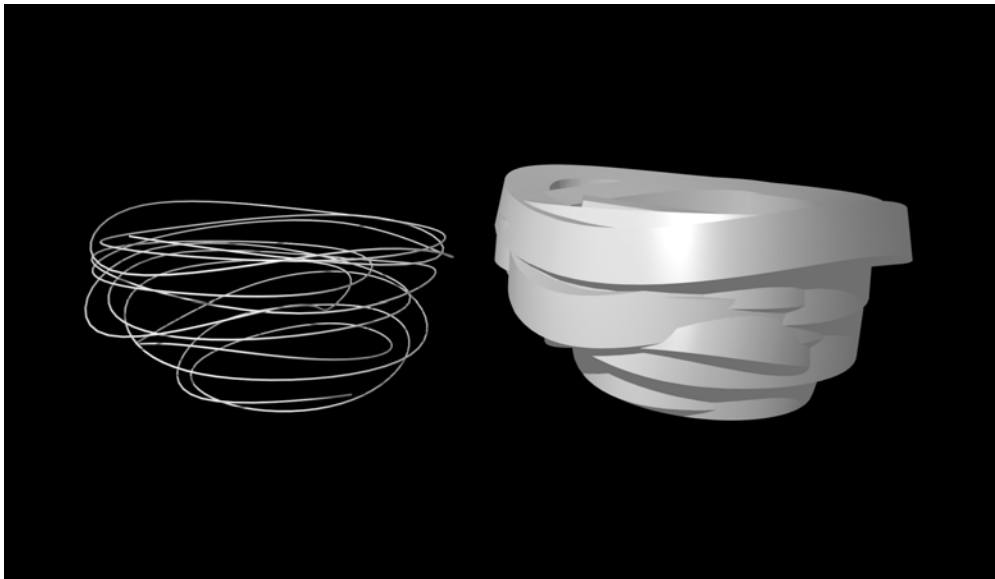


Automatic 3D Digital Production Research Competition

The development of the digitally based maker has the last few years gone through rapid development. In a variety of ways the digital media has the potential of freeing the craft practitioner from creating within the physical constraints of his/her skills. There are, however still important elements of the traditional craft practice which remains relevant and have yet to find a transition into the new media.

One of these elements is the direct physical interaction of the maker during creation. Creating through a CAD program offers huge possibilities but it is essentially a static and calculating exercise. This process is far removed from the physical and intuitive relationship with the form the traditional craft maker experiences. With this proposal I am aiming to integrate the vast creative possibilities of the digital media with the intuitive and physical interaction characterised by the traditional craft practice.

In addition is the element of 'human evidence'. By this I mean the minor imperfections that is such a humanising part of the craft object. Digital media offers the captivating prospect of absolute perfection, in contrast this proposal seeks to explore the 'free and informal'.



The proposal is based on using a digitizing arm or a motion capture device to describe shape and form freehand in space. The project builds on earlier research using the G2 microscribe digitizer, however motion capture would possibly be a better option as it enables completely free movement. Initially a series of shapes would be described as linear paths by using either of these devices. These paths are feed directly into a CAD program as basic 'frames' for constructing vessel-based shapes. The method of vessel generation is not fully determined but various ways such as 'sweeping', 'lofting' or 'draping' could be explored. It would be a clear aim to leave the expression of the input as much as possible. Human evidence in the paths such as 'wobbles and kinks' should not be altered. The completed files would be realised via CNC milling, probably using blue foam. The intention is not for the milling to be refined but course and direct using large cutters to reflect the

physical nature of the input. From the milled shapes a special technique of one-piece seamless plaster moulds would be used to realise the shapes in ceramics. Creating moulds directly by milling out the negative shape could also be experimented with. The emphasis of this proposal is on the 'complete' making process, using the digital tools in synergy with traditional ceramic and mould-making skills.

In addition to academic dissemination (conference paper / article) I believe it is important (maybe more) to communicate such a project to the established craft world and the wider public. This could take the form of an open day with discussions and demonstrations of equipment. I think there is still a long way to go in establishing a public understanding of the digital artisan concept.

Key project words: Direct Intuitive Physical Expressive

Tavs Jørgensen, February 2005

Budget:

Lease or hire of digitizer*/ motion capture devise	£ 500
Plaster (HP2)	£ 200
Blue foam,	£ 100
Clay, glaze, firing etc	£ 300
Exhibition costs (photography, postcards, posters etc)	£ 500
Miscellaneous	£ 200
Total:	<u>£ 1800</u>

*(acquiring a G2 microscribe digitizer: £2000)

