

The Role of the New Designer's Portfolio in the Expanded Space of Multimedia

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Abstract

We live in an age where space and time has been redefined by the pervasiveness of digital technology. While digital technology has expanded the boundaries of space by exploring bits and bytes as viable forms of real estate, in a similar way, it has abbreviated our concept of time by re-defining it in terms of fragmented, non-linear, modular chunks, facilitating vast amounts of information in moving quickly through cyberspace.

The revolutionary, mercurial manner in which digital technology has changed our perceptions and expectations, eventually trickles down to the designer whose role is to solve visual problems that exist within this new spatial paradigm. In fact, the designer plays a key role in dictating how information is assimilated and experienced by the milieu at large.

In order to address the newly expanded space where various forms of multimedia dwell, the new designer's portfolio should exist in more than one form. One technology that is often overlooked in the representation of the designer's work in favor of web, CD, and DVD media is the portable document format, commonly known as the PDF file. In this paper I am going to explore the redefined boundaries of space, in relation to the state of multimedia, the new designer's identity as defined by their portfolio within the paradigm of this space, and the importance of the designer's body of work, existing in multiple forms, to accommodate the expansive sphere of digital information.

Introduction

Inventions such as telegraph, telephony, radio, and broadcasting in the nineteenth and twentieth centuries challenged the notion that space existed purely as a physical entity. Further technological innovations throughout the late twentieth century and into the twenty-first century continued to expand not only the meaning, but also the dimensions of space, as we once knew it.

Vast amounts of information existing in unlimited space, and in particular, information delivered as image, require organization and design. The designer plays a major role in giving meaning to the images in this space. The visual content morphs into blocks of data floating around in this space until it is summoned by a viewer who calls it up at will. With the evolution of digital technology and the repurposing of space to accommodate more data, one has to ask the question, "What does all this mean to new and future designers?" "Given the 'shape shifting' nature of new media, how should the young designer present his body of work so that it reflects their understanding of the expanded space of multimedia?"

The new designer's portfolio needs to represent the best of his or her work and in addition, communicate excellence in form, content, execution, and what Todd Purgason refers to as "legacy."¹ Legacy, as Mr. Purgason defines it, refers to the development of a design beyond its first iteration; a design that continues to work within the expanded space of multimedia. The design may initially occur on paper, but it is assumed that it will also be used for other forms of media such as the web, video, kiosk, electronic billboard, or PDF document. To create legacy, while maintaining the integrity of the original design, is a skill that needs to be acquired by new design students.

The young designer benefits considerably for many reasons when creating portfolios in multiple formats. It gives him/her the ability to deliver the portfolio to a prospective employer or graduate school admissions in a universal format that can be viewed on most any computer. The ability to deliver a portfolio that works for the viewer, demonstrates his/her understanding of new technology as well as his/her ability to manage new problems and devise solutions for conquering the vastness of cyberspace. In addition to the book, web, and removable media portfolios, the designer benefits greatly by including the paperless portfolio in PDF format in their list of viable portfolio formats. The benefits of the PDF portfolio are numerous both for the designer and the viewer. For the designer, a PDF portfolio allows him/her to combine multiple forms of media in one document, including print, web, and video, which can all be viewed within the same PDF document. Because the designer does not have to worry about bad links or missing fonts (assuming the new designer is using the programs correctly), he/she is ensured the viewer sees the portfolio as it looks (WYSIWYG). PDF documents are small and portable as the name suggests, and can be delivered in a variety of ways including e-mail, a link on a website, or on removable media.

Design educators need to continuously reexamine their objectives when mentoring students on portfolio building as well as to stay abreast of advances in digital technology and its potential impact on new designers. The more diverse the new designer's portfolio is (including its existence in multiple formats), the greater the students' chances will be in pursuing a successful career as a designer.

Redefined the Boundaries of Space

Arguably, the Internet and the birth of the graphical interface (World Wide Web) spawned the term "information age." Over the past fifteen years, the web has continued to grow at barreling speeds and continues to serve as a dominant source for global information. In the United States, between the years 1994 and 1995, the number of web sites jumped from 500 to 10,000. By 2003, there were 60 million registered domain names in the United States alone. In 2005, the number of global URLs surpasses 600 billion, signifying that an immeasurable amount of information is available within the vast sphere of digital space.

Digital technology has made it possible for text and image to exist as chunks of information that can be accessed on demand, selectively, in a non-linear manner. Like a maze, interactive multimedia allows viewers to navigate through data and customize their experience depending on the path the viewer selects. With new technologies such as Internet2 soon to be available to the public sphere, offering connections up to 1,000 times faster than the old dial up connections, cyberspace has become more expansive as it is capable of transferring more information in less time, and is considered "better" by society's standards. For example, a high quality, 8 GB, full-length MPEG-2 video can be downloaded in as little as 30 seconds with an Internet2 connection.² It stands to reason that Internet2 will play a major role in defining the rules of design for new media in the next generation. In *The Realm of the Circuit*, author Jonathan Lipkin states, "Cyberspace is the new architecture. It is conditioned on timing, as physical distance gives way to the distance between two network points measured in the wait time as a web page downloads. We can move from one institution to the next, from one country to the next, in a stroke of the key, no longer making time the limiting factor of our travel or experience."³

As digital technology grows at warp speed, so does the definition of space expand to include physical as well as virtual space. Hard drives, cell phones, MP3 players, network servers, CD and DVDs are examples of electronic devices that are capable of storing vast amounts of data. Digital compression allows for more data to exist within a smaller area giving way to the notion that physical space alone is no longer required to populate space. Data can occupy media space in the form of smaller chunks that decompress when needed. Space, as well as time, has become the foundation in the construct by which designers create.

Part of the new designer's charge is to fully comprehend how to manage this space, as well as understand its rules and language. The understanding of space as it relates to multimedia has become so crucial that the student planning on pursuing a career in web design without this knowledge, arguably cannot compete successfully in the job market. For the new media designer, educating oneself on the expanded space of multimedia is as important as it is for a print designer to educate him/herself on post-production preflight preparation. For better or worse, the creative student cannot successfully function in the design industry without this knowledge.

New designers today are expected to possess skills more diverse and far greater than the archetypical designer of the early-to mid-twentieth century that Steven Heller profiles in *The Education of the Graphic Designer*.⁴ As Heller reminds us, graphic designers were once referred to as "commercial artists" in the United States, giving further evidence that the profession as a whole was viewed as one that did not require vast intelligence or creativity. The "commercial artist" produced advertisements and other forms of static print with tools such as T-squares, ink pens, razor blades, and rubber cement. In contrast, the new designer of the twenty-first century arguably needs at least a cursory knowledge of these tools of the old school, advanced skill development in digital tools and techniques, and a firm foundation in design theory, history, and development of a personal style.

Identity and the New Designer

As a design educator, I have observed that my students' body of work matures throughout the years as they begin to develop a personal identity. Their finished product always reveals their unique character, from the decisions they made during the design process, to the way they ultimately solve the design problem. The development of this personal identity plays a major role in a design student's future, and as such, becomes an important ingredient in their evolution toward each stage of their career.

The portfolio measures the new designer's degree of talent and essentially "becomes" *the student* in their absence as most employers/graduate schools, at least in the United States, request samples of a student's work before actually meeting the candidate. It is this preliminary portfolio review that determines the value of the new designer and plays an essential role in mapping their future. In essence, the portfolio reveals or should reveal, the student's style, work ethic, content development, and creativity which subsequently precipitates an evaluation of the worth of this student by the employer, client, or school.

Since it is a given that the portfolio in many cases has the power to open and close doors to the student's future, the design student must work toward perfecting the contents of their book, reel, website, or whatever forms the portfolio exists in, in order to ensure a positive response from the prospective employer, client, or school.

What makes the task of portfolio preparation much more complex than it once was, is the difficulty in capturing one's identity in multiple manifestations of the portfolio. For example, a new designer's physical book might include print samples that elicit a multi-sensory experience, including scent, touch, weight, and shape of the pieces. The same piece that works well in its physical manifestation may appear unremarkable as a small jpeg on a web page, thus diminishing its ability to persuade the viewer of the new designer's talent. When the new designer is depending on the portfolio delivered via web or email to introduce themselves, they must develop a formula for making their portfolio as dynamic in one format as it appears in another. Thus, it is important for the new designer to experiment with different ways to present their work within the expanded space of multimedia.

Designer's Portfolio Morphed into Multiple Forms

As has been established, digital technology has facilitated the review of portfolios without restrictions in time and space, without sacrificing quality for file size, that is, if the designer is literate in digital technology. With regard to representation on the Internet, the web design student's portfolio would seemingly have an advantage over the print design student's web iteration of his/her portfolio. In this case, the print designer's work has been repurposed for a different medium, and altered to fit within the paradigm of the web. The web design student's work on the other hand, exists in its original state, providing a more accurate representation of the web designer's skills. The reality is, whether a student's concentration is in web or print design, their portfolio should arguably reflect an understanding of multiple media and should contain samples of all work that is suitable for portfolio presentation.

It is not unusual for colleges and universities nowadays to encourage interdisciplinary collaboration in the field of Visual Communications. Typical interdisciplinary programs in the United States, such as the college I teach in, are rooted in an interdisciplinary tradition within their major where students are encouraged to cross their discipline and study related art and communications areas such as graphic/print/web/interactive multimedia design, film, video, audio, theater arts, visual storytelling, motion graphics, computer technology, creative writing, printmaking, and painting. A design student's course of study at my college might include any combination of these subjects.

Another example of an institution with an interdisciplinary approach to design education is Hunter College, of the City University of New York in the United States. This college offers a new MFA degree in Integrated Media Arts. This program is based on the premise that the new designer needs a well-balanced body of work in multiple forms in order to compete in the digital world. Another such program on the undergraduate level is offered at University of California, San Diego (United States). This is the Interdisciplinary Computing in the Arts Major (ICAM), and is offered as part of the Visual Arts major that attracts both fine artists and designers. According to the UCSD catalogue description, "It takes for granted that the computer has become a 'metamedium' and that artists and designers working with computers are expected to combine different media forms in their work....the program is unique among currently existing computer art or design programs which, on the one hand, usually focus on the use of computers for a particular media (for instance, specializing in computer animation, or computer music, or computer design for print), and on the other hand, do not enter into a serious dialogue with current research in computer science, only teaching the students 'off-the-shelf' software."⁵

This crossover approach in design education springing up in colleges, universities, and art schools today, begs the question once more, "How does the designer define his/her identity when working in so many different mediums? How does he/she communicate these diverse skills and experience in a single portfolio?"

The new designer needs to develop their portfolio in at least three of the following forms: print, web, interactive CD/DVD, DVD video, PowerPoint presentation or PDF. One format that has been underutilized and often overlooked is the PDF (portable document format) portfolio. The PDF portfolio offers promise, in giving designers the flexibility they need in communicating their creativity, personality, and character. PDF technology is often overlooked because it is commonly associated with pre-press and simple word documents. Because of this stigma, designers don't always look beyond its surface to discover all the rich possibilities this technology offers.

Arguably, the PDF portfolio is a necessary iteration of the book portfolio, especially for print designers, as it addresses the demands of the expanded space of multimedia. Among other things, I base this statement on the format's ability to be accessed via a URL, opened in most browsers, downloaded, or be delivered as an e-mail attachment, all without sacrificing the quality of the original work. There are

many other issues to consider before utilizing PDF as a portfolio format. It does not work well for all new designers, but because of its flexibility, it is a format worthy of examination.

PDF Technology For the E-Portfolio

Most everyone who uses a computer has opened a PDF file, saved documents in PDF format, or perhaps, even seen a PDF design portfolio. One significant feature of this format for the print designer is its ability to maintain the total quality of the original document file in a digital portfolio without compromising other factors such as color or font. For example, if one were to produce a logo, multiple page brochure, or poster in Adobe InDesign, Adobe Illustrator, or any number of programs used for print design, the finished document file can be saved to PDF, thus making the brochure essentially the same file that was sent to the printer since most printers now utilize the PDF format for pre-press preparation (see Figure 1).



Figure 1: Logo designed in Adobe Illustrator and output to PDF format.

The following example is from a Print chapter in a PDF portfolio (see Figure 2). The thumbnail representation of the image in the portfolio contains a hyperlink to the actual document, which was assembled in QuarkXPress and then output to PDF format. The PDF is not always a total solution for the print designer because the tactile experience of the paper and the ink are not communicated electronically; but still, it is crisp, clear, and the viewer can zoom in and navigate through the piece as if turning the pages in a real book.

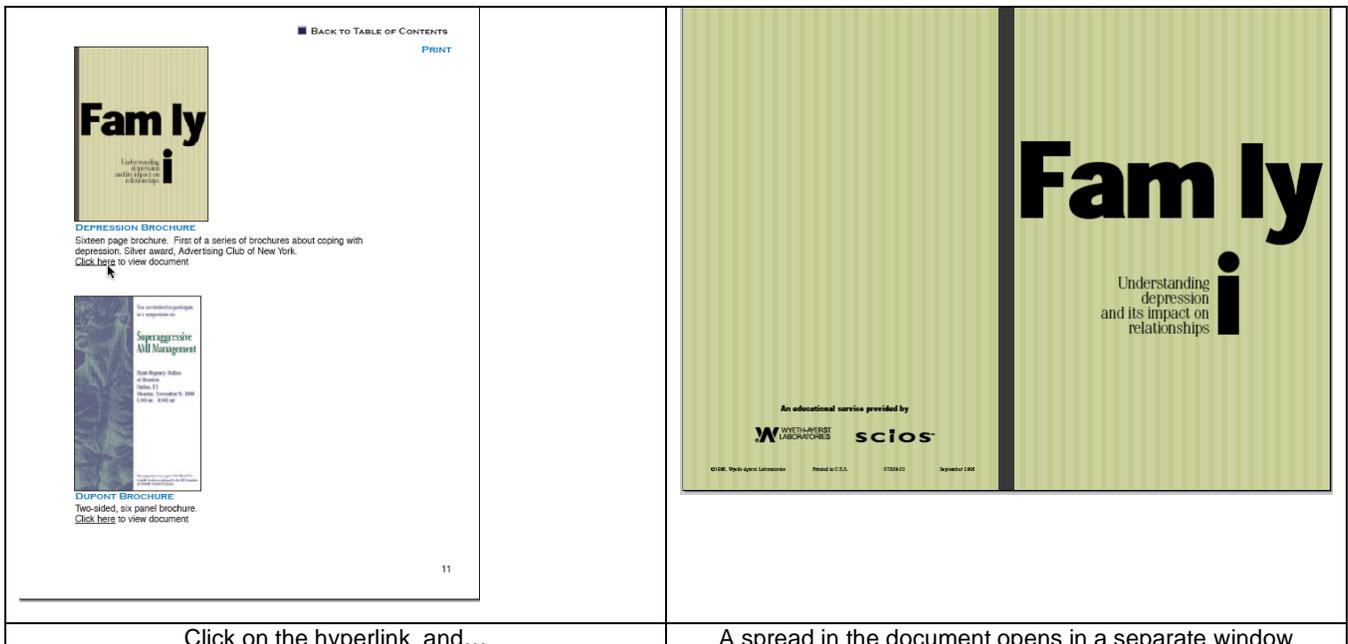


Figure 2: Link from PDF document opens external PDF file in a separate window.

There are many arguments for encouraging the new designer to use PDF format for at least one of their portfolio iterations. Listed below are some issues to consider when evaluating whether this format would be acceptable for one's portfolio:

- PDF documents require a browser plug-in to be viewed in a browser. Additionally, a plug-in is required to view a PDF file on one's computer. PDF plug-ins are generally included with most newer browsers and computers which increases the designer's chances of their portfolio being viewed. Additionally, the Acrobat Reader plug-in (which enables you to view PDF documents) can be provided on disc or as a link to the vendor site for a simple download. This is assuming the viewer who doesn't have the plug-in will take the time to download it. Missing browser and computer plug-ins that prevent a designer's work from being viewed is an unpredictable problem that can occur with any electronic media.
- PDF documents can contain hyperlinks that provide the document a web-like navigation. Multiple pages can be linked as well as external documents and file formats both online and offline.
- PDF is deliverable on the Internet via hyperlink on web page and email attachment. Files can also be saved to CD, DVD, or other removable media. PDF links in an HTML page appear to open in the browser giving virtually the same experience as navigating a website.
- PDF is a desirable format for those designers who are not HTML-literate and wish to put their work up on the web.
- QuickTime movies, audio, and images can be viewed in a PDF document making this a hybrid format.
- One can download a website as a PDF document and the quality of the download will be better than screen resolution. The new designer can archive old website designs as PDF files and eliminate the problem of unpredictable URLs. (see Figure 3).

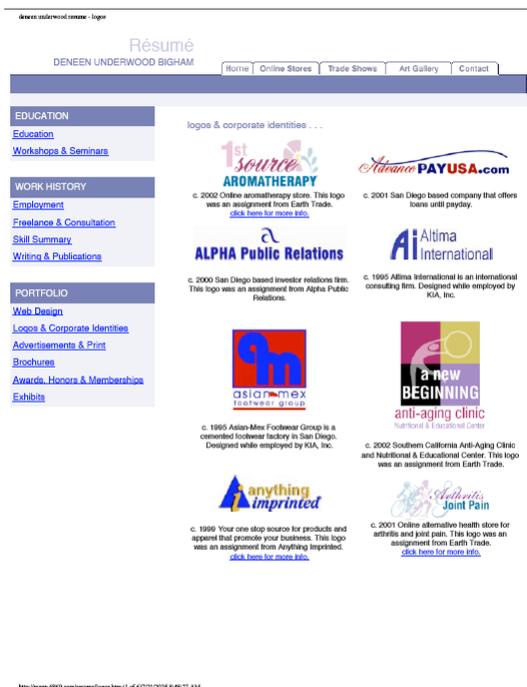


Figure 3: Designer's portfolio website extracted to a PDF document.

PDF Portfolios For the Design Student

The PDF portfolio is a particularly attractive format for the design student for many reasons. First, it gives him/her the ability to combine existing digital work such as publications, advertisements, websites, illustrations, photography, video, motion graphics, writings; essentially any form of media, into one seamless piece. Additionally, the new designer can further expand on his/her process by chronicling various phases of the design process inclusive of brainstorming, thumbnails, layout, and the conclusion of the final project thus, providing the viewer with a virtual profile of "designer as person." These elements can augment the effectiveness of the student portfolio, and in particular, expand the portfolio of the student with a limited body of work with relevant artifacts.

Colleges and universities are beginning to experiment with PDF portfolios for students as part of their design curriculum. At the University of East Stroudsburg, East Stroudsburg, Pennsylvania, USA, professor Susan Amirian teaches a course entitled "Imaging Technology." In this course, Professor Amiran uses the PDF document format for assessment of students' work in the class, but she teaches students how to build a PDF portfolio that can grow throughout their tenure as students in the University. Professor Amiran sees the PDF format as being the standard for document delivery in the workplace.⁶

Many professional design firms have also embraced the use of PDF format for quick, electronic delivery of prototypes to their clients. PDF files are small, portable, and the quality is comparable to the original work. The following figure (see Figure 4) represents one of a series of storyboard designs for the film, "Vanity Fair" by Director Mira Nair. Trollbäck & Associates, in Los Angeles, California, (United States) designed the main titles in this film. Numerous samples of Trollback's work, including the Vanity Fair storyboard, can be seen on the agency website (www.trollback.com). The agency also burns their work in multiple formats on DVD, which is used as a client prospectus. This storyboard design serves as a contemporary example of legacy in the comp stage.

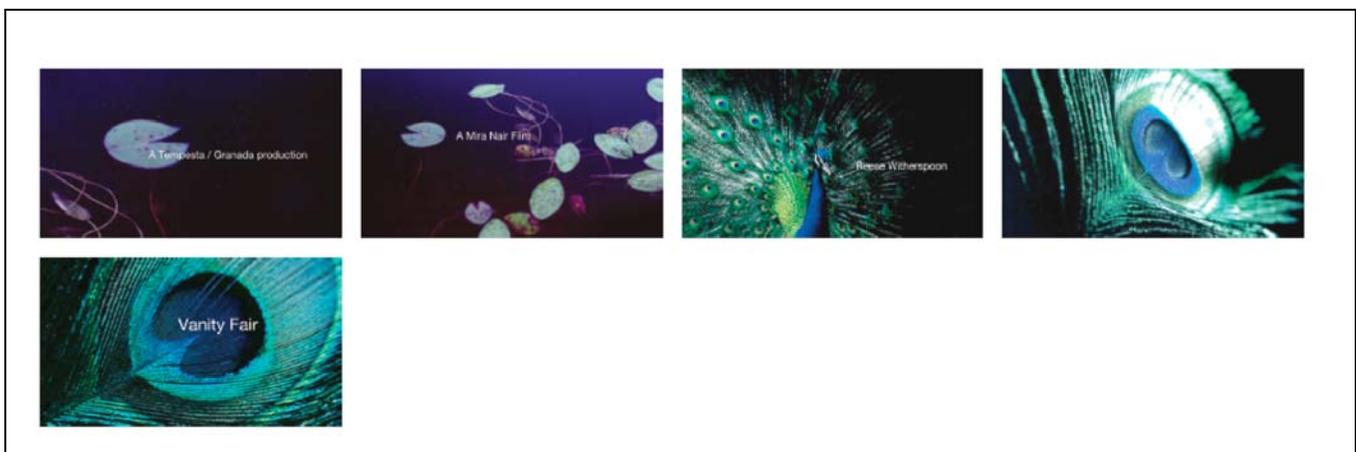


Figure 4: *Vanity Fair* storyboard in PDF format (Trollbäck & Associates).

Thinking Ahead: Portfolios of the Future

Part of the job of a design educator is to prepare students for the future. Since we currently live in an age where technology changes almost daily, by the time a design student leaves college, their knowledge as well as their body of work is already bordering on obsolescence.

In the February issue of HOW magazine, several design professionals were asked to look ahead five to twenty years and conjecture on what they thought was in store for the future of graphic design. Since students graduating in the next four years from college will be in early to mid-career in this timeframe, it is revealing to consider the comments of seasoned designers.

Stephen Beale feels that in the future, “new media will proliferate.”⁷ He goes on say, “Designers will have to become increasingly ‘media-agile’ as new forms of media emerge such as flexible displays and electronic paper. The ability to publish simultaneously to multiple media will be come increasingly important...”

When Sheree Clark, partner in Sayles Graphic Design Group, in Iowa (United States) reflects back on the state of her business five to ten years ago, she comments on how her relationship with clients has changed dramatically. The first “meeting” with a client was always an in-person portfolio review since the electronic portfolio (website, PDF, interactive CD) was yet to become a standard presentation mode in the industry.⁸ Where she once had substantial personal contact with clients throughout the design process and hand-made, one-of-a-kind prototypes were the standard phases in project design, she now rarely sees a client in person because of time constraints. She also goes on to comment that clients expect proofs to be delivered via e-mail in a PDF format and these e-mailed comps are most often indistinguishable from the finished piece.

On predicting changes in the next twenty years, Stefan Sagmeister of Sagmeister Inc., in New York City, (United States) comments, “Most things designers design will be animated in some form or another. We are now working on a book that lights up as you touch it. Our printer already works with electricity-conducted ink now. He’s working on printable LEDs and predicts that printable batteries are only a couple of years off, making an offset-printable TV screen possible well before the year 2025.”⁹

To expand on Sagmeister’s reference to interactive books and printable LEDs, he is referring to a new technology being developed simultaneously by two corporations, E ink and Xerox. “E-ink” stands for “electronic ink,” which arguably is expected to dominate the printing industry some time in the next five to twenty years. This special ink is populated with microcapsules that charge negatively or positively at the direction of microelectronics embedded within the paper’s surface (see Figure 5). The result creates an image much like the way an image appears on a computer screen but with more clarity, however the paper in this instance becomes the substitute for the screen. Data is then transmitted via satellite to the book and the contents of the book, magazine, and newspaper changes dynamically. So the physical book as it were never changes; only the contents of the book.^{9,10} The existence of this and other new technologies in the future will again expand the boundaries of multimedia space. Throughout his/her career, the new designer will be faced with the demanding challenge of broadening their knowledge of design based on developing standards.

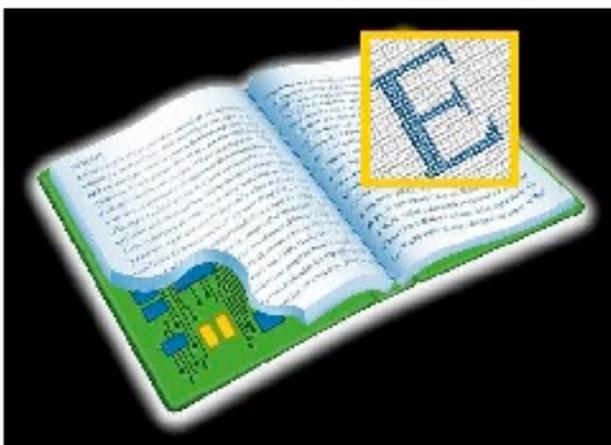


Photo courtesy E Ink

Figure 5: Example of e-book utilizing electronic ink technology.

Design educators don't have a crystal ball to foresee the future, but there is one conclusion most educators would probably all agree on; we need to prepare design students to be flexible enough to adapt to a world which is multicultural, diverse, and globally interconnected. Since the foundations of design training and design history remain constant, to prepare students for what lies ahead, we must encourage digital literacy, adaptability, a solid understanding of legacy, and acceptance of technology as an agent of change.

Conclusion

As technology continues to evolve and space continues to expand, more demands will be placed on the designer to conform to evolving digital technologies. Ultimately, it's the presentation of the new designer's work that establishes their credibility and success in their field and the presentation of one's body of work is essential in communicating this impression. As such, it is essential that design educators encourage design students to stay abreast of related technologies, which would serve the means to this end.

In years past, one portfolio served the needs of the designer. Today, the new designer requires more than one portfolio format. As the expanded space of multimedia grows, the new designer must work toward defining him/herself and his/her work in relation to this vast area where they communicate visually. The new designer's work will assume many shapes within this space and their portfolios should authenticate their understanding of new thought by being prepared with a portfolio that validates their work. The new designer needs to possess a thorough understanding of the language of new media, and gain an understanding of the equipment on which their work may be viewed, whether that be a Mac, PC, slide projector, hand-held device, or DVD player.

There is no doubt that the joy and discovery of the design process is burdened in part by relentless expectations on the new designer to learn the latest digital tools, techniques, and to express all of this vast knowledge in a portfolio. In order to thrive as a new designer, one must be prepared for change, and assimilate these changes into one's own work however unpleasant these changes might seem. It is a given that the space in which new media currently exists will continue to grow. The new designer who learns to grapple with evolving technology and space, will endure throughout his/her career.

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