

# DES 420 / Week 4 / Content

- 1.00-1.20 - Storyboard review (Mock-up, Wireframe, Flowchart)
- 1.20-1.40 - GUI and UX design
- 1.40-2.00 - Layout, spacing, composition
- 2.00-2.15 - Break (15 min)
- 2.15-2.35 - Typography for UI
- 2.35-4.00 - Lab
- 4.00-4.35 - Longer Break (35 min)
- 4.35-4.45 - Assignments 3 & 4
- 4.45-6.40 – Concept Research & Analysis Presentations and Class Discussions

# Storyboard - Mock-Up, Wireframe, Flowchart

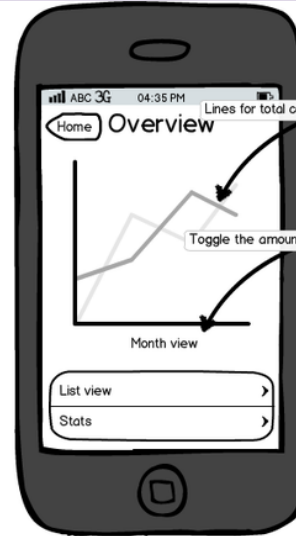
- Mock-up - a lo-fi general design sketch in gray scale.
- Wireframe – a more detailed design with shapes, images and text.
- Flowchart – a guide of the application, a map.
- Interactive Simulation - interactive prototype.

# Mock-up

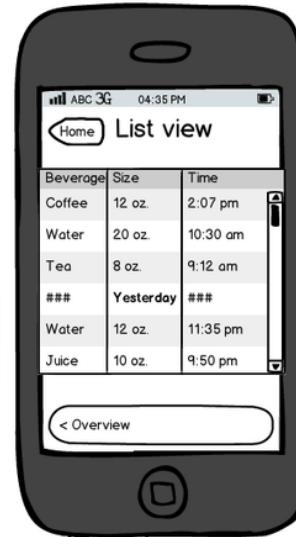
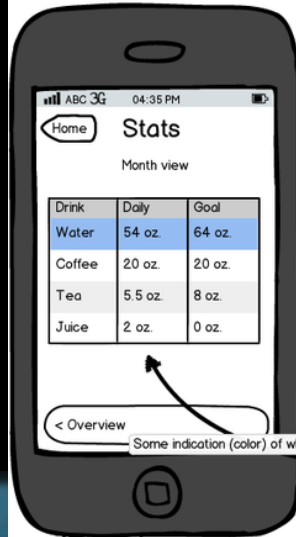
- Initial visualization
  - Sketch
  - Schematic representation
- 
- Low fidelity
  - Greyscale
  - No colors /very minimal
  - No GFX
  - No details

# Mock-up

- Mock-ups are used by designers mainly to acquire feedback from users about designs and design ideas early in the design process.
- Saves design and development time
- Avoids straying off track.



There should also be the facility to set more complex goals (e.g., combined coffee, tea, and soda consumption)



P3-Drinke - CS294-84: Interactive Device Design

<http://husk.eecs.berkeley.edu/courses/cs294-84-fall12/index.php/P3-Drinke>

# Wireframe

Wireframe is a more detailed design with shapes, images and text. It represents the skeletal framework of a mobile app. It is a visual guide that shows all connecting pathways between each screen and where they can lead.

- The next step up from a general mock-up.
- A guide to understand the functionality of an app.
- Gives the design and programming team a clear description of GUI.
- Professional presentation.

# Wireframe

Wireframes focus on:

- The kinds of information displayed
- The range of functions available
- The relative priorities of the information and functions
- The rules for displaying certain kinds of information
- The effect of different scenarios on the display

# Wireframe

- More detailed images, shapes, icons and text
- All main screens and functions of the app
- Labeled actions of buttons, text fields and icons
- Low fidelity
- Greyscale
- No colors /very minimal
- No GFX



PaMI

Username  
codrin.vasilache

Password  
\*\*\*\*\*

Login

Back Patients

A-Z Doctor Salon

Search...

Patient Full Name

Patient Full Name

Patient Full Name

Patient Full Name

Patient Full Name

Patient Full Name

Patient Full Name

Patient Full Name

Patient Full Name

Patient Full Name

Back Patients

A-Z Doctor Salon

Dr. Doctor 1

Patient Full Name

Patient Full Name

Patient Full Name

Patient Full Name

Patient Full Name

Dr. Doctor 2

Patient Full Name

Patient Full Name

Patient Full Name

Back Patients

A-Z Doctor Salon

Salon 1

Patient Full Name

Patient Full Name

Patient Full Name

Patient Full Name

Patient Full Name

Salon 2

Patient Full Name

Patient Full Name

Patient Full Name

Back Patient file

Personal details Medical history

First name: Luther

Last name: Sasha

Birthdate: 15.10.1980

Personal no: 2801015227755

Sex: F

Blood type: A+

Assured: Yes

Telephone: 0723957223

Allergies: -

Back Patient file

Personal details Medical history

Disease name

Date of introduction

Disease name

Date of introduction

Disease name

Date of introduction

Disease name

Date of introduction

Disease name

Date of introduction

Disease name

Date of introduction

Cancel Patient

First name

Last name

Birthdate

Personal No.

Sex  F  M

Blood type  A+

Assured  Yes

Telephone

Allergies

Logout Welcome

Back Disease

Date : 27.10.2000

Symptoms: feeling very thirsty,extreme tiredness,weight loss

Investigations: level of glucose in blood and urine, oral glucose tolerance test, glycated hemoglobin, urine and blood tests

Diagnosis: Diabetes

Hospital and physician: "Sfantul Spiridon" Hospital Iasi, Department of Diabetes and metabolic diseases, Dr. Bacila Bianca

Treatments: Insulin treatment for more than 10 years.

Complications: Diabetic retinopathy since 2008

Cancel Disease

Date

Symptoms

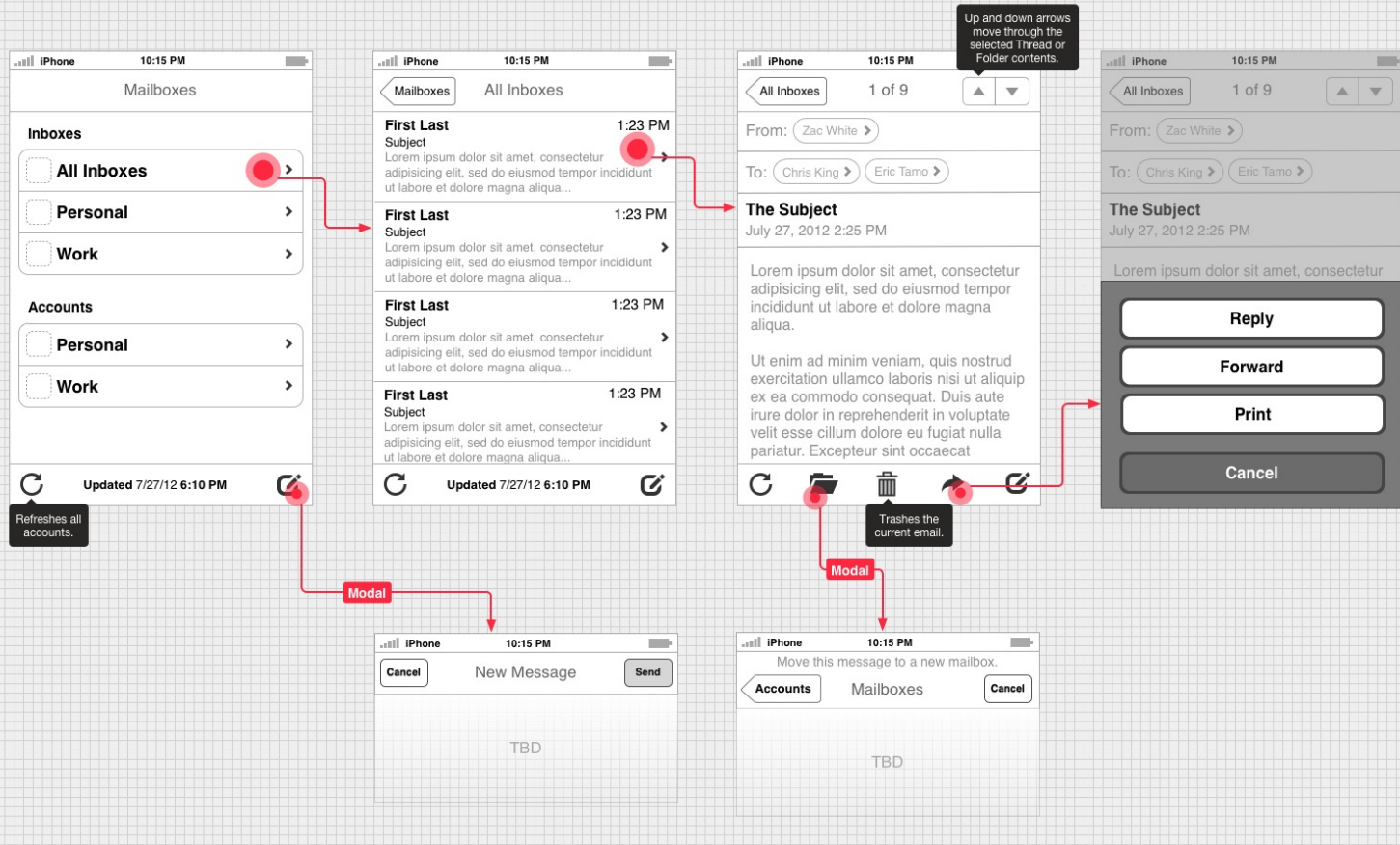
Investigations

Diagnosis

Treatments

Complications

Patient Monitoring Interface  
<http://patientmo.wordpress.com/category/wireframes/>



# Why Wireframe is Necessary?

Keeps design and concept on track

Informs the team

Minimizes number of revisions

Helps avoiding confusion

Allows to:

- Improve your design
- Optimize the user experience
- Reduce the need for changes during development

# Mock-Up and Wireframe Software Links

Free/Small cost

Mobile & Website UI

10 Completely (or almost) Free Wireframe/Mockup Applications

<http://speckyboy.com/2010/01/11/10-completely-free-wireframe-and-mockup-applications/>

10 Free Wireframing and Mockup Tools

<http://speckyboy.com/2011/02/23/10-completely-free-wireframing-and-mockup-tools/>

# Flowchart

Flowchart – a complete guide of the application, a map.

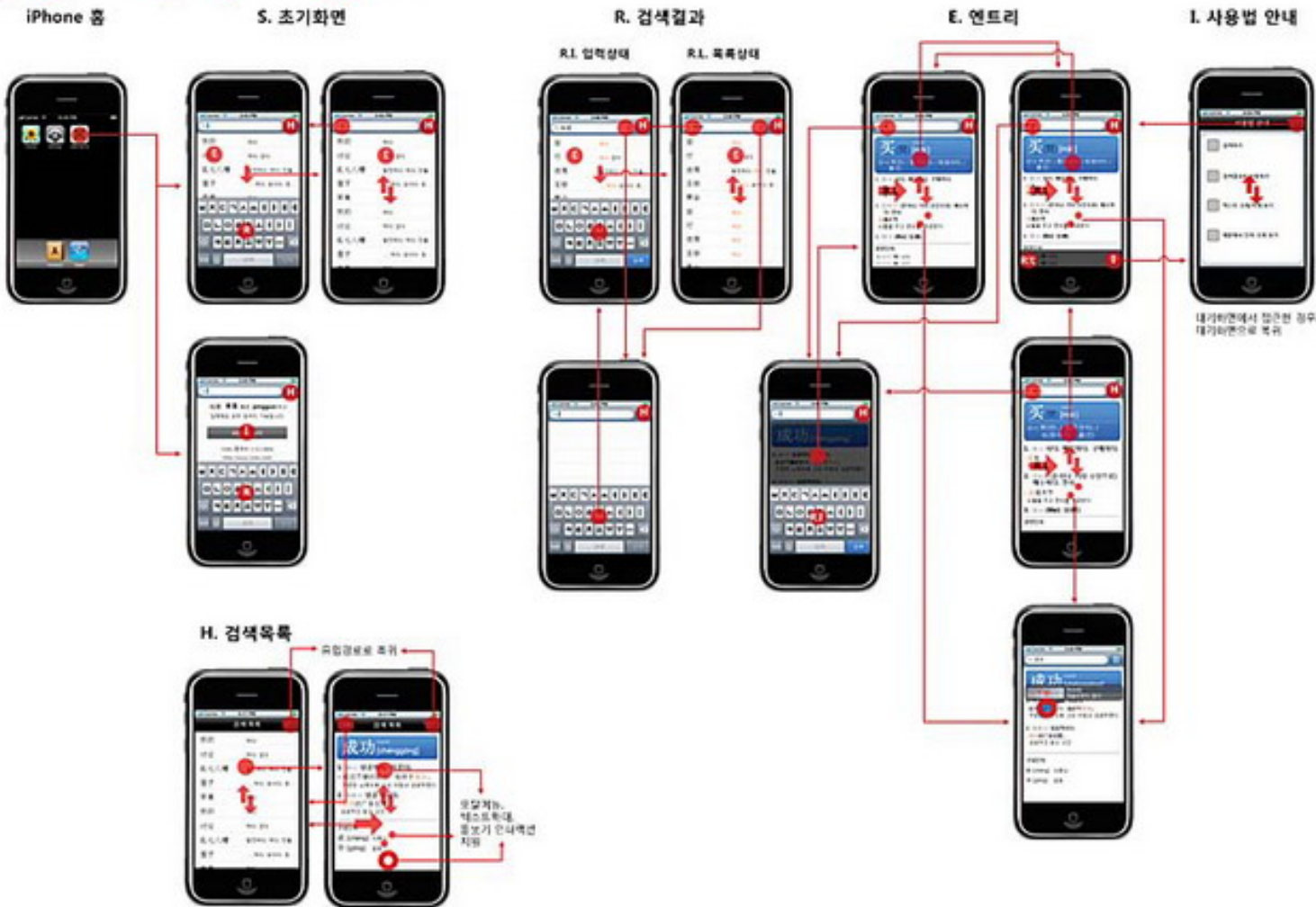
“Where can I go from this screen?”

- Used by design & programming teams
- Keeps various connections of each screen organized
- Visualizes user experience (UX)
- Displays all functions and examines further into the design.

# Flowchart

- Arrows or some or lines signify pathways between all screens.
  - Numbered steps and notes describing their functionality.
- 
- The first screen is a splash or loading or an installation screen.
  - The next screen is typically the main menu screen or home screen.
  - More details are included (ex. numbered steps).

● Tap ○ Tap (View 이동) ↓ Scroll ● Pinch In/Out ○ Touch & Hold



High-level application flowchart for a dictionary app from Excerpt from Designing the iPhone User Experience: A User-Centered Approach to Sketching and Prototyping iPhone Apps by Addison-Wesley  
<http://www.codeproject.com/Articles/111949/Excerpt-from-Designing-the-iPhone-User-Experience>

# Common Resolution/Pixel Density List

OS

Resolution/Pixel Density



Android OS Ranges

160 x 240 ldpi

320 x 480 mdpi

480 x 800 hdpi

960 x 720 xdpi



Apple iOS iPhone/iPod

320 x 480 pixels

Retina iPhone4/iPod

640 x 960 pixels

iPhone5

640 x 1136 pixels

iPad2/Mini

768 x 1024 pixels

iPad3

1536 x 2048 pixels



# Graphical User Interface (GUI)

GUI is defined as an acronym for graphical user interface, a type of computer screen display in which commands are entered and functions are selected by means of icons, menus, a mouse, etc.

# Graphical User Interface (GUI)

Fields

Buttons

Bars

Tabs

Boxes

Scrolls

Navigational menus

Icons

etc.

# Graphical User Interface (GUI)

- Simple
- Easy to navigate
- Clear
- Concise
- Responsive
- Consistent
- Attractive
- Efficient

# GUI Design and User Experience Tips

“Don’t annoy. It is so easy to piss people off on mobile. What you think is really cool might only be cool the very first time.”

“Make it an experience. Make news fast, right and make it sing.”

Beware of “Click here”, “mouseover this”, “see video below.”

Mobile app design tips by David Ho, engineer of the mobile apps for the Wall Street Journal.

# GUI Design and User Experience Tips

Use images with links

Allow users to read the full headline

Provide big targets for touch screen users

Detect the user's device and serve the relevant version of the site

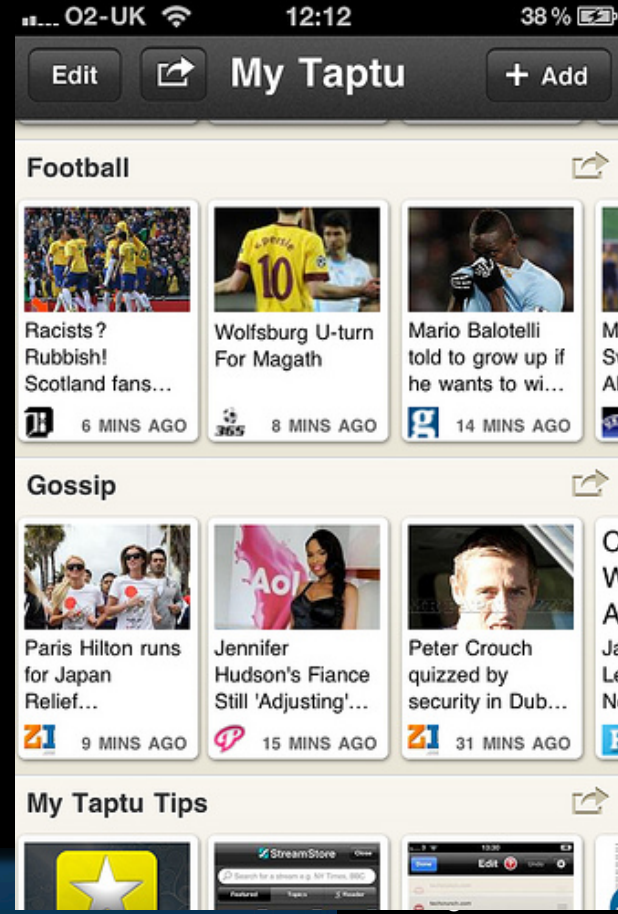
Provide enough space between navigation options

Mobile usability tips from Jakob Nielsen by Graham Charlton

# GUI Design and User Experience Tips

## Use images with links

- Provides more visual impact
- Helps users to quickly recognize an article that is interesting to them, as they recognize their favorite actor, football player etc.



# GUI Design and User Experience Tips

Allow users to read the full headline

- Provides a stronger 'information scent'.

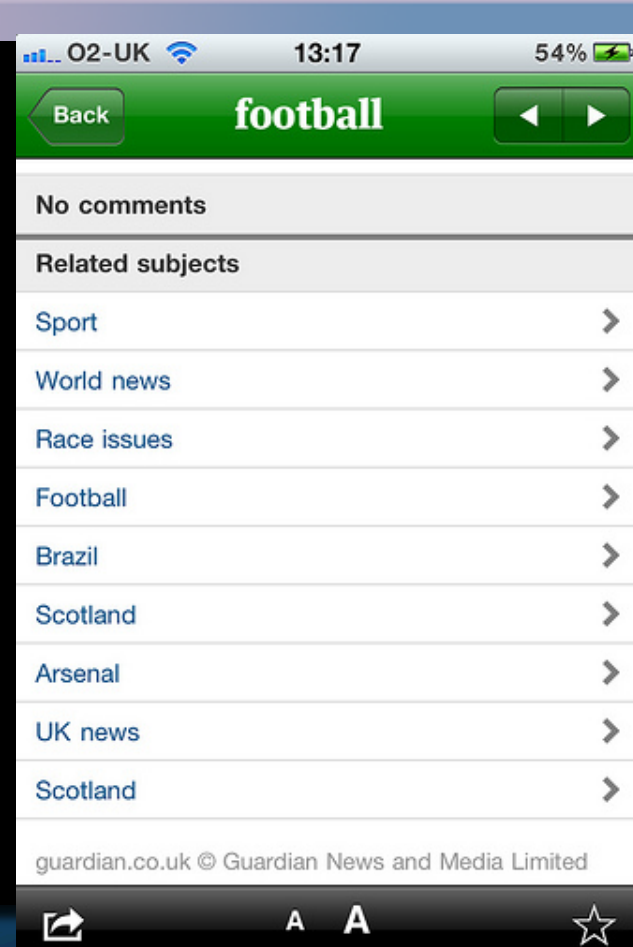
People can get more of a clue of the subject of the article, and if the headline is well written, it should get more clicks.

# GUI Design and User Experience Tips

Provide big targets for touch screen users

- Links need to be big enough so that users don't have to be too precise.

This is something that lets down the Guardian's iPhone app and mobile site. Some of the **links are too small and too close together**, making it easy to click the wrong link:





# GUI Design and User Experience Tips

Detect the user's device and serve the relevant version of the site

-Sending mobile users straight to the optimized version of the website make it easier for users.

-If the mobile and desktop versions have different URLs, then this makes it harder for users to find the version they want.

# GUI Design and User Experience Tips

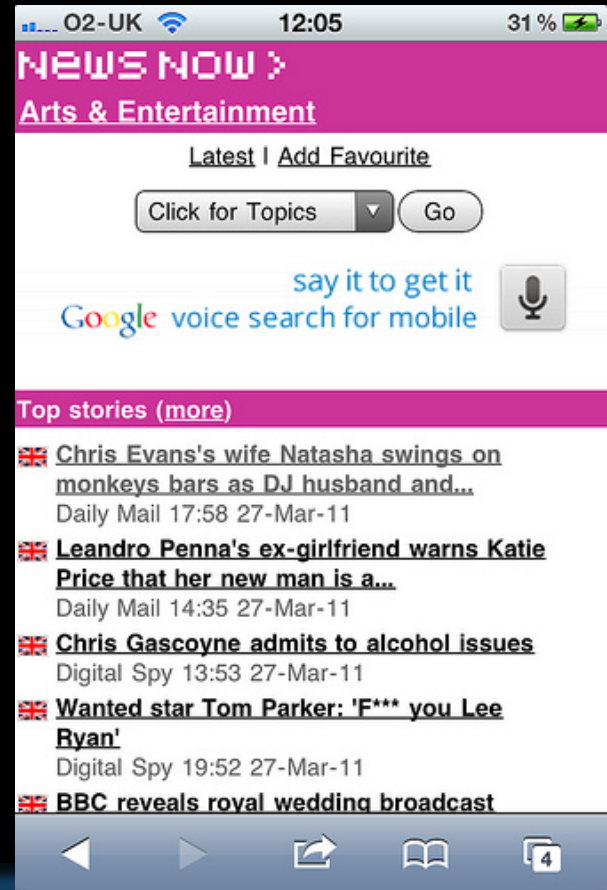
Provide enough space between navigation options

- Misplaced clicks can be a major source of frustration for mobile users, as they mean time wasted loading the wrong page and being forced to backtrack.

- If there is **clear space between links and menus**, then users are less likely to make these mistakes.

# GUI Design and User Experience Tips

the close proximity of the links on the mobile site makes it harder to be accurate for touch screen users.



# GUI Design and User Experience Tips

Navigational links at the top of the page are far enough apart, while the target for users to click and select an article is larger.

- provide more of an 'information scent'
- add a brief summary of each story
- reduce the number of articles displayed on the first screen to allow more room for this information.



# GUI Design Tips

Clear, simpler and appealing information presentation

Uses shades and hues of two or three main colors

Organized layout

Sufficient space between elements for touch display navigation

Moderate use of GUI elements (scrolls, tables, icons, etc.)

# Examples

Examples (E. Tufte's Swiss Mountain Map video)

Swiss Mountain Map video from Edward Tufte's webpage

[http://www.edwardtufte.com/bboard/q-and-a-fetch-msg?  
msg\\_id=0003vq](http://www.edwardtufte.com/bboard/q-and-a-fetch-msg?msg_id=0003vq)