THE MEANS TO THE END IMPLIES THE CREATION OF THE NECESSARY TOOLS AND MATERIALS

By Kharim Hogan

O ver the past several years, I've been involved with authoring tools and environments in one way or another. Initially I had absolutely no use for the tools whatsoever. Then I became a user of the tools, and inevitably moved to programming them. Now I argue about and with them. On one hand I am thrilled about all the new developments and possibilities that are continuously emerging at an impossible rate, yet at the same time, of late, I've often wanted to just throw up my hands and seriously request a bit of a "time out!!". Fact is though, both my experiences and those of countless others have brought a number of issues and questions to bear. For example, the question at issue in today's panel — a painter needs many years to master the tools of painting; an electronic artist would not recognize the work environment after such a time span. How does one master the tools in such an environment: by programming them themselves?

Yes and No! Yes, by default one will have theoretically understood the possibilities and limitations of the tool if one has programmed it oneself. But no, that doesn't necessarily imply a mastery of the tool. Using or applying it towards an effective artistic end may still require some time and experimentation. One still has to learn to use it. (A little aside...there are times one spends so long trying to get the tool they are building just right that the original intention is forgotten. But I suppose that's all part of the process). One way or another, the artist must be involved!

Many of the digital tools available to artists today are based on the "traditional artforms". For example, tools available to the photographer such as Photoshop, are for the most part digital equivalents of what one would find in the darkroom. We have been transferring both the tools and techniques to computer platforms. In addition to this, we have added tools and hence techniques afforded us by digital technology which can be applied by artists adapting their traditional artistic practices and creative endeavours to this new medium. The new possibilities available have prompted us to further explore and push the boundaries of digital technology resulting in a plethora of applications, tools, plug-ins and so forth. The rate at which these tools are being enhanced and created as well as the pace of technological change and advancement leaves us today relentlessly striving to stay ahead of the dust. Inevitably this results in considerable time spent learning and adapting to new tools and technologies, perhaps for fear of not being considered "on the cutting edge"?

Meanwhile though, there seems to be an ever increasing imbalance in the mastery and development of style and technique. Whereas in the past an artist would go through a period of study and apprenticeship whereby he/she would diligently learn about and then apply the techniques and methods of the masters, emulate styles in order to further develop the craft and finally one's own stylistic character would emerge, today we neither have models to follow nor do we have time to define them as we are constantly bombarded with yet newer, more powerful, and more complex developments in the digital arena. If we opt to stick with a set of tools or an environment, we can come to master it. We are gambling though because what may take us several months to produce might be something which could have been done in a matter of hours had we stayed informed of new developments. By the same token, waiting for the tool or building the tool might take as much time as contorting oneself around an environment where the tool is missing.

Perhaps it is time to sit back and choose a direction! Without tool developers we restrict advancements but then again, without artists to define, refine, and/or demand tools to suit particular styles and creative purposes, the new media will never mature. They will continue to advance technologically but will we be able to "fill the space" or "cover the canvas" so to speak? Are we therefore addressing an audience or are we now only fulfilling our own digital dreams driven by the ecstasy and excitement of the power of the technology? Are we essentially restricting access to the "fortunate" few who can afford to upgrade and maintain the level of platforms and technologies required today to have access to this "cutting edge" fantasy?

Again, can artists use the tools and technologies to their fullest in order to achieve this goal without having to program themselves? In other words, can artists only get there if tools are designed that will allow them to author freely? And if so, who should engage in designing and developing such tools? Is it even possible to conceive of one tool that will be all that is necessary to an artist to create one's pieces or works? Will artists not ultimately either require other tools in conjunction with those they are using or be restricted by the limitations of the "catch-all" tool? Can there really be only one tool which serves every artistic purpose and goal? It seems to me that somehow, somewhere along the way, the whole creative process has been reversed with the advancement of digital technology. It used to be that first we'd have an idea and then attempt to realize it. If that involved building tools, we'd build them. No problem. But now, it's as if it's quickly becoming absurd to consider this method. Rather we go and find out what the tools can do for us, what exists today and what's considered "hip" and then we try to come up with something that can be done using these tools and environments! Why? Are we somehow putting the message across that we want all the tools possible at our disposal now and today, and furthermore, that we want tools and environments that will even go so far as to realize our ideas for us? Have we grown tired of the challenge of taking an ab-

stract idea and making it concrete? Or, are we actually succumbing to the pace of technological advancement? The choice, fortunately, is still there.

What about tools to build tools? Development environments and applications based on open architectures are a fantastic option. They leave artists with the option to either extend the bounds of existing tools, or experiment with other possibilities if they so desire. In the end, does it really take longer to master a programming or scripting language than it does to learn a new high-level tool? With tools such as Director, 3D Studio, MAX, etc., artists have extraordinary potential at their disposal, and if they want to extend them, they can. In this case, one can learn a couple of environments and essentially fly with them simply due to the extensibility of the environment. Consider an environment such as OpenInventor for example. Those who are more interested in the low-level aspects of tool building can concentrate on extending and refining existing tool sets and applications, while those who just want to exploit the artistic potential that the applications created within these environments have to offer, can also do so. One of the interesting and potentially seductive aspects of such an environment is the fact that as more tools, plug-ins, modules, classes, and so forth become available, that are all based in the chosen environment, since there is already a familiarity with the environment, the learning curve should be minimal compared to migrating to yet another set of tools.

There was a time when one could almost actually learn to use a tool in its entirety then go back and learn to use it well!! If we set out to agree on a basic set of building blocks, could we do this again today, and would we even want to go that route? Will converging to one or more environments slow down or otherwise hinder technological developments? On the other hand, one could argue that if we were all using the same set of tools, it could quickly become somewhat boring after all, isn't art partly about doing something new and different?

Aren't we toolmakers by nature? No matter what the medium, do we not usually find ourselves either reworking a method or building some sort of contraption or "tool" to produce a certain new or different effect? At some point in the process, we add or create devices to achieve intended goals. We end up turning away from the work in progress for a few minutes, hours or days, while we go off and try to mix the exact colour we want or create the sound we have in mind for example. Is this not analogous to taking out your digital tool building materials and redirecting the creative process to generate the required module to enhance one's work with an unimplemented idea?

I'd like to return for a minute to the issue of artistic styles and techniques and look at where authoring tools and environments fit in. In what concerns adapting traditional techniques to their digital counterparts, we have a basis. We can and have done so, start by creating the tools which will allow us to pro-

duce much of the same type of output or results we've been used to. We then move to adding what the digital domain gives us over and above this to create different tools and therefore be able to accomplish things that weren't as easily accessible to us in the past, and finally we push the limits of the technology and move yet further with the possibilities. With this in mind, it is possible to create relatively complete authoring environments to relieve the artist of having to go out and gather how many different packages and perhaps as many platforms. But what of "new media"? Are we not still in the process of defining it? And if so, where do we start with toolboxes and full-blown creative environments? Does there not first need to be a certain settling and absorption of the new canvas before we will really be able to prescribe any fixed set of tools? Do we not have to become artists once again, have the creative intentions, try to fulfill them and by this process define and fix some of the basic elements? There will always be variables and these variables are part of the artistic process. Hence, programming some of these tools is part of t1he fun, is it not?

Finally, I'd like to leave you with the following question...can we build a set of tools or an authoring environment that will actually satisfy us for more than 20 minutes? If so, would that imply that we've run out of ideas?