

## Chapter 4: Design

My goal for the Main Street Online designs was to develop a clear visual identity which spoke to the personas both aesthetically and conceptually. The graphic design should be both evocative and friendly, while communicating the nature of the business. I also considered how well the design would scale for the graphical applications I planned. The Main Street Online web site was conceived as a general portal, to offer visitors easy access to useful and fun tools such as email and instant messaging, as well as assistance with locating information from the Internet at large.

In the following sections, I discuss in detail both the aesthetics and the practical aspects of the designs shown. I first present the visual identity for Main Street Online, then the business card and the log-in card as graphical applications. A storyboard scenario demonstrates how primary persona Mary Lindbergh visits the Main Street Online facility and logs-in to a computer to use the Internet. Finally, I present the interaction design solution for the web site, including a continuation of Mary's scenario showing her using the portal.

## Visual Identity



### Discussion of Design

The visual identity for Main Street Online is simple and clean. It evokes the classic American street sign, with its rectilinear proportions, royal blue color and thin white border. The inclusion of the word “Online” in the name, though, and the bold sans-serif font Futura, with its very faint drop-shadow, communicate modernity. Futura is a powerful but likable modern font, and is furthermore a highly legible screen font which is also used for graphic headers on the web site.

This graphic design is easily applied to all the applications needed, from printed business cards to digital web pages. Visual identities which are primarily logo marks such as this one tend to weather through time better than ones that use representational graphics or trendy shapes. Also, the simplicity of this design leaves open a world of opportunity for more complicated and potentially dynamic graphical elements to be incorporated around this logo mark on a changing basis as desired.

**Application: Business Card****Discussion of Design**

Organization and balance are the hallmarks of this design. The logo mark at the top is strong and clean, surrounded by white space, while the necessary information about the specific Main Street Online center occupies the main area. The word “Welcome” is a pale-gray watermark that almost bleeds off the edge. The Main Street Online visual identity stands strong, definitively centered on the card, while the dialog with the visitor has only begun. “Welcome” is the word used to greet visitors to the Main Street Online web site, and it represents the friendly attitude Main Street Online takes to satisfy each and every unique individual. Using only two colors of ink, blue and black, this bold design should be printed on bright white stock.

Since the business card is picked up by local visitors and used as a reminder or a referral mechanism, the important information to include consists of the operating hours of Main Street Online, plus its location consisting of street address, town, and telephone number including area code. Including the URL is not necessary, because visitors generally will not have Internet access outside the Main Street Online facility itself, where the portal opens when the visitor logs-in.

**Application: Log-in Card**

**Log-in card front (top) and back (bottom)**

**Discussion of Design**

While Internet access and computer use is free at Main Street Online, people's time must be regulated in order to allow the greatest number of people to access the center's facilities. The log-in card has a magnetic strip which is encoded by the staff with a visitor's allotted time as well as with his or her identification information. This card is inserted into a card-reading box attached to each computer, which activates the Main Street Online portal. The computer recognizes the identification encoded into the card, and presents a customized web site

portal to each visitor. The log-in card uses the business card design for its front side, but being made of plastic just like a credit card, it will not be mistaken for the business card.

The reverse side of the log-in card presents helpful instructions for registering at the desk and inserting the card into the box with the magnetic strip facing upwards. It also includes a short enticement to become a regular at Main Street Online by signing the card. Linda, Mary, Gladys and other visitors can keep their log-in cards in their wallets and use them repeatedly, because every time they come in they must register for a certain amount of computer time. The card functions as a handy reminder device for them much like the business card, and its reusability saves money and builds loyalty for Main Street Online. The log-in card also provides other advantages which will be discussed later in the context of the web site design.

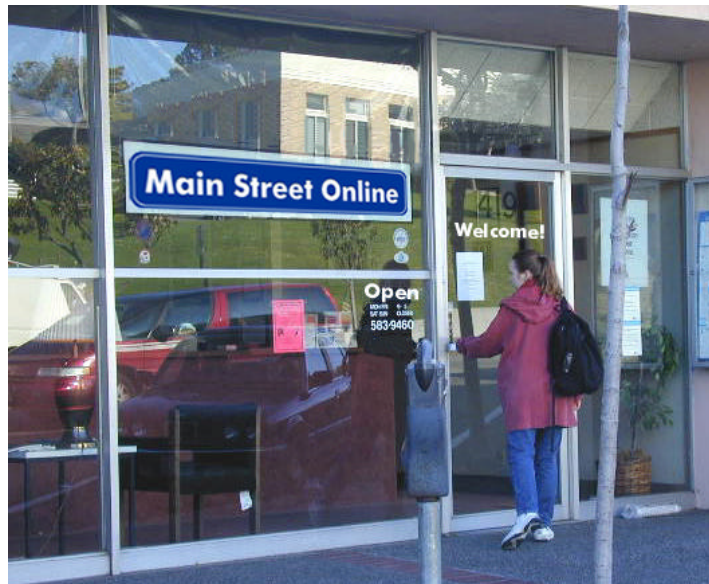
### Scenario: Mary Visits Main Street Online

The following scenario illustrates the total environment of the Main Street Online facility.

1. Mary Lindbergh needs to use the Internet to complete some homework. She walks down to her local Main Street Online public Internet center with her school books, and enters.



**1A. Mary approaches the facility, and sees clearly that it's open.**



**1B. Mary enters the welcoming Main Street Online.**

2. Mary gives her log-in card to the staff person behind the desk. He charges it with an hour's worth of time as she requests and returns it to her.



**2A. The staff is very friendly at Main Street Online.**



**2B. Main Street Online business cards are available on the counter.**

3. Mary goes to a vacant computer, and inserts her card into the log-in box.



**3A. The box is clearly labeled, and the log-in card includes instructions for proper insertion.**

**4.** Logging-in activates the browser, so that when Mary sits down at the computer, it displays her customized Main Street Online home page.



**4A. Mary quickly accesses what she needs for her homework.**

**5.** To be continued below: Mary will use the portal to do her school work, and more.

This scenario demonstrates how the Main Street Online public Internet center incorporates use of the visual identity in terms of signage, business cards and log-in cards, and also how the web site forms an integral part of the Main Street Online experience.



## **Application: Web Site Design**

### **What is a Portal?**

The Main Street Online web site is a general portal. There are a variety of portals on the Internet today, from specialized knowledge portals to business-centric enterprise and application portals, but general portals such as this one can thought of as a gateway to the Internet. They provide a set of convenient resources and services along with a sense of community for visitors. Visitors can use the Main Street Online portal to begin virtually all of their interactions with the Internet, as a tool for what they want and need.

Typically, general portals offer a package of features such as e-mail, chat rooms, news, weather, and always a search engine. Increasingly, a central feature of general portals is the ability for visitors to customize content, so that rather than having their favorite things located on a number of disconnected web sites, visitors can adjust the information displayed in their portal so that it serves their everyday needs. Time flows quickly on the Internet, and even novice Internet users will find that their surfing interests change with the currents. Customization is a key feature of the Main Street Online portal, discussed in detail below.

### **Discussion of Technical Aspects**

The Main Street Online public Internet center's computers are all PCs running a Windows OS, with the latest Microsoft Internet Explorer browser, displaying on a monitor whose resolution is set to 1024x768 pixels. This resolution offers a good amount of screen space while text and graphics remain a large, readable size. The typical concerns of web development in terms of browser-compatibility and accommodating different screen resolutions are moot because of the consistency of the software and hardware at Main Street Online. Up-to-date equipment would be specified at the time of implementation.

### **Scenario: Mary uses the Main Street Online portal**

This scenario continues the story of Mary's experience at Main Street Online as she uses the web site.

1. Mary has a human biology assignment to research diabetes. She knows that her favorite medical web site, YourDoctor.com, is a good source of such information.



1A. Mary clicks on YourDoctor.com in her left-hand content area. To help indicate that it's a hyperlink, the text gets an underline when she rolls over it.

2. Mary sees the YourDoctor.com site while retaining her Main Street Online header and left-hand navigation area. She uses the site to do her homework.



2A. Mary does her research inside the portal frame. Then, she uses the Main Street Online graphic to return to her home page. A helpful ToolTip displays when she rolls over the graphic.

3. Mary looks at the options on her home page, and decides that she wants to read some political news to catch up on events in the 2000 Presidential election.



3A. Mary clicks the word “Political” under the News header, which changes its appearance to indicate selection.

4. On the Political News sub-page, Today’s Top Story discusses the election stand-off. Mary decides not to read any further political news.



4A. After reading the Top Story, Mary clicks on “Email” in the left-hand navigation area to go to her Inbox.

5. Mary has quite a few email messages in her Inbox, 23 of which are new. The system automatically selects the first one, and displays the message below the list of all emails.

The screenshot shows the Main Street Online web interface. At the top, there's a blue banner with "Main Street Online" and a "Welcome, Mary!" message. Below this is a navigation menu with categories like Communication, News, Resources, Weather, and Help. The main content area is titled "Email Inbox" and shows a list of 47 emails, with 23 new. The first email is selected, showing details from Joan Bergen about biology homework. Below the list, the full text of the selected email is displayed.

From	Subject	Received
Joan Bergen	biology homework	7:42 pm Nov. 29, 2000
Marge Cooley	Rattle Ticket	4:21 pm Nov. 29, 2000
Roger T. Brown	I forgot	4:12 pm Nov. 29, 2000
customerservice@yo...	Welcome to YourDoctor.com	3:45 pm Nov. 29, 2000
Roger T. Brown	Class presentation	11:45 am Nov. 29, 2000
Kelly McLaren	long time no speak!	11:23 am Nov. 29, 2000
Mark Jordan	last night	9:09 am Nov. 29, 2000
Candice Byrne	hi Mary!	8:47 am Nov. 29, 2000

**Message from Joan Bergen**

Hi, mary! Do you know what our homework is for biology? I can't believe I didn't write it down. Thanks for your help! Will I see you at the study group on Thursday?

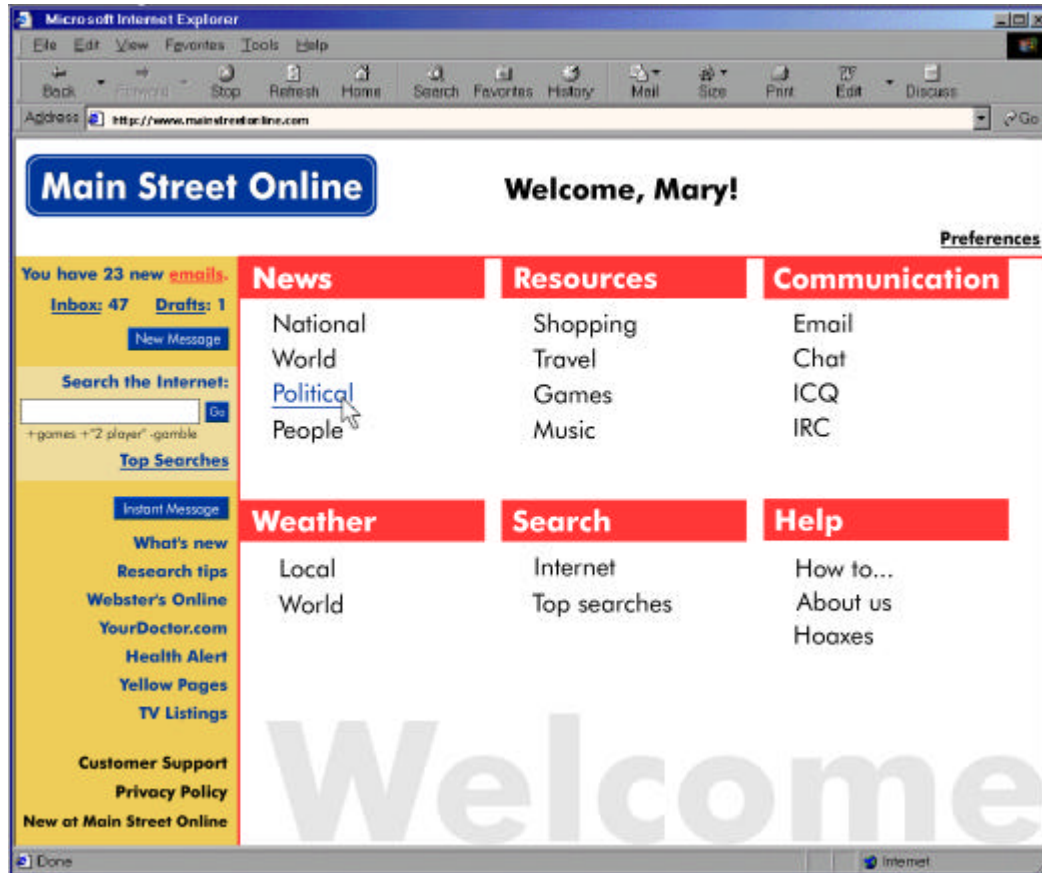
- joan

**5A. Mary reads Joan's message in place. With a single click, she can reply to the message, or read another one, or start a new message, or more.**

6. Mary quickly reads another new email, but doesn't do much more because she has to get home—it's her night to make dinner for her roommates. She logs out and leaves, looking forward to her next chance to visit Main Street Online.

This scenario demonstrates a typical set of interactions within the Main Street Online web site. The home page is Mary's central navigation point, allowing her access to all the things she wants. With custom links, the portal becomes her gateway to visit web sites while never losing the Main Street Online context. She can also use rich navigation options on sub-pages to move quickly around the portal.

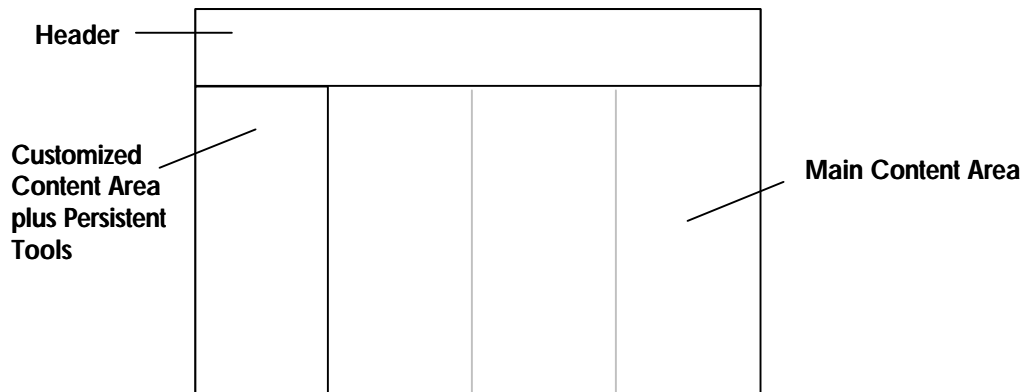
## Discussion of Design



Mary's home page, displayed in a Microsoft IE browser window.

The layout of the home page is clean and simple. The system recognizes visitors' identities from their log-in card, so the header presents the Main Street Online visual identity with the personal greeting of "Welcome, Mary!" The watermark of the word "Welcome" reinforces the friendly theme established with the business and log-in cards, and visually anchors the whole screen without being intrusive. The screen has plenty of white space, but it's full of rich contextual information and options. The limited palette of colors helps to enforce the visual organization established by the grid. The Main Street Online portal must meet a diverse array of Internet needs. The home page makes all the content and services available at Main Street Online easy to access.

The home page is assembled according to this grid:



The main content area, occupying the largest center portion of the screen, features the sub-pages grouped under six bold red category headings which catch the eye. Persistently available items are located in the customized content area on the left-hand side, in the form of textual links and button controls. This area contains different, custom web links for visitors as well as persistent tools including personal email notifications and a New Message control, plus Internet searching tools and an Instant Message control.

A variety of visual feedback is shown in this interaction design. Underlines indicate hyperlinks. Main Street Online tools have persistent underlined text, for example: “Inbox.” Text that leads to sub-page content is only underlined when the visitor rolls over the words, for example: “Political.” The underlined hyperlink affordance is an important usability factor, and one of today’s web site design standards. However, it’s important not to overwhelm the screen with a plethora of underlined text, which becomes difficult to scan.

Visitors always need to know where they are when they’re navigating around Main Street Online’s web site. The underlined hyperlink provides the first visual feedback, but then selection and location must be indicated. When visitors follow a link to a sub-page such as “Political News,” for example, location is indicated in several ways. The red bar across the top contains the page title, shown below:

**Political News**

Other text throughout the page also needs to indicate selection and location. The general standard is for the text of a selected link to be bolder and brighter than surrounding text. For example, after clicking “Political” under the News category, Mary goes to the Political News page, where her navigation area displays visual feedback for her location, shown below:

<b>Communication</b>	
<a href="#">Email</a>	Chat
ICQ	IRC
<b>News</b>	
National	World
People	<b>Political</b>
<b>Resources</b>	
Shopping	Travel
Games	Music
<b>Weather</b>	
Local	World
<b>Help</b>	
How to...	About us
Hoaxes	

The word “Political” indicates selection with the same bold, white font as in the page title bar, and the category heading “News” is a thicker red than the other category headings. In the picture above, hyperlink selection indicating navigation to the Email page is also shown at the cursor focus.

Another place with locational information is the page indicator for a multi-screen article, shown below from the Political News Top Story:

**1, 2, 3** [Next >>](#)

Normal black text indicates the selected page, while the underlined blue numbers allow navigation and present the total number of pages. The “[Next >>](#)” link is a nice, large mouse target for moving sequentially through the article.

Naturally, some of the portal content is geared towards the fact that so many Main Street Online users are novices. One plague of untutored email use is the spread of urban legends and hoaxes, so preventative information on “Hoaxes” is prominently featured in the Help category. Tips for reducing spam emails are also offered in Help areas, along with virus alerts and good security practices. Main Street Online encourages considerate parental guidance,

and parents can arrange for their children to have restricted access to online features, which is easily handled with the log-in card identity encoding. Persistent links for Customer Support and the Privacy Policy are offered to visitors in the left-hand column of the portal.

Because visitors' computer use is time-constrained, it is helpful to display the time remaining for their session. However, this information is not displayed inside the portal. Instead, it is located in the Windows system tray, in the lower right-hand corner of the screen. The reason for this placement is because Main Street Online visitors also use external applications such as Microsoft Word during their session, so the time remaining indicator needs to be in a global location. A custom program for Main Street Online computers, this small desktop timer interacts behind the scenes with the log-in card to display the proper information.

### **Customization**

Customization is an important aspect of the Main Street Online portal. These features are accessed by clicking the Preferences link in the upper right hand corner. This displays a screen which allows visitors to rename categories and remove sub-pages from their main content area, and also to add items to the left-hand content area of the home page. For Mary to set up her "YourDoctor.com" link, for example, she went to the Preferences page, and used a simple interface to enter a URL and a title for the text link in that area of her screen. Links added in this way will display framed inside the Main Street Online portal, as shown in the scenario.

Customization is not taken to extremes, however, because most Main Street Online users are novices. The portal automatically includes email and Internet search tools in the custom content area, as well as links for "Customer Support," "Privacy Policy," and "New at Main Street Online," so that almost all users can get what they need without fussing with their preferences. Main Street Online will update these persistent links whenever appropriate.



**You have 23 new emails.**  
**Inbox: 47   Drafts: 1**  
[New Message](#)

**Search the Internet:**  
 [Go](#)  
 +games +'2 player' -gamble  
[Top Searches](#)

[Instant Message](#)

**What's new**  
[Research tips](#)  
[Webster's Online](#)  
[YourDoctor.com](#)  
[Health Alert](#)  
[Yellow Pages](#)  
[TV Listings](#)

**Customer Support**  
[Privacy Policy](#)  
[New at Main Street Online](#)

Mary's customized content area looks like this, above

**You have 4 new emails.**  
**Inbox: 113   Drafts: 0**  
[New Message](#)

**Search the Internet:**  
 [Go](#)  
 +games +'2 player' -gamble  
[Top Searches](#)

[Instant Message](#)

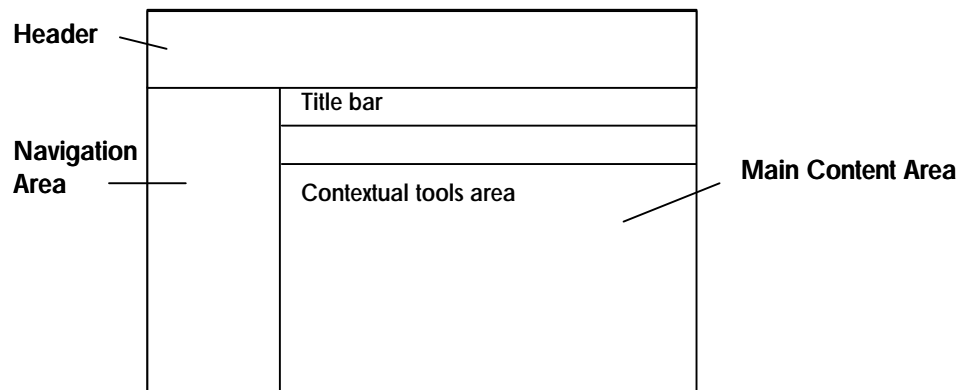
**What's new**  
[Travel Updates](#)  
[People Online](#)  
[Horoscope of the Day](#)  
[Yellow Pages](#)  
[Movie Finder](#)

**Customer Support**  
[Privacy Policy](#)  
[New at Main Street Online](#)

This is Linda's customized area

## Sub-page Designs

All the sub-pages display the basic organization shown in this diagram:



The grid layout of sub-pages is nearly identical to the home page, which makes leaving the home page reassuring and easy to understand. The header across the top is slightly shorter on the sub-pages, but it always contains the Main Street Online visual identity, which navigates back to the home page. The personal greeting has moved to the upper right-hand corner, while access to [Preferences](#) is unchanged. The largest portion of the screen remains the main content area, where the visitor's attention is focused most of the time while using a sub-page. This main area never needs to scroll when Mary navigates inside the portal, but it may require a scrollbar if an external site is framed in the portal, as seen in the scenario.

Separated by a red line and with a gold background, the left-hand navigation area is set-off visually from the main content area. This section is similar to the home page, but here it primarily contains links to the other pages in the web site. These page links facilitate easy navigation between areas of the portal. People don't want to spend time figuring out how to get somewhere—they simply want to get there. On sub-pages, this left-hand column also persistently presents tools for accessing email messages, creating a new Instant Message, and searching the Internet. These Internet search controls are pictured below:



Serving both novice and intermediate users, the Internet search field has some helpful example text for doing Boolean-style searches. The [Top Searches](#) link is a fun way for people to see what others are looking for online, with an educational and family-friendly range of searches presented. Several customized links also display below the Internet search controls on sub-pages, as seen in Mary's screen with "What's New," "Research Tips" and "Webster's Online" displaying in her navigation area.

As previously discussed, sub-page orientation is clearly indicated with a title bar. If appropriate on the sub-pages, a free-text search field is also included in the title bar, as shown in the Political News and Email images. This functionality helps make the Main Street

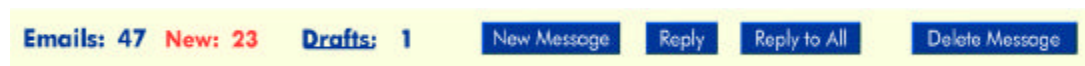
Online portal a more useful resource for visitors. Sometimes Gladys doesn't remember who sent her an email, but she can search for the words "tulip bulbs" to find the right one.

The area below the title bar is a contextual tool palette that has different purposes on different pages. On the Political News page, this area looks like this:



The visitor is offered links to Political News headlines, with the ability to use the More>> link to scroll through more headlines in this same area. Editorials and Archives are separate sections of the Political News page. The gray color of the Archives link shown here indicates that Mary has visited that area recently, which follows web usability standards. This visual indication is not used on the home page or in the navigation area, however, as it would make the concentrated display of sub-page links into an uneven patchwork of shades.

On the Email page, the contextual tools area below the title bar looks like this:



The portal displays the number of emails in the visitor's inbox, and how many are new. It also tracks any email messages which are drafts, so Mary can finish them later just by clicking the word "Drafts." The controls on the right half of this area launch email operations. "New message" opens a pop-up window to write and send (or save) an email. The "Reply," "Reply to All," and "Delete Message" buttons take action on the selected email.

Overall, the Main Street Online portal design as illustrated in these screens emphasizes ease of use, with consistent organization of navigational elements and contextual tools, and simple customization features that allow different preferences to be expressed. The clean, balanced visual design characterizes the whole experience at Main Street Online, which appeals to a wide range of people. Technologically-challenged people like Linda can read the screens and navigate the site, while fairly tech-savvy individuals like Mary can take quick advantage of powerful Internet tools.

## **Other Considerations Noted**

The following considerations were out of scope, but they help reveal the range of concerns around which Main Street Online was designed.

### **Franchise issues**

Naturally, keep the colors and furniture and everything else—including the physical layout—very similar from location to location. One major advantage of the franchise approach is making visitors feel comfortable with a familiar, recognizable environment even if they're actually thousands of miles from home.

The staff must excel at not making people feel stupid—that's their #1 priority, really, because none of the personas want to look stupid. Staff should be friendly, and happy to offer assistance. Employees must have a decent level of computer knowledge in order to rapidly and painlessly solve user's problems. Encourage visitors to help each other, too.

### **Environmental design**

The exterior signage for Main Street Online must be highly visible. It should be large but not disproportionate to other signs on its particular street. Ideally, the sign is readable from both the front and the sides. Also, leverage the sign shape of the visual identity for interior signage such as "printers," "game room," etc. These signs can be displayed on street-sign-style posts in order to indicate areas of the facility.

If necessary, install exterior windows on the side of the building facing the street. The windows should be large enough for the computers and desk to be visible to passerbys, but not necessary floor-to-ceiling. Use a window treatment to dim sunlight coming through, and entirely eliminate monitor glare. Never extinguish the light entirely, however. Window shades may be a good, modular solution.

Disability requirements for physical structures and signage must be followed. This includes making sure to provide wide doorways and aisles, and ramps at any place the level of the

ground changes. Having good ergonomic setups on the computer is vital. Main Street Online must minimize the negative impacts of using computer technology for the human body. This includes such elements as adjustable monitor stands, wrist supports, full-sized keyboards, and highly-adjustable chairs. Main Street Online will have a lot of senior users and children, with a wide range of body heights and shapes, and the equipment must accommodate different users. Also, offer a workstation equipped with devices for disabled visitors, including such tools as alternate pointer devices, and handwriting- and voice-recognition software.

### **Interior design**

The Main Street Online facility should look neither garish nor dull. Paint the walls primarily white. The Main Street Online blue should be used for signage as indicated, and can also be used as a wall or trim accent. A gray color close to the watermark shade is a good accent for accessory surfaces and materials like chair fabric. To keep the environment warm and friendly, use natural and blond wood finishes for counters, tables and trim. Investigate using artwork on the walls, perhaps something graphically simple but warm and agreeable like Henri Matisse's *Dance* or *Jazz* series.

Install lighting sources throughout the facility in a diffuse way that is conducive to working with computers indoors. Energy-efficient natural spectrum florescent lamps are recommended. Good wiring practices should be followed, of course, as well as attention to concerns in the event of a power failure.

Main Street Online must provide several comfortable chairs and small side tables in a waiting area that accommodates conversation. Generally, aim for the ambiance and warmth of a bed & breakfast inn, to make the Main Street Online center a place that people treat with respect, but where they also feel comfortable enough to spend some time.