MOMENTUM

Antje Illner
Beate Gegenwart
Cathy Treadaway
Geoffrey Mann
Jayne Wallace
Jenny Smith
Justin Marshall
Vanessa Cutler
Throughout history, from the invention of the wheel to the printing press, artists have appropriated and often subverted the latest tools and technology to realise their creative ideas; the tools and materials of the Information Age are no exception. The artworks in this exhibition reflect the momentum of current developments in digital technology and their impact on creative practice in the applied arts.

Digital technology pervades every part of our lives and has dramatically changed working practices over the last thirty years. The potential to work collaboratively, across time zones and beyond geographic limitations creates a new democracy, breaks down cultural and sociological barriers and provides creative spaces stimulated by interaction and communication. The rise of social networking and instant messaging has challenged our notions of time, availability and presence. Our mediated world is becoming increasingly portable, embedded and embodied. The zeros and ones of digital code poetically reconfigure our mediated world is becoming increasingly portable, embedded and embodied. The zeros and ones of digital code poetically reconfigure

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Momentum: 'The impetus and driving force gained by the development of a process or course of events.' Oxford Dictionary

Artworks representative of the twentieth century Digital Age exhibit the visual characteristics of the technology, pixels, saturated colour, morphing and moving imagery, but those of the emerging Information Age involve orchestrations of knowledge. The artist becomes conductor, beaming the rhythms of making to the flow of creative intention. Geoffrey Mann for example describes himself as a creative director linking his role as an artist to that of a film director in the creation of a movie. Like many contemporary practitioners he recognizes that there will never be enough time to become expert in all the areas required to realize his ideas. He asserts that 'You don’t have to make it – there isn’t time to learn how to do everything.' He regards the technical practitioners, who assist in the crafting of the work, as being equivalent to film producers – working closely with the director’s artistic vision and undertaking skilled aspects of the work required at the various stages in its creation. Many’s ability to collaborate stems from a familiarity with making and processes that provide him with the appropriate terminology to communicate his visual concepts. ‘I am like a bridge I’ve got different languages I can work with – I always make something once – that’s a basic rule – need prior knowledge, informed discussion.’ Some artists prefer to remain fully in control of the digital processes they use. Jenny Smith works with Jason Cutler to make intricate paper cuts. However, she does not claim to be expert in using technology, preferring to describe her approach as exploratory and questioning rather than predetermined and strategic. She embraces the fact that she is full of uncertainties in using the device and recognizes that this often results in fortuitous and serendipitous mistakes. Smith believes that greater compatibility with the technology would undermine her creative process and that ‘too much knowledge would make the work too perfect’. Her files don’t always turn out exactly as she anticipates, but she confidently utilizes her ‘mistrakes’ and sees each one as a starting point for a new creative journey. Smith has gained sufficient expertise with the device without need for technical assistance and this, she feels, is vital to her practice. Beate Gagendorf too embraces unpredictability and serendipity in her use of technology to stimulate the creative process.
Both Jayne Wallace and Justin Marshall make work that recognizes the creative potential of engaging the audience in co-design. The input of narrative, physical material or information is a vital component in the development of the work and the public is engaged in working with the artist to supply the information used to construct or develop the artifact. Jayne Wallace’s jewelry communicates an intimacy that evolves from her participatory approach to making the work. The true significance of each piece is reserved for those for whom the artifacts were made. Her pieces embody memory and past experience, which in some items, is unlocked for the audience through digital interactivity via embedded electronics. Like Wallace, Justin Marshall works collaboratively with computer scientists to develop artworks that respond interactively and are created and modified through information supplied by the audience. Marshall also makes artifacts that explore the potential of industrial digital processes, working with industry to challenge and extend the notion of hand skill and craftsmanship. His work has also investigated co-design in mass customization production processes, engaging the public on line to create digitally crafted one-of-a-kind physical artifacts from an infinite range of virtual digital possibilities. These new languages of making are but a small reflection of the potential the technology affords. Each artist’s appropriation of it opens new possibilities, inevitably this impacts not only on the creative processes used but also the visual characteristics of the artwork. The result is a new visual language for the information age.

The characteristics of the digital aesthetic are revealed as layering, composite images, multiplex, exact replication, repetition and endless variety. Precision and detail can be achieved with ease, as can varieties of scale and duplication. The potential to create vast quantities of information photographically, in video or audio recordings, or via scanners can result in complexity beyond human replication. The new materials must also be considered in terms of how they can manipulate and layer information. It is a melting pot in which a creative synthesis of divergent material takes place and information is translated into a common format. The question remains as to what precisely is the nature of the final artifact and need it become physical at all? There is also a tendency for the original artwork to resemble something that digitally generated images, one that is devoid of the qualities of the original. This is because the digital image is a unique expression and can vary dramatically dependent on the type of device and substance used to make the physical replication. The resolution of the image file, the quality of the medium, patience, and how long have also a profound impact on the visual characteristics of the physical output. One thing is certain however, as the technology develops, the cutting edge processes used today to generate artworks will look archaic and dated very quickly in much the same way that punched paper and dot matrix printing now evokes a bygone digital era.

Critics frequently question the aesthetic qualities of digital art work that is crafted by machine can be perceived as cold, monotonous and lacking in emotion. Interest in the visual characteristics that result from using the technology frequently takes precedence over that of the aesthetic qualities of digitally generated artifacts. Beauty, however, is not always the artist’s preoccupation and several of the artists showing work in Momentum think that their aesthetic judgments about concern beauty per se. Geoff Mann states that he does not strive to create beauty but to engage with a questioning dialogue, with concept, materials and process. These seem to result, as if by chance, in objects of desire and intrigue if not beauty. Jenny Smith claims she doesn’t consciously try to make beautiful work. It’s process that drives forward each artist’s engagement with the technology that affords. Each artist showing work in this exhibition is engaged in a personal questioning dialogue, with concept, materials and process. These seem to result, as if by chance, in objects of desire and intrigue if not beauty. Jenny Smith's CAD files can take hours to cut using a laser cutter however, she is pleased when there are inaccuracies as these are stimulants for new ideas and developments in her work.

The new materiality revealed in artworks in Momentum is one in which the control of the material is often subverted, softened and humanised. Sometimes this is through serendipitous inconsistencies in the digital process or through subsequent finishing processes involving the hand. The material qualities of three-dimensional printing vary according to the resolution of the file and the nature of the material and process used. SAN, nylon and starch are used in conjunction with hardeners or glue to build the printed structures. The nature of the material speaks its own language and may require further refinement, embellishment or a coating that is currently impossible to achieve via the printing process. Material processes also speak of value and worth. When plated in silver, the printed artwork conveys a certain grandeur that is derived its unpolished replica. The meaning and message may be consistent but the voice is given greater credence by material and visual properties of the artifact. The printed material also mimics and evokes; the rough gritty starch surfaces of Treadaway’s 3D prints can suggest stone or ceramics and are visually ambiguous; they beg to be touched. In some of the exhibited works the humanization is evoked through emotive qualities; the sensuous smoothness of Iltner’s rings, or the rough gritty starch surfaces of Treadaway’s 3D prints can suggest stone or ceramics and are visually ambiguous; they beg to be touched. In some of the exhibited works the humanization is evoked through emotive qualities; the sensuous smoothness of Iltner’s rings, or the rough gritty starch surfaces of Treadaway’s 3D prints can suggest stone or ceramics and are visually ambiguous; they beg to be touched. In some of the exhibited works the humanization is evoked through emotive qualities; the sensuous smoothness of Iltner’s rings, or the rough gritty starch surfaces of Treadaway’s 3D prints can suggest stone or ceramics and are visually ambiguous; they beg to be touched. In some of the exhibited works the humanization is evoked through emotive qualities; the sensuous smoothness of Iltner’s rings, or the rough gritty starch surfaces of Treadaway’s 3D prints can suggest stone or ceramics and are visually ambiguous; they beg to be touched. In some of the exhibited works the humanization is evoked through emotive qualities; the sensuous smoothness of Iltner’s rings, or the rough gritty starch surfaces of Treadaway’s 3D prints can suggest stone or ceramics and are visually ambiguous; they beg to be touched. In some of the exhibited works the humanization is evoked through emotive qualities; the sensuous smoothness of Iltner’s rings, or the rough gritty starch surfaces of Treadaway’s 3D prints can suggest stone or ceramics and are visually ambiguous; they beg to be touched. In some of the exhibited works the humanization is evoked through emotive qualities; the sensuous smoothness of Iltner’s rings, or the rough gritty starch surfaces of Treadaway’s 3D prints can suggest stone or ceramics and are visually ambiguous; they beg to be touched. In some of the exhibited works the humanization is evoked through emotive qualities; the sensuous smoothness of Iltner’s rings, or the rough gritty starch surfaces of Treadaway’s 3D prints can suggest stone or ceramics and are visually ambiguous; they beg to be touched. In some of the exhibited works the humanization is evoked through emotive qualities; the sensuous smoothness of Iltner’s rings, or the rough gritty starch surfaces of Treadaway’s 3D prints can suggest stone or ceramics and are visually ambiguous;
My exhibited artworks comprise a series of 3D digital prints, some of which are embedded with electronics. These are part of a larger body of work exploring creativity and how it can be supported by digital technology. I have used a variety of digital tools to develop the work including digital audio and video, photography, computer aided design, scanning, haptic interfaces and 3D printing.

Sea sounds 1#, 2#, 3# are an exploration into sensory translation. The three works communicate the experience of being in a shoreline location, in proximity to the sea and in a cave on the beach. They communicate visually the sounds and rhythms of moving water in a creative act of synaesthesia: translating and expressing sound through vision and touch. The 3D digitally printed artworks are interactive and invite the viewer to touch and feel. The internal electronics, designed in collaboration with software engineer Mark Heseltine, provide additional sensory feedback enabling the audience to share and reinterpret for themselves something of the initial shoreline experience.

Drawing has always been fundamental to my creative practice; it is a means of both recording experience and collecting visual ideas, usually in a sketchbook and often in situ. In these pieces of work the drawing activity is embedded in the digital making process. Digital drawings were made using a haptic tool, sculpting into virtual clay using Freeform® 3D software while listening to digital audio files recorded at a shoreline location in South Wales. The audio files provided a memory trigger and the marks and indentations were crafted poetically in response to the remembered experience. A desire to keep the hand involved in the
digital process is fundamental to my practice and the sculpted surfaces provide the trace of both physical and emotional responses. By using a haptic tool in order to interact with the 3D software it has been possible to directly and intuitively manipulate the code in order to emulate the process of drawing into soft clay. Although the technology has some way to go before it can accurately imitate physical drawing tools, it has provided a means of translating hand movement, muscular tension and pressure into a digital file capable of reproduction as a physical printed form.

A ZCorp 3D digital printer has been used to print the artworks using starch powder and a liquid hardening solution. The process takes about an hour to print 2cms of layers of the material. Although a relatively slow process it has the advantage of making possible either one-off artworks or multiples from the original digital file. Digitally created artworks are often perceived to have an inherent digital aesthetic resulting from the precision and perfection that can be achieved using the technology; the touch of the maker, the flaws and inconsistencies that are inevitable in hand craft are often absent, resulting in work frequently described as lacking ‘aura’ or soul. I have used a haptic tool intentionally to capture the marks made by my hands and in doing so I have deliberately sought to subvert the technology which was designed to eliminate the necessity for handcraft. Nevertheless, the digital provenance remains clearly evident in the visual characteristics of the marks. The pixilation of the original digital file is translated into the geometry visible in the indentations on the surface of the prints. This kind of mark would be almost impossible to achieve by almost any other means and represents a hybridisation of digital and hand craft. The resulting aesthetic is derived from a visual language that mediates between man and machine.

Indeterminate surfaces invite sensory exploration; my intention to focus on the haptic properties of the printed drawings, rather than visual decoration, provides the viewer with an additional incentive to explore how they feel. The reward for touching the artworks is further sensory stimulation in the form of sounds and vibrations. The viewer is invited to become co-creator of the artwork, to interact with it and control an additional sensory experience by moving the fingers over the surface of the work. The sensory stimulation that inspired the original concept, the shoreline location, the sounds and vibrations of the sea are then palpable and perceptible. For those willing to take the risk and get involved in the hands-on interaction with the artwork these represent further translations from physical to digital (via audio recordings, sensors and electronics), back into physical experiences.
Creative Momentum in the Information Age

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