

Interface Design Basics

The Elements of Visual Interface Design.

Interface Design

Interface is only the experienced representation of the interaction design.

In the past form followed function.

Ex: a hammer looks the way it does because it's shape is optimal for driving nails.

In digital design form does not have to follow function, which can cause problems.

Elements of Interface Design

We will take the visual design and branding as a given, and concentrate on the following which deal specifically with controls and responses of the interactive system.

Elements of Interface Design

Layout – Where and how the features, controls and content are placed.

Layout provides hierarchy, letting the users know what is important and what is less important.

Ex: a control that is visible at all times is perceived as more important.

Elements of Interface Design

Grid Systems – a grid helps a designer organize information into a coherent pattern. Done well a grid structures screens so that there is a clear visual hierarchy and flow through the elements on screen.

Elements of Interface Design

Visual Flow – flow can be achieved by use of white space, and with clues provided by the designer on where to look.

Color

Contrasting fonts

Lines and boxes

(can group objects together)

Position and alignment

(aligned are related, indented indicates subordiance, object at the top will seem more important)

Elements of Interface Design

Typography

Serif – good for long passages of text, easy to read.

San-Serif – good for shorter passages of text

San-serif has become the default choice for interaction design.

EX: Verdana and Georgia have been created for the screen.

Elements of Interface Design

Color – can provide personality and ton, but color can also indicate usage and importance.

Ex: mobile phone buttons red can indicate stop or end, while green ones can signal go or send.

Elements of Interface Design

Material and Shape – What surrounds the screens, assuming there is a screen, will affect the interface greatly.

What material it is can give indications of its use.

Ex: clear plastic can be solid, but is often treated like glass. Not many mobile phones made of clear plastic.

Elements of Interface Design

Controls and Widgets

Switch – A toggle switch is a very simple control. It moves from one setting (“on”) to another (“off”) and stays there until changed.

Elements of Interface Design

Controls and Widgets

Button – buttons are an item that can be pressed. Or clicked to activate it.

A toggle button requires another press or click to reset it.

Elements of Interface Design

Controls and Widgets

Dial – a dial provides more control than a button, allowing the user to select a setting along a continuum.

Ex: setting the amount of heat on a stove's burner

Dials can move freely or simply turn from an established point to other established points.

Elements of Interface Design

Controls and Widgets

Latch – a latch opens an otherwise tightly closed area.

Ex: latches are frequently used on handheld devices to keep the battery compartment safe.

Elements of Interface Design

Controls and Widgets

Slider – sliders, like dials are used for subtle control of a feature.

Elements of Interface Design

Controls and Widgets

Handle – a handle is simply a protruding part of an object that allows it to be moved or resized.

Ex: handles on the frames of digital windows, allow the window to be resized or moved.

Elements of Interface Design

Controls and Widgets

Physical-Only Controls

Jog Dial – a jog dial can be manipulated with a single finger or thumb. It can be dial-like, or it can be a pad of buttons, typically used on small devices for moving a cursor or through menus.

Ex: iPod click wheel

Elements of Interface Design

Controls and Widgets

Physical-Only Controls

Joystick – a joystick is a physical device typically used in digital gaming or other applications that require rapid movement and intensive manipulation of remote physical or digital objects.

Elements of Interface Design

Controls and Widgets

Physical-Only Controls

Trackball – a trackball is a physical device for manipulating a cursor or other digital or physical objects. Trackballs are typically in a stationary base, but the ball itself moves in any direction.

Elements of Interface Design

Controls and Widgets

Digital-Only Controls

Check box – a check box enables users to select items from a short list.

Multiple items can be selected.

Elements of Interface Design

Controls and Widgets

Digital-Only Controls

Radio button – a radio button enables users to choose a single item from a selection.

Radio buttons constrain the user to only one selection..

Elements of Interface Design

Controls and Widgets

Digital-Only Controls

Twist – a twist can turn up or down, either revealing or hiding content or a menu in a panel.

Elements of Interface Design

Controls and Widgets

Digital-Only Controls

Scroll bar – a scroll bar enables users to move content within a particular window or panel. Scroll bars can be vertical or horizontal.

Elements of Interface Design

Controls and Widgets

Digital-Only Controls

Drop-down menu – Drop down menus allow designers to cluster navigation, functionality, or content together without having to display it all at once. Drop-down menus can be displayed by rolling over them, or they can be opened with a click.

Elements of Interface Design

Controls and Widgets

Digital-Only Controls

Multiple-selection list (or list box) – Multiple selection lists enable users to select multiple items in a list.

Elements of Interface Design

Controls and Widgets

Digital-Only Controls

Text Box – a text box enables users to enter numbers, letter or symbols. The can be as small as one character or as larger as the whole screen.

Elements of Interface Design

Controls and Widgets

Digital-Only Controls

Spin Box – a spin box are text boxes with additional controls that enable user to manipulate what is inside the text box without having to type a value.

They are good for suggesting values in what otherwise might be an ambiguous text box..

Elements of Interface Design

Controls and Widgets

Icons – icons are visual metaphors representing features or actions. They act as both shortcuts and visual reminders.

The choice of visual metaphor is critical, a confusing image can obscure more than it can illuminate.

Ex: a disk icon has come to mean “save” although many have never seen a floppy disk.

Elements of Interface Design

Controls and Widgets

Sound – sound can be overused and abused. Used well, sound can be ambient cues that something has happened so that users don't have to constantly visually monitor the application for changes.

Elements of Interface Design

Controls and Widgets

Standards

Do all applications have to work in a similar way?

Ex: Should `ctrl-C` or `Command-C` always copy whatever is selected?

Axiom:

“Obey standards unless there is a truly superior alternative” - Alan Cooper

Elements of Interface Design

Interfaces without Faces

Voice – Voice-controlled interfaces such as mobile phones, are typically limited in functionality

Technically difficult if system is always listening, especially in a public space.

EX: StarTrek computer, must be addressed as “computer.....”

Elements of Interface Design

Interfaces without Faces

Gestures – Like the scene in the movie *Minority Report* in which Tom Cruise stands before a semitransparent screen and simply by gesturing with his hands, he moves things.

In the future if all devices are aware of their location due to Global Positioning System GPS, they will become better able to respond to the human body.

Elements of Interface Design

Interfaces without Faces

Presence –Some systems can respond to a person's presence. With sensors and cameras, in the future we will see more applications respond to a users persence.