



Interface Design Document for “How to Drive a Car” -- an educational multimedia product created by Mercer Development Group, Inc.

Basis for discussion:

User Interface Design Principles for Interaction Design, Adream Blair-Early and Mike Zender

Proposed Interface Design for “How to Drive a Car”

Describe how you visualize this interface and how the component you are assigned might look or be portrayed if this content was actually designed into an educational multimedia product. Write just a few sentences to explain how you would design this element.

1. A clear starting point and stopping point -- Anita

Users must be provided with a clear starting point, so that they may start interaction with the content. This starting point must be an obvious visual form that so that the user pre-attentively processes it. Features that “pop-out” include size, value, hue, orientation, shape, enclosure, blurriness, and movement. Movement captures users’ attention, even in the periphery of their vision. For this product, we propose using an animation of a key inserting into a car ignition located in the middle of the screen. When the user clicks on the key, a car engine sound starts playing and the application is launched. After the user launches the application, the car engine sound stops playing.

Users must have a method of exiting an application. As described in Apple’s “Guidelines”, this principle is known as “forgiveness”. Users need to feel that they can try applications but not have to worry that they will cause damage if they make a mistake. The option to exit should always be available, but it is not necessary for it to “pop-out” as is desirable with the starting point. Users are familiar with the “X” icon located in the top right-hand corner of the screen to close a window. As this method is well understood, we propose to also use the “X” icon to provide the user with a method of exiting the application.

If the user completes the entire multimedia experience, by parking the car and turning off the ignition, the screen will fade to black.

2. Familiar conventions -- Ken

Keep standard controls subtle and modest and ensure predictable behavior of buttons. A unified and consistent presentation helps people trust the interface design and allows them to

navigate quicker by recognizing common patterns.

Examples of these design elements include:

- Graying out functions that are not active
- Using a home button in the upper left screen (or panel) that is either always visible or available during a hover-over.
- Using a familiar close button to exit at any point. (Best to follow the universal principle of X to close a window.)
- Using the common search bar feature in the upper right with magnifying glass icon
- Using the common play button to control video and audio
- Using the scroll bar (or view) to help users see the content that is larger than the current view.

A second example of a familiar convention is to provide feedback that acknowledges users actions. By showing users the result, it keeps them engaged and provides updates on the progress of their task. Common examples include:

- Using an hourglass or daisywheel to show loading
- playing sound during a transition, or
- highlighting an action item

The example in element 1 above can employ these strategies as the car engine sounds when the application is launched and the car engine shuts off at the close of the application. While actions are loading an icon displays progress.

The last example of a desirable design is to match the interface language with the purpose of the user. If the content is scientific the language should be highly structured, to the point, and precise. The mood and voice of the design language should match the content type, the content strategy, and the content structure and be focused on the user intention.

In our driving a car example we have utilized sequential steps and have used a professional tone to educate users and instill confidence.

3. Landmarks

Since users should need location information readily available, a small button named “Location” is placed in the upper left hand panel next to the home button. The new “Location” button will remain on the interface throughout the users entire experience. Insert a status bar at the bottom of the application to let the user know their progress at all times.

When the user has completed 75% of the application show a “You have completed half of this tutorial. Way to go!” pop up window or lightbox. Click the next button to continue or go back to re-try. Land markers are often used as mile markers letting the user know

how much of the application they have completed. Insert new signs such as highway signs, way stop sign, red light, and yield sign.

Create the scene by inserting pictures/animations of parks, water falls, bridges, rails road tracks or well known shops or attractions. Landmarks should let the user know where they are and create a cognitive map.

Landmarks should be placed where a junction in the navigation is required.

4. Proximity -- Tammy

In order to most effectively organize our information, we must consider the proximity of the elements and how they will be visually connected to one another. As described in the previous notations, the best location for the navigation appears to be the upper portion of the screen. Next, we should consider the location of graphics, video and textual portions of the instructions being presented. The elements in this presentation should be grouped together logically. The proximity of the graphics should be either on the left or right of the frame below the navigational buttons aforementioned with the text opposite the graphics in a contained text box. The graphics should be consistent in size and proportion. The text should have consistency in font family, style, size, weight, and color throughout the presentation. Headings should have a slight differentiation of size, boldness, and perhaps color from the main content section and would precede the content text. It should be aligned left within the text box with padding separating it from the edges.

5. Adaptation -- Janice

The scene for crossing an intersection would include a graphic with a person sitting in a car with their hands on the steering wheel at a two-way intersection. Located to the right of the interaction would be a shopping center and located to the left of the intersection would be a park. The design of the scene is made to solve the problem of how to cross an intersection that suits everyone regardless of their abilities or skills. The scene shows a true representation of what a typical driver would see and/or experience approaching an intersection.

6. Help -- Gail

SLIDE 1: With the script from last week to help guide me, I chose to follow the theme of the car itself in designing the HELP button for this training course. The second scene from our script introduces the car radio as a hotspot for users to advance to the next set of step-by-step instructions. Because the radio provides entertainment, advertisements, announcements, and news, most drivers and passengers will recognize it as an iconic

source for information.

The car radio represents the proposed “HELP” button. The word help is in red and will travel across the screen in a continuous loop (animation). The animation and red text will capture the user’s attention on the page. When the radio button is selected, a musical short is triggered to play (activate MP3 file) - but only once.

SLIDE 2: As the music plays, the page will automatically link to a simple user support page.

7. Interface as content and the use of metaphors in the interface -- Lisa

“Interface as content means the design of the page is part of the content not just a way to access it.” (Blair-early, Zender, 2008)

The concept for the design for “How to Drive a Car” includes sound, video, still pictures, screen navigations, textual directions, and other information. The interface must take into account all of these elements, while observing conventions that help the user maintain confidence and stay motivated to continue the exercise until completed. Include all these features in the user interface BUT take care not to add extraneous content that takes away from the design or that creates “noise”. Be as concise as possible in the design of the interface.

The use of metaphors comes into play when there is a need to communicate an idea or provide information to the user for an unfamiliar or complex idea. The metaphor can be in words or graphics. An example would be using icons such as the “?” to represent where the user can get help in the application/program.

Driving a car involves many steps and requires strict focus when learning the steps. The interface design should include graphics of the car, dashboard, radio, gear shift, car pedals, etc. The use metaphors in the form of icons should be used to help the user grasp the concept by using imagery that represents the familiar aiding in understanding.

Recommendations:

Note: Images are from perspective of sitting in driver’s seat

Complete view of dashboard

Complete view of foot pedals

Complete view of center console

Complete view of mirrors (rear view and driver side)

Help icon with “?”

Exit icon using red “x”

Video player icon using “standard player function buttons”

Appropriate screen navigation (next, back, home) using arrows or picture icons

Now, head over to this link, which is a Google presentation slide, and add in your element (if possible). I’ve started this for you.