

## Space Age of Publishing: Technical Innovations Publishers Are Using Now

*Moderator:*

**Monica Mungle**  
JAMA and Archives Journals  
Chicago, Illinois

*Speakers:*

**Rebecca Kennison**  
Public Library of Science  
San Francisco, California

**Carolyn Brown**  
National Research Council Canada  
Ottawa, Ontario

**Rebecca Simpson**  
National Research Council Canada  
Ottawa, Ontario

**Kevin Fitzpatrick**  
Wolters Kluwer Health  
Conshohocken, Pennsylvania

*Reporter:*

**Louise Adam**  
Federation of Animal Science  
Societies  
Savoy, Illinois

Outsource, build, or buy? That was the common theme addressed in this provocative and informative session. Rebecca Kennison, of the Public Library of Science (PLOS), began with an overview of the benefits of outsourcing journal production to a third-party vendor. Currently, PLOS partners with Allen Press, the Charlesworth Group, and Charlesworth China to handle its entire publication process from submission to online hosting, including author billing, XML coding, proofreading, early online release (preprints), DOI deposits, and delivery to PubMed; copyediting is done by in-house and freelance staff. Cited benefits of using third-party vendors include lower costs due to economies of scale, ability to concentrate on core functions, less dependence on internal resources, control

of budget, faster setup, lower continuing investment in internal infrastructure, and improved risk management.

Kennison said that the newest PLOS venture is *PLoS One*, due to launch in 2006. *PLoS One* is open-access, peer-reviewed publication of rigorously performed science across all disciplines and provides an online forum to encourage scientific dialogue and debate. Time from acceptance to publication is expected to be 10 days; articles will not be copyedited. The expected high volume and desire for rapid publication necessitated the efficient, hands-off production process facilitated by Allen Press and Charlesworth.

Carolyn Brown and Rebecca Simpson, of National Research Council Canada, described their build-and-buy approach to implementing an XML-based workflow. The National Research Council Research Press publishes 16 in-house journals and 16 journals for clients, with online posting of articles in PDF. The goals were to post HTML versions of articles online with full reference linking, achieve fidelity in content repurposing, increase figure quality with improved color reproduction, facilitate an electronic workflow to accommodate telecommuters and freelancers, and save money and time by implementing computer-to-plate printing. When making the decision to build or buy a system, cost, usability, automation, and vendor choice were important factors. The group was able to use several existing modules, including a manuscript-submission system (Osprey) and an Oracle database, to reduce overall cost. They used eXtyle (Inera Inc) and a custom-designed export filter to generate XML. Copyediting was done with XMetaL, and the Arbortext 3B2 system generated PDF for print and Web and GIF files of figures, tables, and equations for full-text HTML. Using this compartmentalized, hybrid approach allowed greater flexibility and workflow customization but required a

longer implementation time than purchasing an end-to-end system from a vendor. Having strong support from internal information-technology staff was crucial. A helpful (and potentially cost-saving) tip for deciding on a content-management system is to evaluate business process-management software that is not exclusively geared to the publishing field.

Finally, Kevin Fitzpatrick, of Wolters Kluwer Health, highlighted the value of an effective content-management system. Wolters Kluwer/LWW developed the PubFusion content-management system to automate and streamline its journal-production process from author submission to final publication. PubFusion is now available to publishers and can be used as either a hosted or an in-house system. It allows publishers to reduce production-cycle times and increase quality by substantially increasing the speed with which they create, review, approve, and disseminate content. Features include version control; real-time audits; global management (changes in styles or mastheads can be keyed once and applied throughout); online revisions, corrections, and monitoring by multiple users; collaboration tools; and flexible outputs. Since implementing PubFusion, Wolters Kluwer has reduced publication time by 10%, increased production capacity by 50% without increasing staff, reduced postage costs by 60% (by online routing and review), and reduced proof-management costs. Key to an efficient workflow is the PubFusion Inbox. Each user (such as reviewer, editor, compositor, and proofreader) has an inbox of tasks with automatic notifications of new tasks and production-deadline alerts. The system allows on-demand output in multiple file formats from a single set of files. Incorporating an effective content-management system like PubFusion can revolutionize the editorial-production workflow in today's globe-spanning editorial "office". 