

are available in a range of scales from 1:25,000 to 1:100,000. Other scales between 1:10,000 and 1:250,000 are available on request. *SPOT Flash 1, February 1991*

### DIRECTORY OF COMPUTER AND HIGH TECHNOLOGY GRANTS

The *Directory of Computer and High Technology Grants* lists 640 funding sources for computers, software and high-tech related grants. The Directory provides profiles on foundations, corporations and federal programs.

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The cost of the First Edition is \$44.50 per copy (add \$4.00 for handling). The *Directory of Computer and High Technology Grants* can be ordered from the publisher, Research Grants Guides, Dept. 4B, P.O. Box 1214, Loxahatchee, FL 33470.

### cart lab bulletin board

This forum is offered to encourage communication among practitioners at a time of rapid technological transition. Questions, comments, and announcements are invited.

#### A New HyperCard Stack for Digital Cartography

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The Temple University Cartography Lab has developed a handy new HyperCard stack for Apple Macintosh computers for editing

text on digital maps and other graphics that involve textual elements. The stack, called *Textmaker*, allows users to create a separate document containing their text and then to import it into Adobe *Illustrator* 3.0. From there it can be converted into other formats, such as Aldus *FreeHand* 3.0.

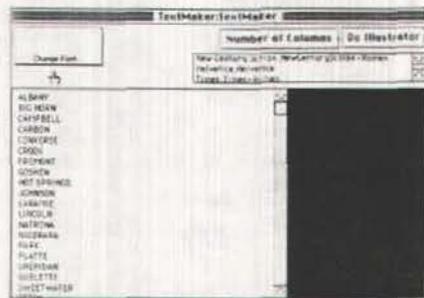


Figure 1

*Textmaker* (see Figure 1) was developed primarily for positioning place names, rather than blocks of text. The user types the list of names into a word processing document and imports it into *Textmaker*. A HyperCard button can then be used to save it in a form that *Illustrator* can open.

As digital cartography continues to replace manual production at cartography labs, cartographers are finding that in some applications it is often still useful to think of the digital mapmaking process in terms of traditional cartography. Name placement is one of those areas. In manual traditional cartography it is common to produce an alphabetically ordered proofing sheet of place names and other map labels that afford easy editing and revision. These labels are then individually removed and placed on the map. *Textmaker* was developed to emulate this process.

I played with *Textmaker* in our lab using a Mac II. Although the HyperCard stack itself is fairly easy to use, experience with, or at least knowledge of, the HyperCard environment would be a bonus.

Once in *Textmaker* there is little need or scope for text formatting, this being best done in *Illustrator* (do your editing in the word processing program). There is a button labeled "change font" but it did not seem to do anything. *Textmaker* will be most useful to cartographers if they think of it as a conversion program rather than an editor or formatting environment. However, a useful addition for the future would be some kind of alphabetizing scheme, so that the list of names could be ordered for export to *Illustrator*.

I began by typing lists of place names in several word processing packages, such as *WriteNow*, *WordPerfect* and *Word*. In order to test whether *Textmaker* could retain formatting done at this stage, I varied the fonts and typesize of the names. However, since *Textmaker* can only accept ASCII format (such as the "text only" option in *WriteNow*, or the "text only with line breaks" option in *Word*, these formats were nullified, with the text coming into (and going out of) *Textmaker* only as Helvetica 10 point. Since the flow of operations goes from a word processing program through *Textmaker* into *Illustrator*, it is best to do your editing before you import the text into *Textmaker*. And if, as expected, you are using *Textmaker* for place names, a spell-checker will not be of much utility — old fashioned copy editing will be needed.

To import the text into *Textmaker* I used *Sigma Edit*, a utility that can be accessed under the Apple menu. (If you have System 6.xx, you can install a DA using the Font/DA Mover; if you use System 7, just place the *Sigma Edit* application in the Apple Menu items folder in the system folder.) To bring the text in, open *Textmaker* and then open *Sigma Edit*, which will allow you to open your word processed file. Choose your text with the cursor or with

"select all" and copy it to the clipboard with Command-C (⌘ C). You can now exit *Sigma Edit*, and, using paste, dump the text into *Textmaker* using Command-V (⌘ V).

When in *Textmaker* click on the Do Illustrator button and save your file (perhaps with a unique extension such as "xxx.Ill" to mark it as an *Illustrator* file). You can now open it from within *Illustrator* as you would an ordinary *Illustrator* document. (If you prefer to work in *FreeHand*, save the *Illustrator* document as an Adobe 1.1 file, quit *Illustrator* and open your 1.1 file from *FreeHand*.) The Temple Cart Lab recommends keeping the names off to one side of your map and grabbing them as needed for placement on the map.

In summary, *Textmaker* is an easy to use and straightforward way of converting text done in a word processing package into something that *Illustrator* or *Freehand* can handle. While it cannot handle formatting or editing at this time, these operations can be performed in your word processor or in *Illustrator/FreeHand* without too much trouble.

Cartographers who wish to obtain *Textmaker* can download it from the publicly available Macintosh archives maintained at Stanford. You will need to "anonymous" FTP to [sumex-aim.stanford.edu](ftp://sumex-aim.stanford.edu) and change directories to the info-mac/card directory and download it using "get." The file will be in binhex format and must be converted before use.

## cartographic artifacts

### BOOK REVIEW

Tufte, E. R. (1990) *Envisioning Information*. Graphics Press, Cheshire, CT 126 pp. (Hardcover \$48)

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With the publication of his 1983 book, *The Visual Display of Quantitative Information*, Edward Tufte established himself as a sharp critic of poorly designed quantitative information graphics and a champion of graphical excellence. By assembling and displaying an impressive range of representational artifacts — maps, tables, graphs, diagrams, and illustrations — Tufte gave his readers/viewers numerous opportunities to visually experience how graphics can show data clearly, as well as how they can obscure and distort. This book broke new ground; it was neither another how-to book on charts and graphs, or a mere collection of graphic examples. Rather, it was an attempt to help readers acquire principles to grapple with the task of portraying complexity effectively.

In *Envisioning Information*, Tufte takes an approach similar to his earlier book; graphics spill off nearly every page and delight the eye with invitations to view, interpret, and consider a broad range of ways to present graphic information. This is a gorgeous book to view and to hold. The printing and typography are extraordinary. Works by some of the great masters of graphic design have been sampled and served up in page after page of graphical excellence. And, Tufte has even daringly ventured into territories seldom considered by information designers, such as architectural design and music and dance

notation. Simply put, this is a "must-have" book for anyone interested in developing better skills at communicating information graphically.

The book is divided into six chapters. In the first chapter, "Escaping Flatland", Tufte argues that the essential task of envisioning information is to recognize that all of the interesting physical, biological, imaginary, and human worlds we wish to represent are multivariate in nature, and that the real challenge is to escape two-dimensionality in favor of greater dimensionality and data density. Drawing upon examples as diverse as a 3-D model of our solar system, an Indonesian railroad plan, and a plot of pollutants emitted over southern California, Tufte argues against cosmetic decoration and chartjunk, and for taking the audience seriously while demonstrating the value of multivariate representations.

In the second chapter, "Micro/Macro Readings", Tufte showcases numerous examples of graphic design in which viewers are invited to read/interpret graphics on multiple levels — with the aid of vast detail that helps to organize complexity in multi-layered displays. The emphasis here is on demonstrating the value of high information displays, and showing how they can help viewers see visual contrasts and comparisons, and make choices. Tufte argues that such displays "allow viewers to select, to narrate, to recast and personalize data for their own uses. Thus control of information is given over to viewers, not to editors, designers, or decorators" (p. 50)

In the third chapter, "Layering and Separation", Tufte demonstrates how by visually stratifying aspects of data one can reduce noise and enrich the context of displays. Rather than expressing graphic elements at the same visual level, for example, with the