Low Hanging Fruit

Bennett Lauber

Sapient Government
Services

Almost every development manager that I have worked
with has asked for the "Low Hanging Fruit." I will discuss
with this really means and strategies for getting around it.

Low Hanging Fruit?

- The title "Low Hanging Fruit" comes from a common misstatement from developers and some project managers (PMs).
  - They usually understand engineering, technology, and schedules and budget.
  - They are not sure how to implement usability, as if usability is a separate feature of their product.
  - Often they are forced by a supervisor or client to turn to the us for last-minute advice.

What should you do?

- When a development or PM lead asks to provide a list of the "Low Hanging Fruit" in order to "fix" the usability of the product
  - You might think about updating your resume and begin looking for a new job!
- Instead you can change the dynamics of a difficult situation
  - From where they do not understand the value of usability, into one where it is ingrained in the development methodology and processes.

Understand your users

- Personas and what to do with them.
  - Have Developers co-create them
  - Post them around the development areas, copy machines, etc.

Meet: Doug Thorpe

The Fruits of our Labor

- Why you should use "sketch" tools like Balsamiq when presenting early wireframes?

The "science" of our art form

- Explain the differences between Novice and Expert users.
- Share Psychological / Cognitive principles for Usability
- Develop ways to convey this information to developers and development managers

Psychological / Cognitive principles for Usability

- Visual Perception
- Memory (7 ± 2 rule)
- Recognition vs. Recall
- Motor skills
- Attention and vigilance
- Problem solving
- Learning and skill acquisition
- Motivation
- Users' conceptual models
- Human diversity

- depth perception
- fundamental attribution error
- Habituation/learned helplessness
- Fitt's Law
- speed-accuracy tradeoff
- Technophobia
- affordance
- capture error
- chromostereopsis
- cognitive load
- distributed cognition

Visual Perception

Count the number of F's in the following sentence:

FINISHED FILES ARE THE RESULT OF
YEARS OF SCIENTIFIC STUDY COMBINED
WITH THE EXPERIENCE OF YEARS

Visual Perception

Count the number of F's in the following sentence:

FINISHED **F**ILES ARE THE RESULT O**F**
YEARS O**F** SCIENTI**F**IC STUDY COMBINED
WITH THE EXPERIENCE O**F** YEARS

There are six "F's".

The human brain tends to see the F in "OF" as a "V".
Rarely will anyone find more than three "F's" in the
sentence.

Example that involves visual perception

Can you guess this woman's age?

How do we convey this?

- Our designs and decisions are (usually) based upon these principles
- How can we share this knowledge with our development peers?
- Give Brown bag sessions describing these in detail.
  - Demo: The Stroop Effect
    - I need a volunteer from the audience (and someone with a stopwatch)

Instructions:
Say the COLOR of the words that are presented in the next screen

The Stroop Effect (1)

Red	Yellow	Green	Brown
Blue	Green	Brown	Yellow
Red	Red	Yellow	Brown
Brown	Blue	Green	Red
Yellow	Blue	Red	Green

Results?

- How long did that take?
- Where there any difficulties?
- Let's try again"

Instructions:
Say the COLOR of the words that are presented in the next screen

The Stroop Effect (2)

Red	Yellow	Green	Brown
Blue	Green	Brown	Yellow
Red	Red	Yellow	Brown
Brown	Blue	Green	Red
Yellow	Blue	Red	Green

Results?

- How long did that take?
- Where there any difficulties?
- What about non-native English speakers?
- This demonstration can be used to "sell" your developers on User-Centered Design
  - They are the "Expert"; the users are the "Novice"

Understand your true audience

- It is Development managers, developers not academics.
- They want a list of actionable work items to perform—not a publishable paper describing your research.

Usability Issues Discovered

A total of 18 Usability Issues, including 3 High Priority Issues, were discovered as a result of this evaluation. Table 2, below, shows a list of these issues ordered by priority. In the following pages, a screen capture is presented for many of these issues. Possible solutions for solving the issues are also presented.

Usability Issues Discovered in the Rich Forms Study

Issue #	Priority	Number of Users	Issue
1	High	6	Tabbed Panes
2	High	4	Add Row name to a form
3	High	7	Options for lower last entry
4	Medium	4	Drag and Drop Difficulties
5	Medium	4	Post Changes
6	Medium		

"First Slice"

- Everyone wants to "see" a working version of the system.
- You should work with the development team to create the overall framework with a single end-to-end solution.

Some practical advice

- Learn the bug tracking system
- Help QA team to file bugs for usability using a pre-determined taxonomy
- Engage with Tech Writers -- internationalization and Localization
- Require externalization of strings.
  - This gives you (and your tech writers) the chance to make modification to ALL of the screen text.

The True "Low Hanging Fruit:"

- How to have an immediate impact on the usability of your product

  - Benchmark your "Ease of use"
  - Implement Smart Defaults
  - Modify Interface Text
  - Add Embedded assistance
  - Ensure Visual consistency
  - Provide Immediate user feedback

Benchmarking

- Use Industry standard questionnaires (such as SUS and IBM CSUQ)

Computer System Usability Questionnaire

Smart Defaults

- You can reduce the number of decisions that a user has to make by choosing smart defaults.
  - Auto-fill the form with a their known address
  - Putting "USA" at the top of an alphabetical list of countries because most of your customers come from there
- It's worth remembering that when a customer returns to a website or an application, they frequently wants to pick up where they left off.
  - Highlight Recently saved documents
  - Allow Resuming a process

Interface Text:
Make sure your interface says what you want I really mean!

Dennett's Wharf
ON THE WATERFRONT, CASTINE

WE WILL DO YOUR MOM
FOR NOTHING "AGAIN & AGAIN"
ON MOTHER'S DAY

TOILET
STAY IN
YOUR
CAR

IT TAKES
MANY
INGREDIENTS
TO MAKE
BURGER KING
GREAT BUT...
"The Secret Ingredient
is our People"
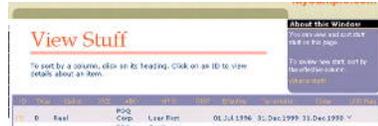
6 DONUTS
Only $1 50
Limit 2
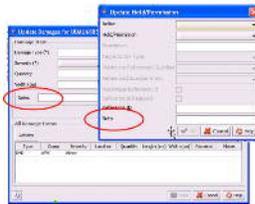Per Customer

Embedded Assistance

Embedded assistance may include:
- Field labels
- Inline instructional text
- Error or information messages
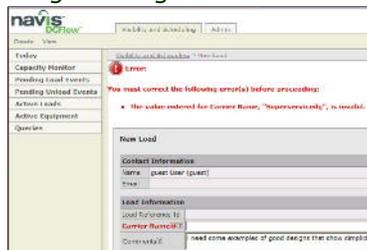- Button labels
- Hover text
- Tool tips

Visual Consistency

- Work with a Visual Designer early in the process
- Establish a visual language
- Use color and treatment to enhance the user experience

Immediate user Feedback

- Let the user know RIGHT away when something isn't right

Put it all together:

The User doesn't read the source code

Lead a cross functional team

- It is the job of user experience to champion usability from:
  - Requirements Definition
  - Interface Design
  - Development
  - Documentation
  - Testing
  - Support

Different Perspectives

Dilbert on Usability