

Editorial

New Process for Data Submission and Dissemination

During 2002 electronic submission of manuscripts to the Journal through the Web-based submission process increased significantly to about 50%. Early in 2003 the Journal will switch to the ACS Paragon System (<http://pubs.acs.org/paragon>) for the electronic submission and peer review of manuscripts. This system will be considerably more user friendly to both authors and reviewers. Authors will have the use of a personalized page applicable to all the ACS journals, which will provide up to date manuscript status information, a customized submission environment for each ACS journal, and automatic backup to the submission process so that it can be stopped at any stage and then continued at a later date. Reviewers will have expanded capabilities for providing comments on manuscripts and on the ACS Paragon review system itself. We are aware that authors, particularly from Asian countries, have had problems with electronic submission of manuscripts due to the difficulty in detecting "foreign" fonts imbedded in their word processing files. ACS Publications, through their help desk (JCEDHelp@acs.org), is working with authors to develop convenient ways to detect these problems and reduce the time spent by authors in the submission process.

During the last year articles have appeared on the future of scientific publication with emphasis on how to convert published data into usable information that can be interrogated through computer programs (*Nature* **2001**, 413, 6851; *Chem. Int.* **2002**, 24 (4), 9–13). These publications have outlined the progress of standards for the interpretation of published information starting from GML (Generalized Markup Language) to HTML (HyperText Markup Language) to XML (Extensible Markup Language). XML is the richest set of descriptors that have application in interpretation of scientific information, but communally agreed-upon schemas and standards for defining the metafiles used in XML-infrastructures need to be formulated. National and international bodies have become active in developing appropriate standards for specific subject areas. Such standards are essential for the transfer of information, particularly data, from publications to archival databases. As foreshadowed in the 2001 editorial (*J. Chem. Eng. Data* **2001**, 46, 1), mechanisms for the capture, storage, and transfer of thermophysical property data along with the development of an XML-based approach for their implementation have recently been established. The TRC (Thermodynamics Research Center) at NIST (National Institute of Standards and Technology) and DIPPR (Design Institute for Physical Properties) have jointly agreed upon ThermoML as an XML-based format for the exchange and storage of thermophysical property data (*J. Chem. Eng. Data* **2003**, 48, 2). The ThermoML file can be automatically generated through the Guided Data Capture (GDC) software developed by TRC at NIST, downloadable from the NIST/TRC Web site (www.trc.nist.gov). Authors of six publications in this issue have submitted data to TRC using GDC. These ThermoML files can be accessed at www.trc.nist.gov. At present only selected data can be captured using GDC. Effective immediately authors of manuscripts with data that can be captured with GDC will be expected to submit their data to NIST using the GDC software. Those data will be available to authors from the NIST Web site at the publication date. The extension of GDC to input other property data types is under continual development. The ThermoML files will form the input files for an accessible archival database presently under development at TRC.

The implementation of these new data archival and electronic dissemination mechanisms will provide enormous benefits to the industrial and academic communities using thermophysical property data and will provide an example for the development of XML formats for use with other data types.

Kenneth N. Marsh

Editor

JE020493I