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center for web research

Information Architecture as Communication

September 18, 2004

Javier Velasco
javier@mantruc.com

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"It's not Rocket Science, it's Social Science"

Clement Mok
Designer,
(Macintosh Interface)

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Design

Design ≠ Accident

"The details are not the details.
These make the design"

Charles Eames

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User Experience

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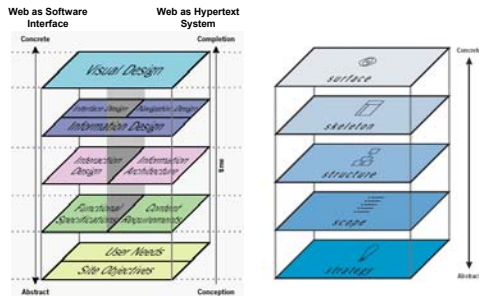# User Experience Design in Automotive Industry

Market Research
User Interviews
Engineering
Ergonomics
Interface
Visual Design
Testing
Grand Launch

Elements of User Experience

Jesse James Garrett
http://www.jjg.net/ia/elements.pdf

User-centered design

"The secret to making a site that people will dig is involving them throughout the design process"

Christina Wodtke, 2002

User-centered design

- Here are the basic steps:
  1. Figure out whom the site is for.
  2. Talk to those people.
  3. Design the site for them.
  4. Test a prototype of the site with them.
  5. Change the design based on what you learned.
  6. Test the final site with them.

Christina Wodtke, 2002

What to ask?

- Write a script, some good questions include the following:
  - What other sites do you visit?
  - How do you use this type of product?
  - Do you use competitors' products?
  - Are you interested in potential features? For example, to probe if people would like a joke newsletter, ask them.
    - How do you find out when a web site has new content?
    - Do you ever sign up for newsletters from sites you enjoy?
  - Do you use a non-web version of the product?

Christina Wodtke, 2002

Design a Site for the People

- Now analyze the interviews, looking for recurring themes. Look especially for problems that crop up again and again, language that people use to describe content and actions, and hints about how they think of the subject matter.
- **Then, test it.**

Christina Wodtke, 2002

Information Architecture

Peter Morville 2000

Slide 1

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Information Architecture

– Is invisible!

Slide 2

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Organization Schemes

- Exact
  - Alphabetical
  - Chronological
  - Geographical
- Ambiguous
  - Subject
  - Task
  - Audience
  - Metaphor
- Hybrid

Silly yet practical example.
Attendance in this presentation:
- Female
  - Dark hair
  - Light Hair
- Male
  - Dark hair
  - Light Hair

- Dark hair
  - Female
  - Male
- Light Hair
  - Female
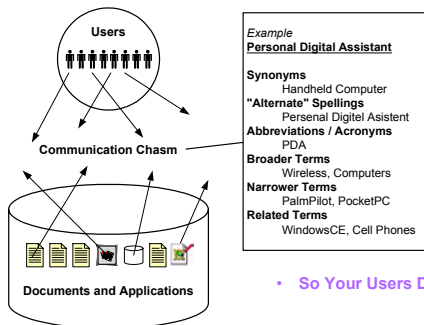 - Male

Slide 3

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Organization Schemes

- Taxonomy
  - Hierarchical Organization of Concepts
    - Originally developed in Biology
- Poly-hierarchy
  - Non rigorous taxonomy, adapted to reflect real world.
    - Art > Surrealism > Painting > Salvador Dalí
    - Art > Surrealism > Sculpture > Salvador Dalí
- Faceted Classification
  - Multiple pure taxonomies
    - One division principle at a time

Slide 4

Faceted Computer Finder at IBM

Slide 5

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Why Control Vocabulary?

Users

Communication Chasm

Documents and Applications

Example
Personal Digital Assistant

Synonyms
Handheld Computer
"Alternate" Spellings
Personal Digitel Asistent
Abbreviations / Acronyms
PDA
Broader Terms
Wireless, Computers
Narrower Terms
PalmPilot, PocketPC
Related Terms
WindowsCE, Cell Phones

- **So Your Users Don't Have To!**

Slide 6

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Levels of Control

(Vocabularies)

Synonym Rings	Authority Files	Classification Schemes	Thesauri

Simple ← → Complex

Equivalence	Hierarchical	Associative

(Relationships)

Slide 1
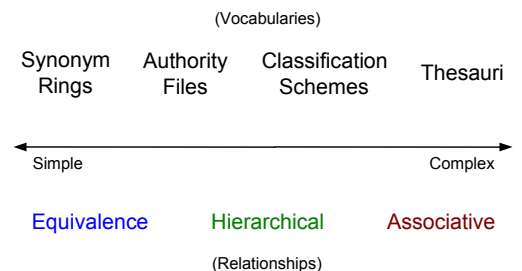
Thesauri in Context
Semantic Relationships

- Types
1. **Equivalence**
2. **Hierarchical**
3. **Associative**

(Broader)
United States

2

(Variant)
Vt

1

(Preferred)
Vermont

(Variant)
Green Mountain State

(Related)
Skiing

(Narrower)
Burlington

3

(Related)
Maple Syrup
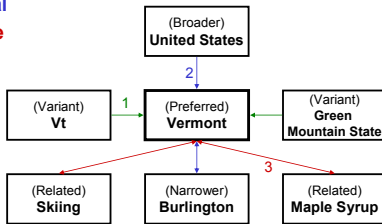
Peter Morville 2002

Slide 2

How do people organize things?

– There are four good ways to learn how people think about your content:
  – **Observe others.**
  – **Study the enemy.**
  – **Visit your search logs**.
  – **Do a card sort.**

Christina Wodtke, 2002

Slide 3

Card Sorting Exercise

Duplex   Sacco   Proust   Chichibio   Lariana

Superleggera   Patty Difusa   San Luca   Toga

How would you sort these?

Slide 4

Labeling Systems

- A label is a term that represents a larger piece of information
- Textual / Iconic / Mixed
- Variety of Lablels
  – Contextual Links
  – Headings
  – Navigation system options
  – Functionality buttons, triggers
  – Indexing terms
- Consistent Labeling Systems

Louis Rosenfeld & Peter Morville (2002)

Slide 5

Good Labels

- A good label is so obvious it's dull as dirt. A good label doesn't make you pause (and it never makes you think.)
- A good label is merely the thing you click to get to the good stuff.
- It may take you hours to come up with something that looks effortless—when it looks like you came up with the label in two seconds, you probably have the right one.

Christina Wodtke, 2002

Slide 6

Types of Navigation Systems

- **Browser embedded**
- **Main**
  – Global
  – Local
  – Contextual
  – Pagination
- **Suplementary**
  – Sitemaps
  – Indexes
  – Guides

Navigation Systems

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Global Navigation		Where am I?		Where can I go?	
Local Navigation	Contextual Navigation	What is near?	What's related to what is here?	Where can I go?	Where can I go?

Louis Rosenfeld & Peter Morville (2002)
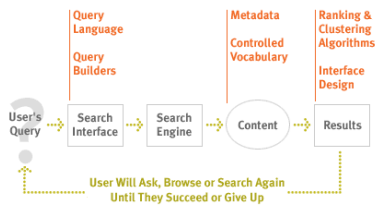

Navigation vs Search

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Navigation   Search

Photo: British Blind Sport

Search is a System

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Query Language
Query Builders

Metadata
Controlled Vocabulary

Ranking & Clustering Algorithms
Interface Design

User's Query → Search Interface → Search Engine → Content → Results

User Will Ask, Browse or Search Again Until They Succeed or Give Up

- http://semanticstudios.com/publications/semantics/search.html

Peter Morville 2002

IA Heuristics for Search Systems

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1. **Locating search**
   – Where is it?
2. **Scoping search**
   – What will be searched?
3. **Query entry**
   – How can I search it?
4. **Retrieval results**
   – What did I find?
5. **Query refinement**
   – How can I search some more?
6. **Interaction with other IA components**
   – Can I switch to browsing when search isn't doing the trick?
7. **Finishing search**
   – What can I do now that I've done searching?

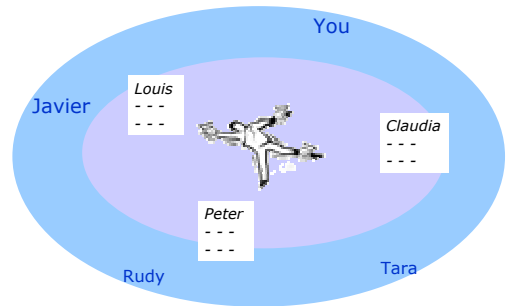Louis Rosenfeld, September 2004

Interaction Design

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Interaction Design

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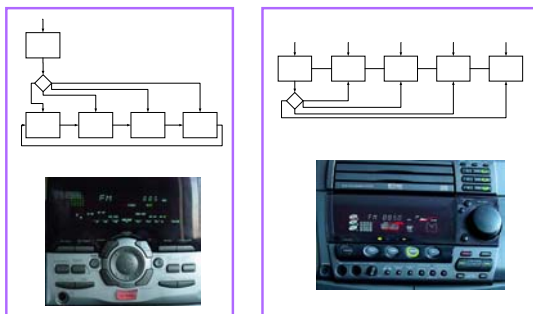
Computers	Humans
Incredibly Fast	Incredibly Slow
Error Free	Error Prone
Deterministic	Irrational
Apathetic	Emotional
Literal	Inferential
Secuential	Random
Predictable	Unpredictable
Amoral	Ethical
Stupid	Intelligent

Alan Cooper (1999)

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Everyday Examples of crappy Interaction Design

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Personas

You
Javier
Louis
- - -
- - -
Claudia
- - -
- - -
Peter
- - -
- - -
Rudy
Tara

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Scenarios

*"I'd love to do it all by myself,
but I don't know how to"*

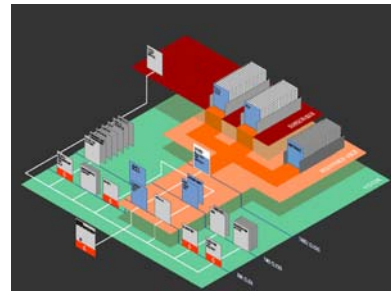**Donna Hoffman**
Public Relations
36 Y/0

*Lives in Old Town, ME
With her 3y/o son*

*Works at the local town
office, in charge of PR.*

- **Persona:**
  - Donna writes media releases and organises for them to be distributed in paper form.
  - She has been doing this type of work for 4 years.
  - She also arranges for the media releases to go on the company website, but someone else does the work.
  - She would like to do it herself to save some time, but does not know how to prepare website content (she doesn't know anything about html).
- **Scenario:**
  - Donna pastes some text from a word document, and types an additional paragraph.
  - She adds some headings and reads through it.
  - She wants to make sure it is accurate, so checks the spelling. When the document is ready, she sends it to her boss for approval.
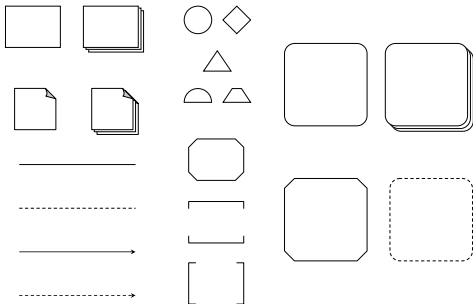
Adapted from Donna Maurer (2002)

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Architecture Diagrams

© Dynamic Diagrams, Inc.

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Documentation: A Visual Vocabulary

Jesee James Garrett   http://www.jjg.net/ia/visvocab/spanish.html

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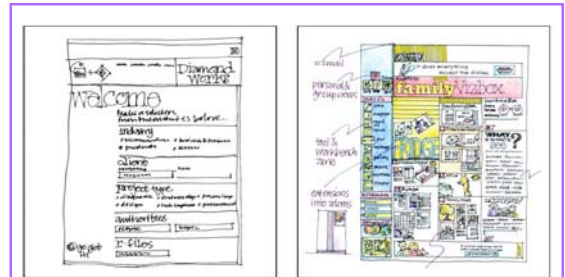
Interface Design

Interface Design

- The Tao of the Page
  - ✓ Principle #1: Simplicity & Elegance
  - ✓ Principle #2: Proximity & Relevance
  - ✓ Principle #3: Focus & Feedback
  - ✓ Principle #4: A Hierarchy of Importance, A Hierarchy of Tasks
  - ✓ Principle #5: The Right Tool for the Right Job

Chritina Wodtke (2002)

Information Design

- What?
  - The main subject or purpose of the page must be clear and explicit
- Who?
  - Claiming authorship on a page is basic
- Where?
  - Don't forget the international nature of the medium
- When?
  - Remeber to post publishing date, pages grow old very fast
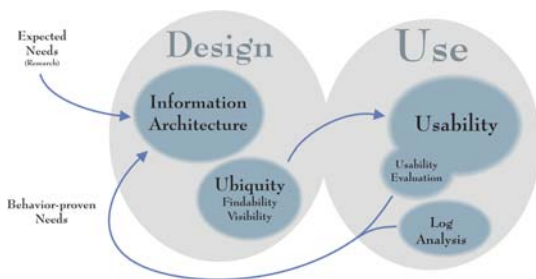

Applied Information Design

http://evolt.org/article/Web_Site_Architecture_101/

Documentation: Wireframes

More: http://www.iawiki.net/WireFrames

IA & Usability: A Causal Model

Ricardo Baeza-Yates & Javier Velasco, 2004

Usability:
A Common Sense Approach

Steve Krug

Don't Make me Think

"If something is hard to use,
I just don't use it as much."

< OBVIOUS   REQUIRES THOUGHT >

| Jobs | Employment Opportunities | Job-o-Rama |

Usability: Operational definition

Usability (of an application) refers to the <u>effectiveness</u>, <u>efficiency</u>, and <u>satisfaction</u> with which specified users can achieve specified goals in particular environments

ISO Ergonomics requirements, ISO 9241 part 11: Guidance on usability specification and measures.

Andrew Dillon 2000

IA & Communication

- Home page as Communication
  - *"A home page is a communication device. This implies that home pages should/could/might be usefully analyzed from within communication theory..."*

  Denis Hlynka. April 1996
  Professor, Department of Curriculum, Teaching and Learning Acting Director, Centre for Ukrainian Canadian Studies – University of Manitoba (http://www.umanitoba.ca/faculties/education/cmns/aect5.html)

Information Theory

INFORMATION THEORY
EMITTER - MESSAGE - CHANNEL - RECEIVER - EFFECT

- Claude Shannon, 1948

Interactional Model

INTERACTIONAL MODEL

AXIOM 1, ONE CANNOT NOT COMMUNICATE

- Paul Watzlawick & Palo Alto Group, 1960s

Biology of Knowledge

COMMUNICATION IS BEHAVIOR COORDINATION

- Maturana & Varela, 1970s

Biology of Knowledge

- Communication as Behavior Coordination

CUSTOMER SERVICE

COMMUNITIES

- Maturana & Varela, 1970s

Information Architecture Community

Asilomar Institute for Information Architecture

Jesse James Garrett

AIfIA-es

Peter Morville

Louis Rosenfeld

evolt.org   boxesandarrows   cadius

Christina Wodtke

                                                    SIGIA-L

iaslash   Usableweb – Keith Instone
                                                    CHI-WEB
Andrew Dillon
                 userati   Punto Flotante   AI chile

Resources & Further Reading

- **Baeza-Yates, R.**; **Velasco, J**. "The user experience from design to use, and back: a causal model". *5th ASIS&T Information architecture summit*, 2004.
- **Cooper, A**. *The inmates are running the asylum: why high tech products drive us crazy and how to restore the sanity*. Sams, 1999.
- **Garrett, J**. *The elements of user experience: user-centered design for the web*. New Riders, 2002.
- **Instone, K**. *Fun with faceted browse*. En: *IA Summit*, 2004. *http://user-experience.org/uefiles/facetedbrowse/*
- **Krug, S**. *Don't make me think: a common sense approach to web usability*. New Riders, 2000.
- **Maturana, H & Varela F.** *The Tree of Knowledge: Biological roots of human understanding*. Revised edition, Shambhala, 1992
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- **Tufte, E**. *Envisioning information*. Graphics Press, 1990.
- **Van Dicjk, P**. *Information architecture for designers: structuring websites for business success*. Rotovision, 2003.
- **Wodtke, Christina**. *Information architecture: blueprints for the web*. New Riders, 2002.

TOevolt.org

TOevolt : a conference for web professionals : Toronto : September 17-19, 2004

Thank you
And long live evolt.org!

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