

**THE DIGITAL DESIGNER:**

'ARCHITECT OF INFORMATION', ENGINEER OR CRAFTSMAN?

ABSTRACT

We are living in a world dominated by the screen; often filled with abstract images that bear no resemblance to the 'real'. The digital designer is a key person in the image production industry, who provides us with the means to access and interact with information. The purpose of this paper is to examine the role of the digital designer in a modern day new media company and to critically investigate what a production workplace looks like and how it works.

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## THE WORK PLACEMENT

I am working at a company called Drumbeat Media. They are located in Brighton in the Laines, which is in the Hub of 'trendy' consumer oriented local culture. My job is to create digital media artefacts, ranging from web design to video editing. The offices are very small. There are three people who share a very small space. The workplace is very noisy. There is usually loud music playing and a number of telephones ringing. There is very little solitude and one has to adapt very quickly to concentrating in a highly charged environment. Although I have a long history of graphic design and computer graphics I am constantly goaded for being the office junior. There is a feeling of everybody being too busy. I am responsible to the creative director and she briefs me, although the other two directors very quickly start checking up on what I'm doing and questioning why I've been asked to do certain things. I have no contact with clients. The company likes to use freelancers as opposed to employing permanent staff. They also have a few people doing work-placements.

The office has three workstations, which are all networked to a main server. This enables workers to share files very quickly. A designer can work closely with a programmer and visa versa, as they can keep updating and exchanging files. Two of the workstations are PC's and one is an Apple Macintosh. The Apple is used for most of the surface design and video work. It has a very large DV format screen and all the latest software and hardware. All the computers have a broadband connection to the Internet and they are online 24 hours a day. The creative director relies on the Internet a lot and looks to it for ideas, images and audio.

I start off the placement re-designing the Flash navigation systems for Drumbeat's company website. I work with the person responsible for the programming to decide where we need to add in Flash graphics. We work together, going through the web site adding in the Flash bits and writing code for the navigation. When this is complete, after many changes, I am asked to design a Flash typographical animation for the website, which is to be used to give information about the companies mission statement. This has to be done in a style that the managing director has found on another website for a different advertising agency. There is much controversy about this piece as the directors disagree on whether or not they like the idea of using this type of animation in their web site. Once this is complete I move on to programming Flash files that allow the user to click a button on the website and then view a video. This is the way Drumbeat wish to showcase their work. There are several video files and after writing the program I have to make many Flash movies to set it up. Each

video requires a main screen from which the viewer can choose a modem or a broadband download: which are then programmed to load dynamically onto the main screen. *(For an example of all the above work please see folder on disc labelled 'website'.)*

The company was in the process of setting up weighing scales that would be situated in supermarkets. While the customer is waiting for her details to be worked out adverts would come up on the screen. The client had wanted these adverts to be made up in video format, but due to the large processor required to run video at the size they needed, they were having problems with this format. I suggested to them that they could use Flash movies instead, as these would be small in file size and much cheaper and easier to produce than video. They could also integrate these easily with the Director programming which they were using for the rest of the project. I showed them some examples on the Internet. I then worked on some sample Flash movies to convince their client that this was the way to go. It was successful! *(For an example of this section of work please see folder on disc labelled 'weightzone'.)*

## INTRODUCTION

Today, coupled with the computer, the screen is rapidly becoming the main means by which information is accessed, be it still images, moving images or text. We use it to read the newspaper, to watch movies, for entertainment purposes, to communicate and, above all, to work (Manovich, 2001). The digital designer is at the forefront of the (often collaborative) process that gives both content and form to this information. It is the designer who makes the action of information gathering a more enjoyable and useful experience for the user/screener. It is this process and skill that I am interested in.

The purpose of this paper is to examine the role of the digital designer in a modern day new media company and to critically investigate what a production workplace looks like and how it works. In this work I take myself as the subject, based on my experience both as a designer 16 years ago in the pre-digital age, and in the pioneering days of computer graphics, and in the practice of everyday work as a digital designer in a current work placement. It is my hope that through observation, participation and emersion in this field I can provide a rich and contextualised understanding of not only the changing role of the graphic designer in the digital age, but also of the way in which a designer uses digital tools and how these uses impact on the visual culture of everyday life.

In her article 'An Academic Alice in Adland', Sarah Thornton used an ethnographic study in a workplace as a method to 'observe the way in which different environments transform the self' (Thornton, 2002, pp. 1). Vicki Smith outlined the opinion of Bosk in her article 'Ethnographies of work and the Work of Ethnographers'. Bosk said of ethnographic studies in the workplace, 'ethnographic studies have been invaluable for the contemporary understandings of work. Researchers have mined the situations and perspectives of workers through their own lived experience as participant observers, both as workers and as witnesses' (Bosk, 1992 cited in Smith 2001). She herself went on to say, 'by engaging in the same organisational, technological and administrative structures, and being implicated in the same relations of power and control, ethnographic field researchers have acquired a type of data that is simply unattainable using other modes of enquiry' (Smith, 2001, Pp.229). By conducting a phenomenological ethnographic study I will attempt to look at how the lived experience of using a

computer to create multimedia artefacts in the everyday workplace is embodied by the designer and experienced by culture. A study of this kind is grounded in the belief that 'all knowledge and truth derives from subjective human experience and not solely from things themselves' (Sturken and Cartwright, 2001, Pp.135) I will investigate the premise that using digital tools transforms the work of the digital designer and brings into question the meaning of both what they are producing and who they are as professionals.

In the first section I will discuss the changing role of the graphic designer in the digital era. As a starting point I will look briefly at the pre-digital role of a graphic designer, and then I will focus on the digital designer's role in the creation of multimedia projects, as this is the primary source of work for the digital designer. I will assess what is meant by multimedia, why it has come about and how to design for multimedia.

In the second section I will give a brief history of Photoshop, as an example of a leading digital image manipulation tool, widely used in the practice of digital design. I will look at how the manipulation of digital images change the way we understand their meanings and value in visual culture. In this section I will also discuss the appropriation and reproduction of images, drawing on Benjamin's essay, 'The Work of Art in the Age of Mechanical Reproduction', to question the value of digital artwork.

In the third section, I will look at the lived experience of everyday work as a digital designer. Firstly I will map the production process and look at how this works. Secondly, using a textual analysis, and drawing largely on the work of Malcolm McCoullough, I will analyse a diary I kept during a recent work placement in a new media company. It is my intention to allow the reader to immerse himself in that practice of everyday work, through the writings in the diary, and at the same time to read the critical investigation into this work. In doing this I would like to critically investigate how a designer uses a computer to create images and to look at the relationship the designer has with his tools. Within this investigation I will question whether the creation of digital artefacts in the practice of everyday work can be considered a craft.

## ~~EVERYTHING LOOKS BETTER WITH SOUND~~

I qualified as a graphic designer in 1993 and began my career in advertising. In those days there were no computers to help me with my job. Typography and images had to be laid out on a page with gum, and then moved about until the layout was satisfactory. Mock-ups were supplied to the client by use of rendering, which was a process of 'colouring in' with magic markers in a particular way, which took a while to perfect. Retrospectively everything seemed to take longer in those days. It was very difficult to do some jobs that today, thanks to the computer and some pretty amazing software, are routine and quick. In 1995 I moved on to become a 'computer graphic designer' in the pioneering days of this field. In these early times computer graphics were mainly being used to create business presentations and post-production houses were using them for animation and special effects. In 1997 I was working for a post-production house doing 2D animation for the television industry. It has been particularly interesting for me to see the development and changes in the role of graphic designer over the last 16 years, not only in the methods of work, but in the forms that their work is mediated.

Throughout history graphic design has meant composing, aestheticising, and styling components on a page, package, or sign to attract visual attention and convey a message. 'A graphic designer is a navigator who strategically positions signposts for the reader to follow' (Heller and Drennan, 1997 Pp.27). The designer gives hierarchy to some signs and directs the reader's attention to certain landmarks in the page. Traditionally graphic design has always been a service to industry and not an art in its own right. A designer does not usually develop ideas from scratch but is hired by a client to solve problems and come up with solutions according to the clients needs. Designers also use signposts to direct readers from place to place on the screen, but the pathways are very different to those of print media. Although it can still be very useful to have a knowledge of print design, the rules for multimedia screen design have changed. The designer must concern himself with not only the look and feel of the project but also the navigational signposts that guide a reader/viewer in a non-linear medium. The designer must also be aware of the end use of the project. Whereas using a computer for print media is a means to an end, designing for screen is different in that the means is also the end. The digital designer must create tools for the user and plot the flow of a series of linked pages. Because of its digital

nature a new media project is, in a sense, never final; it's eternally editable and transmutable.

#### ● ~~WHAT IS MULTIMEDIA?~~

'Multimedia is a generic term being used to refer to a specific range of audio-visual technologies which have converged in digital information processing' (Dewdney and Boyd, 1995, Pp.147).

These convergences grew out of parallel developments in fields such as film, television, telecommunications, digital optical storage and computer science, providing the framework for consumer interactive multimedia and bringing about ways to use existing technologies, such as telephone lines or television airwaves, to disseminate information. Digitalisation enables a wide range of media to be used simultaneously and involves editing, cutting, pasting, combining, juxtaposing and reorganisation of narrative (Lister, 1995). A producer can combine sound, image, video and text to create multimedia experience. The new digital media in comparison with print are dynamic medium that have a dimension of space and time. The user is able to control the medium to some extent by way of the interactive capabilities brought about by non-linear format. The producer of the project decides how the user will navigate through the project by steering them in a particular direction, and in this way, extends that control to them. With the development of multimedia, distribution is no longer dependent on the printed word. These technologies have also changed the means of production. A single designer can use a single machine to develop a range of media, ranging from networked media to video production. The development of software allows him to move seamlessly from typography to drawing to image scanning, which can then be distributed on a range of media including the Internet, CDROM or DVD. Underlying all these concepts is that 'multimedia is communication' (Heller and Drennan, 1997 Pp.29).

#### ● ~~DESIGNING FOR MULTIMEDIA~~

'On the horizon is a new kind of design professional: the information architect, whose job it will be to make sense of this unprecedented flow of information' (Heller and Drennan, 1997 Pp.29)

Graphic design is a single component of multimedia design. The designer has many other things to consider when making the transition from paper to screen. Cotton and Oliver also label the designer "an information architect" 'responsible for coordinating all the components of the media matrix into a media environment that the user can explore at will' (1993, Pp.82) According to them a

designers job is to develop a structure which looks at the relationships between every part of the program. A designer needs to ask 'who is my audience'? What are they doing? Are they working, playing, studying, browsing, searching, watching, etc? What kind of experience do I wish them to have? What will this experience bring to them? What might be the environment in which they will access the information? What kind of hardware and platform might they have? In what way will the media be stored and accessed? Would they be using a modem or would they have a broadband connection? What kind of relationship would I like to create between the participant and the content?

The computing devices we use in everyday life have an effect on us. Eric Gould Bear, a leading interactive designer points to the fact that 'Interactions affect the way we work, play, think and feel' (Gould Bear, 1998). Forms of interaction have the potential to enhance narrative intention or to work against it. Gould states that people like to be engaged on several levels at the same time, so a designer must ensure that the products 'content, form and function' should be designed to work with each other. The way a designer breaks up the many layers involved in designing a multimedia product vary enormously from person to person, depending on their background and education, however the fact that a multimedia project must be broken down into layers remains a constant. Heller and Drennan would break a project up into: surface design, systems design and information theory, structural design, technical design and human factors. (1997) They discuss the most critical level of the design process as being the surface design. Many designers tend to use elements in this part of the structure that do not lend to the overall 'sense' of the product, rather they add 'bells and whistles' without content. In an ideal multimedia product the surface design would lend to the overall narrative of the underlying layers of content. All interactive media share a common feature: the interface. The interface is the point of contact between the person and the content. It is both the boundary and the bridge between the two. Computers work with signs and symbols. Humans work in words, concepts, images, sounds and associations. A computer must represent itself to the user in a language that the user understands. These representations often take the form of metaphors that today most computer users have become very familiar with; virtual desktops, folders, bins etc. These metaphors, represented by icons, form the basis of the Graphical User Interface (GUI) and have transformed the way in which humans and computers interact. In the development of multimedia artefacts the interface forms the navigation through which the participant guides himself from one screen to the next. These can be used in many different ways and can encompass many different signs; an arrow

can indicate next or previous screens, a cross can indicate exit. In electronic media the interface includes everything from the organisation of the material to the layout of the screen and the way people use their hands and fingers. Because interface design encompasses so much, Eric Gould Bear points to three 'domains' of design with which he affords vital importance in the design process. These are information design, interface design and interaction design. In this model, **information** design is about the organisation of content and the 'architectural' shell that holds it. It is in this phase of design that a designer is concerned with where and when certain portions of media are accessible. This is the space that your content lives in. If you take away the content how does this space feel? What kind of space is it? What does it feel like for the viewer to move through this space in this way rather than that? This space can give your viewer a deeper meaning of the project. This is the place where the participant might ask where am I, how did I get here and where can I go. It is very important that this is as clear and logical as possible, and also that it takes into account that different participants come from a variety of experiences; both culturally, educationally and geographically. In targeting your audience as much as possible one can attempt to answer these questions as simply as possible.

In the **interface** phase the designer must manage the meeting of information design and interaction design. According to Gould Bear it is here that a designer asks why the participant should take action and how should he know to take action? What will the interface look like? What will it sound like? A balance must be struck between time, budget and quality of experience.

There are many different types of interaction that can be added to a project.<sup>1</sup> These can be divided into five different types depending on the relationship they create between content and participant; these are discrete, continuous, concrete, character and resonant. The grouping of these interaction styles can help the designer on two levels. It can help to select an interface style that reflects the overall feel we want to bring to the work, and it can help to determine alternative styles of interaction when the piece is not yet clearly defined. **Discrete** interactions are those that allow the user to control the media by pressing, clicking, poking, dragging, scrolling etc. The media changes state as a result of their action. Common examples are buttons, panels, menus and some cursor-based tools such as drag and drop commands. This is clearly the most common form of interactivity and the one that most users will be familiar with.

**Continuous** interactions are different in that the media controllers exist separately from the media. Participants usually use a cursor to manipulate some

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<sup>1</sup> This information has been adapted from Eric Gould Bear's 'five styles of interaction, for more detail please see [http://www.monkey.com/FL3/flash\\_sxsw96.htm](http://www.monkey.com/FL3/flash_sxsw96.htm).

media. Examples of this would be scrollbars, sliders and animated cursors. In this type of interaction, participation is usually experimental and does not change the pace of the project.

The family of **resonant** interactions are algorithmic whereby the technique for interaction forms the framework for the whole experience. In this situation the content changes with the participants movement and changes aren't necessarily guided by clues on the screen. The participant can move through the space and may not be able to reverse back to the original status. The form of the content itself provides the vehicle for action and communication by both the author and the participant.

**Concrete** interaction takes place when the viewer is able to have a direct relationship with the content space by using a tool that acts as an extension of the body to manipulate content as though it were physical. These could include a paintbrush, a hand cursor or an eraser, for example. In order to achieve this the media must be objectified. In these cases it helps to show the audience which objects are malleable. In this way a participant can construct and manipulate the space, which makes an actor out of the participant.

In **character** interaction the participant is a second person experiencing the world through or with a character that lives in the content space. Usually the participant can manipulate the actions of the character. The participant can determine the outcomes, usually resulting in a different storyline for different actions. In this way involvement can be extremely satisfying.

In the assessment of the role of the digital designer and looking at how to design for multimedia, one can see that there are many complications and much to be learned. Heller and Drennan point to the 'many ironies inherent in multimedia design: the emphasis on the general, not the specific; the need for a project to adapt to the needs of the user, not the other way around; defining a dynamic "space" via its supportive structure, for example' (1997, Pp.89). A designer needs to bridge the gap between the surface design and the architecture of the information. This requires a major shift in the thinking process of the graphic designer. The technology is always changing. A multimedia designer must be able to keep abreast with these changes as they affect the way in which their artefacts can be designed and experienced. The scope for a designer covers many things that would not have been expected in the days of design for print. A digital designer needs to understand a certain amount of programming in order to accomplish their role. Whereas in the past a graphic designer was largely concerned with conveying a message through the aesthetics of a project, they are

now required to be increasingly technical. Steven Johnson said in his book, *Interface Culture*, 'there are no artists working in the interface medium who are not, in one way or another, engineers as well'. (1997, Pp.7) He makes the claim that the new 'artisans of interface culture' have now become a fusion of artist and engineer. The rules have changed; in the transition from print to screen, designers have had to learn to deal with a far broader job specification. It is no longer enough to concentrate on the aesthetics of communication but now a designer has to also focus on the infrastructure of that information and all the technical possibilities involved in the dissemination of that information.

#### ~~PHOTOSHOP: THE BEGINNINGS OF A DIFFERENT VISUAL CULTURE~~

'Adobe Photoshop is one of the most powerful visual communication tools ever to appear on the desktop. The program has expanded the visual vocabulary of designers and illustrators to include colour photo imagery, making photos the "raw material" for creative expression'. (Dayton and Davis, 2000, Pp.1)

Photoshop is the biggest selling digital image manipulation tool in the world. It allows photographers to work in the light producing images that before would only have been possible with chemicals and a lot of time. It allows for the creation of on-screen digital imagery for interactive delivery systems and it enables easier cropping, resizing and colour correction for production work. Photoshop is often the first point of call for any digital designer and is usually the first software package that they will learn. Photoshop works with a toolbar, which has many different tools that can be used in many different ways. The user selects a tool with a mouse or pen and a medium from a range of paint, pencil, airbrush, for example, and modifies the image, or parts of the image. The user can work directly onto a virtual canvas and, depending on the specifications of their computer, they can usually see the results in real-time. Because Photoshop works with layers an image can be separated in different parts and these can be separately modified. Photoshop has many filters and effects that can also be applied to the image. It has the 'undo' function, and a history pallet, which allows for experimental work, as the images are infinitely mutable.

The advancement of digital editing in just over a decade is incredible. Effects, that ten years ago may have seemed impossible are now relatively simple. Photoshop is the program that started this and it remains the leading industry standard for everyone who works with graphics, photographers, illustrators, web designers, print specialists, and even fine artists are using it to adapt and diversify their medium.

The history of Photoshop began in Michigan, USA, with a college professor Glenn Knoll. He was a photo enthusiast who worked in a darkroom in his family home.<sup>2</sup> He was also a technology fanatic who was intrigued by the advent of the desktop computer. His two sons, Thomas and John got their inspiration from their father and began to experiment with Darkroom techniques and an Apple II Plus. In the darkroom Thomas learned how to make black and white and colour prints and to balance colour and contrast, while John developed a keen interest in computer technology. In 1987 Thomas purchased an Apple Macintosh Plus to help him with his Ph.D. work on the 'processing of digital images'. Because the Mac couldn't display grey-scale levels in his images, Thomas wrote a program to simulate the grey-scale effect.

John saw the work Thomas was doing with image processing tools and realised these were all to do with working out how a computer could be made to recognise a predefined object in a digitised picture. Shortly afterwards they wrote some code together and Thomas built an application called Display. John began to wonder if it were possible to make Display save images in other formats so that they could be printed in another program. After using Display to open some images that looked too dark on his screen, he then realised he needed some gamma correction tools. This cycle of improving on the software continued and led to an improved version of the application called "ImagePro" in 1988. It was at this point that they began to think about turning ImagePro into a commercial application. A lot of companies were initially sceptical about the idea of an image manipulation application. SuperMac turned it down believing that it couldn't be any better than their popular product 'PixelPaint'. One company BarneyScan did show interest. They offered to bundle what was now called "Photoshop" with their slide scanner. In September John showed the application to Adobe's internal creative team and they were delighted with it. A licence agreement was struck and soon after Photoshop 1.0 was shipped in February 1990 after 10 months of development. Thomas wrote all the code for the program while John developed and wrote plug-ins. The application was immediately popular as it coincided with the development of the desktop publishing revolution. Initially Photoshop could only be used on the Macintosh platform. For the release of version 2.0 Adobe hired more engineers to work on the program and this version added support for CMYK, which made it attractive to the print industry. Later a Windows version was released. New tools and uses are continually in development and Photoshop is now at version 7.0 with a beta version of 8.0 now being tested.

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<sup>2</sup> This information is adapted from 'Ten years of Photoshop' by Jeff Schewe, and can be found at <http://www.seanperkins.com/archives/000063.html>

## ● VISUAL CULTURE IN THE DIGITAL AGE

Everyday we are bombarded with digital images in an increasingly visual culture. These images are a central aspect of commodity culture and of consumer societies, dependent on the production of goods in order to function (Sturken and Cartwright, 2001). This is a world of abstraction: a world that operates not in the real, but in the imagined world of promise to the consumer. Things we must have, want, desire; are projected to us by a use of 'impossible' imagery. Although a lot of the time we realise these images are not representations of reality, they communicate possibilities of how our futures could be, and in a sense, in a technologically driven world, how technology could continue to make our lives good.

According to French Philosopher, Jean Baudrillard, the late twentieth century is a period when images become more real than real. He wrote about contemporary images saying,

'If they fascinate us so much it is not so much because they are sights of the production of meaning and representation – this would not be new – it is on the contrary because they are sights of disappearance of meaning and representation, sites in which we are caught quite apart from any judgement of reality'. (Jean Baudrillard, 1988, Pp.29)

According to Baudrillard simulation of reality has replaced representation of reality. We live in the age of the screen, filled with images that do not have to be represented by any real objects or worlds. These images that Baudrillard called 'simulacra', represent the hyperreal overtaking the real. Through the existence of new media products these 'simulacra' represent new forms of post-modern existence. The writings of Baudrillard give us an idea of the drama and impact that digital imaging has brought to visual culture.

According to Dan Harries, the growing digital imaging technologies are causing a 'convergence of media images'. (Harries, 2002, Pp. 171) We are seeing the same type of images on all our screens, and in some cases we are using one screen to view different types of media. We may use the Internet to watch a movie; we may use our television to do shopping. The media are losing the 'medium specificity' and wherever we look Baudrillard's 'simulacra' are reaching out to us: on billboards, on buses, on screens in shopping malls and on our computer screens at home and work. Digital technology calls into question our belief in the image as representation. In his article, *The Virtual Unconscious in Post-photography*, Kevin Robins points to 'our uncomfortable relation to this new world of images' (1992, Pp. 103). He argues that although photography has always had the ability to make us see differently, with the use of clever angles, lenses and

filters, images now seemed to have assumed 'a new and boundless authority'. Although it has always been possible to "fake" realism in photographs, digital techniques have made it possible to completely construct realism. In a modern world we seem to interact with images that bear no representation to real life. In the article Robins seems to agree with the 'digital image revolution' theorists, in the belief that new imaging technologies have become central to a new post-modern culture. This is a time when the photographic truth no longer exists and this can have historical impacts on society as well. What happens when someone is removed from a photograph? When a political event is portrayed on the news can we believe its authenticity? Some would argue that these events have changed the way we relate to images, forcing us to become more reflexive and to adopt a critical relationship to images and their meanings (Mitchell, 1992, Pp.225 cited in Robins, 1995). In 'Will the image move us still?' Robins attempts to look beyond the post-modern image rhetoric and tries to locate our changing emotional responses to images, within the framework of new digital technologies (Robins, 1995). He argues that digital images offer us new ways of seeing, new ways of emancipation from the representation of truth. Our truth and knowledge no longer comes from mediated visions. Are we able to see the material world differently from the mediated world and distinguish between the two? Images signify things to us. Although we may realise that an image is not an actual representation of a real object or event, meanings can be associated with the 'simulacra' we see. Semiotician, Charles Peirce, looked at the distinctions between different kinds of *signs*, and their relationship to the 'real' (Sturken and Cartwright, 2001). He identified three kinds of signs: iconic, indexical and symbolic. Iconic signs remind you of their object in some way, for example the metaphorical icon of a house on the computer screen would resemble 'home'. Symbolic signs bear no obvious resemblance to their objects but are learned conventions. Through language we learn to identify the word 'home' with the meaning of home, but the word on its own would not have any meaning to somebody who did not understand the English language. Indexical signs involve an actual relationship between the signifier and the signified. In this way a photograph is an indexical sign that testifies to the moment that the camera and the subject were in the same place at the same time. Although a photograph is also iconic, its cultural value is gained largely from its indexical status, in that it resembles the real.<sup>3</sup> The fact that most digital images are not indexical represents a major shift in their meanings, when compared with photographic images. According to Sturken and Cartwright their meaning has shifted to being iconic, in

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<sup>3</sup> The meaning of Peirce's 'signs' is gleaned from Sturken and Cartwright, 2001, Pp.140

that we take these images to resemble real-life subjects. In questioning our emotional responses to images it is easy to believe that if we are sceptical of images, as not being representative of the truth, then we may be less *involved* with an image and are less likely to be moved by it. Robins would see this as a kind of technological determinism as, he would argue, images remain important despite technological developments because they 'mediate so effectively, and often movingly, between inner and outer realities'; between what we know and what we see. If digital images are iconic of real life objects or landscapes we can still derive some real meaning from them in our world, even if we know that they are possibly 'bits' of information or experiences, digitally pieced together. A picture of a fashion model may represent an image to us of how we could look, and through advertising we are often led to believe, how we *should* look. Although we know that these images have been digitally changed to represent a 'perfect' face it doesn't stop us from identifying with that picture as a real person and wanting to achieve that look.

#### ●—THE VALUE OF IMAGES IN THE AGE OF DIGITAL REPRODUCTION

Digital images lend themselves to being copied and modified. In the practice of new media design an artist is likely to make up an image using parts of images from another source. In the age of computer culture, 'authentic creation has been replaced by selection from a menu' (Manovich, 2001, Pp.124). It is very easy to copy images, video and sound from other sources and then modify them. A new media artefact is often made up from the cutting and pasting of other artists work or from existing libraries of images, sounds and behaviours. Cotton and Oliver referred to this, 'bringing together of existing media to create something new', as "bricolage" (1993, Pp.36). According to them bricolage can be seen as an essential aspect of human creativity. In a sense, no work of art is truly original. Everything that's created has some reference point to the culture we live in: what we see, what we hear, what we feel. The romantic ideal of an artist creating totally from scratch has been critiqued by Gombrich, who argued that the realist artist can only represent nature by relying on already established "representational schemes" (Gombrich in Manovich, 2001, Pp.125). Benjamin, in his well-known essay, 'The work of art in the age of mechanical reproduction', argued that it was the originality of the artwork that gave it a particular "aura". This was 'original' in the sense that it couldn't be copied precisely: it was one-of-a-kind. Its value was attributed to the presence of the original in time and space, in the place where it happened to be, for example a museum or church (1969). With digital technologies, the concept of reproduction

changes. There is no difference between the original and the copy. According to Thomas, once this difference has been eroded 'reproduction loses a sense of authority' (2002, Pp.84). When Benjamin wrote his essay he was referring to the copying of an object: an artwork. In the digital era the notion of 'copy' has been transformed from an 'object to an activity'. The world of images has been transformed to a world of code. Thomas argues that because the 'relationship between the copy and the original no longer serves as a basis of judgement, content no longer serves as a valuable judgement or evaluation' (2002, Pp.84). If we can no longer value content because of its reproducibility, is this not in a 'Benjaminian' sense, a loss of aura... a loss of value attributed to the artwork because of the sense of their being no one original that is different from all the others? Sturken and Cartwright wrote, 'the concept of authenticity is crucial to the way in which images are perceived to have value' (2001, Pp. 122). This has changed in today's world, where the concept of authenticity is of little importance. Digital media products have none of the material properties that are usually associated with real objects, because they exist in a virtual space; be that a networked space or a storage medium such as a CDROM. Le Grady argues that it is precisely this immateriality that frees digital artworks from the conditions of "aura" identified by Benjamin. 'Authenticity is not a determining issue as all copies can potentially be seen to have equivalent value' (2002). According to Le Grady digital works of art attain value when they are represented within the space of a gallery or museum, but because computers are usually associated with information dissemination, he questions whether this delivery format reduces the artwork to a reference material. Benjamin noted that in addition to removing the aura of an artwork, mechanical reproduction changed the audience, in that it dispersed copies throughout society, as compared with auratic art, which the audience had to come to view in its own space (1969). In this way, digital artworks designed for gallery spaces, such as installation art, could be seen to have a higher auratic value than those distributed by network or other digital storage devices. Although the installation material can be copied, the audience would have to attend the gallery to view it. In comparison, the success of digital media works accessed in our home environments depend on a fusion of both the 'content and information flow' of the work, and on the 'conditions of its delivery' (Le Grady, 2002). In which environment is the artwork being accessed, and on what platform with what specifications? This is beyond the control of the artist. A digital media artwork has to be exceptionally well designed in order to maintain the interest of a viewer/user. The screen is not an easy medium for viewing artwork. When standing in front of a painting one is moved in the knowledge

that, not only is it one-of-a-kind, but it exists as a material object. It is in this sense, in the age of digital reproduction that I can attribute an aura to a painting or material work of art that doesn't exist on a screen. Virtual images derive their value, in part from their role as information, and from their capacity to be easily accessed, manipulated and stored, whereas I would argue, unlike Benjamin, a material artwork derives its value, not purely from its originality, but from its materiality. It is complete. It cannot be changed and therefore it is a complete expression of the artist. This is not to say that a work of art in this form is not in itself mediated. Poster argued, in his paper, 'The Aesthetics of Distracting Media', that Benjamin failed to account for the 'differential effects of media art, for the always already mediated effects of art' (2002, Pp.3). He argues that Benjamin placed the reproducibility of art as the primary significance of new technologies and culture, whereas, according to Poster, this is of secondary importance. What is of primary importance is the way that technology changes the mediation of art (Poster, 2002). According to Richard Grusin, it is through these new forms of mediation that the work of art in the age of digital reproduction does not 'destroy the aura of a work, but refashions the aura in another media form' (1999, Pp.6). New forms of media art give users a sense of authorship in that they can interact with the artwork and each viewer can have a unique experience of the work. This experience of interactive images is very different from the experience of an original as described by Benjamin, but it has values that a painting couldn't have had. The value of a new media artwork lies not in its originality but in its interactivity and ease of distribution. Although many of these artworks are shaped from existing images and texts, the artist still begins with an empty canvas and fills it with his concept. It is still a skill to produce meaningful artworks and images, although some artists say that the appropriation of images, in the context of image libraries, are squashing the creativity of artists. Instead of new images being produced we see the same images over and over, causing digital media to have a flat and lifeless quality. In the same way software encourages styles to be overused by artists. The Photoshop filters are a good example of this. When a new filter is developed we see it applied in the same way to many images. The uniqueness of an image is dependent on the artist having a creative talent that is capable of creating fresh ideas.

Perhaps if we look back to Benjamin's idea of the original work of art deriving its value from its uniqueness and its role in ritual (1969), we should accept that new media art has a different 'ritual'. This is to say that it is powerful art, and that its value is not less than that of the original discussed by Benjamin, but different. As we have seen here 'original' and 'authentic' hold no currency with digital media;

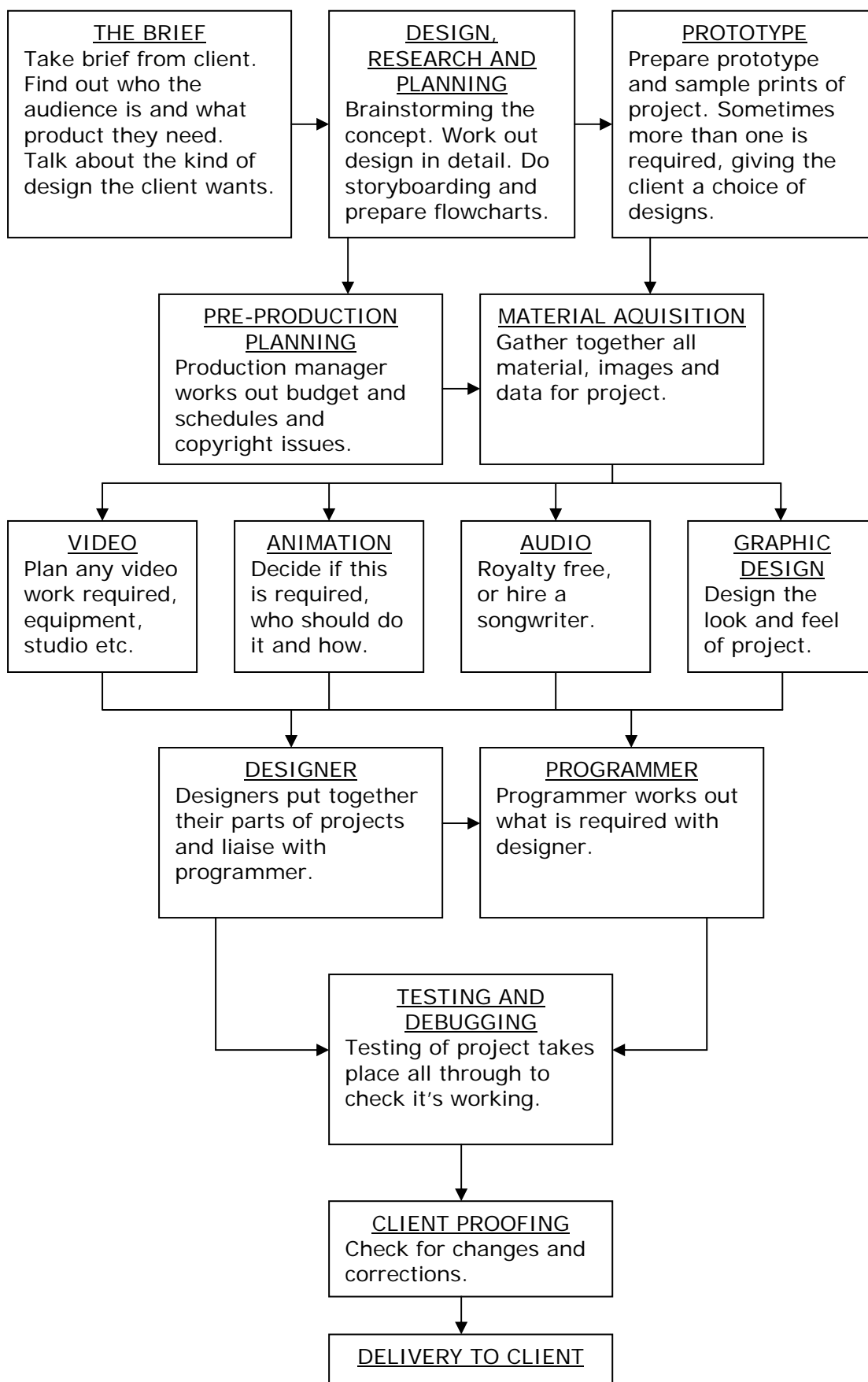
but these media are dynamic and interactive and they offer an audience a different way of seeing and experiencing art. This is the age where an audience can participate in the experience of art, can add his own value to the artwork. In a sense, this would create a new type of aura to an artwork, a new type of 'sacred' experience. One that is truly indicative of the world we live in, and that seems fitting for this new millennium.

## ~~THE CRAFT OF DIGITAL CREATION IN THE PRACTICE OF EVERYDAY WORK~~

### ~~BACKGROUND~~

During a recent work placement I kept a diary. The purpose of this was not to record what I was doing, as such, but rather to record how it felt to use a computer to create digital artefacts. I tried to think about how I was using the tools and the software. This was quite difficult to achieve in a very busy day, having to reach deadlines, and required a bit of practice. The result, I feel brings together a lot of the material discussed in this paper and is a good representation of the everyday work of a digital designer. Because I have been using computers for many years for the purpose of creating digital artefacts, I realized on some level, this prior experience would affect my writing up of the current experience. I felt this was an advantage, as I was able to write of the experience of being a digital designer as an everyday practice, and not just from the experience of a short-term work placement. To begin with, I will look at how the production process works. I will then use the work of Malcolm McCoullough and refer to the work diary in order to look at the creation of digital artefacts as craft.

## MAPPING THE PRODUCTION PROCESS



According to Malcolm McCullough 'artisanry can be defined as the practice of a craft for a livelihood' (1966, Pp.20). The author argues that 'aspects of crafts in practical computational work may lead to habitual practices that we could understand as artisanry'. In a reading of the above work diary we see the computer being described as a medium and tool (11<sup>th</sup> June). If we accept that craft describes 'habitual skilled practice with particular tools, materials, or media, for the purpose of making particularly well executed artefacts' (McCullough, 1966, Pp.22), how then do digital artefacts fit into this proposal, within the everyday practice of work?

#### ●—DIRECT MANIPULATION

According to McCullough, 'the best measure of direct manipulation as a basis for craft is its capacity for continuous actions' (1966, Pp.24). Although using a computer to create artefacts cannot satisfy the need for direct experience, McCullough argues that these needs are met in a different way, through the use of direct manipulation. In writing about the experience of a digital designer in the practice of everyday work, one can see the development of skills that arise through the use of computers to create digital artefacts; which lead to a satisfying experience. The development and uses of these skills are evident throughout the diary. On the 11<sup>th</sup> June several skills come to light: the ability to multitask (Appendix 1, 2), the hand to eye coordination necessary for using a mouse or pen while focusing on the screen (Appendix 1, 3), and the ability to switch seamlessly between software packages and knowing which tools to use in each one (Appendix 1, 4). McCullough states that processes that work a material have traditionally required hand-eye union (1966, Pp.35). The creation of digital artefacts using a computer has, according to him, been a modification of this process. He points to 'hand-eye separation' in the use of the mouse while the designer's eyes remain on the screen. When a designer is using a digital tool, such as a paintbrush, the tool is being manipulated and controlled by the hand on the mouse. On screen the designer is looking at the effects that his tool usage is producing, while the hand manipulation becomes a natural process, which is not part of the thought process.

Once the designer has learnt how to use particular tools and approaches, this knowledge becomes practiced in an intuitive way. A designer can push that knowledge into their subconscious and yet this knowledge allows them to perform

certain tasks. McCullough identified this skill as 'the development of a contextual awareness' (1966, Pp.27). An example of this experience is noted in the diary in sections dated 19<sup>th</sup> and 24<sup>th</sup> June (Appendix 1, 5/6). As computing technology increases and actions become immediately visible, so that the designer can see 'real-time' changes, direct manipulation becomes more continuous and has a better chance of 'satisfying our instinct for tools' (McCullough, 1966, Pp.36).

#### ●—THOUGHTS ON VISUAL THINKING

As seen throughout this paper, we live in a visual world in which the computer screen has become a visual medium. The ability to utilize computers as medium and tool has opened up new creative possibilities for the artist. According to McCullough, 'computing shows promise of becoming the medium that could reunite visual thinking with manual dexterity and practiced knowledge' (1966, Pp.50). For McCullough, this reunion is central to any proposal of digital craft. While this may be true, I feel it is important to assess how it *feels* to create a digital artefact in the practice of everyday life. In the diary I noted, (Appendix 1, 7), that in the real world of work one often doesn't have time to experiment with software. As this is a very fast paced industry the temptation to reuse practiced skills instead of developing new ones, is very real. A designer is required to learn and keep up to date with an enormous variety of software (Appendix 1, 8). McCullough does mention this invitation 'to a 'reflex-based kind of activity' (1966, Pp.53), and he calls for designers to resist becoming 'mouse potatoes' by being 'contemplative' and 'playful'. By this he means that designers should nurture the ability to switch playfully between the use, and the aesthetic of a digital artefact. I feel that in the real world of work this is often quite difficult to achieve (Appendix 1, 10). Designers are often required to rework digital artefacts that have originally been done by someone else (Appendix 1, 11). A designer is also creating work to suit a clients needs. Creativity is very often downplayed in order to meet these needs. A piece of advice from a leading design practitioner in the Computer Arts magazine recently was 'above all, remember – you are not an artist!' The practice of creating installation works using digital artefacts, for exhibition in galleries and museums, I feel, lends itself more to the 'crafting' of digital artworks. In this practice an artist is creating his own artwork; he is his own client. He is using the installation as a work of art, to express his vision. This leads me to question the end use of a digital artefact, in the contemplation of digital artefacts as 'craft'. This is not an area that McCullough explores. In the practice of everyday work, in a new media company, digital artefacts are usually designed to meet the needs of a capitalistic; consumers orientated market, and are often used for the purpose of manufacturing desire. For me this is central to

the question of digital artefact as 'craft'. What is the artefact being created for? Is it an expression of the designers' talent and thought processes, or is it simply designed for the dissemination of information? An educational CDROM used in a school to teach children about history, for example, could be 'crafted' in a very creative way. In this project the designer could have used the ability to switch playfully between use and aesthetic. However, if a website is produced specifically to sell products on the internet, I would find it harder to consider this a craft, and would be more inclined in instances such as these to use the term 'information architect'.

#### ● ~~THE COMPUTER IS JUST A TOOL~~

McCullough quotes, 'a tool may not only perform some action, but may also come to represent that action' (Warren Wake in McCullough 1966, Pp.61). In the creation of digital artefacts a tool comes to represent an approach and also an effect. Tools allow you to work a medium. While working I can change my tool to create the effect I'm after. I have many tools at my disposal, and after much practice I know before I choose a certain tool what the outcome is likely to be. This is what McCullough refers to as mental modelling. The ability to imagine the layers and structures of a digital project, and the ways in which to go about designing these structures is a talent. Each designer develops his own mental models, which he uses to find his way around his computer, and to foresee outcomes of certain software applications. Some people have a better ability to see deeper into a structure than others. Knowing which tools to use becomes a part of this mental modelling. Some tools assist operations, while others are used to apply a medium (Appendix 1, 12). While there are many tools available, it is still down to the artist to choose how to use them and to have the ultimate vision of how they want their work to look. No matter how many new tools become available an artist still needs to be able to think of a concept and to envisage how this concept can be worked through the tools. It is this that leads designers to say 'the computer is just a tool'. McCullough takes this statement to regard the whole computer as one tool. This according to the author undermines the value and use of the computer and places it in the role of a machine to automate tasks. In my opinion the computer is a toolbox. Included in this are all the software applications and the tools available within each one. If I say 'the computer is just a tool', I am not undermining the uses of computers or their power; rather, I am insisting that we use the tools available to us to enhance the speed we work, to create effects that would not otherwise be possible and to explore our creativity in a different way. As McCullough says, 'ultimately the computer is a means for combining the skillful hand with the reasoning mind... our use of computers ought

not to be so much for automating tasks as for abstracting craft' (1966, Pp.81). In the practice of everyday work in a new media company computers are used for many different tasks. Learning to use them to automate certain design functions is an important process in the role as designer, but they are also constantly used to design digital artefacts.

## CONCLUSION

In the first section I discussed the changing role of the graphic designer. The graphic designer has taken on a new kind of work that involves a shift in the design process, brought about by a different kind of medium. New media design is both interactive and dynamic. Interactivity brings with it a whole new dimension to the design process. A designer needs to contemplate how different methods of interactivity will affect both the way a user navigates through the project, and the dissemination of information in that project. A designer must bridge the gap between the aesthetics of the project, and the architecture of the information. A designer has to bear in mind the end use of the project, which has become a virtual artefact in that it is stored in a digital format and viewed on the screen. Because technology keeps changing, a designer now needs to keep learning new software packages and updating his knowledge of the ones he already knows. Designers also needs to become increasingly technologically minded, as it is becoming difficult to create new media artefacts with the creative skills that were once used for graphic design. A new media designer needs to have some knowledge of programming in order to create the interface and structure of his project. A designer will also need a technical knowledge of the medium in which his project is to be delivered, as this affects the design constraints. In this way new media designers are also engineers.

The rules have changed; in the transition from print to screen, designers have had to learn to deal with a far broader job specification. It would appear that we could equally classify the designer as both an engineer and an architect of information, as their role seems to fit within both of these classifications. The evidence of how comfortable that fit is can perhaps be seen as the success of a particular designer or the failure of another.

Images are all around us. We live in a world of abstraction. Our desires are fuelled by imagery that is not real, but promises us a future filled with wonderful technology that can enhance our lives. We live in a time of hyperreality; one in which simulations have no representation to the real. Through the existence of new media products these 'simulacra' represent new forms of post-modern

existence. Digital techniques have made it possible to completely construct realism. In looking at the distinctions between different kinds of *signs*, and their relationship to the 'real' we can argue that most digital images are not indexical signs. This represents a major shift in the meaning of images. It could be argued that digital images offer us new ways of seeing: free from the constraints of truth. Our truth and knowledge no longer comes from mediated visions. We are able to distinguish between the material world and the mediated world, and apply a more critical approach to the meanings we give to images. Knowing that an image is not a representation of truth, however, does not prevent us from attributing meaning to it.

Digital images lend themselves well to being reproduced. In a sense, no work of art is truly original. Everything that's created has some reference point to the culture we live in. With digital technologies reproduction loses significance; there is no difference between the original and the copy. Authenticity does not play a part in the value of a digital artefact. Virtual images derive their value, in part from their role as information, and from their capacity to be easily accessed, manipulated and stored. I would argue that a material artwork derives its value, not purely from its originality, but from its materiality. It is complete. Unlike a digital artefact, it cannot be changed and therefore it is a complete expression of the artist in that time and place. New forms of media art give users a sense of authorship in that they can interact with the artwork and each viewer can have a unique experience of the work. This experience of interactive images is very different from the experience of an original as described by Benjamin, but it has values that a painting couldn't have had. I would argue that new media art has a different 'ritual' from that which Benjamin described in his essay. This is to say that the value of a new media artefact is not less than that of the original discussed by Benjamin, but different. As we have seen here 'original' and 'authentic' hold no currency with digital media; but these media are dynamic and interactive and they offer an audience a different way of seeing and experiencing art. This is the age where an audience can participate in the experience of art, can add his own value to the artwork. In a sense, this would create a new type of aura to an artwork, a new type of 'sacred' experience. One that is truly indicative of the world we live in, and that seems fitting for this new millennium.

In the final section I looked at the everyday work of a digital designer in a new media company and assessed whether this work could be considered 'craft'. I looked at how the designer works and how they relate to the computers and tools

they use. Digital designers develop a range of skills that satisfy their need for direct manipulation. Computers can inhibit the creative process in that they lend themselves to a non-contemplative way of working: as it becomes easier to follow existing styles and trends rather than allowing a more creative approach to a project, which is time consuming. Although McCullough argues that designers should nurture the ability to switch playfully between the use, and the aesthetic of a digital artefact, I feel that in the real world of work this is often quite difficult to achieve, due to the pressures of everyday work and the constant need to update ones knowledge of software. In assessing whether the producing of a digital artefact is a craft, I would like to look at the reasons for making that artefact. What is it going to be used for? Is it a structure purely for the dissemination of information, or is it a creative artwork? It takes skill, practice and talent to produce a digital artefact; but I feel that the end product is important when assessing its value as craft. It is not enough to say that every digital artefact is a craft. It depends on the particular skills and creative thinking required for each project. The computer *can* be used to craft digital artefacts, but in the practice of everyday work in a new media company there are many limitations within that environment that prevent this crafting from taking place by encouraging an automated, reflexive approach to the design of interactive media artefacts. As the role of graphic designer has always been about providing a service to industry, I imagine the role of the digital designer to be the same. Perhaps applying pure, creative talent to the interactive design process is a craft to be mostly enjoyed out of work hours, when one can create one's own digital artefacts outside of the 'work for profit' industry. Designers have become multifaceted professionals; we are the chameleons of the art world, being architects of information, engineers and, when we are permitted, craftsman too.

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## APPENDIX 1

~~WORK DIARY MAY 2003~~

(Numerical references here refer to those in the main body of the text)

DATE	
15 <sup>th</sup> May	<p>Initially it takes some time to get used to the environment and settle in to using the computer to create digital artefacts, as I have been away from this environment for quite a few months. Digital creation requires constant updating and immersion. It is a difficult field to leave and then come back to, one quickly loses ones place in the queue.</p> <p>I am asked to change the navigation for drumbeat web site. This involves getting new images through network and using Photoshop to size and make ready for internet. Working with Photoshop I resize, cut and paste images. I use the batch function to automate operations – once I've decided on the right size and contrast I set up a command that opens all the files and applies the same process to all the images.</p>
20 <sup>th</sup> May	<p>Work on Flash typographical animation. Look for music and sound effects to use (royalty free). Have difficulty finding good sound for backing track. Decide we need a backing track rather than using only sound effects. I find new ways to work with type. I create a section and then play it and then change it, until I am satisfied with it. I am aware that this particular artefact will always be stored and viewed on computer. I must bare in mind the constraints of the medium while trying to achieve the vision I have for 'how I want it to look'.</p>
22 <sup>nd</sup> May	<p>The typographic animation is progressing slowly. I am out of practice. I have lost my speed and have forgotten a lot of the fine tweaking that one applies to ones own set of digital tools to speed up work-flow. I am using someone else's computer. It feels like a stranger. His desktop is different to mine. I must reshape my 'mental models' to allow me to work more effectively in this environment. I am uncomfortable. The music is loud and I'm finding it hard to concentrate. At this point I begin to long for fine art and curse the existence of digital tools. Later I learn to use a software package for making really useful text animation bits quickly, called swift. This is very useful. I can now work more quickly and effectively. There is a frustration of not knowing all the tools available. Everyday practice and networking with other designers makes this easier to grasp.</p>
29 <sup>th</sup> May	<p>Being organized in your filing system is very important. Being digital makes</p>

	<p>this easier than it used to be with literal paper files, but lots of 'designers' omit to use the admin skills available to make your life easier. The metaphorical desktop and filing cabinet very quickly becomes second nature. It has taken me a while to find my way around the 'filing cabinet' and the network and now I use it automatically. I actually think of the artefacts I am producing as 'files'. The metaphorical language of computer interfaces is embodied in my usage of them. I think only about the symbols and icons and I do not try to think of how the computer is actually working. Undo is very useful. Because I know I have 20 undos available to me I can experiment without being too afraid – although there is always a fear of the computer not working. There is not a total trust of computers. I am aware that they fail. Sometimes it feels as though having things on paper is still more reliable. I am probably more experimental than I would be if I weren't working digitally. This way of working allows me to try things, knowing that it is quick to compare to others and then choose the option that works best. In the same way I can erase things very easily or parts of things. I can divide images into layers and delete or manipulate certain elements while leaving other elements.</p> <p>It is easy to put music to images in multimedia. Rather than just a visual society, we are creating a multi-sensorial society. Everything looks better with sound. In this way a 'designer' can cover a multitude of sins?</p>
3 <sup>rd</sup> June	<p>There are inconveniences with being digital. As everything is done on computer, there are sometimes long delays while people share equipment. There is different software available for different platforms and sometimes this causes shuffling about the office.</p> <p><u>There are many different ways to achieve the same effect. Some people don't understand another person's ways and if you are taking over a job that somebody else started it may take a long time to ascertain how they were working. A lot of companies use freelancers. Being digital means a lot of people have the software at home. This leads to problems in there being a discontinuity of ideas and lack of communication between designers leading to a waste of time. I am experiencing the isolation and frustration of this. I am working on someone else's canvas – like taking a paintbrush and altering a strangers painting. Because it is not my canvas, not my creation I engage on a very superficial level with the work. I feel more like a computer operator than a designer (11).</u></p>
5 <sup>th</sup> June	<p>Working with multimedia is tricky. There are different platforms to consider and also computers of different specifications – so what plays well on one</p>

	<p>computer may not work very well on another. There is a feeling of uncertainty while you are working and a project has to be tested many times. This is particularly the case when putting music on an animation. Some computers will slow down playback so that even if the sound is streamed it may sound bad.</p>
9 <sup>th</sup> June	<p>Things look different when uploaded on the net. What appears to work will not necessarily work on-line. Things have to be tested. Computers seem so fallible! There's always a lot of time spent sorting out the reasons for something not working when there seems no logical explanation for it. I'm beginning to think it would be a good idea to specialize more in flash. More training in flash programming would be great, but at some point it would be nice to be marketable. The problem with working is you have to always update your skills but you get bogged down with deadlines and tend to work with what you know. A company that allows its designers time to learn more skills is going produce more interesting and innovative designs, but these days you are expected to be brilliant at all things or the company simply moves onto the next freelancer.</p>
11 <sup>th</sup> June	<p>I switch constantly between software programs, using one to create an image, another to optimise it, another to edit a bit of film and so on. I think I am suited to working with computers because I have a very focused brain that is good at multitasking and thinking about many different things at once. <u>The computer is my medium and my tools (1).</u> I can choose an appropriate medium depending on the ultimate vision I have for the end result. <u>Once I have selected a tool I do not look at it – rather I look at what affect the tool is producing. I use a broad range of tools. Some are for measuring, cutting and selection and others are for applying a medium or effect. I prefer to use a pressure sensitive pad rather than a mouse. The pad feels more like actual drawing and painting and I am able to be more precise. The shape of the mouse does not lend itself well to drawing and being precise. It is a good pointer. The more my tools can represent the real life thing, (in this I include my pen), the more natural the virtual canvas feels (12).</u></p>
18 <sup>th</sup> June	<p>I am feeling more and more at one with the computer. Now that I am back using it to execute design works a lot all the things I had forgotten are coming back to me. Being able to successfully manipulate images and use programs gives me a real sense of power and satisfaction. Power perhaps because the industry is so competitive and satisfaction because I believe in the skill it requires to use the software successfully. I use the mouse</p>

without thinking of it. It is an extension of my hand and therefore an extension of my brain. It feels very normal for me, very natural.

I am expected to do a lot of Actionscript programming as part of my job. I have not been trained to do this and it is a matter of discovery. But there is no time for discovery (10). If it doesn't work, as it should I have to spend long hours at home outside of work perfecting it. I feel that my job has changed from being creative to that of an engineer. This is an area where the role of a designer has changed considerably. In the old days a designer was not expected to be that technical. In fact in the pioneering days of computer graphics, it was said that a designer who was good at both design and understanding the technical issues of software and hardware was a rare and unusual commodity. These days a lot of people seem to fit this role. This would indicate to me that as a culture, designers have changed and adapted their skills to fit a far more technical environment. We are no longer the 'creative space cadets' we were considered to be. Youth now grows up with both digital technology and motion graphics. Motion graphics are a part of them, as a mouse is an extension of self, so is the motion graphic. Children as young as 6 are producing animated flash graphics. Designers in the pre-digital days never had to worry about the youth being in competition!!

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this.onLoad = function() {
    vid.stop();
    vidStatus = playing;
    player.gotoAndStop(2);
    vidColor = new Color(vid);
    colorTransform = new Object();
};

this.onEnterFrame = function() {
    perCent = 100*(this.getBytesLoaded()/this.getBytesTotal());
    if (perCent == 100) {
        vid.play();
        delete this.onEnterFrame;
    }
};

vid.onEnterFrame = function() {
    player.onRelease = function() {
        if (vidStatus == playing) {

```

	<pre> vid.stop(); vidStatus = 1; player.gotoAndStop(1); } else { </pre> <p>This is an example of some Actionscript programming I am working on to get the video files to dynamically download when the user activates the button. The site is set up with the user in mind. We want to make this a pleasant experience for the user and give them as much content as possible without them having to wait too long for download. These days thanks to Flash6 we can download video files straight onto our site. The quality can be adjusted according to the size of bandwidth the user has.</p> <p>More and more people are using broadband but we still have to design for 56k modems.</p>
19 <sup>th</sup> June	<p>I work in layers. All the software I use a lot makes use of layers. In this way an image is built up of different components. I can work on separate layers and make modifications to separate bits. This allows me to be more experimental. <u>I also work a lot with a timeline. I can see life as an animation. I relate to life as a timeline. I work very comfortably with timeline and feel it is intuitive. (5)</u></p>
24 <sup>th</sup> June	<p>I am applying colour to a logo. Colour can be applied by using the colour picker or by moving the points on a graph or by incrementally changing a sliding scale or by typing in a number. There are many different ways of doing one thing with computers. It is up to the producer to find the way that works best for them, in as much as a painter can decide which brush to use. Computer artists have many more tools available to them and digital tools are very flexible. <u>Certain tools have come to represent certain things to me. After much everyday practice I can imagine the outcome of a tool and choose accordingly. (6)</u></p>
26 <sup>th</sup> June	<p><u>It would be nice to explore the tools at my disposal and try to push the software more. This is a very fast paced industry where everyone wants everything now (7).</u> I am passionate about what I do, but not enough to dedicate my entire life to it. <u>Software is becoming extremely complex and it is difficult to truly know it, let alone push it (8)! I don't feel happy about the end use of the images I am producing and whom I am producing them for (9).</u> I enjoy the artefacts I produce and the action of using tools to produce them, but 'what I am producing them for' takes away from the creativity and the enjoyment.</p>

1 <sup>st</sup> July	<p>Working this way is very disjointed. I need to have more of a continuous flow with a job. Leaving something for a few days and then picking up where you left off is difficult. I need to spend a lot of time working out exactly how I was working and where I was. Computer work seems to flow. Once in that flow it is possible to immerse yourself completely and forget what is happening in the outside world. I wonder if it were not for money if I would choose to immerse myself in the world of computer art. (If one can call it that!) I think not. Although I like this world of 'new media' designer because I like the challenge of working with software and attempting to get the best out of it, it is a very competitive world and one in which you cannot be using true creativity a lot of the time. You are carrying out the needs of a client. You are an information architect.</p>
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