Creating the right image

Ivan Trundle

Manager,
communications
and publishing
ivan.trundle@alia.org.au

All of the 'digitally-enhanced' pictures had suffered an attack of the pixels...

L ast month's article on frames elicited a strong and quite vocal response from a broad cross-section of web users — it appears that I struck a chord with many readers. However, I doubt if the tide will turn in favour of simplicity in navigation, as much as information professionals may desire it. The advent of new web technologies (wireless application protocols — or WAP — and others to come) will demand such simplicity if they are to develop a niche in a rather crowded environment, but I predict that it is highly unlikely that WAP technology (for example) will become a dominant force in communication of online textual material. When mobile phones and other devices have the same data entry and visual capabilities of your average internet-connected computer, then perhaps things will change. Until then, I remain unconvinced.

A backward step — or revolutionary move?
On a related note, and as a subscriber to *WIRED* magazine since its inception, I noted with considerable mirth and hilarity the advent of 'the first Internet enabled magazine in history' (according to the hype enclosed with issue 8.07). Developed by Digimarc, creators of digitally-embedded signature in digital pictures, a number of pictures throughout the magazine have a special kind of signature embedded (undetectable to the eye, so they say — but more on this in a moment) that allows one to hold the picture up to a digital camera and record the watermark which is then be transferred to the user's personal computer and automatically opens a web browser at the URL secretly embedded. They call it groundbreaking technology — and I concur that it does indeed severely break the ground. In their defence, they also suggest that there are bound to be scme bumps along the way. So I should have been prepared.

It took me a few moments to check that the issue was not dated 'April', and although Digimarc MediaBridge has to be a prime candidate for the most perverse misuse of technology and the most likely to sink without trace, I was prepared to accept the 'development' as yet another mindless internet pursuit. However, upon opening the magazine, my mirth was quickly replaced with frustration and anger. All of the 'digitally-enhanced' pictures had suffered an attack of the pixels. Instead of seeing clear, sharp, well-focused images, the 'invisible digital watermark' had rendered the pictures slightly fuzzy, noticeably unclear, and obviously digitally-affected. What surprised me more was that I have grown to appreciate and expect high-quality pictures in magazines of this ilk.

Digital images and *inCite*
The advent of digital camera technology has sprouted a corresponding interest in the reproduction of digital pictures in print-based media such as *inCite* magazine. A growing number of our contributors are asking if it is acceptable to send digital pictures to supplement their article. As a general rule, we say 'please don't'. Why is this? Unless you have a digital camera that cost you upwards of $5000, the quality of the output is highly unlikely to be suitable for reproduction in print, especially in *inCite* magazine. And it all boils down to numbers, and in particular, numbers of pixels.

Traditional chemical photographs contain countless millions of 'pixels' of information. For example, a standard sliver-halide colour photograph contains enough information (even with poor-quality cameras) to allow enlargement, enhancement, or other kinds of manipulation deemed suitable for print-based publication. On the other hand, digital cameras make compromises along the way, both in terms of the range of contrast and in the amount of information recorded. More pixels are needed for adequate print publication: *inCite*, for example, is printed at 300 pixels per inch (or dpi), whereas most digital cameras produce output at 72dpi. Digital cameras capable of producing output at more than 72dpi must use compression algorithms such as JPEG to reduce the overall file size of the image (otherwise the image would not be able to be stored and later retrieved) — and these algorithms remove important data from the final image, which can never be recovered.
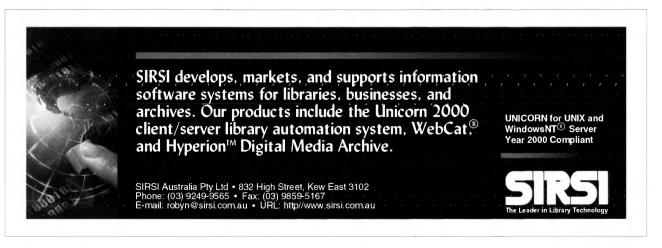
So if you are hoping to include images in your next article for *inCite*, please send your original (chemical) photographs — we'll make sure that you get them back! Save the digital pictures for your web-site, where pixels don't matter so much. ∎