New Media

Welcome to the New Media section of the Canadian Journal of Anesthesia

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WITH this journal issue the Canadian Journal of Anesthesia introduces a new section entitled New Media in Anesthesia, focusing on CD-ROMs, videos, software, and especially on Internet resources. Here you will also learn about Internet mailing lists and discussion groups, about obtaining software at sites across the world, and about medically related resources that can be "downloaded" to your computer from around the world.

This inaugural issue begins with information on getting started on the Internet, a review of a CD-ROM from Silver Platter Inc, and an introduction to some Internet-related concepts. Next month we will look at blood transfusion information on the Internet, and review a video on cricothyrotomy.

Readers are encouraged to submit reviews of material for future editions of this section, including software, videos, CD-ROMs, Web site reviews and synopses of issues related to medicine and the Internet.

Getting started on the internet

Getting access to the Internet has never been easier - just select an Internet service provider (ISP), put their startup disk or CD-ROM into your modem-equipped computer, and follow the instructions presented on the monitor. You will be asked to provide a credit card number.

Many new (brand name) computers come with the required ISP software already installed. In addition, most computer stores offer startup Internet packages at attractive prices. Readers with nationalist leanings may choose to go with the excellent Sympatico service (<http://www.sympatico.com/>) offered by Bell Canada. While America Online (<http://www.aol.com/>) remains

a very popular service, in part because of its reputation for extreme ease of use and the ease of filtering out (censoring) material inappropriate for family viewing, many users have expressed frustration at the frequent busy signals encountered during peak usage periods. Frequent international travelers may prefer Compuserve (<http://www.compuserve.com/>) because of its accessibility from major cities around the world.

Some companies offer unlimited Internet access for a monthly fee, but it is unlikely that anyone in clinical practice would find time to consume more than 50 hours a month of connection time. Other companies offer multiple e-mail addresses or space on their server for you to place your own personal web pages. (These services are also available free (supported by advertising) - for free web-based e-mail try <http://hotmail.com> or <http://mail.yahoo.com>; for free space in posting web pages try <http://www.freeyellow.com> or <http://www.geocities.com>).

To access the Internet you do not need a separate telephone line. Just make sure that "call waiting" is disabled when using your regular line - otherwise the signaling tones denoting a new incoming call may crash your modem connection. Of course, if you end up spending hours connected to the Internet by telephone, friends and family will get frustrated if they constantly encounter busy signals. Options in this situation include obtaining a second telephone line, using a "cable modem" system or asking people to page you if the line is busy and replying via cellular phone if you cannot interrupt the Internet connection to respond (e.g. when in the middle of "downloading" large files.)

Your computer's modem is the most important factor in determining the rate at which data communica-

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tion takes place. Most new computer purchases include a 56K bps (bits per second) modem running the "V90" protocol, but satisfactory results can be obtained with the much less expensive older 28K bps modems. Laptop computers without built-in modems usually accept modem cards (PCMCIA cards, PC-cards), but be aware that only special modem cards will work with cellular telephones without requiring special interfacing equipment.

Some "cable modem" systems (e.g., <http://www.home.com/>) offer Internet access at about 50-100 times the speed of regular telephone connections and without tying up a telephone line. This is a new service, available in only a limited number of cities. Expect to pay about \$50 monthly with an initial setup fee around \$200.

"Surfing the 'net'" is done using a "browser", which comes included with all Internet startup packages. The two most popular browsers are Microsoft Internet Explorer and Netscape Navigator. Both can be procured ("downloaded") from their respective web sites (<http://www.microsoft.com> and <http://www.netscape.com> respectively). A number of excellent books exist to explain the intricacies of these browsers, which have now become sufficiently complex with configuration, security and "plug-in" options that some background material must be studied in order to grow beyond the novice level of Internet user. One well-known bookstore on the Internet where you can explore published titles (in all fields, not just Internet topics) is Amazon Books at <http://amazon.com>. If you prefer to learn more about the Internet and browsers from free Internet resources, I recommend that you visit an Internet directory site such as Yahoo (<http://www.yahoo.com/>) or Lycos (<http://www.lycos.com/>). Microsoft offers a particularly well-done Internet tutorial at <http://www.microsoft.com/magazine/guides/internet/default.htm>. It is possible to ensure that users can only access "family suitable" sites with "blocking" or "censorship" software. A list of such packages is available at http://www.yahoo.com/Business_and_Economy/Companies/Computers/Software/Internet/Blocking_and_Filtering/. For companies producing software to keep children (or employees) from accessing undesirable material, the road to moral purity turns out to be a slippery slope. Some censorware packages may do more than just filter pornography: their (often-secret) blacklists ban everything from the National Organization for Women to animal rights web sites. Even support sites for victims of breast cancer have been excluded, based on a list of forbidden key words.

Once you are up and running, pay a visit to the newly updated Web CAS site at <http://www.cas.ca/>, learn about the upcoming 12th World congress in

Montreal in 2000 (<http://www.wca2000.com/>), or consider other anesthesia meeting possibilities by visiting Dr. Oyston's meeting page (<http://www.oyston.com/anaes/meet.html>). You will also want to visit Yale University's GASNet, perhaps the best known of anaesthesia sites, at <http://gasnet.med.yale.edu>. Most importantly, keep your eyes open for new and interesting web sites to be reviewed in this section of the journal.

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This CD-ROM includes journal article information (over 50,000 citations and abstracts) from MEDLINE, covering the span 1967 to the present time, as well as information from SERLINE and Lexi-Comp's Drug Information Handbook. Access to a number of Internet resources are also included. The selections included are drawn from over 3500 journals of potential interest to anesthesiologists. The search engines provided are known as WinSPRIS (for CD-ROM searches) and WebSPIRIS (for Internet searches). Searches for subjects, authors and journal titles may be performed, while concepts can be combined using connectors such as "or", "and", "with" or "near". To search databases online (MEDLINE, AIDSLINE, BioethicsLINE, MD HealthSTAR and MD Drugs) one needs an active Internet connection and membership to Physician's Home Page (<http://searchPHP.silverplatter.com>).

I installed the software on two Windows 95 machines without trouble and found the search engine to work quite well. I was similarly satisfied with the extensive Physician's Home Page offerings. A help system is provided, although the 11 page brochure provided was quite sufficient. An annual subscription for individuals costs \$295 US and includes 3 quarterly updates.

All in all, I was quite pleased with this product, although its value has been somewhat diminished by the availability of free (but much slower) MEDLINE searches via the Internet (e.g. see links at <http://canmed.net>).

Internet concepts: Part I

Bit

Short for "binary digit". A single digit number in base-2, either a 1 or a zero. The smallest unit of computerized data. Bandwidth is usually measured in bits per second.

ASCII

American Standard Code for Information Interchange — This is the de facto standard computer representation for upper and lower-case letters, numbers, punctuation, etc. There are 128 standard ASCII codes, each of which can be represented using 7 bits.

Byte

A set of 8 bits that represents, for instance, a single ASCII character.

Bandwidth

Refers to how much information you can send through a connection. Usually measured in bits per second (bps). A fast telephone modem can move over 50,000 bits in one second, while "cable modems" can be over 20 times faster. A full page of English text is about 25,000 bits.

Internet

A network of over 50,000 interconnected computer networks in over 70 countries that uses the "TCP/IP" networking communications protocol. It is the largest network of computers in the world. The Internet provides electronic mail (E-mail), mailing lists (discussion groups), file transfer (ftp), news, remote computer access (telnet), access to the World Wide Web, audio and video conferencing, access to thousands of databases (images, clip art, books, magazines, software), online gaming and more.

TCP/IP

Transmission Control Protocol / Internet Protocol - a series of "protocols" that defines data transmission on the Internet. To be connected to Internet, your computer must have TCP/IP software.

Uniform Resource Locator (URL)

An address on the Internet where an information resource resides. For example, the URL for the Canadian Anesthesiologist's Society is <http://www.cas.ca>.

Electronic Mail (E-mail)

The electronic exchange of messages between individuals via computers, usually via the Internet. These messages may contain "attachments" such as text files, graphic images, spread sheets or even video clips. A "signature file" is often attached to the end of e-mail messages and frequently contains personal information such as academic affiliation. Unwanted E-mail, usually sent in bulk, is known as "spam", named after the once popular luncheon meat. Free advertiser supported E-mail is available on the World Wide Web at

<http://hotmail.com> or at <http://email.lycos.com>. Contrasted to E-mail is "snail mail", traditional mail through the postal service.

Mailing List

A discussion group that electronically exchanges messages dealing with a particular topic. The mailing list uses software designed so that a message sent to a single person is forwarded to all the people on the list.

In an unmoderated list, the mail is forwarded automatically without human intervention. In a moderated list, the mail is first screened by a moderator, who then weeds out inappropriate messages and forwards mail suitable for the group at large. The archives of GASNet's Anesthesiology Discussion List, a large volume unmoderated anesthesiology list with considerable international participation, can be accessed at <http://gasnet.med.yale.edu>

Search Engine

A computer system that sifts through information in the Internet looking for key words and concepts. The system then stores that information in an internal database to allow subsequent information retrieval by users. Most search engines are free, supported by advertising. Examples of popular search engine sites include <http://www.lycos.com>, <http://www.excite.com>, and <http://www.yahoo.com>. Lists of over 1200 and 700 search engines respectively are provided at <http://www.beaucoup.com/> and <http://www.searchenginecolossus.com/>. Some specialized search engines such as <http://www.electricmonk.com/> or <http://www.askjeeves.com/> allow search questions to be posed in ordinary narrative English (e.g., "Please get me information on fiberoptic intubation").