Receiving, Managing, and Modifying Digital Images: How Do You Cope with the Logistics and Ethics?

Chair:
Karen Adams-Taylor
American Medical Association
Chicago, Illinois

Panelists:
Linda Knott
American Medical Association
Chicago, Illinois

Alec Kornacki
Cadmus Journal Services
Linthicum, Maryland

Kevin Klein
Perry-Judd's Incorporated
Waterloo, Wisconsin

Reporter:
Portia Holt
Journal of Eukaryotic Microbiology
Guelph, Ontario, Canada

The use of digital images has opened a Pandora's box for those in the journal business. The increasing use of digital images, said Karen Adams-Taylor, director of advertising and production services at the American Medical Association (AMA), has raised issues that affect the entire production spectrum from how images are initially received to publication and quality control of the end product—all issues appropriate to discuss at a forum like CBE.

Alec Kornacki, Cadmus product marketing manager, discussed

- print versus electronic distribution
- standards
- file conversion and manipulation
- logistics
- storage

Print and electronic distribution, said Kornacki, have very different requirements, particularly with reference to resolution and file size. For example, to obtain a 150-line screen for printing, a resolution of 300 dots per inch (dpi) is needed during file capture; resolution less than 300 dpi creates the "jaggies". Tagged Image File Format (TIFF) and Encapsulated PostScript (EPS) are the 2 formats being used to provide appropriate resolution for print.

When converting files, said Kornacki, it is extremely important that someone take control of matching digital images with original hard copies. Kornacki noted that final figure size is a complicated manipulation—going too large makes the image "grainy", going too small makes the image "soft".

Keeping current with the changing technology for receiving images is necessary but can be expensive. Removable media, such as CD or ZIP drives, require the proper hardward and software and pose compatibility problems. Transmitting files via e-mail presents an entirely different set of problems; information can arrive truncated or scrambled.

Digital imaging, said Kornacki, requires investment in image-database technology and huge amounts (gigabytes and terabytes) of storage space. His advice: Ask a vendor to provide storage space, especially if you are a small publisher manipulating and using the images.

Linda Knott, department director for electronic production of the Journal of the American Medical Association and the set of Archives journals published by AMA, discussed

- acceptance
- conversion
- manipulation
- management
- AMA publishing fillers
- computer-to-plate technology

Because of authors' lack of expertise in creating graphics and the multitude of software applications and file formats in use, said Knott, digital images are not particularly well accepted by many journals. The situation will improve, she said, as a few standards emerge and quality control can be more easily ensured. Knott echoed Kornacki's conclusions about the importance of image management, adding that it is critical to provide the resources for effective archiving and retrieval of material.

AMA began accepting digital files from in-house marketing departments 2 years ago. After a difficult learning period, 99% of the editorial material is now in digital format. Advertising is now scanned if digital files are not available. At AMA, the in-house graphics departments continue to be the experts.

Kevin Klein, color systems supervisor at Perry-Judd's Incorporated, wound up the session with a discussion of computer-to-plate (CTP) technology. CTP technology, he said, has advantages and disadvantages for both editorial and advertising pages. At Perry-Judd's, 40% of the printing-plate production uses CTP technology. This technology has produced an overall higher-quality product and decreased turnaround time. Klein admitted that cost benefits are still not great, because the savings gained by the elimination of labor and materials for image production are more than offset by the tremendous capital outlay needed.

Klein agreed with the previous speakers that a good data-managing system is of prime importance, and he suggested the option of archiving to CD-ROM. He also agreed that editorial and advertising operations are complicated by the lack of standards and the high costs required to put material into a chosen form. He predicted that CTP technology would continue to grow in spite of those drawbacks. ◼