

PostScript paths in *FreeHand*, instead of a passel of disconnected line segments.

3. In the Base Map Options dialogue box, choose **Fills/Dots Only**. If you skip this step you will get two superimposed maps in *FreeHand*: one with lines and no fills, another with fills and no lines. You need only the fills now. It is easy to add the lines in *FreeHand* without increasing the size of your file (and slowing down the performance of your computer) unnecessarily.

4. Save your *MapMaker* map as a PICT-format file with a unique filename.

In *FreeHand 3.0*:

1. Open the PICT-format file you just created. *FreeHand* automatically converts the PICT file to a new, untitled document. Pattern fills created in *MapMaker* will be preserved in the converted document.

2. Drag a selection box to select all the polygons in the map. Set *FreeHand's* Colors Palette to **Lines**, then choose **Black** in the Colors Palette. This step strokes the closed, filled paths with black lines.

In *FreeHand 3.0* fill and line attributes are called "styles." Styles are named. Style names appear in a Styles Palette. To assign a style to a drawing element in *FreeHand* you just select the element, then click the style name in the palette. All elements assigned to one style can be modified simultaneously simply by editing the style.

Your goal is to create a named style for each data division of your map. For example, if the data range of one division is 0 to 100, you would create a style in *FreeHand* called "0 to 100." Once you match the style to the fill pattern representing that division in the

imported *MapMaker* map you can easily change the style for all the polygons in that division. Here we go.

3. Double-click on the default style named **Normal** in the Styles Palette to edit the style.

4. In the Styles dialogue box, rename the style to match one of the data divisions of your map.

5. Click the **Fill and Line** button to call up the Fill and Line dialogue box.

6. Choose **Patterned** in the **Fill**: pop-up menu. Choose the *FreeHand* fill pattern that matches the *MapMaker* fill pattern used for the current data division. Close the Fill and Line dialogue box.

At this point you have created one style for one data division. Now let's create the rest.

7. Click to select a polygon whose mapped value falls in another data division.

8. Create a new style by choosing **New** in the Styles Palette menu. The Styles dialogue box will appear.

9. Name the new style for the data division of the selected polygon. The line and fill attributes of the selected polygon will automatically be assigned to the new style.

Create new styles for the remaining data divisions on the map in the same way. After the fill patterns of each division have been assigned to a style, you can change the attributes of all the polygons associated with one style by editing the style from the fill and line dialogue box.

Note: A detailed tutorial on Aldus FreeHand 3.0 is available from the author.

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.

Wurman, Richard Saul (1989)
Hats. *Design Quarterly* No. 145, pp. 1-33.
Reviewed by Jeffrey C. Patton,
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This entire issue of *Design Quarterly* is a single free flowing guide to the organization and graphic presentation of information. Entitled "Hats," it was written by Richard Saul Wurman, an architect by training, who has devoted much of his career to making visual information more understandable, through such projects as innovative maps, city guidebooks, and Pacific Bell's *Smart Yellow Pages*. It should be of great interest to graphic designers, including cartographers, and to educators.

Wurman utilizes the hat rack as a model of how information can be organized, and to develop the types of relationships existing among information. For the organization of information he states that there are five "ultimate hat racks" upon which all information can be hooked: the alphabet, time, location, continuum or magnitude, and category. Using the analogy of a hat check clerk organizing hats in his care, Wurman shows that hats can be arranged alphabetically (bowler, fedora, sombrero. . .), chronologically (according to the time each hat was given into the clerk's care), by location (manufactured in France, Japan, Egypt. . .), by continuum or magnitude (hat size), or by category (military, with feathers, male, female. . .). The

decision of which hat rack to place or organize the hats is critical because it determines the informational patterns that will be built. The juxtaposition of these patterns can lead to new understandings of the information. Effective graphic design is related to the selection of the appropriate hat rack, the one "which most easily reveals the aspect of a subject that you want to communicate."

While information may be hung on the five ultimate hat racks, the understanding of that information can only occur when the new information can be related to something you already understand. For example, most people do not have an accurate concept of how large an acre is. However, once shown that an acre is about the size of an American football field (minus the end zones), it becomes understandable. Wurman points out that too often in our graphic design and in our educational system there has been a failure to relate new information to what is already understood. According to Wurman, simplification or minimalization of information, rather than organization and clarification have become the norm, leading to what he calls the "dumbing of America." For example, maps designed for young children have often been designed to be "simpler," which has only made them more abstract and more difficult for the child to comprehend. The inability of the child to relate the map information to spatial concepts that they already understand also makes the maps less interesting to the child. Wurman stresses that it is interest that is the key to understanding. "Memory, interest, and learning to define our existence. Learning is remembering what you are interested in." Wurman feels that interesting design comes from illumination of the pattern and organization of the information, not from graphic decorations or

the addition of color to "spice up" a map (what he calls "rainbow worship"). The goal of graphic design should be "to let the data become information — to become active and expressive."

The remainder of the article summarizes Wurman's ideas on how to present information, much of it reminiscent of work done in the late 60's and early 70's by cartographers on cartographic communication. However, his viewpoint and insight may be fresh to most cartographers, particularly his comments on the use and abuse of color, and on how technological change effects not only how the design is created but also what the design looks like and its interpretation.

This article is not a scientific report based on extensive research, rather it is a mix of philosophy and anecdotes from 30 years of experience in graphic design. As should be expected, some of Wurman's most compelling arguments are made not with his words but through carefully selected illustrations. The article makes for thought provoking reading and viewing.

cartographic artifacts

NEW MAP PROJECTIONS BOOKLET

The American Congress on Surveying and Mapping (ACSM) has recently published a thirty-page booklet entitled *Matching the Map Projection to the Need*. The third in a series, it was prepared under the auspices of the Committee on Map Projections of the American Cartographic Association, a member organization of ACSM. The booklet addresses ways in which map projections can help make clear various geographic relationships and objectives, whether for technical or

popular presentations.

The text is non-mathematical, and more than seventy illustrations show numerous projections for world and regional maps. Edited by Arthur H. Robinson and John P. Snyder, twelve two-page chapters by ten leading cartographers are included in an 8.5 x 11 format. Common and rare map projections are used for a variety of different purposes, such as displaying continental drift, viewing Earth from space, showing routes for globe circlers, and enlarging the heart of a map.

Copies may be obtained from ACSM at a cost of \$15 for members and students and \$20 for nonmembers. Contact ACSM Publications, 5410 Grosvenor Lane, Bethesda, MD 20814-2122; (301) 493-0200, fax (301) 493-8245.

NETWORK RESOURCES FOR MAP PEOPLE

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Ever had a problem that your local library couldn't deal with and you needed some immediate help? Or, as a librarian, ever had a user ask you a question that got you stumped? And what about keeping up with the latest map information in a timely manner and keeping in touch with other cartographers? Interested in a quick and reliable resource that could give you an answer in hours rather than days or weeks?

In the past few years several network discussion and information groups have sprung up that allow cartographers and geographers to send in questions and answers and generally discuss topics as diverse as GIS, mapping, graphics and geography. Snag: you must have electronic mail capabilities (generally a computer account at your university or library, or a PC and modem). Once you've acquired these, you