péter's picks & pans

Péter Jascó
University of Hawaii

GeoScienceWorld, OpenDOAR, and Enciclopedia Estudiantil Hallazgos

The picks include the GeoScienceWorld (GSW) database/portal, which shows the future of integrating traditional tools (thesaurus, A&I database) with digital archives and offers a lot on an open access basis, and the OpenDOAR directory about open access repositories. The pan is World Book's Spanish language student encyclopedia (Encliclopedia Estudiantil Hallazgos), whose modest content cannot even be searched but used only as a print encyclopedia (in sharp contrast to the open access, mightily searchable information and media rich subset of the Spanish language Encarta Encyclopedia).

the picks

GEOSCIENCEWORLD

The portal GeoScienceWorld (GSW) [www.geoscienceworld.org] resulted from a consortium of the same name, which was formed by seven of the largest nonprofit geoscience organizations to create an abstracting/indexing and full-text database of the journal literature of earth sciences. The project was assisted by the best digital facilitator, HighWire Press, which created the core of a state of the art database/portal for geoscience-related literature. Although seemingly only the abstracts and the bibliographic data are open access, this outstanding resource has much more to offer, even for non-subscribers. The browsing, searching, and output features enrich the worthy content more than ever (and HireWire Press spoiled us rotten with offering partially open access to comprehensive archives of some of the most prestigious publishers and their journals, such as Oxford University Press, the American Medical Association, the American Association for Cancer Research, and the American Society of Microbiology).

At the end of January 2006, there were about 84,000 records in the database from the 31 journals currently hosted by HighWire Press for GSW. The retrospective coverage of the 31 journals varies significantly. For example, the full-text coverage of the *Journal of Sedimentary Research* goes back to 1931 with full text and abstracts. The *AAPG Bulletin* has abstracts from 1921 and articles since 2000; the *GSA Bulletin* has abstracts from 1918 and full text from 1988. *Geology*, the highest impact factor journal in the geosciences, has abstracts from 1973 and full-text articles since 1988. The articles before 2000 are typically in PDF format, thereafter in HTML.

The subscription version includes the entire GeoRef indexing/abstracting database—that makes GSW a mega-database of 2.8 million records, according to my estimate. GeoRef, which is by far the largest among the three geo-databases (twice as large as GeoBASE and thrice as large as GeoArchive), is available through many subscription-based services (OCLC, Ovid, EBSCO, CSA, Dialog, STN). HighWire Press splendidly integrated it with the 31 journals, and offers much open access content and many services. I focus here on the features of the nonsubscription version of GSW, many of which far surpass what subscription-based services offer.

The descriptors associated with the records in the results set are automatically displayed in a sidebar. When I mistakenly searched for `sand oil` instead of `oil sand` and retrieved very few records, the descriptor `oil sands` appeared in the sidebar, gingerly reminding me of proper word order and plural format possibilities. Although non-subscribers cannot search the GeoRef database component in GSW, they can search the full text of the journal archives, display the bibliographic data and the abstract from the journal, and show the GeoRef indexing/abstracting record of the GSW articles retrieved by the search.

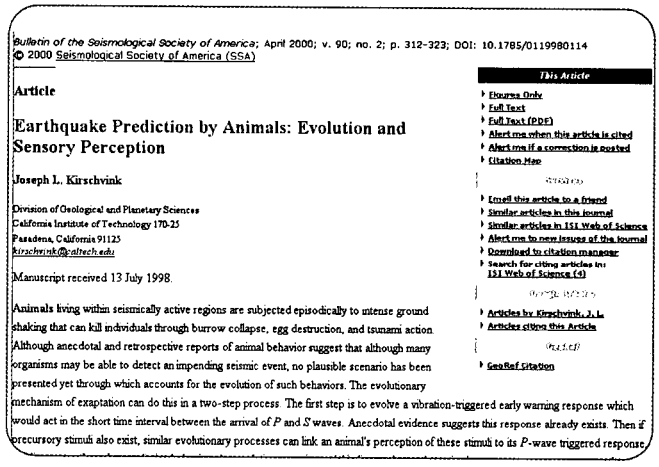
True, GeoRef has abstracts for only about 18 percent of the GeoRef records (10 percent according to the Dialog Bluesheet, but I trust my own test results). For the GSW journals, the ratio seems to be higher. In addition, when "only" a free bibliographic record with descriptors is shown from GeoRef, often there is an option, even for nonsubscribers, to display a free extract, the first 300 words from the full text. This is a generous, intelligent, sincere, and practical approach. The richness of the menu on the sidebar becomes obvious when you start clicking on the many actionable entries and ride the waves of cited and citing references. I will just mention the most useful items.

The 10th edition of the respected GeoRef Thesaurus can be browsed as a visually appealing, dynamic Topic Map. I hope that in the next release the posting values of the broader, narrower, and related terms also will be displayed (maybe as a mouseover option), and double-clicking on them would launch a descriptor search. It makes GSW even more attractive that non-subscribers can display the Citation Map, which in turn shows the cited articles from journals hosted by HighWire Press. Graphically the citation graph is as clunky as if I had made it by hand, but the content is superb and free. It highlights the most cited papers of the references in the article at hand, and these papers are hotlinked to their open access indexing/abstracting segments and often also to the full-text records within the entire HighWire archive. Considering that HighWire Press (and its publisher partners) offers more than 1 million open access articles from more than 70 of the most prestigious scholarly journals, in addition to the 900 other journals it hosts, this is a big deal. The list of articles that cite the article in hand is graphically and intellectually appealing, and if you wish, you may change it to a Spartan grid.

In this static print review I can't do justice to these features, but if you run a search `earthquake prediction by animals` in GSW, you will see that 10 of the cited references from *Science*, *PNAS*, and *Journal of Experimental Biology* are hotlinked, and all six articles of the latter two very high impact factor journals can be displayed, printed, and saved in their full-text glory. The entire 10 records can be used as a springboard for further research. Click on at least one of the cited articles to see its own citing papers from journals hosted by HighWire Press to get a feel for the splendid flow when following the lush path of cited/citing references.

For good measure, you can also see how many times the article was cited in Web of Science (you need a subscription to WoS to show the records), and you can find out how often it was cited according to Google Scholar. A link launches a search that identifies two citing references, half of what WoS identified. You must forgive me if I don't join the choir singing the gospel of Google Scholar's unconditional superiority in reporting the citedness of articles.

It makes me wonder again what the obviously competent and caring system designers and programmers of HighWire



Bulletin of the Seismological Society of America; April 2000; v. 90; no. 2; p. 312–323; DOI: 10.1785/0119980114
© 2000 Seismological Society of America (SSA)

Article

Earthquake Prediction by Animals: Evolution and Sensory Perception

Joseph L. Kirschvink

Division of Geological and Planetary Sciences
California Institute of Technology 170-25
Pasadena, California 91125
kirschvink@caltech.edu

Manuscript received 13 July 1998.

Animals living within seismically active regions are subjected episodically to intense ground shaking that can kill individuals through burrow collapse, egg destruction, and tsunami action. Although anecdotal and retrospective reports of animal behavior suggest that although many organisms may be able to detect an impending seismic event, no plausible scenario has been presented yet through which accounts for the evolution of such behaviors. The evolutionary mechanism of exaptation can do this in a two-step process. The first step is to evolve a vibration-triggered early warning response which would act in the short time interval between the arrival of *P* and *S* waves. Anecdotal evidence suggests this response already exists. Then if precursory stimuli also exist, similar evolutionary processes can link an animal's perception of these stimuli to its *P*-wave triggered response.

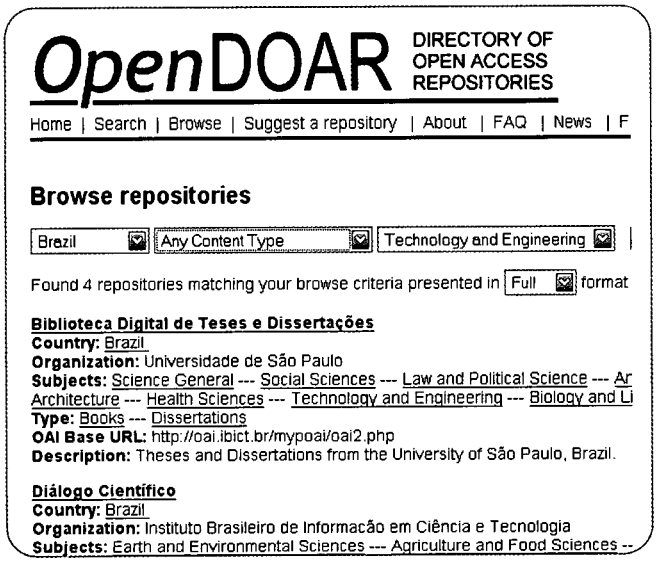
Gourmet choice on the GSW menu

Measurement of the threshold sensitivity of honeybees to weak, extremely low-frequency magnetic fields

J Kirschvink, S Padmanabha, C Boyce and J Oglesby

Experiments reported previously demonstrate that free-flying honeybees are able to detect static intensity fluctuations as weak as 26 nT against the background, earth-strength magnetic field. We report here an extension of this work to weak, alternating fields at frequencies of 10 and 60 Hz. Our results indicate that the sensitivity of the honeybee magnetoreception system decreases rapidly with increasing frequency. At 60 Hz, alternating field strengths above 100 µT are required to elicit discrimination. These results are consistent with biophysical predictions of a magnetite-based magnetoreceptor.

Citing articles in journals hosted by HighWire Press



Typical OpenDOAR entry

Press could do if they were given access (as Google was) to the archives of the majority of scholarly publishers (Springer, Taylor and Francis, Cambridge University Press, IEEE, ACM, and John Wiley) to create a mega database with partially open access content, or if HighWire Press were the software partner in the CrossRef project, which could foster an unprecedented cooperation among the fiercely competitive publishers.

OPENDOAR

A good name does not necessarily a good project make, but fine content deserves a mnemonic name. No matter with what accent you utter the word OpenDOAR [http://opendoar.org], it sounds like open door and is a perfect mnemonic acronym for Directory of Open Access Repositories. A collaboration between the University of Nottingham in the U.K. and the University of Lund in Sweden (both well-known names in the open access movement), OpenDOAR reflects the rapid growth of and interest in open access materials. Nottingham has been instrumental in the SHERPA project to set up open access archives at academic institutes in the U.K., and created the SHERPA/ROMEO database to keep track of the open access/author archiving related policies of publishers. Lund created DOAJ, the directory of scholarly open access journals, and is a leading institute in the open access movement in Scandinavia.

Currently, OpenDOAR has information about more than 300 repositories around the world from Australia to Sweden to Venezuela. The directory is searchable, but it shines when browsed by country, document type and subject, or a combination of these. The information about the repositories is presented in a systematic and consistent way, providing a succinct description, the geographic name and URL of the archive and its host, the subject descriptors for disciplinary specialization, and the document types. All these are hotlinked for jump-starting a search for, say, all the dissertation repositories.

The entries can be displayed in compact or full format. Either way, they are well structured for scanning the results list. It would be useful to add the estimated size and the prevailing language(s) of the repositories. While it may seem to be obvious that in Brazil the language is Portuguese (which is not necessarily true with scholarly papers or dissertations), it is certainly not obvious in the case of the Swiss repositories. The successful open access movement will need such directories to keep track of the hopefully fast-paced developments.

the pan

SPANISH STUDENT DISCOVERY ENCYCLOPEDIA

The encyclopedias and dictionaries of World Book, Inc. [www.worldbookonline.com] have long been the hallmark of educational resources in print, and to a lesser extent in digital format. This is, however, not true for the online version of *Enciclopedia Estudiantil Hallazgos*, a Spanish translation and adaptation of the *Student Discovery Encyclopedia*, which is available by subscription only. The articles are too short; there are too few hotlinks to related articles; and they are not in the text but at the end of the article—if they are there at all. As for access, the publisher claims that the encyclopedia is organized so that the student can find information quickly and easily. This is nonsense spin to make a virtue out of necessity (or rather, in this case, laziness).

The encyclopedia is not searchable, but merely browsable by the first letter of the article. In the case of, say, Frida Kahlo, this is of course the letter K. If you look up the short entry for Diego Rivera, under R, his wife, Frida Kahlo, is mentioned in passing, but there is no see also reference (let alone a link) to the entry about her. The reverse is also true. Images are few and far between. For the renaissance (renacimiento), the article is 330 words long and there is no illustration. It mentions that Raphael is one of the three major figures of the renaissance but there is no article about him.

The free subset of the informative, excellently structured Spanish language Encarta has a 2,000-plus word article about the renaissance in general, a 530 word entry dedicated to renaissance dance, and a 2,200 word long article for renaissance music with many hotlinks to topics and persons mentioned. There are nine images and a short audio sample from Monteverdi. That product fosters discovery; Hallazgos does not.

Péter Jacsó [jacso@hawaii.edu] is professor of library & information science at the University of Hawaii's Department of Information and Computer Sciences.

Comments? E-mail letters to the editor to marydee@xmission.com.