Against the Grain

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Back Talk-A Digital Library Measurement Tool

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Back Talk — How much blood is there on your digital edge? A Digital Library Measurement Tool.

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Everyone seems to be concerned with determining how well they are doing in the race toward digital relevance. I am. So when I recently reviewed reports for ten members of the Digital Library Federation (http://www.clir.org/diglib/pubs/news01/reports.htm), it occurred to me that if I developed a list of the categories of activities in which these leading institutions were involved, I could create a test or measure of how well an institution might be doing.

Before I reveal my test *(located in this issue on page 94)*, let me confess it is anything but scientific. Nor is it inclusive of every kind of digital/electronic activity possible. These are the activities that were mentioned in the Federation's Website reports, or activities which occurred to me upon reading these reports. If I left out any important categories, just integrate them into my scheme and compute your own score. Since not all digital activities are equally important or easy/difficult to accomplish, you'll note that I

decided to introduce a weighting factor. These factors have not been agreed upon by a committee of experts, just a couple of friends and I, and we couldn't agree completely with other, so I don't imagine you will agree with me either.

In general, if I thought a library could buy a service and implement it without creating a completely new position, I gave it a one (1) difficulty rating. If I figured the technology level was more difficult but still no new position was required, it got a two (2). If a new position was needed, the technology level was even more complex and/or it required the cooperation of multiple parts of an organization or multiple organizations to cooperate in very new ways, it got a three (3). A four (4) difficulty rating was given to services/projects that would require several new positions, very significant new expenses,

and/or the technology was extremely complex or had to be developed locally.

So, here is how the test works.

Step One. Go through the list of digital activities on the list and give your library one to three points: One (1) point if you have thought about (prior to taking this survey) doing this but have not even started doing anything. Two (2) points if you have planned your work and are in the process of implementing your plan. Three (3) points if you have accomplished the activity or have it in production. Write each activity's points in the space provided in the "Your Library's Score" column.

Step Two. Multiply each of your point scores by the weighting factor and write that in the space provided in the "Your Library's Weighted Score" column.

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unique subculture put together by **Eric** and a host of unnamed volunteers. The lexicon itself is organized alphabetically from A-Z with logical previous and next term links. A few visits to this site, and even you can talk to IT! http://www.tuxedo.org/~esr/jargon/html/

Science — The comprehensive homepage for K-12 science educators, **Science Netlinks** (maintained by the **American Association for the Advancement of Science** (AAAS — the organization which publishes *Science* magazine)) features the **AAAS Project 2061**, a long-term initiative to reform science education nationwide. Browse the site's Benchmarks, 12 major categories including the Nature of Science; Mathematics; Technology; The Living Environment; the Human Organism; Historical Perspectives; and The Habits of the Mind. Each benchmark area features online resources, lessons, and an introductory essay. Kids can visit Kinetic City, an episodic science website designed especially for them. http://www.sciencenetlinks.com/index.html

Space Travel — **John Sisson's** unrealized dream to live in orbit gave birth to this wonderful archive of children's space travel books published between 1883 and 1974. The Biological Sciences Librarian at the Science Library, **University of California** at Irvine, **John's Dreams of Space** site includes hundreds of illustrations from the books, dozens of quotations from notables such as **Willy**

Ley and **Carl Sagan**, and an impressive bibliography focusing on post-1950 publications. Organized chronologically into five major themes (Imagination: 1883-1948, Preflight: 1949-1953, Countdown: 1954-1956, Liftoff: 1957-1960, and Flight and Touchdown: 1961-1974), each description links to illustrations from the book and a short biography of the author. **Sisson** traces the evolution of the book's themes and content, noting for example that by 1961 "imagination had run into reality," changing content from prediction to reality. A glorious trip down memory lane for wannabe astronaut baby boomers! http://sun3.lib.uci.edu/~jsisson/john.htm

Statistics — SEDAC, the **Socioeconomic Data and Applications Center**, is one of the **Distributed Active Archive Centers (DAACs)** in the **Earth Observing System Data and Information System (EOSDIS)** of **NASA**. SEDAC focuses on human interactions in the environment and serves as an "Information Gateway" between the Earth and social sciences. Located at the **Center for International Earth Science Information Network (CIESIN)** at **Columbia University/Lamont-Doherty Earth Observatory** in Palisades, New York, **SEDAC's** Web site offers a variety of interactive applications to maniuplate the wealth of population data. Check out the Climate Change Integrated Assessment Modeling, which considers the social and economic factors that drive emissions, or the Ultraviolet Interactive Service (UVIS) where you can custom-query on-screen visualization of hourly, daily, and

monthly UV dose variables from selected locations across the U.S. There is a link to the **AIDS Data Animation Project**, and the complete text of **Environmental Treaty** texts. http://sedac.ciesin.columbia.edu/

West Nile Virus — "What happens if you cut the sensory nerve in the mosquito's stomach? The little whiner can keep sucking blood until it bursts (oh, sweet justice!)." This is just one item in the Mosquito Fun Facts section on the **Mosquito Genomics World Wide Web Server**. Here you'll find databases on five of the some 2700 species of mosquitos, including Culex pipiens which carries the West Nile virus, as well as one on information across all species. The site hosts a massive fully searchable database of about 70,000 mosquito-related references, almost half of which were rescued from a punch card archive at the **University of Notre Dame**. Links include the **American Mosquito Control Association** and other general mosquito sites. http://klab.agsci.colostate.edu

The **National Atlas** at the **U.S. Geological Survey** are keeping us abreast of the progress of the **West Nile Virus** as it sneaks down the coast. Check your town on the West Nile Virus Maps page, where three types of maps: online interactive, dynamic multimedia, and high quality maps for printing and reproduction, are updated weekly. The maps are created from surveillance report summaries led by the **Centers for Disease Control (CDC)** and categorized by Human Cases, Wild Bird Cases, Mosquito Surveillance, Veterinary Cases, and Sentinel Flock

Surveillance. http://www. nationalatlas.gov/virusmap.html

Zoology — "Their back were grey, and gross were they, and hideous of head." So goes a line from the poem "The Ballad of the Ice-Worm Cocktail" by **Robert W. Service**, full-text available on the Annelid Resources page, which serves as a guide to scientific information on annelids, and to current worm research and researchers. This 4 year old site offers a discussion group, an annotated bibliography of recent papers on worm phylogeny, and a directory of worm experts. You can also look for worms in literature, search museum collections for Annelida, visit Worm Lab pages, and take Random Field Trips to other worm sites. Particularly fascinating are the recently discovered vent worms, who live in extremely high temperatures, and the leeches who are making a comeback in medicine. **Charles Darwin** spent much time observing earthworms and postulating on their mental abilities, recounted in his 1881 book *The Formation Of Vegetable Mould Through The Action Of Worms With Observations On Their Habits* available through a link to **Project Gutenberg Etexts** (http://www.promo.net/pg/list.html). To finish off your visit, download a 5 megabyte Quicktime video clip from the movie *Tremors*! http://biodiversity.uno.edu/~worms/annelid.html

the findings from an interim evaluation is now available in html at http://www.jisc.ac.uk/pub00/nesli_evaluation_report.html and in Word at http://www.jisc.ac.uk/pub/index.html#projects. The study was commissioned by the **Joint Information Systems Committee (JISC)** and undertaken by staff from the **Human Sciences & Advanced Technology Research Institute of Loughborough University** during March to June 2000.
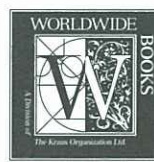
Among the outcomes of the study were that the over-riding view was that **NESLI** has achieved much in a rapidly-changing and complex environment. It was stated repeatedly that the **Managing Agent** has done very well in difficult circumstances. Progress in agreeing to deals, getting them accepted by libraries and achieving end user take up has been slow because of the complexity of the process. Nevertheless there are signs of gathering momentum and support from all the necessary stakeholders. The offers that have been made have been of value to some libraries but the different situations of the libraries means that a single offer cannot meet all needs, and evaluating complex deals in a limited timescale has led to many libraries being unable to take up offers. The recommendations from the evaluation are that the experience of **NESLI** be built on with a view to exploring alternative ways of providing a single negotiating agency and achieving some flexibility for libraries to obtain deals that meet their specific requirements, and to use the services they choose for subscription handling and service delivery.

Step Three. Add up all of your library's weighted scores and divide by 435 (The total points possible. If you add or subtract activities be sure to adjust this total).

Now that you have your score, what should you do with it? First of all, you can compare it with the following non-scientifically arrived at scale and feel good or bad about your library:

— 80 to 100 points means your library is a super digital library

— 60 to 79 points means it is well on its way to becoming a super digital library

— 59 points and below means your library needs a lot more money to get a higher score (or you can declare it dumb to want more points).

Unfortunately, the thought that the digital future is cheap was a dream.

Second, you could go through the list and line out all the things that don't match your library's needs and/goals and then re-compute how well you are doing. Be sure to adjust the total points possible in step three above. In either case, I have found it useful to think about all the things that could be done and to do a self inventory for my library.

I would be happy to hear how well your library did on this digital library measurement scale or what you thought of the scale. Drop me an e-mail: <ferguson@columbia.edu>.

Digital Project/Program Type	Difficulty Weighting	Your Library's Score	Your Library's Weighted Score	Total Weighted Score Possible
Acquisitions lists, personalized new book/material lists (1DLF)	1			3
Consortia, participation in consortia like ICOLC for cooperative licenses, training, etc. (2 DLF)	1			3
Cost models, work on costing out what are the costs for doing digital projects (1 DLF)	1			3
Dissertations, online access (3 DLF)	1			3
E-journals, online access (3 DLF)	1			3
E-monographs, online access (3 DLF)	1			3
E-reference tools, provide access to (2 DLF)	1			3
Finding aids, local development to improve access (3 DLF)	1			3
Inventory of all digital projects being done at a single institution (2 DLF)	1			3
OPAC, online linked access between an institution's web catalog and its digital resources (1 DLF)	1			3
Printing, campus wide linked printing, e.g., patron can send a printing job to a shared printer (1 DLF)	1			3
Authentication & security management systems/research (2 DLF)	2			6
Cataloging, standards, developing or working to adhere to, e.g., FGDC; metadata development projects (1 DLF)	2			6
CD-ROMs, online access to CD-ROMs located on a campus network (1 DLF)	2			6
ILL/offsite desktop requests and content delivery (4 DLF)	2			6
Linked access between a reference tool and full-text resource; between separate e-archives (5 DLF)	2			6
Proxying management systems/research (1 DLF)	2			6
Publishing standards, promotion of, or adherence to, e.g., Dienst-based Open Archive Initiative (1 DLF)	2			6
Reference services, online or email at a single institution (4 DLF)	2			6
Training, online instruction for regular patrons on how to use digital resources (1 DLF)	2			6
Use data, systematic collection and reporting of digital use statistics (1 DLF)	2			6
Archive, manage a digital archive of unique/rarely held multimedia materials (3 DLF)	3			9
Archive, manage a digital archive of unique/rarely held printed/ink on paper materials (9 DLF)	3			9
Archive, manage a digital archive of unique/rarely held sound recordings (4 DLF)	3			9
Archive, manage a digital archive of unique/rarely held still or moving images (7 DLF)	3			9
Classrooms, electronic/digital designed specifically to encourage the use of digital materials in instruction (2 DLF)	3			9
Copyright center/program to facilitate obtaining permission from publisher to digitize (1 DLF)	3			9
Data services, numerical, e.g., a numerical data center; creation of databases (5 DLF)	3			9
Data services, textual, e.g., an electronic text center; creation of databases (2 DLF)	3			9
E-Periodicals/monographs, project to digitize titles held locally (4 DLF)	3			9
Imaging standards, promotion of, or adherence to, e.g., DLF/RLG Guides to Quality in Visual Resource Imaging (1 DLF)	3			9
Integrated library system, currently selecting or taking steps leading to such (5 DLF)	3			9
Interface, personal interfaces, My-library like interfaces (2 DLF)	3			9
Multimedia, advisory program or center for patrons to digitize/create digital presentations (6 DLF)	3			9
Multimedia, campus-wide online networked access to commercially & locally produced materials (1 DLF)	3			9
Organization, Digital (Commercial) Acquisitions Coordinator	3			9
Organization, Digital Materials Reeducation Coordinator (coordinates program to educate patrons of what they have at their finger tips)	3			9
Organization, Digital Reformatting Coordinator	3			9
Organization, Free access (Web) Acquisitions Coordinator	3			9
Organization, have an organization/unit devoted to campus-wide digital planning (4 DLF)	3			9
Organization, Metadata specialist	3			9
Organization. Digital Repository Coordinator (watch over archiving of all local materials)	3			9
Publishing, partnering with for profit and not-for profit publishers (5 DLF)	3			9
Publishing, single institution e-publishing local resources including digital exhibition catalogs (4 DLF)	3			9
Reserves, delivering course reserves content to the desktop (5 DLF)	3			9
Training, post-doc training programs for information technology professionals (1 DLF)	3			9
URL management system for external links/ system for insuring internal persistent, location independent identifiers (3 DLF)	3			9
Cataloging, union catalog of digital resources held by own and other libraries (3 DLF)	4			12
Collections, cooperative access to digital collections created by two or more institutions (4 DLF)	4			12
E-journals, consolidated /interface access to all the e-journals owned by an institution (1 DLF)	4			12
E-journals, customized table-of-contents services for individual researchers (1 DLF)	4			12
Interface, single interface to the contents of multiple commercial & local resources (4 DLF)	4			12
Organization, have undergone a major restructuring to support digital library needs (2 DLF)	4			12
Reference services, online between multiple institutions, e.g., LC's International Cooperative Digital Reference Service Project (1 DLF)	4			12
Software/middleware, locally develop digital library software, e.g., search engines, linking resources (5 DLF)	4			12
Wireless access to campus/library/Internet resources (2 DLF)	4			12
Total Points possible:				435

To compute your library's weighted score: Multiply the points you gave your library in the Your Library's Score column by the weighting factor. Write that number in the Your Library's Weighted Score column. Add up all of the points in this last column

Your library's point score key:
1 You have thought about doing this prior to this survey.
2 You have figured out how to do this and are actually in the process of implementing your plan.
3 You have already implemented your plan. You have completed this task/you are in production.