CREATIVITY AND TECHNOLOGY

by

Marc Millon

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Marshall McLuhan's famous aphorism "the medium is the message" implies that technology itself is the ultimate determinant of content and more. What is most interesting in the case of the world wide web is to consider how technological innovation is impacting on creativity and in the process resulting in a form that is evolving organically in unpredictable directions. Indeed this is a medium that is positively driven by technological innovation, and as new so-called "killer applications" arrive on the scene in ever greater and more frequent profusion, it is possible to witness the evolution of the form most graphically: for indeed in the frantic race to utilise such emerging technologies the change and evolution to the form and structure of the web is happening literally before our very eyes. Witness how static and unimaginative early first generation web sites now seem, with their grey backgrounds, and lists of hypertext links extending down the screen in sometimes endless scrolls. Yet how exciting they appeared to us just, what, a few years ago? As new features have come on line, both as extensions to HTML as well as through plug-in technologies, web sites have literally come alive, with the imaginative use of graphics, frames, and tables used not simply to liven up a page but to aid in navigation and the facility of exploration.

Macromedia's Shockwave plug-in, for example, allows the importation of Director movies, Flash animations and streaming audio and video. This facility adds true multimedia capabilities to the web, and with the use of Macromedia's lingo script, dynamic interactivity is possible whereby, for example, certain behaviours — the start of a sound file, the swapping of an image, or the offer of a pull-down menu — take place when a mouse rolls over an image or is clicked on. However, such features come at a cost, and that is the requirement for the user to have the Shockwave plug-in installed and

configured in his/her browser as an in-line helper application. Though this is freely available from the Macromedia site, this process is at once time consuming and off-putting even to advanced web users.

Shockwave is not the only technology that requires a third-party plug-in. Checking my web browser at this moment, I discover that I have no fewer than twelve helper applications configured and this number grows literaly by the day, virtually every time I come across an interesting or innovative site that requires some widget application to get it to work. Innovative technologies, including streaming audio and video, VRML, Adobe Acrobat and many others, all require plug-ins that need to be downloaded and installed in order to make access to those features possible. The result is that the web is becoming ever more fragmented with such a variety of proprietary extensions in use and few as yet establishing themselves as true industry standards that it has become difficult for the content creator to know which to choose, safe in the knowledge that his/her site will be able to be at once at the cutting edge yet at the same time be able to reach a large audience. Technology in this sense is causing the web to grow ever more tangled and confusing, the haves and have-nots no longer merely delimited by those who are or are not on-line but further by those who utilise the latest browser versions or who are savvy enough to have downloaded and configured the necessary "cutting edge" helper applications necessary to make cool sites really sing and dance. The frustration for those who come across such sites but find themselves shut out from their full features can be extreme and lead to the situation where users feel compelled constantly to keep up with the latest applications or risk being consigned to the dustbin of net oblivion.

Java and the simpler though closely related JavaScript are two object-oriented, cross-platform computer languages that hold considerable promise as alternative means to adding interactivity and functionality that can be delivered without the need for third-party plug-ins within a Java-savvy web browser. JavaScript programs, written as lines of code within an HTML page, for example, can control the behaviour of a page, helping to

determine not only how it looks, but how it acts and interacts with the user. At its most basic level, such programs are used primarily for ornamentation, that is to add special effects — scrolling text, buttons that change colour when triggered by events such as a mouse rollover or click, the playing of a background sound file. Java applets are even more powerful and can be used to create substantive cross-platform applications that one day may even take care of all the tasks your computer currently does, working off of networked terminals that download the software applications on demand. However, though Java and JavaScript programs do not require plug-ins to run, it is not all plain sailing: at present both require valuable bandwidth to operate, and more worryingly, these so-called "universal cross-platform languages" are appearing in various proprietary guises, such as Microsoft's Java which works under the Windows platform, as well as scaled down versions such as Embedded Java and PersonalJava that have been developed for small-scale devices such as webphones, palmtops and other hand-held devices. So as in everything else on the web, the promise of universal accessibility is easier than the delivery and an industry standard for Java itself has not yet established itself across the board.

Content creators utilising Java and JavaScript in web development, furthermore, must balance the time it takes to wait for an applet to download or a script to execute against the perceived valued of that application. This same caveat applies to those making use of any other features that require lengthy downloads or the retrieval of a third-party plug-in. It is no good asking people to wait some five or ten minutes or more to download some cute widget that does nothing in terms of adding value to content and which is itself over in less than five seconds!

The whole thing rather reminds me of those hi-fi fanatics from the 70s and 80s, you know, those folks with the constantly glazed, evangelical eyes and enlarged ears who were insanely knowledgeable about and "into" stereo components — amps, pre-amps, the latest turntables, speakers with massive sub-woofers and the clearest and most precise

tweeters — but were hardly at all interested in the music that they could enjoy through the machine. It was the sheer excitement of those sexy objects of desire that was the driving force behind their enthusiasms: I see the same thing sometimes in the web whiz kids today who can't wait to cram their sites with the latest electronic equivalents for the sheer sake of it, the technology an end in itself rather than a means to communicating or adding value to content. See it too in myself, in other web users who feel the frantic need to keep up with all that is the latest. This too is the meaning of the "medium is the message".

Technology, it seems certain, is going to continue to drive the web for the near future and in the process lead us ever more into temptation. Like electronic junkies, like serial cybersex offenders, it is hard not to get addicted to the thrill of it all. This is indeed a great part of the excitement of developing creative content for the web. Undoubtedly, the entire creative process is undergoing an extended period of trial and error and the learning curve is still steep, the mistakes and blunders egregious. Those technologies that are truly worthwhile, meanwhile, will inevitably, and hopefully sooner rather than later, ultimately establish themselves as industry standards. But it is not only a question of discovering what new technologies are effective, it is also a case of finding out what users will go for. Indeed, the finest or funkiest special effect or application may bring orgasmic joy and satisfaction to the content creator but, for any variety of reasons — slow download, the requirement of a plug-in, for example — prove to be a total turn-off, or click-elsewhere for the user (and the advent of web tv and the mouse potato mentality that this may further engender is only likely to bring greater resistance to such requirements). Finding the balance between those new technologies that are of real worth and interest yet which are capable of reaching as large an audience as possible will not always be easy.