

Editorial

SCOPUS: Another step towards seamless integration of the world's medical literature

As the technologies of the Web have advanced from the earliest formats to its present utility and pervasiveness, so we have sought to advise and inform our EJSO readers in articles and editorials on its uses in medical research, education and surgical oncology.

The world scientific and technical literature is expanding at an enormous rate. There are now believed to be some 200,000 citable regional and international journals in existence, and the numbers are expanding at a rate of some 4000 journals per year. Of these, some 10% are believed to be in the medical and related scientific disciplines. Much important additional scientific and technical information emerges in non-peer reviewed “trade” magazines and publications, and in applications to patent offices.

To add to the complexity of tracking, searching and analysing this uncontrollable organism of data, many journals and magazines are published in local and regional languages; many have unconventional ownership models and production strategies; and many cease publication, fail or change their titles from time to time. The truth of the scale of the world journal and scientific knowledge “pool” at any one time is far from clear.

As witnessed by the success of the major public search engines, and in particular Google, web based systems allow information to be presented and interrogated efficiently. In the publishing world, data on titles, authorship, institutional sources, full article content, referencing and usage on many diverse journals and other publications can now be linked, searched, distributed and analysed in new and useful ways. The progressive capture and digitisation of millions of the world's books by engines such as Google Books hugely extends this utility.

Many of the world's journals are indexed and searchable in title and abstract form at no cost to the user at the point of use by the major public listing bodies and search engines, as for example PubMed and Google Scholar. The major publishing houses now make the full content of their journals available through institutional and organisational subscription based services. Elsevier's Science Direct provides such a successful platform for the distribution of

EJSO content that we have profited from some 300,000 full article downloads in the past year 2008–2009.

The flood of information is so great that it has become essential to impose structure and quality thresholds on the data sources if researchers are not to be overwhelmed. There is a considerable development and management cost to systems which are capable of imposing such order. There is an intellectual imperative to develop commercially viable systems that link together the world's published scientific knowledge resources and help to make sense of this data deluge.

A number of major organisations and software houses are thus in the process of refining and testing systems which make this functionality available to general users. One such system is the ISI Web of Science Portal provided to institutions by Thomson Reuters. Another is the Elsevier SCOPUS system, which has been under progressive technical development since 2002. Scopus is the largest searchable abstract and citation database of research literature and selected web sources. It is continually updated and expanding. It currently offers the content from some 18,000 peer-reviewed journals from more than 5000 publishers, which includes coverage of 1200 Open Access journals. It also indexes 600 trade publications; 350 book series; 3.6 million conference papers; and 38 million archival records, half of which 19 million records cover 1996 to the present, and the other 19 million cover the period of 1823–1996.

SCOPUS also contains the results from 435 million scientific web pages; 23 million patent records from 5 patent offices; “Articles-in-Press” from over 3000 journals, and seamless links to full-text articles and other library resources. In partnership with CSA Illumina, it has also recently accrued some 4500 titles in Arts & Humanities and Social Sciences from arrange of databases. The net result of this process in time will be to make much of the human academic output of the past two centuries instantly accessible and visible, and in the process abolishing the concealing consequences of the passage of time.

This massive data repository is driven by user demand and the requirements of simplicity and ease of searchability,

including links to many full-text articles. In the context of our surgical oncology readership, it allows researchers and authors to find out who is citing you, and how many citations an article or an author has received; to analyse citations for a particular journal issue, volume or year; to see the main journals, disciplines and authors that publish in your area of interest; to discover obscure but relevant articles; to review the work and citations of other authors; and to follow reference links to track research trends and make connections within or across disciplines.

SCOPUS allows your editorial team to find and evaluate referees and authors for review papers and thematic issues; monitor journal trends and citation patterns; and review the output of competitor journals. The system also has considerable utility to hospital and university Librarians.

With its technical foundations firmly established, SCOPUS has now entered the realm of further metaphysical and philosophical development. Its Content Advisory Board of 12 senior subject editors from the breadth of scientific publishing disciplines has recently been challenged to consider how to define the quality thresholds and selection criteria for inclusion of journals and their content on the database; and how these inclusion criteria might help to raise the standards and worldwide accessibility of the content of journals currently “on the fringe”. English has now become *de facto* the world’s second language and its principal language of technical, professional and scientific communication. Would encouragement of the publication of abstracts in English help raise the accessibility and

appraisability of presently obscure regional material? What editorial and review characteristics define a reliable (“strong”) journal and an unreliable (“weak”) journal? How many of the 180,000 or so unlisted journals should be listed, and should effort and expense be committed to help raise them to list-able standard? How should the content of trade and technical publications be integrated into the literature search engines, and what quality and reliability factors distinguish the content of such products from that of peer review journals?

In little more than two decades, we have moved from the typewriter, the postage stamp and the regional print journal to seamless Internet enabled production and worldwide distribution of peer-reviewed journals such as the *EJSO*. We are now in the process of defining systems of accessibility and standards of quality which will facilitate seamless navigation through the entirety of the world’s quality-checked literature, and which will help make your Journal and your papers readily available everywhere. Access to SCOPUS is currently allowed through institutional, academic and library portals. We would encourage all those interested in writing for publication to familiarise themselves with the capabilities of this powerful and evolving scientific research tool.

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