

Images on the Internet

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film and then integrate your case with the rest of the teaching file. "Contributing cases is especially convenient if you can get raw digital data through your MR or CT lab," said J. Keith Smith, MD, PhD, a clinical instructor in the department of radiology at the University of North Carolina.

One current problem with teaching files: They have no firmly established system of peer review. Unlike a written medical journal article which undergoes review by an independent group of experts in a particular field, teaching files are not formally reviewed. Quality control for teaching files has generally meant physician staff members verifying resident cases and checking their own work as well as relying on e-mail comments from users. Many teaching file servers, however, are working to remedy this. "We are working to implement a high quality standard for the Whole Brain Atlas, in which neuroimaging experts will be peer reviewers," said Johnson.

Sharing Images with Colleagues

Let's say you want to get a gallium scan on a colleague's imaging machine 1000 miles away. The Internet offers two basic options for transferring diagnostic images, explains Trevor D. Craddock, PhD, at Victoria Hospital in Ontario. You can either send images over file-transfer protocol (ftp) or attach them to e-mail.

If you have access to ftp through your Internet connection, you can send or receive images from another ftp-connected colleague by establishing a shared "read-write" access Internet account and password, which your institution or Internet provider can arrange. This account allows you and your colleague to exchange patient images privately and preserves patient confidentiality.

Sending images over e-mail may be your only option if either you or your colleague does not have a full-fledged Internet account. One disadvantage to this method is that you need to convert image files from binary format into ASCII (a text format which e-mail can send) and then back into binary. This means both sender and receiver need an e-mail file-conversion program such as uencode/udecode. Another problem with e-mail transfer is that image files may be too large for commercial online service e-mail systems, although some systems allow you to get around the problem by sending large files in chunks as multiple messages.

Diagnostic images sent over e-mail need to be saved with a .gif, .jpeg or other image-file format extension so that the receiver can open and view them as image files. To do this, the sender first needs

to do a "screen grab" of the image from the imaging machine—similar to printing from the screen—to capture the screen into an image-file format. For example, to send a gallium image by e-mail, your colleague would screen-grab the file as gallium.gif or whichever image-file extension the imaging program indicates. Then, he would go into uencode/udecode and tell it to encode gallium.gif; the encoded file, gallium.uue, would then be attached to the e-mail message.

Once you receive the image, the message would appear as gallium.uue. You would then have to enter uencode/udecode to decode the file back to gallium.gif. Since you cannot view an image in a word processing program, you would then need to open the image file in a software viewer program. You could also use the browser program that you use with the Web. Enter the directory in which the file is stored and the filename, for example, C://public/email/gallium.gif.

One final word: If you and your colleague are not transferring images from nuclear scanners made by the same company, you will need to do a conversion through Interfile, a common file format which accommodates nuclear images as counts rather than pixels. For more information on Interfile, contact the University of Western Ontario home page (<http://www.largnet.uwo.ca>).

Jill Steuer

Erratum

In our April Newsline article "Navigating the Internet," we regret that some e-mail and Internet addresses had slight misprints or have since been updated. A number of astute readers brought the correct addresses to our attention. Here is a revised list:

1. Let's Play Pet:
<http://www.nuc.ucla.edu>
2. Radiation Biology:
<http://www.science.ubc.ca/departments/physics/radbio/HomePage.html>
3. Medical Matrix URL:
<http://kuhttp.cc.ukans.edu/cwis/units/medcntr/Lee/HOMEPAGE.HTML>
4. Big Dummy's Guide to the Internet:
ftp.pub/Net_info/EFF_Net_Guide/netguide.eff
5. Loyola University Nuclear Information Service:
<http://www.lunis.luc.edu>
6. Nucmed e-mail list: nucmed@largnet.uwo.ca
To subscribe to nucmed, send an e-mail message to:
listserv@largnet.uwo.ca
7. The Institute for Clinical PET can also be reached through the Internet.
Their e-mail address is:
PETicp@aol.com