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SCIENCE COMMUNICATION IN ELECTRONIC JOURNALS IN THE FIELD OF TRAFFIC AND TRANSPORT

ABSTRACT

Electronic journals have become an inevitable source of scientific information. Their advantage, in relation to the printed journals results from the characteristics of the media: they are available to all the interested users at the same time, before than the printed version, and they are not necessarily related to the location of the library. Since one of the basic roles of librarians in the process of disseminating scientific and professional information is to provide the users with the information which they need and when they need it, the librarians tend to inform the users primarily about the available electronic sources. The objective of this work is to systematize the journals in the field of transportation sciences through an overview of journals that are available to the Croatian academic community in the databases of full text articles at the National and University Library, and the libraries of scientific institutions and faculties, which are gathered around the subsystems of the Scientific Information System. In the aggregated databases of EBSCO Publishing, 34 journals from the field of transportation sciences were selected, and in the publisher databases the following was selected: 8 titles by the publisher Kluwer Academic Publishing, 24 titles by the publisher Elsevier Science, 6 titles by Springer Verlag and 3 titles by the publisher John Wiley & Sons. For the selected full text journals the Impact factor (IF) was used from the Journal Citation Reports (JCR). The data on indexing and abstracting rates in the secondary databases for individual journals were taken from the ULRICH'S database.

KEYWORDS

journals in the field of transportation sciences, databases with full text articles, ISI selection, impact factor, secondary databases

1. INTRODUCTION

Science communication in its contemporary form is experiencing an innovative era of the way of thinking, acting and production of knowledge in the recent 40 – 50 years. It has become one of the key ele-

ments of accelerated and sustainable growth of population development, and the inter-social exchange of knowledge and skills have become the *spiritus movens* of every further development in human history.

Modern tendencies in the development of electronic technology are modifying the traditional two-way flow of scientific communication. The communication process has evolved from the slow individual communication channels towards very fast and interactive ones. This results in the network of scientific communications which stimulates the formation of digital communication network independent of time and space distance [1].

The significance of transportation sciences in the modern world is growing constantly and it may be claimed that this is one of the essential characteristics that influence all the aspects of human activities. At the end of 20th century and the beginning of the third millennium the trend of fast development and globalization is continuing. In today's economy traffic has found itself in the narrowest circle of production and social interest, thus including the scientific circle as well. The scientific knowledge and its timely availability in the field of transportation sciences are of high importance, and thus they acquire an important social status [2].

Advanced strategies and transformations of transportation sciences make the classical travelling method increasingly unnecessary and introduce us to the world in which information travel more and more instead of people. The development of transportation sciences has to be followed by the libraries and they have to provide faster and better availability of the latest research results.

The journals are considered the most important form of the primary scientific periodicals and they play a crucial role in the scientific activity especially in the natural and applied sciences. They are places of pre-

sentation of scientific information and active factor in transmitting and spreading new knowledge. The journals as primary scientific publications (primary publications are those that contain information about direct results of scientific and research work, i. e. new knowledge or new interpretation of the known ideas and facts), reflect the status of a certain scientific discipline, and the scientific articles in journals are the basic indicators of the scientific and professional activity and the measurement of the achieved results in a certain field of science [3].

Network electronic journals appeared in 1994 – 1995, and their advantages are:

- speed, i. e. articles are immediately ready for reading and to be downloaded from Web pages,
- searching does not depend on the opening hours or premises of the library,
- interactivity, i. e. shorter time from the reading phase to the active exchange of ideas with the author of the text or other interested users,
- availability – text is available to anyone who is connected to the Internet and has access to the database which contains the journal.

The issue of purchasing scientific journals for a relatively small scientific community such as the Croatian one is more complex than in the big countries. The criteria for purchasing journals are not the need and the right of the scientists to the scientific information, but the purchasing criteria are rather dependent on the calculation level.

The purchase of printed journals often brings also the “privilege” of the institution receiving the printed version to acquire as well its electronic version. The majority of information experts agree that the electronic documents today are becoming increasingly one of the most important currencies on the information exchange market. These facts have given incentive to coordinated purchase and formation of consortiums (group of several libraries that work together on solving mutual problems) with the aim of using the available budget means to purchase journals in the printed version and the consortium versions of electronic journals, taking into consideration the economic moment in Croatia. In this way the libraries provide all the scientists with the access to scientific information under equal conditions [4].

There are various types of consortiums for electronic sources in the world. Thus, e. g. in the USA there are more than 100 big consortiums, including faculty libraries (especially in the last five years) [5].

Electronic full text journals are available via the Internet regardless of whether they are issued only in the digital form or whether they are electronic versions of printed journals. Due to a large number of titles and interdisciplinary characteristics of individual journal collections, and for simpler availability it is

necessary to systematize them according to the fields of science.

The advantages of electronic journals include: availability regardless of time and place, speed of publishing, relation between the citations in the article and the original full text works and communication among scientists.

In the last several years the use of electronic journals has become very widespread. The access to electronic journals with complete articles is enabled through aggregated databases (databases with journals of several publishers) and databases of publishers who provide online access only to their journals.

The publishers of electronic journals try to be recognizable regarding the journal collections and methods of presenting the articles provided to the scientific community and according to the functionality of the tools for searching the articles. The users, however, require from librarians all the journals on a certain topic regardless of the publishers. This problem is solved by using the so-called “linking tools” (SourceLink, Link Solver, Link Finder etc.) which provide links between the citation databases of e-journals with full text articles.

Electronic sources have thus become an inevitable source of scientific information, and therefore the librarians tend to systematize the electronic information sources in order to provide their users with simple and clear access to them.

The users of the National and University Library [6] and the libraries of scientific institutions and faculties, gathered in subsystems of the Scientific Information System [7], have free access to the journals with full text articles in the databases studied in this work. The term database most often understands a set of data on a machine-readable medium.

Easier managing in the abundance of scientific and professional information is provided by secondary publications. The scientific documents which contain information on the scientific literature are classified as secondary publications, and they are formed by the selection and processing of primary publications and they help in searching. They are organized in accordance with the users’ requirements, and they differ according to the method in which the primary sources are presented – bibliographical record or bibliographical record with abstract. The specific characteristic of citation databases is that apart from the bibliographical record they also bring a list of all the references cited by the authors [8].

At the very beginning, for easier reading, it is necessary to clear some basic notions about the sources from which the data for this work have been taken:

- ISI (Institute for Scientific Information, Philadelphia, USA) [9] produces citation indices of scien-

tific journals and publishes them in several forms (Science Citation Index, Biotechnology Citation Index), and the Journal Citation Reports (JCR) on CD-ROM was used in this work [10].

- JCR is ideal tools for the analysis and comparison of the scientific journals. There are two editions: Science Edition and Social Science Edition. JCR offers several ways of ranging, evaluation and comparison of journals such as: impact factor (IF), citation rate index, citation Half-Life. In this work only the Impact Factor (IF) of journals in the field of transportation sciences has been considered [11-12].
- The Impact Factor is a measure of frequency with which an "average article" of a certain journal is cited in a year. IF is calculated from scratch every year, and in this paper the one from 2003 has been taken. IF has proven to be an adequate basis for comparison of individual journals. ISI emphasizes that the impact factor of a journal is a significant indicator only when journals are compared that cover the same fields of research [13-14].
- Ulrich's Periodical Directory is a bibliographical database containing 175,000 publications from the whole world, and they give the basic data about the journals and databases in which these have been referenced [15].

2. METHOD

In order to determine which electronic journals with full text articles in the area of transportation sciences are available to the Croatian academic community, they had to be identified and selected in the databases: EBSCO Publishing (Academic Search Premier base), Kluwer Journals, ScienceDirect, Springer Link and Wiley InterScience.

In every mentioned database the journals dealing with the area interesting for the experts engaged in transportation sciences have been identified and selected, with checking the beginning of full text availability.

The selected journals per fields and publishers were controlled in the Ulrich's Periodical Directory.

Then the Impact Factor (IF) for 2003 was taken for the journals in the field of transportation sciences in the Journal Citation Reports (JCR) of the Institute for scientific information from Philadelphia (ISI).

The data about indexing and abstracting in the secondary databases for each journal were taken from the ULRICH'S database.

3. RESULTS

EBSCO Publishing

In the collections of EBSCO electronic journals [16] the journals in the field of transportation sciences are found in the Academic Search Premier (ASP) base (it encompasses over 4000 «full-text» primary journals from all areas of science). EBSCO Publishing is an aggregated database which contains journals of a larger number of publishers. The data about the selected journals in the field of transportation sciences of the publisher EBSCO Publishing are listed in Table 1. Along with every journal the availability period of full text articles is indicated. A special column indicates the publisher's "embargo", which shows the period to which a publisher has limited the usage of the full text articles. The access is mainly limited to the period of the last 12 months. EBSCO Publishing informs the users about all the changes that refer to new titles or the change in the conditions of usage.

In the ASP EBSCO Publishing database thirty-four journals with full text articles have been selected. For 14 titles there is an embargo on the access to articles published over the last 12 months. The availability period of the selected full text articles can be seen in column 3. All the journals have been abstracted and referenced in the secondary databases, out of which 18 journals are in CC (column 7), and there are six in SCI, the same as in IF (columns 6 and 8).

Table 1 - Journals in the field of transportation sciences in EBSCO host

Journal title	ISSN	Availability	Embargo	ABSTR.& REF.	IF 2003	CC	SCI
Annual Review of Environment & Resources	1543-5938	1996	12 months	25	0	+	+
Aviation History	1076-8858	1996	0	1	0	0	0
Aviation Week & Space Technology	0005-2175	1984	4 days	39	0.028	0	0
IEE Proceedings – Radar, Sonar & Navigation	1350-2395	2003	0	17		+	+
IEE Proceedings – Vision, Image & Signal Processing	1350-245X	2003	0	14		+	+
International Journal of Aviation Psychology, the	1050-8414	1991	12 months	12	0	+	0
JFQ: Joint Force Quarterly	1070-0692	1999	0	3	0	0	0
Journal of Air Transportation	1544-6980	2002	0	3	0	0	0
Journal of Energy Engineering	0733-9402	1995	12 months	26	0	+	+

Journal title	ISSN	Availability	Embargo	ABSTR.& REF.	IF 2003	CC	SCI
Journal of Intelligent Transportation Systems	1547-2450	2002	12 months		0		
Journal of Regional Science	0022-4146	1965	12 months	35	0	+	0
Journal of Transport History	0022-5266	2000	0	8	0	0	0
Journal of Transportation Engineering	0733-947X	1995	24 months	29	0.336	+	0
Journal of Urban Planning & Development	0733-9488	1993	12 months	29	0.16	+	0
Maritime Policy & Management	0308-8839	1999	12 months	20	0	0	0
Papers in Regional Science	1056-8190	1999	12 months	15	0	+	0
Popular Mechanics	0032-4558	1984	0	15	0	0	0
Popular Science	0161-7370	1984	0	20	0	0	0
Proceedings of the Institution of Mechanical Engineers – Part D – Journal of Automobile Engineering	0954-4070	1997	0	23		+	+
Proceedings of the Institution of Mechanical Engineers – Part F – Journal of Rail & Rapid Transit	0954-4097	1997	0	18		+	0
Proceedings of the Institution of Mechanical Engineers – Part G – Journal of Aerospace Engineering	0954-4100	1997	0	19		+	0
Proceedings of the Institution of Mechanical Engineers – Part M – Journal of Engineering for the Maritime Environment	1475-0902	2002	0	10		0	0
Professional Safety	0099-0027	1995	0	13	0	0	0
Public Roads	0033-3735	1990	0	25	0	0	0
Roads & Bridges	8750-9229	1996	0	10	0	0	0
Telecommunications & Radio Engineering	0040-2508	2002	0	11	0	0	0
Telephony	0040-2656	1993	0	7	0	+	0
Transactions in GIS	1361-1682	1999	12 months	2	0	0	0
Transport Reviews	0144-1647	1999	12 months	19	0	+	0
Transportation Journal	0041-1612	1961	0	12	0	+	0
Transportation Planning & Technology	0308-1060	2002	12 months	13	0.269	+	0
Transportation Science	0041-1655	1967	12 months	24	0.491	+	+
Vehicle System Dynamics	0042-3114	1997	12 months	21	0.295	+	0
Wireless Review	1099-9248	1998	0	3	0	0	0

Kluwer Journals

Kluwer Journals are available via OVID platform [17], and they feature over 700 journals from all fields of science. The published papers are presented in

PDF format, which is a disadvantage compared to the collections of other publishers where there is the possibility of selecting the format: HTML or PDF. Eight journals have been selected with the possibility of access to full texts since 1997 (see Table 2).

Table 2 - Journals in the field of transportation sciences u Kluwer Journals

Journal title	ISSN	Availability	embargo	abstr i ref	IF	CC	SCI
Analog Integrated Circuits and Signal Processing	0925-1030	1997	0	14	0.254	+	+
Mobile Networks and Applications	1383-469X	1997	0	8	0.844	+	0
Multidimensional Systems & Signal Processing	0923-6082	1997	0	10	0.441	+	+
Telecommunication Systems: modeling, analysis, design and management	1018-4864	1997	0	5	0.413	+	0
Transportation	0049-4488	1997	0	30	0.05	+	+
Wireless Networks	1022-0038	1997	0	11	0.17	+	+
Wireless Personal Communications	0929-6212	1997	0	4	0.28	+	0
International Journal of Wireless Information Networks	1068-9605	1997	0	5	0	0	0

ScienceDirect

ScienceDirect is a database of electronic journals of all impressums of the publisher Elsevier Science and contains about 1800 titles of primary journals in electronic format from all areas of science, but those from the area of natural and applied sciences prevail [18]. The Croatian academic community has access to full articles from 1500 titles with the beginning of usage since 1997 (licensing conditions).

ScienceDirect provides the registered user with the possibility of interesting and useful personaliza-

tion of access and service. By selecting the area of interest in the articles or a journal the articles are then constantly delivered, i. e. contents of the selected set of journals. The monitoring of journal citation rate of selected authors or their own articles, makes this collection especially interesting. Twenty-two journal titles available through ScienceDirect were selected, and they are presented in Table 3.

Springer Link

The electronic journal database of the publisher Springer Verlag (Springer Link) contains over 480

Table 3 - Journals in the field of transportation sciences in ScienceDirect

Journal title	ISSN	avail-ability	em-bargo	abstr. & ref.	IF 2003	CC	SCI
Aerospace Science and Technology	1270-9638	1997	0	19	0.495	+	+
AEU - International Journal of Electronics and Communications	1434-8411	2001	0	7	0.552	+	0
Air & Space Europe	1290-0958	1999	0	2	0	0	0
Air Medical Journal	1067-991X	1997	0	3	0	0	0
Aircraft Design	1369-8869	1998	0	2	0	0	0
Computer Networks and ISDN Systems	1389-1286	1997	0	24	0.918	+	0
Fuel	0016-2361	1997	0	32	0.167	+	+
Fuel Cells Bulletin	1464-2859	1998	0	0	0	0	0
Fuel Processing Technology	0378-3820	1997	0	14	0.823	+	+
International Journal of Transport Management	1471-4051	2002	0	2	0	0	0
Journal of Air Transport Management	0969-6997	1997	0	4	0	0	0
Journal of Transport Geography	0966-6923	1997	0	8	0	0	0
Marine Structures	0951-8339	1997	0	21	0	0	0
Optical Fiber Technology	1068-5200	1997	0	3	0	+	+
Optical Switching and Networking	1573-4277	2005	0	0	0	0	0
Recherche - Transports - Sécurité	0761-8980	1998	0	0	0	0	0
Signal Processing	0165-1684	1997	0	13	0.569	+	0
Signal Processing: Image Communication	0923-5965	1997	0	15	0.129	0	0
Telecommunications Policy	0308-5961	1997	0	16	0.849	+	+
Transport Policy	0967-070X	1997	0	5	0	0	0
Transportation Research Part C: Emerging Technologies	0968-090X	1997	0	23	0.896	+	0
Transportation Research Part D: Transport and Environment	1361-9209	1997	0	23	0.911	+	0
Transportation Research Part E: Logistics and Transportation Review	1366-5545	1997	0	19	0.556	+	0
Transportation Research Part F: Traffic Psychology and Behaviour	1369-8478	1997	0	22	0	0	0

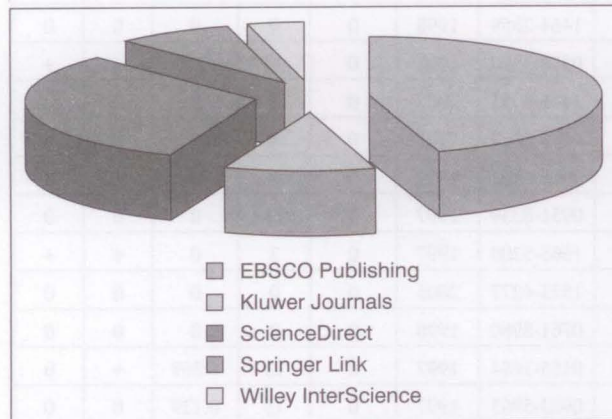
Table 4 - Journals in the field of transportation sciences Springer Link

Journal title	ISSN	avail-ability	em-bargo	abstr & ref	IF	CC	SCI
Circuits, Systems, and Signal Processing	0278-081X	2002	0	12	0.28	+	+
GPS Solutions	1080-5370	1995	0	0	0	0	0
Information Technology and Management	1385-951X	2000	0	11	0	0	0
Journal of Optical and Fiber Communications Reports	1619-8638	2004	0	0	0	0	0
Journal of VLSI Signal Processing	0922-5773	1997	0	13	0.593	+	0
Multimedia Tools and Applications	1380-7501	1997	0	6	0.438	+	0

journals from all scientific areas, and the majority is from natural and applied scientific groups. The access to the full texts of the published articles is not limited to certain years [19]. It allows fast access to the sources since the base is located on three servers (two in Berlin and one in New York). The Online First Service provides availability of articles even before the journal is printed. The "Alerts" service informs the registered users by e-mail about the articles in print. Six journals were selected from the area of transportation sciences (see Table 4).

Wiley InterScience

Wiley InterScience [20] offers articles in more than 300 leading scientific journals. The access to full texts of the articles is provided only by titles to which the libraries have subscribed in the printed form (licensing requirements), and three journals have been selected which publish topics in the area of interest for the experts in transportation sciences: International Journal of Communication Systems ISSN1074-5351, International Journal of Satellite Communications and Networking ISSN 1542-0973, Wireless Communications and Mobile Computing ISSN 1530-8669.



Graph 1 – Selected journals per databases

Impact Factor (IF) for the selected journals in the field of transportation sciences for 2003

Out of a total of 75 selected journals in the full text bases in JCR the IF was identified for 29 journals in 2003. IF for 2003 (column 6) ranges from the highest 0.915 for the journal Computer Networks and ISDN Systems which is included in the ScienceDirect base to the lowest 0.05 for the journal Transportation which is included in the Kluwer base.

4. SECONDARY SOURCES OF DATA OF ARTICLES DEALING WITH TRANSPORTATION SCIENCES

For the field of transportation sciences the following secondary databases are essential: Current Con-

tents, Science Citation Index, Inspec, Electronic and Communications Abstracts, CSA Mechanical & Transportation Engineering Abstracts, CSA Engineered Materials Abstracts, Engineering Index Monthly, CompuMath Citation Index and TRIS.

Current Contents (CC), ISI, USA – is published in seven sections. It is published weekly and features great selectivity (evaluated by peer professionals for each field), so that the publishing of an article in a CC covered journal is used as one of the criteria in the scientific and/or academic upgrading. It is available in the printed version (without abstracts) and in online version (with abstracts).

Science Citation Index (SCI) is published by ISI, USA, and, besides other factors, the selection is based primarily on citation rate of the journal, i. e. its IF.

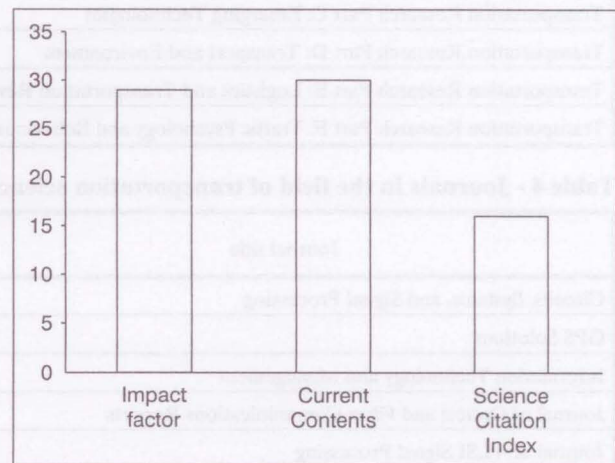
Inspec is published by the Institution of Electrical Engineers (IEE). It is a bibliographic information service, and covers the world science in technology, engineering, electronics, information technology and other related fields of science.

TRIS - Transportation Research Information Services is a bibliographic database founded by the sponsor – the Transportation Research Board (TRB) [21].

Only four out of the total of 69 selected journals in the bases with full texts are not refereed in the secondary databases which is an important indicator of the journal quality, influencing thus the development dynamics of a certain scientific discipline.

Tables 1-4 (column 5) show the number of secondary databases representing each single journal, and ranging from 1 to 35, which indicates the interdisciplinary orientation of the journals.

The number of journals according to the most important secondary sources CC and SCI is presented in Tables 1 – 4 in columns 7 and 8. Out of the selected 75 journals, 30 can be found in the Current Contents (CC), and 16 in the Science Citation Index secondary base (SCI).



Graph 2 – The IF, CC, SCI for the selected journals

5. CONCLUSION

This work is an attempt to make the users more familiar with the electronic journals in the field of transportation sciences and related fields. The librarians and the users of these services expect a continuity of service and maintaining of the quality of available sources.

The system of international indices and databases is becoming a requirement without which the continuity in the development of transportation sciences would become difficult and slowed down. Without these, a great part of new knowledge would be lost in the vast amount of works published daily.

The obtained data can be useful to scientists (for publishing of articles in these journals), and the library (building up of science periodicals holdings).

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SAŽETAK

ZNANSTVENA KOMUNIKACIJA U ELEKTRONIČKIM ČASOPISIMA IZ PODRUČJA PROMETA

Elektronički časopisi postali su nezaobilazni izvor znanstvenih informacija. Njihova prednost, u odnosu na tiskane časopise, proizlazi iz karakteristika medija: dostupni su svim zainteresiranim korisnicima istovremeno, prije nego tiskana inačica i nisu nužno vezani na lokaciju knjižnice. Kako je jedna od temeljnih uloga knjižničara u procesu diseminacije znanstvenih i stručnih informacija osigurati korisnicima informaciju koja im je potrebna i kada im je potrebna, knjižničari nastoje prije svega korisnike informirati o raspoloživim elektroničkim izvorima. Cilj ovoga rada je sistematizirati časopise iz područja prometnih znanosti kroz pregled časopisa koji su hrvatskoj akademskoj zajednici dostupni u bazama podataka članaka s cjelovitim tekstom u Nacionalnoj i sveučilišnoj knjižnici, te knjižnicama znanstvenih institucija i fakulteta, koje su okupljene u podsustavima Sustava znanstvenih informacija. U agregiranim bazama podataka EBSCO Publishinga odabrano je 34 časopisa iz područja prometnih znanosti, a u bazama podataka izdavača odabrano je: 8 naslova izdavača Kluwer Academic Publishing, 24 naslova izdavača Elsevier Science, 6 naslova Springer Verloga i 3 naslova izdavača John Wiley & Sons. Za izabrane časopise s cjelovitim tekstom preuzeo se Impact factor (IF) – faktor odjeka iz Journal Citation Reports (JCR). Iz ULRICH'S-ove baze podataka preuzeti su podaci o indeksiranosti i abstraktiranosti u sekundarnim bazama podataka za pojedini časopis.

KLJUČNE RIJEČI

časopisi iz područja prometnih znanosti, baze podataka s cjelovitim člancima, selekcija ISI, faktor odjeka, sekundarne baze podataka

LITERATURE

- [1] Ujević T.: *Elektronički modeli znanstvenog komuniciranja*. Zagreb, Filozofski fakultet, 2003. Master's thesis.
- [2] Županović I.: *Tehnologija cestovnog prijevoza*. Zagreb, Fakultet prometnih znanosti, 2002.
- [3] Bačić M, Škrinjarčić I.: *Bibliometrijska analiza dvadeset dosadašnjih volumena časopisa Acta Stomatologica Croatica*. Acta Stom Croat 1986; 20: 21-9.
- [4] Mihel I, Gržetić V.: *Nabava časopisa u 2002. godini: konzorcijski pristup*. Kemija u industriji 2002; 51: 285-9.
- [5] Hiremath U.: *Electronic consortia: resource sharing in the digital age*. Collection Building 2001; 20: 80-7.
- [6] Katalozi i baze (Internet page). Zagreb: Nacionalna i sveučilišna knjižnica; (downloaded on February 27, 2004). Available at address: <http://www.nsk.hr/usluge/katalozi.html>
- [7] Sustav znanstvenih informacija RH (Internet page). Zagreb: Ministarstvo znanosti, obrazovanja i športa; (downloaded on February 27, 2004). Available at address: <http://www.szi.hr/>
- [8] Lacković Z, Čečuk Lj, Buneta Z.: editors. *Mjera za znanost*. Zagreb: Medicinska naklada; 1991.
- [9] ISI, Institute for Scientific Information. Available at: URL: <http://www.isinet.com/isi>
- [10] JCR, Journal citation reports on CD-ROM: Philadelphia: Institute for Scientific Information, 2003.
- [11] Maričić S.: *The Mainstream-peripheral science communication*. Available at: URL: <http://www.cis.vt.edu/technoscience/97win/comm.htm>
- [12] Stegmann J. *Building a List of Journals with Constructed Impact Factors*. J Documentation 1999; 55: 310-24.
- [13] Garfield E. *The use of JCR and JPI in measuring short- and long-term journal impact*. Available at: URL: <http://www.garfield.library.upenn.edu/papers/cseimpactfactor05092000.html>
- [14] Garfield E. *How can impact factors be improved?*. Available at: URL: [http://www.garfield.library.upenn.edu/papers/bmj313\(7054\)p411y1996.html](http://www.garfield.library.upenn.edu/papers/bmj313(7054)p411y1996.html)
- [15] Ulrich's Periodicals Directory (database on the Internet). New Providence, NJ: Bowker; (downloaded on February 27, 2004). Available at address: <http://www.ulrichsweb.com/ulrichsweb/>
- [16] EBSCO Publishing (database on the Internet). Birmingham, Ala.: EBSCO Industries Inc.; (downloaded on February 27, 2004). Available at address: <http://search.epnet.com>.
- [17] Kluwer Journals (database on the Internet). Dordrecht: Kluwer; (downloaded in February 27, 2004). Available at address: <http://gateway1.ovid.com/ovidweb.cgi>

