I214 Inspection Methods

February 28, 2013

Inspection methods

"Experts" not users
"Inspection" not use

Inspection methods

Heuristics
Cognitive walkthroughs
Competitive analysis

HEURISTICS

Definition

Rules of thumb

"providing aid or direction in the solution of a problem *but otherwise unjustified or incapable of justification*" – Webster's 3rd

Uses of heuristics

Competitive evaluation

Design specifications

Continual evaluation

Summarize lessons learned for future design guidance

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How to do it

1. **Develop/identify 10–15 heuristics**

   weight them by importance

2. **Assign 3–5 evaluators**

   Experts (mix of design and domain experts)

3. **Make a set of representative tasks**

4. **Perform tasks**

5. **Apply heuristics**

   Individually at first

   Group compilation

6. **Prioritize what to fix**

   Severity

   Weighting

7. **Make recommendations** for improvement (optional)

Sources of heuristics

Nielsen's

Accepted in your domain

Competitors

Models – your domain or other

Research (not necessarily YOURS)

Discussion

The process of developing and applying heuristics can help design/evaluation group(s) to define and agree on goals, priorities, evaluation criteria
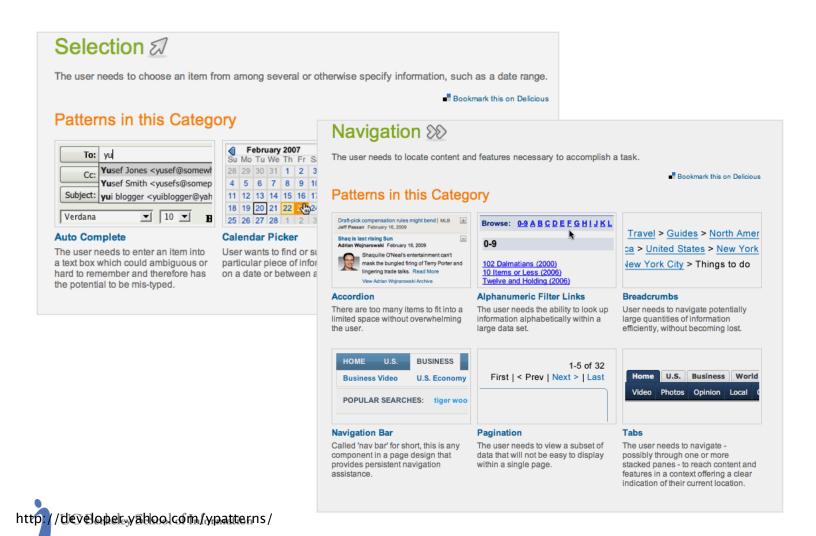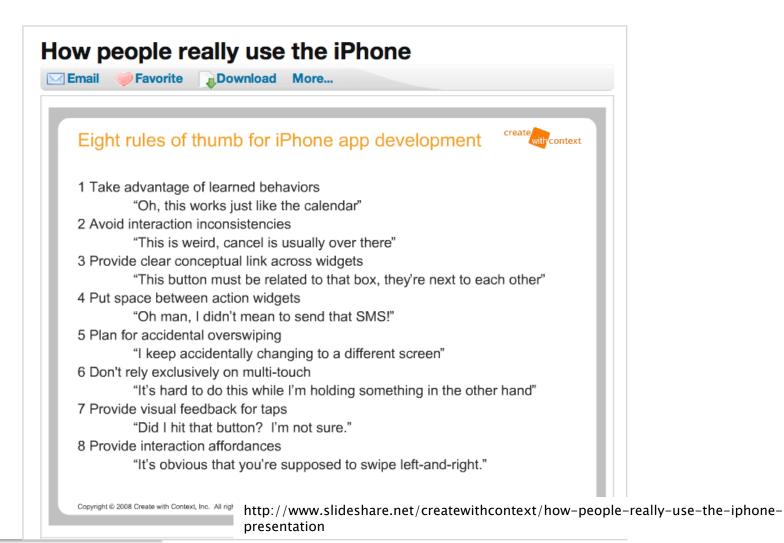
Nielsen's heuristics

Visibility of system status

Match between system and the real world

User control and freedom

Consistency and standards

Error prevention

Recognition rather than recall

Flexibility and efficiency of use

Aesthetic and minimalist design
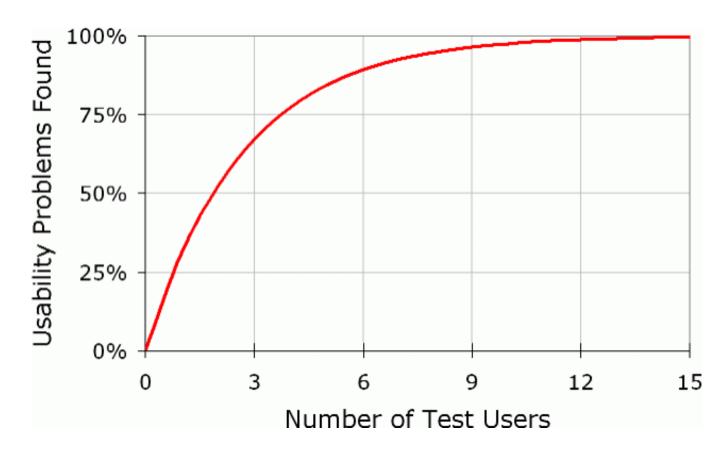
Help and documentation

What others do: design patterns

Adapt heuristics to domains

How people really use the iPhone

Email   Favorite   Download   More...

Eight rules of thumb for iPhone app development

1 Take advantage of learned behaviors
   "Oh, this works just like the calendar"
2 Avoid interaction inconsistencies
   "This is weird, cancel is usually over there"
3 Provide clear conceptual link across widgets
   "This button must be related to that box, they're next to each other"
4 Put space between action widgets
   "Oh man, I didn't mean to send that SMS!"
5 Plan for accidental overswiping
   "I keep accidentally changing to a different screen"
6 Don't rely exclusively on multi-touch
   "It's hard to do this while I'm holding something in the other hand"
7 Provide visual feedback for taps
   "Did I hit that button? I'm not sure."
8 Provide interaction affordances
   "It's obvious that you're supposed to swipe left-and-right."

http://www.slideshare.net/createwithcontext/how-people-really-use-the-iphone-presentation

of evaluators? Nielsen's basis

Applying heuristics: use a checklist

Heuristic Evalualtion - A System Checklist

I. → 1. Visibility of System Status

The system should always keep user informed about what is going on, through appropriate feedback within reasonable time.

#	Review Checklist	Yes No N/A	Comments
1.1	Does every display begin with a title or header that describes screen contents?	O····Q····Q	
1.2	Is there a consistent icon design scheme and stylistic treatment across the system?	O····Q····Q	
1.3	Is a single, selected icon clearly visible when surrounded by unselected icons?	O····Q····Q	
1.4	Do menu instructions, prompts, and error messages appear in the same place(s) on each menu?	O····Q····Q	
1.5	In multipage data entry screens, is each page labeled to show its relation to others?	O····Q····Q	
1.6	If overtype and insert mode are both available, is there a visible indication of which one the user is in?	O····Q····Q	
1.7	If pop-up windows are used to display error messages, do they allow the user to see the field in error?	O····Q····Q	
1.8	Is there some form of system feedback for every operator action?	O····Q····Q	
1.9	After the user completes an action (or group of actions), does the feedback indicate that the next group of actions can be started?	O····Q····Q	
1.10	Is there visual feedback in menus or dialog boxes about which choices are selectable?	O····Q····Q	
1.11	Is there visual feedback in menus or dialog boxes about which choice the cursor is on now?	O····Q····Q	
1.12	If multiple options can be selected in a menu or dialog box, is there visual feedback about which options are already selected?	O····Q····Q	
1.13	Is there visual feedback when objects are selected or moved?	O····Q····Q	
1.14	Is the current status of an icon clearly indicated?	O····Q····Q	

Prioritization: Severity

Goal: prioritizing recommendations

Nielsen's: frequency, impact, persistence

Possible severity rating scale:

0   not a problem

Cosmetic – need not be fixed unless time available

Minor – low priority

Major – high priority

Catastrophe – fix before release

Or:
Weighting →
Prioritization

Content Area: *Human Resources Benefits Policies and Procedures*

Value Criteria	Importance	Score	Value
Currency	20%	85%	17%
Authority	25%	50%	13%
Popularity	10%	70%	7%
Feasibility	45%	50%	23%
Totals	100%	-	**60%**

Content Area	Score	Value Tier
Best sales proposals	73%	I
Internal white papers from R&D group	72%	
Compliance guidelines from Legal dep't.	72%	
Sales support documentation (English)	64%	II
HR benefits policies and procedures	60%	
Client case studies	51%	III
Materials science technical reports	47%	
Recent company newsletters	43%	IV
Product support documentation	40%	
Sales support documentation (Spanish)	40%	
Staff directory	39%	
Technical support documentation	36%	VI
Corp. Communications newsletter archive	19%	VI
Employees' personal web pages	12%	

Lou Rosenfeld
http://www.slideshare.net/lrosenfeld/enterprise-information-architecture-because-users-dont-care-about-your-org-chart

Reporting Heuristic Evaluation Results

Tell a story

Your audience is likely not interested in the heuristics themselves but in problems and recommendations.

Communicate clearly what's problematic

By task report problems and identify heuristics violated

By location or region of the product

By priority group violations by severity or weight

By heuristic – least useful?

Be concise

Reporting example: By task/activity

Task	Problem	Heuristics violated	Severity
Search for plant by name	Requires Latin name, with genus capitalized	H2: match with real world; H15, use users' language	4 (catastrophe) 90% of searches will fail

Reporting example: heuristic x evaluators

Sidebar #6: Thematic Problems Identified

Heuristic	UI Experts	Developers
1: Speak users' language	Use of jargon Uninformative ordering of lists	Not enough information Misleading titles
2: Consistency	Terminology Link term *vs.* Page header Formatting (typeface, header, graphics, layout) Button labels ('go', 'run', etc.)	Formatting (typeface, header, graphics, layout)
3: Memory load	No theme	No theme
4: Flexibility and efficiency	Need instructions Difficulties finding desired material Insufficient short cuts	Need instructions Optimize 'applications'
5: Aesthetic and minimalist design	Visual appeal Redundant objects on screen Missing information	Visual appeal Position elements for visibility
6: Chunking	Separate topics merged Same topic split	Separate topics merged
7: Progressive levels of detail	No theme	Insufficient detail Inconsistent granularity
8: Navigation	Insufficient navigation aids (titles, headers, etc.) Inaccurate or unclear links	Missing links

http://www.bls.gov/ore/htm_papers/st960160.htm#Sidebar%201

What's the problem here?

User Control and Freedom

- Add site map to HTC home page.
- To offer the user more control, make navigational links of each word in the unordered list that repeats in the link button frame.
- Add navigational options so the user does not rely on the back button.
- Add more internal links to the course description page to take users back to the top.
- If a user goes to the HTC home page and bypasses the SPSU links, the user does not know that this department is part of Southern Polytechnic nor can the user go to SPSU's home page, other department pages, or other information such as fees and registration.

Consistency and Standards

- Site identification is really important, as is the repetition of frames (and how the frames look), colors, and fonts. Why aren't frames used on the HTC home page?
- Make Peers and Professionals consistent with the others. The faculty bios do not have a link back to HTC

http://www.ablongman.com/barnum/pdf/inertiaheuristics.PDF

Heuristic evaluation: Benefits

Low resource requirements
Fast
Easy to repeat
Easy to communicate
Facilitate group agreement
Face validity

Heuristic evaluation: Limits

Can be superficial
Tends toward a short list
Tends to identify superficial problems
Deceptively rigorous-looking
Are experts like users?
How appropriate are the heuristics?
How relevant are the tasks?
False positives?

COGNITIVE WALKTHROUGHS

Cognitive walkthroughs

From the perspective of new or infrequent users, **try out the application**

As you go, **identify problems, assumptions, possibilities** for change

Rationale: acceptability depends on first experience

Cognitive Walkthrough Worksheet

This section should be used by evaluators to keep track of the steps & screens they f positive results or issues found should be included in the two sections above.

Scenario 1: Brief description

#	Step	Screen	Comments/issues	Principle	Suggestions for solution

Components of a cognitive walk-through

Written **assumptions** (i.e., personas) about new/infrequent users population and contexts of use

1–4 important tasks to accomplish

Sequence of actions (i.e. scenarios or task flows) a user is likely to perform to complete the task

Prototype to walkthrough (paper or digital)

Templates
OCLC's http://www.oclc.org/policies/usability/heuristic/oclc.htm
Fluid Project http://wiki.fluidproject.org/display/fluid/UX+Walkthrough+Report+Template

Roles in a cognitive walkthrough

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COMPETITIVE ANALYSIS

What's in a competitive analysis?

"What are competitors (and other 'best practice' sites) doing to provide services and content that is positive and meaningful to users?"

Site name	Traveloicty.	Expedia	Travelnow	Yahoo! Travel	Netscape Travel	Lufthansa	Icelandic Air	Southwest	Alaska	United	Away.com	Lonely Planet
Classification	Portal sites					Airline sites					Adventure	
General features												
Search for flights												
Make online reservations												
Search for hotels												
Make online hotel reservations												
Search for rental ccars												
Search for vacation packages												
Customer service 1-800												
Customer service online chat												
Book flight features												
Search for flights												
By city												
By date												
By price												
Sort flights												
By airline												
By lowest fare												
By nonstop												

from Goto and Cotler, Chapter 10, p 262

Formal vs informal comparisons

	Formal Industry Analysis	Informal Features Analysis
Team	An independent research team with expertise and background in marketing, communications, research, and/or strategy	Members of the {product} development team who will be re-creating the user experience online
Approach	Formal analysis of industry, market segmentation, trends and forecasts, and customer needs	Informal analysis of competitive sites focusing on features and user experience
Results	Quantitative data-driven market and research-centered focus	Feature-driven, qualitative information, show what is working and what is not working
Report	A huge book of information	5 to 20 pages, short and sweet.
Budget	$20,000 and up	Lunch to $20,000
Goals	Provide comprehensive, detailed, strategy-based recommendations on changing marketplaces, evolving business models, and customer habits and segmentation	Gain firsthand, comparative view of customer experience. Provide relevant documentation and industry information.

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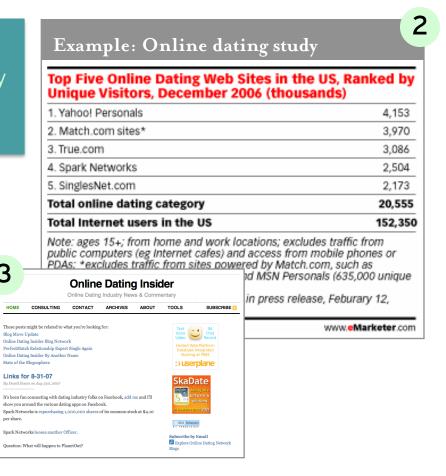adapted from Goto and Cotler, Chapter 10

Steps in competitive analysis

1) Define the process
2) Create a features list
3) Conduct analysis (usability or otherwise)
4) Create a report

Step 1: Defining the process

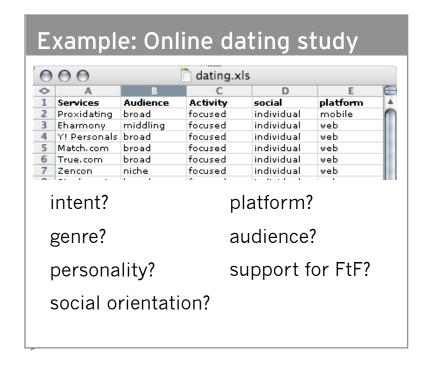**1** What features might serve users with heavy time and/or mobility constraints?

1 Build a plan for analysis

2 Define the competitive set

3 Prioritize and categorize your competitive set

2 Example: Online dating study

Top Five Online Dating Web Sites in the US, Ranked by Unique Visitors, December 2006 (thousands)

1. Yahoo! Personals	4,153
2. Match.com sites*	3,970
3. True.com	3,086
4. Spark Networks	2,504
5. SinglesNet.com	2,173
Total online dating category	**20,555**
Total Internet users in the US	**152,350**

*Note: ages 15+; from home and work locations; excludes traffic from public computers (eg Internet cafes) and access from mobile phones or PDAs; *excludes traffic from sites powered by Match.com, such as ... d MSN Personals (635,000 unique ... in press release, Feburary 12,*

www.**eMarketer**.com

3 Online Dating Insider
Online Dating Industry News & Commentary

HOME   CONSULTING   CONTACT   ARCHIVES   ABOUT   TOOLS   SUBSCRIBE

These posts might be related to what you're looking for:
Blog Move Update
Online Dating Insider Blog Network
PerfectMatch Relationship Expert Single Again
Online Dating Insider By Another Name
State of the Blogosphere

Links for 8-31-07
By David Evans on Aug 31st, 2007

It's been fun connecting with dating industry folks on Facebook, add me and I'll show you around the various dating apps on Facebook.

Spark Networks is repurchasing 1,000,000 shares of its common stock at $4.10 per share.

Spark Networks looses another Officer.

Question: What will happen to PlanetOut?

Text Voice Video   IM Chat Record

Hosted Web Platform
Database-integrated
Starting at FREE

:) userplane

SkaDate   dating site software & solutions
in business since 2002

880 listeners
BY FEEDBURNER

Subscribe by Email
Explore Online Dating Network Blogs

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Step 2: Making a list of features

Inspection of competitors

Design decisions

Online discussions, reviews

Expert or user interviews

Example: Online dating study

	A	B	C	D	E
	Services	Audience	Activity	social	platform
1					
2	Proxidating	broad	focused	individual	mobile
3	Eharmony	middling	focused	individual	web
4	Y! Personals	broad	focused	individual	web
5	Match.com	broad	focused	individual	web
6	True.com	broad	focused	individual	web
7	Zencon	niche	focused	individual	web

dating.xls

intent?   platform?

genre?   audience?

personality?   support for FtF?

social orientation?

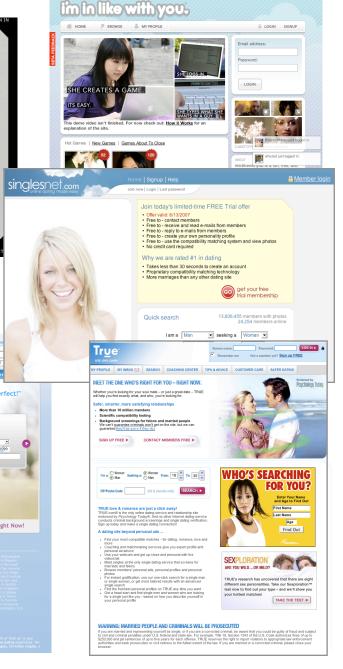|	Peers ThinkTank	CXO Round Table	Session with a Consultant	Session with a Performance Coach
Have access to an outside perspective	✓	✓	✓	✓
Receive multiple feedback	✓	✓	No	No
Receive perspectives from peers (in a similar position)	✓	✓	No	No
Get feedback from everyone in the session	✓	No	N/A	N/A
The feedback received are always supported by personal examples	✓	No	No	No
Get feedback in writing from the subject matter expert (after the session)	✓	No	✓	No
Receive a complete transcription of the session within a couple of days of the completed session	✓	No	No	No
Confidential	✓	✓	✓	✓
Anonymous	✓	No	No	No
Participants can be anywhere in the world	✓	No	✓	✓
No commuiting	✓	No	✓	✓
Amount of relevant and applicable information received	📁	📁	📁	📁
Time needed	🕐	🕐🕐	🕐	🕐
Cost	$	$$	$$$	$$

Feature grid

Step 3: Analyzing the set based on features

Perform *individual* inspections

Conduct *informal* usability testing

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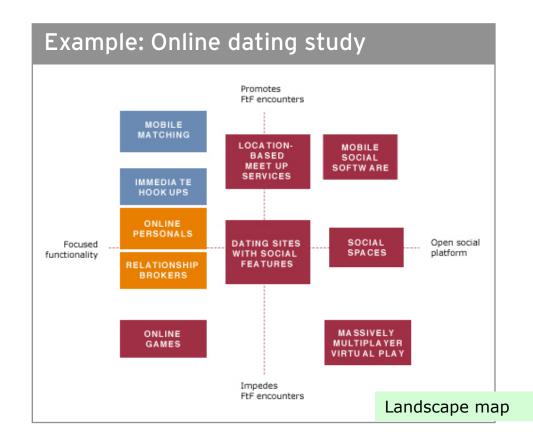# Step 4: Creating a final report

1) Create a **features grid** or a **landscape map**
2) Make overall evaluations

Example: Online dating study

Landscape map

Appendix
Inspection methods resources

Another sample heuristics checklist

Homepage Usability

Communicating the Purpose of the Site

0	1/2	1	
☐	☒	☐	company name and logo shown prominently in standard size and location
☒	☐	☐	tagline present that explains company/site purpose
☒	☐	☐	site's value proposition/differentiators communicated
☒	☐	☐	highest priority tasks (from user's perspective) emphasized
☐	☐	☒	only one page identified as "home" or "homepage"
☐	☐	☒	*Web site* used only to refer to total site, not to pages or sections
☐	☐	☒	homepage design clearly different from all other pages

Comments:
1.) Name and Logo: The company name is present in the thematic "blurb" in the banner area
of the site ... the name is ... ely ... sociated with the logo. It is understood that the ...

http://www.olkincommunications.com/images/Clients/Heuristic%20Evaluation.jpg

Specialized feature list:
E-commerce and Order Forms

Shows total cost

Shows itemized costs

 Shows product names and/or descriptions

Allows the user to change the quantity easily

Provides an option to save an order and complete it later

Provides details on any other charges on the order

Provides details on shipping options and charges

Provides shortcuts for repeat visitors to make transactions faster

Allows users to easily move from the order form to shopping
        and back again

Provides security information

Provides users with an alternate offline way of ordering

Allows users to view and/or change previous orders

Does not require users to register before a purchase

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Guidelines and checklists

Research-based web guidelines from

http://www.usability.gov/pdfs/

See specifically:

http://www.usability.gov/pdfs/chapter7.pdf

http://www.usability.gov/pdfs/chapter11.pdf

http://www.usability.gov/pdfs/chapter4.pdf :
user connection speeds and screen resolutions