor speaks to the group. There are also self-study sections, with participants working on their own, or in pairs and the instructor acting as a coach.

Be certain to allocate time for the leader-led sections. The self-study sections are more flexible. The number finished in a course will depend on the speed with which individual participants complete them.

Planning summary

When instructors are planning to conduct training, it is important that they gain an overview of the course they are about to teach. That way you can remember how the pieces of the puzzle fit together. As a result, your delivery will be smoother. You will feel more confident. For example, when someone asks you a question about a topic that comes later you will be able to confidently say what is coming and ask them to be patient.

Planning table

The following table will help you gain an overview of the course. It is not however a substitute for a plan that you draw up yourself. It should help you; nevertheless, in making your own plan. One way to make your personal plan would be to photocopy this plan and modify it to suit your person needs. If you obtain the MS-Word file of this course plan, you will be able to make whatever modifications you wish to this plan — and to the entire course.

	Topic	Key Points	Time
1.	Introduction	Welcome participants, explain prerequisites, and distribute manual.	5
2.	Introductions and expectations of participants	Sets the tone of the course (interaction), deals with expectations, links this course to other ones. By introducing each other, participants get more involved and learn more about each other.	30
3.	Course objectives	Instructor explains the course objectives.	10
4.	Essential terminology	Review key Internet terminology. Ascertain that participants are all working with the same definitions.	15
5.	Introduction to search services	This section provides the contextual information for understanding the need for search services.	60
6.	Search services	Introduce the types of search services.	60
7.	Search service selection	Provide guidelines for appropriate search service selection.	30
8.	Search engine features	Examine the various search engine features which most increase searching efficiency.	90
9.	Review of main search features	Review main search features and discuss specialized searching.	45
10.	International development gateways and development project information	Introduce two international development gateways and discuss ways of accessing development project information.	60
11.	Current awareness tools	Look at various tools and techniques for electronically keeping up to date in your interests.	90
12.	Language issues	Examine current limitations of language searching and translation services.	30
13.	Evaluating results	Discuss criteria for evaluating the credibility and validity of search results.	45
14.	Copyright	Look at issues surrounding copyright in a digital environment.	30
15.	Citation of electronic documents	Present styles of e-doc citation.	30
16.	Conclusion	Discuss how workshop lessons might be incorporated into the participants work.	15
17.	Evaluation	Have participants evaluate the workshop	15

Conventions used in this manual

All text in *Italics* is for the instructor. It gives the instructor hints on how to conduct the session. Some of the italicised text also provides sample answer material to questions posed by the instructor. If an instructor follows the approach contained in *Italics*, this will help to produce an interactive session in which participants get involved and learn more.

Bold text in the manual indicates key words that instructors and participants will find on their monitor screen when software is running.

3-D boxes with notes to instructors

The 3-D boxes throughout the course contain notes to the instructor.

(r) This is a 3-D reference box for the instructor. You can use it to indicate resource and reference materials that may serve as background information for the instructor.

(i) This is a 3-D information box with notes for the instructor. You can use it to prepare yourself before you conduct a course.

(C) This is a 3-D customisation box for the instructor. You can use it to indicate areas of the text that would be improved by customising the text specifically for the intended audience.

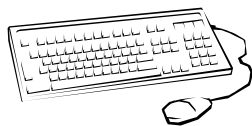
Icons

Icons appear in both the instructor manual and the participant manual. We included icons to draw attention to the text beside the icon and to give an immediate visual clue about the meaning of the material contained in the section.



Also in the instructor manual, the stopwatch icon indicates the estimated time to deliver a section of the course.

The following margin icons appear in both the instructor and participant manuals.



This margin icon indicates an exercise that participants are to complete.



This margin icon indicates that the accompanying text is a tip about some aspect of software or the Internet.

Instructor Resources

Recommended Background Readings Or Reference Materials For Instructors:

The following Web-based documents have been identified as extra resources to those who are interested in seeing how other search tutorials have been organized, or who wish to review certain areas of the workshop sessions. A careful reading of the VisualMetrics document will provide most of the information needed to deliver the workshop. Where additional reading may be required, sources have been indicated.

- 1) Search Tutorial: Guide to Effective Searching of the Internet, revised and updated July 1999, VisualMetrics Corporation, <http://www.thewebtools.com/tutorial/tutorial.htm>
- 2) Tips for Searching the Internet, S. Lawrence and C. Lee Giles, NEC Research Institute, 1999, <http://www.neci.nj.nec.com/homepages/lawrence/searchtips.html>
- 3) Recommended Search Strategy: Search with Peripheral Vision, Teaching Library Internet Workshops, University of California, Berkeley, Updated August 1999, <http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/Strategies.html>

Handout To Participants:

A handout listing some of the more popular search services categorized by their type has been prepared for instructors to distribute. It is in no way exhaustive, and you or your participants will undoubtedly wish to discuss the merits of other search services – do so at the appropriate sessions. Note too that new search engines are launched almost weekly, so remain flexible, and feel free to introduce new search services if you judge them important.

Evaluation: to be completed by all instructors

Good training courses are constantly being revised and improved. The best way to review a course and develop new ideas for revisions is to get feedback from instructors and participants who use it. With that in mind we have created a questionnaire for your comments. Please treat this questionnaire as a guideline. Feel free to add comments in any areas you feel we have missed. You can send your evaluation to the address provided in the preface to this manual. Please ask your participants to fill out their evaluation forms.

Your name and email address: _____ Sex: male / female

Course name: _____

Duration in hours: _____ Date: _____

Location: _____

Number and sex of instructors and coaches: _____

Number and sex of participants: _____

Describe in a few words your cultural background: _____

In the table below please indicate which sections you conducted in a leader-led format, which ones where self study, please rate the material as indicated.

Please indicate your answers below with an x or a check.

Topics	Participant's Level of Interest			Level of Difficulty		
	High	Medium	Low	High	Medium	Low
1. Introduction						
2. Introductions and expectations of participants						
3. Course objectives						
4. Essential terminology						
5. Introduction to search services						
6. Search services						
7. Search service selection						
8. Search engine features						
9. Review of main search features						
10. International development gateways and Development project information						
11. Current awareness tools						
12. Language issues						
13. Evaluating results						

14. Copyright						
15. Citation of electronic documents						
16. Conclusion						
17. Evaluation: to be completed by participants						

Please indicate the extent to which you agree with the following statements.

Questions	Ranking				
1 strongly disagree, 2 disagree, 3 neutral, 4 agree, 5 agree strongly					
	1	2	3	4	5
15. The introductory notes for instructors were helpful.					
16. The introductory notes for instructors were easy to read					
17. The layout of the manual made it easy to follow.					
18. The words used in the manual were easy to understand.					
19. The explanations in the manual were easy to understand.					
20. The manual was the right length.					
21. The graphics of the manual were easy to read.					
22. These course materials helped me teach the Internet.					
23. The training was what I thought it would be.					

24. Topics that should be added.

25. Topics that should be removed.

26. Describe the materials you added.

27. Other comments.

COURSE NOTES

The notes in the section that follows will help an instructor prepare to deliver a course on Effective Internet Searching. These notes are very similar in both the instructor manual and the participant manual. The difference being that in the instructor manual there are some additional notes for instructors, including answer material for questions that instructors will be asking.

DAY ONE

1. Introduction

Welcome to An Overview of the Internet. In this course you will learn about the ITrain Internet training programme and key concepts about the Internet.

In order to complete successfully the exercises in this course, you will need to be familiar with Microsoft Windows and the use of a mouse. You will need to know how to open programmes in Windows, how to select items from pull-down menus, how to use a button bar, how to maximise and

minimise a window, as well as how to select items from a Windows dialog box. If you do not meet these requirements, we have developed a computer handbook that you can use to upgrade your skills.

This manual is a reference for your personal learning. Feel free to make notes on it.

You can learn more about the ITrain Collection, of which this manual is a part, at <http://unganisha.idrc.ca/itrain>.

(i) While participants are arriving greet them individually, introduce yourself and ask them to write their names on name tags or another piece of identification that you provide. Now is the time to hand out the Participant Manuals

(i) Somewhere early in the programme instructors should introduce themselves, briefly outlining their background and personal interest in the course.

2. Introductions and expectations of participants

1) Please introduce to the group, the person you interviewed.

2) In a sentence or two, indicate what type of work the person does.

3) What experience with Internet searching does the person you introduced have?

4) What does the person you interviewed expect to learn from this course?

(i) Instructor explains that participants always like to get to know other participants. Here is an innovative way to do that. Ask participants to select someone they do not know and to interview him or her using the questions suggested below. Next, ask each participant to present to the class the person they interviewed. To optimise time, limit introductions to few sentences (1-2 minutes).

(i) Instructor should note what participants hope to learn so that this list can be reviewed at the end of the course. A flip chart or white board can be used for this purpose. Flip chart is best because the list can be taped to the wall. If using a white board, the list would most likely need to be erased to make room for other notes on the white board. In such cases, the list could be copied to a piece of paper, perhaps by a coach and re-written on the board for the final review

3. Course Objectives

Objectives

- 1) Present the components and the nature for the ITrain Effective Internet Searching Course.

- 2) Explain how search services work

- 3) Explain how to use a variety of search engine features

- 4) Explain how to search for an appropriate web page, download it, copy it to a word processor, and cite it correctly

- 5) Explain how to access international development gateways, and development project information

- 6) Explain how to use language features and translation services available on the Internet

- 7) Explain criteria necessary for effectively evaluating search results

- 8) Explain how to access a variety of Internet-based current awareness tools

- 9) Explain basic electronic document copyright and citation conventions

(i) Instructor states each objective, adding the information that is in the boxes, as required. The objectives below are written in terms of what participants will be able to do by the end of the course.

Possible answers:

1. So we can have a reasonable expectation of what lies ahead, and know what we will learn.
2. So we will better understand why search services are important, and therefore be better able to make appropriate search engine selections
3. So that we can improve our Internet searching efficiency, i.e. obtaining fewer, but more pertinent results
4. So we can fully exploit Internet resources for work and study..
5. So we may use Internet-based international development tools for obtaining more pertinent international development results
6. So we understand the strengths and limitations of language searching on the Internet
7. So we make sound judgments regarding the credibility of our results
8. So we can use Internet tools keeping abreast of new Internet technologies, and developments in our fields.
9. So we respect copyright in a digital environment, and will use the accepted practices in electronic resources citation.

4. Essential Terminology

Objectives:

- ✓ Understand key Internet concepts and terminology.
- ✓ Understand how web documents are constructed and transmitted.

(i) Review the terms listed below with the participants so that everyone begins the course with the same understandings. This section will also familiarise participants with a few Internet glossaries.

Basic Internet terminology

1) Internet

2) World Wide Web

3) Web Browser

4) Search Service (Directory/Search Engine):

5) Meta Data

(i)

- ✓ A global network connecting millions of computers
- ✓ System of Internet servers which support html formatted documents
- ✓ Software application used to locate and view Web pages. Popular examples include Netscape and Explorer
- ✓ Software that permits the retrieval of specific Web pages. Includes directories and search engines which will be discussed in a later session of the workshop.
- ✓ Data used to describe a Web page, and which is not displayed when viewing a document through a browser. Meta Data fields are described as Meta Tags that can be used to indicate Web page author(s), title, description etc.



Exercise: Using either glossary listed in the sources, identify, and present to the class one unfamiliar term.

Sources:

University of California at Berkeley – Library

<http://lib.berkeley.edu/TeachingLib/Guides/Internet/Glossary.html>

LearntheNet

<http://learnthenet.com/English>

Webopedia

<http://www.webopedia.com>

Inside the World Wide Web

In order to fully appreciate how Internet search engines function, it is important to understand how pages on the World Wide Web are created and transmitted.

1) How are World Wide Web documents created?

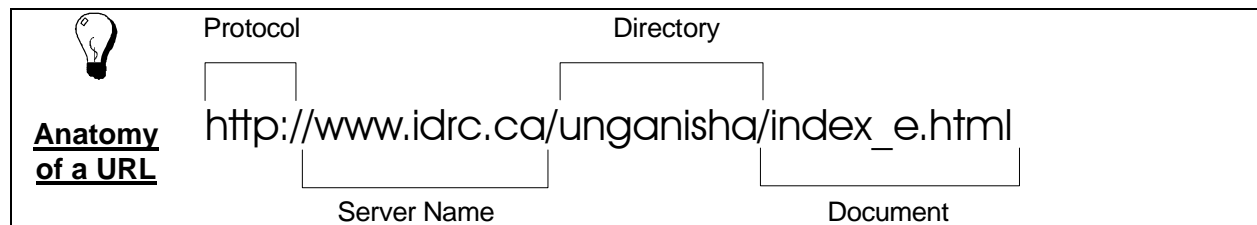
2) What is HTML?

3) What is HTTP?

4) What is a URL?

(i)

- ✓ Web documents are created from plain text. They contain formatting commands contained in angle brackets <> which control the display of text on the web page.
- ✓ HTML stands for Hyper Text Markup Language. All HTML commands are contained within angle brackets.
- ✓ HTTP stands for Hyper Text Transfer Protocol. This is the language that Web browsers and Servers use to talk to each other.
- ✓ URL stands for Uniform Resource Locator. It is a method for uniquely specifying the address of a World Wide Web page.



5. Introduction To Search Services

Objectives

- ✓ Review basic Internet statistics
- ✓ Introduce concept of search services
- ✓ Discuss search service coverage of the Internet
- ✓ Understand results rankings of the search services

(r) [pages 5-13, and 46-47
VisualMetrics]

Basic Internet statistics from 1999

1) Approximately how many websites exist on the WWW?

2) How many web pages does this represent?

3) How are these pages categorized (commercial, scientific, educational etc)?

4) Of the top 25 sites, how many are search-related?

5) How many users are there on the Internet?

6) What percentage of Internet users are Americans?



Note that not all Web documents are publicly indexable.
(i.e. retrievably through a search service)

(i) Possible Answers:

- ✓ There are currently over 5 million sites on the WWW.
- ✓ According to WWWmetrics (<http://www.wwwmetrics.com>) there are over 800 million pages on the WWW.
- ✓ 83% commercial / 6% scientific / 1.5% pornographic according to WWWmetrics (<http://www.wwwmetrics.com>):
- ✓ From Mediametrix (<http://www.mediametrix.com/TopRankings/TopRankings>) of the top 25 Internet sites, 11 are search related. (The other 14 are represented by a variety of sites including retail, reference (i.e. weather) and news sites.)
- ✓ It is estimated there are over 159 million Internet users.
- ✓ U.S. accounts for 47% of Internet users, but that number is dropping.

Sources:

WWWmetrics (<http://www.wwwmetrics.com>)

Mediametrix <http://www.mediametrix.com/TopRankings/TopRankings>

Greg Notess' Search Engine Showdown <http://www.notess.com/search/>

Search Tutorial: Guide to Effective Searching of the Internet, revised and updated July 1999,

VisualMetrics Corporation, <http://www.thewebtools.com/tutorial/tutorial.htm>

Definition of a search service

1) Provide a brief definition of a search service.

2) How many search services are currently available?

3) What are the two basic types of search services, and how do they differ from one another?

(i) Possible Answers:

- ✓ A search service is an Internet tool that enables you to find information on the www.
- ✓ There are approximately 2,500 search services currently available on the Web.
- ✓ There are two basic types: subject directories that classify websites, and search engines that perform keyword searches within websites.

Search service coverage of the www

According to a recent article in Nature by Lawrence and Giles individual search engine coverage of the publicly indexable web has decreased from approximately 30% in December 1997, to about 16% in the spring of 1999.

The same authors, in an earlier study published in Science, determined that querying six search engines increased the likelihood of finding results by a factor of 3.5. As well, they found very little duplication between search engines, noting that duplication between the popular HotBot, and AltaVista was only 18%.

1) Why is the question of search service coverage so important?

2) How might this information affect your searching habits?

Sources:

Nature, 400, 107-109, 1999

Science, v. 280, April 3, 1998, pp 98-100



Help participants to understand the significance of the search service coverage by presenting them with the following questions

- ✓ Understanding coverage (or lack of coverage) helps searchers appreciate the difficulties of Web searching, and the limitations of search services.
- ✓ Internet searchers should become very familiar with 2 to 3 search services in order to optimise finding relevant results.

How results are ranked

An overview of results ranking is essential to effectively using search services.

- ✓ In what areas of a web page do search engines perform a search?

- ✓ How do search engines retrieve documents?

(i) An overview of results ranking is essential to effectively using search services. This section will introduce participants to the parts of web pages where search services typically go to find the keywords identified by the user. This understanding should help users to properly frame search statements.

- ✓ Search engines look for keywords in the body of a web document, but also in metatag fields such as title, keyword, and description. Keywords found in these areas may score higher than a simple word count of keywords found in the body of a text. Some of the newer search engines, such as Google and Direct Hit not only use metatag searching and word count, but also factor in a site's popularity to rank the results. They reason that the more a web site is hyperlinked to, the more popular it is and consequently, the higher its quality and relevance.
- ✓ Typically, search engines retrieve documents based on a weighting formula, and a word number count. Each search engine owns an algorithm that determines the method in which results are found, and the ranking given to each result.



Tip: Alta Vista's Advanced search allows the user to adjust the ranking of results by means of the 'sort by' box found below the main query box.



Tip: As a general rule, when viewing results, avoid looking beyond the first 30 (usually 3 screens worth), as the relevancy of the results will likely be poor much beyond this point.

6. Search Services

Objectives:

- ✓ Classify different types of search services
- ✓ Learn about the advantages and disadvantages of each type
- ✓ Become familiar with search service help screens
- ✓ Practice downloading a document and converting it to a word processor

(r) (READ PAGES
10-12, 53 from
VisualMetrics)

Search Service Types

In this section, participants will begin to categorize search services.

For each type identified, describe and provide examples of actual search services, and discuss the advantages and disadvantages associated with each.

(i) Have the handout at hand in order to provide or confirm examples of the different types. You will be passing out the handout later in the session.

Web Directories

(i) **Web directories:** The web sites found in these directories have been organized by a person into a subject classification scheme or taxonomy. Users can either browse the directory or enter a search keyword to retrieve documents.

Advantages: Some “quality control” is achieved through the human intervention required for classification; for easily classified topics, using relevant directories usually means finding a manageable number of good quality sites.

Disadvantages: Where topic is less easily classified, it can be difficult to find appropriate sites; much smaller coverage due to cost and time of human labour.

Search Engines

(i) **Search engines:** Through the use of “spiders” or “robots”, web pages are indexed, and then added to a search engine’s database. Typically, this exercise is repeated on a weekly, or bi-weekly basis. As discussed earlier, the search engines “index” (record word by word) all the words in a web page, as well as those found in the first few sentences of a web document, the web site title, and other metatags fields.

Advantages: Easier to find uncommon words; Provides greater coverage than directories as a result of their much larger databases; Offer better searching through a broader menu of search features (see next session)

Disadvantages: No human classification of documents; Though improving, they are more likely to be victims of spamming; Too many results because of large databases.

Hybrids

(i) **Hybrids:** Increasingly, the distinctions between search engines and directories are blurring as each type is incorporating elements of the other. Excite is a good example of a hybrid, as is the ‘new’ (Oct. ’99) interface of AltaVista.

Metasearch Engines

(i) **Metasearch engines:** Search tools which translate queries into the syntax understood by a number of search engines. It is possible to have one query searched simultaneously across dozens, even hundreds of search engines.

Advantage: Can be useful for very simple queries.

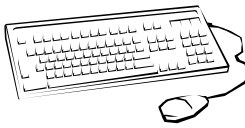
Disadvantage: Not as effective in complex searches where advanced features are required.

Specialty Engines or Gateways

(i) **Specialty engines or gateways:** Search services that will only search on, or classify web pages that fit the profile of the featured topic/subject area. They are fastest growing type of search service. They will very often provide value-added features such as access to papers, partners, listservs, topical links, search engines, and any other information the targeted users might find useful.

Search Help

Effective searchers are familiar with the capabilities of their preferred search services. To do so requires time spent testing their search service, and time spent reading the help screens. It is never a waste of time



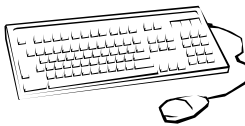
Choose two search services from the handout, and locate their respective help screens. Evaluate the help screens of the search services using the following criteria:

- ✓ Are examples provided?
- ✓ Clarity of design and organization
- ✓ Breadth of help topics

to take a few minutes to review help screens. In addition, search efficiency can be greatly improved by printing a copy of the help screen, and filing it beside your computer.

Working With Results

Finding results, though the most important component of searching, is only a part of the picture. Knowing how to work with or use your results is essential to fully exploiting the Internet's usefulness. It's important to know how to download, convert, and print electronic documents if you want to incorporate search results into your work.



Download a page from a help screen to your hard drive, and then convert the document to a word processor.

7. Search Service Selection

Objectives

- ✓ Understand search service strengths and selection criteria.

(r) (pages 13-15 of VisualMetrics, NEC, and Berkeley documents)

Broad guidelines for determining choice of search service type:

Web directory: Is topic easily classified? i.e. Looking for a government web site vs. looking an article on international development.

Gateway: Does topic fall into a thematic area that has a subject directory?

Search engine or hybrid: Is topic hard to classify or complex? i.e. looking for a discussion or academic paper on a particular topic.

Metasearch engine: For a quick search engine overview of a fairly simple search (1 or 2 keywords). Typically, users will then access the search engines that offer the best coverage of the topic.

(i) There is no guaranteed method of determining which search service to use in any one circumstance. By using some common sense, however, one can narrow the choice of search service options.

Which search service (directory or search engine) might be best suited to finding the following information:

1) University address

2) Paper on credit union founder Freidrich Raiffeissen

3) A map of Norway

4) Participatory agricultural methodology in Southern Africa

5) The name of an old colleague from school

(i) Possible Answers:

- ✓ Directory
- ✓ Search Engine
- ✓ Directory
- ✓ Search Engine
- ✓ Metasearch Engine

8. Search Engine Features

Objectives:

- ✓ Understand what is meant by basic and advanced level searching
- ✓ Become familiar with the features generally available in both search levels



Read pages 15-45 of
VisualMetrics

Basic Level

- natural language searching [Which cover crops are used in Africa?] results: 47,920, 335
- + and - signs [+cover +crops +Africa] 16,678 [+cover +crops -Africa] 57,272
- “phrase” searching for both expressions and proper names [+”cover crops” +Africa] 2,145
- truncation or word stemming [+”cover crops” +Afric*] 2,620



Examples are based on the query: “Cover crops in Africa?” Results were obtained by using Alta Vista’s Advanced Search on October 19 1999

Advanced Level

- boolean operators (AND, OR, NEAR, and NOT) [cover AND crops AND Africa] 9,099 [cover NEAR crops NEAR Africa] 55
- “phrase” searching [“cover crops” NEAR Africa] 52
- using parentheses or nesting [(“cover crops” OR “green manure”) NEAR Africa] 65
- truncation [“cover crops” NEAR Afric*] 58
- filter/field searching (url, title, anchor) [“cover crops” and URL:org] 6 [TITLE:cover crops]155
- case sensitivity (always use lower case)



Define the term ‘search feature’, i.e. ways in which queries can be focussed using Boolean operators, filter or field searches, word stemming, and phrase searching. Describe each with the help of a ‘live’ demonstration of the examples listed below. Stress that these features permit the user to limit or expand the meaning of his/her search, and are the greatest means of controlling search engine results.



Unless the search term is unusual, always use more than 2 words in your query. Nouns are generally more effective than verbs or adjectives.



Refine a search using some of the advanced features indicated above.

1) Which feature should always be used when searching a person's name or a multi-word expression?

2) Which filter would be used to limit results to a specific domain type?

3) How can you obtain various word endings for your search term?

4) Which operator will give you a greater number of results, 'AND' or 'OR'?

(i) Possible Answers:

- ✓ quotation marks, " "
- ✓ the url, url:
- ✓ truncation, *
- ✓ or



Compose your own advanced search query in AltaVista using a Boolean operator, a filter search and truncation. Share results with class.



AltaVista's Advanced Search supports the use of the NEAR operator which enables users to retrieve their keywords within 10 words of each other. i.e. mine NEAR gold will retrieve Web pages where the keywords mine and gold are placed no farther than 10 words one from the other. NEAR is a very powerful operator in narrowing down searches.

DAY TWO

9. Review of Main Search Features and Specialty Options

Objective:

- ✓ Review search engine feature knowledge and explore more specialized search options.



Review the following search features with participants. Describe uses of each through the following examples (or your own). AltaVista's Advanced Search is recommended for demonstration.

“+” and “-” `+cancer -astrology -zodiac` This search will pull out Web pages on cancer as a disease, and not as an astrology sign.

Boolean operators and Parenthesis (workshop or tutorial) and searching This search will find pages dealing with search tutorials or search workshops.

Filter or Field searches Many search engines will support some forms of filter searching. Examples include image; title; url; link; anchor. The syntax used for each is the following: filter: keyword i.e. title:peace or url:edu or anchor:pdf Ask the participants to choose one or two filters and explore. Have them use glossaries to look up any filter they may not be familiar with.

Phrase searching “sustainable development” This search will find the words ‘sustainable’ and ‘development’ as written in the quotation marks, that is side by side.

Truncation develop* Using the asterisk indicates to the search engine that different word endings for ‘develop’ are wanted. It should provide ‘developed’ ‘developing’, ‘development’ etc.



You can search for sites that contain hyperlinks a Web site by using HotBot's (<http://www.hotbot.com>) “links to the URL” found in the “look for” drop down box.



As well as general access to the ‘free’ Internet, Northern Light (<http://www.northernlight.com>) offers full text delivery of articles from their ‘Special Collection’, a collection of documents from certain private (commercial) sources. Costs for the articles generally range from \$2.00 to \$10.00 US. Accounts must be set up with Northern Light prior to the delivery of the articles.

10. International Development Gateways and Development Project Information



Read pages 60-61 of VisualMetrics

Objectives:

- ✓ Become familiar with two important specialty gateways in the field of international development
- ✓ Review techniques and resources for finding international development project information.

(i) Be sure participants visit the Eldis search, issues, and country profiles pages. For Oneworld, draw attention to the search, news, and dispatches features.

International Development Gateways

In the field of international development the following two sites have proved useful in organizing, and making searchable the information contained in a broad selection of development sites. Eldis and OneWorld provide quality Web portals into the world of international development.

Eldis

Eldis describes itself as “a gateway to online information on development in countries of the South. Coverage includes social, economic, political and environmental issues. Eldis makes a qualitative selection of materials and structures it for easy access.”

OneWorld

OneWorld describes its mission as being “dedicated to promoting human rights and sustainable development by harnessing the democratic potential of the Internet.” It provides access to news, special dispatches, and a search engine of partner sites.

(i) Explain that part of the skill in being an effective Internet searching is knowing when to use the efforts of others to help you find results. Effective searching not only means knowing how to structure a search properly, but also how to find and take advantage of the expertise of subject specialists. Most subject areas can boast quality gateways that have been prepared by librarians, academics, not-for-profit, and for-profit organizations



Review either Eldis or OneWorld for approximately 15 minutes, and then have them answer the following questions:

Which features from either Eldis or OneWorld did you find most useful?

Using either Eldis or Oneworld, find an article of professional interest to you.

Sources:

Eldis: (<http://nt1.ids.ac.uk/eldis>)

Oneworld : (<http://www.oneworld.org>)

Finding Development Project Information:

Examples of Canadian international development project sites. Include the following:

- ✓ International Development Research Centre (IDRC):
<http://idrinfo.idrc.ca/scripts/minisa.dll/144/IDRIS?DIRECTSEARCH>
- ✓ Canadian International Development Agency (CIDA):
<http://w3.acdi-cida.gc.ca/regione.htm>
- ✓ Canadian Department of Foreign Affairs and International Trade (DFAIT):
http://www.dfid.gov.uk/public/working/pipe_links.html
- ✓ Global Knowledge Partnership GK-AIMS (ICT project information)
<http://www.bellanet.org/gkaims>

(i) A need common to many in the international development community is that of knowing which organizations are working or interested in a particular development area, product, or policy. Explain that finding Web-based project information in international development can be difficult. As yet, there exists no single international and comprehensive repository for development projects. Most researchers must bookmark the sites of organizations that they know to be involved in project work, and consult these individually as the need arises. Some examples of Canadian international project sites have been provided below to demonstrate where Web-based project information may be housed. Feel free to substitute this list with sites more appropriate to your class' interests.

11. Current Awareness Tools

Objectives

- ✓ Understand what is meant by 'current awareness' tool
- ✓ Review a number of current awareness sites and services for search engine information, new or interesting web sites, journal articles, books etc.

What kinds of current awareness tools are available on the Web?

(i) Typically, they will be either web pages which are updated regularly with the very latest information (pull technology), or alerting services which send new and updated information to your email address (push technology)

Where could you find new information about search engines?

(i) For a regularly updated web site specializing in search engine news try <http://www.searchenginewatch.com> or Greg Notes' Search Engine Showdown <http://www.notess.com/search/>. For an electronic newsletter which is sent to your email address, try signing up for a service such as ResearchBuzz whose subscription instructions are available at: <http://www.researchbuzz.com/news>

Where could you go to get the most current Table of contents for a favourite journal?

(i) For a particular journal try either at the journal's own website (e.g. British Medical Journal at <http://www.bmj.com>), or at its publisher's web site (eg. Elsevier's Social Science and Medicine <http://www.elsevier.com/homepage/alert.htm?mode=direct>). As an added service, both of the examples listed above are sent regularly to individual's email addresses, free of charge through an alerting service. On occasion, the Table of contents will provide direct access to the full-text of the articles.

Where could you find new books?

(i) A good source of new books could be found at a favourite library's New Acquisitions page. (e.g. IDRC's http://www.idrc.ca/library/curbib/index_e.html) Also popular, are some of the major book retailing sites such as Amazon (<http://www.amazon.com>) or Chapters (<http://www.chapters.com>) sites where you might perform a search on subject or title for the current year.

Where could you find new information on a topic of interest?

(i) Subject gateways are a good choice for newly posted information on topics of interest. To find a relevant gateway try using a subject launch pad such as PINAKES (<http://www.hw.ac.uk/libwww/irn/pinakes/pinakes.htm>)

Where could you find reviews of new and worthwhile Web sites?

(i) Most regular web searchers will probably have a small collection of sites or services which he/she consults several times a week in order to learn about new or interesting sites. Two good places to start are the Digital Librarian's "New Sites" collection which is updated on a weekly basis (<http://www.servtech.com/~mvail/home.html>) or Librarian's Index to the Internet's "New This Week" collection, also updated weekly. (<http://sunsite.Berkeley.EDU/InternetIndex/>).

Where could you get news from a variety of sources?

(i) If looking for a listing of international newspapers, good sites include Newspapers.com (<http://www.newspapers.com/>) or for some alternative media selections, About.com (<http://home.about.com/medianews/media/index.htm>). For searching across a number of current news sources, try either Northern Light News (<http://www.northernlight.com/news.html>) or Excite News (http://www.excite.com/search_forms/news).

12. Language Issues

Objectives:

- ✓ Understand limitations of language searching on the WWW
- ✓ Appreciate the rudimentary quality of Internet translation services

1) What is the most effective way to search the WWW for a non-English language term?

(i) Though some search engines allow the user to specify the language of results, generally, they are not completely effective.

Where a term is unique to a language, it is best to use that term in the query box; where a term is common to more than one language, then it will be helpful to specify the language (where available).

2) Where could you find a translation service on the WWW?

(i) For a very basic translation, visit a site such as BabelFish. It will provide a rudimentary translation for a number of the more common languages. Never use is to replace a professional translation.



Exercise: Play a game of virtual “broken telephone”. Send a short text in English to the participant closest to you, he or she must then translate it into another language and then send on to a third participant who will again translate it into another language, and so on. Ultimately, the message must be returned to the first participant who will translate it back into English.

Sources:

<http://babelfish.altavista.com/cgi-bin/translate?>

13. Evaluating Results

Objectives

- ✓ Understand the lack of quality control for information available on the Internet, and need for participants to exhibit healthy scepticism when viewing results.

Anyone with access to a server can upload anything they want to the Internet. Finding a document on the Web in no way guarantees quality, accuracy, or credibility. Always use a healthy scepticism when evaluating your results. The following criteria for critical evaluation may be helpful.

Review the following criteria, and discuss how they can be used to evaluate web resources:

1) Accuracy:

(i) Are sources for factual information listed so that information can be verified? Check for grammatical, typographical, and spelling errors.

2) Reliability and Credibility:

(i) Is there a credible description of sponsoring organization? Is there a non-Web equivalent in which to check reliability? Are quotes and assertions backed by verifiable sources?

3) Purpose

(i) Does the information fall into the categories of fact, opinion, or propaganda? Does the affiliation of author or document appear to bias the information?

4) Author

(i) Is the name of the author evident on the page? Is there an e-mail address or link to a home page of a sponsoring organization listed?

5) Currency

(i) Is the information up to date? Is there an indication on page when it was last updated?

6) Links

(i) Are the links current? Are they annotated?



Tip: To find out when a web page was last modified, click on VIEW from browser bar, and then click on PAGE INFO.



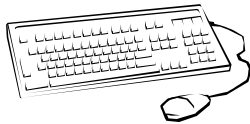
Tip: Using a web page's URL (Uniform Resource Locator) can help to evaluate a web site's credibility. Having edu, ac, or org in the first part of the address may indicate a respected academic institution, or non-profit organization. Alternately, if com appears in the URL, then the site is a commercial one that is probably attempting to sell you something.



Tip: When viewing a result, if it is not obvious why the web page was returned as a result (i.e. the search term cannot be found on the page), try using your browser's "Edit - Find in Page" feature to locate the position of the search term within the page.



Exercise: Use the criteria discussed above to evaluate the exercise web sites provided at Georgetown University Library's site:
<http://www.library.georgetown.edu/internet/eval.htm>.



Exercise: Compare the following sites on Melatonin: 1) <http://www.melatonin.com> and 2) <http://www.aafp.org/patientinfo/melatonin>
Discuss issues such as author and sponsoring organization, purpose, currency etc.

14. Copyright

Objective:

- ✓ Understand basic copyright conventions

The basic rule for understanding the copyright of Internet documents is this: **Everything** posted to the Internet is copyrighted.



According to the Berne Convention (administered by the World Intellectual Property Organization (<http://www.wipo.org/eng/main.htm>) to which most countries are signatory, every creative work is copyrighted once it is fixed in a usable form (print, web page, sound recording, sheet of music etc). The basic rule for reproducing Internet documents is that if you didn't write it, and want to copy it, seek permission from the author unless he/she has already granted permission on the Web page in question.



Exercise: Using Brad Templeton's site <http://www.templetons.com/brad/copymyths.html>. Discuss the following "hypothetical" situations 1) You find an interesting Web document which you download and print for 10 colleagues. Have you violated copyright? 2) Is e-mail subject to copyright laws too? Can someone post my e-mail message to a website without my permission? 3) Does the author of 10 Big Myths permit reproduction of his article?

15. Citation of Electronic Documents

Objectives:

- ✓ Learn how to cite the various types of electronic documents.

Just as there exist proper styles of citation in the print format, so too are there recognized styles for citing electronic documents. The following examples, taken from Purdue University's Writing Lab site <http://owl.english.purdue.edu/files/33.html>, represent typical forms of electronic document citation.

Web page

Author(s). Name of page. Date of posting/Revision. Date of Access <electronic address>.

Example:

Daly, Bill. Writing Argumentative Essays. 1997. 26 Jun. 1998
<<http://www.eslplanet.com/teachertools/arguweb/frntpage.htm>>.

Article in online journal

Author(s.). "Title of Article." Title of Journal Volume. Issue (year): Pages/Paragraphs. Date of Access. <electronic address>.

Example:

Inada, Kenneth. "A Buddhist Response to the Nature of Human Rights." Journal of Buddhist Ethics 2 (1995) : 9 pars. 26 Jun. 1998 <<http://jbe.la.psu.edu/>>.

E-mail correspondence

Author. "Title of message (if any)." E-mail to author. Date of message.

Example:

Tilton, Martin. "Re: Meeting Agenda for Friday." E-mail to Norit Berman. 18 June 1999.

Listserv posting

Author. "Title of posting"" Online posting. Date when material was posted (for ex. Mar. 1998) Name of listserv. Date of Access. <electronic address>.

Example:

Lin, Michael. "Compressing Online Graphics." Online posting. 27 Apr. 1999. MacWeb. 29 Apr. 1999 < <http://www.graphica.com/digitizing/intro.html>>.

Other sources to consult

(http://www.mla.org/main_stl.htm)



Exercise: How would you cite Brad Templeton's 10 Big Myths site?

Discuss some of the problems associated with Web page citation? I.e. Web page disappearance; how to retrieve pages based on date of access.

16. Conclusion

Objectives:

- ✓ Assessment of how the search features and tips presented over the course of the workshop will be useful to the participants.

Discuss with the class which of the search features or searching aids presented in the Effective Internet Searching Workshop will be most helpful to you in your work.

Have most of your information needs been covered by the workshop, and if not, please share them with the class.



Note which features were found most useful by participants. Mention these in your workshop evaluation so that the workshop developers can properly update or expand the most helpful information. Also note any areas which the participants feel were not properly development.

17. Evaluation: to be completed by participants

One important part of training is to receive specific feedback from people who use the materials. With that in mind we have created a questionnaire for your comments. Please treat this questionnaire as a guideline. Feel free to add comments about any areas you feel we have missed. Please send your evaluation to the address provided in the introduction to this manual. Evaluation forms can also be filled out online at the ITrain web site: <http://unganisha.idrc.ca/itrain/evaluation/>

Your name and email address: _____

_____ Sex: male / female

Course name: _____

Duration in hours: _____ Date: _____

Location: _____

Number and sex of instructors and coaches: _____

Number and sex of participants: _____

Describe in a few words your cultural background: _____

Please indicate your answers below with an x or a check.

	Your level of interest			Level of difficulty		
	High	medium	low	high	medium	low
1) Introduction						
2) Introductions and expectations of participants						
3) Course objectives						
4) Essential terminology						
5) Introduction to search services						
6) Search services						
7) Search service selection						
8) Search engine features						

	Your level of interest			Level of difficulty		
	High	medium	low	high	medium	low
9) Review of main search features						
10) International development gateways and development project information						
11) Current awareness tools						
12) Language issues						
13) Evaluating results						
14) Copyright						
15) Citation of electronic documents						
16) Conclusion						

Please indicate the extent to which you agree with the following statements.

Questions	Ranking				
<i>strongly disagree, 2 disagree, 3 neutral, 4 agree, 5 agree strongly</i>					
	1	2	3	4	5
17) The introductory exercise was helpful.					
18) The notes for participants were easy to read					
19) The layout of the manual made it easy to follow.					
20) The words used in the manual were easy to understand.					
21) The explanations in the manual were easy to understand.					
22) The manual was the right length.					
23) The graphics of the manual were easy to read.					
24) This course will help me use the Internet.					
25) The training was what I thought it would be.					

27) Topics that should be added.

28) Topics that should be removed.

29) Other comments.

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