



Editorial Manager[®]

CASE STUDY

Use of Editorial Manager[®] for
Online Manuscript Submission and Tracking
at the Journal of Bone and Mineral Research

One of the biggest challenges for a leading peer-reviewed scientific journal like the Journal of Bone and Mineral Research is to manage the submission, review, and publication process for manuscripts in a timely and efficient manner.

Ensuring this happens at the North Carolina-based Journal, published monthly by the American Society for Bone and Mineral Research, is the responsibility of Adrienne Lea, Director of Publications. "In our field, we are the leading publication," says Lea who, over the past two years, has spearheaded the transformation of the Journal's editorial process from a lengthy, labor intensive, paper-centric system into a model electronic process that other scientific, technical, and medical journals are now adopting.

The Journal itself provides a forum for the best academic papers about all areas of the biology and physiology of bone, the hormones that regulate bone and mineral metabolism, and the pathophysiology and treatment of disorders of bone and mineral metabolism.

Since medicine, like business, increasingly knows no geographic boundaries, the Journal is an international operation. The contributors, reviewers, and editors of the Journal are among the foremost in the field and work all over the world.

Some 40 percent of the society's 3,700 members are outside the US. They, coupled with about another 1,000 individual non-members and libraries, make up the Journal's subscriber base.

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Manuscripts are submitted by leading expert doctors and scientists from across the globe for review by their peers in the hope that the Journal will publish their work and that their achievements will be recognized.

Traditionally, as at other journals, this process used to begin with the physical submission of manuscripts, usually by mail, for review. This in turn triggered a lengthy, complex, and expensive process of shuffling papers between editors, reviewers, and the authors by mail and courier.

In the days of paper-based editing, it was a Herculean task. "We handle 46,000 manuscript pages and about 6,000 images per year," says Lea, so the switch from paper to electronic submissions represented a major undertaking.

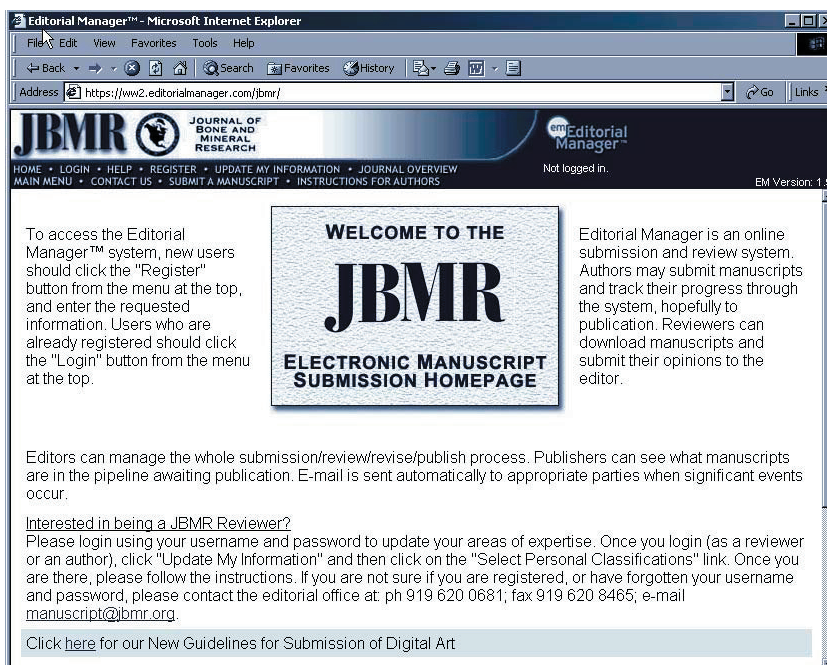
Selecting a Vendor

"We began to look at an online peer-review system in order to remain competitive," says Ms. Lea, and the pressure came from the contributors. "Authors began pressing for this because the decision on running their papers arrived so much faster (using an online electronic process), and speed is very important to them."

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About 65 percent of 750 manuscripts that the Journal is sent each year are rejected and an early decision enables the author to rework the paper or submit it elsewhere for publication.

Lea began to explore electronic alternatives to the old paper-based process. "I looked at quite a



few systems, but I was not very impressed,” says Lea, a straight-talking Southerner. “Most of them seemed to be designed for programmers rather than users.” From the outset she realized that the Journal’s contributors and editors would not tolerate a system that was difficult to use. They are, she notes, a demanding academic group who would soon tire of a cumbersome, inefficient or unreliable publishing system.

“If the system is not user friendly they would go elsewhere (for publication). They would not put up with something that doesn’t work,” she says. Underscoring these concerns for her was the knowledge that several other peer-review journals had tried to move to an electronic system, but had been forced to return to paper when the systems did not work. As a highly respected, high quality publication, “that was not the reputation we wanted,” she says.

Eventually Lea turned to Lyndon Holmes, President of North Andover, Massachusetts-based Aries Systems Corporation, a 16-year-old software developer best known for its Knowledge Finder® search engine, one of the first search engines to implement natural language and relevance ranking capabilities.

Since it was founded in 1986, Aries has built a solid reputation for delivering high quality, problem-solving technology to knowledge workers in the scientific, technical and medical information sectors. Aside from Aries’ financial stability and large customer base, Lea was drawn to the company because she had worked with it before and knew that Aries understood the importance of making an online publishing system accessible to all users.

At that stage however, Aries did not have an online manuscript tracking and submission system, so she wrote a request for proposal (RFP) and sent it out to as many potential suppliers as she could identify. “I did quite a lot of preliminary research,” she says.

In all, Lea sent RFP’s to about 12 potential suppliers and got 5 responses. She then visited several of the companies, but felt most had serious shortcomings. “I received back several responses, but in the main they failed in two areas, user friendliness and technical support.” In addition

she says, “pricing was all over the board.” The bids ranged from \$15,000 to \$100,000.

Aside from cost, there were other important differences between the proposals. While some of the proposed systems had “all the bells and whistles,” others vendors effectively wanted the Journal to build its’ own system using their software tools. Some wanted to charge for technical support and some proposed outsourcing the technical support - something Lea was determined to avoid because she was concerned about dealing with people “who didn’t really understand the product.”

In the end Lea decided that Aries was indeed the best supplier, even though it meant waiting for the company to build the product. “We already had a relationship with Aries, we knew they were capable,” she explains. What is more, “Aries quoted a realistic price that was considerably less than some of the competition. We didn’t need to argue about costs,” she says. Aries was awarded the contract early in 2001.

System Development

Development of the Web-based product, that became known as *Editorial Manager*, took 10 months. “We made the decision to wait because we felt we would get a better product in the end,” explains Lea. She was not disappointed.

Editorial Manager is an enormously powerful, highly automated but flexible system that harnesses the power of the Web to deliver a streamlined, cost efficient, and fast system for accepting, reviewing, and tracking manuscripts. Not only is the system easy to use, it can accept submissions from authors in a variety of document and image formats including Microsoft Word, PowerPoint, Excel, WordPerfect, RTF, Postscript, PDF, LaTeX, GIF, TIFF and JPEG.

Submissions are then automatically transformed into Adobe PDF files for circulation to selected reviewers. All the functions of the publisher’s editorial office, such as re-

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viewer selection and review status tracking editorial office, such as reviewer selection and review status tracking are automated by Editorial Manager using e-mail and Web-based reporting.

What is more, authors, reviewers, and editors can monitor the progress of their manuscripts from anywhere in the world using any Web-capable computer including Windows-based machines, Apple Macintosh, and those running Linux.

Unlike many 'first generation' manuscript tracking systems that use hard-coded software and assume that all editorial offices operate in exactly the same way, Editorial Manager actually anticipates the complexity and change inherent in the editorial process by providing powerful administrative tools. For example, at any time, staff can define and insert new editorial 'roles' into the workflow and configure letters appropriate to those roles.

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Editorial Manager also has extensive self-configuration options built into it designed to minimize the need for custom programming - a key factor in reducing the time it takes to implement a system.

System Roll Out and User Adoption

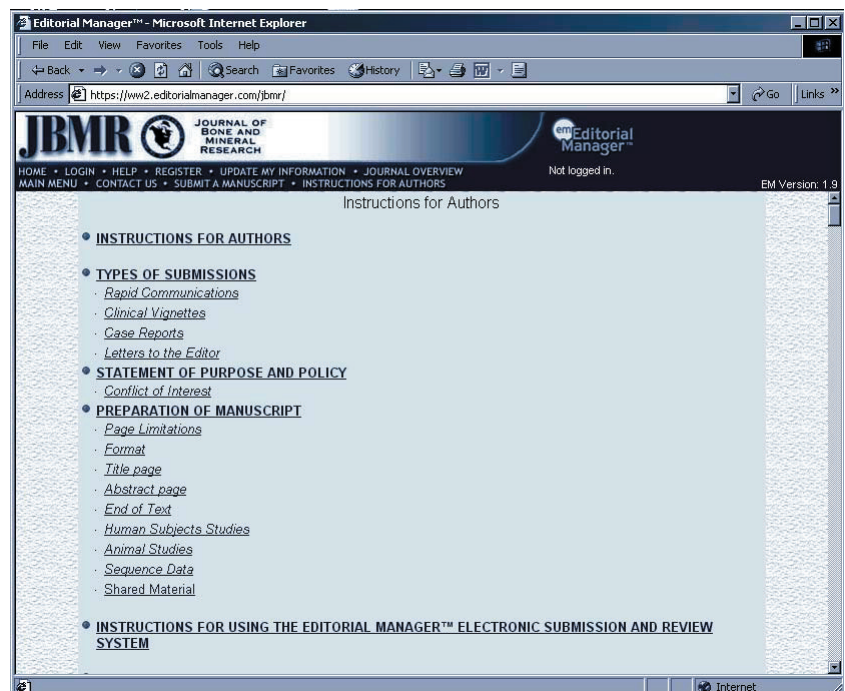
After a six-week pilot at the Journal, the new system went live in October 2001. Despite the fact that the change from a paper-based to electronic submission and editorial process was an enormous leap and required a big change for the Journal's editorial team, she says implementation went remarkably smoothly. Much to her personal surprise, contributors mastered the new system very quickly.

"The Web submission process is so well designed that very few of our authors have voiced questions about how to submit manuscripts even though the method is totally

different from what the Journal previously required," she says.

To help the eight Associate Editors - who are themselves spread out around the world - get to grips with the new process, JBMR staff wrote a procedure manual for them. "You really need to give them something they can flip back and forth," she says.

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Even though the implementation process went well, Lea wishes she had done a few things differently. In particular she wishes she had involved the editors in the pilot process at an earlier stage and had done a better job in preparing them for the change.

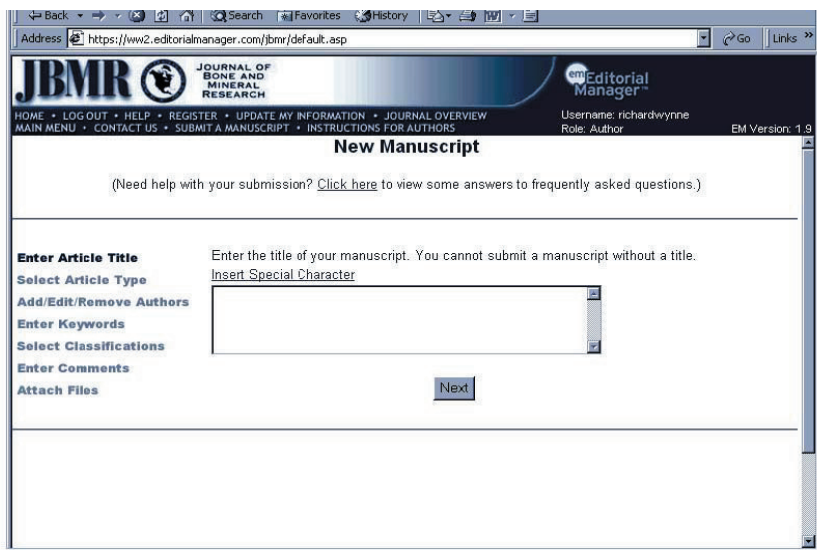
"We focused on the authors," she notes, "and we were unprepared for the degree of change it meant for the Associate Editors," who suddenly found themselves at the center of the process. "We didn't pay enough attention to them and we lost some good will." Although she says a

longer pilot is not really necessary, she says the Journal's staff should have done more extensive training with the editors during the pilot.

"Inevitably in such a major project, we encountered some unanticipated issues during implementation," she says, but adds that Aries has readily incorporated many new requests into software updates that automatically become available to the staff. "It has been very reassuring to work with a vendor that is willing and able to respond to such needs."

"Lea says the system has helped cut late reviews - those taking longer than two weeks - to just 16 or 17 percent."

The result, she says, is a system that is much faster than the cumbersome paper-based process it replaced. This is how the new system works. When contributors send in submissions - usually in electronic form - they are automatically transformed into PDF files for circulation to selected reviewers.



Submissions in PDF format are then sent automatically to the Editor-in-Chief who assigns them to one of the eight Associate Editors, each of them a senior scientist. They in turn approach perhaps six or eight experts in the particular field covered by the manuscript who are selected from a pool of about 1,200 scientists around the world.

Hereto, *Editorial Manager* steps in to help. In addition to 'known' reviewer selection, the system recommends and ranks reviewers for assigning editors based on topical classifications matches between manuscript and reviewer, reviewer availability, workload and past performance.

After two specific peer-reviewers are selected for each manuscript, they are automatically sent reminders for overdue assignments and receive automatic e-mail reminders. Mailings can even be selective to respect and reflect special relationships with individual reviewers. Lea says the system has helped cut late reviews- those taking longer than two weeks - to just 16 or 17 percent. "The system has a lot of flags to help manage the process and ensure it moves along," she says.

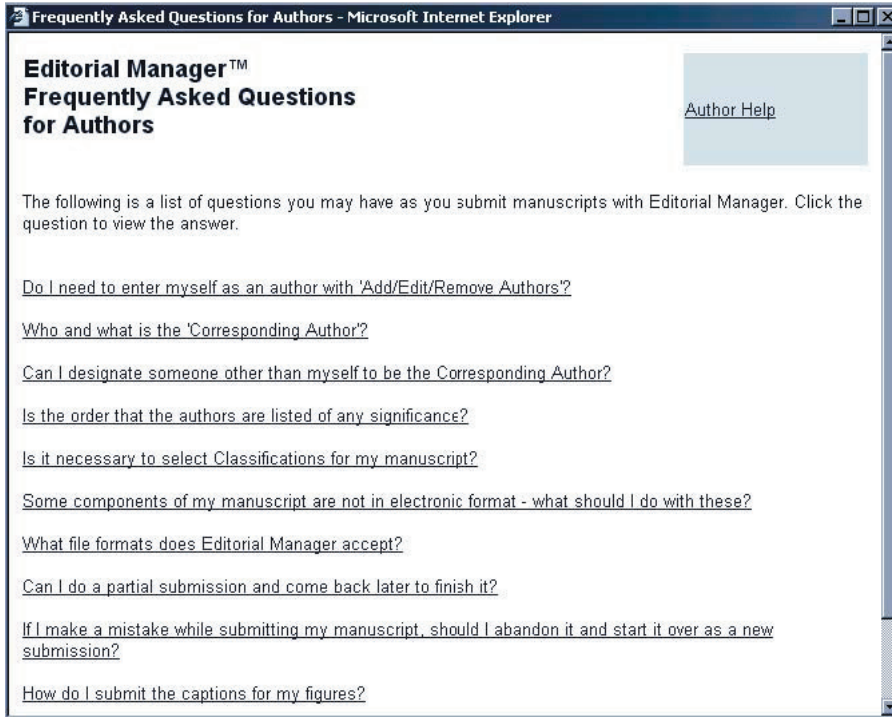
"Contributors get a 'yes' or a 'no' much more quickly," she says. The average time has dropped from 52 business days to 25."

Following the acceptance of a manuscript, an author's final submission files are automatically packaged into a single ZIP file, and production staff are notified by e-mail. The ZIP file is downloaded - under password control - to the production area for post processing.

Impact of Online Manuscript Tracking and Submission

While Lea says the new system has brought many benefits, she says the most significant is that it has reduced the average turnaround time to decisions for manuscripts submitted online by about 50 percent. "Contributors get a 'yes' or a 'no' much more quickly," she says. The average time has dropped from 52 business days to 25. That means contributors know much more quickly whether their paper will be published by the Journal, and what changes the reviewers have suggested.

As well as accelerating the time-to-decision for authors, *Editorial Manager* has dramatically reduced the large amounts of money spent by editorial offices each year on overnight couriers. "The reduction in our FedEx bill alone will pay for the system," says Lea.



User Support

She is particularly appreciative of the support that Aries has provided since the system went live. Generally, Lea's team tries to answer any questions the editors or contributors may have. Most of the time she says the questions are pretty straightforward - for example, users ask how to upgrade a browser or how to download Adobe® Acrobat® Reader. However, if the Journal staff cannot provide the answer, the question is referred to the Aries' system support staff. "They get back with an answer within one business day," she says.

Aries also wins plaudits from Lea for its ongoing commitment to upgrade and improve the system in a timely fashion. So far Aries has supplied three major upgrades. The latest release (EM 1.9) focused on providing editorial

Introduction of the Editorial Manager system has also enabled the Journal staff to be more productive. There are 2.5 full-time equivalent staff devoted to processing at the Journal, a figure that Lea says would have dropped, and the productivity gain has enabled the Journal team to take on other publishing projects. There have been other less tangible benefits as well. In particular, the new system enabled the US-based Journal to pick a new Editor-in-Chief living on the opposite side of the world: Professor John A. Eisman, Director of the Bone and Mineral Research Program at the Garvan Institute for Medical Research in Sydney, Australia and Professor of Medicine, University of New South Wales.

"It is very, very unusual to have a scientific journal published in the US with an Editor-in-Chief in Australia," says Lea. "We could never have included people outside the US in our search for a new Editor-in-Chief under the old system," she says. Indeed, the new team includes Associate Editors based in Japan, UK, Sweden, as well as the US.

Little more than a year after the system was introduced, Lea says it is already hard to imagine producing the Journal without it. "We don't get many complaints and calls from authors have dropped dramatically," she says.

office administrators with features such as the ability to 'undo' erroneous editor decisions, modify reviewer comments after decision, and initiate author rebuttals.

The need to chase non-responding reviewers has also been mitigated by the selection of 'alternate' reviewers who can be automatically invited to review a manuscript if 'primary' reviewers decline or fail to respond within a given time.

Many other software vendors only release upgrades on a yearly basis forcing their customers to wait for requested changes and improvements, "It is a wonderful thing not to have to wait for a year for changes to be made," Lea says.

What is more, she says that when Associate Editors or others have had concerns that have been conveyed to Aries, they have been addressed almost immediately. For example, there have been small changes to the way the pages look on screen to make it easier to review manuscripts. Other changes designed to make life easier for the Editors and reviewers have made it easier to enter comments and print.

One of the biggest changes has been to improve the flex-

ibility of the reporting system that enables Lea and her staff to monitor the Journal editorial process by entering any of a wide range of parameters. "One of the things I did not like about some other systems is that they could be personalized but not customized, especially in the reporting function," says Lea. "The things we look at and track this year might be quite different next year."

Of course, there is always room for improvement. Lea's wish list for future changes to Editorial Manager includes on-screen-highlighting functions. "One of the things the incoming editorial team would like to see is a different display for editors that would highlight changes in a different color."

Advice for Other Journals

After her experience at the Journal, what advice does Lea have for other peer-review publishers considering a similar move to a Web-based manuscript management and publishing system? Obviously she says cost is a factor, but more importantly she warns that many smaller journals may not be able to commit as many resources and people to ensuring the transition goes smoothly. In addition she believes it is important that the users have a clear view of what they are doing.

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to change." Based on her own experience, she believes it is important to involve the editors at an earlier stage, and provide extensive training while conducting trials before going live with the new system to help iron out small problems.

More fundamentally she says anyone considering such a move now needs to consider that the industry has moved on. "We are much closer now to a fully-electronic work-

flow," she says. "They need to ensure that the system they choose will enable them to move to the next generation of electronic publishing."

Since the Journal of Bone and Mineral Research system went live just over a year ago, more than 120 other journals have chosen Editorial Manager as their online manuscript tracking and submission system.

In a rapidly maturing technology market, Editorial Manager has delivered on its promise to reduce peer review time and generate cost savings at the Journal. Those publications that fail to follow, risk finding themselves left behind in the rush to embrace Web-based manuscript submission software.

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