

## DIGITAL CULTURE – WHENCE AND WHERE TO?

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### KEYNOTE ADDRESS – SUMMARY

The 21<sup>st</sup> century has begun with an explosion of digital culture. Though the fuse had been burning for some years the actual detonation has been a major surprise. Google has revolutionised access to information and probably the fundamentals of scholarship, Wikipedia, YouTube, Second Life, Bebo and on and on, all mark extraordinary progress in the evolution of our digital world. To understand what is happening, why it is happening and, importantly, to try to get an understanding of where it is taking us we need to take a deep breath and look at the progress of human cultural evolution from its earliest beginnings.

After the development of symbolic language, thought to have emerged around 250,000 years ago, the next great defining feature of Homo sapiens has been the ability to use that language to externalise knowledge. Initially this would have been manifest, or perhaps in Darwinian terms selected for, in the capability to pass knowledge on to offspring by “showing and telling”. Thus in times of acute threat, for example after the near extinction of 73,000 years ago caused by the eruption of Mount Toba in Java, those humans who were able to pass on tool making and foraging skills quickly gave their children an increased chance of survival. Thus we can imagine that the estimated 10,000 or so individuals who were around at the end of that cataclysmic period were those with the best transmission skills. In the ensuing 50,000 years, these skills have blossomed into the sophisticated communication skills and advanced technologies we have today. The last 500 years with the development printing and the proliferation of books as knowledge repositories saw a dramatic acceleration of this externalisation process and we can now see digital culture as another major step.

Digital repositories differ from the older book and picture-based cultures in that they have the potential to be intelligent and active. Already we have bots that will go find things which fit our profile, that profile either being explicitly and willingly given by us or inferred from our search behaviours, and we are on the verge of much more intelligent repositories. Today our systems have probably crossed a rather hazy boundary and are headed towards automatic knowledge generation. Do we want this and how will we live with it? The topic of this conference, *visualisation*, will be a key tool in communicating with such systems and I suggest that, after the excitements and challenges of the ideas and techniques to be presented in the next few days, we reflect on them in the context of this major cultural development.

## **BIOGRAPHY**

Dr Mallen is founder and Chair of System Simulation Ltd (SSL) a software company supplying high end information management systems to leading museums and other cultural institutions. He first started working with computers in the Mathematics Department of the Royal Aircraft Establishment in the 1960s. He left the RAE to work with Gordon Pask, one of the leading members of the British cybernetics school, and developed early computer models of human learning and decision making. He co-founded SSL in 1970 and also maintained academic appointments first at the Royal College of Art, researching design decision making and computer graphics. This led to animation projects for film and TV. A second academic appointment was at Bournemouth University where he was the first head of the Department of Communication and Media Production, now the Media School, housing the National Centre for Computer Animation. He was also a founder member of the Computer Arts Society set up in the late 1960s to encourage artists to engage with this new field. He has published articles and papers on many aspect of computing and its applications in learning and carried out consulting assignments for senior levels of government and industry. He is a Fellow of the British Computer Society, a Chartered Engineer and a Fellow of the Royal Society of Arts.