# User friendliness? User empowerment? How to make a choice?

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## 1. Introduction

The user interface is where users and applications collaborate. This collaboration requires developers to make a critical decision: which of the two will control the interaction – the user or the software? When doing user interface design, it is possible to make the interface to be user friendly (less user control) or user empowered (more user control). However, it seems that user friendliness and user empowerment are two extremes and being against each other. Usually we can only make a choice between them. But is it the best we can do? Can we make a balance between them? If the answer to the above question is a positive one, the next question to be asked would be "How can we make this balance?"

In this paper, we will examine the definitions and characteristics of user friendliness and user empowerment. Comparisons between the pros and cons of them will be made. Finally, guidelines will be presented on how to make a choice or a balance between them.

## 2. Definition of user friendliness and user empowerment

**User friendliness** means that the interface will guide the users through different stages towards the accomplishment of the tasks. It lessens the difference between users and the systems, such that users can interact more with the tasks and less with the system. User friendly interface will ask the user for details that are sufficient enough to complete the task. The requested details are under a narrow scope and constrained to be meaningful answers. The interface will always ask to confirm users' intentions before performing destructive actions.

**User empowerment** means that the interface assumes users know what they want to accomplish. Users will have the most (if not all) control of different aspects of the software. For most of the time the interface is waiting for the user to give commands or enter data. Through the empowerment, users' humanity is retained and extended.

# 3. Characteristics of user friendly interface

**Legible and aesthetically pleasant**

Good looking interface will usually let users feel it will work better, they will be more confident in using the application. Users also feel more comfortable and satisfied with a visually easier to read interface with strong contrast between text and background.

**Cultural conscious**

Users will find an interface to be friendly if it displays information in their native reading direction or in their native language, without any jargon or profession specific terms. The bottom line is to use natural language so that the interface can "speak" to users in the same way as human do.

**Accessible**

A user friendly interface should take care of those with less-than-normal physical capability (left-handed, color deficiency, motion coordination problem, visually or hearing impairments etc).

**Intuitive**

A user friendly interface should be built upon the human visual and cognitive capabilities, and thereby lower the learning curve. This can be achieved by using metaphors that allow us to take our knowledge of familiar objects and events and use it to give structure to abstract, less well understood concepts. Users thus find it easier to learn and use.

**Consistent in style and wordings**

Consistent interface style will repeatedly "train" users so that they know what to expect when they do something upon the interface. Consistency also helps to maintain users' awareness of the context and reduce their cognitive load. Thus users can work with the interface by recognizing, rather than recalling.

**Responsive**

If the user interface can provide proper feedback to the user about the processes being undertaken or about any processing error, user will feel more confident that the system is running and be able to fix any run-time error.

**Context conscious**

It is critical that you provide users with a means of maintaining and regaining their bearings within your application, so that they are more aware of what is going on.

**Error tolerant**

Users do make mistakes. It is important to minimize possible user errors and provide them with mechanisms to recover from the errors.

## 4. Characteristics of user empowered interface

**High level of user control**

Users will have complete and fine-grained control over different aspects of the application.

**Flexible**

Since users are granted more control on what and how the system can do, they can accomplish tasks that cannot be done with the user friendly interface.

**Less intuitive**

As there are much more possible ways of using the various user-adjustable features or functionalities, it usually takes much longer time and greater effort for the users to manage.

## 5. Pros and cons of user friendliness

**Pros**

User friendly interface is easier and more pleasant for users to learn and use, they guide users all the way through. Users are always provided with visual clues about possible features and choices. What user friendly interfaces do is to reduce the number of new concepts and thereby lower the learning curve, giving a feeling of "intuitive". Regular users are usually more productive and satisfied with user friendly interfaces.

**Cons**

User friendly interface is easy to use because it limits users to the few basic operations that can be learnt quickly. However it can cause problems if those basic operations are not what the users need. User friendly interface actually takes control and may hide information from users which can be important for performing a task. The ease-of-use is paid at the cost of flexibility.

## 6. Pros and cons of user empowerment

**Pros**

User empowered interface can provide specialized or powerful features which make the advanced users very productive. It offers users a lot of control over the different aspects of the system's functioning. Users can perform specific and advanced tasks (those not covered by the basic operations from user friendly interface) more efficiently and effectively. Control is given back to the users.

**Cons**

User empowered interface usually requires more training and investment in time and effort from users. It can easily confuse regular

users who are easier to make mistake or error because there are more options to choose from. Regular users usually cannot handle the control granted to them.

## 7. Guidelines for making a choice between user friendliness and user empowerment

The situation in which a user makes use of the application determines which approach is preferred. User control is matter of degree. Determining when the user should be empowered should not be only based on distinguishing between advanced and regular users, or on the user's intelligence or familiarity with computers. User empowerment should also be based on an essentially economic point: empowering users where users are willing to invest valuable time and energy.

Users are typically willing to invest time and energy to learn how to perform the tasks that are necessary for their **regular activities**. In the case of **infrequent tasks**, users don't have much interest in learning to perform these tasks more efficiently or effectively in the long term, because that knowledge will likely become forgotten or obsolete by the time they perform the task again. Developers must decide if the target users will use the software for a regular activity or an infrequent task. It follows that user empowerment generally makes sense only for regular activities. In contrast, because people are only willing to make small investments in infrequent tasks, software should be user friendly and guide the users all through those infrequent tasks.

Knowledge of who the users are, their need, capabilities, preferences, constraints, purposes and how frequently they use the software can help to determine if user friendliness or user empowerment is preferred. This knowledge can be obtained through the use of questionnaire, interview, user focus groups and observation (in normal working environment). After the choice between user friendliness and user empowerment is made, the decision can be verified by usability test on real users.

In an attempt to make a balance between user friendliness and user empowerment, it may be possible to design a flexible interface that can handle a spectrum of users and usage situations. However, the wider this spectrum is, the harder the design task will become. The interface may end up satisfying neither kind of the users. The more appropriate solution may be to design different interfaces for user friendliness and user empowerment.

## 8. Conclusion

After analyzing the characteristics, pros and cons of both user

friendliness and user empowerment, it can be concluded that user friendly interface is more suitable for regular users and infrequent tasks; while user empowered interface is preferred by advanced users and regular activities. It may be more appropriate to design separate interfaces to fulfill needs from both sides, rather than designing a "balanced" interface that is neither user friendly nor user empowered at the risk of compromising the whole design.

# 9. References


**GUI design guide**

[1] Microsoft User Experience Group. "*Picking the Right Degree of Control for User Interfaces*." Oct 2003 (http://msdn.microsoft.com/Longhorn/understanding/ux/default.aspx?pull=/library/en-us/dnaero/html/usercontrol.asp)

[2] Nielsen, Jakob. "*User Empowerment and the Fun Factor.*" useit.com, Jul 2002 (http://www.useit.com/alertbox/20020707.html)

[3] Engel, Tomi. "*Interface Design Rules*." Feb 2000 (http://www.objectfarm.org/Activities/Publications/TheMerger/UserInterfaces/DesignRules.html)

[4] Hobart, James. "*Principles of good GUI Design*." (http://www.iie.org.mx/Monitor/v01n03/ar_ihc2.htm)

**User-centered design**

[5] Alexander, Dey. "*Empowering users through user-centred web design.*" Nov 2000 (http://www.its.monash.edu/web/slideshows/ucd/spusc.html)

[6] IBM. "*What is User-Centered Design?*" (http://www-3.ibm.com/ibm/easy/eou_ext.nsf/Publish/2)

[7] "*User-centered interface design*." (http://infolab.kub.nl/pub/theses/w3thesis/Hci/user_centered.html)

[8] Katz-Haas, Raissa. "*User-Centered Design and Web Development*." (http://www.stcsig.org/usability/topics/articles/ucd%20_web_devel.html)

[9] Katz-Haas, Raissa and Truchard, Aimee. "*Ten Guidelines for User-Centered Web Design*." Usability Interface, Vol. 5, No. 1, July 1998 (http://www.stcsig.org/usability/newsletter/9807-webguide.html)

[10] Sullivan, Terry. "*What is 'Reader-Friendly'?*" Jan 1997 (http://www.pantos.org/atw/35252.html)

[11]Sullivan, Terry. "*Empowering Readers*." May 1999 (http://www.pantos.org/atw/rr-35316.html)

**GUI and CLI**

[12] Afinogenov, Greg. "*GUI vs. CLI: A Qualitative Comparison.*" Sep 2003 (http://www.osnews.com/story.php?news_id=4418)

[13] Brignull, Harry. "*What are the advantages and disadvantages of an icon based user-interface for computer users?*" Jun 1999 (http://www.neocortex.co.uk/oldstuff/essays/applied/icons.htm)
[14] "*linux and apples.*" Sep 2003 (http://www.ale.org/pipermail/ale/20030923/001042.html)
[15] "*Peddlers and Dealers... and Relationships too!*" (http://reveal.unpaved.com/fumes/fume_03.html)
[16] Dishaw, Jim. "*Do You Really Want a Rodent to Run Your Computer?*" (http://maple.lemoyne.edu/~dishawjp/)
[17] Peek, Jerry. "*Why Use a Command Line Instead of Windows?*" Nov 2001 (http://www.linuxdevcenter.com/pub/a/linux/2001/11/15/learnunixos.html)
[18] Sisler, Eric. "*System Administration - CLI or GUI?*" May 2000 (http://gromit.westminster.lib.co.us/linux/cli-vs-gui.html)
[19] Laurel, Brenda. "*The Art Of Human-Computer Interface Design.*" Addison-Wesley, 1990 (http://www.stemnet.nf.ca/~elmurphy/emurphy/laurel.html)