encouraged ICAD to support work on a new edition. Instead of producing a second edition of the printed book, however, the editors decided to create a digital atlas that would allow users to access the data directly from the maps. They envisioned the Atlas to be reasonably priced and to run on standard PCs found in homes and schools.

Commercial software was not available that could be adapted to meet their requirements so ICAD enlisted a Geography Department graduate student with programming skills to develop the software. The result was *The Interactive Atlas of Georgia* that was released in 1994. It updates many of the subjects illustrated in *The Atlas of Georgia* and most of its 256 maps can be queried to find county-level data by pointing at counties on the screen. County names and city locations can be viewed from any map screen. Atlas users can define regions by selecting multiple counties and can view data by region. Composite maps of counties meeting criteria specified by the user can also be viewed.

Due to the success of its projects, ICAD decided to make atlas production part of its mission. There is now a permanent staff for the development, production, marketing, and sales of *The Interactive Atlas of Georgia*. An updated version, that will expand the content and add new data and maps, is currently underway. Postcards have recently been mailed to registered users of the Atlas in order to solicit their ideas for inclusion in the new versions. Lesson plans have also been developed to help teachers use the Atlas for classroom instruction. ❑

SYRACUSE UNIVERSITY CARTOGRAPHIC LABORATORY

by Mike Kirchoff
Department of Geography
Maxwell School of Citizenship
and Public Affairs
Syracuse University

The Syracuse University Cartographic Laboratory is a focus for cartographic activities at Syracuse University. The primary responsibility of the Laboratory is to meet the Geography Department's need for maps and graphics in scholarly publications. The Lab also provides the University community with advice and assistance for the professional, educational, and technical aspects of cartography and mapping. Cartographic services are available, at cost, to the University community and to nonprofit organizations such as the Syracuse Chamber of Commerce and area tourist and visitor bureaus. Most of the Lab's income for new equipment and software comes from these outside contracts.

At present, the Lab has two full time professional cartographers. Student assistants were once employed for drafting but as with most cartography labs, computer methods have replaced manual methods. Our Leroy pens have dried up, the darkroom is closed, and the stat camera is up for sale.

The Lab has two accelerated Power Macintosh computers primarily running Macromedia FreeHand and Adobe Photoshop. Aldus PageMaker, DeltaGraph Pro, Geocart, Microsoft Word, Microsoft Powerpoint, and Microsoft Excel are used occasionally, however, the bulk of the cartographic work is done with FreeHand. Recently, the Lab began using prepared map bases on CD-ROM from Cartesia for

routine work such as creating simple outline maps for the classroom.

Most of the original maps, however, are made by scanning a base map on the HP ScanJet and then using the scan as a template in FreeHand. The HP ScanJet has replaced the stat camera for copying existing maps and Photoshop is used to correct imperfections in the original. Other laboratory equipment includes an HP LaserJet 4M and access to an HP Designjet 650C 36" wide color plotter. The HP LaserJet 600dpi resolution is suitable for some publications and proofing but most maps are sent to a service bureau for imagesetting.

Products produced by the Lab have not changed much since the introduction of computer technology. We still focus on thematic maps for publication but we now have greater design and editing flexibility. For instance, relief shading is easier to add and special type effects such as skewing and rotating are now possible. Perhaps the most significant benefit of the technology is in editing. Authors can review draft copies of the maps and easily make changes without sending the cartographer back to the darkroom for a tedious remake of positives and negatives.

The future of the Syracuse University Cartographic Laboratory seems secure and interesting. There is increasing demand for our services and we are looking forward to the possible production of the first *New York State Atlas* both in print and on CD ROM. We plan to continue a tradition of exploring new technology and utilizing it to support our clients needs. ❑