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<div align="center">The Challenge of Digital Tools in Interior Design</div>

"… Just as water, gas, and electricity are brought into our houses
from far off to satisfy our need in response to a minimal effort, so we
shall be supplied with visual or auditory images, which will appear
and disappear at a simple movement of the hand, hardly more than a
sigh."

—Walter Benjamin (part I)

How would it feel if you were about to be swallowed by a giant Pac-Man®
machine, an intimidating, humming, blinking, electronic mechanism? What if
the device had the ability to totally consume you; in spite of the fact that you
wanted to be friends with it and to communicate with it? What if it was big and
complicated, scary and powerful—enough to be smarter than you—yet what this
gentle giant really wanted was to serve you in anything that you commanded it
do? These contrary and complex pieces of equipment—computers—surround and
permeate almost every part of our society, even though many people are afraid
of them and do not have a clue about how to have a relationship with them. I
know. I was once one of those people. That was a long time ago.

The interior design industry has been dear to me for over 25 years.
Actually, I never wanted to admit that I was in the interior design field. To me,
interior design meant decorating and picking colors and furniture. I realized and
admitted eight years ago that interior design was an overall description for a
huge area of study and practice that encompassed not only colors and decoration
but interior architecture, space-planning, office design, and a host of others

areas within a building. Other experts in the industry, such as John Pile, agree with me:

> In interior design … the term describes all of the decisions that determine how a particular object, space, or building will be. It can also be described as determination of form, with form understood to mean every aspect of every quality, including size, shape, material, structure, texture, and color, that makes one particular physical reality different from any other. It is design differences that distinguish one house from another, one room from another, and that also allow us to speak of one example as better or worse than another. (Pile p. 33)

The growth in automation of our design tools over that time has been astounding. Approximately fifteen years ago, the computer-aided design program with which I am currently most familiar appeared in the office where I worked. At that time, my career involved design of kitchens and baths, drawing everything by hand, and writing all of my proposals and orders by hand. I had taken some computer classes in the 70's at a community college in Texas; it was no fun. COBOL programming and flowcharting were boring and offered no practical application for my own work.

What a nice surprise when a computer appeared in the office and seemed to be a useful device at an important time in my life. I had made the design industry my career path and here was a new type of design tool, unfamiliar and with lots of possibilities! I decided that I was going to ask the operations manager to teach me how to use the new design program. He did and now it is nearly fifteen years (and ten or twelve revisions) later.

One of the interesting things that I have noticed in my years of experience in the design industry is that different designer personalities gravitate to different tasks. The interior design field has many avenues, leading to a diverse choice of career opportunities. Most designers stay in the field for many years and move to different areas of specialization after a time. I am one who has expanded my knowledge in different areas. I designed kitchens and baths for 25 years while selling cabinets and other products. My specialization now is teaching and using computer-aided

design and drafting software. I am interested in almost anything that has to do with computers. What I have seen has caused me to ask myself, "How has the automation of our tools—design tools in particular—challenged us as designers and how, in turn, has this fact challenged our clients and consumers?"

Pens, pencils, graph paper, and drafting tables are tools used by designers to create sketches and plans for their clients. These images are used to help the client visualize the proposed solution to their design needs. What I hear most often from clients and consumers is, "I have a hard time visualizing." Most of us want to see what it is that we are purchasing, whether it is a sample or an image. Interior designers create works of art for the rooms in the home. The designers' dilemma is that somehow the client needs to see a visual image. This takes time and many designers do not have time. Whether working as a contractor or as an employee, the typical designer is overwhelmed with demands on her time that detract from what she really wants to do, design work. Design by its nature is customization and customization is not a task at which humans are efficient. The typical designer spends most of her time doing paperwork, arguing with vendors or managers, expediting orders, and resolving problems. Images are still a necessary tool for the consumer, but fall to the bottom of the designer's priority list.

Walter Benjamin discusses the importance of the physical presence of the original piece of art. His thoughts apply as well to a design project:

> Even the most perfect reproduction of a work of art is lacking in one element: its presence in time and space, its unique existence at the place where it happens to be. This unique existence of the work of art determined the history to which it was subject throughout the time of its existence. This includes the changes which it may have suffered in physical condition over the years as well as the various changes in its ownership. (Benjamin part II)

The image that a designer creates for a consumer provides a general idea of what the consumer may want; however, it is not a real space. An image created by hand or by machine does not capture the essence of life in someone's home, only a partial reproduction of it. It is enough to get the consumer thinking and this visual reminder is important, as Benjamin says, "And in permitting the reproduction to

meet the beholder or listener in his own particular situation, it reactivates the object reproduced." (Benjamin part II) An image that someone can see creates a desire, an urge to move forward and to get a project completed. Benjamin reinforces the idea with these thoughts, "Every day the urge grows stronger to get hold of an object at very close range by way of its likeness, its reproduction." (Benjamin part III)

What does the designer do? She can create the images by hand, which takes up time better used for design work, she can hire someone to do the drawings, which fractures the budget, or she can attempt a computer design program. Many designers are afraid. Some fear that if they delegate drawings or drafting projects to others, they will lose control of their project. Others fear the learning curve, expense, and complexity of using a computer design tool. These fears are very real—although not freely admitted—and not only within the design community. Automation of projects has that affect on others as well:

> … Computer-Aided Design and Drafting (CADD), for example, has virtually eliminated the drafter in, and radically changed the character of, engineering. The articulation, by means of a computer, of design with execution (manufacturing) has increased productivity exponentially, wiped out whole occupations, and transformed the work from its tactile, craft character into a surveillance function. (Aronowitz p. 137)

Aronowitz paints a clear picture of similar fears in the manufacturing arena; however, designers themselves are also typically the drafters for their projects and they do not want to be replaced by computers. They might lose the hold that they have on that part of the creative process and their client relationships might be diluted. In addition to thinking that computer drafting may replace them, designers think and are afraid that they will not be treated as individual, unique providers for the client's needs. They may think that by using computers more they will be just like everyone else—a duplicating machine instead of a unique individual. This is something in the typical person's ego that is strong and innate, particularly within groups that have an artistic orientation.

Most people in our society are accustomed to excessive self-gratification. Designers in particular have a tendency to think that they are the most important individuals on a project, when in actuality it is not what they want that is of the

utmost importance, it is what is right for the consumer and how expedient they are at providing a service to that consumer. Designers receive self-gratification by getting individual and focused attention from a client. This benefits both parties. Designing someone's home is an intensely personal experience. It is often difficult to determine the client's real desires, needs, and most important—budget, yet the client will be very vocal in their dissatisfaction if the completed project does not meet these requirements. Probing for needs and desires and discussing money takes quite a bit of time, and rightly so. Some projects may last for years.

Computers help provide design services in record time. Every designer should stop, try to set aside her feelings of individual importance, and focus on the fact that there are hundreds of other, competing designers eager to take on the same basic tasks she does every day. As designers, it is possible to work a bit more creatively and offer something more unique in design to the client. This is the soul of the design profession, yet most designers spend a small fraction of their time on actual design tasks. We, as designers, are able to offer graphic presentations, prepared on the computer, that are very special. This is one way to stand out from the crowd in the industry while also achieving much more self-satisfaction and communicating far more effectively with the client. Everyone is happy with the results.

I have found in the design industry that at the onset of becoming automated the transition may be difficult and irritating. Adding computers, networking systems, and purchasing new software are complex tasks. However, the discomfort is merely a part of becoming more in tune with today's ever-changing world of digital media. We almost always have a little pain or awkwardness for a tremendous gain. Amy Spiezio agrees with the importance of automating our industry:

> As the kitchen and bath industry is more aware of their automation options [Emil] Musgrove predicts growth for the firm. "I do see more and more people automating for one reason: it makes their lives easier once it's up and running. You can do more in less time," he says. (Spiezio)

There is an old saying that there is really nothing new that can be done; history repeats itself. There are interior designers, architects, and kitchen and bath designers

in every part of town. They all offer the same things: cabinets, fabrics, countertops, etc. Most of them do the same things that others have been doing and repeat the same pattern on project after project—just as they have done for years. Designers need to take advantage of what technology has to offer. The individual in these times needs to move away from the drafting table and use the computer-aided design programs that are available. Many designers do not realize that this will leverage their expertise and help them stand out in the crowd. The investment is minimal when one realizes the value of what is returned:

> … The individual is an illusion not merely because of the standardization of the means of production. He is tolerated only so long as his complete identification with the generality is unquestioned…. Only because individuals have ceased to be themselves and are now merely centers where the general tendencies meet, is it possible to receive them again whole and entire, into the generality.… Individuation has never really been achieved.... Every bourgeois characteristic, in spite of its deviation and indeed because of it, expressed the same thing: the harshness of the competitive society. (Adorno and Horkheimer)

Computer drafting is fast! In our competitive society, designers would be ahead of the game if they realized that getting information to consumers quickly is a unique service more often than not. You may think otherwise. This week I spoke to a busy cabinet dealer who needs help in getting quotes to potential customers. People come through their doors and inquire about pricing for products. All of the sales people are busy with other work and new client requests are typically put "on the back burner!" All of the attention is being devoted to deals that are already in hand and new business is being given the lowest priority. This situation will not recur once computer assistance and a quick hand are applied. The retail outlet gains a stronger reputation in fast, efficient customer response and increases their success rate in attracting new business. John Pile is in tune to the interior design industry as well:

> As in so many areas of contemporary existence, computers and the techniques associated with their use have come to be accepted as essential elements of professional practice. Early fears that individual creativity would in some way be displaced by inhuman intervention have given way to an understanding of how computers, when intelligently used, can simplify and expedite design work, ultimately contributing to

superior end results. Young designers entering the profession now take
for granted the value of computer technology and accept its use as no
more exceptional than the use of the T square, triangle, and pencil. (Pile
p. 9)

The process of generating a professional, detailed, color-enhanced drawing is shortened with the use of computer-aided design by days and sometimes by weeks. The time to create a basic "before" plan—for sketching purposes—from measurements taken from an on-site visit is very brief, usually less than an hour for an average residence. A one-hour turnaround will allow the designer to start sketching out ideas almost immediately, while the information about what the client wants is fresh. Alternatives can be easily explored, options mixed and matched, and different budgets considered, all with minimal effort and equally-pleasing results. This is simply not possible in a paper and pen world for reasons of time and cost.

Many designers will mentally walk through the space after a site visit and will achieve greater clarity for the direction of the design process. However, these effective design concepts are often lost when there is no time to commit them to paper and it is often difficult to communicate these ideas effectively to the client who may lack the designer's skill at visualization. There is a tremendous need for the quick ability to commit the designer's ideas to solid form, to visualize them in a realistic manner, and then to quickly modify those ideas without the need to restart the plan from the beginning. Computer-aided design now provides these tools. A pseudo-virtual design process generally leads to the talented designer's ability to create a realistic virtual space that the consumer can appreciate and understand: Pile is in agreement with the idea of a virtual space becoming the future:

Futuristic thinking rooted in technology suggests that an escape from
obsessive materialism might be explored through a group of techniques
sometimes called virtual reality. Computer simulation makes it possible
to study a set of alternatives so that the consequences of various actions
can be observed and evaluated with great rapidity; the technique can
also be used to generate sensory output, allowing consequences to
actually be seen, felt, or heard.

The goal of virtual reality is to create a totally synthetic surrounding
that would be as persuasive as reality. A participant can visit various
locations and seem to look and move about within a setting that does

not exist except within the simulation equipment.

By its very nature, built reality is costly. It takes up space and uses real materials. A virtual-reality environment would occupy no space, use no materials, and have no cost beyond that of its programming. (Pile p. 29)

The interior designer has the potential of many options before making any selections as Dave Platter agrees in his article, "The Matrix Meets Interior Design:"

Interior designers are finding they, too can use digital animation. By creating virtual versions of a room, … they can try out ideas before spending a penny on fabric, furniture or construction. (Platter)

Once a designer has sketches to show the client, she may proceed to the techno-design process. Time is the most valuable at this stage. The client generally has not been seen for a few days or more and they are usually anxious to hear and see something concrete after the initial meeting. They are excited to get started although the change process is at the beginning stage. Almost all design proposals will require changes, even after the "final" plan. Clients and designers work continually to perfect the project plan. It may take months to move through the changes depending on each individual's time constraints. The computer is able to produce fast results and can free the designer to focus on the true design issues when changes need to be made, instead of being inundated in paperwork:

In the old design era, most of the architect's and engineer's time was taken up by making and remaking drawings and performing mathematical calculations. The three-dimensional graphics program and the math menu inscribed in CADD have drastically reduced the proportion of time spent on routines of drawing and calculation compared to actual design work in the activities of the engineer and architect…. (Aronowitz p. 137)

But there has been no net increase of design jobs because these employees [and designers] are now more productive. Similarly, those who herald Technoculture as the fulfillment of the next and perhaps final frontier of human striving call on us not to mourn the passing of the old culture—if indeed a culture not intimately linked to technology ever existed—or to celebrate a new cornucopia of leisure; they call on us, rather, to take a new ground of social existence at last, according to some, the full development of the individual is possible, because we have finally objectified both our physical and mental capacities in a machine. (Aronowitz p. 138)

As wonderful as computers are, there is a continuing issue when it comes to creating this virtual space for consumers. Many designers will not take the time to learn more than the most basic aspects of a software program and use few of the features that a computer has to offer. For example, most users of word processing treat the computer as a glorified typewriter and use less than ten percent of the available capabilities. It was just the other day that a designer called me and was mystified about how to add a column of numbers in a spreadsheet program. At least she thought there might be such a feature and found someone to ask, so I became her help manual.

This was not the first time I have been called for computer assistance. Designers tell me, "I'm too busy. I don't have time to learn the program," or "I don't touch computers." It is amazing how many people are computer-challenged, even in this time of technical saturation. They are usually willing to freely admit in public their frustration that they are "computer illiterate." This may be their way of getting help referred to them. It also indicates the continued tolerance of society for those who refuse to use modern tools. It is unclear how long this will continue or how much longer clients in my industry will be tolerant of designers who are unable to work at the current state-of-the-art.

Not only do the great majority of computer users not know how to use even a fraction of the available features, but most are also reluctant to ask for assistance and even hesitate to refer to the help manual. Surprisingly, many computer users forget that there is a "help" section available in nearly every existing software title. Of course, sometimes the "help" is not very helpful, is even more difficult to use than the program for which you are seeking help, lacks the answer you seek, or has chosen to categorize the answer in a way that does not occur to you. Many beginning and intermediate computer users get discouraged and become reluctant to seek additional information outside of their comfort level.

It takes time to learn a program including using the "help" menu. I teach CADD software to interior designers and to kitchen and bath dealers. Many of them are angry and upset to be in the class but have been forced to attend because of changes in the industry—driven by their fears of getting behind the times or by management

directive. They are forced to learn certain programs and to remain current with the latest updates because many manufacturers now tie their products and ordering procedures to specific software packages.

Unfortunately, in this industry, there is no such thing as a standardized size, shape, color, or even designation. Many cabinet manufacturers, for instance, have their own set of descriptive terms for their products. There are numerous vendors, each independent of the other, that create the software catalogs for each manufacturer's product. This creates havoc with dealers and designers because all of the product catalogs use different specifications. It is very confusing for the techno-designer, especially since most kitchen dealers sell many cabinet lines. This is true with many products in the kitchen and bath arena and is also true within the wider field of interior design and within many other design-related fields.

Some manufacturers have created standalone pricing programs; of course, they all follow their own standards and guidelines. Each has different hardware requirements. I was working with a pricing catalog yesterday and the only way to transfer data (it actually removes the data from the computer) is via a 3½" floppy disk! This is way behind the times compared to current technology. This is one of the many challenges we still face within the new automated devices that we are using. Automated devices, digital in particular, are improving constantly and almost always need upgrading. It is a challenge to recognize and stay current with constantly changing versions and to note the differences between different vendors.

Manufacturers have changed their thinking and have increased their usage of computer support systems since they have begun to realize that automated catalogs and ordering systems greatly increase the quality of the orders they receive, cut down on errors, and reduce the number of pre-order questions. There have been massive upgrades and incredible changes in software versions; designers need to be brought up-to-date, and they do not like the commitment of time and energy that is required to stay current, even if they have passed the hurdle of initially learning the computer system. Ironically, once someone has been exposed to the features of the latest release of a design program, they do not generally want to go back to a previous version. This can be both a positive and a negative.

Version 5.2 of the design program that I teach was DOS-based. It was a clean running program; I was fast with it and so were a lot of people that used it. It was solid and reliable in its operation; however, it was DOS-based and the developer felt tremendous pressure to get current with the rest of the software world by providing a graphical interface. The manufacturer did a massive upgrade about four years ago and converted the software to a Windows-based environment. I was excited about it, but the initial release, V6.0, was full of bugs, crashed constantly, and used a completely different paradigm for its approach to design tasks. I hated it. It was hard to use, it was unreliable, and I did not want to learn it! I put it away for about eighteen months and stuck with my familiar V5.2. My progress was typical:

> When I start using a new program I have to take some time away from my immediate task to learn how to use its features. I am called away from my usual duties by the software until I become competent to invoke what I want when I want it. (Chesher)

The program is tightly linked to databases of products and bills of material provided by all of the major vendors in the kitchen and bath industry. Eventually, all of the vendors supporting the program transferred their existing data to the new release and gradually became incompatible with V5.2 as they released new information. Fortunately, the developer also provided a series of fixes that corrected most of the bugs and instabilities. I was forced to learn the new, improved V6.06, along with thousands of others, or I would have been unable to place product orders. The latest V6.4 will be out sometime later this year and I am looking forward to it. I love the new release now, but it was a horrible transition; however, I would never return to the previous version. I admit, it was a major commitment for me to learn V6.06 and to continue to move to new upgrades (currently at V6.1). I had to focus tightly on this task to the exclusion of current work and practiced for hours daily. The rewards are that I am able to create an almost seamless virtual space to offer to a client. Again, I followed a typical path:

> However, by enduring this process of training, I have transformed myself into the particular subjectivity of a user. I have tied myself into an upgrade path. The tasks become habitual, and I can no longer perform

them without this software. (Chesher)

It is interesting to see my obsession with the software. There are mornings that are spent from 4:00 a.m. on just becoming proficient with all of the capabilities of the program. I have made a commitment to learn as much as possible about using every aspect of the software and to stay as current as possible with new features and capabilities as they are released. I teach the use and implementation of the software to others so I am constantly learning and relearning the details. It has become a job within a job for me, but also something I do for fun as I enjoy increasing my knowledge and learning how to produce new results. I know that sometimes, too, I become totally immersed in working on a virtual project; I am so absorbed that I choose working on the computer rather than completing other important jobs.

Another aspect of making a commitment to a complex software program like this one is that I often have to adjust the way I do my work because of the way the program has been designed. I often wonder what the authors were thinking as they sometimes seem to lose touch with the real-life design process. For example, in the design software that I use, in order to view a simple floor plan prior to printing it, the user must navigate a complex set of steps and settings: click for the preview option; set the type of view, color, line drawing, and wire-frame drawing; and select the view element, floor plan, and elevation options. Then you may be lucky enough to press "view" and be able to see and print what is required for your presentation. Most of the time, the view is not quite right and the whole process has to be repeated again and again. This is typical in the current version of the program. There is no way to save a group of setup parameters (despite the multiple steps needed to create them) and then use one click to arrive at the result. Chris Chesher's understanding of the situation is brutally honest:

> While software features give users greater power, they also call users away. This is a special example of cultural process that Weber {24} refers to as avocation. An avocation is a minor form of vocation. It is not the life-long calling such as the calling in politics, ministry or another profession, but a distracting call to deviate from one's original path. Software features are a special form of avocation. They allow users to perform second order invocations, or invocationary acts. Although they

are never quite right for the job at hand, they are usually adequate. (Chesher)

We have come a long way in the communication of needs from paper and pencil to computer graphics and now virtual reality. We (and I will speak for all) techno-designers create the pseudo-virtual space via two- and three-dimensional images. There are some designers who use software that creates a realistic virtually-designed space that rotates in three dimensions. A client is able to actually "look all the way around" the room from a certain pre-determined point. Yesterday, I was privy to a virtual kitchen created by a designer friend. She sent it to me to preview in order to test the practicality of that particular delivery method, electronic mail. It worked quite nicely (as long as the recipient has the proper version of the Quick Time® movie player needed to view the video). All of these methods of pre-imaging a client's space were at one time delivered by hand to the client. Now we have new technologies that enable us to electronically beam plans and images directly from our office to the client's home. The material is transported through cyberspace on the Internet.

Ah yes, the Internet, another layer of technology and perhaps even an extremely useful one. The concept intrigued me as soon as I heard about it. My friend and my brother both used the Internet often and I always wondered, "How about me going online? How will I like it when I learn how to use the Internet?" I wanted to be able to access all of the information that they were sharing with me and it certainly seemed like it was a simple tool to learn. I knew that the Internet was going to be wonderful for me, too. I needed to forge ahead through my fears and learn more about this new tool which seemed to have applications everywhere. I relate to this analysis by Margaret Morse:

> However define cyberspace as I will, fashioning an inclusive and compassionate electronic culture out of the raw stuff of bits and bytes demands more than critique or what amounts to symbolically turning the table on masculine prerogatives. Even though we may have difficulty in setting the clock on our VCRs, the times demand that we re-engage information with our own values…. (Morse p. 86)

Now I feel my computer is my friend and I have awful withdrawal if I am unable to access the Internet first thing in the morning to check my mail. In the beginning, I was online quite a bit, researching information and getting set up with electronic mail. Electronic mail has enhanced and expanded our ability to communicate with much more complexity than using the telephone. Electronic mail is how I talk with clients, deliver drawings and invoices to them using digitally-created electronic files, discuss design issues, and set up appointments to meet with them to discuss their further design needs.

The Internet is another automated communications device that has changed the lives of not only the designer but also of the customer. We have speed and convenience, both things that our society loves. We crave fast food and fast transportation to get everything done in a hurry so that we can move to the next form of distraction. We want more social interactions; however, our busy schedules keep many of us from the physical human contact that we desire. The computer, with electronic mail and instant messaging, gives us a new opportunity at being with other people. We share information about interesting Web sites through electronic mail by copying and pasting a URL into a mail message:

> Being on the same web page becomes a social event. Cyberspace marries subjective human experience to the vast data of global information. (Heim)

The Internet provides automated tools that we can use for upgrading our software. In the past we had to physically purchase software (and hardware, too, for that matter). I remember my first computer purchase at CompUSA. I was terrified. It was about 1990 and I had never even been in a computer store before! I looked around and was glad that I had a good techno-friend with me to lead the way. I have since purchased four computers, all through the Internet. Making my first Internet purchase was also intimidating and frightening. Making a big investment in machinery without having a tactile experience combined with it was at first very different. I think that most people who have purchased online would admit to some similar feelings. It is now, for me, more comfortable to be an online customer than to go to a retail store.

It is fast and convenient and many vendors are so experienced with customer service that one can often obtain better service online than in person.

My initial purchases online were a mixed bag of fear and excitement. It was fun to be independent and explore a variety of virtual stores. It was quick, easy, and convenient to go from one "big box" virtual computer store to another. This made customized selections and, with help, decisions to create my own personal computer a simple matter. In the end though, it seemed I would always make "personal" contact with the salesperson to clarify information and get answers to my questions. The automated ease was not a complete replacement for personal customer service. Most of us still need to hear a person at some time or another. There is usually always a time when we have a question with which we need help:

> "The Internet seems impersonal. It feels like you are never going to have contact with a human being again," says Amy Caplan. "But what's clear is how critical the human being is in all of this—you have someone guiding you through. No one is going to do it all on the Internet. The value of the Internet is information access and in that there is 360 degrees of marketing with human beings all around it. The paradox is that though aspects of it are impersonal, it has made services and how a customer is treated more important than ever." (Jankowski)

Now, many consumers use the Internet. Most of us have electronic mail and have a way to actually communicate—albeit via electronic media—with family, friends, and associates who we would not otherwise contact regularly. Many of us surf the Web often, shopping for information and products. We are able to shop any time of the day or night and there are no salespeople to walk up to us and interrupt our experience. We are able to get information almost instantly. Many consumers do plenty of Internet research on major items before they leave the house, even if they intend to purchase in a retail store. Customers are able to relax as they view all the wonderfully designed sites, once they find the ones that interest them. It is no wonder that consumers are so well-educated before they walk into a store or meet with a professional to make a purchase these days. The Internet is changing the way designers need to do business.

Web sites can hold a lot of information and the investment needed to create a user-friendly, easy-to-use Web site can be significant. While beginning at around $120.00 per year for rental of the computer space and Internet connection there is also a large time commitment by the designer to collect the graphics, photographs, and information and for the educated, well-trained Web designer to assemble all of these elements. Compare that to the cost of business cards and brochures for a typical designer. The designer who creates a fancy color photo brochure to mail to clients and potential clients is making a commitment of hundreds, if not thousands, of dollars. While it is true that these sales aids do have a purpose, how much more valuable is a good Web site?

So, designers face another challenge. They need a Web site for customers to access. We must face up to the fact that if the Internet is where people are shopping, and yes, they shop for cabinets, appliances, light fixtures, and even designers online, then we must have a visible presence on the Web:

> The immersion of the consumer base into e-commerce is another challenge. "I can go online right now and purchase major appliances. I can even sit at home and design my own kitchen using manufacturer-specific product catalogs, send this to specific kitchen and bath companies and with a credit card, have this ordered without ever leaving my living room," he [John K. Morgan] says. (Spiezio)

A challenge to the designer is the Web site. Many have one and many do not. It is another part of the growth of the design firm that takes time to research and put together. There are companies that provide the service of offering a number of pre-defined Web site templates. The designer selects from different options of number of pages and how much they are willing to invest. Usually, there is an up front fee and then a monthly charge for the Web page. The template choices generally have a list of options as to what services the designer provides, and also an option for the number of photos they are able to display. This is one possible avenue. Another is for the designer to make an investment and have a customized Web site designed. Those projects can run from hundreds to thousands of dollars.

There are advantages to a nicely planned and executed Web site. Since many

consumers are now shopping online and Web surfing constantly, they almost expect you to have a Web site. When I need to find out information about a company or if someone asks my advice, one of the first things I say is, "Did you look at their Web site?" I am able to determine a lot from what I see on a business Web site. It is almost expected now. I do not remember the last time I suggested to someone, "Did you look in the Yellow Pages?" I expect a business to have a Web site:

> Image building is another great benefit of a well-designed website. You have heard the old adage, "You only get one chance to make a great first impression." Savvy consumers make judgments about your company when they see you on the Internet. The way your site looks and its ease of use can create an impression on the shopper that compels them to buy from your company. To take this further, not having an Internet presence says nothing to the prospective client, except maybe "I'm behind the times." It's frustrating when today's consumers see a small ad in a local paper or magazine, but can't find additional information on the Internet. They've just come to expect it, so when it isn't there it looks bad for your business. (Glickman)

What should be included on a designer's Web site? We need to look at the expected user of the site and ask that question. It would be a plus to include an easy-to-read map with written directions if the design company has a showroom. Including a digital photo of the designer or the designers is a plus. Again, keeping in mind that the Web visit is in cyberspace, having a person's smiling face looking back at you from a Web page may give a more personal and human appeal to many Web customers. Digital images of completed projects will give a potential client an idea of what kind of products and services are provided plus the scope of work of typical jobs. This is another way of providing a virtual introduction to the company and influencing the consumer's desire to obtain a personal appointment.

Web sites also provide the opportunity to display banner ads and links to other Web sites, such as those of the manufacturers of the products the designer represents. Another fruitful area for links is articles of interest to the consumer. This is a "free" service to the client and consumer and is just another way to show prowess at customer service and product knowledge. The Internet can be a multipurpose marketing tool for design firms.

How has the automation of our tools challenged us as designers and how, in turn, has that challenged clients and consumers? How has the development of automated tools when applied to a business that has been paper and pen for thousands of years not changed and inspired us? The changes that have been made and the growth that has been achieved is overwhelming. In my own life, I have been compelled to learn about using computers in order to stay current with the growth of our electronic and digital society. I have learned to use them in my business, designing and drafting digital images to share with clients and consumers. I need the computer now; I certainly do not want to go back to card catalogs and dirty graphite pencils!

The Internet has changed and challenged many of us. The excitement of being able to be online and to "surf the Web" is still a new concept although it is becoming more accepted as a standard in automated communication. We are learning how to use electronic mail almost daily as a required element in our personal as well as our business lives. This is the standard now. We will not go back. It has not only changed the way we communicate, it has given us the inspiration to communicate more. We send electronic greeting cards and offer a quick, "Hello!" to an old friend when we might normally lose touch if restricted to more traditional tools.

We research things of interest, for instance, in the design industry the Internet provides a wealth of information about the latest appliances and cabinet models—information that would have been extremely difficult and time-consuming to obtain by contacting each manufacturer or reseller individually. It is common for clients to show me information they have compiled for their kitchen project: refrigerators, microwaves, ovens, and many other details—all with color pictures and specifications they have printed out on their inkjet photo printer. I will follow them by going to the appliance manufacturer's Web site and collecting detailed data on precise sizes and installation specifications. The Internet is now an automated tool we do not want to be without—should I say I do not want to be without it?

It has been an interesting highway for all of us, designers and consumers alike. We have been challenged by the new technology, almost forced to comply with the changes to keep up with the current generation of tools. Has it been good? Absolutely!

Easy? Not at all. At this point in the world of digital dilemmas about hardware and software and Webs and online communications, why not take advantage of our humanity? We have the potential, the fortitude, and the talent to continue the search and to adjust to the constant parade of new tools that challenge us as designers to continually improve the quality of our work.

> "Let a person rejoice when he is confronted with obstacles, for it means that he has reached the end of some particular line of indifference or folly, and is now called upon to summon up all his energy and intelligence … to extricate himself, and to find a better way; that the powers within him are crying out for greater freedom, for enlarged exercise and scope."

—James Allen

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