

PREDICTING THE PAST, REMEMBERING THE FUTURE

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There never has been such an exciting moment in time in the extraordinary 30 year history of our subject area, as NOW, when the philosophical theoretical and practical issues of *virtuality* are taking centre stage.

The Past

There have, of course, been other defining moments during these exciting 30 years:

- the first algorithms for generating building layouts (circa 1965).
- the first use of Computer graphics for building appraisal (circa 1966).
- the first integrated package for building performance appraisal (circa 1972).
- the first computer generated perspective drawings (circa 1973).
- the first robust drafting systems (circa 1975).
- the first dynamic energy models (circa 1982).
- the first photorealistic colour imaging (circa 1986).
- the first animations (circa 1988)
- the first multimedia systems (circa 1995), and
- the first convincing demonstrations of virtual reality (circa 1996).

Whereas the CAAD community has been hugely inventive in the development of ICT applications to building design, it has been woefully remiss in its attempts to evaluate the contribution of those developments to the quality of the built environment or to the efficiency of the design process. In the absence of any real evidence, one can only conjecture regarding the real benefits which fall, it is suggested, under the following headings:

- **Verisimilitude:** The extraordinary quality of still and animated images of the formal qualities of the interiors and exteriors of individual buildings and of whole neighborhoods must surely give great comfort to practitioners and their clients that what is intended, formally, is what will be delivered, i.e. WYSIWYG - what you see is what you get.
- **Sustainability:** The power of «first-principle» models of the dynamic energetic behaviour of buildings in response to changing diurnal and seasonal conditions has the potential to save millions of dollars and dramatically to reduce the damaging environmental pollution created by badly designed and managed buildings.
- **Productivity:** CAD is now a multi-billion dollar business which offers design decision support systems which operate, effectively, across continents, time-zones, professions and companies.
- **Communication:** Multi-media technology - cheap to deliver but high in value - is changing the way in which we can explain and understand the past and, envisage and anticipate the future; virtual past and virtual future!

Macromyopia

The late John Lansdown offered the view, in his wonderfully prophetic way, that ..."the future will be just like the past, only more so..."

So what can we expect the extraordinary trajectory of our subject area to be?

To have *any* chance of being accurate we have to have an understanding of the phenomenon of *macromyopia*: the phenomenon exhibited by society of greatly exaggerating the immediate short-term impact of new technologies (particularly the information technologies) but, more importantly, seriously underestimating their sustained long-term impacts - socially, economically and intellectually . Examples of flawed predictions regarding the the future application of information technologies include:

- The British Government in 1880 declined to support the idea of a national telephonic system, backed by the argument that there were sufficient small boys in the countryside to run with messages.



- Alexander Bell was modest enough to say that: «I am not boasting or exaggerating but I believe, one day, there will be a telephone in every American city».
- Tom Watson, in 1943 said: «I think there is a world market for about 5 computers».
- In 1977, Ken Olsson of Digital said: «There is no reason for any individuals to have a computer in their home».

The Future

Just as the ascent of woman/man-kind can be attributed to her/his capacity to discover amplifiers of the modest human capability, so we shall discover how best to exploit our most important amplifier - that of the intellect. The more we know the more we can figure; the more we can figure the more we understand; the more we understand the more we can appraise; the more we can appraise the more we can decide; the more we can decide the more we can act; the more we can act the more we can shape; and the more we can shape, the better the chance that we can leave for future generations a truly sustainable built environment which is fit-for-purpose, cost-beneficial, environmentally friendly and culturally significant

Central to this aspiration will be our understanding of the relationship between real and virtual worlds and how to move effortlessly between them. We need to be able to design, from *within* the virtual world, environments which may be real or may remain virtual or, perhaps, be part real and part virtual.

What is certain is that the next 30 years will be every bit as exciting and challenging as the first 30 years.

