

The Move Towards Electronic Lab Notebooks

By John Landells and Helen Palmer

Have you ever considered discarding that well-worn old lab notebook, and making the move to an electronic version?

Lab notebooks are of course a vital part of any research project. All researchers are well aware of the need to keep full and detailed records of their experimental work for future reference, and so that experiments can be repeated by their colleagues. Such records can also become very important in disputes over patent rights. In most countries, the “winner” in the race for patent rights will be the “first to file” a patent application. However, the current law in the United States is such that the “first to invent” has the right to obtain patent protection for an invention. (Although there are indications that this situation may change in the future.) Therefore, if there is any dispute between two parties, for example over when a particular compound was made and characterised, it may be vital to show that the compound was in fact made on a particular date. Many organisations therefore recognise the importance of adopting standard procedures whereby the researcher signs and dates his or her lab book, and the entry is then read, signed and dated by a witness.

As an alternative to the old-style handwritten lab book, some organisations are now moving to the use of electronic lab notebooks. There are a number of commercial products available, which endeavour to incorporate enough checks and safeguards to satisfy even the most pedantic patent attorney.

There are some obvious advantages to using electronic lab books over the traditional handwritten versions. One of these is the potential for an increase in knowledge transfer, as electronic notebooks allow results to be readily shared with collaborators and colleagues. In addition, because the format is electronic, it can be easier to search through the data and information contained within. Experimental data and text can be easily integrated together and, once entered, cannot be modified. This can assist in preventing possible transgressions by the record-keeper. The researcher can then electronically sign off each piece of work, and the software provides a permanent date and

time record of that piece of work. Such electronic records could form part of any evidence used in a future patent dispute.

Other advantages include the fact that electronic notebooks can be backed up electronically, thereby minimising the possibility of losing vital data, and providing a permanent stored record. However, this does highlight a potential issue for the future - whether or not, with advances in technology, this stored information will be able to be easily retrieved and read ten or even twenty years in the future. One way of dealing with this may be to retain paper printouts from the electronic notebook, together with any other original data - although this somewhat defeats the purpose of storing the information electronically.

Academia may be slower to adopt electronic lab notebooks than industry organisations. Cost could be a factor for academic organisations, particularly if the lab notebook software needs to be tailored to suit individual lab situations and needs. Developing and maintaining such software would require significant input and ongoing maintenance from an IT support team.

Nevertheless, it is easy to see that there will come a time when the potential benefits of electronic lab notebooks will outweigh the disadvantages. Perhaps the “paperless lab” is just around the corner.

A reminder: if you have any queries regarding patents, or indeed any form of intellectual property, please direct them to:

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