

### map library bulletin board

#### MAPS AT DUKE UNIVERSITY

by Margaret Brill  
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The mission of the Map Collection in the Perkins Library is to support the programs and research at Duke, a private research university. The Map Collection is part of the Public Documents and Maps Department. As such, it is open most evenings and weekends—something which would not be possible if the maps were housed separately. The entire staff of the Public Documents and Maps team has been trained to provide map reference service, and when unable to answer a question, they refer it to the map specialists. Staff who work primarily with maps include a Librarian (currently a vacant position), a half-time Library Assistant, and two student assistants. Most of the maps, such as the United States Geological Survey series, are acquired through the Depository Library Program, however, there is also an annual budget of over \$3,000 to purchase maps and reference books. An Area Studies funds is also used to purchase maps.

The Collection houses 126,000 paper maps. Space is at a premium—a medium-sized collection has been fitted into a room more appropriate for a small-sized one. However, due to a careful arrangement of the map cases and no wasted space, the Collection is not cramped. The major constraint caused by lack of space is that there is no room for the piles of maps waiting to be put away and/or processed. As a result, all new maps are cataloged immediately (the depository maps are included

on the Marcive tapes which are loaded in the on-line catalog). A project to catalog the older maps is about halfway complete. The cataloging project also involves checking and updating the shelf-list (previously the only way to find maps which are not in major series) and the card catalog includes shelf-list and subject cards. All maps not in major series are assigned Library of Congress call numbers despite the fact that Duke is a Dewey library.

The Collection's strengths are in DMA maps from World War II, North Carolina, and the Canadian depository map collection. Rare and antique maps are housed in the Special Collections Library. Map purchase priorities are given to the research and instructional focus of the Duke faculty. Since there is no other map collection on campus, the Collection is heavily used by the Geology Department and School of the Environment. With no geography department, the map collection has been described as the "geographical presence at Duke" and the map librarian regularly teaches class sessions on the use of maps at the invitation of faculty.

The Collection's computer mapping dates back several years to the distribution of the TIGER Files on CD-ROM and it provides patrons with the ability to combine the Census maps with the data from the 1990 Census CD-ROMs to produce demographic maps. This project has been very successful and uses MapInfo software to produce the maps and a conversion program to convert the TIGER Files to MapInfo format. The terminal is accessible to the public, and training is available by appointment. The menu provides access to some ready-to-use local maps. Over the years, more products have been added to the system, notably ArcView, thanks to the ARL GIS Literacy Project (Association of Research Librar-

ies). Easy-to-use, popular mapping programs available to patrons from two terminals include StreetAtlas with MapExpert, Global Explorer, and Centennia. Users come from a wide range of Duke departments, as well as from the general public. The librarian also acts as a liaison with departments who maintain GISs. You are invited to visit the Maps Homepage (part of the Perkins Library web pages) at <http://www.lib.duke.edu/pdmt/maps.html>.

#### UNIVERSITY OF VIRGINIA GEOGRAPHIC INFORMATION CENTER: THE FIRST YEAR

by Denise Stephens  
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The Geographic Information Center at the University of Virginia seeks to encourage greater awareness and broader utilization of GIS and related spatial tools among the Library's clientele. The Center (GIC) was created in the spring of 1995 by merging of the Library's GIS Laboratory and its Maps Collection. GIC has begun an ambitious program of service integration, resource-building, and outreach to facilitate its objective: To make spatially-driven technology and information as accessible and as useful as possible, regardless of format. In its initial year, the Center has already begun to see the positive results of its 'holistic' approach to service. While the environmental sciences once dominated the GIS laboratory's user group profile, the new GIC has experienced growing interest and use generally from the social sciences, as well as from the



professional schools and the humanities.

The previous GIS Laboratory was a successful service point for those Library users knowledgeable in UNIX and full GIS packages (ArcInfo and Grass). Having eliminated its Geography department, the University had no single lab capable of supporting the exploding interest in GIS. The Library site provided both a rapidly automating facility and a central location. Its proximity to the Map Collection and Government Information division provided rich source material for students and others who were comfortable utilizing the resources available. Advanced researchers and faculty had also begun to approach the lab to assist in their projects. In addition, the lab's close relationship with the University's GIS community as a teaching site made available a rich pool of well-trained assistants eager to acquire marketable experience. In the new configuration, GIC has retained its close working relationship with faculty who teach GIS and it is still the site for laboratory-based GIS courses. The Center has also moved to serve a more diverse user group by enhancing its UNIX-based services with a robust PC service configuration and the building of a functional spatial data library.

Like its five sister Library electronic centers, GIC is committed to integrating non-traditional services into the mainstream of service activities. Thus, the Center has chosen to democratize access to GIS technology by placing less emphasis on it as a highly specialized system. The introduction of additional personal computers and a variety of more approachable PC-based viewing/mapping software has lessened the initial hesitation evident in most first-time Center users. The acquisition of ready-to-use spatial coverages (either purchased commercially, or

developed in-house by lab assistants) has reduced the staff time committed to coverage generation and has increased the time available to mediate the table-linking and related tasks involved in most user applications.

The introduction of Internet/World Wide Web services has greatly aided in the delivery of spatial information to remote Library users. The Virginia Atlas Project is the Center's primary initiative designed to integrate GIS technology and the growing wealth of public-domain spatial information into Library services (<http://viva.lib.virginia.edu:gic/vatlas.html>). Census Bureau TIGER data (basemap coverage of the U.S. in county units) is hardly useful to most Library clientele in its raw form. By tapping the skills of talented lab assistants, GIC has created WWW-based, custom county mapping using the same data, while requiring no technical expertise of users.

The Virginia County Interactive Mapper (<http://ptolemy.gis.virginia.edu:1080/tiger.html>) has enjoyed a successful year. A project initiated under the previous GIS lab, the Mapper is now one of several Virginia Atlas Project services. Another WWW-based service provided is the Virginia GNIS (Geographic Names Information System). A subset of the national GNIS database for Virginia locations have been marked up using SGML and made fully searchable via an easy-to-use interface. The resulting geographic reference data may then be illustrated with original reference graphics ([http://viva.lib.virginia.edu:gic/VA\\_locator/locator.html](http://viva.lib.virginia.edu:gic/VA_locator/locator.html)). In addition, a selection of more than 50 original map images depicting various 1990 Census social and economic variables for Virginia have been made available in the Virginia Digital Map Library (<http://viva.lib.virginia.edu:gic/>

[maps.html](http://maps.html)). Perhaps most beneficial has been the full integration of the Center's resources into the Library bibliographic catalog. Data, image, and software records are treated as all other library resources. Also, custom maps and other information produced by the Center for its World Wide Web service pages are cataloged and accessible in the same manner as traditional library resources. Thus, whether looking for a paper map of Virginia, the digital orthophoto of Washington, D.C., or an original map showing Virginia demographic variables, a researcher browsing the electronic catalog will be directed to the Geographic Information Center.

Building a library of ready-to-use spatial resources is another element in GIC's service strategy. Currently, the vast amount of public-domain spatial data available in the Center are still in raw format and is generally not useful to mainstream library users. Converting these materials into useful, generally accessible information is a high priority in the support of a growing user group. Developing original state-level coverages and the large-scale digitizing of historic, public domain mapping is under way. In the mean time, and to support emerging PC-based services, GIC is locating and acquiring commercial spatial data compatible with its desktop software packages to support the occasional map-maker. A library of manuals and how-to guides is growing quickly, as a larger number of users are curious to try their hands at the technology. Finally, GIC staff provide mediation where needed. It has been somewhat surprising that a significant number of persons with some degree of experience have come into the Center ready to do work.

Outreach had been a major factor in the Center's growth during its first year. To further its goal of



integrating GIS-related technology and spatial resources into the total library service environment, educating the Library community is crucial. GIC participates in the library's User Education Program, providing short courses on the potential applications of spatial operations in the Social Sciences and the Humanities. The visibility of the Center in the library's promotional activities has also helped to educate potential users. Descriptive articles in the library newsletter, as well as guest lectures in key academic departments about GIC's services and resources have had quickly-realized benefits. Many new users in the last year have heard about the Center in their class setting. Finally, the participation of GIC in regional consortia and in the University's GIS user group activities has helped maintain its status as a key player in shaping the future development of GIS technology and resource delivery at the University of Virginia.

The first year for the Center has been quite successful. Use of GIC resources and services has clearly diversified. Historians, archaeologists, political scientists, and other social sciences scholars now comprise the largest user group. Humanities scholars, particularly in English, have also grown in number and have produced several imaginative GIS applications.

The best indicator of the program's achievement in its initial year is the general increase in geo-information resource utilization. A clear demand for desktop resources has required the addition of more personal computers. Simultaneously, browsing and circulation of paper maps has significantly increased over previous years.

Future activities of the Geographic Information Center involve the expansion the Virginia Atlas Project components with

additional map layers and more regional coverages for use by remote browsers. GIC has also begun work on the Historic Map component of the existing Virginia Digital Map Library. A key objective in the coming year is the full integration of our existing WWW resources with more interactive search, retrieval, and display capabilities. Flexibility and creativity will certainly be key elements in the Center's future service activities. Rapidly changing, more intuitive, technology and the continued growth of both public-domain, and value-added commercial source material will likely make spatial resources, services, and technology generally expected by library users. Our challenge is to define our role with ambition, while maintaining consistent, quality service to the University community. □

### **Cartographic Perspectives Back Issues**

*The first issue of Cartographic Perspectives was published in March 1989. Back issues (for all issues) are available at a cost of \$20 per issue (\$10 for members). Please specify the issue numbers (1-23) when ordering. Make checks or purchase orders payable to NACIS. Send your back issue requests to:*

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## **reviews**

### **BOOK REVIEW**

#### ***How Maps Work: Representation, Visualization, and Design***

Alan M. MacEachren. New York: The Guilford Press, 1995. 526 pages, 221 maps and illustrations, bibliography, author index, subject index. \$42.00, hardbound. (ISBN 0-89862-589-0).

*Reviewed by Elisabeth S. Nelson  
Department of Geography  
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If you are searching for a detailed guide to contemporary cartographic research issues, *How Maps Work* is the book you need. This encyclopedic volume covers many of the major ideas currently being examined by academic cartographers. The goal of the book, as stated by MacEachren, is to provide a basis from which cartographers might begin to build an understanding of how maps work. As he clearly points out in the preface "Understanding how and why maps work (or do not work) as representations in their own right and as prompts to further representations, and what it means for a map to work, are critical issues as we embark on a visual information age" (p. v).

To accomplish this daunting task, MacEachren has constructed a view of spatial representations that consists of multiple levels and has organized his book around this structure. *How Maps Work* consists of three main sections: *How Meaning is Derived from Maps*, *How Maps are Imbued with Meaning*, and *How Maps are Used: Applications in Geographic Visualization*. The first two sections of the book consider cartographic research from two complementary perspectives: a private/perceptual-cognitive view