# I214: Usability analysis and reporting

February 21, 2013

UC Berkeley School of Information

# USABILITY ANALYSIS



Most examples from http://usability.wikimedia.org/wiki/

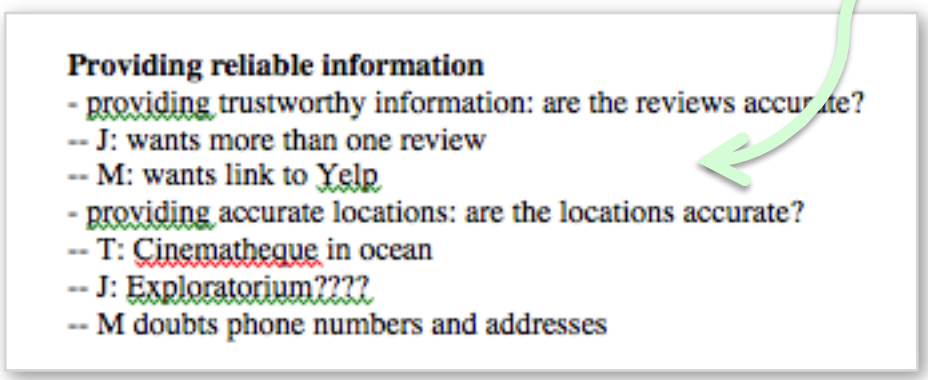
# Quick qualitative analysis for quick tests

## 1) Group observations

By feature tested (ie, the editing toolbar)

By shared theme (ie, "Editing makes me feel stupid")

By underlying cause (ie, "People don't think they have anything to add)




## 2) List for each group

Observations

Quotations

Break the group into subgroups where necessary.

## 3) Name the groups

# Time-to-task:
## an example of quantitative analysis in usability

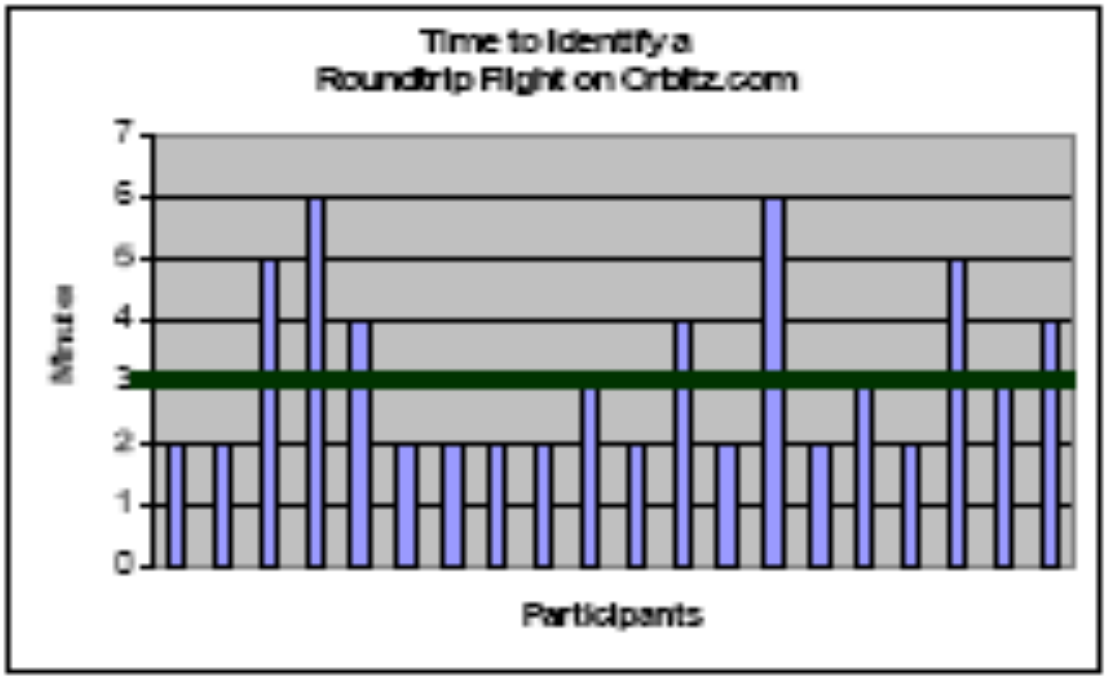



Figure 5: Orbitz.com task time: The minutes to perform the task are shown as 2-6 minutes with the average time line being 3.15.



http://www.upassoc.org/upa_publications/jus/2005_november/travel.html

# Time-to-task:
## an example of quantitative analysis in usability

For N<25 use geometric mean*

-Otherwise, compare median values

Examine distribution for outliers

Take *how* the test was conducted and moderated into account

Consider comparing numbers approximately

Consider reporting relative ratings rather than absolute numbers

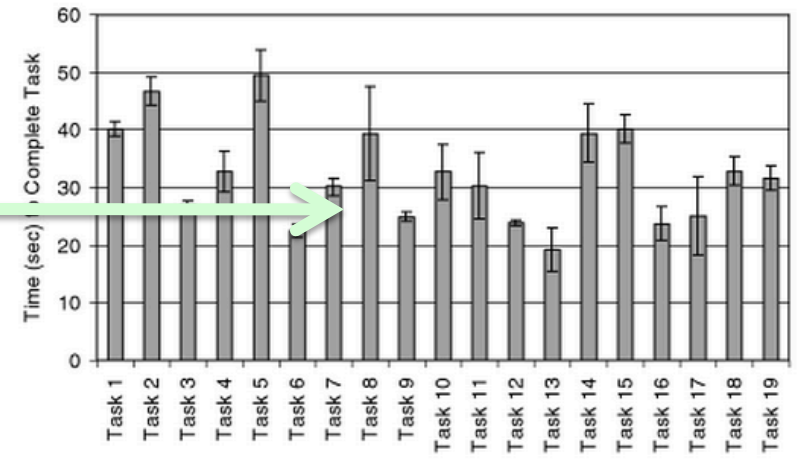



**FIGURE 4.5**

Mean time-on-task for 19 tasks. Error bars represent a 95 percent confidence interval. These data are from an online study of a prototype website.

*http://www.measuringusability.com/average-times.php



Tullis, T., & Albert, W. (2010). *Measuring the User Experience: Collecting, Analyzing, and Presenting Usability Metrics*. Morgan Kaufmann.

# USABILITY REPORTS

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# The three challenges of reporting

1) Delivering potentially challenging news
2) Efficiently
3) But *usefully*
4) And *convincingly*

# Common Industry Format (CIF) report

(some details modified)

Title Page

Executive Summary

Introduction

Method

Results

Appendices



http://www.idemployee.id.tue.nl/g.w.m.rauterberg/lecturenotes/Common-Industry-Format.pdf

# Main components of a Common Industry Format (CIF) usability report

| | |
|---|---|
| Title Page | Product (and version, if necessary) tested |
| Executive Summary | Test: who led it, and when |
| | Report: date, author, and author contact info |
| Introduction | Customer company and contact person |
| Method | |
| Results | |
| Appendices | |

# Main components of a Common Industry Format (CIF) usability report

| | |
|---|---|
| Title Page | |
| Executive Summary | Name and brief description of the product.<br>Brief summary of method(s) including number(s) and type(s) of participants and tasks.<br>Reason for and nature of the test.<br>Summary of results |
| Introduction | |
| Method | |
| Results | |
| Appendices | |

# Main components of a Common Industry Format (CIF) usability report

Title Page

Executive Summary

Introduction

- Background description
- Test objectives

Method

Results

Appendices

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Participants: *who* did we work with?

Context: *what* tasks were tested, *where*, & *when*

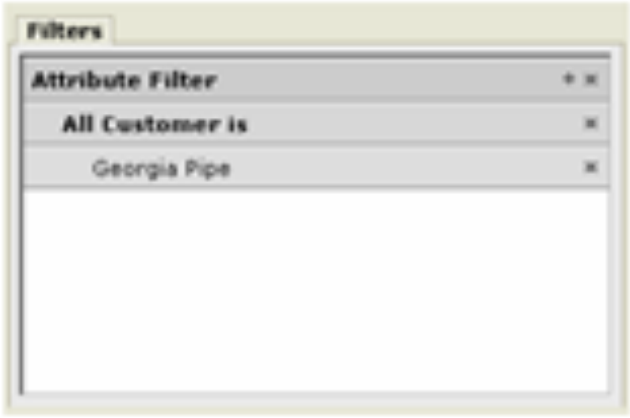
Experimental design: *how* was it tested?

Metrics: *how* did we evaluate success?

# Main components of a Common Industry Format (CIF) usability report

| | |
|---|---|
| Title Page | |
| Executive Summary | |
| Introduction | |
| Method | |
| Results | *What* did we learn? |
| Appendices | Tables, charts, photographs, video |
| | Recommendations (optional) |

# USABILITY TESTING REPORT – PRICE EXPLORER




*Filter display - few noticed the filter edit button*

*After clicking the filter edit button, the current filters are shown in the Attribute Filter window.*

*But when clicking "Filter by Attribute", the current filters are not shown in the Attribute Filter window.*

## Editing filters

When asked to change the waterfall chart from showing Georgia Pipe to showing Liberty Plastics, only one of the participants used the filter edit button. It is the "+" icon to the left of the "x" at the top, right of the filter display area. Two tried to click directly on Georgia Pipe in the filter display area, thinking that would bring up the list of customers to choose from.

- *"I don't want to clear filters and start over. I want to just go back to the customer list.* [Tries clicking on Georgia Pipe] *And there's no back button.... It would have been easier to have a more obvious way to back up one step."*

Two participants clicked the "Filter by Attribute" link and thought that selecting Liberty Plastics would replace Georgia Pipe. After adding Liberty Plastics, they did not notice at first that Georgia Pipe was still in the filter list. That was because clicking the "Filter by Attribute" link brings up a version of the Attribute Filter window that does not show the current filters selected on the right. Clicking the filter edit link brings up the Attribute Filter window with the current filters displayed on the right side. This inconsistency can cause these types of errors.

**Recommendations:**

- **Open the Attribute Filter window when users double click on the items in the filter display area (e.g., Georgia Pipe).**
- **When filters are selected, clicking the "Filter by Attribute" link should open the Attribute Filter window with the current filters displayed in the "Filter Lists" box on the right side of the window (the same as it appears when the filter edit button**

Jim Ross, Communicating User Research Findings
http://www.uxmatters.com/mt/archives/2012/02/communicating-user-research-findings.php

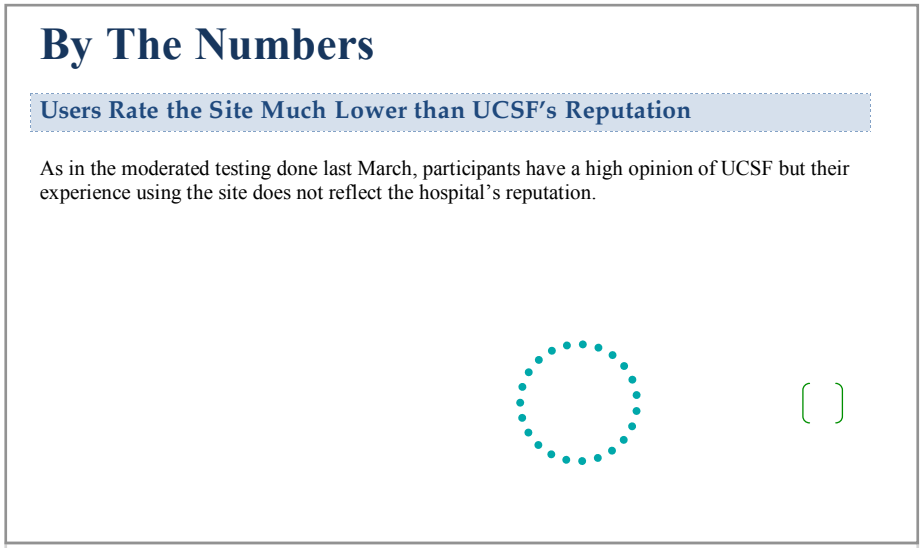
# HISTORY

## Checkboxes

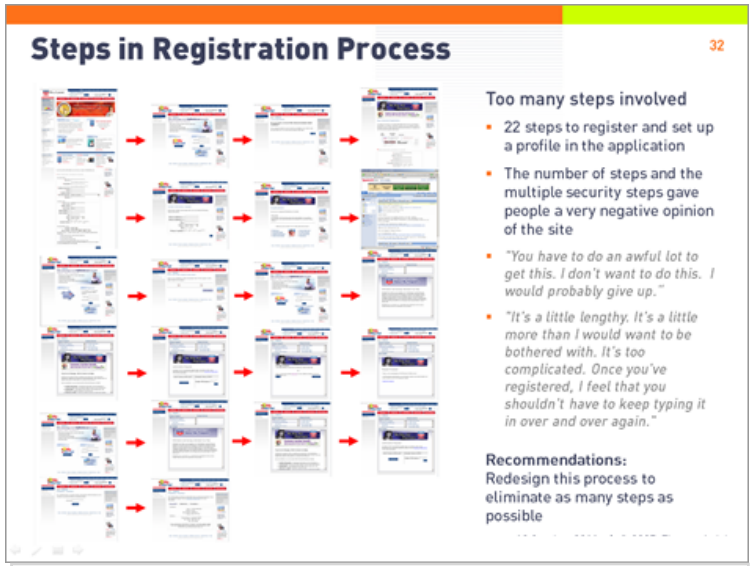
- When asked to view only the business events in the history, 50% of the participants incorrectly unchecked all of the other checkboxes, including Accurate, Cellular, and No GPS.
- They did not understand the relationship between the top row of checkboxes and the second row.


Jim Ross, Communicating User Research Findings
http://www.uxmatters.com/mt/archives/2012/02/communicating-user-research-findings.php

# Your goal: tell the story

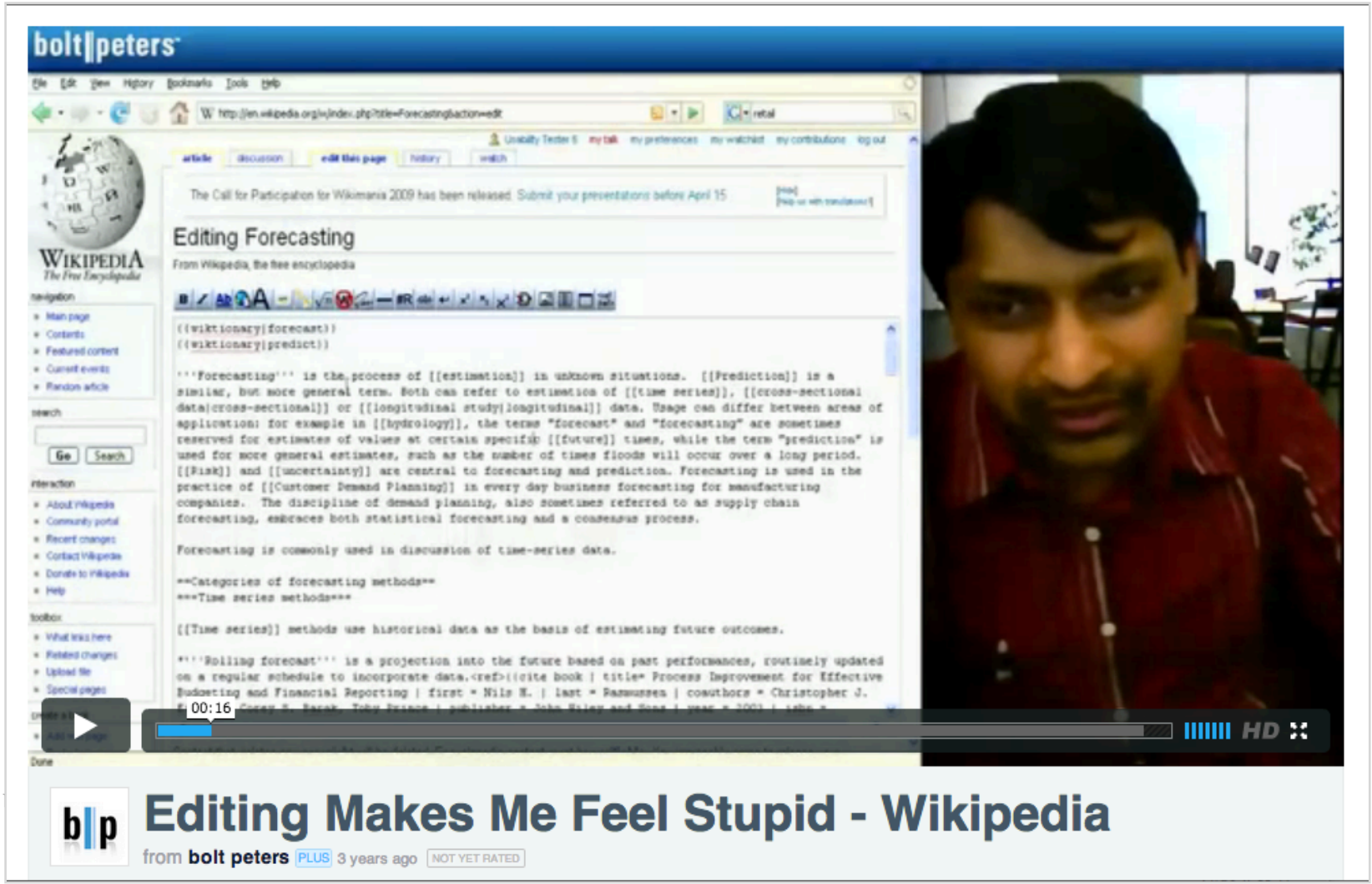



Bolt|Peters
Usability Recommendations | UCSF website




Jim Ross,
Communicating User Research Findings

# Video highlights clips



# Severity ratings: pros and cons

**Pro**

Severity ratings help readers prioritize

Already made implicitly in organization of report

**Con**

May be based on incomplete information

Likely evaluator effect

**A compromise: Use a simple, user-centered scale**

| | Few users | Many users |
|---|---|---|
| Small affect | Low severity | Medium severity |
| Large affect | Medium severity | High severity |

Adapted from Tullis et al, 2008 and Nielsen, 1993

# Specific recommendations: pros and cons

**Pros**

Facilitates *constructive* criticism

Moves discussion towards future, not regrets or blame

**Cons**

Do you have the credibility?

Can you make *good* recommendations under your time/expertise constraints?

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Appendices

- Full text of questionnaires
- Interview protocols
- Extra detail on research context, if necessary

# Common challenges to usability reports

‘This is not statistically significant!’

Conflicting internal agendas

‘This user is stupid.’

‘User X is not our market.’

‘User X did Y; therefore, everyone must do Y’

‘They all hated the green, so we need to make it all white, like Google.’

Explaining stealth problems