REVIEWS OF BOOKS & SOFTWARE

■ SOFTWARE REVIEWS

JAMA & Archives Journals, complete collection (1994). Distributed by Ovid Technologies, Inc, AMA Product Support, 5650 South Green St, Murray, UT 84123; phone: (801) 281-3884; fax: (801)281-3694; e-mail: support@ovid.com; $250 for complete collection (all JAMA and Archives journals for that year). $150 for "archival-disk," which includes editorial content from January to December for JAMA and all 9 Archives journals. Introductory offer: 1994 collection for $9.95.

DOCUMENTATION: 15-page instruction manual.
HOW SUPPLIED: CD-ROM
HARDWARE AND SOFTWARE REQUIREMENTS: *Software minimum*: DOS 5.0 or Windows 3.1 with 4MB virtual memory swapfile. *Hardware minimum*: 386-SX, 4MB RAM and 540KB memory. VGA monitor.
MOUSE SUPPORT: Yes.
TOLL-FREE ORDERING: (800) AMA-2350.
TOLL-FREE CUSTOMER SUPPORT: (800) 950-2371.
DEMONSTRATION DISKS: No.
MONEY-BACK GUARANTEE: No.
RATING: Good.

JAMA & Archives Journals on CD-ROM (AMA-CD) is a compilation of the complete, full-text collection of 1 year of the *Journal of the American Medical Association (JAMA)* and the American Medical Association's *Archives* series, the nine journals that include such standards as the *Archives of Internal Medicine*, *Archives of Neurology*, and so on. For all citations in AMA-CD articles, the CD also includes MEDLINE abstracts (when available) if the citation is from the previous 3 years.

The main menu (Figure 1) has two options: a Browse option and a Search option. Using the Browse option, successive windows appear, allowing the user to choose the desired journal (eg, *JAMA*, *Archives of Internal Medicine*), then specific journal issue, and finally, the article from the issue's table of contents. Once in the article, the user may obtain an outline of the article, if desired, to quickly advance to desired material.

The Search function was developed by Ovid Technologies and is not unique to the AMA-CD product. The user enters a Search term. All fields (title, abstract, body of article) are searched for occurrence of the term. The retrieved citations may then be "limited" to specific journals, to review articles, to original research articles, and so on. Different terms may be searched and the results of searches combined (eg, search "asthma" and "pregnancy" separately, then combine) using the familiar Boolean and/or operators (Figure 2). A useful feature is the ability to search only certain fields, such as title and abstracts, for key words; unfortunately, the menu system does not help users accomplish this. Users may also perform author searches. Searches are fast and efficient.

The nicest features of the Ovid search software are hypertext links and graphics features associated with full-text documents. The hypertext links allow users to easily navigate from the article's text to references by clicking on the reference within the text. Users can then easily view the abstract from the reference (assuming the reference is from the last 3 years), if desired, and return to the original text—all in seconds. An article's figures and tables can be listed, viewed, and printed easily: a zoom facilitates viewing by enlarging the graphics.

FIGURE 1

Main screen. Browse and Search are described in the text. "Subscribe" allows users to order paper journal subscriptions. "Guide" provides instructions and reference for software use.
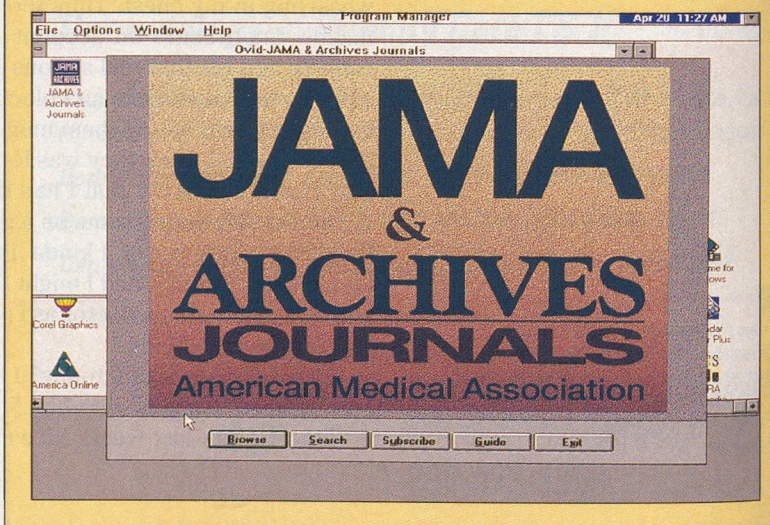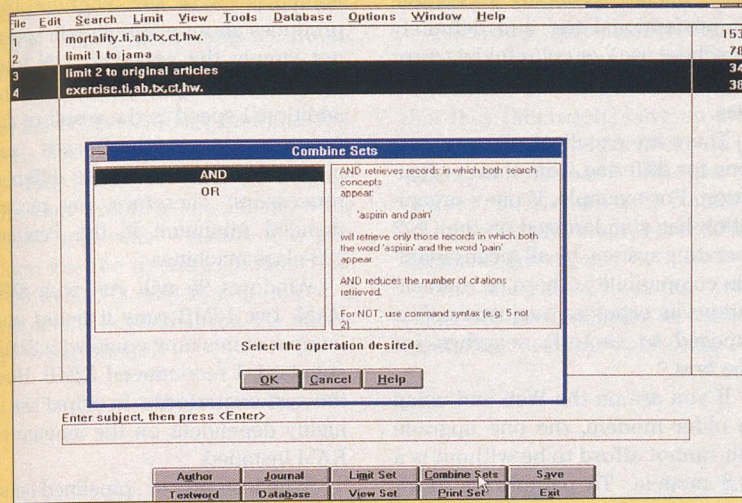
FIGURE 2

Search feature. Search for "mortality," subsequently limited to original articles in *JAMA*; figure shows process of combining with "exercise." Two sets to be combined are highlighted using mouse clicks. Clicking "Combine Sets" button (cursor overlying) at the bottom of the screen creates active "Combine Sets" window pictured.

AMA-CD is fast and easy to use. One year's worth of 10 major journals plus abstracts to cited material are stored in searchable format on a disk smaller in size and weight than a few 5 × 7 cards. The Ovid search engine is a tried and tested one. AMA-CD represents an important addition to medical libraries, residency programs, and physicians who lack easy access to such libraries or shelves of journals. Offering the 1994 CD for $9.95 via a toll-free ordering number allows users with any potential interest the opportunity to evaluate this product for themselves without any real financial barrier or risk.

Joseph A. Troncale, MD
Lancaster General Hospital
Lancaster, Pennsylvania

Entry Level PC System for Physicians

In the market for an IBM PC-compatible (PC) home or office computer? Periodically, the Journal will publish a *minimum* suggested configuration for purchasers of new computers. Obviously, computers are not a one-size-fits-all commodity. Also, we are dealing with a moving target—hardware product cycles are measured in months. (This article was submitted 11/96.) On average, computing power has been doubling every 18 months—a pace projected to continue for a while. Older equipment may be perfectly functional; consider upgrading when the computer no longer performs adequately. Recognizing these limitations, we suggest that this not be the only source for information.

Because of the short technology cycle, I recommend new purchasers invest in as near state-of-the-art equipment as their budgets allow: the additional expense will be offset by a longer useful life. Generally avoid *the* top of the line microprocessor, however, because the price premium will be much greater than the small or modest increase in system performance. Computer periodicals, available in most bookstores, contain advertisements from dozens of vendors, including prices, reviews of computers and accessories, reliability ratings, companies' service ratings, and so on, allowing comparison shopping. Many of these vendors are well known (IBM, Compaq, Hewlett-Packard, Dell, Gateway); others less well known offer competitive products and prices. Many retailers, including household names such as SAM'S Club, Best Buy, and Office Max, offer an array of power and price in computer equipment. Buying a brand with a reputation for reliability and service may cost more but save untold aggravation. Beware: Some sales leaders in the home market are reported to be among the worst in reliability and service. Evaluate the fine print of warranties carefully to make sure that service agreements fulfill your needs.

For corporate installations, authorities recommend first determining what one is going to use the computer system for, then determining what software best fits those needs, and then selecting the hardware that most efficiently and affordably will serve to run the software. For home use, usually the *hardware* is selected first. Most home computers now include "bundled" software that would cost hundreds of dollars to purchase separately. I recommend integrally considering the whole "bundle" in the purchase decision. At the time of PC purchase, many vendors offer discounts on additional memory, printers, software bundles, and accessories; inquire about these offers.

Here is my suggested *minimum* configuration for physician standalone home or office PCs and laptops. At best, this would now be considered low- to mid-range, not high-end, equipment.

Desktop and Laptop

MICROPROCESSOR: 133-MHz Pentium processor or equivalent (Cyrix

equivalent, 6x86-P133+), with 256KB L2 synchronous or pipelined-burst cache.

HARD DRIVE CAPACITY: 800+ MB, EIDE; preferably 1.3 GB.

RAM: 16MB EDO DRAM; preferably 32MB.

DISPLAY: Color Super VGA (SGVA), 800 x 600 pixels.

GRAPHICS ACCELERATOR: 1 or 2MB RAM ("graphics card").

MODEM: 28.8.

FLOPPY DRIVE: 3.5-in. 1.44MB.

CD-ROM: 8X preferable, 4-6X acceptable.

OPERATING SYSTEM: Windows 95.

MULTIMEDIA: Sound-blaster compatible sound card.

WARRANTY: 30-day return policy; 1 year parts, labor, and technical support.

SOFTWARE: Word processing software: either a "works" program or professional word processing (latter preferred). Other software (calendar, appointments, games, spreadsheets, databases, financial managers, encyclopedias) determined by individual needs.

PORTS: Parallel (for printer) and serial port (for modem) in addition to mouse port.

DESKTOP

MONITOR: 15-in. monitor (minimum 13.5-in. display).

EXPANSION BAYS: Several usable ones (for scanners, etc, that might be added later).

POINTING DEVICE: Mouse is usually standard.

LAPTOPS

POINTING DEVICE: Integral pointing device (less to carry, lose, and break).

PC CARD PORT: At least 1 type II.

DESIGN: Modular design allows varying configurations and upgrading.

POWER: Lithium ion battery and AC pack.

DISPLAY: Active Matrix display is best and brightest; Dual Scan Passive Display acceptable if cost is an issue.

COST

DESKTOP: Less than $2500 for minimum configuration.

LAPTOP: Add about $1000.

PERIPHERALS

PRINTER: Laser jet (for professional use), ink jet (generally acceptable for professional use and definitely for school use), or color inkjet (great for school), depending on intended uses.

There are excellent personal reasons for differing from this configuration. For example, if one's organization has standardized on the OS/2 operating system, by all means maintain compatibility. These recommendations incorporate "mainstream" as opposed to esoteric searches for "the best."

If you are on the Web and using an older modem, the one upgrade you cannot afford to be without is a 28.8 modem. To paraphrase Mark Twain, the difference in function between a 28.8 and 14.4 is like the difference between lightning and a lightning bug.

NOTES: On average, the 133-MHz Pentium CPU (computer "brain"), compared with the Pentium 120, produces about a 30% gain in speed, not simply the expected 11% from the processor speed difference. The additional speed is the result of differences in motherboards and chipsets required with the different processors. Therefore, my recommended minimum is the Pentium 133-class machines.

Windows 95 will run with 8MB RAM, but 16MB runs it better, and many systems now come with 32MB standard; I recommend 32MB. How the system performs in actual use is highly dependent on the amount of RAM installed.

Synchronous or pipelined-burst

SOFTWARE EDITOR'S UPDATE

I purchased and evaluated *PDR DrugREAX* for a software review that was published in the October issue of the Journal *(J Fam Pract 1996; 43:403-6)*. I feel that I should update the review to reflect the just released software "update."

It is now apparent that the software is time-bombed, that is, after a certain date, it informs the user that the subscription has expired and prohibits access. (Tough lesson during office hours.) Later, I spent a whole evening unsuccessfully trying to install the update disks that I had received earlier. Unfortunately, a bug in the installation program kept me from accessing the newly installed disks until I called technical support, which has usual business hours that are inconvenient for physicians. The company knew of the "bug" but apparently did not care enough to inform customers.

This is a $200 software program.

Next, on my Pentium 133-MHz computer, the entry of drugs into the list for checking interactions seemed substantially slower than in the pre-update version. However, there was no way to compare the two.

In addition, on each of the first two occasions when I checked interactions, additional bugs in the program appeared, one in which an interaction monograph failed to appear, and one which gave conflicting information—both that there was and was not an interaction.

Considering the installation bug, the time-bomb, and the other bugs, I'd consider this a zero-for-four experience.

PDR DrugREAX was a solid program. The new update is one big, slow bug. My recommendation is now to avoid it.

Gary N. Fox, MD
Software Editor
Toledo, Ohio

L2 cache memory (L2 cache) is a $100 feature that measurably boosts system performance. Tests by *PC Magazine* show that upgrading from 256K to 512K of L2 cache boosts performance only about 3%; therefore, 256K is sufficient. Avoid cheap systems with asynchronous or no L2 cache.

Read evaluations of PCs by one of the PC periodicals: Pentium 133-MHz machines from some vendors perform on a par with the average Pentium 166-MHz machines, while those from other vendors may perform like the average Pentium 120. (Obviously, overall system speed is not totally dependent on the microprocessor alone.)

Based on recent personal experience, if your upgrade includes transitioning from Windows 3.x to Windows 95, anticipate at least 1 week of lost productivity and include sufficient time to relearn every long-shelved expletive.

Regarding software recommendations, one reviewer professed, "You might as well be frank and say that they [Microsoft] have an effective monopoly, and users should pay whatever Microsoft charges for *Office.*" (Microsoft's suite consisting of its word processor, spreadsheet, database, and so on.)

The Macintosh operating system (Mac OS) predominates in much of academia, desktop publishing, and other niche markets. Most of the corporate world (including non-university hospitals) has made the Intel/Microsoft "PC" architecture the standard; however, Mac users (probably correctly) maintain that they have a superior system that simply lost the marketing war. For home or office use, many physcians still prefer the Mac, and much of the software available for physicians is available on both platforms.

Gary N. Fox, MD
Software Editor
Toledo, Ohio

EDITOR'S NOTE: Thanks to Jacob Reider, MD, and John Faughnan, MD, for their helpful comments.