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15 Interface Design Principles

Collected by Rick Ligas

This document lists the interface design principles that I have collected and strived to understand since I began in 1989.

Many of these principles come from the original "Apple Human Interface Guidelines" that form the basis of current software design.

Others have been collected here and there.

As an introduction I have written some brief comments on several important topics related to interface design.

My intent is to share this information with those who are interested.

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Rick Ligas - Austin, January 2005

What is Interface Design?

Interface design, specifically software interface design, is a subset of general information design. Software interface design is creating a two-way channel of communication between the software developers and the users.

The Human-Computer Interface

The human-computer interface concept is a misnomer.

The essential effort of what is called interface design is not to create a human-computer interface it is to create a human-human interface.

The actual on-screen interface is a tool for communication between the software team (the visionary, business, design and programming people) and the users. The interface designer must understand the needs and intentions of all of these people and create an interface that allows communication between them.

It is important to remember that the computer does nothing at all.

It is simply a medium for the development team and the users to communicate.

User Centered Design

Because the essential nature of an interface is communication between groups of people and not between a human and a computer it is insufficient to focus only on the user.

The concept of "User centered design", specifically the admonishment that - *Just focus on the user everything will be fine* -, creates too narrow a priority in the effort to create an interface.

In the "conversation" all groups need to be heard appropriately.

This does not mean that the concept of "User centered design" is in any way flawed. This concept is still an essential, a critical part of the design process, but it has its effective use when the actual on-screen interactions are being designed. By this point the designer has already understood the visionary idea of the software, the business goals, the technical abilities and limitations of the development team and the capabilities of the underlying system. "User centered design", though critical, is not the entire focus of the design.

If the human-computer interface is not the essential effort and user centered design is too narrow a priority what is the overall goal?

The overall goal of interface design is to create a way for the users and the developers to communicate easily and efficiently.



15 Interface Design Principles

- 1.** Use metaphors from the real world (like windows, menus and buttons) so that the user can use the vast store of knowledge they already possess.
- 2.** Provide direct, rather than indirect, manipulation of items so that the user can immediately see and understand the effect of their actions.
- 3.** Create interfaces where the user can see and point rather than remember and type because the user explores and manipulates their environment in order to understand and use it.
- 4.** Be consistent because the user's world is consistent.
- 5.** Put the user in control (although the temptation to believe you know better than they do will be almost irresistible).
- 6.** Put the user and their goals before your precious, beloved technology.
- 7.** Give the user immediate, appropriate feedback in their own language, not yours, about where they are, what they are doing, what the system requires and has available.
- 8.** Establish a dialog, a special channel of communication, with the user whenever you require more input to proceed or to warn the user of potentially harmful possibilities of their actions.
- 9.** Always and unconditionally offer the user forgiveness for their actions.
- 10.** Create a system that provides a perceived stability so that their environment remains understandable instead of appearing to change randomly.
- 11.** Do not create modes unnecessarily and when necessary, identify your modes unequivocally to your user.
- 12.** Provide shortcuts for the experienced user.
- 13.** Create systems with aesthetic integrity and either learn the art of visual communication or hire one who knows and support them in doing their job.
- 14.** Create systems with interaction integrity, meaning that your design must be consistent with itself, with the host operating system and with what the user expects.
- 15.** Expend every effort so that the user may set the pace of interaction.