Where is it? A simple guide to table tennis information

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Abstract: The purpose of this paper was to support table tennis experts and scientists with up to date information regarding table tennis issues. Accessing information about table tennis today can be very easy due to the internet access but on the other hand also very complicated The growth of the web and different services has decreased the need of table tennis experts, players and scientists to visit libraries to locate relevant books, journals or conference papers.

This paper would like to outline the need and availability of table tennis information through the web and database. Literature around the world has been checked out in order to collect information on different fields of table tennis game in one place. In order to increase the sports attractiveness of table tennis, the International Table Tennis Federation (ITTF) has carried out reforms such as having differently combined rubbers on the two sides of the racket, the co-existence of the white and yellow ball, regulations on service, 40-mm ball, shorter sets and lately players have to cease using glues containing harmful volatile compounds (VCs). With the development of table tennis equipment, rules change and players' techniques, the need to get up-to-date information has grown in all fields of table tennis training and game.

Key words: table tennis, literature, literature search

1.0   INTRODUCTION

The World Wide Web has revolutionized the way people access information, and has opened up new possibilities in areas such as digital libraries, general and scientific information dissemination and retrieval, education, commerce, entertainment, government, health care and sport. Thus, the web is a useful research tool but it is no substitute for a library. Library services have been greatly improved by computer automation and use of the web, but the web cannot replace all of the services offered by a good library.

There are many ways of improvement of the Web; for example, in the areas of locating and organizing information. Libraries are increasingly moving away from collecting information to providing gateways to electronic information. Today, most information is found by utilizing search engines. A search engine is a software program that uses web robots to query millions of pages on the Internet and creates an index of those web pages. Users can then search that index quickly and easily to find the information they may be looking for. Current techniques for access to both general and scientific information on the Web provide much room for improvement; search engines do not provide comprehensive indices of the Web and have difficulty in accurately ranking the relevance of results. Some indexes and databases on the web provide free access to text or at least allow one to search their holdings.

Scientific findings, also in table tennis, spread very quickly. New findings supersede old ones which is why a scientist or a coach has to keep up with novelties in the international literature and search for the latest findings so as to maximise the planning and proficiency of his or her work. It is sometimes difficult to keep up with the novelties in the professional and scientific literature on table tennis due to the vast number of professional and scientific magazines published worldwide. Nowadays, the Web enables fast communication between people around the globe and facilitates the search for and exchange of information. However, the problem of the dispersion of new professional and scientific findings remains since many professional magazines are not published on the Web.

Are we wasting our valuable time endlessly searching the Web for an answer? There are several glaring problems with the notion of the web as a "gigantic digital library". First, the web is an uncatalogued mess and, despite what any search engine claims to do, none of them searches the entire web. Imagine a librarian telling you that there are 60 books on your subject, but he is only going to let you look at 12 of them [2].

The aim of this paper is to describe the possibility of using search engines and computer software when searching for table tennis databases. Using the Web and TT Knowledge Base programme, table tennis scientists, coaches, PE students and others can regularly follow published table tennis and table tennis research work from all over the world.

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2.0 METHODS

Instrument

The basic elements for data collections were Web search engines, SPORTDiscus and Table Tennis Knowledge Base (TTKB).

Procedure

For obtaining and completing analysis of table tennis investigation the total volume of table tennis references was collected.

3.0 RESULTS AND DISCUSSION

Unfortunately, most documents on search engines we found in the Web were either lists of hyperlinks without any comments, or discussions about how many documents are in the database of particular contents and what method of counting of the number of documents was used. No word about the efficiency, i.e. how many documents on some subject I can find using this search engine, especially in comparison to the other ones (Table 1).

Table 1 Search results with different search engines (access: 28.02.2009)

	GOOGLE	YAHOO	ALTAVISTA
equipment "table tennis balls"	35.500	203,000	203,000
how to get info about table tennis.	6.440.000	144,000,000	144,000,000
international table tennis rules	288.000	8,350,000	8,450,000
international table tennis rules and regulation	78.100	2,040,000	2,060,000
table tennis	17.300.000	143,000,000	143,000,000
table tennis balls	436.000	12,700,000	12,700,000
table tennis champion	2.970.000	24,900,000	24,900,000
table tennis equipment	347.000	22,200,000	22,200,000
table tennis game	4.910.000	1,170,000	1,170,000
table tennis history	266.000	27,900,000	28,000,000
table tennis learning	2.040.000	30,400,000	30,400,000
table tennis players	4.280.000	32,000,000	32,100,000
table tennis racket	386.000	4,360,000	4,500,000
table tennis rules	305.000	26,500,000	26,900,000
table tennis science	1.400.000	25,100,000	25,100,000
table tennis technique	782.000	12,600,000	12,600,000
table tennis tips	269.000	19,900,000	19,900,000
table tennis trainer	627.000	28,400,000	28,500,000
table tennis trainers	792.000	28,400,000	28,400,000
table tennis training	2.180.000	28,300,000	28,600,000

Search engines such as Google (www.google.com), Yahoo (www.yahoo.com), AltaVista (www.altavista.com), etc. should be utilised to locate table tennis information published on websites, e.g. research and conference papers, contents pages, references lists, etc. It should be noted that these search engines do not search inside some professional databases (e.g. Pub Med).

In addition we have search SPORTDiscus and TTKB for references about table tennis. A total of 1926 (till February 2009) references were registered in SPORTDiscus. But we have to take into account that both elements for data collection have limitations. Namely in some cases authors don't define appropriate key words in their manuscripts which can be an aspect that can generate difficulties and put limits to the search possibilities [4]. On the other side, it is possible that some references are incompletely listed or there can be a lack of information in their search fields [1].

Table 2 Search results with SPORTDiscus and TTKB

	SPORTdiscus	TTKB
table tennis	1926	923
table tennis balls	4	65
table tennis champion	4	12
table tennis equipment	11	4
table tennis game	3	24
table tennis history	0	0
table tennis learning	0	23
table tennis players	30	114
table tennis racquet	2	27
table tennis rules	5	10
table tennis science	1	8
table tennis spin	2	22
table tennis technique	7	41
table tennis trainers	1	2
table tennis training	13	94

Before you start your search, you should be aware of the completeness and the sort of information you can find in the Net. Lebedev [3] did an informal study called 'Best search engines for finding scientific information on the web' in 1996, which describes the functionality of selected search engines using the number of documents returned as the primary parameter for a good search engine. He states: "My estimates show that the maximum number of documents which can be found in the net is less than 10% of the number that can be (found) using a good scientific database like INSPEC or CAS. Thus, the bigger is the database of a search engine, the higher are chances that you won't miss something important". (Lebedey 1996, 33)

Databases remain the primary method of locating quality sports and table tennis information. Listed below are several databases available through the web that can assist you. The following two most wanted databases you can find in the Hochschulnetz (University web):

- **SPORT Discus** ("Weltdatenbank des Sports"/Worlddatabase of Sport), is issued by Sport Information Resource Centre (SIRC) in Canada. Besides numerous documents in English it also contains the databases Heracles, Atlantes and the catalogue of "Musée Olympique". This is the most comprehensive database covering table tennis information needed by scientists and coaches.
- **HERACLES** (French Database of Sport Science) of the Institut National du Sport et de l'Éducation Physique (INSEP), Atlantes (Spanish database) and the catalogue of "Musée Olympique". These three databases are a part of Sport Discus.

Here you can find some more information about the free access to some sports databases in the web:

- **Spolit** (Dokumentation sportwissenschaftlicher Literatur, Erfassungszeitraum ab 1970)/Dokumentation of the Sport Science Literature, collected since 1970), published by the German „Bundesinstitut für Sportwissenschaft".
- **Spofor** (Dokumentation sportwissenschaftlicher Forschungsprojekte, Forschungsarbeiten der letzten 12 Jahre/Dokumentation of Sport Science Research Projects, research projects of the last 12 years), published by the German „Bundesinstitut für Sportwissenschaft".
- **Spomedia** (Dokumentation von AV-Medien im Sport/ Dokumentation of the AV-media in sport), published by the German „Bundesinstitut für Sportwissenschaft".
- **SPOWIS** (database "Sportwissenschaft") from „Institut für Angewandte Trainingswissenschaft (IAT)" in Leipzig, mainly Dokuments for the German speaking countries and for Easteurope, completed in 1995.
- **Heracles** (French, sports science database), published by the SPORT-DOC.
- **Sponet** (web-sources for Sport and Sport Science – Emphasis on Training Science).
- **SportScan database** (Australian Recherche database of the National Sport Information Centre. Once known as Sports journal update database).
- **Altis** (database of the University of Birmingham with information and links to health, spare time, sport and tourism).
- **Coaching science abstracts** (abstract-database by Brent S. Rushall, San Diego State University regarding the topic training).
- **Digital Library d. World Anti-Doping Agency WADA/AMA** – contains up-to-date anti-doping-publications of the WADA/AMA-member states.
- Etc.

Useful features of the database include links to full text articles, journal browsing, marking references and saving search strategies for future use (cubby future).

Faculty of Sport at the University of Ljubljana has developed one of the largest table tennis literature database collections in the world known as Table Tennis Knowledge Base (TTKB) [5]. This collection has been developed to service the information needs of table tennis scientists and professionals around the world. The TTKB is designed to deliver the latest sports science information to sports practitioners including coaches, participants, physical educators and practitioners in table tennis area with sports focus. The basic idea of the information system in TTKB is to enable any user interested in these topics to access the database and enter the latest information regarding table tennis. The data entry is controlled by the software, meaning that the same article cannot be entered in the database more than once. The data entry system ensures the uniqueness of each individual reference.

For unregistered users the data entry consists of two phases; in the first phase the unregistered user can enter an article and add it to the waiting list to be reviewed and confirmed by the database administrators. In the second phase, the article is incorporated in the database. This method helps to prevent any malicious entering of nonsense data in the database (i.e. spam). When an individual contributes a certain number of articles in the database she or he becomes a registered user. Registered users are trustworthy individuals who are granted the right to make direct entries in the database without adding their entry to the waiting list. In exchange for their contributions, they are granted access to all the data in the central database.

It is in table tennis experts' interest to enter information which is still lacking in the database. Thus the database of professional and scientific articles, authors, test descriptions etc. grows daily, while any individual can acquire the status of a registered user by contributing a number of entries. As mentioned earlier, registered users can enter new articles directly into the database while at the same time retrieving articles and other information from the database without limitations. This system involves mutual dependency between its administrators and users.

We believe the 'Table Tennis Knowledge Base' information system will be very useful for table tennis coaches and researchers as it will enable fast access to data on articles from various countries. The system is designed in such a way as to motivate every individual to contribute to the central database. Thus, the most relevant data on table tennis will be available in the one place which will save a lot of time and help in keeping track of novelties from various fields of expertise. Currently there are over 1000 data entries.

4.0 CONCLUSIONS

At the end, the idea that the web can be a replacement for a library ignores the most important characteristics of a library. A library is not just a collection of books, or some vast warehouse of words, books, and journals; it is part of our cultural, historical and scientific memory. With the advent of the web, libraries are now connecting and sharing their collections and resources with each other. Thus an individual academic or public library can be the access point for scientists and people

to explore their world and their history, and to enlist the aid of information professionals to help guide them through their contents.

We also believe that the situation with scientific documents in table tennis will improve soon because many editors of scientific journals start to publish contents of their editions, and sometimes the full papers in the Internet. Low frequency of updating of databases of search engines and imperfect algorithms for locating and adding new URLs into these databases is now becoming the problem. In our analysis of the contents of URLs we saw many links to interesting scientific documents that were not indexed by most search engines.

In recent years there has been a decline in the publishing of printed conference proceedings and a move to publishing these proceedings on the Web or on the CD-s and DVD-s.

5.0 REFERENCES

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