TECHSIGHTING
SOFTWARE

Micromanaging References

Modern bibliographic software products facilitate the placement of footnotes and references into scientific manuscripts and allow continuous updating of the citations without requiring the user to reformat the document. Most bibliographic software packages accept references entered manually, copied from CD-ROM databases, or downloaded from standard Web sites such as BIOSIS. Only a few are integrated with Internet browsers that search and download citations from online databases.

One such product is the excellent Reference Manager 9.5, a substantial update of Reference Manager 9 (*1*). The power behind the Reference Manager 9 was its cite-while-you-write capability that enabled users to import references into a document without leaving their word processing program. The software made it very simple to enter new citations in the text by automatically associating the internal citation with the reference listed at the end of the manuscript. Reference Manager 9.5 now adds new features that include "pay-per-view" access to Search ISI, one of the largest and most popular scientific referencing services. Other features of Reference Manager 9.5 include a spell checker with a customizable dictionary.

Reference Manager 9.5 works within word processing programs as an item under the Tools menu. This adds functions to the word processor for importing, searching, and editing citations. Although other bibliographic software packages share these features, Reference Manager 9.5 distinguishes itself by the convenience with which it lets the user search online while simultaneously working on a manuscript, permitting real-time reference entry and updating.

New databases are created in the Database Window, which contains numerous options for managing references. Citations for the database can be retrieved by searching CD-ROM and online bibliographic sources, including Medline and PubMed. Reference Manager 9.5 also provides direct access to ISI databases in two ways. First, the program allows users to directly search the ISI eSource database and download 10 full-record views for $29.95. In addition, current subscribers to the ISI Web of Science database can retrieve information using Reference Manager 9.5 at no additional charge.

The features of Reference Manager 9.5 surpass those of other popular bibliographic software products. Its flexibility in copying reference information between databases and its ability to search 10 databases at one time are noteworthy. The software is simple to use and is an invaluable companion to word processing programs. It is highly recommended for anyone needing a powerful tool for developing local bibliographic databases.

Reference Manager Version 9.5 operates on Windows 95, 98, and NT4 systems with at least 16 MB of RAM and a CD-ROM. The program works with all Windows-compatible word processing software; however, its cite-while-you-write feature was designed for Microsoft Word 95, 97, and 2000 as well as Corel WordPerfect for Windows 7, 8, and 9.

—**BRIAN R. SHMAEFSKY**

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Reference
1. B. Shmaefsky, *Science* **288**, 1981 (2000).

> **Reference Manager 9.5**
> **ISI ResearchSoft**
>
> Berkeley, CA
> $199.95 (academic);
> $99.95 (student)
> 510-559-8592
> www.isiresearchsoft.com

TECHSIGHTING
SOFTWARE

Plotting the Fit

Tecplot 8.0 is a technical graphing software program for creating high-quality, two- and three-dimensional (2D and 3D) graphical representations of complex data. Like many technical programs, Tecplot requires time and effort to master. But the effort is worthwhile because the quality of the graphical output obtained is exceptional. Tecplot is available in a Windows 95, 98, or NT version and a Unix X-Motif version. Instructions and pictures depicting dialog boxes for the Windows and Unix versions are intermixed in the Tecplot manual. This may be somewhat confusing, although the overall formats of the Windows and Motif versions are very similar.

> **Tecplot 8.0**
> **Amtec Engineering, Inc.**
>
> Bellevue, WA
> $1295 (Windows)
> 800-763-7005
> www.amtec.com

Tecplot can render 3D surface and volume plots, vector and streamline representations of fluid flow and heat transfer data, mesh plots of linear or curvilinear grid data, finite element representations of real world structures, and contour plots. Tools that allow one to explore the 3D data representations by panning, zooming, and rotating 3D objects are particularly useful for examining complicated graphics. Light source color and shading options can be adjusted to enhance the 3D quality of the graphic. Data can also be examined by slicing along x, y, and z axes or another specified plane.

Tecplot can draw an unlimited number of lines in an x-y plot and has over 100 different symbol types. The program features interactive data adjustment, multiple axes, logarithmic scales, custom labels, and error bars. Line thickness, color and pattern, axis range, and label and tick mark attributes can be easily specified. In scatter plots, the symbol size and color can be a function of a field variable.
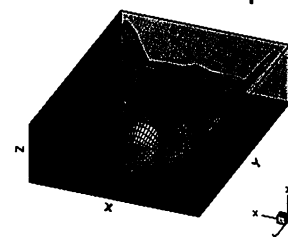

Finite element surface plot

Tecplot permits several types of data manipulation, including data smoothing to reduce noise, shifting of cell-centered data, transforming polar coordinates to rectangular, and shifting from 2D to 3D views. There are several interpolation routines available, including kriging, inverse-distance, and linear interpolation. Curve-fitting routines built into Tecplot include polynomial, exponential, power, and spline fits. Variables can easily be weighted before curve fitting. One shortcoming of this program is that user-defined curve fits are not supported.

Macros and plot templates in Tecplot allow for automation of repetitive tasks. Tecplot can be run in batch mode to generate multiple plots.

One of the most attractive features of Tecplot is the publication-quality graphics it produces. The sidebar tools make it very easy to add, delete, move, or resize text and geometries. Properties of the graphics such as data representations, axes, and legends can be altered quickly from multitabbed dialog boxes. Complex layouts can display multiple graphs either side-by-side or laid over each other. Axis and plot features can be linked so that when a parameter, such as scaling, is

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