TECHSIGHTING
SOFTWARE

Work in Progress

Formatting references according to the specifications of numerous different scientific journals is a problem that can readily be solved by reference management software. These products have become almost indispensable tools for researchers working on manuscripts. A good reference management product maintains a database of references from which users can access information readily. It also provides a convenient way to format references for manuscripts with a word processor.

Papyrus, a reference management program from Research Software Design, has the basic functions users expect, but with a few rough edges. The program is notable for its interesting features. First, it comes in a freely distributable limited version and in a full, commercial version. Second, the software license allows individual users to copy the full version of the program to their various computers to create up to four distinct databases. Purchasing a site license for $200 allows up to 20 databases to be used by the program, making Papyrus a practical and economic choice for a department or a group of researchers.

Papyrus 8.0.7
Research Software Design
Portland, OR.
$89 to $139
503-796-1368
www.rsd.com

References are entered into Papyrus from the keyboard or with import filters. Some of the many popular reference database formats imported by the program include Medline, EndNote, ProCite, and SilverPlatter. Papyrus's importing function was very slow, however. A file of 110 references from PubMed (a Medline access format) took over 10 minutes to process. The same file was handled by a competing product, EndNote, in less than 5 seconds. The Papyrus technical support team acknowledged that Papyrus was slower than EndNote but said that it was also cataloging more information than EndNote. Additional cataloging might offer speed gains on accessing very large databases, but it is an annoyance when performing the very common operation of importing references from Internet sources. Papyrus also had more difficulty than EndNote with reading standard formats. The company provided two unofficial updates of version 8.0.7 during this review before references from the common PubMed database could be imported. EndNote, on the other hand, worked with the same references with ease. However, Papyrus did successfully import Medline files from BioMedNet (www.biomednet.com).

Several features of Papyrus are cumbersome. For example, input and output formats are supplied as collections in folders. To use them, users must open a Format window, then open the collections within the program, and subsequently drag the desired formats into the window. Next, one must select which format to use in another window. The company states that all of these steps are necessary to add format information directly to the reference database for portability, but the process seems unnecessarily complicated.

Papyrus will not format references directly to Macintosh WordPerfect 3.5e files, and on a PC it prefers to use a rich text format or a Word 98 format. The program crashed numerous times under Mac operating system 9.0 when it attempted to format a document for publication, but the unofficial updates noted above fixed at least some of those problems.

In summary, Papyrus 8.0.7 is clearly a work in progress. Reportedly, some of the program's shortcomings will be fixed by the time this review is published. The price is reasonable, and the support staff is responsive to concerns. The company's stated policy of designing custom importation filters for users is welcome and will help build customer confidence.

—KEVIN AHERN

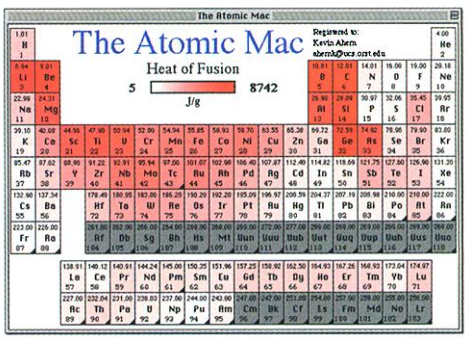
TECHSIGHTING
SOFTWARE

Atomic Power

The periodic table is probably the most common fixture in science classrooms. Numerous attempts have been made to put periodic tables into electronic formats and marry the organizing and calculating functions of personal computers with the information available about the elements. The vast majority of the simple programs already in use do not fully harness the abilities of the computer and thus are seldom used.

The Atomic Mac
Kagi Software
Berkeley, CA.
$25 individual,
$200 site license
510-601-5244
www.kagi.com

The Atomic Mac (only available for Mac-based computers) is notable, therefore, for its clever use of color shading and graphics to display additional information about the elements in the layout of the periodic table. For example, the figure (above right) shows the periodic table in which the color indicates the heat of fusion of each element according to the scale at the top middle of the chart. The lower figure similarly plots color according to the density of each element. Twenty different such plots can be viewed by selecting from the "View" menu. These properties include heat of vaporization, specific heat, thermal conductivity, linear expansion coefficient,



Customizable Chemistry. The periodic table colored according to the heat of fusion of each element.

melting point, boiling point, atomic radius, covalent radius, electronegativity, resistivity, and each element's state at temperatures set by a user-adjustable thermometer. Eight different crystal configurations of the elements can be seen by selecting the "Crystal Structure" option.

Other options in the program include a molecular weight calculator and five different listings of information available separately about each element, including electronic shell configuration, isotopic data, physical information (density, specific heat, etc.), x-ray information (fluorescence emission energies and binding energies), and miscellaneous data (the name of an element's discoverer, etc.).

The program's simple, tidy design sets it apart from its competition, and its use of color is exceptional. Nevertheless, The Atomic Mac is not without shortcomings. There is little users can do to customize the appearance of the periodic tables created by the program, such as specifying colors or fonts used in the table or even resizing the window, apart from the two default sizes provided. It would be useful if The Atomic Mac could create wallpaper (a desktop picture) of some of the periodic tables to serve as screen backdrops. Perhaps this will be added to future versions. Still, for a $25 program, The Atomic Mac provides plenty of "bang for the buck."

—KEVIN AHERN

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