

# Using IDEA Online

---

a workshop by

The Interface Design Evaluation & Assessment (IDEA) Group

Jay C. Rees

Rachel S. Smith

Using IDEA Online	
Introduction	3
What Does the IDEA Group Do?	3
What Is a Usability Inspection?	3
Why Evaluate User Interface Designs?	4
What Is an Heuristic Evaluation?	4
What Types of Applications Are Suitable for Evaluation?	5
How Does a Designer Find Evaluators?	5
How Should Designs Be Presented for Evaluation?	5
How Are Evaluations Conducted?	6
What Tools Are Used in the Evaluation Process?	6
References & Contact Information	7

### Introduction

This handout is the material for the workshop entitled Using IDEA Online, presented by the Interface Design Evaluation and Assessment (IDEA) Group. It includes a definition of usability inspections, reasons for evaluating user interface designs, and a description of the IDEA Group and what it does. This document also describes a specific type of usability inspection known as heuristic evaluation and describes how to prepare and submit an interface design for this type of inspection by the IDEA Group's evaluation team.

The workshop is aimed at interface designers and is intended to introduce the concept of heuristic evaluation and to provide instructions for taking advantage of the evaluation services provided by the IDEA Group. These services are provided free of charge to employees of the California State University System. All evaluators are volunteers.

The IDEA Group would like to acknowledge the staff of the Center for Usability in Design and Assessment (CUDA) at CSU Long Beach for their support and help during the development of this workshop. Some material in this booklet was adapted from CUDA's materials.

### What Does the IDEA Group Do?

The IDEA Group is the result of a 2000/2001 TIGERS Grant funded by the CSU Center for Distributed Learning. The grant requested and received funding to develop the materials in this booklet and to provide training to designers and to evaluators who will use and provide heuristic evaluations within the CSU. The Group requested and received another grant in 2001/2002 to convert paper-based evaluation materials to an online system (IDEA Online). This system is now available for use.

The IDEA Group is made up of qualified, trained usability professionals; these professionals serve as the interface evaluators on a voluntary basis. An individual may be both a designer and an evaluator -- that is, one may submit a design of one's own and also evaluate the designs of others. The IDEA Group encourages this spirit of reciprocity among its members.

### What is a Usability Inspection?

*Usability inspection is the generic name for a set of methods based on having evaluators inspect or examine usability-related aspects of a user interface.*

*- Nielsen & Mack  
Usability Inspection  
Methods*

Simply put, a usability inspection is an informal evaluation of a user interface design performed by someone with knowledge and experience in the field of usability engineering. The evaluation is based on certain rules of thumb and on the experience of the evaluator. There are other kinds of evaluation methods, including user testing (where actual users are observed interacting with a prototype or a working system), automatic assessment (where interface specifications are run through evaluation software), and empirical evaluations (which use mathematical models and formulas to calculate measurements). Usability inspection is simply one way to assess an interface. Often inspections are used in concert with other methods.

There are many types of usability inspections, as well. For example, one type of inspection known as a *cognitive walkthrough* is used to assess how easy or difficult it is to learn how to use an interface by exploration. *Pluralistic walkthroughs* are another type. These

walkthroughs are conducted by a group of usability professionals, developers, and end users to gain varied perspectives and insights on a design in development. *Heuristic evaluations*, the type of inspection we will discuss in this workshop, are conducted by usability professionals who review a design in light of a set of usability guidelines.

Once an interface design has been sketched out, it can be subjected to a usability inspection. All that is needed is that there be something visual to evaluate; the system or web site does not have to be working. Early inspections can be done on hand-drawn paper mock-ups if desired. When using IDEA Online, it is convenient to have a design posted somewhere on the web, but it is not required. The IDEA Group can work with designers whose designs are not online, to ensure that the designs are distributed to evaluators.

*...usability really just  
means making sure  
that something  
works well.  
-- Steve Krug  
Don't Make Me Think*

### **Why Evaluate User Interface Designs?**

The point of a usability inspection is to uncover any design flaws early enough in the development cycle that changes can still be made to the design. A “design flaw” is anything that will cause users to have difficulty, make errors, or become stuck or unable to use the system. The inspection may also recommend or suggest specific ways to correct the flaws or improve the design. There is no point in conducting usability inspections on a finished product that will not be changed, except possibly to learn what not to do “next time” (a costly way to improve designs!). Often the inspection will also specifically point out parts of the interface that are very usable or otherwise beneficial, so that the designer knows not to remove or destroy the good aspects while changing problematic ones.

As part of an iterative design process, evaluations can significantly improve the usability of an interface. No matter how experienced a designer may be, two factors indicate that separate usability inspections will be beneficial: first, no one person will find all the usability problems in a given design; and second, the designer will be so familiar with the design that he or she will always overlook some areas which are potential problems for users who lack the designer’s perspective.

There is no set number of evaluations that should be done in a given development cycle; nor is there a “recipe” for which evaluations to perform, or at what point in the cycle. Different projects will call for different types of evaluations. Some projects will benefit from frequent evaluations, while others will need fewer, perhaps more comprehensive inspections. This workshop seeks to introduce one kind of usability inspection that may be performed multiple times in the development cycle as a means of inexpensively and rapidly assessing usability where otherwise no assessment (or fewer assessments) might take place. The ultimate goal of all this is to improve the quality of materials that are developed by designers (in this case, materials developed and used within the CSU system).

### **What Is an Heuristic Evaluation?**

Heuristic evaluation is an informal method of usability inspection. A small group of people qualified in usability examine an interface (independently from one another) and decide whether each part of the interface conforms to principles of usability. These principles are known as heuristics: thus the term *heuristic evaluation*.

Heuristic evaluation is relatively easy, rapid, and inexpensive to perform. The materials are not difficult to prepare, and no group meetings are required. The results of an evaluation will vary based on the experience of the evaluator, but even a relatively inexperienced evaluator can have a positive impact on a design by using this method.

The IDEA Group has prepared tools to assist evaluators and designers and to help ensure some uniformity in evaluations. The IDEA Online website provides a means for submitting a design and annotating it with information that will be helpful for the evaluators. Evaluators examine the design, then fill out a checklist and add any comments for each of eleven guidelines. The evaluations are compiled into a combined report for the designer (who may also read each evaluation separately). IDEA Online is available at this URL: <http://www.consultusonline.com/idea/>

A single evaluator cannot provide a comprehensive evaluation; however, as few as three to five evaluators may find 60-75% of the usability problems in an interface. The payoff for using larger numbers of evaluators is not great. Ten evaluators will usually find 85-90% of the problems, and fifteen evaluators will usually find 92% of the issues. Designs submitted to the IDEA Group will usually be evaluated by three to five people who will not collaborate. It is vital that each evaluator work independently for the best results.

### **What Types of Applications are Suitable for Evaluation?**

A designer may submit any interface design. The most common types of interfaces we expect to see are web sites and multimedia applications, but others are possible. The development platform (Java, HTML, Flash, Director, etc.) is not a barrier to evaluation, although it should be noted in the submission form so that the evaluators may take it into account if necessary.

Any interface which requires a user to make choices, enter data, navigate through several pages or screens, or otherwise interact with it is suitable for usability inspection.

### **How Does a Designer Find Evaluators?**

Part of the purpose of the IDEA group is to match designers with evaluators. Designers will submit a request for evaluation at the IDEA Online website, and evaluators with matching skills will be automatically invited to evaluate the design. Once the evaluations are complete, the designer simply logs in to IDEA Online and reads the report(s).

Designers should allow a minimum of five working days from the time they submit the designs to the time they receive the reports. In some cases the wait time may be longer. Designers may specify a deadline by which they wish to have all evaluations completed.

### **How Should Designs be Presented for Evaluation?**

Designs may be emailed to the IDEA Group (as an attachment in PDF format, for example) or posted on the web. If possible, on-paper designs should be converted to electronic format (scanned or mocked up in a graphics program) for ease of viewing. Web sites may be evaluated online. Designs may also be saved as image files and arranged in a website, as long as evaluators can easily work through the screens. There is a place on the submission form to include a URL if it

is available. Other arrangements may be made if it is not possible to provide a design in electronic form.

### **How Are Evaluations Conducted?**

Each evaluator will conduct his or her evaluation independently of the others, and each will complete a report of his or her evaluation. When an evaluator receives a design submission, he or she will first read the submission form to find out what kind of information the designer is looking for. Then the evaluator will go through the interface at least once to become familiar with it.

Next the evaluator will work through the online evaluation form. Each guideline page has space to record notes on findings as well as a scale for rating the severity of issues found.. When the evaluator is finished, a report is generated and posted in the designer's workspace. When all evaluators have completed their reports (or once the specified deadline has passed), designers may read the reports.

### **What Tools Are Used in the Evaluation Process?**

The following instruments are used in the process of heuristic evaluation by IDEA Group evaluators:

**IDEA Design Submission Form:** The designer fills this out online and submits it along with the URL of the design, if available.

**Evaluation Form:** This eleven-part checklist covers some of the more common areas where problems might occur. An evaluator fills out this online form, and a report is generated for the designer.

## References & Further Reading

---

Constantine, L. and Lockwood, L. (1999). Software for Use. ACM Press, New York.

Krug, S. (2000) Don't Make Me Think. New Riders Publishing, Indianapolis, Indiana.

Nielsen, J. (1993) Usability Engineering. Academic Press, San Diego, California.

Nielsen, J. and Mack, R. (1994) Usability Inspection Methods. John Wiley & Sons, Inc. New York.

Nielsen, J. and Tahir, M. (2002) Homepage Usability: 50 Websites Deconstructed. New Riders Publishing, Indianapolis, Indiana.

## IDEA Group Contact Information

---

The IDEA Group coordinators are listed below:

Jay C. Rees (jrees@csusm.edu)

Rachel S. Smith (rachel@cdl.edu)

For information on the Center for Usability in Design and Assessment, contact:

CUDA (cuda@csulb.edu)

For information on TIGERS Grants or the Consortium of Academic Technology Staff (CATS), contact:

Abbe Altman (abbe@cdl.edu)

## Website for Workshop Materials

---

IDEA Online is at the following URL:

<http://idea.csusm.edu/>

Blank checklists and forms for printing are also available in MERLOT:

<http://www.merlot.org/>

and in CATS-MERLOT:

<http://cats.merlot.org/>