

Rochester Institute of Technology

RIT Digital Institutional Repository

Theses

11-1-1996

Kiosk for do-it-yourself express business card machine

Chamaipan Ruksakiati

Follow this and additional works at: <https://repository.rit.edu/theses>

Recommended Citation

Ruksakiati, Chamaipan, "Kiosk for do-it-yourself express business card machine" (1996). Thesis. Rochester Institute of Technology. Accessed from

This Thesis is brought to you for free and open access by the RIT Libraries. For more information, please contact repository@rit.edu.

Rochester Institute of Technology

A Thesis Submitted to the Faculty of

The College of Fine and Applied Arts

in Candidacy for the Degree of

Master of Fine Arts

**Kiosk for Do-it-Yourself
Express Business Card
Machine**

by

Chamaipan Ruksakiati

November, 1996

Approvals

Chief Advisor: Robert Keough

Date: 2 - 28 - 97

Associate Advisor: James Ver Hague

Date: 2.28.97

Associate Advisor: Glen Hintz

Date: 3/10/97

Chairperson of Graphic Design : MaryAnn Begland

Date: 3.11.97

I, _____

hereby grant permission to the Wallace Memorial Library
Of RIT, to reproduce my thesis in whole or in part.

Any reproduction will not be for commercial use or profit.

Date: _____

Contents

Preface	<i>i</i>
Introduction	<i>1</i>
Three Components:	
Business Card	<i>3</i>
Kiosks	<i>7</i>
Electronic Prepress	<i>22</i>
Groundwork	<i>32</i>
Body of Work:	
The Design of Logo	<i>41</i>
The Design of Business Cards	<i>43</i>
Process of Designing Interface	<i>49</i>
The Final Work	<i>63</i>
Conclusion	<i>107</i>
Bibliography	<i>109</i>
Acknowledgements	<i>111</i>

Preface

Have you ever needed to have beautiful and customized business cards? Have you ever worked under a very tight budget? Have you ever wanted to get business cards immediately? In the old days, this kind of service was neither while-u-wait nor cheap. Yet, it was not easy to get one. One had to pay separately for both design and printing. Moreover, you had to pay for a ton of cards, just to try out with risks and make it costs reasonably. Hopefully, you never had to make any changes for what we had already paid for.

Then one day, I happened to be in the shopping mall where the business card machine was located. I was very much interested in this machine in which I can create and get the

business cards within a few minutes just like an ATM machine. It is a great combination of business card design, multimedia kiosks and electronic prepress technology. What a wonderful machine!

Beside that the first inspiration at the mall, I also had a chance to receive catalogs from PaperDirect. This paper company produces full-color impact and beautifully predesigned papers that can be printed by laser or ink jet printers. Their products help everyone create an entire coordinated corporate image that looks professionally designed.

Therefore, I decided to combine the business card machine and PaperDirect. I thought this is it, this is what I want to do for my thesis. It allows me to

apply my skills in computer graphics design and graphic design by creating the multimedia kiosks for business card machine. It would help the non-designer produce their own business cards with satisfactory results and much quicker service than ever.

I hope, maybe some day, this thesis could be my real business project.

Intro duction

My interest in this thesis subject would touch mainly upon the "Kiosk for Do-it-Yourself Express Business Card Machine" and related areas of that nature. Living in the twentieth century inspires me of the interactive era in which human interpersonal communication is rare to occur. Technology in a form of interactive machine is playing an important role in technological life. Interactive shopping is considered truly convenient nowadays.

According to Aaron E. Walsh in Destination Multimedia, he sees the kiosk-based interactive multimedia as a tool to "provide direct contact with consumers." Aaron's idea towards the existing multimedia kiosks is extremely concrete and positive upon which I truly agree:

Creating-A-Greeting machines are an ingenious twist to traditional kiosks. It is an on-the-spot customization and delivery of products without having to wait in line or seek assistance from a salesperson.

Being a computer graphics designer, I wanted to develop the design of conservative business cards and make big changes onto it. Making the selection of business card more attractive and impressive is my crucial objective. The development of designs and systems for a business card machine would make an advanced pace in the design industry and technological society.

Moreover, I would like to develop the kiosk interface to make it remarkable to replace the standard plain black and white text on screen (ordinary Business Card Machine). In addition, my proposal would improve the machine in the following ways: the outstandingly attractive appearance, the easy process for the first-time computer user, and the simple-but-interesting point-of-sale. Conceiving ideas for this written literature has given me the inspiration to pursue my dream to make it for real in the near future.

Three **components**

1. BUSINESS CARD

Business card design is one of the most exciting, yet most difficult types of design, to create. Graphic designers must convey a great deal of information about and a positive image of a client in a relatively small space. As an illustration, the designer must juggle typography, color, paper, visuals and graphics. All of these considerations must also comply with budgets are usually based on a very tight budget. Few types of design give a designer such a wonderful opportunity to create something truly unique and original. The graphic designer must possess the basic essentials of business card design as well as creative imagination. The following parts described in a sequential and logical process in order to produce the creative yet effective business card design.

In order to understand how to design business card, some information has been taken from Fresh Ideas in Letterhead and Business Card Design by Diana Martin and Mary Cropper as follows:

1.1 What is A Business Card?

The business card is the ultimate challenge for the graphic designer to develop and create a compelling message in a concise format. It is an image piece that creates a first and lasting impression. For example, one business card can turn a client on or off depending upon its positive impressions or negative designing image at the first glance.

1.2 The Make-up of a Business Card

The basic rule seems to be to apply a business card design solution to any printed piece that can be perceived as a

selling tool. Considering the competition most businesses face, it makes sense to take advantage of every possible promotional opportunity.

The business card design almost always includes the firm's or organization's name, address and telephone number, but there are many variables such as logo, fax number, employee names and titles, list of board members, which are often requested to be included and present unique design challenges.

The most successful business card system does two things. It communicates the appropriate image for the client through a careful and purposeful use of design and design elements, and it lets the letter fulfill its intention and readability.

1.3 Designing for a Client

The rule for designing a successful business card is know thy client. Graphic designers need to become intimately acquainted with the client's image or style. Most clients do have an image, but sometimes it won't be defined or refined enough, or the client can't adequately articulate it for the graphic designer. Besides that the graphic designer may have to help capture it. The opportunity to do this will be in the design brief, when the client tells about his project, business and needs. One way to prepare for a design brief is to write a list of questions to ask the client. The answer to all of the questions will create a personality and budgetary profile of the client and business.

Use the following questions as list starters:

- What does the client feel about his public image? What does the client want it to be?
- What, if anything, does the client like about the designer's existing business card design? How well does the client think it has worked as a selling tool?
- What uses does the client plan for the business card?
Simple letter writing?
- Who is the typical recipient of the business card?
Who does the client want to reach?
- Who is going to use the business card? Secretaries?
Sales representatives? Vice presidents?
- Does the client have a budget for this job? How firm is it?
- What level of risk is the client comfortable with? Does the client prefer to be on the cutting edge, or does it play a conservative wait-and-see brand of business?

1.4 The Elements of Business Card Design

Whatever design solution the designer and the client agree on, it will be implemented through the careful and creative use of various design elements. Often the visual or graphic aspect of the solution begins with the designer's sometimes Herculean task of designing the client's logomark. Depending on the impression the client needs to create, other graphic elements can be an effective part of the design solution. For example, the childlike stick figures used for a pediatrician or the friendly looking dalmation used for a hot dog restaurant.

Another way to communicate an image is through the selection of typeface. For example, a design for an accountant or lawyer would probably call for a traditional and conservative typeface. On the other hand, less traditional clients, many designers find more modern computer fonts to be particularly suitable for the business cards.

Color selection is another important element of business card design. A graphic designer's choice must be based both on the client's budget and on the image he needs to convey.

One-color printing is not only the most economical; it is often the most appropriate for conservative clients such as banks and insurance companies. In contrast, if the client has money for multicolor to establish himself as creative and progressive, take advantage of the opportunity. Color can achieve a wide range of effects such as creating depth, commanding attention, organizing, dividing, intensifying or subduing.

Probably the most basic, but sometimes least considered, ingredient in business card is the paper on which it's printed.

Today's market offers hundreds of variations suitable for business card, and determining which paper will work best with which printing technique is no easy job. The paper's

color, its fiber content, its texture, its size and weight and its availability in business card stock will all play a part in the selection. And for the environmentally conscious, recycled paper now comes in an exciting array of colors and textures.

1.5 Standard Size of Business Card

Business cards can be folded or unfolded. They can have a design or information printed on one side or both sides; the choices are virtually limitless. The business card, however, should be durable and easy to carry. Because cards are handled frequently, they should be printed on a heavy weight of paper. Most business cards measure 3.5" x 2", but through folds and die cuts, many kinds of cards may be produced. If the business card will be folded, have it scored on the press to ensure accuracy.

2. KIOSKS

Today, many multimedia kiosks are addressed by two basic needs. They convey the information to many people in a consistent way and they make its access appealing and useful. Kiosks allow people to search for information at their own pace and "ask questions" without imposing on others. A user can request the directions over and over again and the kiosk will reply in a consistent manner, whereas a person might be tired of repeating the same information and answering the same questions. The key to a successful kiosk is a highly usable interface which a wide variety of people can understand.

2.1 What Are Kiosks?

Kiosks are public installations designed to make information accessible to many people. Multimedia kiosks (computers housed in attractive shells) can be found in hotels, music stores, museums, shopping malls, galleries, airports, rental car agencies, convention centers, theme parks, zoos and other public environments. While some of these computer information centers are strictly educational or service-oriented, others combine information at the point-of-sale with advertisements and promotions. In addition to providing useful information or advertisements, a kiosk may also survey users in order to collect market research information, public opinion, or other data.

Most kiosks are custom-built for a particular client and a particular environment. As a result, clear communication between the client and production house is critical to creating a kiosk that performs its function on schedule and under budget. Other tasks involve finding the right level of information and assembling the necessary hardware to fit the function and the design. The provision of basic functions and information technology at the kiosk is likely to be based solely upon the service objective and location.

2.2 Considerations

In the book *Macromedia Director Design Guide*, Cathy Clarke and Lee Swearingen, depict some considerations for kiosk multimedia design which are described in the following paragraphs:

2.2.1 Kiosk Environment

The characteristics of the environment where the multimedia project will be used may have some impacts on a project. The location, lighting and ambient sound are all elements that can affect a design. A public installation is quite different from a house use. A public site may be able to use better quality equipment than most consumers can afford but will also require more durability and protection from weather or theft. These followings are the issues for kiosk environment:

2.2.1.1 Public Spaces

Consider locations where people naturally congregate or wait, such as lobbies, lines in a supermarket, bus terminals, airports, or hospitals. A kiosk that allows people to have a prompt service or less time-consuming can attract a greatly patronage.

In the public spaces, privacy is an issue. Some kiosks are set up to project screen activity onto a larger overhead monitor. The appropriateness of this setup depends on the content and the type of interactivity. For example, if the user is entering name and address information, this would be a poor choice. Automated teller machine kiosks are also designed for privacy so that the display screen can only be read by a user standing directly in front of the kiosk. For public use, provide wheelchair accessibility to the kiosk and consider other physical characteristics that may be unique to your target audience such as the height of the kiosk's average user and whether this user is a child or adult.

2.2.1.2 Sound

The ambient noise, foot traffic noise, and nearby sound sources like air conditioners are all elements that will affect the ability of a user to hear sounds from a kiosk. A designer needs to take these into account to determine volume levels

and how much sound to use. Another issue is the impact the sound from a kiosk will have on the environment. Some places like commercial shopping areas may be noisy and more accommodating to sound. In other places like museums or libraries, sound may be obtrusive. In these cases, kiosks may need to be placed in special areas or provided with headphones.

2.2.1.3 Lighting

Glare on the screen can adversely affect the visibility of any displayed information. Kiosks should not be placed in direct sunlight and the ambient light should be at a readable level. Just as the impact of the sound on the environment needs to be taken into account so does the impact of the graphics.

If a room has a green undertones then it may be distracting to have a kiosk with a blazing red display. Also, displays are commonly designed to attract people but they may take away from the environment if they are so busy as to annoy.

2.2.1.4 Security

Security can include anything from the security of a kiosk, any of its components, or the information in the kiosk to the security of the user while using the kiosk. Lighting, access, and positioning are considerations that will affect security issues.

2.2.2 Network

A sophisticated network of kiosks might involve a dozen kiosks stationed throughout an area, such as a shopping mall, and networked to a single server. These kiosks could provide store locations, general news, and consumer

information, such as product availability and comparative descriptions. Some can be designed to receive nightly updates from merchants and advertisers.

Costs can range from \$10,000 for a single-site kiosk on standard equipment to over \$1,000,000 for a networked, multiple-unit system. Prices vary with the degree of quality, time, media and content complexity, hardware components, number of stations, and maintenance required. A mid-range kiosk might showcase a company's products and capabilities using extensive full-color animations and video, while a simpler kiosk might be based on an interactive HyperCard stack using text, graphics, and a few simple animations. Special hardware or the use of video may increase the cost dramatically.

2.2.3 Hardware

A common hardware component in most kiosks is a touch-screen interface, an alternative to a keyboard and mouse. It allows people to easily interact with a kiosk by physically touching selections on the screen. Rarely do public kiosks feature keyboards because of the difficulty and time involved in keying in requests. Another component may be a videodisc player to show video segments. These analog players are more prone to breakdowns and more expensive to update than using digital video compression boards, but they are still a common choice for many developers. Other components may include credit card readers, bar scanners, printers, or other types of input and output devices. The booth that houses the equipment also needs to be tailored to the environment. It should look good, have appropriate lighting, signs, and instructions and be durable and secure enough to protect the equipment housed in the booth.

2.2.4 Maintenance

The custom nature of kiosks, the frequency of use, and the hardware components often make support and maintenance a big issue. Monitors may need to be replaced because of burn-in. Videodisc players, credit card readers, or printers may need maintenance or replacement because of wear.

Kiosks may need backup equipment on site for most components, as well as people trained in both routine and special maintenance. Maintenance not only applies to the physical components but also to the information and content provided by kiosk. Kiosks that contain outdated or incorrect content may be more of a disservice than an aid.

2.3 Kiosk Design

Arriving at appropriate design decisions will likely require in-depth market research into traffic flow, buying patterns, and information needs. A production house may benefit from having some type of marketing knowledge or expertise on hand to help interpret this research into design decisions.

According to Multimedia Demystified A Guide to the World of Multimedia by Apple Computer Inc., there are two rules of thumb mentioned by many developers are to keep the interface simple and to provide prompt feedback. The organization of the information and the design of the interface is important, since much of the audience may not be familiar with computers and may not have a lot of time to try to figure out how a system works. Most kiosks feature an attraction loop that invites people to use the number of "hops" or branches of information to a minimum. Kiosk design is composed of two following principles:

2.3.1 Information Design

Solving communication needs is an essential design task for any product. Information design addresses ways to organize and present information in a meaningful and useful form.

It includes the information in all media (whether textual, aural, or visual) and, to some degree their interaction.

Where graphic design is primarily concerned with creating a beautiful visual arrangement of information, information design is concerned with creating a clear, accurate, and meaningful arrangement of information. This is not to say that graphic design and information design are necessarily at odds. In the best case, information can be both attractive and meaningful, and succeed from both standpoints.

Information design can affect the color, layout, sequence, and styles of any media, but it is most concerned with the organization of all elements in an entire product. The organization affects the communication of those elements. For example, reorganizing all of the words in a dictionary by order of everyday use instead of alphabetical order would change how a user might search for words or make associations. Visual dictionaries use pictures and scenes to allow users to find a word for something they can identify by sight. A thesaurus groups words by similar or opposing meanings. Each solution solves a particular need.

In the book Information Anxiety by Richard Saul Wurman identifies five general ways to organize any information:

2.3.1.1 Alphabet

An example of organizing data alphabetically is a telephone directory or Rolodex file. Alphabetical organizations have no inherent meaning but most people who speak Roman-based languages are more than familiar with this sequence of letters. However, the alphabet does not necessarily translate into other languages. Users who speak Asian, Semitic, or Cyrillic languages may be unfamiliar with “an alphabet” and thus unable to find things.

2.3.1.2 Time

Organizing by time can be effective in relating events to each other. Train schedules and theater listings do this because this is the most important aspect of their use. A timeline might be the navigation method for a multimedia piece depicting the evolution of a species. Time is a particularly useful organization because just about every culture on earth

shares a common method of measuring time. In fact, the international time standard is active in nearly every spot throughout the world (although somewhat confusingly in Southern Asia and along the north coast of South America).

2.3.1.3 Location

Ordering information by location is a common form of presenting spatial relationships and is particularly effective when such relationships are part of the message. Maps are obvious examples of organizations by location. A less obvious example is a medical book that starts at the top of the body (the head) and works its way down to the toes (the thigh bone’s connected to the knee bone...). A multimedia piece about automobiles, for example, might explain each component and major subassembly when users click on that component from a detailed illustration of a car. The illustration essentially forms a “Table of Contents” for the product.

2.3.1.4 Continuum

Continuums or magnitudes can be anything with two opposing parameters. Number systems like the Dewey Decimal system, used to catalog books in a library, are continuums where major ideas are represented with a number from 0 to 999; minor ideas are divisions from the major represented by a decimal number from .000001 to .999999. Magnitude can be from "best to worst," "least to most," or "biggest to smallest" or vice versa. A multimedia title about movies might be organized from highest to lowest revenues or highest to lowest budget. A game might be organized by levels of difficulty.

2.3.1.5 Category

Finally, content can be organized by category. Categories can be obvious or unexpected. They should be chosen to reveal something about the content itself. How content is grouped

or separated speaks for the purpose and understanding its creators intend to communicate. Newspapers, for example, are often organized by categories such as Business, Entertainment, Sports, Food, Books, and Classifieds.

Information Design Tools

When organizing information, certain tools lend themselves well to certain functions. A map or diagram might be useful to depict interaction or relationships of different elements. Outlines describe order and sequence well. Information maps informatively describe elements and their connections, especially when the connections outnumber the connecting points. (An information map is a web or tree that shows all the elements and connections between them.)

In film, theater, or video production an effective tool for visualization is a storyboard. A storyboard is an illustrated scene-by-scene plan for telling a story and for indicating the balance of visual and aural elements in each scene. Storyboards, by nature, are organized by time since that is the unifying component. In many ways the experience of multimedia is like that of film or theater, meaning that several forces are at play in creating a rich experience. A storyboard, therefore, can be a useful tool for describing the multiple “tracks” that work together to create a multimedia experience.

Another useful tool for designers is a notebook to capture design ideas for future reference and to communicate them with others as necessary. A glimpse into a designer’s notebook might reveal pencil sketches of screen designs, rough outlines of navigational paths, quick studies of animated

characters, phone numbers of possible recording studios, or anything that represents the flood of thoughts-in-process that are inevitable in any design process.

2.2.2 Interface Design

Interface design is very much like information design but its domain is mainly screen display and interactivity with computers and electronic devices. Many of the same organizational concerns apply but there are some additional ones that deal with specific media and with specific interaction in an electronic environment. Interface design encompasses everything a user sees, touches, hears, and interacts with. While many project managers, programmers, and interface designers define interface design as a primarily visual exercise dealing mostly with screen, button, and icon design, its scope extends to include all visual components as well as audio elements and, most importantly, interaction and navigation.

The interface design orients the user to the experience or message of the project. Paradoxically, the best interface is one that is transparent to the user, meaning that it does not distract from the purpose and message of the experience. A transparent interface is one that is so subtle and quiet that users do not perceive an interface at all. Elements of the interface range from screen layout and color selection to modes of interaction such as a touch screen, keyboard, joystick, or voice control.

2.2.2.1 Principles of Interface Design

Interface design presents a challenge of balancing different traditions of communication to create a meaningful and understandable experience for people. The first question an interface designer should ask is, "What is the experience people should have?" Defining the experience defines the interface design. If the experience is a conversation, the

interface should draw from the conventions of human conversation. If the experience is that of a journey, the interface should give a person the means to orient and explore. A good interface respects human intelligence and faculties without getting in the way of understanding. A poor or non-intuitive interface continually reminds people that they are working with a machine.

Each medium has a tradition of experience and a history of how people relate to it. Reading a book may seem like a passive experience but people do more than just read the words. They underline them, dog-ear pages, scribble notes in the margins, look up words in a dictionary, drop the book accidentally in the tub, and lend them to friends. One of the challenges of interface design is to allow the user as much control of the environment as possible.

The Apple Human Interface Guidelines presents principles of the Apple Desktop Interface and the particular specifications of standard interface elements. These guidelines can be interwoven with the design conventions of other media such as literature, music, video, and film.

A) Metaphors

A metaphor allows someone to understand and experience one kind of interaction in terms of another more familiar kind. Use metaphors based on real-world experience and make them clear so that users have a set of expectations to apply to the computer environment. Carefully craft a visual, aural, and behavioral environment to support the metaphor. Build a stable and consistent world for the metaphor. Even an interactive game that takes place on the distant planet Devargus should give the player a way to find their way around.

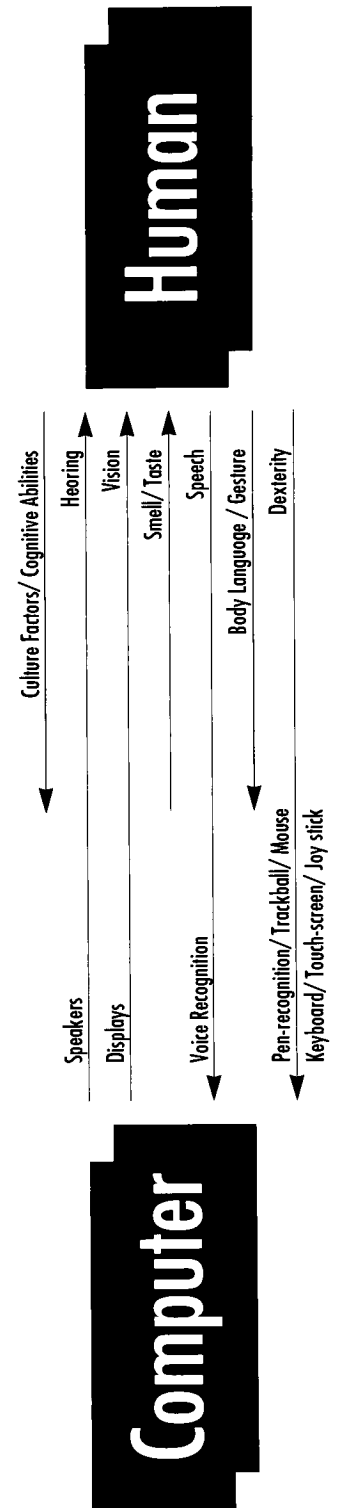
Sometimes structuring the interface in a metaphor can clarify the interaction. One might present information about a city with a street map interface. An interactive program to teach research skills to young people might use the metaphor of an archeological excavation, complete with maps, excavation "tools," "finds," and perhaps a local guide. Organizing the interaction around a metaphor can only be useful if the metaphor is familiar, stable, and consistent. Misusing a metaphor can range from being corny to irritating to unusable.

B) Direct Manipulation

People want to feel that they are in charge of the computer's activities. They expect their physical actions to have physical results and want their tools to provide feedback. Objects and their properties should be movable. This is especially true of multimedia programs which invite interaction. See figure 1.

Human & Computer Interactions

figure 1



C) See-and-Point

People select actions from alternatives presented on the screen. They rely on recognition, not recall; they should not have to remember anything the computer already commands. A multimedia program that requires a complex manual for the users may not last long. If people understand what has to be done, they can usually figure out how to do it. For example, if someone wants to quit a program, they will thru the obvious first (such as the word QUIT or an EXIT sign) and then explore other options to get the desired result.

D) Consistency

Effective applications are both consistent within themselves and consistent with one another. People feel centered when they can rely on familiar ways to get things done. With consistent design a person is more likely to take chances on exploration. An icon that indicates "return to screen one"

displayed on every screen is reassuring as long as it works consistently. As soon as the icon freezes or brings the person to a screen other than the one expected, that person's faith in the system is shaken.

E) What You See Is What You Get

Implement the metaphor as realistically as possible. There should be no secrets from the user, no abstract commands that only promise unpredictable results.

F) User-Initiated Actions

The person, not the computer, initiates and controls all actions. People learn best when they are actively engaged. This is different from the more traditional model, in which the computer acts and the user responds with a limited set of options.

G) Feedback and Dialog

People appreciate immediate feedback on the progress of an operation. Communication should be brief, direct, and expressed in terms of the user's point of view.

H) Forgiveness

Users make mistakes; forgive them. Forgiveness means letting users do anything reasonable, letting them know they won't break anything, and allowing them to explore all territory. All actions should be reversible—let users know about any that are not.

I) Perceived Stability

People feel comfortable in a computer environment that remains understandable and familiar, rather than one that changes randomly. Consistent graphic elements provide

visual stability; a finite set of objects and actions to perform on them provide conceptual stability.

J) Aesthetic Integrity

Visually confusing or unattractive displays detract from the effectiveness of human-computer interactions. Avoid clutter. Simplify representation to what is essential for the user to know, hiding the rest. Messes are acceptable only if the user makes them—multimedia applications are allowed this freedom. The user should be able to control the style and individuality of the experience.

K) 90/10 Functionality

User operations performed often (90% of the time) should be very simple while operations performed infrequently (10% of the time) can be more difficult if necessary. Dangerous operations such as erasing all files should be difficult to do, preventing inadvertent triggering.

3. ELECTRONIC PREPRESS

In the mid 1980s, the term desktop publishing was coined by Paul Brainerd, who was at that time president of the Aldus Corporation in Seattle, Washington. Aldus Corporation developed the first popular page layout software application for the Macintosh computer—Aldus PageMaker (now from Adobe Systems). Desktop publishing (DTP) is defined as the use of personal computers (microcomputers), scanners, laser printers, and specific software applications to create a wide variety of publications.

Usually, a page layout software application such as PageMaker from Adobe Systems or QuarkXPress forms the basis of a desktop publishing operation. In the basic operation, text and other typographic elements are created in word processing software or directly in the page layout software. Graphic images may be obtained by scanning

photographs and other artwork or by creating them in a drawing or painting software application such as Adobe Illustrator or Fractal Design Painter. After text and graphic elements are combined, completed publication pages may be output on a laser printer or a high-resolution imagesetter.

The development of the relatively low-priced personal computers, such as the Apple Macintosh and the IBM PC, spurred the desktop publishing revolution, but electronic prepress can involve expensive hardware and software.

Some prepress functions are likely to be performed by specialists employed at color trade shops (color houses), prepress service bureaus and commercial printing firms.

This more specialized field is defined as high-end electronic prepress and involves the use of color electronic prepress systems (CEPS).

A less expensive approach to electronic prepress is represented by mid-range prepress systems. These fall somewhere between desktop publishing and high-end prepress systems in cost and capability.

3.1 When Desktop Publishing Becomes

Electronic Prepress

The degree of involvement by graphic designers and other desktop computer users in prepress activity depends on the sophistication of available hardware and software and the ability of the individual. For example, a person who creates a simple advertising flyer using a page layout software application on a Macintosh computer and then outputs the final layout on a desktop laser printer at 300 dots per inch (dpi) is performing electronic prepress work at its most basic level. The 300 dpi output can be taken to a print shop where a printing plate can be made from it. The resulting printed

flyers would be adequate for the advertising purposes of many business. In fact, this type of prepress activity is quite widespread now that desktop publishing technology has become so popular.

3.2 The Publishing Process

In the past, prepress work was exclusively done by people trained to do specialized jobs. Publications were usually conceived and designed by graphic designers and others whose expertise lay primarily in art and editorial functions. Camera-ready artwork was handed over to the specialists employed at a printing firm, and the next time the origination or saw the publication, it was in the form of a proof copy which showed how the publication would look when it came off the press. For the sake of discussion, we will call this the "traditional publishing process". The traditional process has all but given way to the use of personal computers in the "desktop publishing process".

3.3 The Traditional Process and the Desktop Process

In both the traditional process and the desktop process, a publication begins when it is conceived and designed. The designer uses rough sketches and a fully-realized mock-up called a comp (abbreviation of comprehensive) to communicate the design concepts to others involved in the project. Comps can be quite elaborate. They may utilize the actual paper stock that the job will be printed on, and, in the traditional method, show color elements rendered by marker, paint, or colored paper. In the desktop method, the comp can be much more accurate at showing what publication will eventually look like when it's printed on a printing press. Since the publication is being created on a computer, all the text and graphic elements can be rendered in more or less their final state.

The publication can then be output to a color printer, showing colors, typography and other elements much more accurately than a traditional handmade comp ever could. See figure 2 and figure 3.

3.4 The Digital Mechanical

The process of creating a traditional mechanical is being replaced by the desktop method. In the desktop method, the mechanical is created entirely in a computer. Type is created and formatted in the computer, and photographs and other artwork are either scanned or created in the computer. The computer replaces the traditional typesetting procedure, and the scanner replaces the process camera. When images are created by a scanner, they are said to be digitized images. The term digital is often used to describe the functions of a computer, referring to the numerical basis on which a computer processes data. Desktop publishing allows type and graphic images to be combined electronically

Traditional Publishing Process

figure 2

1 Concept and Design

The project begins with a pencil rough or a color comp. Discussion among individuals involved in the project results in a final design.

2 Typesetting

Type is set a professional typesetter from copy prepared by the designer, copywriter, or editor. Type galleys are returned to the designer or production artist. Changes require additional typesetting time and expense.

3 Camera Work

Photos, logos, and other illustrations are sized to fit the layout and photographed with a process camera. Prints, or stats are returned to the designer or production artist.

4 Camera-Ready Mechanicals

The designer or production artist prepares a mechanical by pasting up type and graphic elements.

5 Final Camera Work

The process camera is used to make film negatives or positives from the paper mechanicals. Color separations for spot colors and color halftones are also made at this point.

6 Stripping

The film is prepared for plate-making by a stripper who assembles all the pages and other elements.

7 Printing Press

Printing plates are made and the project is printed, folded, and bound.

Desktop Publishing Process

figure 3

1 Concept, Design, and Typography

The project may still begin with a pencil rough, but it's just as likely that it will begin on a computer because design changes can be so easily made. Text is generated in a word processor or directly in a page layout application. Typographic changes are easy to make at any stage.

2 Graphics

Graphic elements are digitized with a scanner or created in a graphics software application. Special effects and color adjustments can be applied with image manipulation software.

3 Electronic Mechanicals

Text and graphics elements are combined in a page layout software application. Color information is an integral part of the publication file.

4 Electronic Stripping

Further adjustments, such as inserting high-resolution digital halftones or trapping colors, may be made to the electronic mechanicals by a professional prepress service provider, or the publication may be output directly to film or printing plates on a high-resolution imagesetter or film recorder.

5 Printing Press

Printing plates are made, and the project is printed, folded, and bound. Some types of digital presses do not use plates, or the plates are made on the press through digital imaging.

in a manner which might be thought of as a metaphor for the traditional paste-up board. The resulting mechanical can be an almost exact representation of the final printed piece.

3.5 The Software Base

The basis of the desktop method is a software application which provides the electronic paste-up board. This type of software is known as page layout software. Two have dominated the field so far—PageMaker and QuarkXPress. They are both available in Macintosh and Microsoft Windows versions. Page layout software allows the user to exercise complete control over typographic elements. In fact, the amount and ease of control exceeds that of any previous typesetting technology. The only problem with this revolutionary technology is that many of the people working

with type in a page layout software application are not professional typesetters or graphic designers. Consequently, many of the resulting publications do not have the finesse that a professional hand would apply. For example, a novice will often combine inappropriate typefaces or utilize type sizes and styles incorrectly. It seems that this is merely a matter of education, however, and individuals who are working with page layout software are learning that there is often more to a printed page than first meets the eye.

The benefits of computer-generated type are many. Easy access, rapid revisions, vast choice of fonts, and sheer economy are only some of the reasons computer typography is so successful.

3.6 Software Applications

3.6.1 Page Layout Software

Standard page layout software applications form the basis of desktop publishing and electronic prepress. Special proprietary software, such as Hell ScriptMaster, Scitex Visionary, or Crosfield StudioLink, is used in high-end prepress operations to link desktop software with the high-end scanners and film recorders. However, there are two widely-used desktop publishing applications in the prepress systems and service bureaus; PageMaker and QuarkXPress.

3.6.1.1 PageMaker and QuarkXPress

PageMaker and QuarkXPress are fierce competitors, and users are often equally fierce in their advocacy of one or the other of these software applications. The two software companies are constantly changing and improving their products to meet the demands of the market, and

PageMaker and QuarkXPress are both excellent page layout software applications. Both are available in Macintosh and Windows versions. Any statements regarding which product is better are essentially subjective and affected by personal bias. Objectively, the two software applications are approximately equal in their ability to generate sophisticated publications.

3.6.1.2 How They Work

A page layout software application allows the user to electronically combine text and graphic elements such as scanned photos, illustrations, and lines and boxes. PageMaker and QuarkXPress each take a completely different approach to the process of incorporating elements into the electronic layout, but there are many similarities, especially in typographic features. Both applications can import a wide variety of file formats.

Both applications create on the monitor screen a clearly defined layout page and pasteboard area contained within a document window. This page can be any size up to 48" x 48" in QuarkXPress and 42" x 42" in PageMaker. Both applications allow text and graphic elements created in other software applications, such as word processors and drawing and painting programs, to be imported into the publication layout. Scanned images can also be imported. It is in the manner that these elements are displayed on the page layout that the two programs differ most.

In PageMaker, imported text and graphic elements are placed directly on the layout page where can be manipulated as a discrete object. Text flow is controlled either by column guides or by adjusting the size of the text object. Graphics appear in much the same manner as they do in their originating software.

On the other hand, to impart text or graphics into QuarkXPress, a box must be created to contain the element. Text boxes are created for text, and picture boxes are created for graphics. Text boxes control the flow of text and can be formatted with column guides. Picture boxes display graphic images accurately, but the edges of all boxes are always apparent unless guide display is disabled.

Both software applications have similar typographic features to format font, size, style, character width, kerning and tracking, etc. Graphics can be resized, cropped, rotated, skewed, and flipped in both applications. Both applications have word-processing features such as spell checking and search and replace. Text and simple graphics such as lines and geometric shapes can be created directly on the layout page in both PageMaker and QuarkXPress. Other common

features include style sheets, digital halftone manipulation, text wrap-around on graphics, color formatting and separation capabilities, and library files for storing text and graphic elements. QuarkXPress provides built-in color trapping features. Trapping in PageMaker can be accomplished with an add-on called TrapMaker. Indexing, table of contents, and book assembly features in PageMaker give it an advantage for long documents. Both software companies have made arrangements with other developers to provide software adjuncts which address specialized needs or enhance the basic features. In QuarkXPress, these are called "XTensions;" in PageMaker, they are known as "Additions." XTensions and Additions perform such functions as color management (EfiColor XTension) and creating printing signatures (Build Booklet Addition).

3.6 Final Output

Several options exist for outputting desktop publications. Assuming that the publication will be printed on an offset press or by some other means of mass reproduction, the computer file containing the page layouts (electronic mechanicals) can be output to paper or film on a laser printer or on a high-resolution imagesetter. That output can then be used to make printing plates. It is even possible to output directly to printing plates.

The most obvious difference between laser printers and imagesetters is the resolution. Laser printers provide output in the 300 to 1,200 dpi range, and imagesetters work in the 1,200 to 4,000 + dpi range. Another major difference is in the quality of the output. Although a 1,200 dpi laser printer and 1,200 dpi imagesetter have the same resolution rating, output from the imagesetter will usually look better due to its photographic quality. A toner-based laser printer

simply cannot provide as sharp an image as the photographic process used in an imagesetter. The difference is especially apparent in digital halftone.

If a printing press is not the ultimate goal, then a laser printer, color printer, or color copier may be the final output device. Allowing for the image quality limitations inherent in such devices, it's not unreasonable to reproduce hundreds of copies of a publication. Some business routinely reproduce letters, business cards, advertising flyers and so on with their laser printers. Even full color brochures can be economically produced on such devices as a Canon photocopier fitted with a Fiery controller. The Fiery controller (developed by Electronics for Imaging) is a PostScript interpreter which creates good continuous-tone color images. This kind of final output for business presentations and short-run color is an important aspect of electronic publishing.

Ground work

The first thing that I decided to do is to research and to focus on the business card machines. These machines are available mostly in the public areas such as airport, shopping arcade, supermarket and wholesales store. As mentioned earlier in the preface, the first business card machine that I had seen in the shopping mall has brought the inspiration for my concept of a card machine: service rendered at ease and satisfactory system operation. See figure 4.

This research was established and based on three key components: business cards; kiosks; and electronic prepress.

Express card **machine**



figure 4

1. BUSINESS CARD RESEARCH

Its "too" simple design is not quite attractive yet boring. It lacks design elements: visual, graphic, color, and texture. The plain standard black and white typography is commonly found. The use of white paper instead of the paper stock draws back the first impressions. The design neither creates excitement nor draws any attention.

See figure 5.

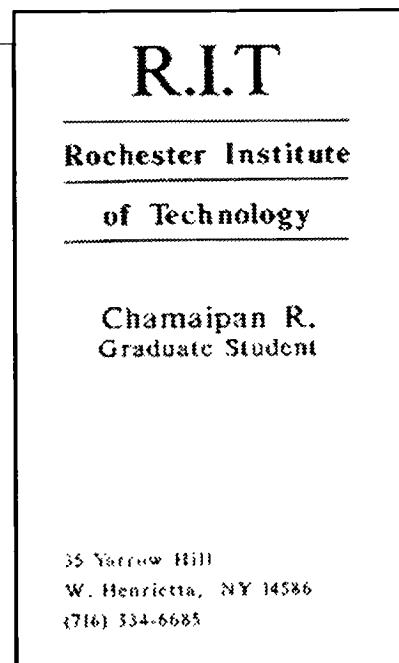


figure 5

2. KIOSK RESEARCH

It lacks proportional visual arrangement on the screen interface design such as color, layout, and graphic. The simple black and white text is not quite convincing. It provides a keyboard and a text on screen for interaction and navigation instead of dealing with buttons, icons design on screen and voice control. Moreover, the tips helps and the card design selections are misplaced next to the monitor instead of on the screen itself—that would take the user sometimes to find out for help. In addition to that the point-of-sale looks dull and unattractive. There are two parts for researching this machine's kiosk: Card Design Panel and Control Panel . See figure 6.

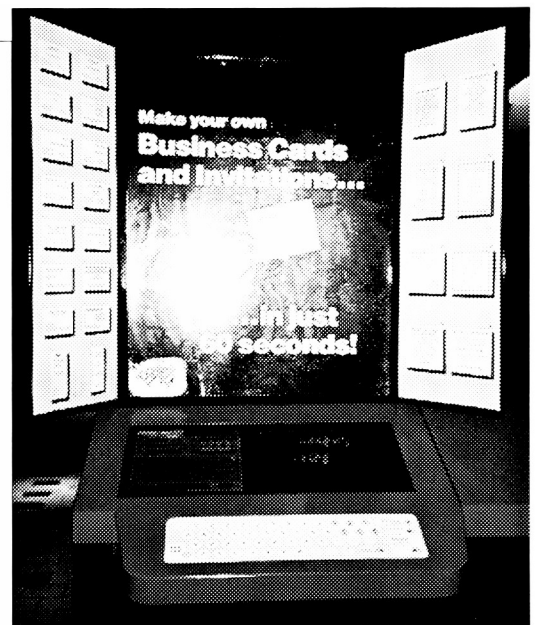


figure 6

2.1 Card Design Panel

The card design panel is on top of the machine. It separates from the screen monitor and shows variation of business card limitedly on both sides of the panel. The number above each card design samples are necessary for the user in order to operate the machine. See figure 7.

2.2 Control Panel

The user can operate this machine by using a control panel which places below a card design panel. This control panel includes a screen monitor (on the right side), a keyboard (below center), helps and tips (white square on the left side). See figure 8.

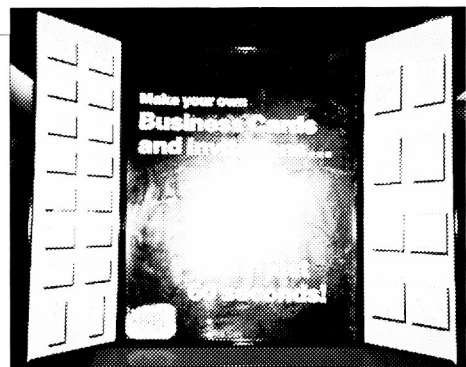


figure 7



figure 8

2.2.1 Screen Monitor

This screen interface has no color, buttons, or graphics.

There is only text which is visible on the screen:

1. Welcome to the Express Card Machine.

- Press key E for English.
- Press key F for French.
- Press key S for Spanish.
- Select languages to view prices.

2. Please select one of these followings.

- 4 small or 2 large \$1 press A.
- 10 small or 5 large \$2 press B.
- 40 small or 20 large \$5 press C.

3. You have selected (quantity of cards and prices).

- If you would like to change your selection, please wait for previous display to re-appear and then make another selection.

- Please insert money.
- Accept \$1 and \$5 Bills.
- Press Enter to Continue.

4. You now have 15 minutes to design your card.

- Select your card style from the samples on the display and type its number, now.
- Press Enter when selection has been entered.
- Press Enter to Continue.
- Correction to Amend.

5. Please type your information.
 - Type Company's name.
 - Type name (Title/Position).
 - Type address (Telephone/Fax).
 - Press Enter to Continue, next line.
 - Press Correction to Amend.
 - Press Previous to go to the Previous line.
 - Press Enter to Print.
6. You have recieved (quantity of cards and prices).
 - Your card is in memory if you would like another set of cards.
 - Press Enter to Menu to design another cards.
 - Press Correction to make another set of cards.

2.2.2 Keyboard

The keyboard is the most important device for this machine. The user can command and access to it by pressing the corresponding buttons on keyboard; Previous button, Next button, Enter Button, and etc.

2.2.3 Helps and Tips

The helps and tips function is a fundamental need called for to a self-service machine operation. The users may take a little time to understand and to remember how to use before starting to operate the machine. It should be the "see-and-point"; instead of the "remember-and-type". The following parts are about the explanation of helps and tips that appear on the left white square:

2.2.3.1 The Explanation of Help

Use the Express Card Machine to make professional business cards in just a few minutes. Instructions will appear on the screen once you have inserted your money. We suggest that you first take these steps :

- Pick a card style from the samples above.
- Decide what you want to put on your card.
- Select the language you understand by pressing its first letter.
- Select the quantity of cards you want to print by pressing the letter for that quantity.
- Insert bills face up on the right front of the machine.

2.2.3.2 The Explanation of Tips

- Print a small amount of cards first. If they are exactly the way you want them, you can print additional sets immediately after the first are printed.
- While the machine prompts for specific information, like 'name', you can type any information in any field or line.
- You can skip any line— our samples include all available lines.
- If you run out of room on a line, try using lower case letters— more will fit on a line.
- Remember to identify which numbers are for telephone (Phone or Tel.), Facsimile (Fax or FAX), Work, Home, Cellular, etc.
- Check each line for errors before going to the next line.
It helps to write the information on a paper before putting in your money.

3. ELECTRONIC PREPRESS RESEARCH

For this machine, electronic prepress is operated by computer, however; it is controlled by user. The printing materials and designs are available for finished products on premises. The users have absolute control over the machine. This is the way it works:

The user chooses one of the business card designs from the design panel first, then he has to type all of the information that he wants to appear on the business cards. After that, typography and font which have been formatted on each individual designs, are generated and ready to the next step.

All publication send directly to an electronic black and white laser printer. This laser printer can produce output of 300 dpi, however; the quality is poor and it is limited to black and white and also the only option which is available for this machine.

Body of Work

1. THE DESIGN OF LOGO

In my opinion, this system should have a self-described name that can identify and represent the system itself.

I came up with a couple of names such as Quick Cord, Cord on The Run, etc. Eventually, I picked out "Cord-to-go" which I think is the most suitable one for the system: self-explained with a clear description.

After naming this system, I started designing the logo.

See figure 9-12 for the first idea logos to the final logo.

The concept for designing the logo is to be simple, memorable, easily recognized and timeless. All endeavors can make the client capture the essence of this system, yet realize instantly what this system is all about.

In association with my concepts, the logo image is designed to be a direct translation of its name as the following paragraphs:

- The inclination of the rectangle shape (visual image of business card) shows its movement and readiness in a forwarding direction.
- The meaning of the arrow aims at the target audience who make possible the business transaction. And it is a metaphor of the future trend business.
- Using the font such as Futura family can express the concept of designing the logo.
- The brightness of primary colors such as yellow, red, blue invites the target audience to try out a service as well as reinforce a point-of-sale.
- The system overview expresses the easiest way of owning business card. Its simplicity looks irresistably convincing to the new users.



figure 9



figure 10



figure 11



figure 12

2. THE DESIGN OF BUSINESS CARDS

From the various design selections of Paper Direct, I have chosen eight designs which are wonderful combinations of colors, graphics, and qualities.

Each 8.5"x11" sheet contains ten business cards that are the traditional 2"x3.5" standard size. See figure 13. I choose the usual formats, because all eight designs may be oriented to put either horizontally or vertically. See figure 14-21.

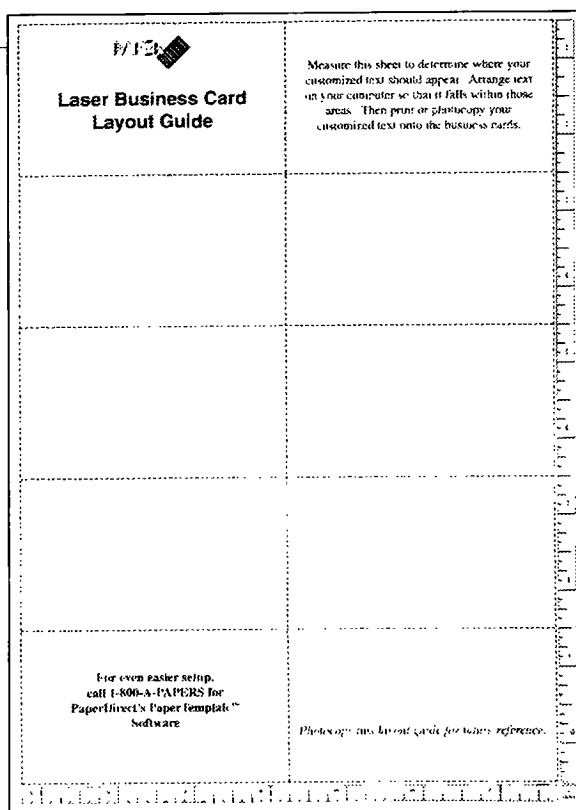


figure 13

figure 14

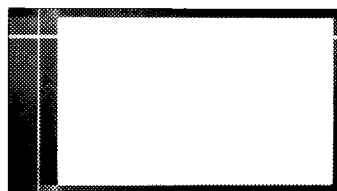


figure 15

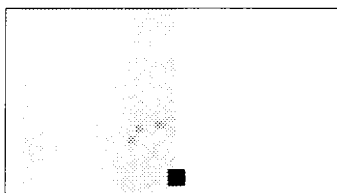


figure 16

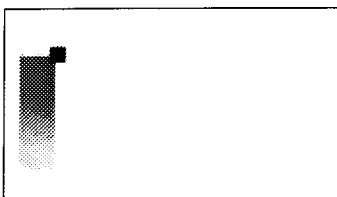


figure 17

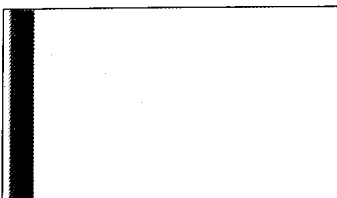


figure 18

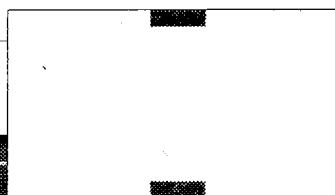


figure 19

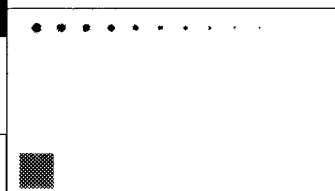


figure 20

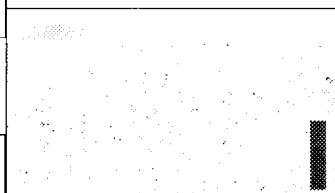
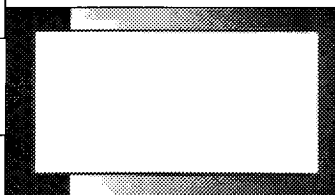


figure 21



After the design selections have been chosen, then it comes to the typography on each individual business card. Simple typography, first and lasting impressions are my concept. I choose some fonts such as Avante Garde, Futura, and Helvetica that are not too fashionable and not too traditional styles. These three fonts are the big type families which include various typefaces. Moreover, they are legible and suitable to design the information on the business card such as name, address, telephone number and so on. With the vast selection of the typography on each business card designs, all business cards are appropriately designed for every levels of clients' styles and personalities. See figure 22-53.



figure 22



figure 23

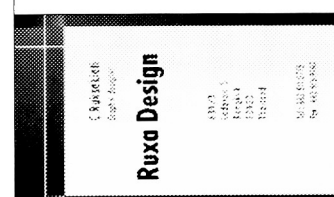


figure 24

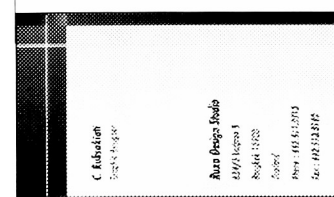


figure 25

figure 26

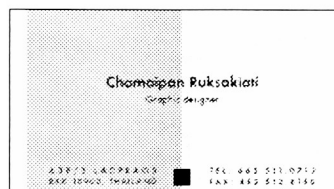


figure 27



figure 28

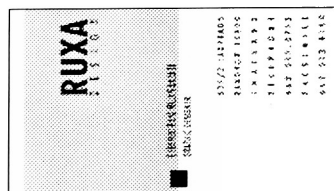


figure 29

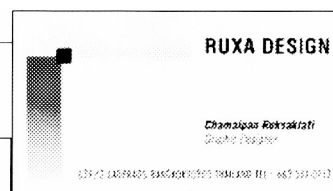
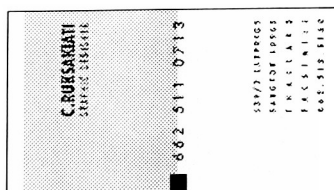


figure 30

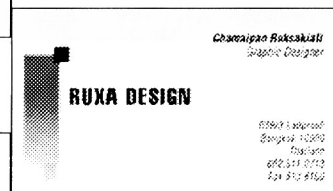


figure 31

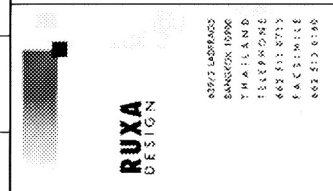


figure 32

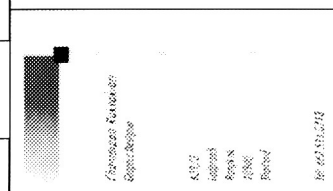


figure 33

figure 34



figure 35

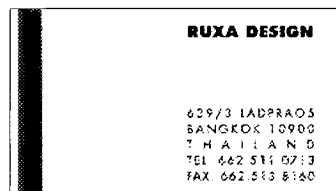


figure 36

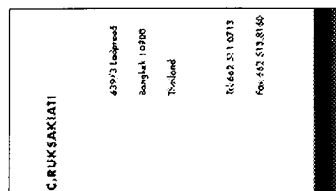


figure 37

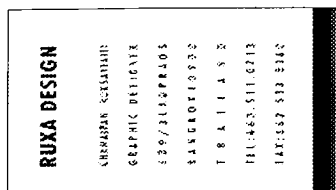


figure 38

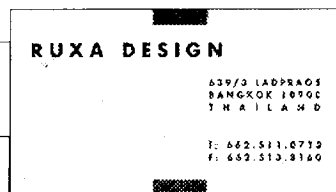


figure 39



figure 40

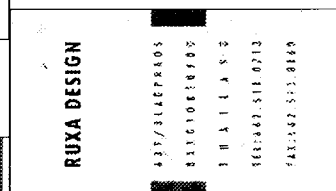


figure 41

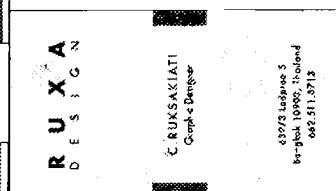


figure 42



figure 43



figure 44

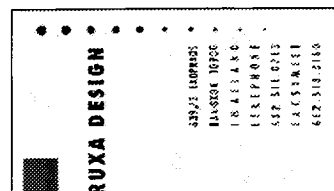


figure 45

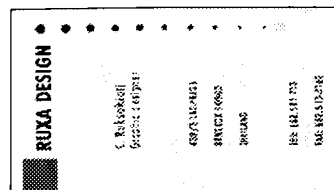


figure 46

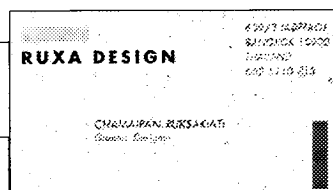


figure 47

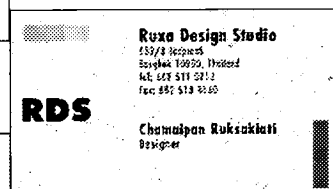


figure 48

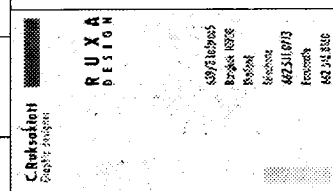


figure 49

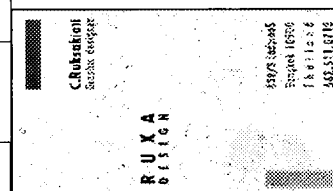


figure 50

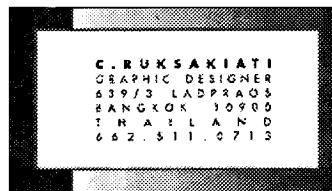


figure 51

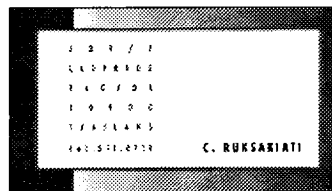


figure 52

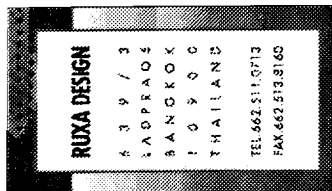
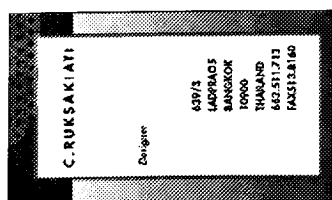


figure 53



3. PROCESS OF DESIGNING THE INTERFACE

3.1 The Flowchart

The main concern of creating the flowchart is to give shape and structure to the content, so I can get a sense of how this project might work. It is the key component I will refer to throughout the project, as the basis of decisions about structure and navigation. Every link, forward and backward represents an access control that I have to create for the interfaces on each screen. The utmost success in creating a flowchart is to make it clear, easy-to-follow as well as easy-to-understand. See figure 54.

Diagramming the content shows the organization and access which includes the following paragraphs:

3.1.1 Introduction

The introduction shows a logo by short animation. It plays continual music until the user starts the transaction. Being a point-of-purchase, the introduction is created to draw attention and to be remarkable to catch the users.

3.1.2 Main Menu

The main menu shows the illustration of eight various business card designs. Also, each of the eight variations contain four business card designs with different typography in two vertical and two horizontal styles. It is created as the product's main navigation screen so that the users can select the business card that they want while viewing the selections.

3.1.3 User's self-service process

This is created to give users the opportunity to operate the machine by themselves after the selection was made.

The users put in the information that they need to be on the business card and it will appear on the screen for viewing. Then, the users can also see the preview of the selection and choose the quantities they need.

3.1.4 Finale

The finale shows a short animation to thank the users who use the service. Then, it goes to the introduction automatically after the transaction are completed.

3.2 Setting the Style

Setting the style is an important procedure that assembles a unified set of elements working together to produce a cohesive personality and characteristic for every interface. This means I have to create the integration of elements to make up the style of each interface.

The style setting is tailored to meet all levels of user's criteria of owning a business card. The whole idea is to underlay the meaning and identity of the simple style. The simplicity of style characterizes theme and personalities of the whole project in terms of the conceptual aspect. According to the elements of interface style are set apart in four categories on the following chart. See figure 55.

3.3 Designing the Elements of Interface Families

According to the figure 55, I create a harmonious environment by forming the elements of the interface families. They are repeated and used for representing the continuous relationships as moving on the next screen. The following is three main elements of the interface families in this project:

3.3.1 Graphic Elements

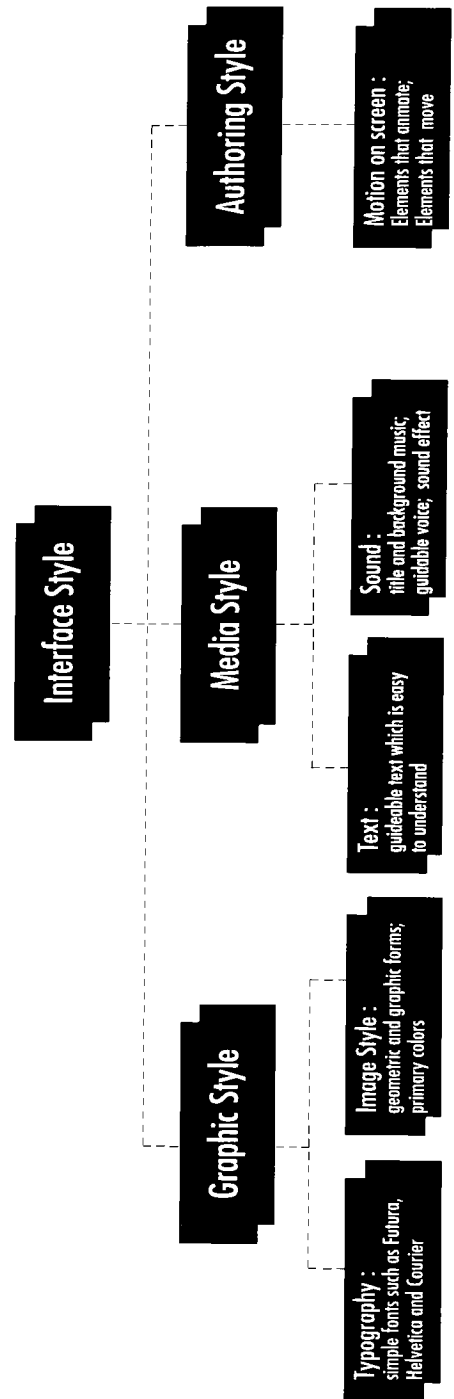
3.3.1.1 Typography

A) Screen layout

Certain screen layouts based on print documents can be useful in interactive products because they help the users to focus on the content. Unlike the magazine layout, the screen layout is flexible and definite to design. The consistency of interface elements on each screen helps to guide the users all the way to the end of transaction. The followings are the rules of thumb for designing the screen layout:

The Element of **Interface Style**

figure 55



- Scanning from top left to bottom right.
- Assuming the larger items are more significant.
- Looking for “more-to-come” signals at the bottom center or right.

I focused on the most important elements on the screen of this project’s products, which are the various business card designs. I placed them at the center of the background and also made it larger than other elements. For the remaining elements, I placed them in order of importance from top left to bottom right such as logo, buttons, text and so on. See figure 56.

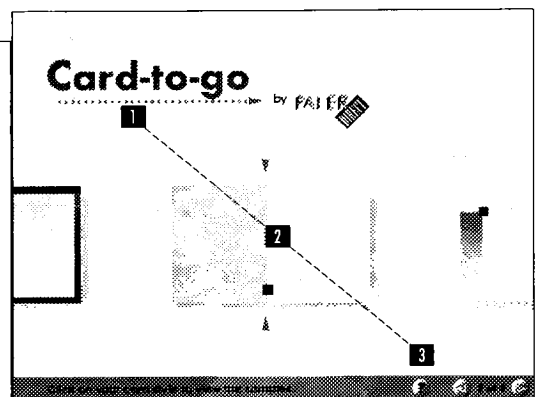


figure 56

B) Grid

The grid is a system of two-dimensional guidelines for positioning elements in a layout. It helps to ensure accurate alignment of elements within a single screen and to consistently place the elements that appear on multiple screens.

On the screen, however, the grid for screen designs should not be complex. In order to accommodate elements of different shapes and sizes in a variety of layouts while providing for overall consistency in balance and structure.

For this project, I use the benefits from the use of a grid because the screen design concept is based on geometric regions. As a result, I can use it rigidly in the layout. It also aids the alignment with a sense of balance. See figure 57.

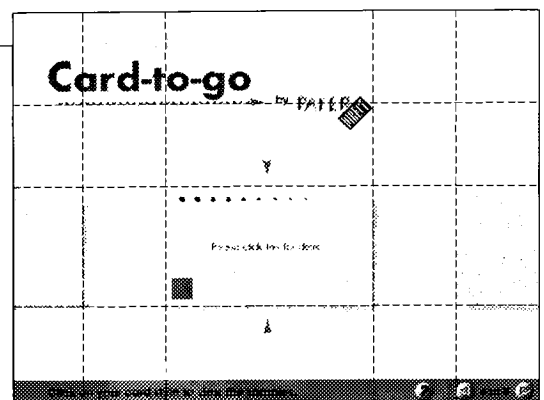


figure 57

3.3.1.2 Images

A) Background

Although every element on the screen contributes to the style of the interface, the background carries the greatest simple image and also the biggest element of the screen. Like the backdrop in a theater, it provides the location and context for all the actions on the stage.

The background doesn't have to play a dominant role in the design. In this project, a purely decorative or plain background is all that's needed. But even in a passive role, the background serves two purposes:

- It influences the look, balance, and location of all other elements on the screen.
- It fills the empty space so other elements are not floating objects.

No matter how tightly a background is integrated with other screen elements, it needs to be created as an independent image so those screen elements can move and change in front of it. So I have to make the background really work with the interface and it has to be composed together with the other elements that will appear on the top of it. Moreover, the background must be created and matched with all objects on every screens.

As described, this project relates to business card design which it is made by the paper. So I choose the texture of white stripe paper as the background because its texture is realistic, decorative and fully integrated with this project.

See figure 58.

Back
ground

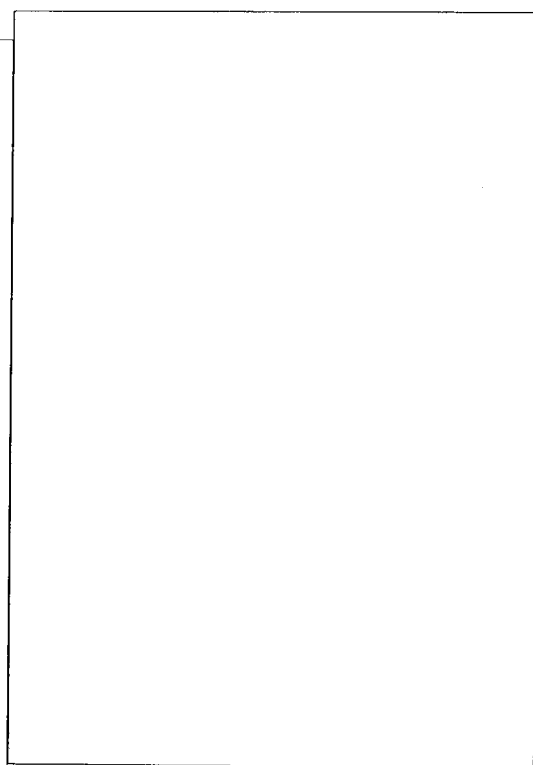


figure 58

B) Control panel

The control panel, a distinct region of the screen, is an area that involves users to use it as a controller. The following is the purposes of control panel:

- It helps the buttons and instructional text not to appear floating on the screen.
- It adds depth to the screen and helps the buttons not to loose in the background.
- It is the area where the buttons can be grouped.

I created it to be a simple red control panel because this color can be a first glance for the users and also can be easily matched with the buttons and instructional text .

Moreover, I placed it separately at the bottom part of the screen because it helps the users recognize where they want to operate and control the machine. See page 69-88.

C) Buttons and Image buttons

Buttons are able to be a touchable part of the interface and the objects to which the users interact. They naturally need to be clear and predictable like a button or a discrete object. On the other hand, sometimes they can be any part of a screen or region of the images.

In this project, I had to create both kinds of button because I needed them to represent the importance and the function to the users. Moreover, I avoided creating them not only to compete with the content, but also support the the style of the interface.

To create the buttons, I need them to look like real buttons with the same color as the control panel. I use words and icons on them to identify their functions to the users. They are placed at the right side on control panel because they should be convenient for the user to operate the machine. See page 69-88.

I created the image buttons as the product images that represent the products and the button's function. The users can choose and click on the product any time they want while operating the machine. See page 69-88.

D) Logo

As everyone knows, the logo is designed or created to represent the service or product itself. Because of the point-of-purchase, I intend to represent this project's logo to the users and place it at the top left of every screens. Moreover, it's easy for the users to memorize and recognize the service. See page 69-88.

3.3.2 Media Elements

3.3.2.1 Text

All the elements in an interface play a major role in design. Creating the guidable text on the interface to be simple consistent in harmony with other important elements. It is my intention to demonstrate the mutual work of function and beauty. Even when the words are used decoratively as part of a background or image, their meaning matters. Text on the screen serves many masters:

- It must look right for the message.
- It must be easy to read.
- It must work with the interface.

In this project, text is only the guidable text, which is for helping the user operate the machine. Among other things, it requires a balancing act between my design concept and reasonable effort. So I have to choose the appropriate typeface from the hundreds available which should be simple, clean and readable font. I decide to use the Futura typeface which is the most suitable screen font for this project. See page 69-88.

3.3.2.2 Sound

A) Title and background music

Music can be more than just an afterthought to the project. It can be the central focus or a rich accompaniment that enriches the content. Beside that, it can often punctuate action and provide continuity between sections.

For this project, I choose the jazz music as the title and background music because this kind of music is very simple, comfortable and easy listening. This music supports the stylistic of this project, which is simple and easy-to-use. Moreover, it can establish the users' mood and emotion such as confident, friendly, honest, so on and so forth.

B) Guidable voice

According to the text in this project, the purpose of voice is the same as the text. It is always set to function with the text for guiding and helping the user step by step. I chose a middle-age-man voice because this voice is suitable to appeal the users. It does not only communicate the stylistic of this project, but also makes the users find it comfortable to listen to.

C) Sound effects

Many times that sound effect represents a natural sound which is not actually the real sound. In this project, I choose the realistic sound which is the actual sound when we click a mouse but much louder. It is for some elements on the

screen such as the buttons, image buttons and so on. This sound effect is to reinforce the action which is taken by the users and represent a sense of place. Also, it relates to the event as well as the subject matter of this project.

3.3.3 Authoring Elements

3.3.3.1 Motion on Screen

A) Elements that animate

Animating the screen can simply mean giving life and motion to the elements of this project. According to point-of-purchase, I intend to present the logo by a short animation because it introduces the topic's project and gets the users' attention. So I use the elements of logo to animate which are the yellow rectangle, the blue name of this project "Card-to-go" and the red arrow. The first element begins with the rectangle which moves by rolling. And the second element which is the "Card-to-go" appears word by word. It starts

with "Card-", "to-" and "go" The last one which is the arrow appears below the name. The red arrow also animates continually until the users start the transaction. Then these three elements move forward from the middle to the left of the screen. See page 64-47.

Moreover, there is another logo animation which is created as a visual bridge when the introduction changes to the main menu screen. On the main menu screen, I present the logo, placed at the top left of the screen and reduced in size. Each element moves forward from the left to the top left of the screen. See page 68.

The last animation for this project is animating words which greet the users when they finish using the machine. The blue greeting sentence is "Thank you for choosing our service". This sentence also moves from the left forward to the center at the first appearance and then from the center forward to the right at the end of transaction. At the beginning, it greets with "Thank you" firstly, then "for" is the second and "choosing our service" is the third. See page 105-106.

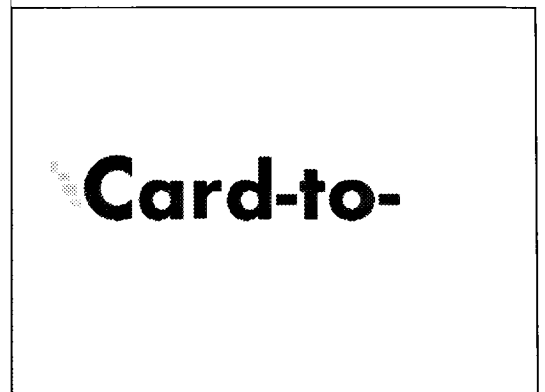
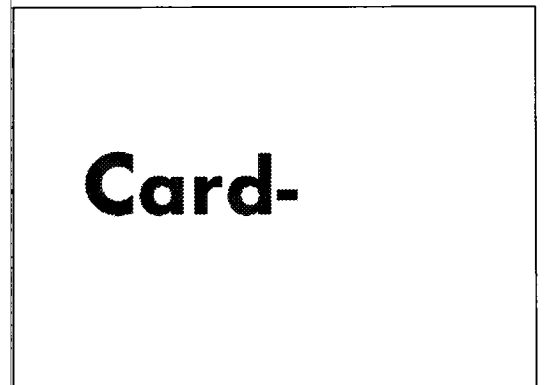
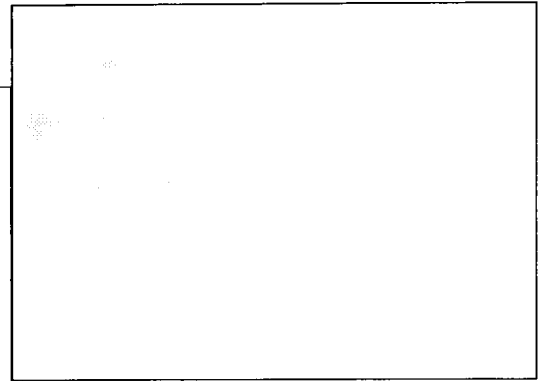
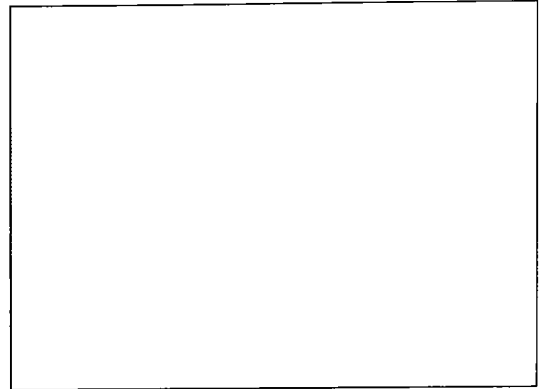
B) Elements that move

The elements that can move on the screen are the various business card selections. The purpose of them are for entertaining the users, emphasizing the content, and supporting the screen navigation. The users can click on the button forward and backward for viewing every selection that they want to see to help them have the best pick. See page 69-88.

4. FINAL WORK

After establishing the flowchart, setting the style and designing the elements of interface families, the last process is the final work. According to the flowchart, there are four sections of the final work which contains the introduction, the main menu, the user's self-service process and the finale. On these following pages are the illustrations of the final work:

Introduction



Card-to-go

Card-to-go
.....▶

Card-to-go
.....▶
by **PATER**
MARK

Card-to-go
.....
by **PATER**
MARK

Click my where to more

Card-to-go

..

by **PAPER**
POINT

Click anywhere to start

Card-to-go

.....

by **PAPER**
POINT

Click anywhere to start

Card-to-go

.....

by **PAPER**
POINT

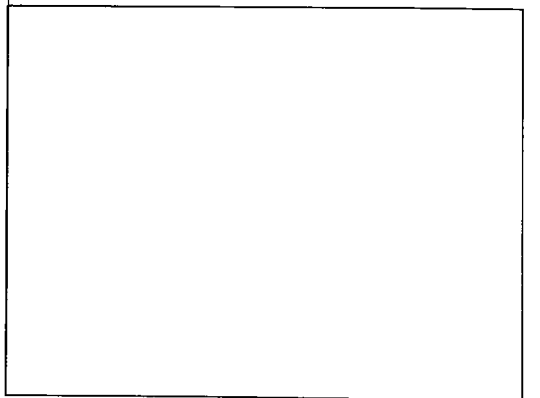
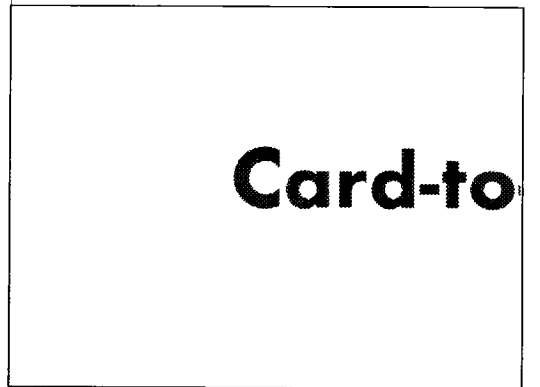
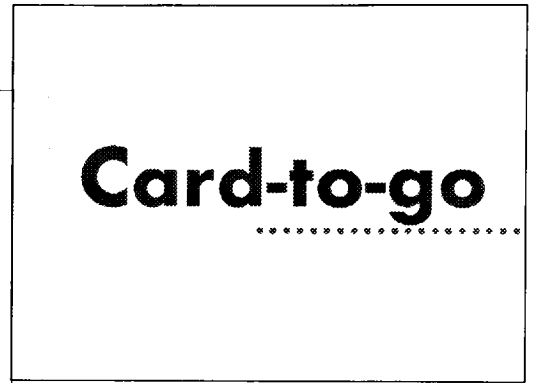
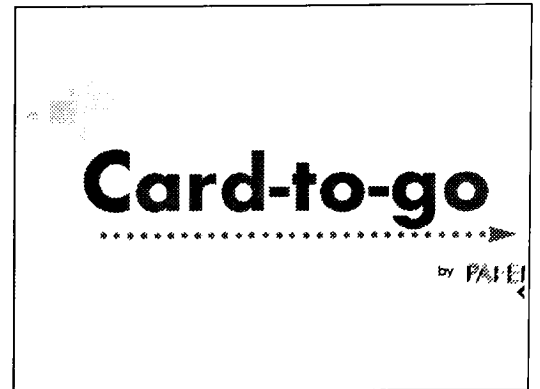
Click anywhere to start

Card-to-go

.....➤

by **PAPER**
POINT

Click anywhere to start



Main menu

by FAIRER
2020

by FAIRER
2020

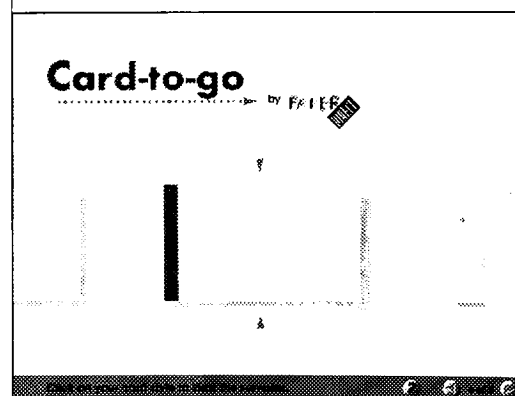
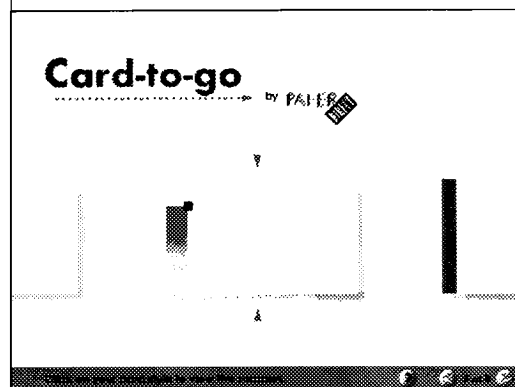
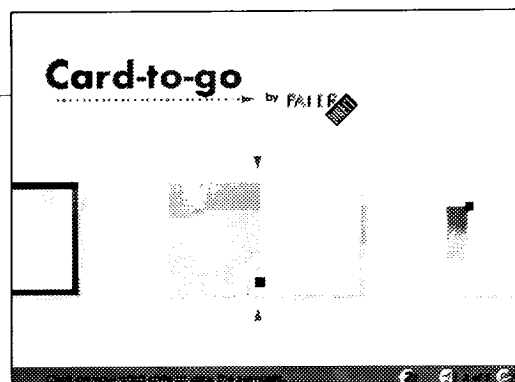
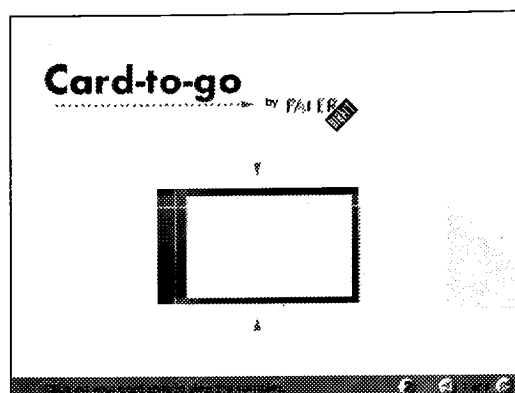
d-to-go

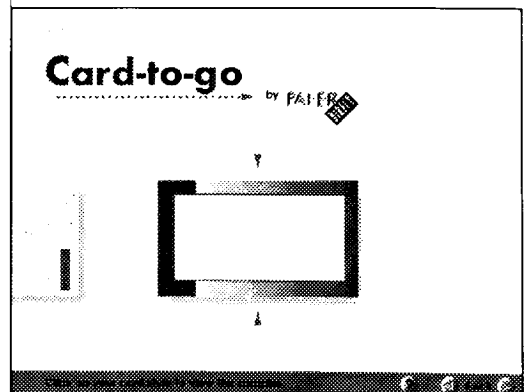
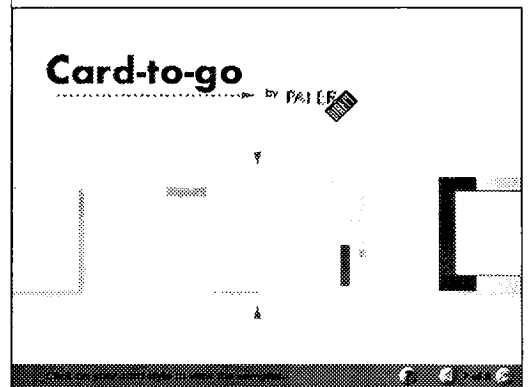
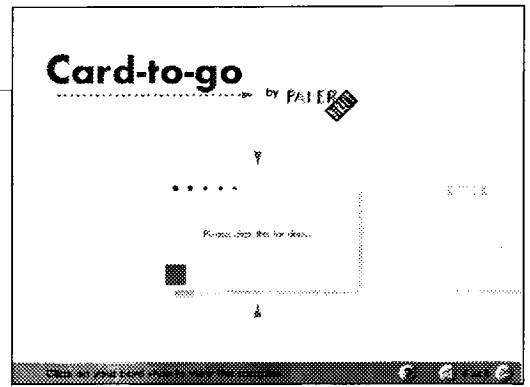
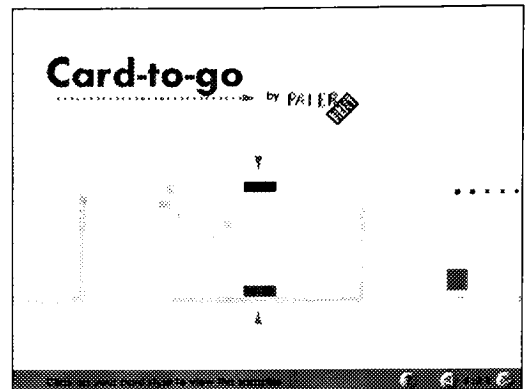
by FAIRER
2020

Card-to-go

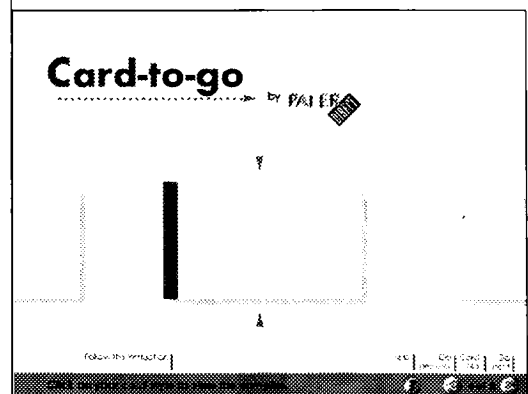
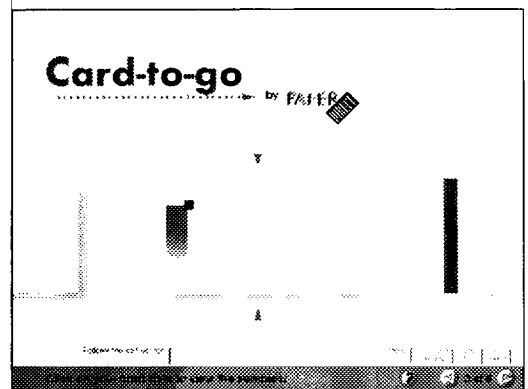
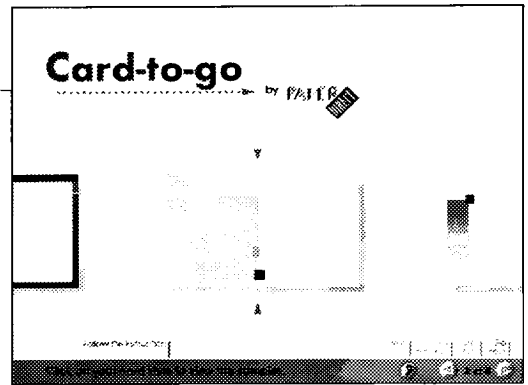
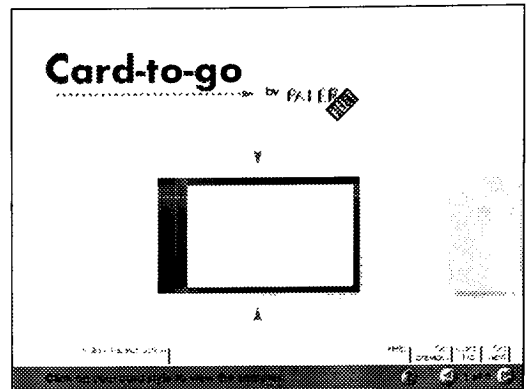
by FAIRER
2020

Business card selections

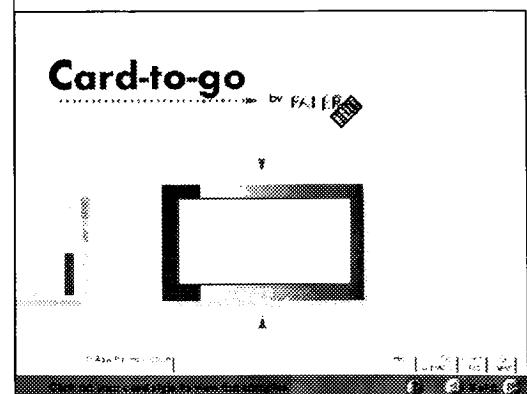
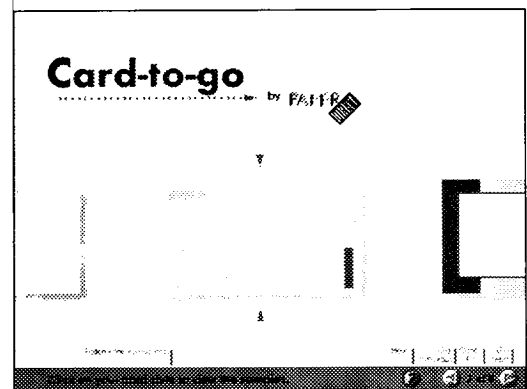
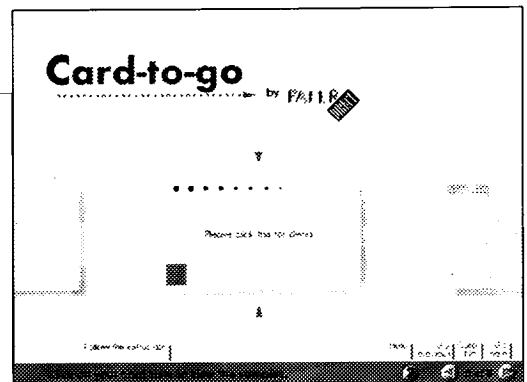
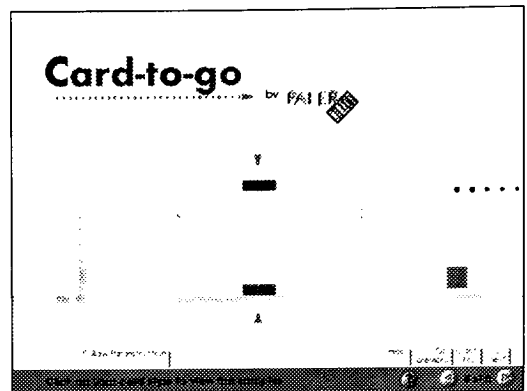




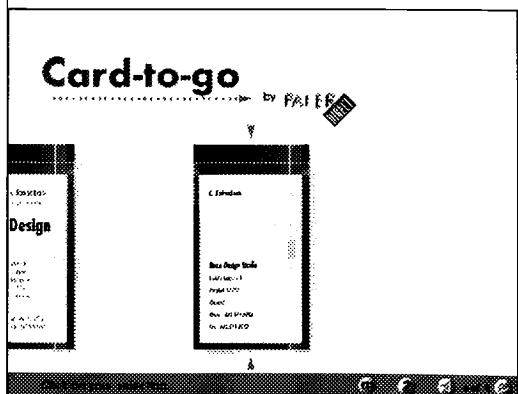
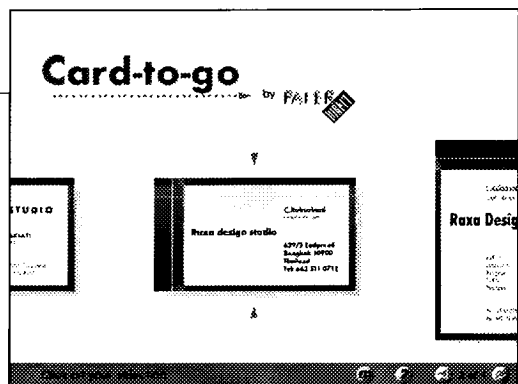
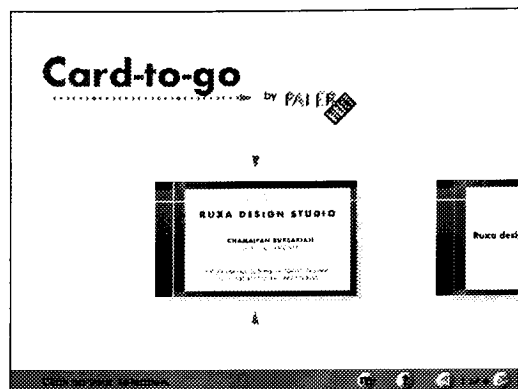
Guide & help



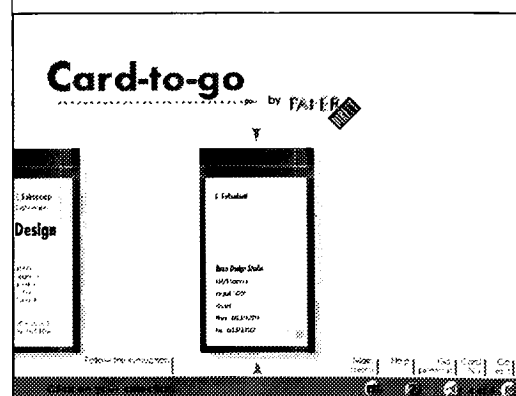
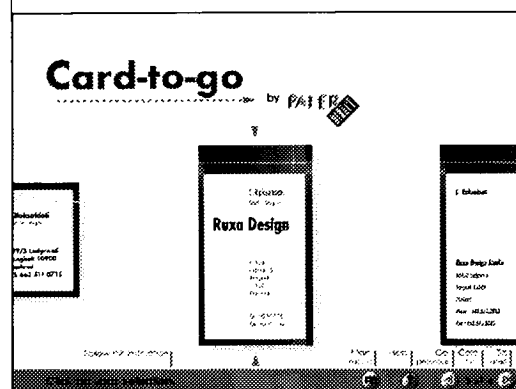
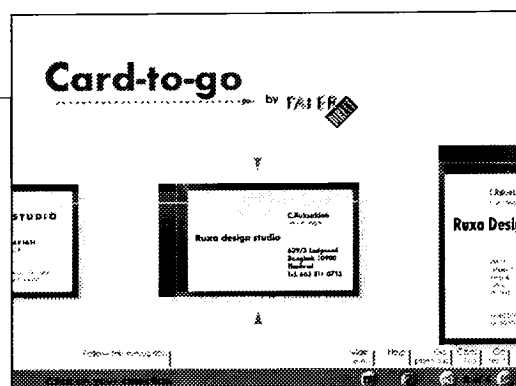
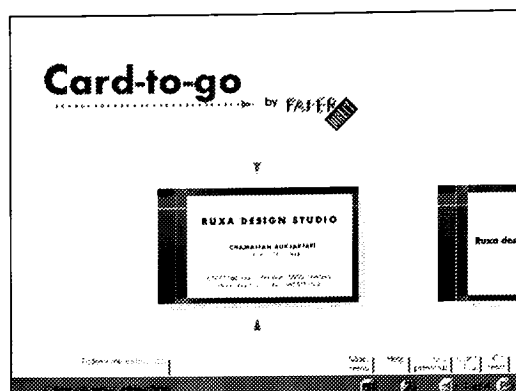
Guide & help



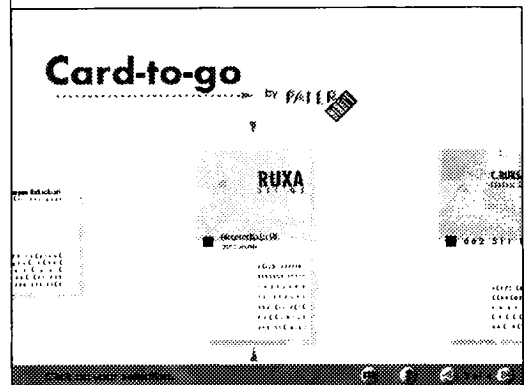
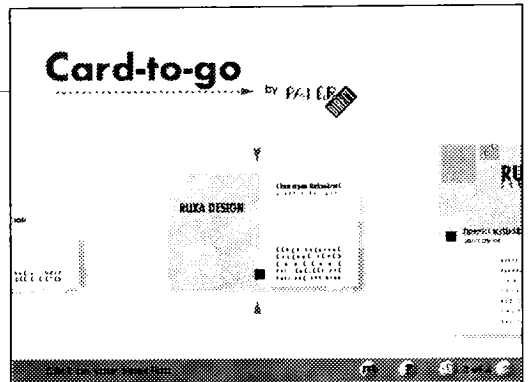
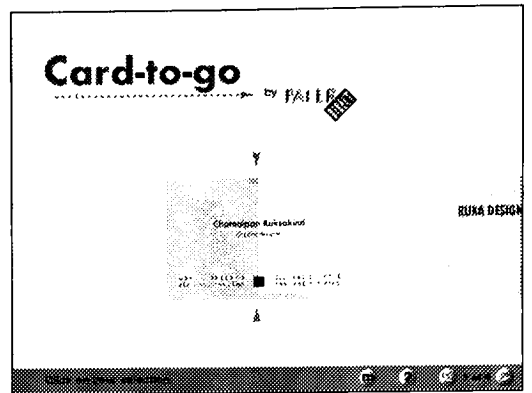
Selection no. 1



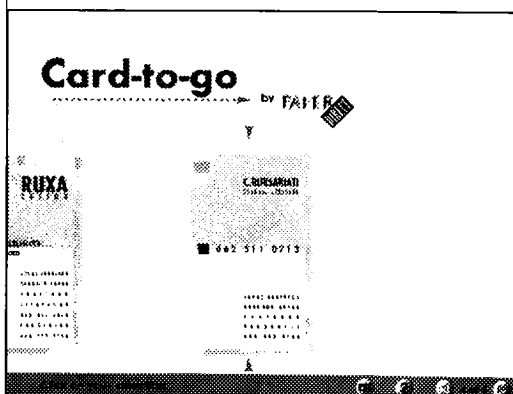
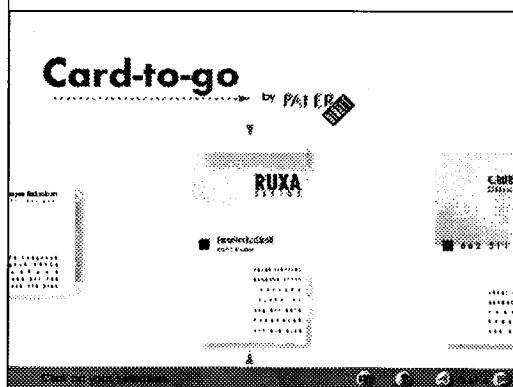
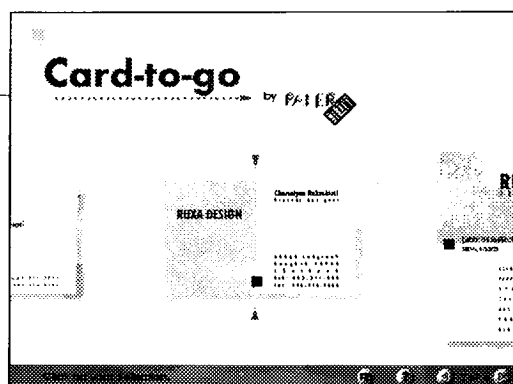
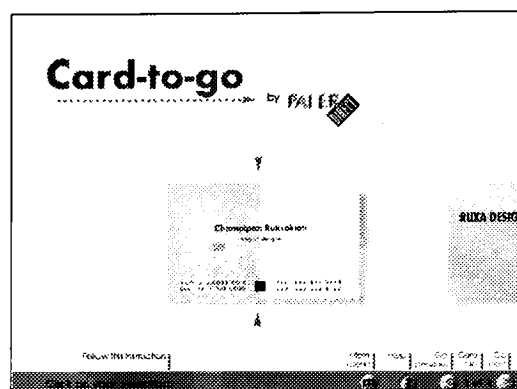
Guide & help



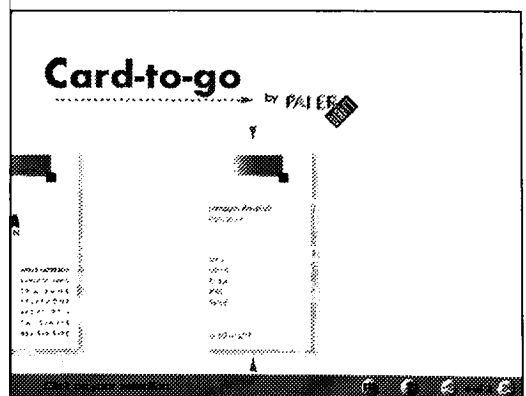
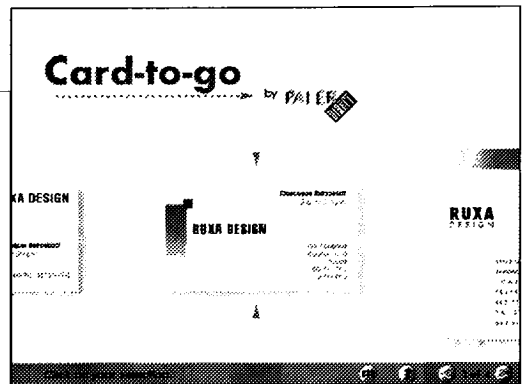
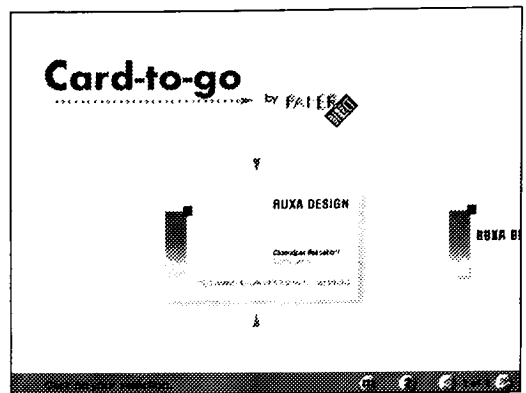
Selection no. 2



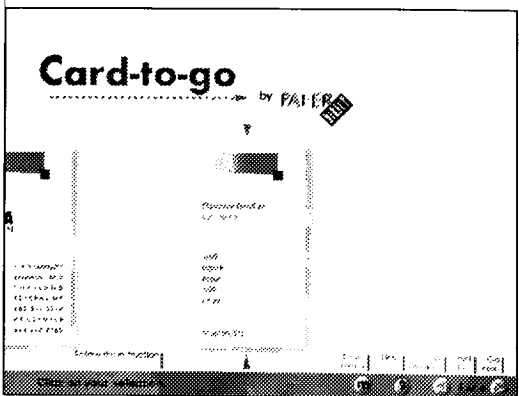
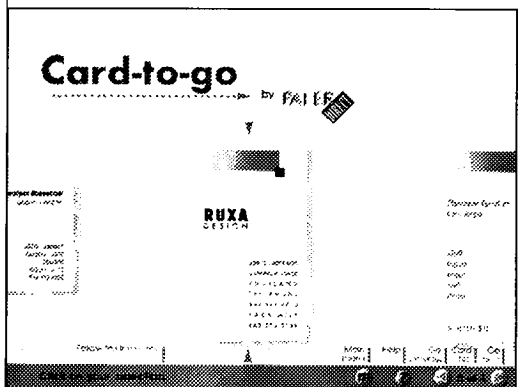
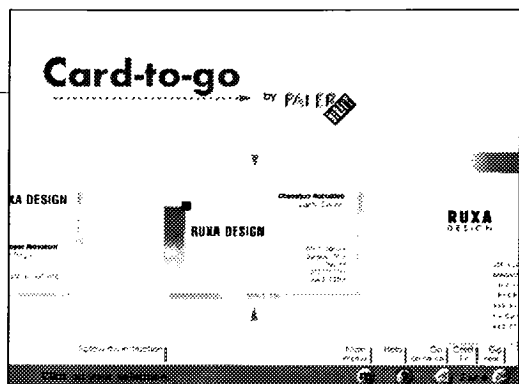
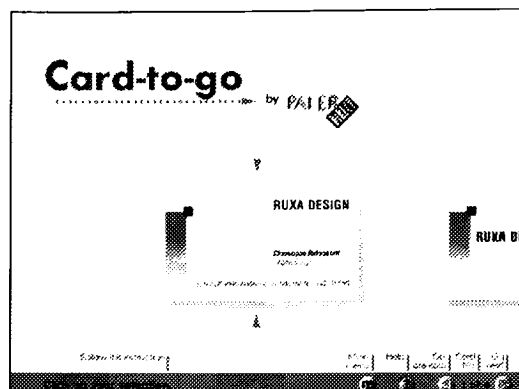
Guide & help



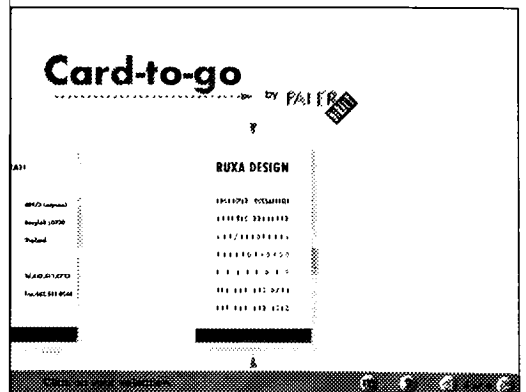
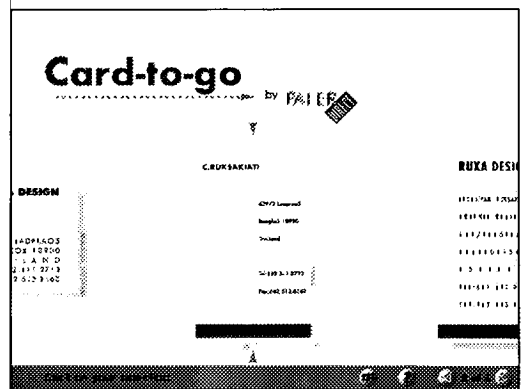
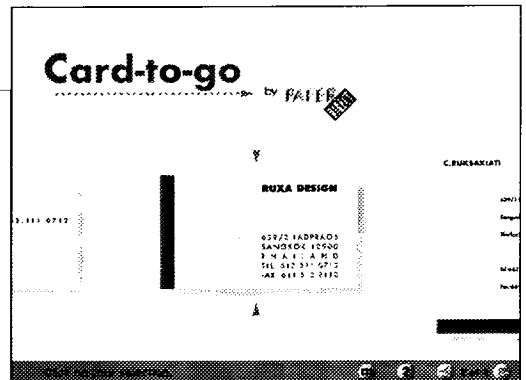
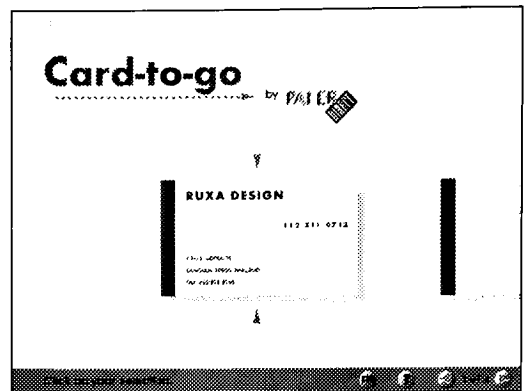
Selection no. 3



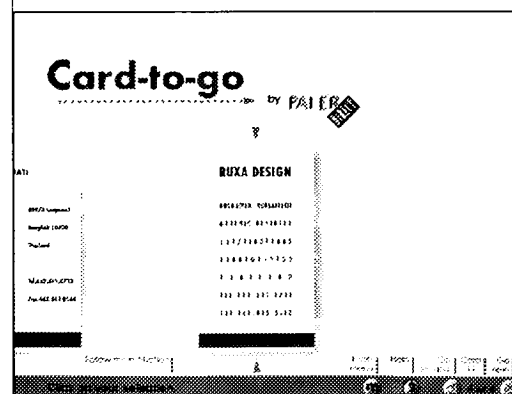
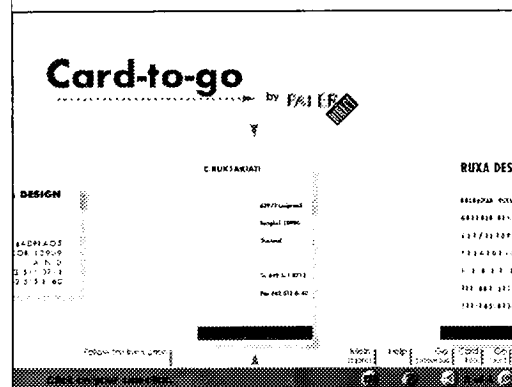
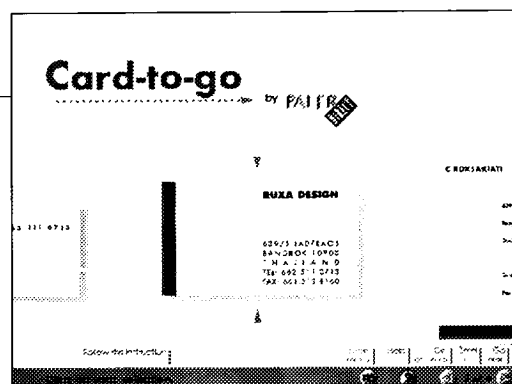
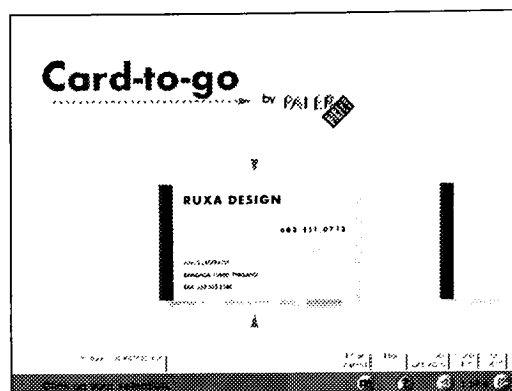
Guide & help

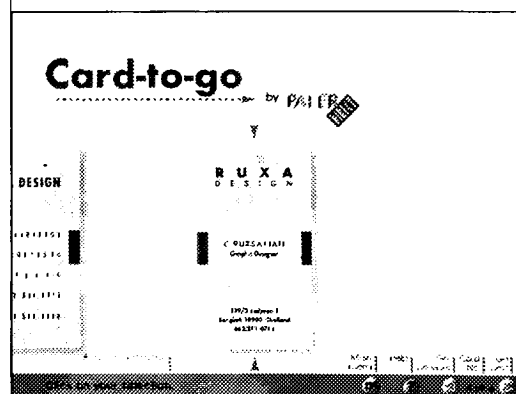
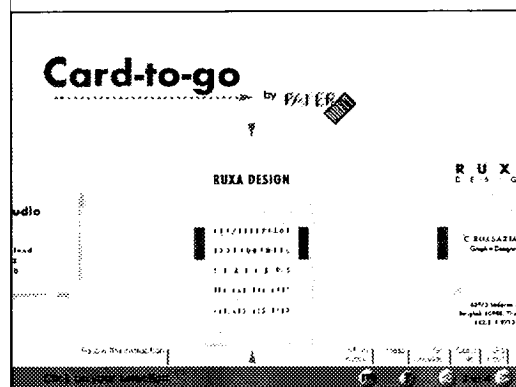
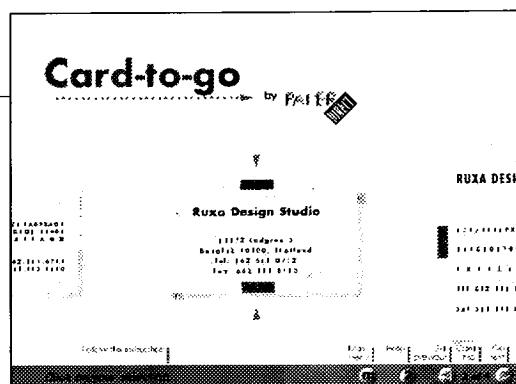


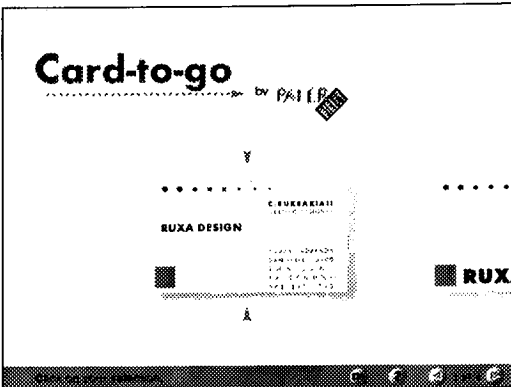
Selection no. 4



Guide & help

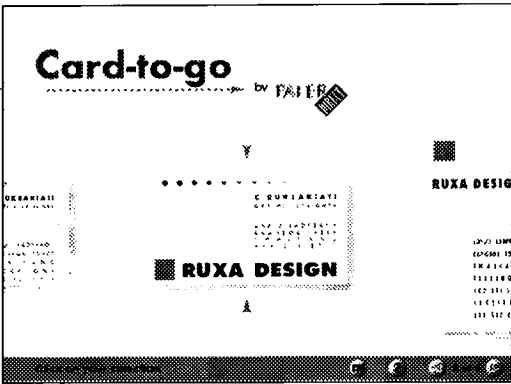




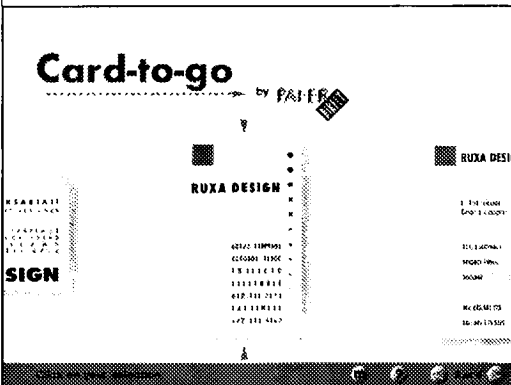


go to page 89-92

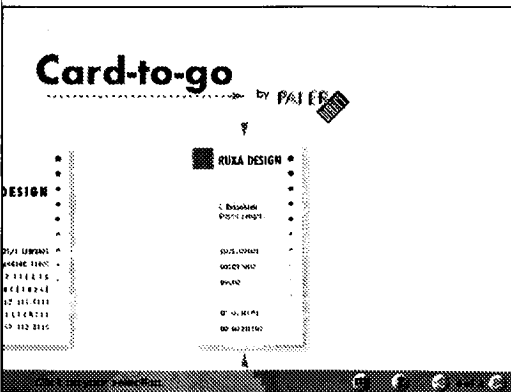
Selection no. 6



go to page 93-96

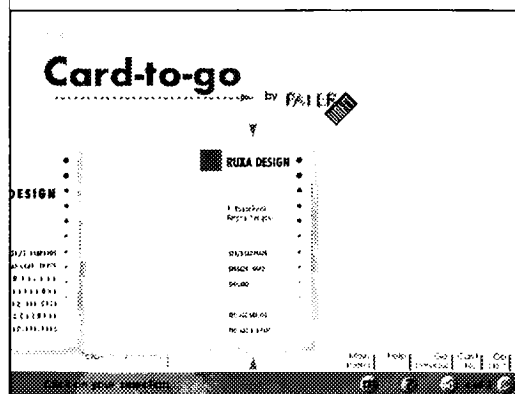
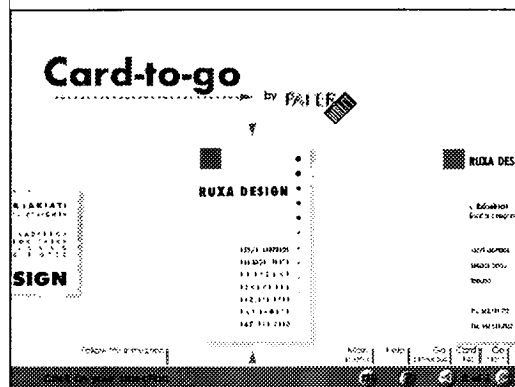
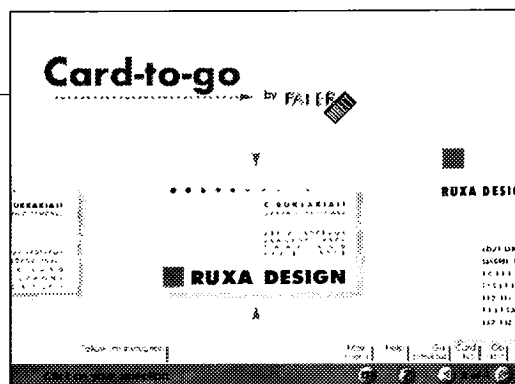
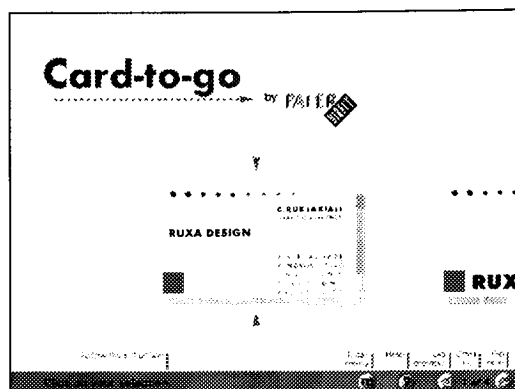


go to page 97-100

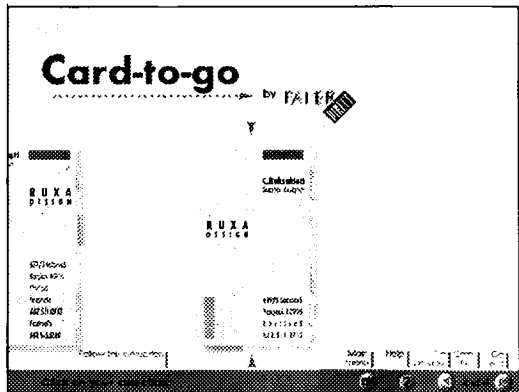
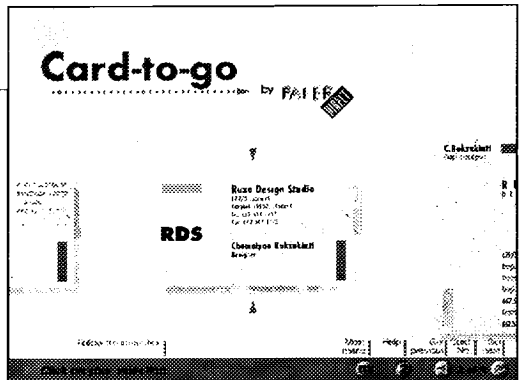


go to page 101-104

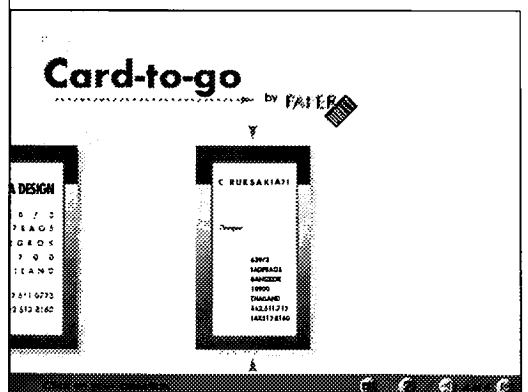
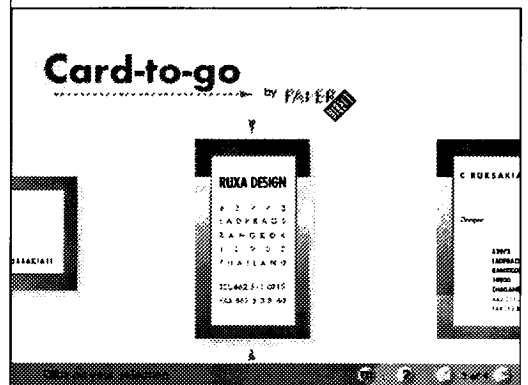
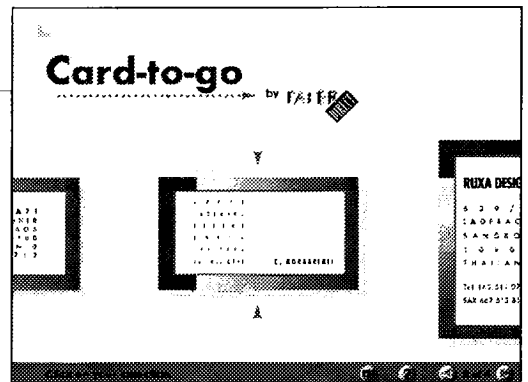
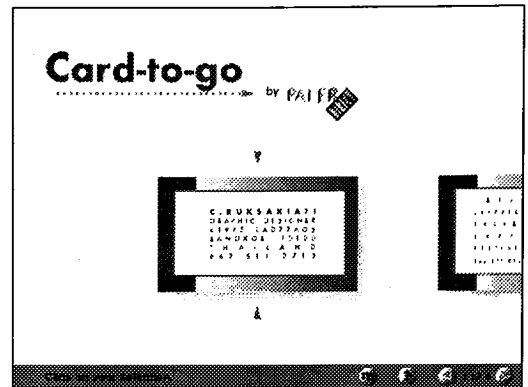
Guide & help



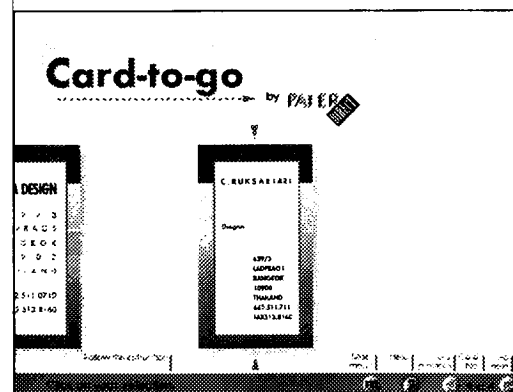
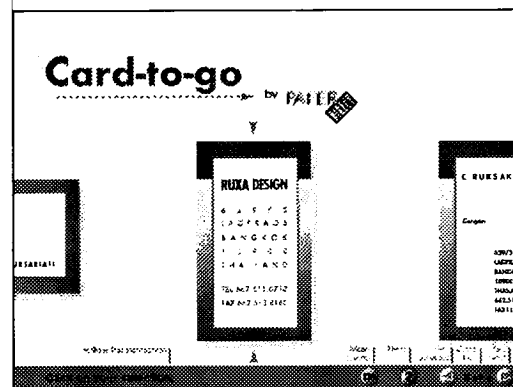
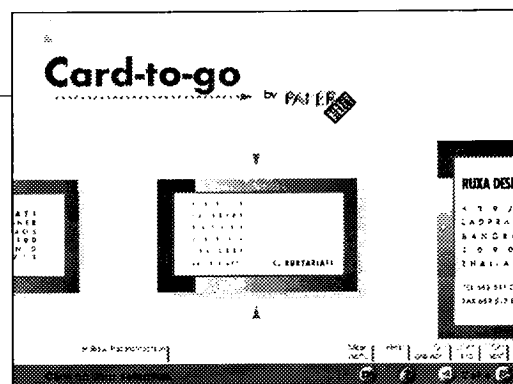
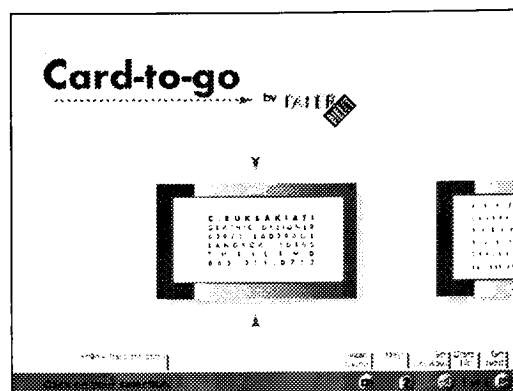
help



Selection no. 8



Guide & help



User's self-service process

Selection 6.1

Card-to-go

by PAPER

COMPANY'S NAME RUXA DESIGN

ADDRESS 489/3 LADPRAO 5

BANGKOK 10900, THAILAND

TELEPHONE 862.511 0713

Card-to-go

by PAPER

NAME CHAMAIPAN RUKSAKIAI

POSITION GRAPHIC DESIGNER

Card-to-go

by PAPER

RUXA DESIGN

CHAMAIPAN RUKSAKIAI

GRAPHIC DESIGNER

862.511 0713

Card-to-go

by PAPERKIT

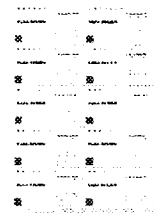
1 sheet : 10 cards	5 sheets : 50 cards	9 sheets : 90 cards
2 sheets : 20 cards	6 sheets : 60 cards	10 sheets : 100 cards
3 sheets : 30 cards	7 sheets : 70 cards	11 sheets : 110 cards
4 sheets : 40 cards	8 sheets : 80 cards	12 sheets : 120 cards

Download the PDF of the Card-to-go cards



Card-to-go

by PAPERKIT



Download the PDF of the Card-to-go cards



Guide & help

Card-to-go

by PALES

COMPANY'S NAME: PUXA DESIGN

ADDRESS: 639/3 LADPRAO 5

BANGKOK 10900, THAILAND

TELEPHONE: 062-511 0713

Follow the instruction: [icon] [icon] [icon] [icon]

Print [icon] [icon] [icon] [icon]

Card-to-go

by PALES

NAME: CHAMATPAN RUEKAKIATTI

POSITION: GRAPHIC DESIGNER

Follow the instruction: [icon] [icon] [icon] [icon]

Print [icon] [icon] [icon] [icon]

Card-to-go

by PALES

.....

C RUEKAKIATTI
GRAPHIC DESIGNER

PUXA DESIGN

639/3 LADPRAO 5
BANGKOK 10900, THAILAND
062-511 0713

Follow the instruction: [icon] [icon] [icon] [icon]

Print [icon] [icon] [icon] [icon]

Card-to-go

by PAPERKIT

1 sheet : 10 cards	5 sheets : 50 cards	9 sheets : 90 cards
2 sheets : 20 cards	6 sheets : 60 cards	10 sheets : 100 cards
3 sheets : 30 cards	7 sheets : 70 cards	11 sheets : 110 cards
4 sheets : 40 cards	8 sheets : 80 cards	12 sheets : 120 cards

Table of the 4 main sizes

More sheets | More cards | More sheets | More cards

Card-to-go

by PAPERKIT

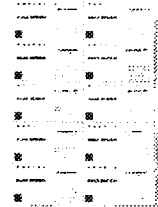


Table of the 4 main sizes

More sheets | More cards | More sheets | More cards

User's self-service process

Selection 6.2

Card-to-go

by PATER

COMPANY'S NAME RUXA DESIGN

ADDRESS 66973 LADPRAO S
BANGKOK 10900, THAILAND

TELEPHONE 062.511.0713

Card-to-go

by PATER

NAME CHANAIKARN POKSAKATY

POSITION GRAPHIC DESIGNER

Card-to-go

by PATER

C POKSAKATY
GRAPHIC DESIGNER
RUXA DESIGN

Card-to-go

by PAPERKIT

1 sheet : 10 cards

5 sheets : 50 cards

9 sheets : 90 cards

2 sheets : 20 cards

6 sheets : 60 cards

10 sheets : 100 cards

3 sheets : 30 cards

7 sheets : 70 cards

11 sheets : 110 cards

4 sheets : 40 cards

8 sheets : 80 cards

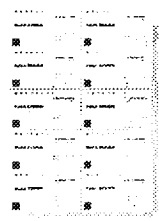
12 sheets : 120 cards

Print this quantity of cards on one sheet



Card-to-go


by PAPERKIT



Print this quantity of cards on one sheet



Guide & help

Card-to-go by PAPER 

COMPANY'S NAME


ADDRESS

TELEPHONE

Company's logo:

Logo: Size: Color:

Print Preview

Card-to-go by PAPER 


NAME

POSITION

Company's logo:

Logo: Size: Color:

Print Preview

Card-to-go by PAPER 

RUKSARTAT

RUXA DESIGN

Logo: Size: Color:

Company's logo:

Logo: Size: Color:

Print Preview

Card-to-go

by FATEP 1000

1 sheet : 10 cards	5 sheets : 50 cards	9 sheets : 90 cards
2 sheets : 20 cards	6 sheets : 60 cards	10 sheets : 100 cards
3 sheets : 30 cards	7 sheets : 70 cards	11 sheets : 110 cards
4 sheets : 40 cards	8 sheets : 80 cards	12 sheets : 120 cards

Follow the instructions

Non
card

Web

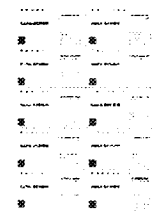
Agree / Disagree

Print the quantity of sheets you want

1 2 3 4

Card-to-go

by FATEP 1000



Follow the instructions

Non
card

Web

Agree / Disagree

Print the quantity of sheets you want

1 2 3 4

User's self-service process

Selection 6.3

Card-to-go

by PATER 1999

COMPANY'S NAME RUXA DESIGN

ADDRESS 139/26 LADPRAO 5
BANGKOK 10900, THAILAND

Card-to-go

by PATER 1999

TELEPHONE 662 511.0710

FACSIMILE 662.513.8160

Card-to-go

by PATER 1999

RUXA DESIGN

139/26 LADPRAO 5
BANGKOK 10900
TEL 662 511 0710
FAX 662 513 8160
E-MAIL RUXA@HOTMAIL.COM

Card-to-go

by PAPER
2010

1 sheet : 10 cards

5 sheets : 50 cards

9 sheets : 90 cards

2 sheets : 20 cards

6 sheets : 60 cards

10 sheets : 100 cards

3 sheets : 30 cards

7 sheets : 70 cards

11 sheets : 110 cards

4 sheets : 40 cards

8 sheets : 80 cards

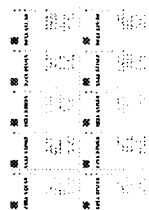
12 sheets : 120 cards

Print this quantity of cards for each



Card-to-go

by PAPER
2010



Print this to 100



Card-to-go

by PAPER

1 sheet : 10 cards	5 sheets : 50 cards	9 sheets : 90 cards
2 sheets : 20 cards	6 sheets : 60 cards	10 sheets : 100 cards
3 sheets : 30 cards	7 sheets : 70 cards	11 sheets : 110 cards
4 sheets : 40 cards	8 sheets : 80 cards	12 sheets : 120 cards

Enter the following: Size (mm) Rep Agenc Comp am

Card-to-go

by PAPER



Color Separation: Size (mm) Rep Agenc Comp am

User's self-service process

Selection 6.4

Card-to-go

by FAIRPLAY

COMPANY'S NAME RUXA DESIGN

ADDRESS 639/3 LADPRAO 5

BANGKOK 10900, THAILAND

Card-to-go

by FAIRPLAY

TELEPHONE 662.511.8718

FACSIMILE 662.519.8140

NAME CHAMMAIPAN RUMKARITTI

POSITION GRAPHIC DESIGNER

Card-to-go

by FAIRPLAY

RUXA DESIGN

1. RUXA DESIGN

2. RUXA DESIGN

3. RUXA DESIGN

4. RUXA DESIGN

5. RUXA DESIGN

6. RUXA DESIGN

7. RUXA DESIGN

8. RUXA DESIGN

9. RUXA DESIGN

10. RUXA DESIGN

Card-to-go

by PAI FR

1 sheet : 10 cards

5 sheets : 50 cards

9 sheets : 90 cards

2 sheets : 20 cards

6 sheets : 60 cards

10 sheets : 100 cards

3 sheets : 30 cards

7 sheets : 70 cards

11 sheets : 110 cards

4 sheets : 40 cards

8 sheets : 80 cards

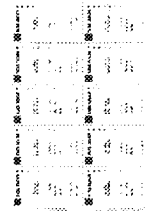
12 sheets : 120 cards

Select the quantity of cards you want



Card-to-go

by PAI FR



Page 1 of 1



Guide & help

Card-to-go by **FAIR**

COMPANY'S NAME: RUZA DESIGN

ADDRESS: 63973 LACPRAG 5
BANGKOK 10900, THAILAND

Address: Name: Address:

Card-to-go by **FAIR**

TELEPHONE: 662-511-0713

FACSIMILE: 662-513-8160

NAME: CHAMAIPAN ROKSAELIATI

POSITION: GRAPHIC DESIGNER

Address: Name: Address:

Card-to-go by **FAIR**

RUZA DESIGN

T. Tel. 662-511-0713
F. 662-513-8160

CHAMAIPAN ROKSAELIATI
GRAPHIC DESIGNER

Address: Name: Address:

Card-to-go

by PAPER
PAPER

1 sheet : 10 cards

5 sheets : 50 cards

9 sheets : 90 cards

2 sheets : 20 cards

6 sheets : 60 cards

10 sheets : 100 cards

3 sheets : 30 cards

7 sheets : 70 cards

11 sheets : 110 cards

4 sheets : 40 cards

8 sheets : 80 cards

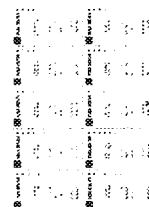
12 sheets : 120 cards

Follow the collector

2025 1990 1980 1970 1960 1950 1940 1930 1920 1910 1900 1890 1880 1870 1860 1850 1840 1830 1820 1810 1800 1790 1780 1770 1760 1750 1740 1730 1720 1710 1700 1690 1680 1670 1660 1650 1640 1630 1620 1610 1600 1590 1580 1570 1560 1550 1540 1530 1520 1510 1500 1490 1480 1470 1460 1450 1440 1430 1420 1410 1400 1390 1380 1370 1360 1350 1340 1330 1320 1310 1300 1290 1280 1270 1260 1250 1240 1230 1220 1210 1200 1190 1180 1170 1160 1150 1140 1130 1120 1110 1100 1090 1080 1070 1060 1050 1040 1030 1020 1010 1000 990 980 970 960 950 940 930 920 910 900 890 880 870 860 850 840 830 820 810 800 790 780 770 760 750 740 730 720 710 700 690 680 670 660 650 640 630 620 610 600 590 580 570 560 550 540 530 520 510 500 490 480 470 460 450 440 430 420 410 400 390 380 370 360 350 340 330 320 310 300 290 280 270 260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0

Card-to-go

by PAPER
PAPER



Follow the collector

2025 1990 1980 1970 1960 1950 1940 1930 1920 1910 1900 1890 1880 1870 1860 1850 1840 1830 1820 1810 1800 1790 1780 1770 1760 1750 1740 1730 1720 1710 1700 1690 1680 1670 1660 1650 1640 1630 1620 1610 1600 1590 1580 1570 1560 1550 1540 1530 1520 1510 1500 1490 1480 1470 1460 1450 1440 1430 1420 1410 1400 1390 1380 1370 1360 1350 1340 1330 1320 1310 1300 1290 1280 1270 1260 1250 1240 1230 1220 1210 1200 1190 1180 1170 1160 1150 1140 1130 1120 1110 1100 1090 1080 1070 1060 1050 1040 1030 1020 1010 1000 990 980 970 960 950 940 930 920 910 900 890 880 870 860 850 840 830 820 810 800 790 780 770 760 750 740 730 720 710 700 690 680 670 660 650 640 630 620 610 600 590 580 570 560 550 540 530 520 510 500 490 480 470 460 450 440 430 420 410 400 390 380 370 360 350 340 330 320 310 300 290 280 270 260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0

Finale

Thank you

Thank you
for

Thank you
for
ing our service.

Thank you
for
choosing our service.

Thank you
for
choosing our service.

for
choosing our service.

choosing our s

Conclusion

In the end, I had a chance to fulfil my goal in completing this project. I am very satisfied with my work. I have gained more knowledge and have become more experienced in computer graphics design and graphic design through my dedicated research and information-gathering, all the way to the completion of the project. As I was doing this project, I found it beneficial to me in many ways and I now know more about the process of business card printing, multimedia, and electronic prepress. In addition, I have practised in several software applications including Macromind Media Director, Photoshop and QuarkXpress.

If my proposal is really taken into production, I would provide a wider selection of business card and make it available to a large audience. It would also be extremely helpful to get an expert's assistance in terms of electronic printing. I wish my project would make the advanced pace in the Express Business Card Machine industry. It would make progress in creating better service that would help everyone's needs.

Biblio **graphy**

- Apple Computer, Inc. *Macintosh Human Interface Guidelines*. Massachusetts: Addison-Wesley, 1992
- Clarke, Cathy, and Lee Swearingen. *Macromedia Director: Design Guide*. Indiana: Hayden, 1994.
- Haykin, Randy. *Multimedia Demystified: A Guide to the World of Multimedia from Apple Computer, Inc.* New York: Random House, 1995.
- Kristof, Ray, and Amy Satran. *Interactivity by Design: Creating and Communicating with New Media*. California: Adobe Press, 1995.

- Martin, Diana, and Mary Cropper. Fresh Ideas in Letterhead and Business Card Design. Ohio: North Light Books, 1993.
- Parsons, Bill. Electronic Prepress: A Hands-on Introduction. New York: Delmar Publishers, 1994
- Thompson, John, and Sam Gottlieb. Macromedia Director: Lingo Workshop. Indiana: Hayden, 1994.
- Walsh, Aaron E. Destination Multimedia. California: IDG Books, 1995.
- Wurman, Richard S.. Information Anxiety. New York: Doubleday, 1989

Acknowledgements

This thesis project and report would not have been done without helpful hands. I wish to express my appreciation to Robert Keough, Jim Ver Hague, and Glen Hintz who are my thesis committee advisors. They contributed ideas, materials, feedbacks that were instrumental in shaping the development of this thesis.

Moreover, I would like to express my gratitude to my dad, mom, brother and his wife 'Tak', and also 'Kie'. Their generosity, love, care and encouragement were of tremendous support. Thank you all family members for always being there.