

that 10% of the laboratories surveyed have invested in imagesetters. The purchase price and upkeep cost of this equipment is significant; however, ownership shows that labs realize the control this equipment affords them in both quality and production efficiency. Sixty-seven percent (67%) of the labs indicated that they would be purchasing new hardware or software specifically for desktop cartography within the following fiscal year.

Cartographic Laboratories Which:	Percent
Use Laser Imagesetters	67.0%
Own Laser Imagesetter	10.0%
Plan Desktop hardware or software purchases in the next fiscal year	67.0%
Based upon availability, would be willing to produce all cartographic products using the Desktop	48.0%

Table III: User Sophistication

Forty eight percent of those surveyed stated that they would phase-out conventional cartographic production as the development of large format desktop techniques continued. Considering that at the time of this survey only 14% of the labs were experimenting with desktop large format techniques, the figure of 48% is significant. Apparently, many of the cartographic labs are very satisfied with the methods and output of publication-size desktop and want to expand their desktop productivity. Since 66% of the of the labs are presently producing some form of large format cartographic products, the 48% rate may be conservative.

Conclusion: By generalizing the survey results to the entire cartographic community, it is apparent that desktop cartographic technique has gained great accep-

tance and is perceived as a viable, desirable method for producing maps and graphics. Additionally, the cartographic community seems poised for the continued development of large format desktop techniques and continued expansion of the desktop for both large format and publication-size production (i.e. 67% were planning purchases).

Although the results of this survey may not be particularly surprising, they do provide an empirical framework from which to gauge the importance of the desktop in today's cartographic workplace. The desktop provides a cost-effective, quality-oriented cartographic alternative to proprietary systems.

map library bulletin board

ESRI AND ARL LAUNCH GIS LITERACY PROJECT

by James Minton
University of Tennessee

The Environmental Systems Research Institute (ESRI) of Redlands, California and the Association of Research Libraries (ARL) of Washington, DC have joined forces to introduce Geographic Information Systems technology to staff and faculty at major research university libraries across the United States and Canada. After several months of negotiation, ARL and ESRI staff agreed to mutually support a *GIS Literacy Project*. ESRI agreed in January (1992) to provide software, training, and technical support as well as access to the ESRI annual User Conference. ARL agreed to coordinate a multi-phased project to introduce, educate, and equip librarians with skills to provide access to spatially referenced data

and provide effective access to selected federal electronic information resources in depository collections.

In March 1992, ARL mailed a "Request for Participation" to all ARL member libraries. The announcement identified the objectives, resources, equipment requirements, and project schedule. Each of the ARL libraries interested in participating were asked to respond by 1 April 1992. Prue Adler (ARL), Joe Boisse (UC-Santa Barbara), and Paula Kaufman (University of Tennessee) served as the ARL subcommittee overseeing the project. In April 1992, thirty libraries were selected as Phase I participants from approximately fifty six proposals. Each of these libraries were to identify staff who would serve as the local ARL-GIS Project coordinators, support their travel to California for training, and select and acquire the necessary hardware to support the project. The following goals of the project were identified by ARL:

- Introduce GIS to a variety of libraries to address diverse user information needs with an initial focus on access to Census information.
- Develop a team of GIS professionals in the research library community to lend time and expertise to applications, user training, and education programs related to GIS.
- Stimulate and encourage the connections between federal, state, and local GIS users and information.
- Promote research, education, and the public right to know through improved access to government information.
- Initiate library projects to explore new applications of spatially referenced data and evaluate the introduction of these services in research libraries.

ESRI has been a world leader in the development and support of GIS technology for many years. They have developed GIS-based software that can be adapted to a variety of levels of sophistication and application, ranging from personal computers to mainframes. Their users have included university teaching faculty, researchers, and cartographers working in government agencies (including local, state, regional, and national). ESRI produces a wide variety of mapping and GIS products including ARC/INFO, PC ARC/INFO, and ArcView. ESRI also offers a variety of ArcData products. All Phase I, ARL-GIS Literacy Project participants received copies of ArcView software as part of the project. In addition to the software, ESRI has committed itself to providing training, technical support, and fee waiver to its annual Users Conference. Participating ARL libraries sent staff to a two-day training workshop which was conducted by ESRI on June 6-7, 1992 in Palm Springs, California. The training coincided with the ESRI Users Conference and allowed ARL-GIS Literacy Project members a chance to meet and discuss GIS applications with users and ESRI staff. The 2 day ArcView Seminar consisted of an introduction to GIS development history and fundamentals by Duane Marble of Ohio State University followed by an introduction to and hands on experience with the ArcView program. Following the Palm Springs experience, members returned home to begin the long task of identifying and ordering hardware, configuring work space, developing goals and objectives, and the learning of ArcView in earnest. In order to facilitate the project and to allow project members to share their experiences, ARL established a BITNET/INTERNET LISTSERV account. As the project has developed, the

number of messages has increased dramatically. Members have shared their experiences in selecting equipment, technical difficulties in using ArcView, and conducted discussions concerning public service implications and more. On November 9-10, 1992, thirty five libraries identified as ARL-GIS Literacy Project, Phase II Participants attended a two-day training workshop at ESRI headquarters in Redlands, California. This will bring the total ARL-GIS library participants to 66.

After library staff at these institutions have acquired the necessary hardware and have become fully trained in using ArcView, university faculty, researchers, and students will be

able to access a variety of spatially referenced data. The ARL-GIS Literacy Project should allow university librarians to forge new relationships with their faculty and students. As this new technology is applied in a library setting, map and documents staff must develop clearly defined mission statements, policies, and procedures that define the roles, services, and resources provided by the university library as contrasted to cartography labs, geography departments, and GIS labs. The ability to provide access to and manipulation of digital spatial data should signal a rebirth and continuance of map libraries and cartographic information centers.

ARL-GIS LIBRARY PARTICIPANTS

University of Arizona	University of Minnesota
Boston Public Library	University of Missouri
Brown University	University of Nebraska
UC-Berkeley	University of Nevada-Reno
UC-Riverside	University of New Mexico
UC-Santa Barbara	SUNY-Albany
University of Chicago	SUNY-Buffalo
University of Colorado	New York Public Library
Columbia University	New York State Library
University of Connecticut	New York University
Cornell University	North Carolina State Univ.
Dartmouth University	Oklahoma State University
Duke University	University of Oregon
Emory University	Penn State University
University of Florida	Purdue University
Georgetown University	Ohio State University
University of Georgia	Rice University
University of Guelph	University of South Carolina
Harvard College	Univ. of Southern California
University of Houston	Univ. of Southern Illinois
University of Illinois	Temple University
Indiana University	Tulane University
University of Iowa	University of Tennessee
Iowa State University	University of Utah
Johns Hopkins University	State Library of Vermont
University of Kansas	University of Virginia
University of Kentucky	University of Washington
Louisiana State University	Washington State University
University of Massachusetts	University of Wisconsin
Mass. Institute of Technology	Library of Congress Geog. &
University of Maine	Map Division
University of Michigan	Colorado State University
Michigan State University	Virginia Polytechnic Institute
	Montana State Library