World Universities' ranking on the Web

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Introduction
Web is becoming key for scientific communication although only a limited amount of academic activities and research results are published on it. Inclusion of web indicators among the criteria used for evaluation of universities and R&D institutions could increase the scientific community commitment for publishing on the Web.

There are strong reasons for improving the global usage of the Web, including scientific (wider audiences, improved presence of technology and humanities), economic (cheaper publication), political (developing countries access) or industrial (faster transfer of innovations) ones.

The aim of this new scientometric tool is to show empirically advantages of use of webometric indicators for institutional evaluation. A global scenario involving a survey of the universities and R&D centres worldwide is introduced for building a ranking according to basic descriptive web indicators.

Methodology
Data has been collected from the main search engines (Google, Yahoo Search, MSN search and Teoma) for each one of about 9,400 universities and 3,500 research centers worldwide with an independent institutional internet domain.

Three measurements has been considered: Size, as number of web pages of each domain, Visibility, obtained from the number of external inlinks to that domains and the number of Rich Files, those documents in formats like pdf, ps, doc or ppt.

To decrease the biases associated with each engine the figures obtained has been normalized excluding the extreme values and then converted into ranks. Using Web Impact Factor as a model, where the ratio visibility/size is 1:1, the combined indicator increases the weight of visibility and reinforces the value of the rich files in the size evaluation, making a new global ratio of 4:3.

Position
$R_{Global} = 4*R_{Visibility} + 2*R_{Size} + 1*R_{Rich Files}$

Results
• Top institutions according to web data are also the best positioned in other rankings based on traditional bibliometric indicators
• Institutions from English-speaking countries represents a large share of the group of most important ones, but percentage is far lesser than journals in the Journal Citation Report. In fact there is a good presence of universities of other countries
• Previous results showing under expected presence of Japanese universities were probably due to search engines bias
• However results still show late positions of French universities

Final comments
The ranking is not intended as a final product even as new indicators (including non-web ones) are scheduled for a near future. Although web indicators could be used for evaluation purposes in the medium-term, the main objective of the website is to promote the use of the Web for both informal and formal communication, increasing significantly the volume of academic/scientific information available worldwide.

A cautionary use of the data presented in the website is recommended as several problems still are unresolved such as problems with institutional assignations of certain domains, duplicate sites, bias in search engines data and extra research needed on the indicators calculations.

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