

## NEW MARKET STUDY ON AUTOMATED MAPPING

Applied Data Corporation, a Boston area market research firm, has just completed a new survey of the latest technology for automated mapping and mapmaking. The survey identifies several mapmaking applications and end user mapping markets which offer significant growth opportunities for cartographic firms and their suppliers. The results of this survey are examined in detail in a new and comprehensive market study.

One of the most prominent and influential trends is the growth of desktop mapping. As desktop computers have gained power, cartographic databases have expanded in detail and variety. The software that integrates cartographic and demographic databases continues to become more powerful and easy to use.

The study contains market analysis, statistics, end user profiles, product descriptions and forecasts designed to provide readers with all of the information necessary to identify technology trends and growth opportunities for automated mapping and mapmaking. One hundred twenty five pages in length, it is available for immediate delivery from Applied Data Corporation, P.O. Box 834, Andover, MA 01810. The price is U. S. \$1,050; supplemental copies are priced at \$150 each.

## fugitive cartographic literature

Interesting articles about cartographic information often appear in unexpected outlets. The goal of this section is to bring those publications to the attention of our readership. We invite synopses of papers appearing in journals other than those devoted to cartography, geography, and map librarianship.

**Ziegler, A. M. (1990) Mapping the mesozoic and cenozoic at the University of Chicago.** *Geotimes*, April 1990, pp. 23-24.

*reviewed by Edward J. Hall, Kent State University*

The Paleogeographic Atlas Project of the Department of Geophysics at the University of Chicago was founded in 1975. Its goal, among others, was to produce a large format, full color Mesozoic/Cenozoic paleogeographic atlas of the world. The project involves developing several computerized databases in order to produce the atlas and to assist in various projects tied to the atlas.

The first step in atlas preparation is to generate base maps. The continental shapes and interrelationships need to be researched and verified. The next step is to figure the rotational axis for each time period under consideration. The project must also establish the polar position for each map interval to within five degrees — a difficult level of accuracy to achieve. The project must also assemble statistically reliable paleomagnetic data for comparison with paleoclimatologically sensitive sediments and floral data without incurring circularity from using the data.

The team of researchers is charting the positions of shorelines and various bathymetric and topographic contours. Inferences on the pattern of shoreline motion can be made long after the direct record has been erased once it is known if a basin results from thrust loading or extension. Physiographic studies will be

made after the effects of glacial loading on the Canadian Shield, Greenland, and the Baltic Shield are determined, reversed and evaluated. Warping of the shield areas and the appearance of kilometer-high mountain ranges appeared to be common at that time.

An epeiric sea connection across Manitoba to Hudson's Bay and through the Hudson Strait to the Labrador Sea may explain the similarities of Cretaceous faunas from the Western Interior Basin (North America) to West Greenland.

Inferences may also be made about the Cretaceous marine rocks through combining a knowledge of sea level curves with biogeographic connections. The aim of the Paleogeographic Atlas Project is to complete the Mesozoic/Cenozoic North American maps by June 1990 and then the maps of Europe and northern Asia. The last major problem area in producing the base maps and the final atlas will be the completion of the plate-tectonic interpretations of the Alpine and central Tethyan zone.

The scope of this atlas is extremely ambitious. I look forward to seeing the published volume.

**Monmonier, Mark (1987) Making maps.** *Design [The Journal of the Society of Newspaper Design]* 26, pp. 14-17. A geographer's view of newspaper cartography. *Reviewed by Ellen White, Michigan State University*

"Daily newspapers are a significant source of geographic information for the American public." So saying, Mark Monmonier proceeds to discuss some of the common problems with news maps that hinder their communication of valuable geographic information — information much of the public will obtain from no other source. A

number of maps from newspapers are provided to illustrate his comments on what does, and does not, work.

Projection is the first major element Monmonier considers. He notes that distortion is an inevitable accompaniment to the process of transferring a three dimensional globe to a two dimensional page. However, for most subcontinental areas, the distortions involved are negligible and the ready availability of atlas base maps, clip art files, and commercial outlines makes it relatively simple to provide appropriate base maps. For larger areas (continents, the whole world) an appropriate projection choice is critical.

Projections can also be used to provide dramatic insights to areas of interest. The use of bird's eye perspectives, gnomonic projections to illustrate great circle routes, and views of regions from other than north-up are examples of creative applications.

Monmonier cites several design questions which enter into planning a news map. Among these are the amount of surrounding territory to be shown, the number and selection of relevant places, inclusion of inset or locator maps, as well as positioning of type. Poorly centered and illegible maps often result from trying to reuse archived drawings, particularly where the originals must be highly reduced. State or national chauvinism is another factor often contributing to poor design. The point is well made that weather and travel are seldom restricted to home states, especially for cities located near borders, yet single state maps of these topics are the norm rather than the exception.

The graphic hierarchy of geographic features is yet another design feature that can lead to confusing maps. "The overall collection of map elements should be designed to convey and

reinforce the hierarchy of geographic concepts inherent in the map, its caption, and the story it accompanies." Sometimes confusion results from overly rigid style guidelines or the limitations of photowire transmission.

Locator insets can provide a unifying element to the overall design of the newspaper if carefully executed. Aspects of insets to avoid include lack of a border, large areas of solid black, and heavy drop shadows. Monmonier feels that the drop shadow — adopted by newspaper artists in the 1980s with the same fervor that automobile designers embraced the tail fin in the late 1950s — can be effective if light in tone and not too thick. Similarly the popular use of three dimensional symbols can divert attention from more important elements.

Type is yet another aspect of design that can cause serious problems. Wherever possible, labels should be placed near their symbols rather than in lists or legends. Names should be aligned with their features. Type style and size should be varied in a consistent manner that reinforces the graphic hierarchy.

Dr. Monmonier has provided a handy design guide to a very particular set of map producers. These producers seldom have any formal cartographic training and must often work under very tight deadlines with limited facilities. As an increasing number of news maps are produced "pressure for improving standards must come from managers and committed professionals. Workshops, practicums, regional and juried competitions, and other outreach programs will be highly important means of upgrading and maintaining quality standards."

*Editor's note: Mark Monmonier is author of Maps with the News University of Chicago Press (1989).*

Tibbetts, Steve (1989) *Big Map Idea*. ECM Records 839-523 (CD); 52' 52" AAD.

*reviewed by David DiBiase, Penn State University.*

Tablas jwoop, congas patter; skilled fingers and palms caress stretched hides. Ephemeral rhythms: now urgent, now pensive, now fading among brown mists at dusk. Wisps of children's song glimmer through high silver clouds. Fine brass-wound nickel strands tuned low over hollow, cherished spruce and rosewood; fingered guitar sings a wanderer's muse, improvised intricate as gnarled branches of winter oaks. Delicately thumbled kalimba, malletted steel drum, bells, shakers, berimbau . . . whence comes this music? From uncharted lands.

*Big Map Idea* — guitarist Steve Tibbetts' fifth ECM release — transports this listener to remote, unfamiliar landscapes. Tibbetts and his long-time collaborator, percussionist Marc Anderson, often discover the kernel of a new composition in a fragment of 'found sound' recorded during their travels. The exotic triptych "Three Letters," for instance, is informed by snippets of festivities recorded at a Hindu shrine at Parpen, Nepal. Says Tibbetts, "These little pieces of sound make you realize you're far from home."

Tibbetts has remarked that "Musicians may be overly sensitive to their environment." In a recent interview I asked if he and Anderson work consciously to evoke images of particular places in their music. He suggested that it tends rather to be "the sense of place [that] evokes a song."

Forced to categorize, he calls his work 'folk music.' "I am an untrained musician and a 'folk' as well." But not all of Tibbetts' recordings rely principally on the delicate voices of acoustic instruments. A previous release, *Exploded View* (1987; ECM 831-109),