Not only computing – also art

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Heavy Metal

Regular readers will be aware that a good part of my time is spent in devising computer animated images to assist art directors in making advertisements and films of various sorts. Being concerned with only a part of the film-making process, I make the images in something of a vacuum, and am usually surprised to see how they turn out in the final production. Last year, veteran animator John Halas asked my colleague, Tony Pritchett and I to do a short sequence of what I thought was a helicopter landing on the Pentagon building in Washington. This has turned up in the new animated film *Heavy Metal* as a view from the VDU's of an alien space ship complete with noise added to the picture. I think it fits very well into the general action and illustrates quite neatly the advantages of computer animation in dealing with complex rotations and manipulations of three-dimensional objects – something which is fairly difficult to do by hand.

John Halas has long been interested in computer assisted animation and has pioneered some of the British work in this area. At the beginning of 1981 he showed his new fully computer animated film, *Dilemma*, which seems set to be a classic of the genre, having already won a number of prizes. Look out for it.

Next time: a sow's ear

Over Christmas I was heavily engaged in assisting Ken Brown, another brilliant and prize-winning animator who has used computer produced imagary for some years. In this case, and for reasons which we need not dwell on, it was necessary to animate objects built up as a series of small blocks, rather like Lego. These objects such as two shown in Figures 1 and 3 had to build up and dismantle
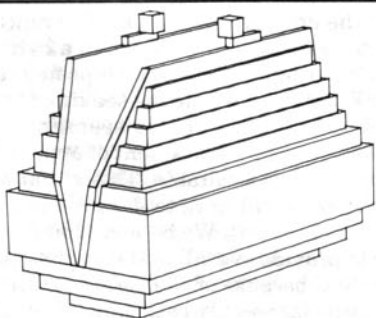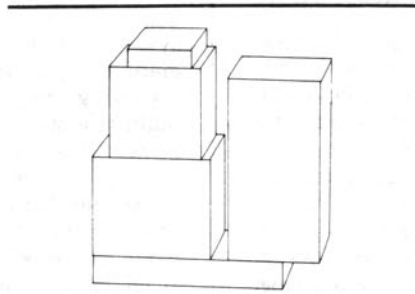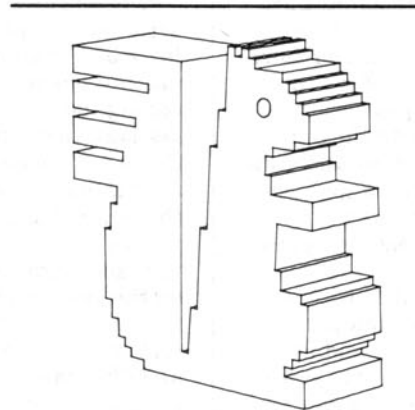

Figure 1

Figure 2

Figure 3

themselves via stages such as Figure 2 whilst rotating in order to give an appearance of continual three-dimensional transformation from one object to another.

The problems in doing this are manifold especially when full hidden-line imagary is needed. It is fairly easy to model the objects when complete – although, with the micro-based computers that I use, the computation of each frame takes a long time (12 hours for each second of film in some cases!). However, to describe the data in such a way as to facilitate the transformation is a real problem, where trial and error plays a considerable part.

The whole business of data description for computer animation requires further research and study. Much has been done on modelling of objects for static pictures or for those in which the objects are subject to rigid body transformations. Creative animators, however, want to make much more complex transformations and little is published on this aspect. It is an area where an expert, knowledge-based system would be of real assistance – but is anyone working on this subject?

Viewdata '81

As mentioned last time, my experience with videotex has not been encouraging, but nonetheless, foolish chap that I am, I am going to persevere with Prestel – by moving it into my flat and connecting it to my Apple II computer where, I hope new and exciting things will emerge. I will report progress. (Incidentally, I calculate that, if you looked at each Prestel page for one second, twelve hours a day, it would take 250 days to see them all!).

The reason for this renewed interest in Prestel is my recent attendance at Outline's Viewdata '81 Conference and Exhibition at the Wembley Conference Centre, which whetted my appetite for more of the same. Certainly, both public and private Viewdata systems ought to be both valuable to the user and profitable to the supplier but, almost without exception, speakers representing manufacturers, software and information providers came to the platforms to tell us that they weren't making money – not yet anyway.

Prestel is now about two years old and was the first Viewdata system. To pioneer the field is always problematical – others come along behind having the benefit of your costly mistakes and offering an improved product. The rival systems to Prestel, the German Bildschirm text (actually just a son of Prestel), the Canadian Telidon, and the Japanese Captain system, all offer improved facilities – but, to my mind, not *much* improved. Perhaps the biggest area in which they score is in graphics, but Prestel is fighting back with Picture Prestel which allows medium resolution reproductions of photographs to be included in their Viewdata pages. The Open University Cyclops system also has superior graphics. Needless to say, much of the conference and exhibition was taken up with the rival claims of these systems. Standards, too, are bones of contention, although a European standard will shortly be settled. Perhaps the best presentation was that by N. Remington-Hobbs on the private Viewdata system at the Stock Exchange called Topic. This system currently supports about 800 continuously working terminals with plans for extension to 1,500. The Stock Exchange provides a basic Prestel-compatible service for all users and also supports ten closed user groups whose information is restricted to members of these groups. This was obviously a useful and important service enabling up-to-the-minute information to be constantly in the hands of Stock Exchange members.

The buzz word at the Conference was 'transaction', which seemed to be what you and I mean by 'interaction'. By all accounts transaction orientated Viewdata systems are going to be the thing, so that people can buy, sell and bank remotely. We must wait and see.