A Note on Internet for Rock Engineers

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1.0 INTRODUCTION

In 1969 ARPANET a group of three American Universities started research on computer networking, which ultimately led to the birth of Internet in the year 1982. Since then development has taken place at a rapid pace in the so-called "online world". Today we have millions of public databases available online all over the world. With so many online services, and large variety of access methods, it is often difficult to find our way through the maze of offerings.

Information is abundant, anyone navigating the online world needs to know what is available, and how to find and use it. Getting there takes time, but the potential rewards are immense for researchers, designers and consultants. Therefore, half the battle is figuring out where to look. You will also discover that using the online resource can be quite fun and entertaining..

2.0 THE WORLD WIDE WEB

The World Wide Web (WWW, or just Web) allows you to connect to all services provided by the InterNet or Internet. Currently there are more than 30 million users connected to the Internet, and each month about half a million more start surfing the Web. About 10% of all users provide a Web-Server, to which all users in the world can connect. And naturally all these servers provide information or services, which may be of importance for you. Via the InterNet you may e.g. check the library of a University or even of the American Congress to see if they carry the book you are interested in. Or you can discuss a specific problem in special forums with people all over the

world. For this you need to search the Web and these searches involve using a "search engine" available on the Internet as Web directories.

Finding relevant data not only depends on search engines but also on the type of keywords you search for. For example if one wants to search for information on Geomechanics, he can simply type Geomechanics in the space provided for keywords on the search engine. The search engine will list URL (Universal Resource Locator or simply address for the page) of sites containing "geomechanics". To do an effective search, knowing about how search engines operate helps. There are many ways to narrow down your search. Boolean logic is one of the most common and effective way and involves using AND, OR and NOT in the key words. You can also use the "+" sign in your statements to give more focused results. Similarly, you can use the "-" sign to exclude certain words. Most of the search engines offer their "advance search" where you have all these options and more listed in pull down menus. Some of the useful search engines available on the net are *http://www.altavista.com, http://www.infoseek.com, http://www.excite.com, http://www.yahoo.com, http://www.lycos.com.*

Suggested key words: tunnels, caverns, rock + engineering, geomechanics, rock + mechanics, landslides, rock + slope.

3.0 USENET

Another option is to search the Newsgroups-an online discussion group or a virtual community of people with similar interests. Usenet News (User Network News), as newsgroups are officially known as it is a network of networks and computers all of which have made bilateral agreements with other members of Usenet to share and exchange news. To be able to surf the Usenet you need to have access to NNTP (Network News Transfer Protocol) Servers through your ISP (Internet Service Provider). Usenet is divided into newsgroups and today, there are over 20,000 different newsgroups organised around every topic imaginable e.g., computers, books, music, science, research, environment, business etc. In order to make them easily recognisable, newsgroups follow a standard naming convention. The name of a newsgroup starts with a category type, followed by a dot and a subject, which can be followed by any number of subcategories, each separated by a dot. Some of the common categories of newsgroups are "alt" for alternative, "biz" for business, "comp" related to computers, "sci" related to science etc. More information on Usenet can be found at the web site - *http://vlib.stanford.edu/Overview2.html.* Some newsgroups of specific interest to rock engineers are *sci.engr.geomechanics, sci.engr.civil, sci.geo.geology, sci.geo.earthquakes.*

4.0 URL OF SOME INTERESTING SITES

List of web addresses, also called URL (Uniform Resource Locator), of some of the related sites for rock engineers are given below.

Societies

- *http://www.lnec.pt/ISRM/* - Site for ISRM.
- *http://www.ita-aites.org* - Site for ITA.
- *http://www.cgs.ca/* - The Canadian Geotechnical Society's Home Pages.

Software directories

- *http://www.ggsd.com* - Geotechnical and Geoenvironmental Software Directory. A comprehensive site for freeware and shareware software for download.
- *http://members.tripod.com/~mclean/software.htm*
- *http://grc.laurentian.ca/resource/resource/html*

Library, Journals, Magazines, Publications etc.

- *http://geotech.civen.okstate.ed/index.htm* - Virtual Library of Geotechnical Engineering. The site provides links to related universities from all over world apart from other relevant sites. It also provide link to Electronic Journal of Geotechnical Engineering (EDJE).
- *http://www.rockscience.com* - This site contains "Practical Rock Engineering" a book published on Internet by Prof. E. Hoek. It also has a collection of Software available for download free of cost.
- *http://isrm.luns.net/index.htm* - Home page of Prof. J.A. Hudson.
- *http://www.arcat.com/arcatcos/cos08/arc08914.cfm* - Underground Space Center, University of Minnesota Profile Page.
- *http://www.pubs.asce.org* - Journals published by ASCE.
- *http://www.usace.army.mil/inet/usace-docs/eng-manuals/* - Civil works engineering manuals.
- *http://www.sciam.com* - Scientific American.
- *http://www.hbz-nrw.de/elsevier/08867798*
- *http://www.elsevier.nl/inca/publications/store/2/5/6/* - Journals published by Elsevier Science.
- *http://www.worldtunnelling.com*
- *http://www.enr.com*
- *http://www.sunet.se/sweden/science_geomechanics.html* - XYZ of Geo-mechanics

Many similar sites are available on the internet and many more are being added regularly catering to various aspects of geomechanics. One has to search for them through the various search engines listed above.