

INTO FOCUS: PEMSATS—ELECTRONIC OIL FOR THE PE WHEELS

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Palaeontologia Electronica is becoming a victim of its own success, and is receiving manuscripts at an accelerating rate. Manuscripts, especially taxonomic monographs, are becoming longer, include more figures, and involve multiple media formats. Our existing methods of manuscript submission and tracking have become strained; we are struggling to keep the transfer of manuscript files between editors, reviewers and authors running smoothly. To put manuscript handling on sounder footing, we have created the *Palaeontologia Electronica* Manuscript Submission And Tracking System (PEMSATS). PEMSATS is a custom-written application that stores all manuscript files and details on a central server; it is accessed via web-browser, and communicates with editors, authors and reviewers by email. PEMSATS tracks each manuscript from initial submission, through the review process and subsequent revision and editing, and on to final publication. It is intended to make the entire editorial system more efficient, consistent, and transparent. The system will not only make submitting and reviewing manuscripts easier, but it will speed up turnaround times; the first round of manuscripts through the PEMSATS system have taken less than three months from submission to acceptance. Figure 1, the PEMSATS state diagram, shows in simplified form the PE manuscript lifecycle that PEMSATS implements.

All authors submitting manuscripts to PE are now asked to use PEMSATS. The process is simple and hopefully transparent. After registering with the system to obtain a username and password, the author simply logs on, follows the 'submit a new manuscript' link (see Figure 2), and is then taken through the steps of the submission process, including the entry of title, abstract, keywords,

author list and upload of files. At any subsequent time the author can log on to see the status of their manuscript, or to withdraw their manuscript. At certain stages in the process authors will be required to modify their manuscript or comment on proofs; all these actions are also performed through PEMSATS, which will notify authors by email when they need to do anything, and also remind them if action is overdue. When logging on, the system will provide authors with context sensitive 'action' links on the manuscript details page (see Figure 3) which will let them know what they need to do with/to their manuscript.

Peer review is also now conducted through PEMSATS. Reviewers are contacted by email, and accept or decline the reviewing task by following a link to a webpage and clicking a single button. Should they accept, a PEMSATS user account is generated for them; after logging in they are able to download the manuscript for offline viewing. To make life simpler, multiple files can be downloaded as a single ZIP archive (see Figure 3). Reviews are also submitted via PEMSATS; each reviewer just follows the link for the 'submit review', pastes their review into the appropriate box (see Figure 4), and selects their recommendation from a drop-down list. To help keep things moving, reviewers receive timed reminder emails about upcoming review deadlines. This semi-automation of the review system will speed the entire peer review system in several small but important ways; an example is speed of access to the MS on acceptance. Under our old system, reviewers accepted a MS for review by replying to an email from the Reviews Editor. They were thus only able to access the manuscript and begin reviewing once the Reviews Editor manually picked up their email and sent the

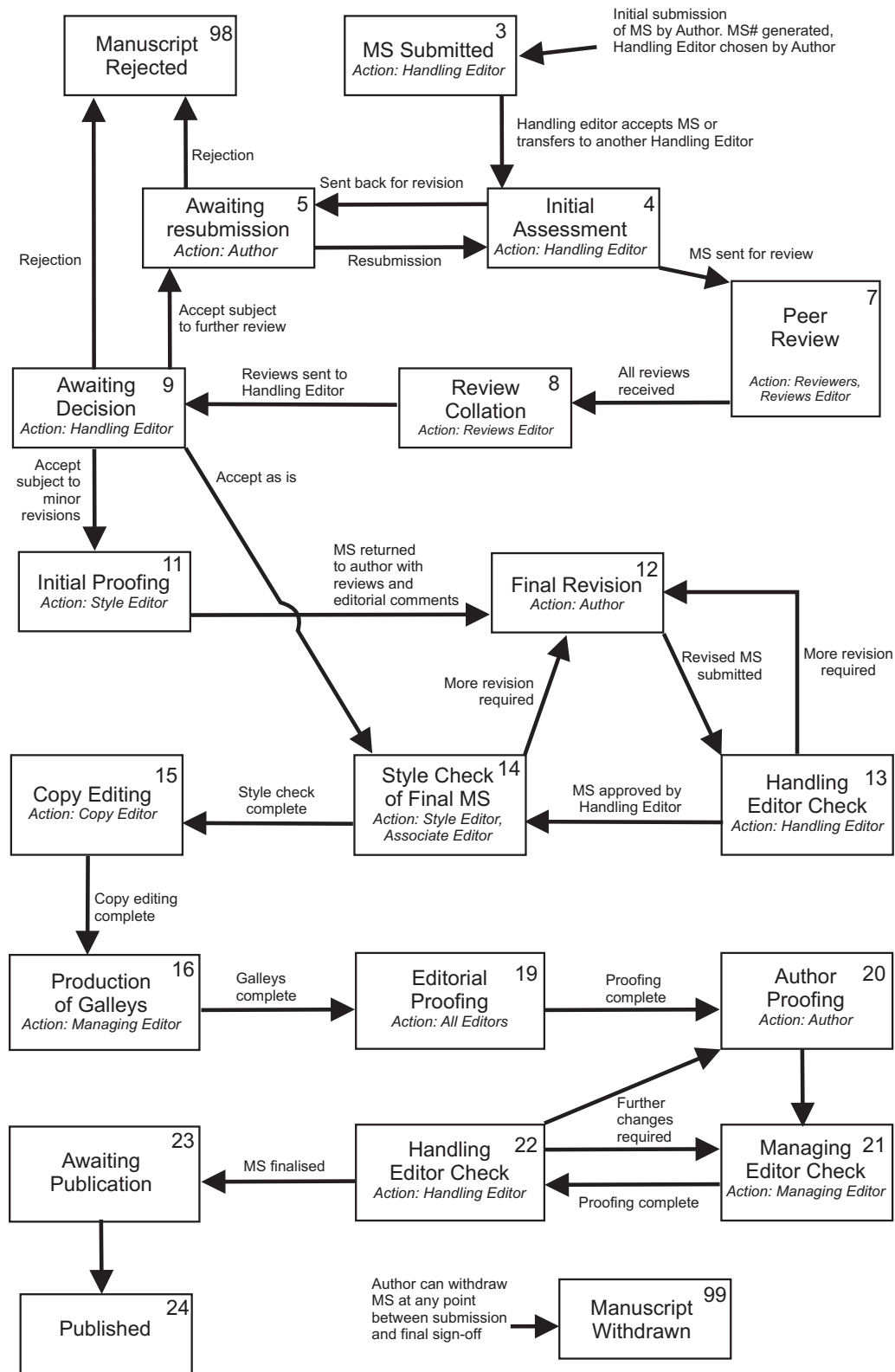


Figure 1. The PEMSATS state diagram. Each box represents a state that a manuscript can be in; the numbers are the PEMSATS codes for these states. Each state has a name (bold), and an owner or owners (italics) who is responsible for the moving the manuscript on. Arrows represent allowed actions (i.e. transitions between states).

1

2

3

4

MANUSCRIPT LIST PAGE - CHANGE PASSWORD - LOG OUT

User: Mark Purnell Category: Manuscript Reviews Editor Logged on since: 3:13 pm

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Click the action link for a manuscript to select it (e.g. to submit a review or access manuscript files)

MS #	Short Title	Authors	Status	Action?
132			Awaiting author revision (12)	View/Edit
133			Peer Review (7)	Allowed ➔
134			Peer Review (7)	Allowed ➔
135			Peer Review (7)	Allowed ➔
136			Peer Review (7)	Allowed ➔
138			Initial assessment (4)	View/Edit

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Figure 2. The PEMSATS manuscript list page (sensitive information has been obscured). Once logged in, this is the page all users see. 2.1. PEMSATS logo and primary navigation links (manuscript list page; change password; log out). 2.2. User data line – who is logged in, what type of user, how long have they been logged in. 2.3. Link to submit a new manuscript (for freshly registered authors this will be the only link visible). 2.4. List of manuscripts available; for authors and reviewers there will normally only be one. Clicking the Action link on the right opens the manuscript details page (see Figure 3).

files by return. Using PEMSATS, a reviewer can access the manuscript within seconds of their decision to accept, without the intervention of the Reviews Editor. This is particularly helpful when one of us is in the field.

The introduction of PEMSATS will also benefit PE Editors, because all our internal communications regarding manuscripts will now be made using the system. This will make the whole process of manuscript handling simpler and more efficient. For instance the central storage of all manuscript files will ensure that we will always know where the most recent versions are (and who uploaded them, and when), and also avoid problems with multiple file versions. The PEMSATS system cuts Handling Editor involvement out of the manuscript lifecycle at several non-critical points, speeding throughput. Automatic drafting of standard emails reduces our workload, while still enabling us to customise the text as desired. Automatic reminders keep manuscripts moving through the system by avoiding any confusion about whose action is required. Central availability of status information makes it much easier for us to see what needs doing and how

things are progressing; this is especially important for tracking peer reviews. Finally, we will now more easily be able to examine our systems for bottlenecks, and attempt to remove them. This will all be entirely transparent to authors and reviewers of course, let alone to readers of the journal, but that does not mean that the benefits will be invisible! PEMSATS will speed manuscript throughput, while simultaneously enabling us to spend far less time on the mundane work of composing emails, shifting files around, and generally keeping manuscripts moving through the system in an orderly fashion. We will be able to devote more time to the real work of evaluating and improving the increasing number of manuscripts that are submitted to us, and ensuring that *Palaeontologia Electronica* remains a journal of the highest possible quality.

Technical details for the geekier reader: PEMSATS is written in PHP 5.1 using a MySQL database back-end, running on a Linux server. Swift Mailer is used for email, PECL Archive_Zip for ZIP file creation, and Xupload (a PERL/PHP hybrid) for file upload progress bars.



MANUSCRIPT LIST PAGE - CHANGE PASSWORD - LOG OUT

User: [redacted] Category: Reviewer Logged on since: 4:12 pm

1

[\[ABORT ACTION\]](#) [\[PREVIOUS PAGE\]](#)

Action 'Submit review' for manuscript '[\[redacted\]](#)'

2

Review

3

Recommendation

SUBMIT DATA AND PROCEED TO NEXT PAGE

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Figure 4. A page from the 'submit review' action (sensitive information obscured). This page is accessed as part of a sequence from the 'submit review' link visible, if appropriate, on the manuscript list page. 4.1. Standard links to abort action or return to previous page in the sequence (in this case the instructions page). Action name and Manuscript short title also given. 4.2-3. Data items gathered by the action - in this case 4.2 the review itself and 4.3 the recommendation, selected from a drop-down. The large button underneath submits the information and proceeds to the next stage of the action (in this case there are no more pages and the review process is complete).