

## NRL Digital Library Initiative in Web Journal Access

The proposed five-year project will test the concept of a scientific-technical digital journal library in a low-risk environment by building a five-year digital journal collection that can be retained and reused by NRL on a permanent basis and by providing 24-hour per day desktop access to such information through a state-of-the-art prototype WWW-based digital library system. The NRL Web Journal System will be capable of handling the many formats currently in use or under consideration by the publishing industry (TIFF, PDF, SGML, HTML, and common word processing formats) and of supporting a full-range of planned publisher enhancements including use of color, video, and multimedia. The NRL Web Journal System will provide a common interface for retrieving information from various sources (e.g. publishers, government document providers, library consortia) to enable a single virtual library system. The project will incorporate user feedback into the process of enhancing and refining the Web Journal System through on-going user surveys and automated tracking and analysis of user activity.

While the scope of this proposal is limited to providing user-friendly Web access to scientific journals for the NRL/ONR research communities, it is anticipated that the Web Journal System will, at all stages of its development, be seamlessly integrated into the Library's InfoWeb Information Gateway. The journal project and the continued development of the InfoWeb will interact synergistically, benefiting both endeavors and enabling the Library to take advantage of resulting economies of scope. Such an integrated approach to systems development will benefit the end user by providing a single point of access to a full range of scientific and technical information -- journal articles, technical reports, agency publications, reference tools, catalogs, directories, tables of contents, indexes, and databases. It will benefit the Library by allowing it to concentrate its limited resources on the development and maintenance of a single underlying infrastructure that supports all digital information delivery. And it will benefit the Laboratory by parlaying the Web Journal System into a full-blown digital library prototype.

It should be noted that this proposal is not a solution to escalating journal costs, which have been rising at 14% on average annually. Nevertheless, digital journals are clearly the wave of the future and this proposal will position NRL early on to take advantage of a forecasted paradigm shift in which publishing costs for digital journals level-off, while the cost of paper journal continues to climb at historical rates (14% annually). At the end of this project, it is planned that a Web journal system will provide the Library a method for continued funding of its roughly 300 to 500 digital journal collection. In the final project year, the benefit of the Web Journal System to the researcher will be assessed and an algorithm for funding its continued development through will be provided. Under consideration is charging user fees in FY02 and forward in the form of a flat rate (one thousand researcher accounts at well under \$200 per account annually), or variable costs based on usage (display/print charges of \$0.50 per article), or a combination of the two. The exact cost and methodology for funding will be known after usage statistics are analyzed, survey's are conducted, and a value analysis has been performed in the final project year (FY01).

In terms of government staffing changes factored into this proposal, the Library will replace one GS-6 part-time Library Technician with one full-time GS-9 Librarian. The GS-9 Librarian will be responsible for on-going end-user training in networked Library information systems and the development and maintenance of user guides. In addition, one temporary full-time GS-12 Librarian position will be added to perform project management and carry out negotiations with publishers of digital information.

**NRL Digital Library Experiment in Web Journal Access**

<b>Expenses</b>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
<b>ADP Equipment*</b>	<b>78.1</b>	<b>87.4</b>	<b>89.1</b>	<b>55.8</b>	<b>37.2</b>	<b>55.3</b>
Disk Space	9.0	14.7	14.7	4.5	4.5	4.5
Cluster Server	25.0		25.0			8.3
Juke Box		15.5		15.5		5.2
Tape Autochanger	13.0	13.0	13.0		4.2	4.2
Development Workstations	9.0	9.0	6.0	5.6		4.1
NICEnet standard network cards and hub		15.0	9.0		4.5	4.5
End-user Training Systems	15.0	5.8	3.0	15.0		8.0
Maintenance & Tech Support	7.1	14.4	18.4	15.2	16.0	16.5
<b>Digital Journals</b>	<b>95.0</b>	<b>120.0</b>	<b>140.0</b>	<b>160.0</b>	<b>180.0</b>	<b>210.0</b>
Digital Journals	95.0	120.0	140.0	160.0	180.0	210.0
<b>Software Development</b>	<b>168.7</b>	<b>189.0</b>	<b>170.5</b>	<b>189.2</b>	<b>160.8</b>	<b>25.0</b>
Programmer	120.0	123.6	127.3	131.1	135.1	
SGML Viewer			9.0	9.0		
RetrievalWare License	20.5			11.1		
EFS License Upgrade	11.0	11.0	11.0	11.0		
Profiler		21.0	10.0	10.0		
Doc Conversion	8.2	3.4	3.2			
Pattern Matching SW		30.0				
Pattern Matching UPG			10.0	10.0		
Tracking	5.0			5.0		
STILAS Interface	4.0					
Add'l Maintenance & Tech Support				2.0	25.7	25.0
<b>Project Development Staff</b>	<b>159.5</b>	<b>112.2</b>	<b>114.9</b>	<b>117.8</b>	<b>150.6</b>	<b>0.0</b>
GS-12 Librarian (Full-time Temp) **	51.6	53.1	54.7	56.4	58.1	
GS-09 Librarian (Full-time) ***	37.9	39.0	40.2	41.4	42.6	
Document Format Study	50.0					
Contract for value analysis					40.0	
Travel	20.0	20.0	20.0	20.0	9.9	
<b>Project Staff Support</b>	<b>103.2</b>	<b>106.3</b>	<b>109.5</b>	<b>112.8</b>	<b>116.1</b>	<b>95.9</b>
GS-14 Librarian (1/4 Time)	21.5	22.2	22.8	23.5	24.2	
GS-13 Librarian (1/2 Time)	35.7	36.7	37.8	39.0	40.1	
GS-07 Mgmt Asst. (1/4 Time)	8.0	8.2	8.5	8.7	9.0	
Unix Administrator (1/2 Time)	38.0	39.1	40.3	41.5	42.8	
Unix Administrator (1/4 Time) - On-going support						22.0
GS-12 Librarian (1/2 time) - On-going support						29.9
GS-09 Librarian (Full-time) - On-going support						43.9
<b>Expenses Total</b>	<b>604.5</b>	<b>614.9</b>	<b>624.0</b>	<b>635.6</b>	<b>644.7</b>	<b>386.2</b>
<b>Funding</b>						
<b>Redirected Library Budget</b>	<b>304.5</b>	<b>309.9</b>	<b>314.0</b>	<b>320.6</b>	<b>324.7</b>	<b>261.2</b>
Staff Support ****	103.2	106.3	109.5	112.8	116.1	51.9
Division Book Procurement (GS-6 part-time, eliminated)	20.0	20.6	21.2	21.9	22.5	23.2
Microcomputer Center Redirection	140.0	140.0	140.0	140.0	140.0	140.0
No Additions to Software Collection	40.0	40.0	40.0	40.0	40.0	40.0
Savings in photocopier maintenance and paper	1.3	3.0	3.3	6.0	6.0	6.1
<b>Digital Journal Experiment</b>	<b>300.0</b>	<b>305.0</b>	<b>310.0</b>	<b>315.0</b>	<b>320.0</b>	<b>0.0</b>
Present Code 1001 Supplement	100.0	100.0	100.0	100.0	100.0	0.0
Additional Code 1001 Supplement	200.0	205.0	210.0	215.0	220.0	0.0
<b>Post Experiment</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>125.0</b>
Fee from Digital Users						125.0
<b>Funding Total</b>	<b>604.5</b>	<b>614.9</b>	<b>624.0</b>	<b>635.6</b>	<b>644.7</b>	<b>386.2</b>

\* FY02 ADP equipment costs are average costs incurred for FY02-FY06

\*\* Project management and digital journal licensing negotiations

\*\*\* End-user training; user guide development and maintenance. This position moves to project staff support in FY02 and beyond.

\*\*\*\* Same as the project support staff in the expenses, except for the GS-09 Librarian who replaces a GS-06 Library Technician