

Applicazioni per dispositivi mobili: User Experience

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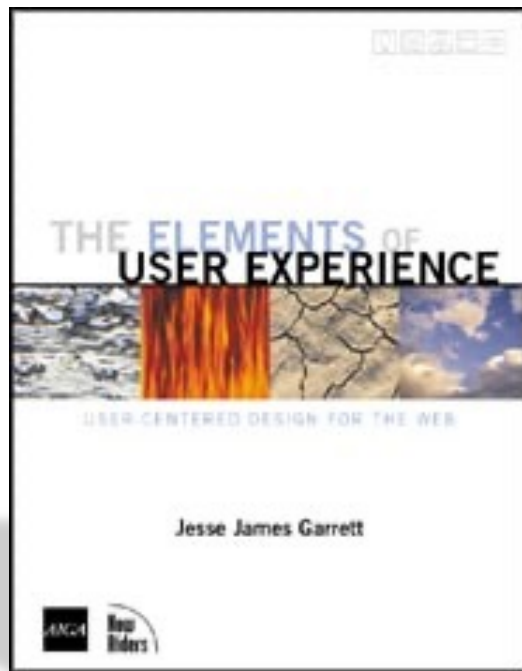
Outline

- » Elements of User Experience
- » Navigation Model
- » Wireframes

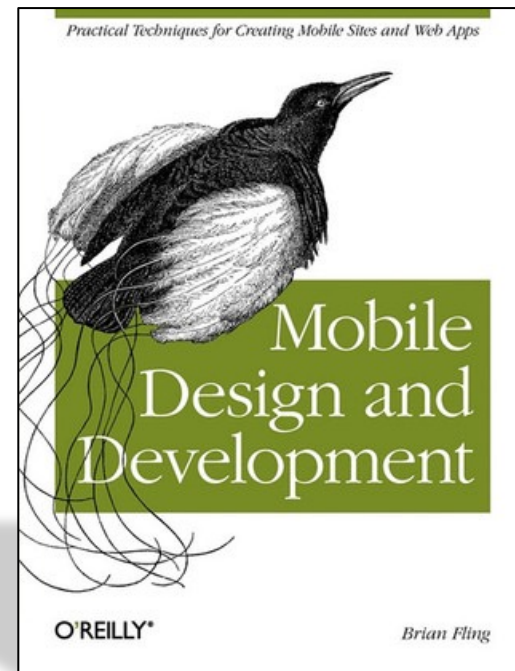
Outline

- » Elements of User Experience
- » Navigation Model
- » Wireframes

References



<http://jjg.net/ia/visvocab>



Chapter 7

Everyday Miseries (1)

- » You wake up to sunlight streaming in your window and wonder why your alarm clock hasn't gone off yet. You look over to see that your clock thinks it's 3:43 a.m. You stumble out of bed to find another clock, which tells you that you can still make it to work on time—if you leave in 10 minutes

- » You turn on the coffeemaker and hustle to get dressed, but when you go to retrieve your dose of life-sustaining caffeine, there's no coffee in the pot. No time to figure out why—you've got to get to work!

Everyday Miseries (2)

- » You get about a block from your house when you realize that the car needs gas. At the gas station, you try to use the one pump that takes credit cards, but this time it won't accept yours. So you have to go inside and pay the cashier, but first you have to wait in line while the cashier very slowly helps everyone in front of you!
- » You have to take a detour because of a traffic accident, so the drive takes longer than you expected. It's official: Despite all your efforts, you are now late for work. Finally, you make it to your desk. You're agitated, harried, weary, and irritable — and your day hasn't even really started yet. And you still haven't had any coffee

Events

- » **Accident:** driver took his eyes off the road for a moment to turn the radio down
- » **Register:** the cash register was complex and confusing
- » **Pump:** nothing on the pump indicated which way the card should be turned
- » **Coffeemaker:** didn't make coffee because you didn't push down the power button all the way
- » **Clock:** The time was wrong because your cat stepped on the clock in the middle of the night and reset it for you

User Experience (1)

- » The experience the product creates for the people who use it in the real world
- » When a product is being developed, people pay a great deal of attention to **what** it does
- » User experience is the other, often overlooked, side of the equation— **how** it works — that can often make the difference between a successful product and a failure
- » UX is about how it works on the outside, where a person comes into contact with it

User Experience (2)

» From Wikipedia

» It refers to a person's emotions and attitudes about using a particular product, system or service. It includes the practical, experiential, affective, meaningful and valuable aspects of human–computer interaction and product ownership. Additionally, it includes a person's perceptions of system aspects such as utility, ease of use and efficiency.

User Experience (3)

- » From Wikipedia (ita)
- » Per esperienza d'uso s'intende ciò che una persona prova quando utilizza un prodotto, un sistema o un servizio. L'esperienza d'uso concerne gli aspetti esperienziali, affettivi, l'attribuzione di senso e di valore collegati al possesso di un prodotto e all'interazione con esso, ma include anche le percezioni personali su aspetti quali l'utilità, la semplicità d'utilizzo e l'efficienza del sistema.
- » L'esperienza d'uso ha una natura soggettiva perché riguarda i pensieri e le sensazioni di un individuo nei confronti di un sistema; inoltre è dinamica dal momento che si modifica nel tempo al variare delle circostanze

User Centered Design

- » The practice of creating engaging, efficient user experiences is called user-centered design
- » The concept of user-centered design is very simple
- » Take the user into account every step of the way as you develop your product

DESIGN??

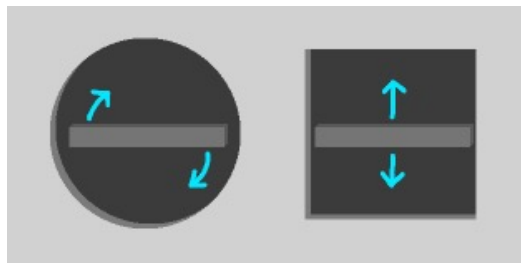
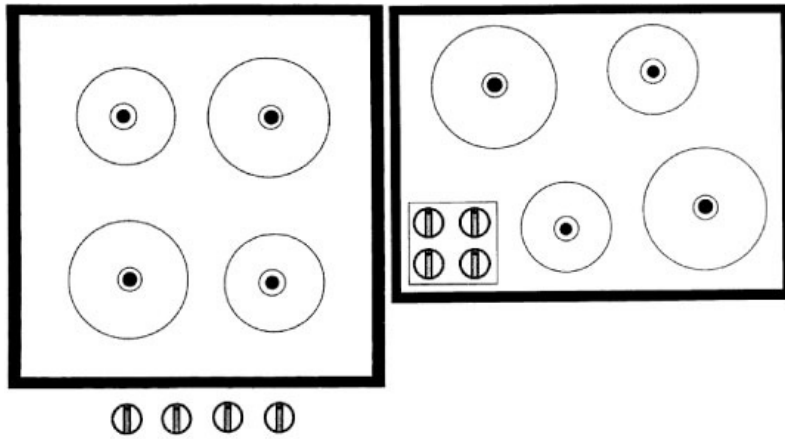
» The etymology of design goes back to the Latin

DE + SIGNARE

» to do something, to distinguish it with a sign, give it meaning, designate it in relation to other things, owners, users

» Based on this original meaning, you can say, design is making sense (of things)
Klaus Krippendorff, 1989

DESIGN is universal



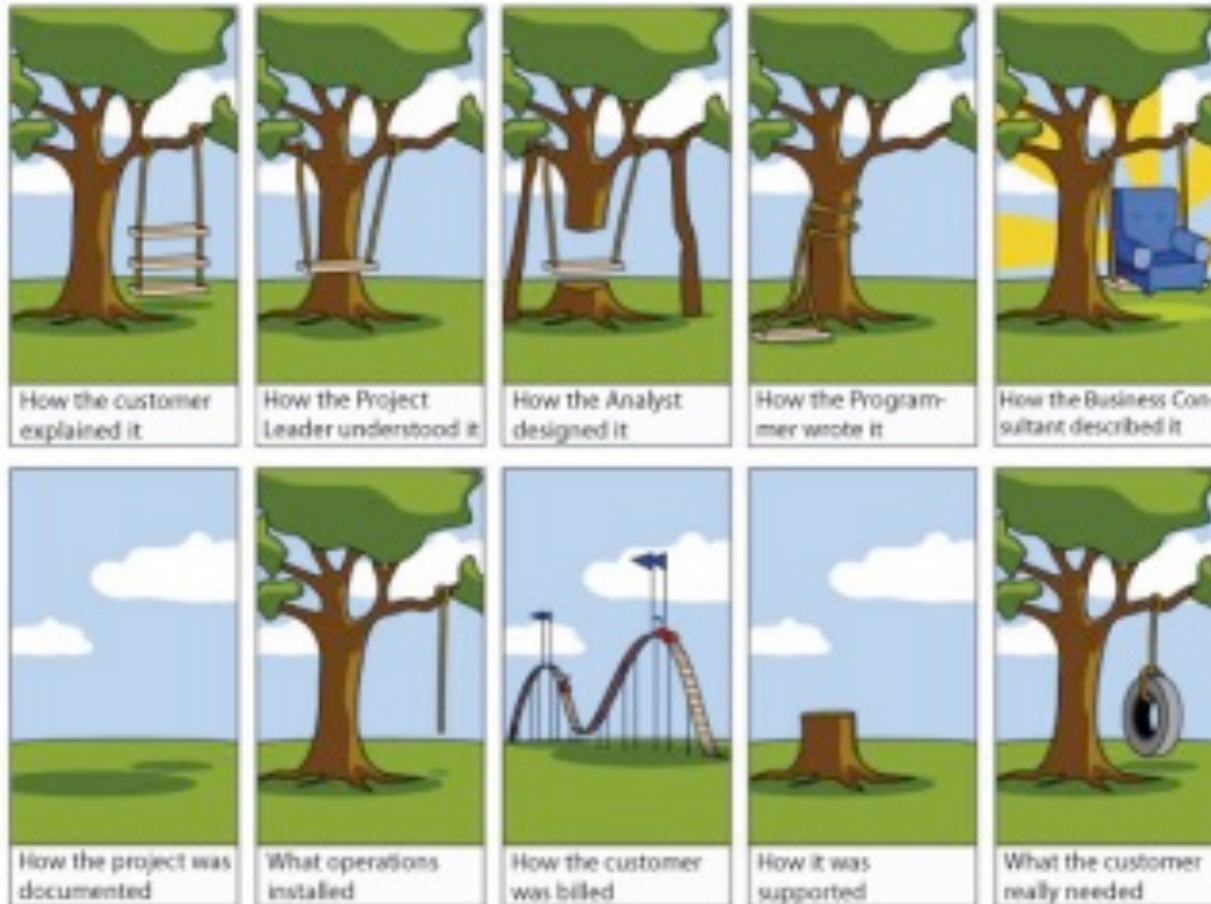
Good design?



- » The visual part of a design is only the tip of the iceberg
- » Foundation of a successful design
 - user-centered design
 - Process (UCD)

<http://paznow.s3.amazonaws.com/User-Centred-Design.pdf>

A World without User-Centered Design...



Definition of UCD (from Wikipedia)

» User Centered-Design (UCD) is ...

“a design philosophy and a process in which the needs, wants, and limitations of the end user of an interface or document are given extensive attention at each stage of the design process”

More formally...

» UCD is a **development cycle** which takes into consideration what users really need and makes **adjustments** by exploring, testing and tuning the design until these needs are satisfied

» The result of this is a **high level of usability**

UCD is Universal

» UCD can be applied to all design practices that have the aim to provide a good user experience

» Example

- websites
- architecture
- magazines
- graphics
- ...

UCD is a process

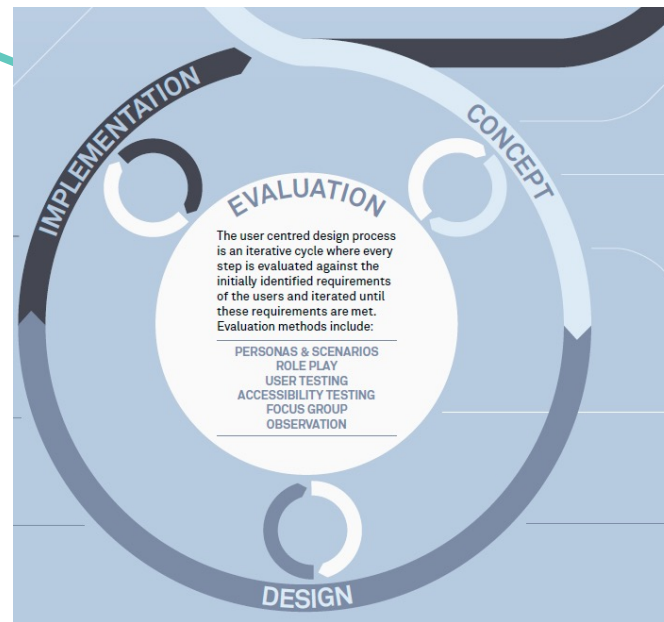
» Designers have to

- **analyze** and **foresee** how users are likely to use an interface
- **test** the validity of their assumptions in real world tests with actual users

UCD Process

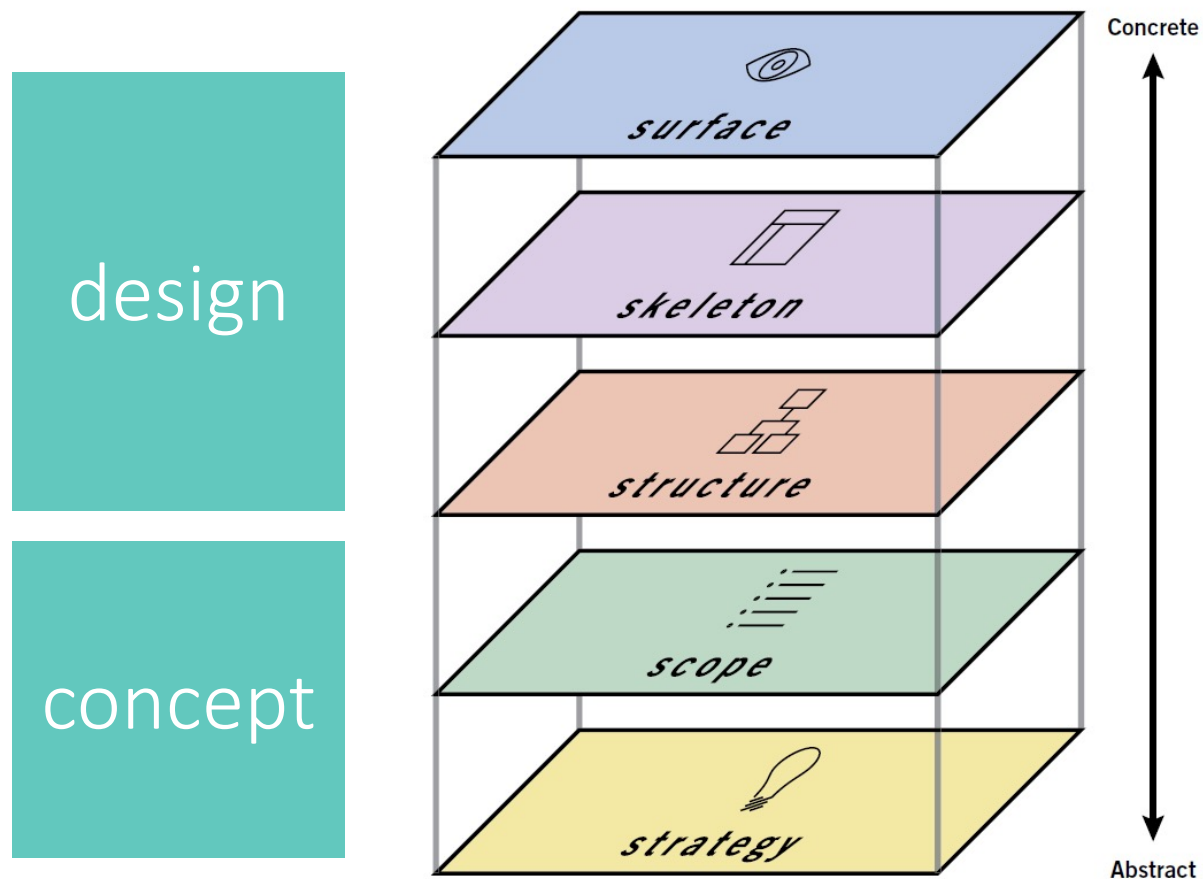
Analysis &
Planning

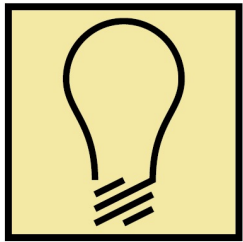
Launch



<http://paznow.s3.amazonaws.com/User-Centred-Design.pdf>

User Experience 5 planes (layers)





Strategy

» Planning out the objectives and goals of the project

» Product objectives: *what do we want to get out of this product?*

- Business goals
- Product overview (sketch product features)
- Competitors

» User needs: *what do our users want to get out of it?*

- User research
- Needs & goals
- Segmentation
- No context
- PERSONAS


Personas

» Invent fictional characters with their own story

Frank

"This stuff is all new to me. I want a site that will explain everything."


Frank is interested in learning how he can turn his hobby of making furniture into a business.




Age: 37
Occupation: School bus driver
Family: Married, one child
Household income: \$60,000/year

Technical profile: Somewhat uncomfortable with technology; Apple iMac (about two years old); DSL Internet connection; 8-10 hours/week online
Internet use: 100% at home; entertainment, shopping


Favorite sites:



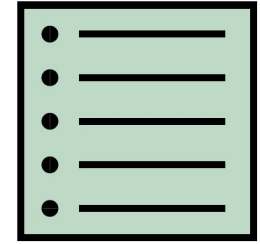
ESPN.com



moviefone.com

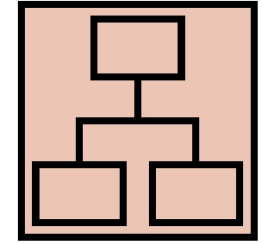


eBay.com



Scope

- » Definition of requirements, functional specifications, data sources, scenarios
- » Features of the app
 - What does it do
- » Prioritized Requirements
 - Constraints, rules, etc.
- » Type of managed content
 - How does it manage text, video, audio
 - Data provenance (external API, web service, DB ...)
- » Scenarios (using personas)
 - Describe how personas may interact with the app

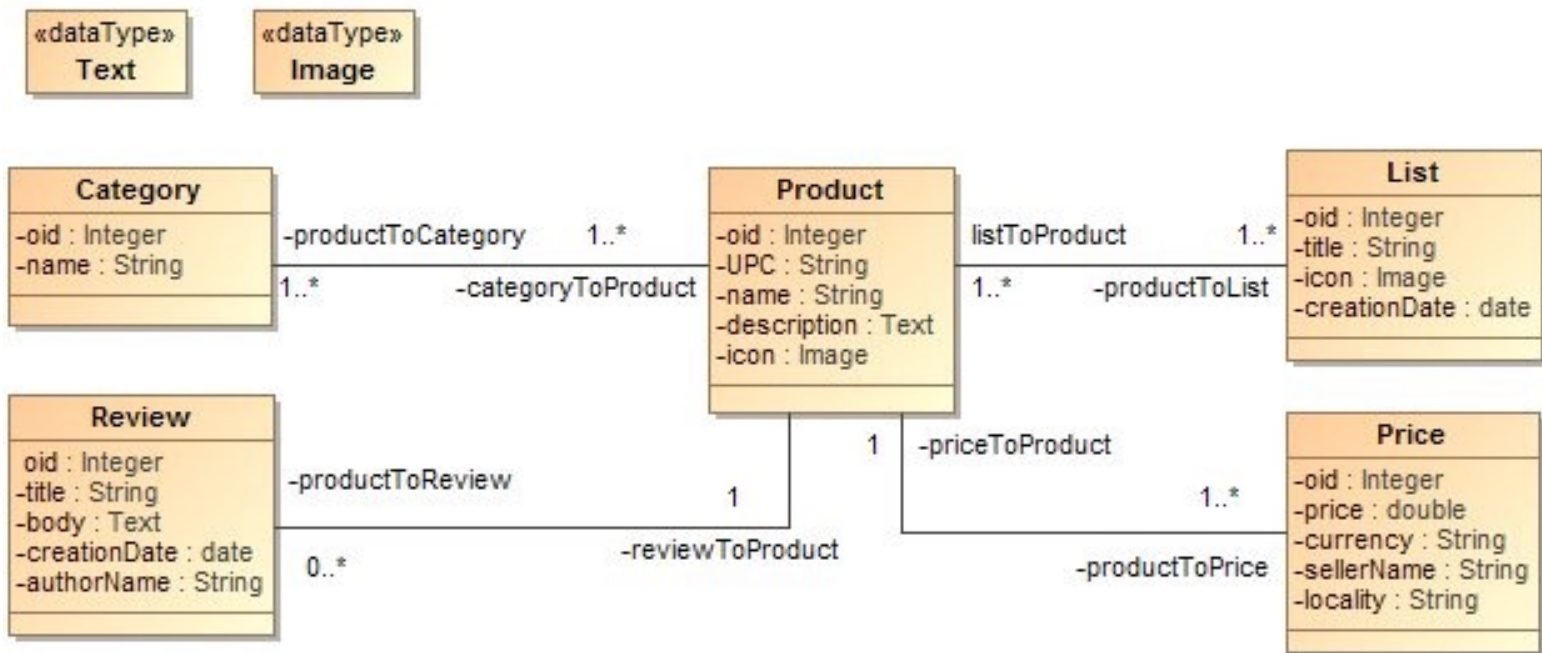


Structure

- » Structural design of the information space
- » how the user moves through and makes sense of tasks and information
 - Information architecture
 - Views definition and **CONTENT NOMENCLATURE**
 - Interaction design
 - Navigation among views via a **NAVIGATION MODEL**

Domain models

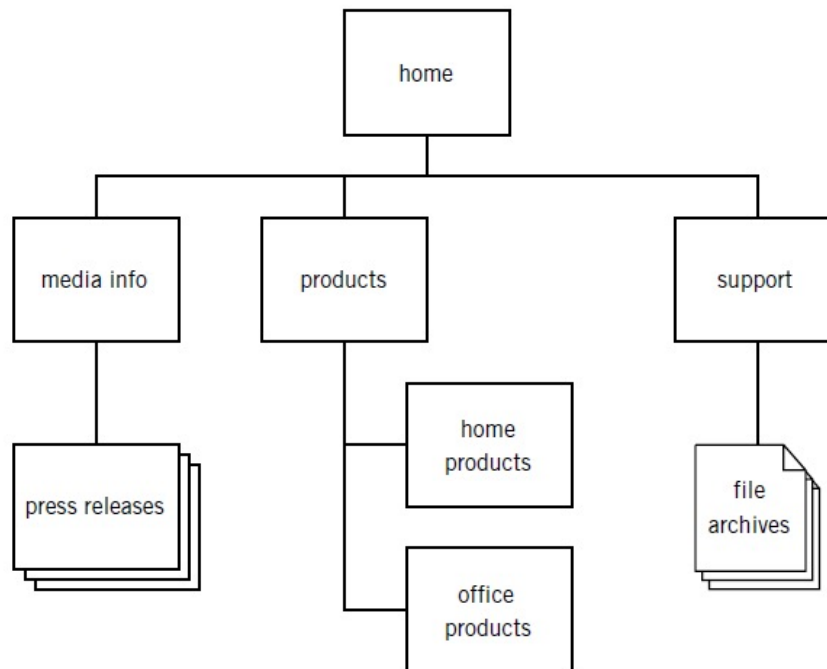
» Conceptual model of the domain that incorporates both behavior and data.



Navigation models

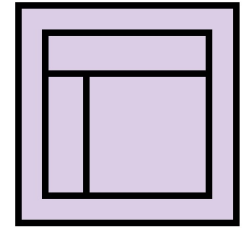
» They represent

- **relationship** of content to other content and
- how the user **travels** through the information space



For more details:
<http://www.jjg.net/ia/visvocab/>

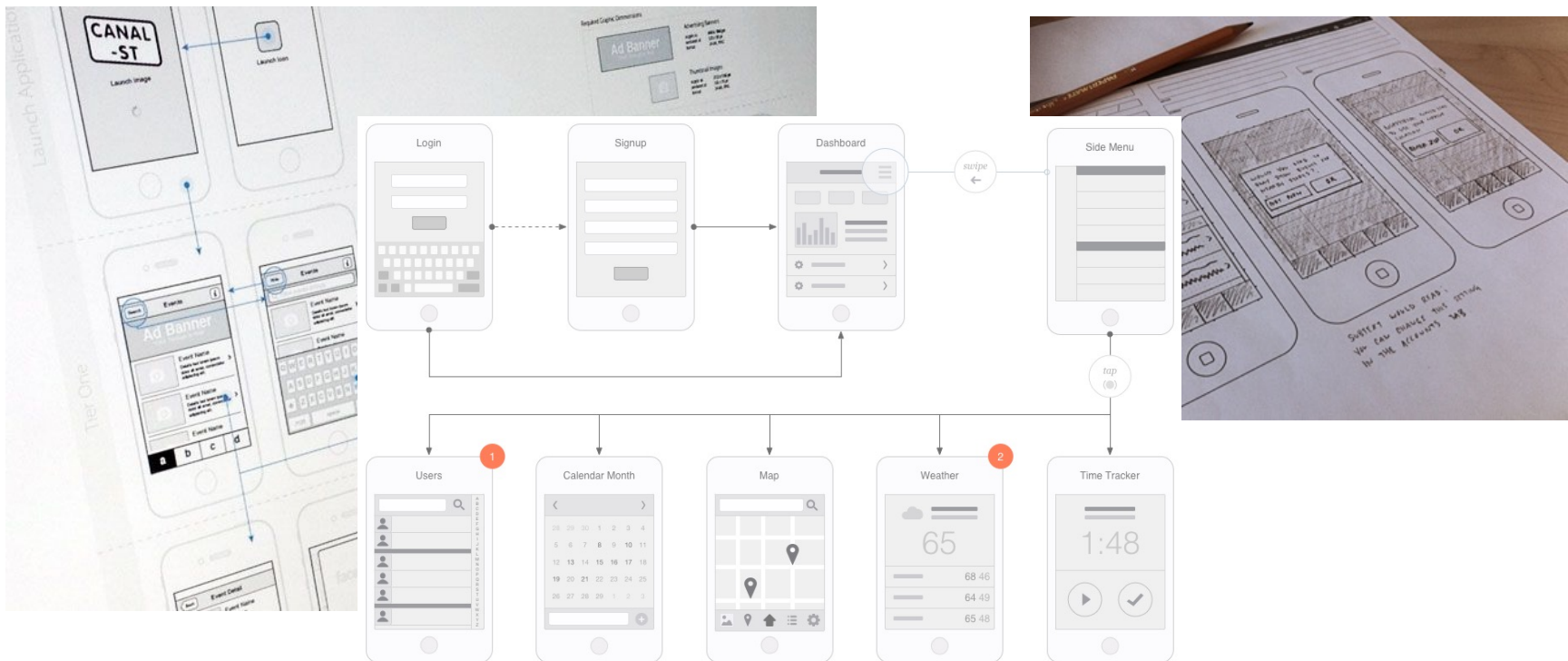
Skeleton

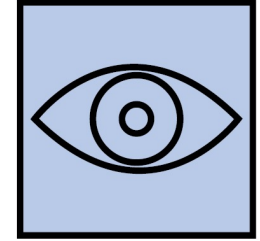


- » Designing how information is presented to facilitate understanding
- » Interface design
 - Buttons, checkboxes, lists, etc.
- » Detailed navigation design
 - How the user travels among views
- » Information design
 - How to arrange and group info + wayfinding
- » LO-FI WIREFRAMES
 - Low fidelity for preventing confusion of visual design concepts with information design concepts

LO-FI wireframes

» Views + user interaction + navigation
– a refinement of navigation models



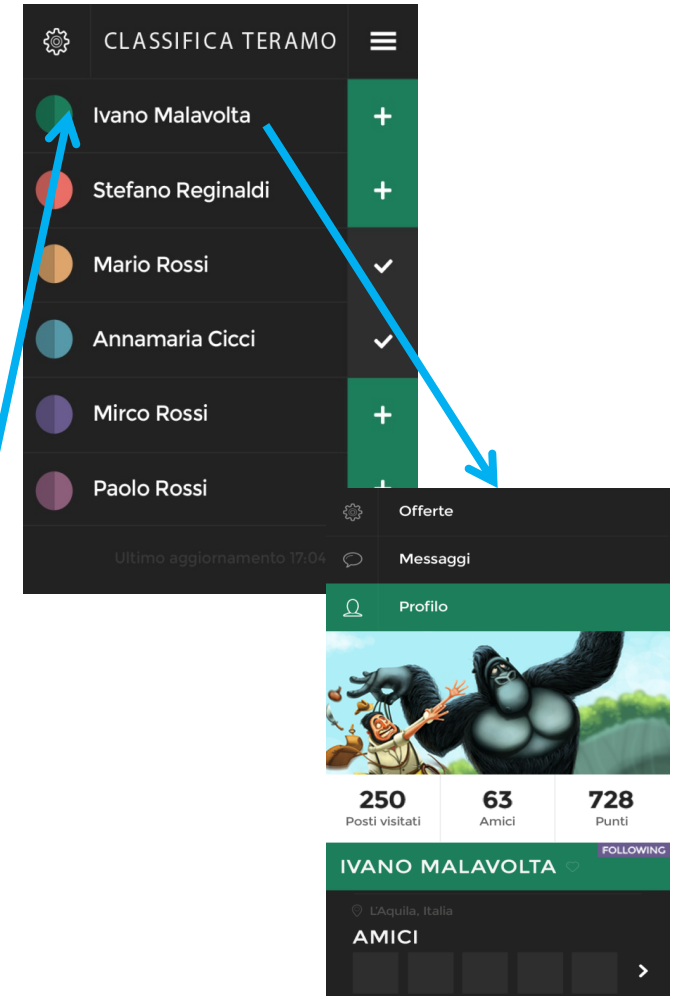
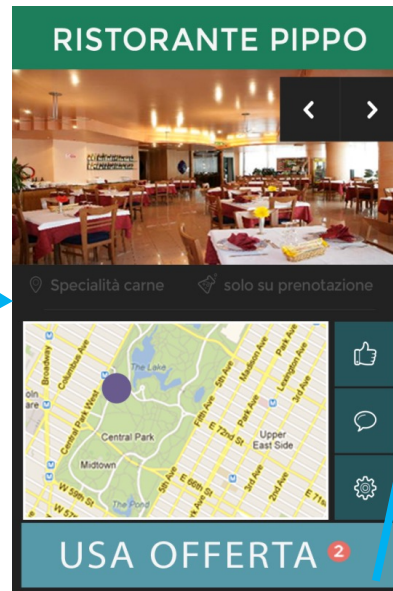


Surface

- » The look and feel of the product
- » Typography, colour palette, alignment, texture, etc.
- » HI-FI WIREFRAMES (close to mockups)
- » PROTOTYPES

Hi-fi Wireframes

» Detailed, realistic wireframes



Prototypes

» Wireframes cannot represent complex interactions

- Prototyping

» Different kinds of prototype

- Paper prototype
- Context prototype
- HTML prototype



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Play Store

<https://marvelapp.com/pop/>

Summary

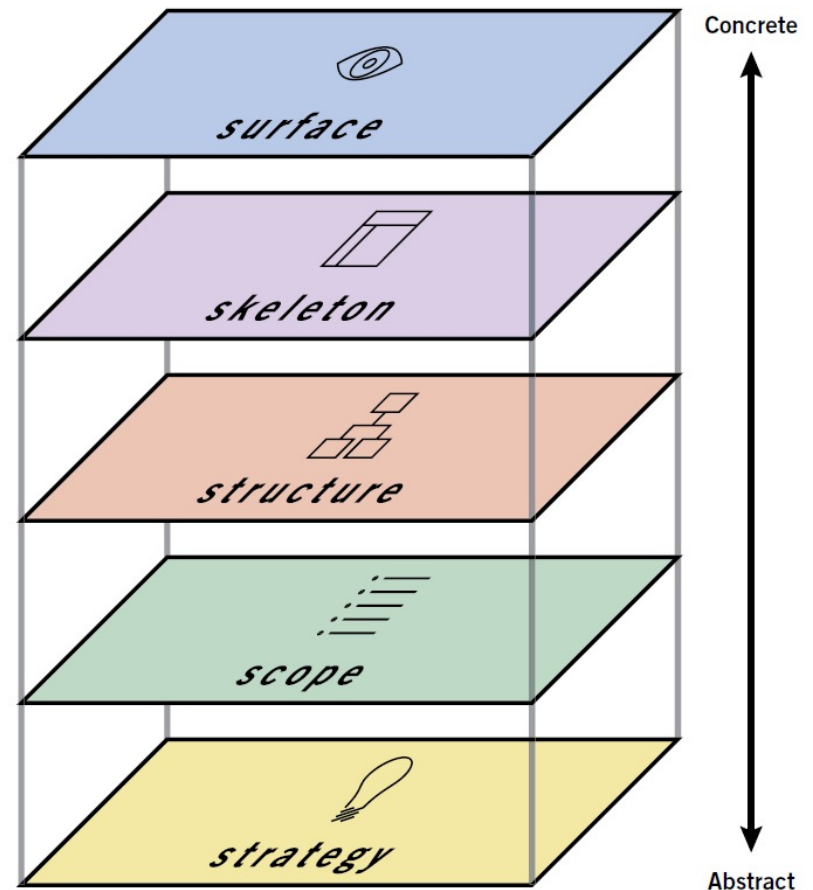
Hi-fi wireframes + prototypes (if needed)

Lo-fi wireframes + wayfinding info

Navigation model + data model

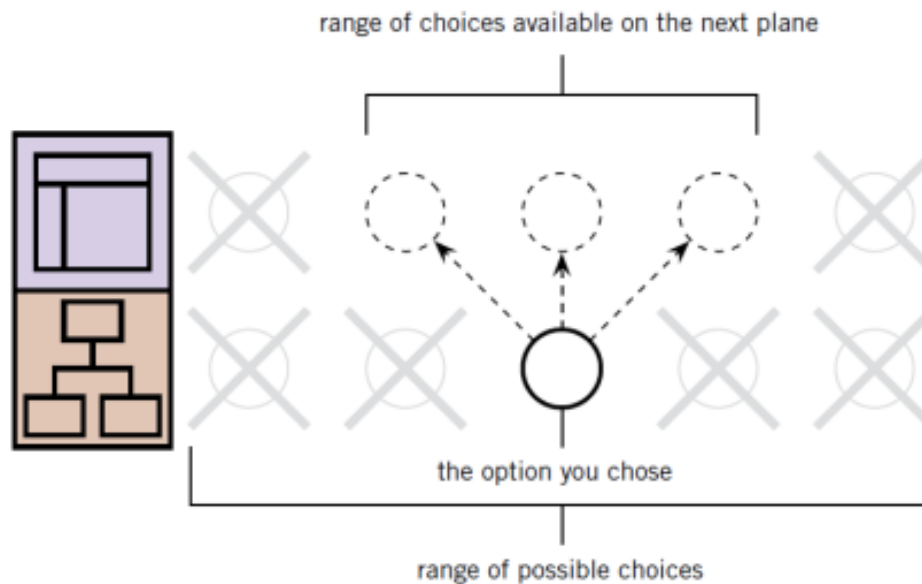
Scenarios (with ctx) + functionalities

Product overview + objectives
+ Personas + competitors



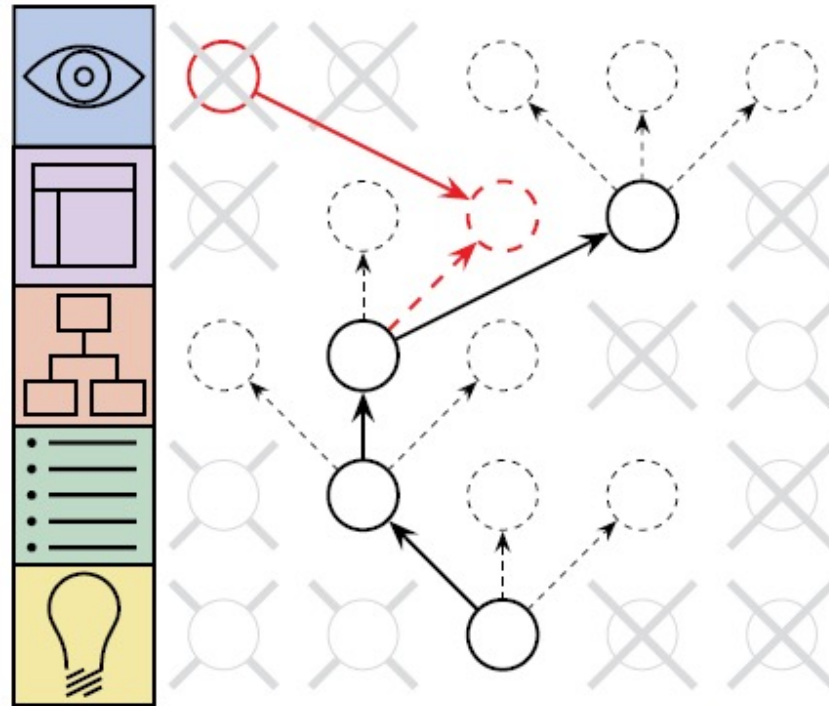
Planes dependencies (1)

» The choices you make on each plane affect the choices available to you on the next plane above it

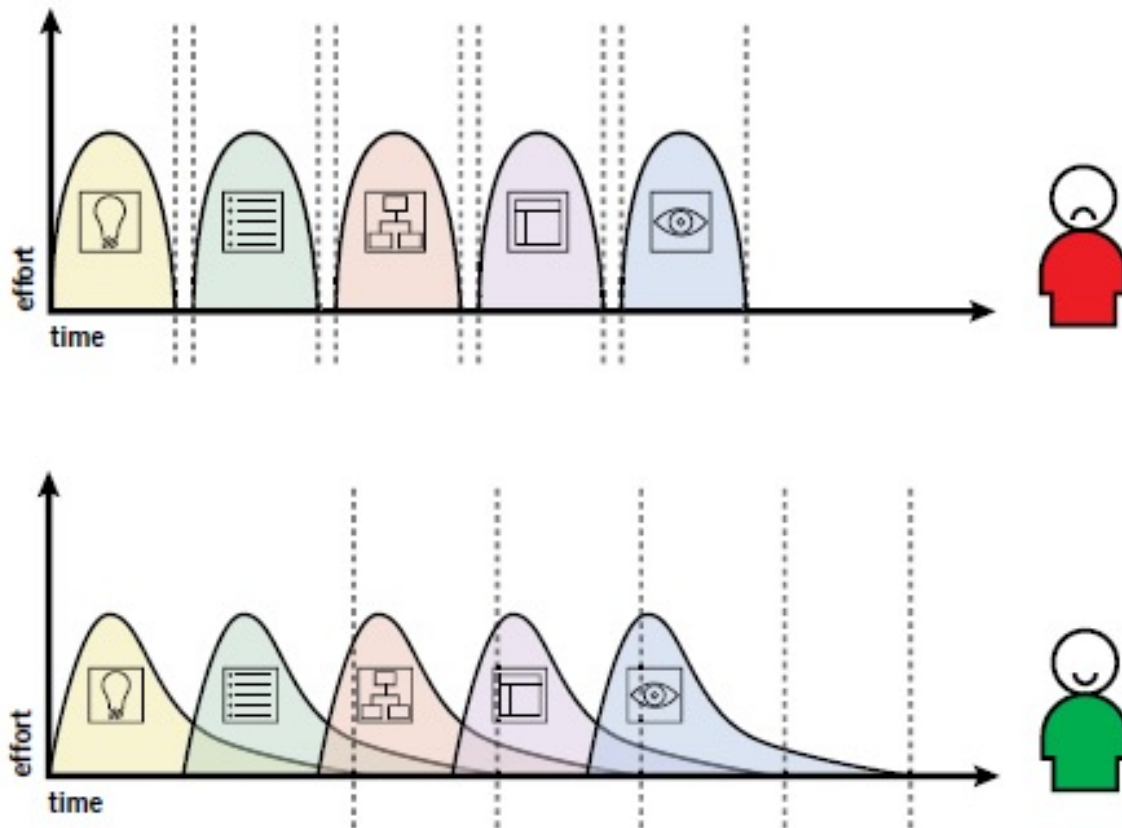


Planes dependencies (2)

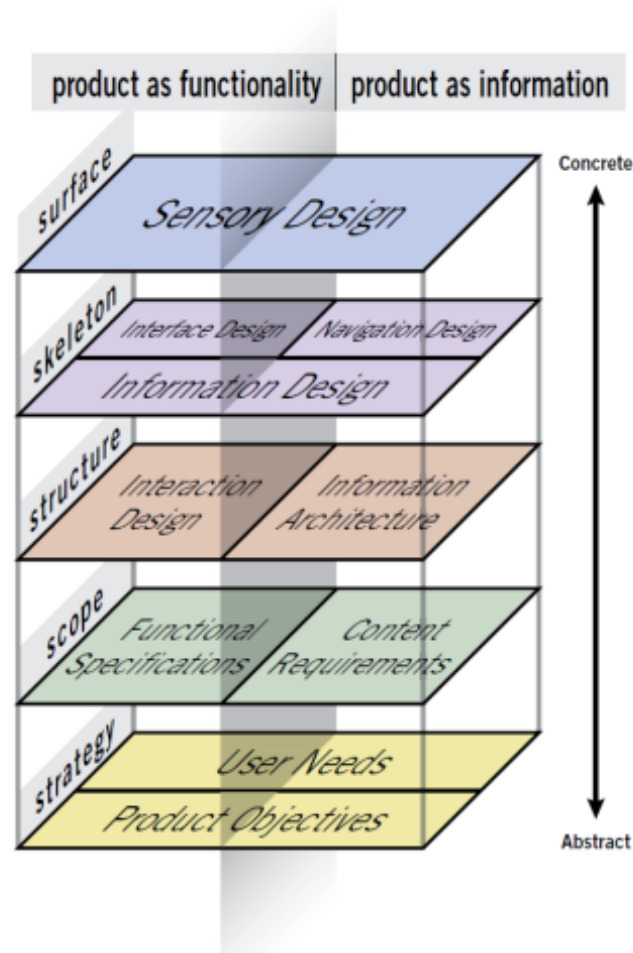
» **Ripple effect:** If you choose an option out-of-bounds, you have to rethink lower options



Be elastic



Basic dually



Outline

- » Elements of User Experience
- » **Navigation Model**
- » Wireframes

Roadmap

- » Introduction to the Navigation Model
- » Navigation Model Elements
 - Pages
 - Files
 - Connectors & Arrows
 - Concurrent Sets
 - Continuation Points
 - Areas
 - Iterative Areas
 - Flow Area
 - Decision Point
 - Conditional Connector
 - Conditional Branch
 - Conditional Selector
 - Cluster

Symbology

- » We will use a basic symbology
 - for diagramming information architecture
 - and interaction design concepts

- » Proposed by **Jesse James Garrett**
 - he coined the term Ajax, by the way



Information Architecture

» It is about

- Conceptual structure
- Organization of content

» It is **NOT** about navigation among views

Interaction Design

» It is about

- navigation among views
- how the user flows through defined tasks

» It is **NOT** about navigation details

- buttons, checkboxes, pictures, etc... are not defined here, they are part of wireframes

Goal of the sitemap symbology

- » To describe at a high level the **structure** and **flow** of the user experience of a website or app
 - Features
 - Simple
 - Tool-independent
 - Small
 - Self-contained
- » Focus is on the macro-structure
- » A visual vocabulary for describing information architecture and interaction design: <http://jjg.net/ia/visvocab>

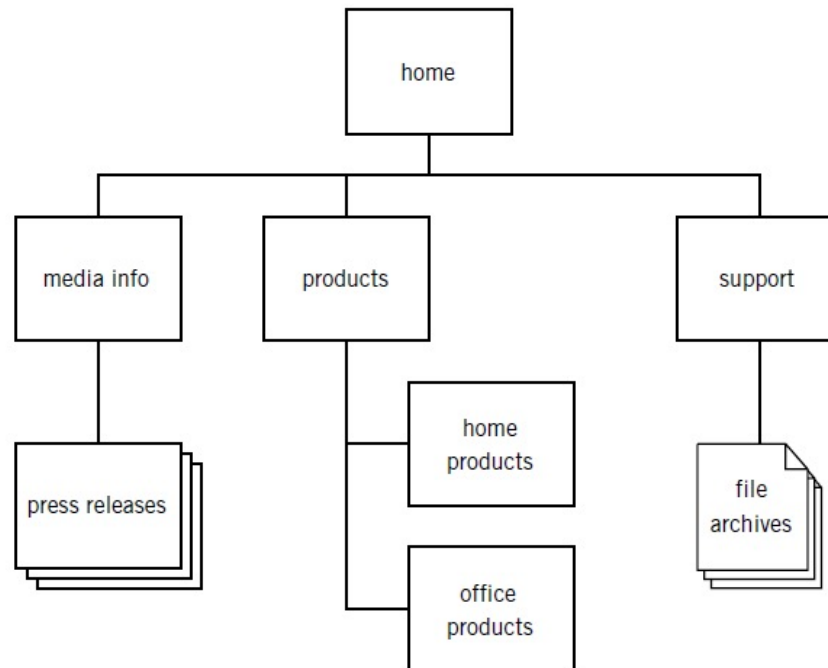
Audience

- » Project managers and sponsors
 - to get a general sense of the project
- » Content producers
 - to derive content requirements
- » Interface designers
 - to derive interface design requirements
- » Technologists
 - to derive functional requirements
- » Information architects
 - to derive navigational and interface requirements

Sitemaps

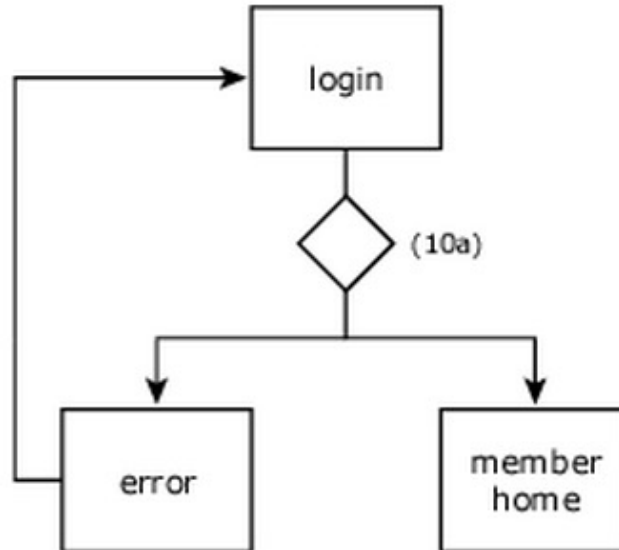
» Focus on

- Relationship of content to other content and
- How the user travels through the information space



Conceptual model

- » The system presents the user with **paths**
- » The user moves along these paths **through actions**
- » These actions then cause the system to **generate results**



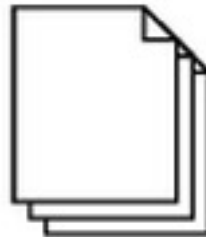
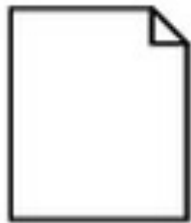
Pages (Views)

- » Pages are the fundamental unit of presentation
- » They are also called views
- » Not (necessarily) a unit of implementation
- » One page in your diagram may correspond to multiple files
- » Pages can be organized into a page stack
- » Page stack: functionally identical pages with identical navigational treatment



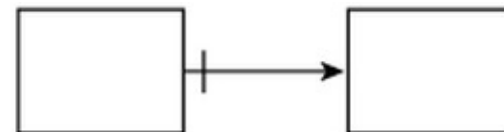
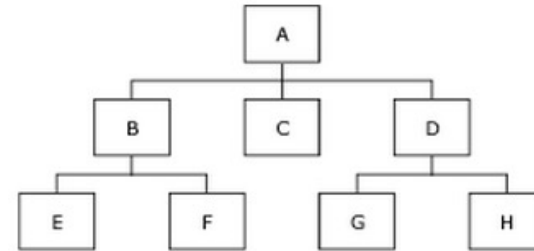
Files

- » Files are parcels of data without navigational properties
- » They are delivered to the user for use outside the app
- » Files can be organized into a file stack



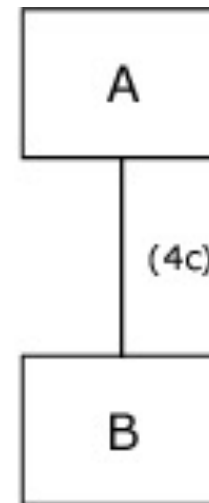
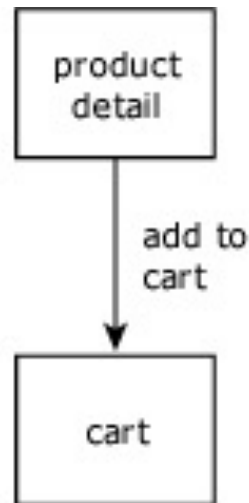
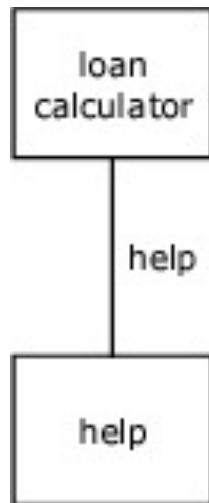
Connectors & Arrows (1)

- » Relationships between elements are depicted with simple lines
- » Arrows to convey directionality
 - they indicate how the user will move through the system
- » A crossbar on the opposite end of the arrow is used to prohibit upstream movement



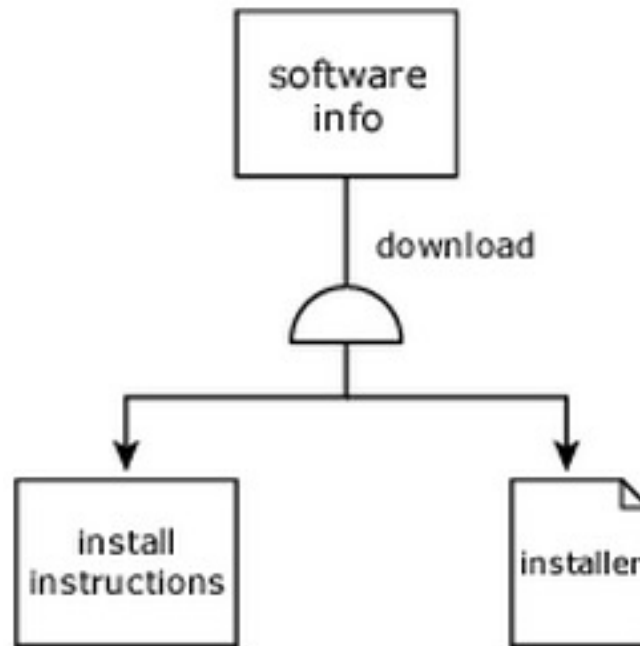
Connectors & Arrows (2)

- » Connectors and arrows can also be labeled
- » If the labels become long, point the reader toward a footnote or appendix entry



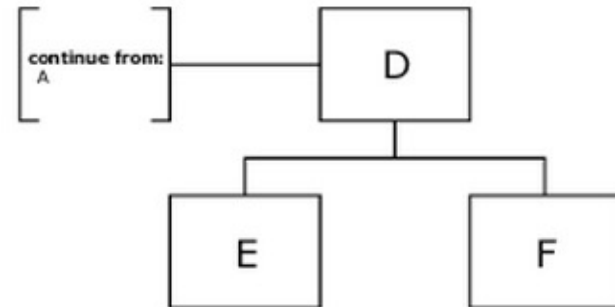
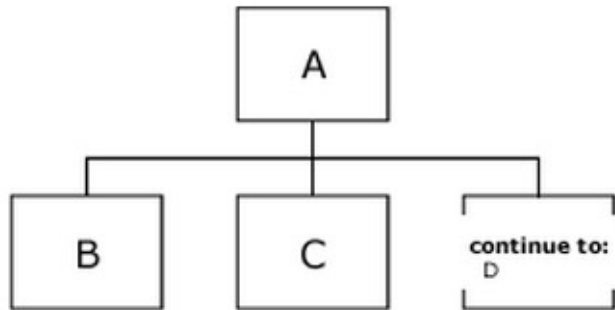
Concurrent Set

» It is used when a user action generates multiple simultaneous results



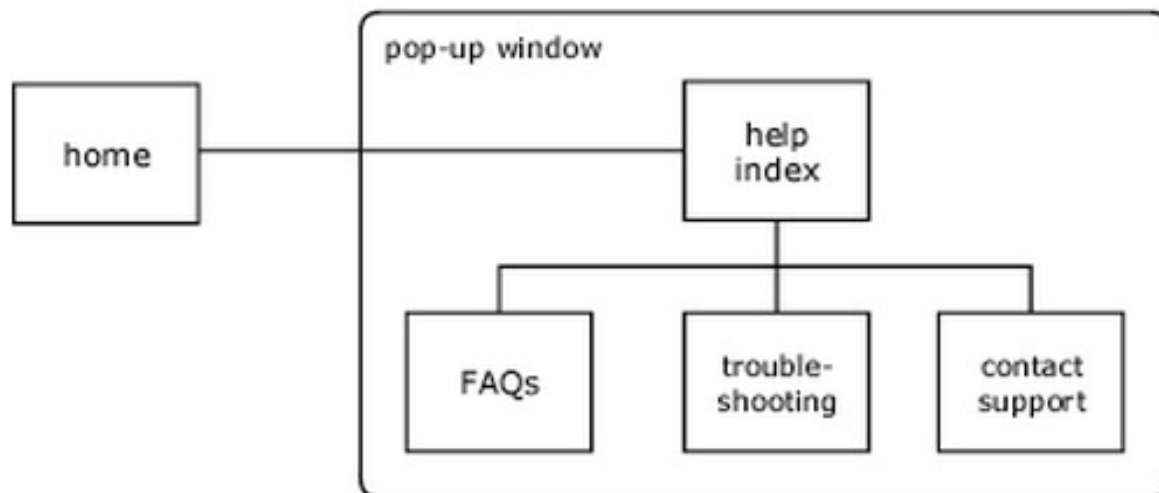
Continuation Points

» Continuation points allow us to split our diagrams



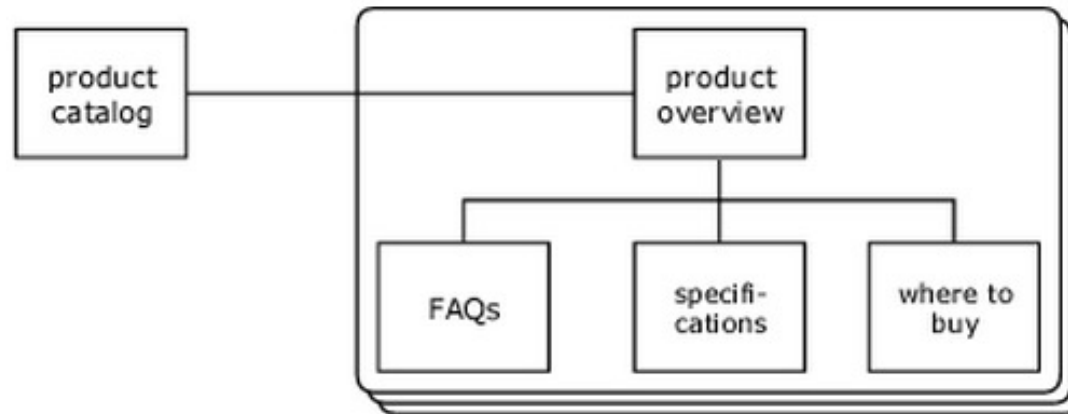
Areas

- » They are used to identify a group of pages that share one or more common attributes
- » Example: appearing in a pop-up window having some unique design treatment



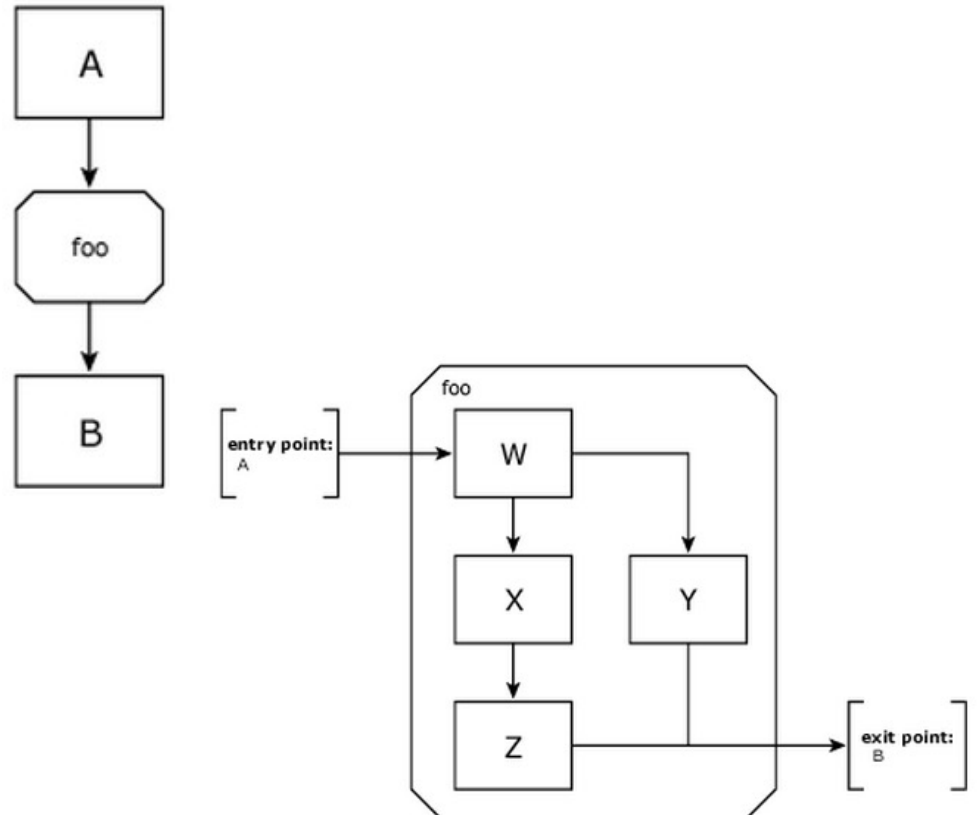
Iterative Areas

- » They are used to represent architectures that involve repeating the same basic structure as it is applied to a number of functionally identical information elements
- » Example: a product catalog in which each product has a number of associated pages



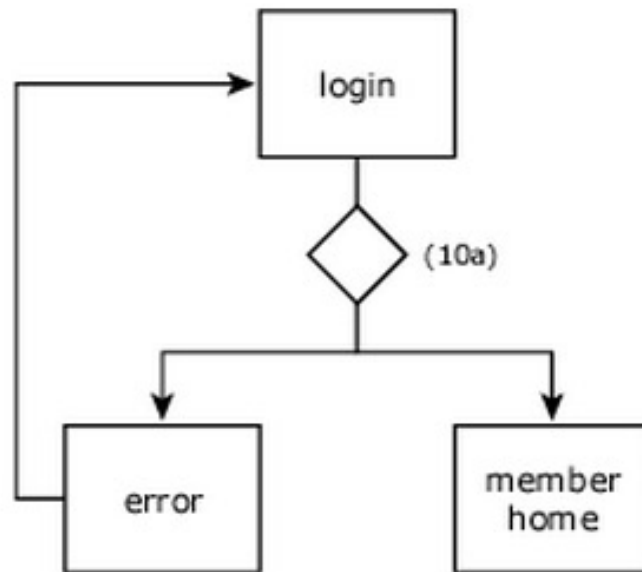
Flow Area

- » It encloses a sequence of steps that will appear repeatedly in the diagram
- » Example: login procedure
- » They require the two special types of continuation points: entry points and exit points



Decision Point

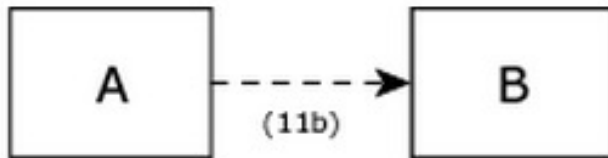
- » It is used when a user action may generate one of a number of results, and the system must make a decision about which result is to be presented



(10a) correct credentials?

Conditional Connector

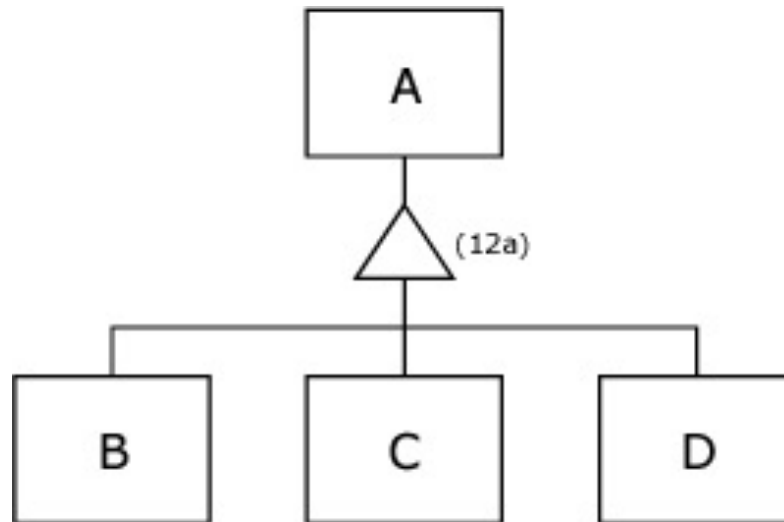
- » It is used when a path may or may not be presented to the user depending upon whether one or more conditions are met



(11b) only company employees can have access to B

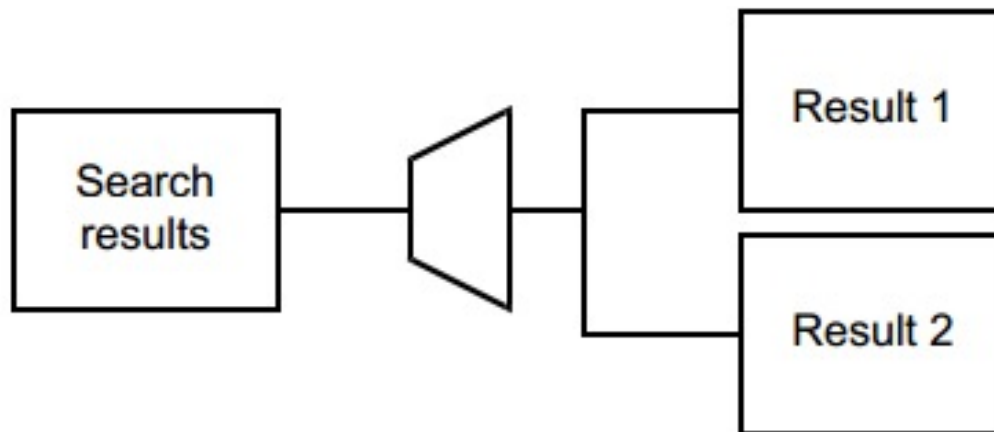
Conditional Branch

- » It is used when the system (**not based on user action**) must select one path among a number of mutually exclusive options



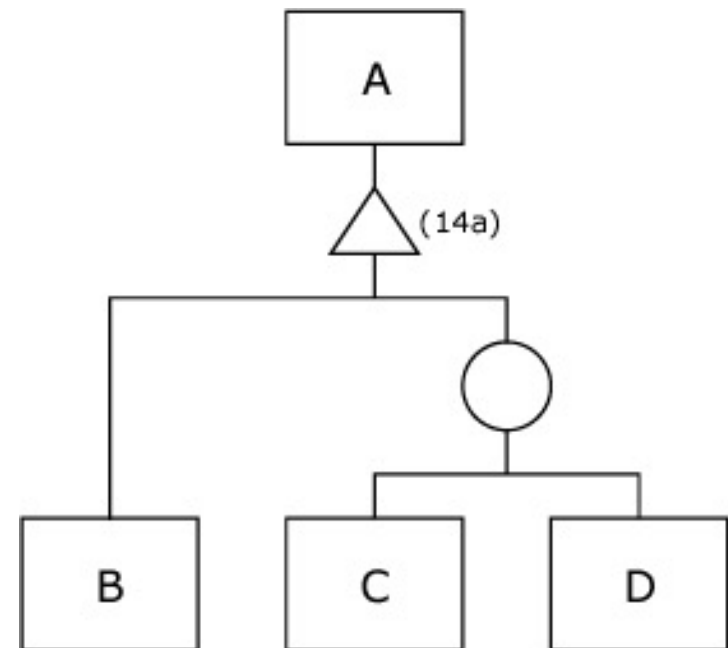
Conditional Selector

- » Same as conditional branch, but paths are not mutually exclusive
- » Most common application of the conditional selector is in results generated by a search engine



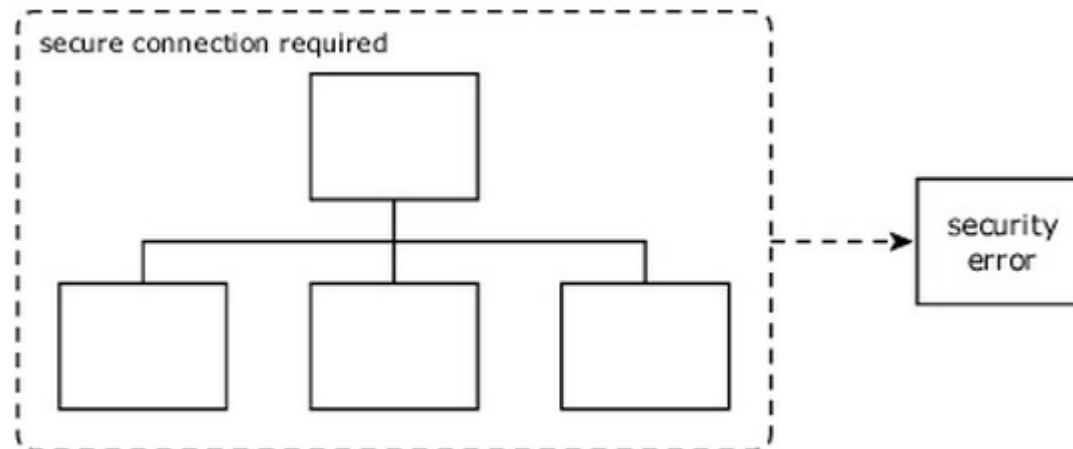
Cluster

- » Similar to conditional selector, system allows more than one path for certain conditions
- » If the attribute being evaluated has value x , the user sees a path to page B; but if the attribute has value y , the user sees paths to both page C and page D



Conditional Areas

- » It is used when one or more conditions apply to a group of pages
- » An outgoing result is generated if the condition is not fulfilled
- » Example: access permissions

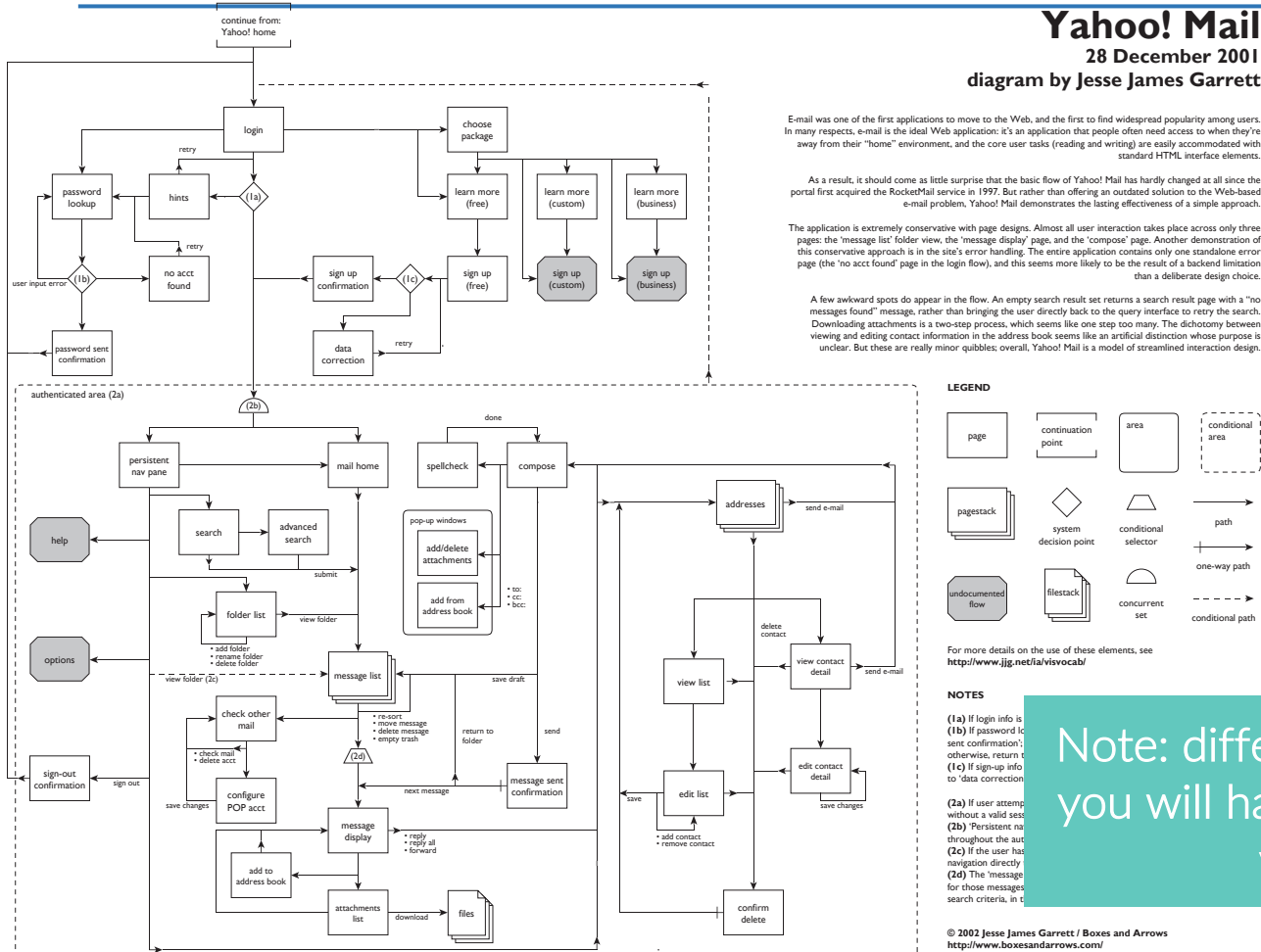


Example - Yahoo mail

Yahoo! Mail

28 December 2001

diagram by Jesse James Garrett



Note: differently from this example, you will have a single page for each view of the app

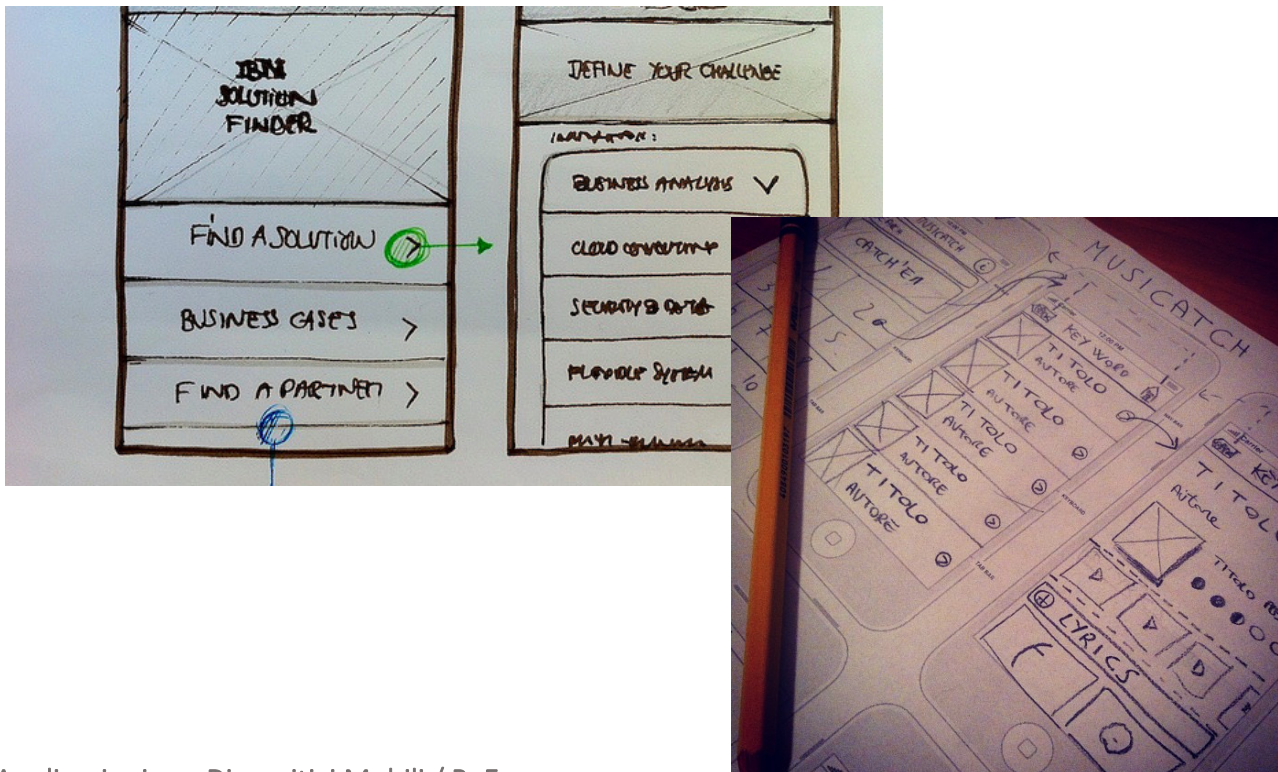
http://boxesandarrows.com/files/banda/jjg_ymail_poster.pdf

Outline

- » Elements of User Experience
- » Navigation Model
- » **Wireframes**

Wireframes

» Views + user interaction + navigation



Sitemap → LO-FI wireframe (1)

» A LO-FI wireframe is built on the sitemap and has a focus on

- The LAYOUT of the views
- Interaction with elements within the views

» Low fidelity for preventing confusion of visual design concepts with information design concepts



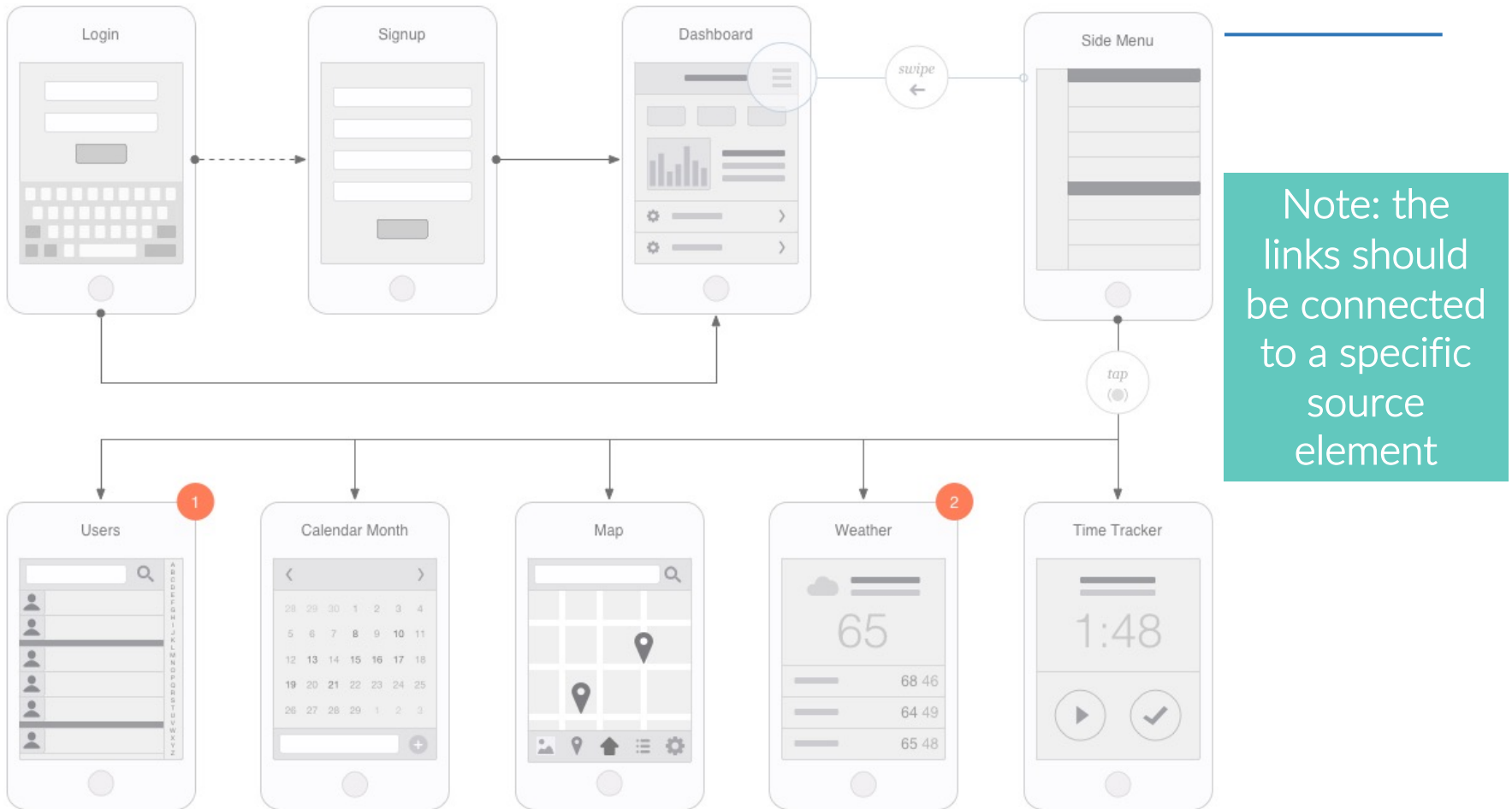
Sitemap → LO-FI wireframe (2)

- » Sitemap page → wireframe view + interactions
- » Sitemap transition → link with gesture icon



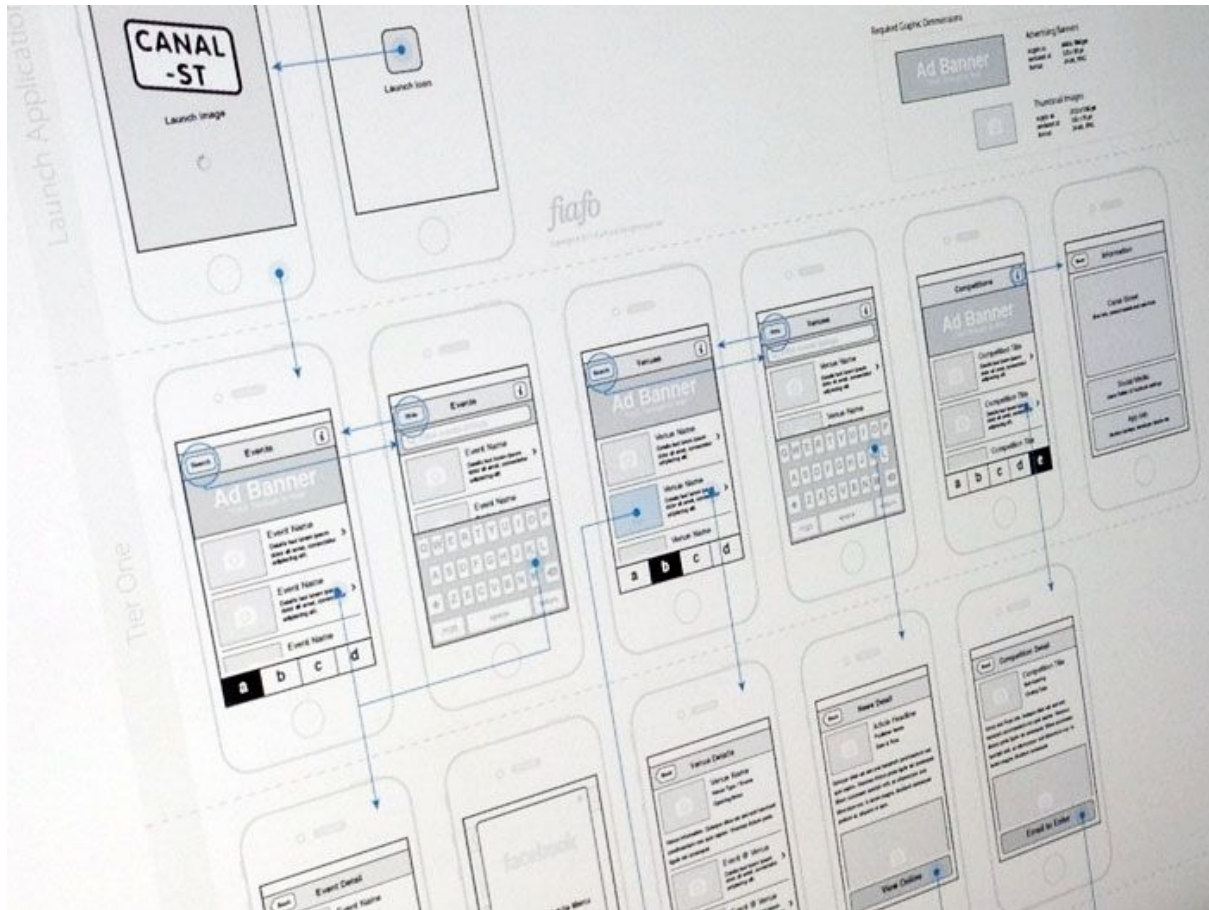
- » Better doing it manually in an A3 sheet
- » Then translate it using a wireframing kit e.g.
<http://graphicburger.com/app-wireframes-kit/>
<http://goo.gl/i5dxjk>

Example 1



<http://uxkits.com/products/mobile-app-visual-flowchart>

Example 2



<https://www.pinterest.com/pin/391742867560358518/>

Tools for LO-FI wireframes

» <https://www.draw.io>

» <https://www.justinmind.com/>

» <https://balsamiq.com/>

» <https://dzone.com/articles/27-open-source-web-ui-mockup-tools>

HI-FI Wireframes

- » An HI-FI wireframe is a refinement of a LO-FI wireframe with a focus on
 - How each view will appear in details
 - Sensory sensations of the user

» Typography

» Colour palette

- <https://color.adobe.com/>

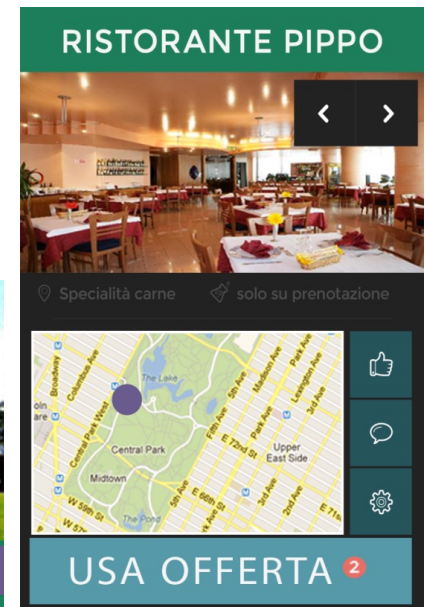
» Textures + everything about the look & feel

www.justinmind.com

inspireui.com

www.designer.io

<https://www.figma.com/>



In your project

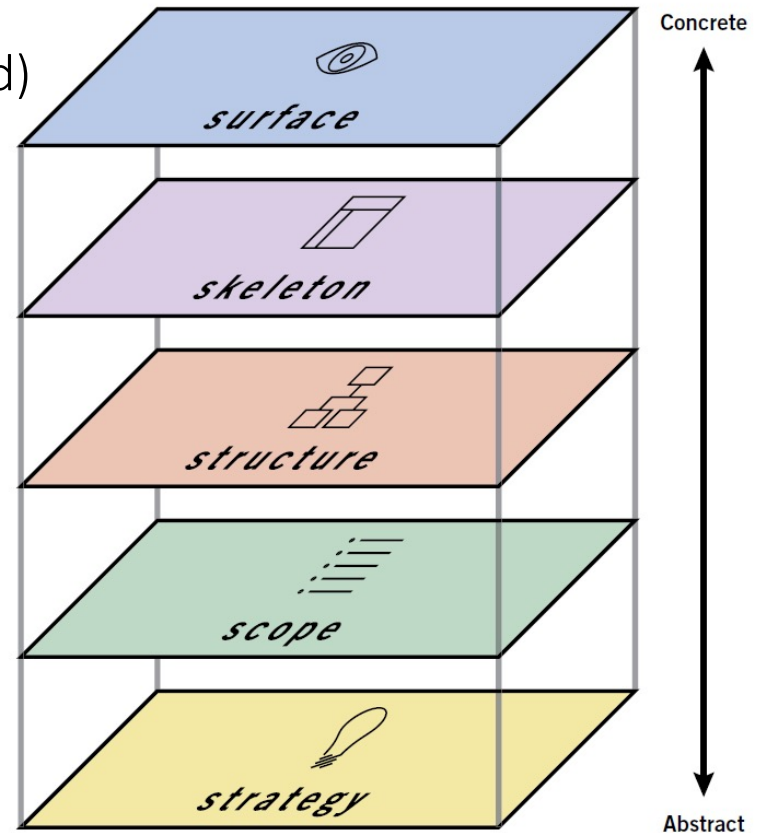
HI-FI WIREFRAMES + prototypes (if needed)

LO-FI WIREFRAMES + wayfinding info

NAVIGATION MODEL + DATA MODEL

Scenarios (with ctx) + FEATURES

Product overview + OBJECTIVES + Personas
+ competitors



LAB

1. Create the navigation model of the app
2. Sketch down the wireframe of some views of the app