

# Human-Computer Interaction

## Understanding Web UI Elements and Principles

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# Agenda

- The Essence of Interface
- Input Controls
- Navigation
- Animations
- Default Settings
- Guided Actions
- Visual Clarity & Language Clarity
- The "MAYA" Principle
- Takeaway

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# The Essence of Interface

- You're designing the interface for the Facebook homepage.
  - Ask yourself “*What are the jobs people want to do here?*”
  - The answers will be things like *sharing* news, pictures, messaging, *sending* and *receiving* invitations, etc.
- ”A web interface is a collection of jobs, not just pretty screens and pixels.”
  - Each of these jobs needs a beginning, a middle, and an end.
    - Users want to post news → click in “Update Status” box (beginning).
    - This expands the message window → allows to type their message (middle)
    - When they are finished, they click “Post” and can see their new Status Update appear on the screen so that they know it's official (end)

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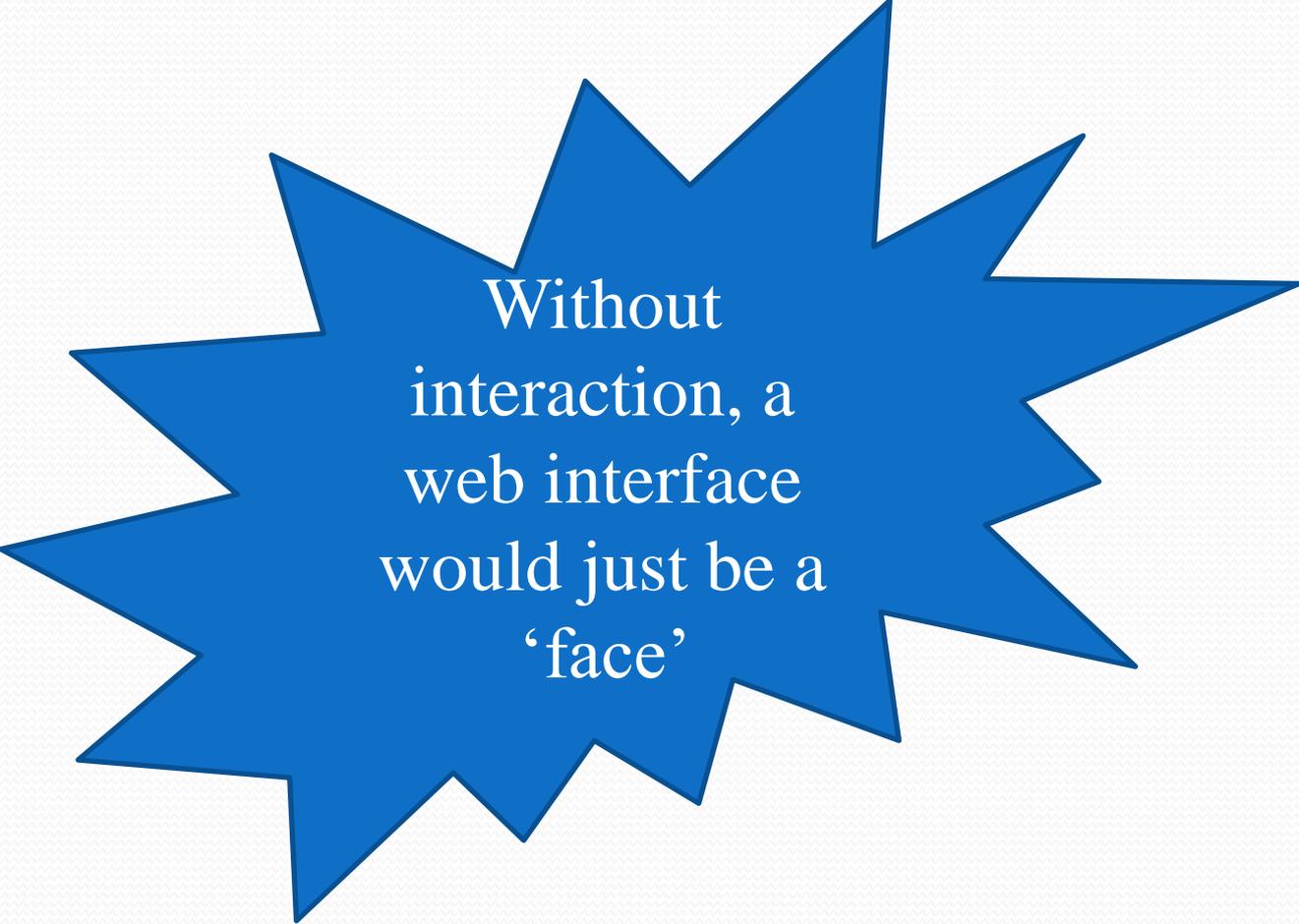
# Input Controls

- Interface would just be a “face” without interaction, and a lot of that comes from input controls.
- But there’s a paradox with controls, because users want more options, but every new control complicates the UI and clutters the screen.
- The best way to strike that perfect balance, is to have **controls on demand** (Dmitry Fadeyev - founder of Usaura)

# Input Controls

- Hiding controls until needed → save on screen space without having to sacrifice user options.
  - It's a win-win solution that's been adopted by most highprofile websites at this point.
- Controls can be hidden and revealed by:
  - hovering over the affected content (**Pinterest**)
  - hidden in collapsed drop-down menus via tabs (**Google Docs**),
  - hybrid of the two, as with the **CollabFinder**

# Input Controls



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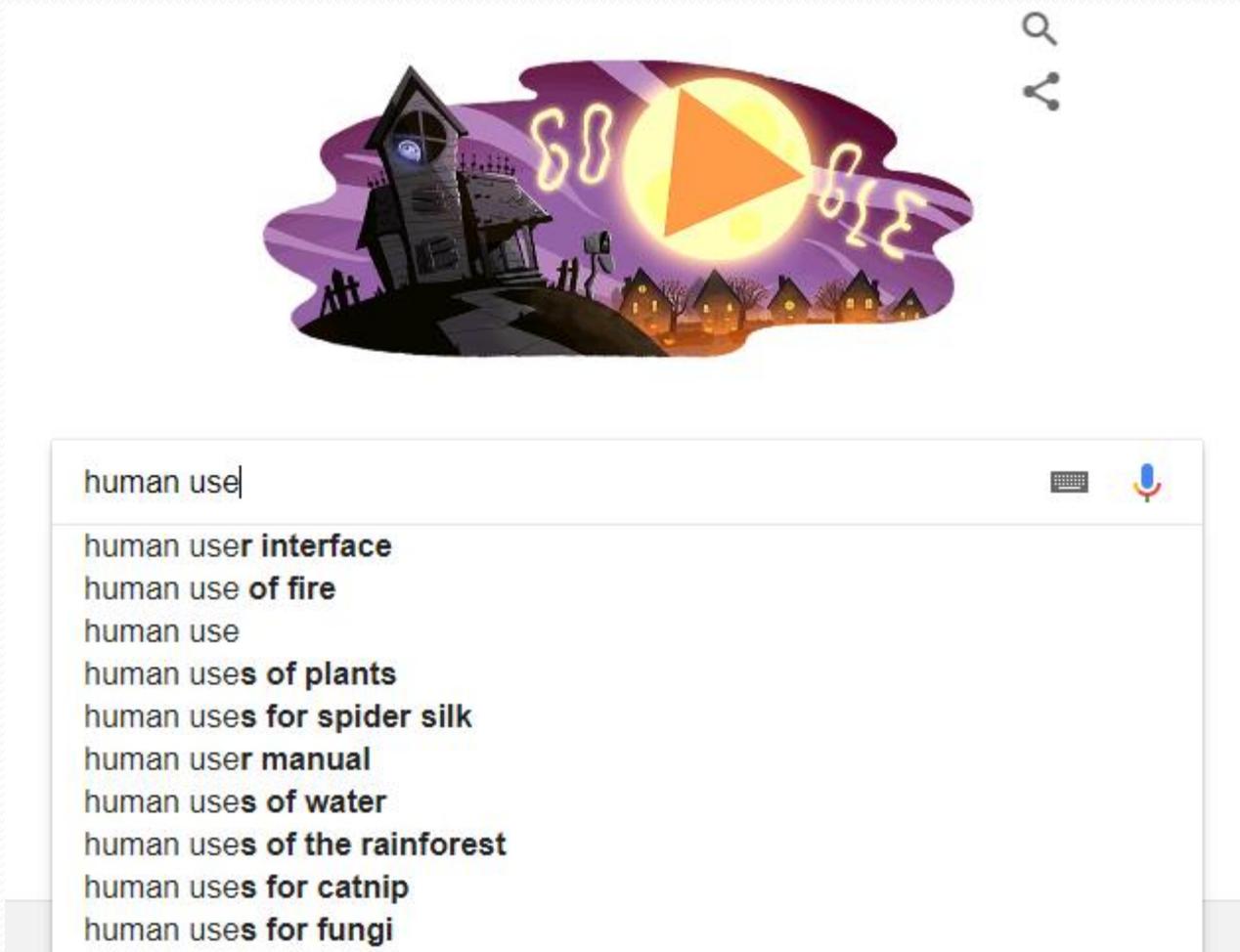
# Text field

- A customized input field can help infuse some personality into your site, or even avoid an unfortunate clash of colors with generic designs.
- Fadeyev offers some help with the coding
  - If your site is focused on a certain input field, or if input is a necessary first step, you should implement an **auto-focus** on that input field so that the cursor starts there automatically.
  - The best example of this is Google:
    - entering the site, the user can start typing their query without clicking anywhere.
    - also incorporates **default values** and **auto-complete**, which significantly speeds up user actions and helps users explore additional topics and themes

# Text field



# Text field



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# Navigation

- It's hard to appreciate a site if you're lost, which is why **navigation is mandatory** when discussing web UI design

Solutions / Adobe Marketing Cloud / Core services /

Mobile services / App-centric user interface

*source: Adobe*

# 2 cardinal rules of navigation

- **1. Users should always know their current place in the site**
  - This is instrumental in making your users feel comfortable, and streamlines the site on their end.
  - Ways to orient your user involve highlighted menu items, breadcrumb trails, and headings
- **2. The navigation system remains consistent**
  - Don't move your menu bar around.
  - For example: Imagine how frustrating it would be if you were lost in a city, and streets signs switched between posts, the sides of buildings, the sidewalk, etc

# Navigation

- Your **navigation** needs to match the flow of **content** via proper **placement**.
- **Content**: the site's content is complete before tackling the navigation.
  - If your content is lacking, even the best navigation won't save the site.
  - Navigation must support the content

# Navigation - Content

- **Menus** – The default choice for users to find site content.
- **Breadcrumbs** – Many users do not land on the homepage, so orientation is essential. Breadcrumbs provide that reference point.
- **Filters** – Filters make content-heavy sites manageable.
- **Links** - Helps users understand connections between related content

# Navigation - Placement

- Do you want the user to click or scroll? Enter data or click the Back button?
- Navigation is a series of choices and users must decide without seeing what comes next. The most visible places to add a navigation menus are horizontally and vertically



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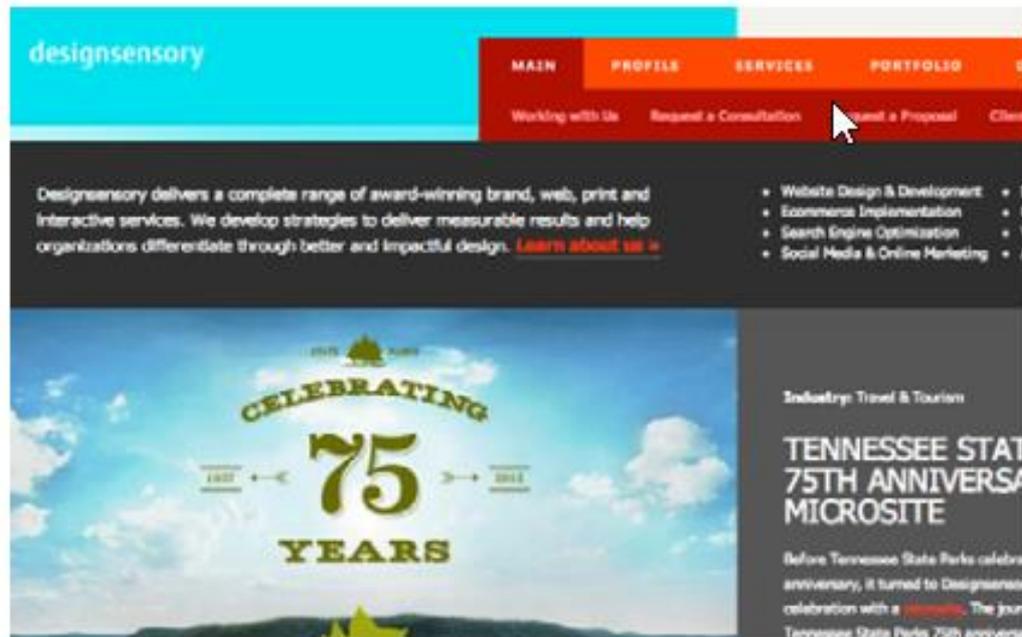
# Animations

- Animations are fun. They're useful and can surreptitiously add a lot to your UI without the user even knowing it.
- **Val Head**, a designer who runs animation-based workshops, lists three excellent reasons that animations are indispensable for a great UI
  - **The eye is drawn to movement:**
    - An animated icon will signal a change to the user much more effectively and less jarringly than a flat change
  - **Establishing connections**
    - Animations make excellent transitions, which help make using the site more coherent, especially if there are a lot of tasks happening at once.
    - For example: a clicked icon expanding to open, instead of simply a new window appearing. These small transitions can make a world of difference when the user is caught up in what they're doing and can help make emotional connections
  - **Cues and clues**
    - An animation is great for signaling that a task is accomplished, and, related to the above point, similar animations are great for drawing connections between two tasks.
    - Well-thought animation can even suggest actions to the user — if an item is “added” in a clever way, the user might guess it would likewise be “removed”

# 1. Menus with panache

- Animations are trickier to add to navigation menus, but they can add striking detail to the interface.
- Make sure that the speed is quick enough to capture attention, but not so quick that it feels disorienting.
- Links should also be easy to access and provide plenty of space for clicking

# 1. Menus with panache



- **Design Sensory** uses a top-level menu along with submenu links.
- Hover over each top link, the new submenu options appear below.
  - ➔ quick access to all the menu links while still providing enough “breathing room” for clicking.
- The only problem might be users who have poor vision and may struggle to read the smaller font sizes - but that can be addressed by playing with the font size

# 1. Menus with panache



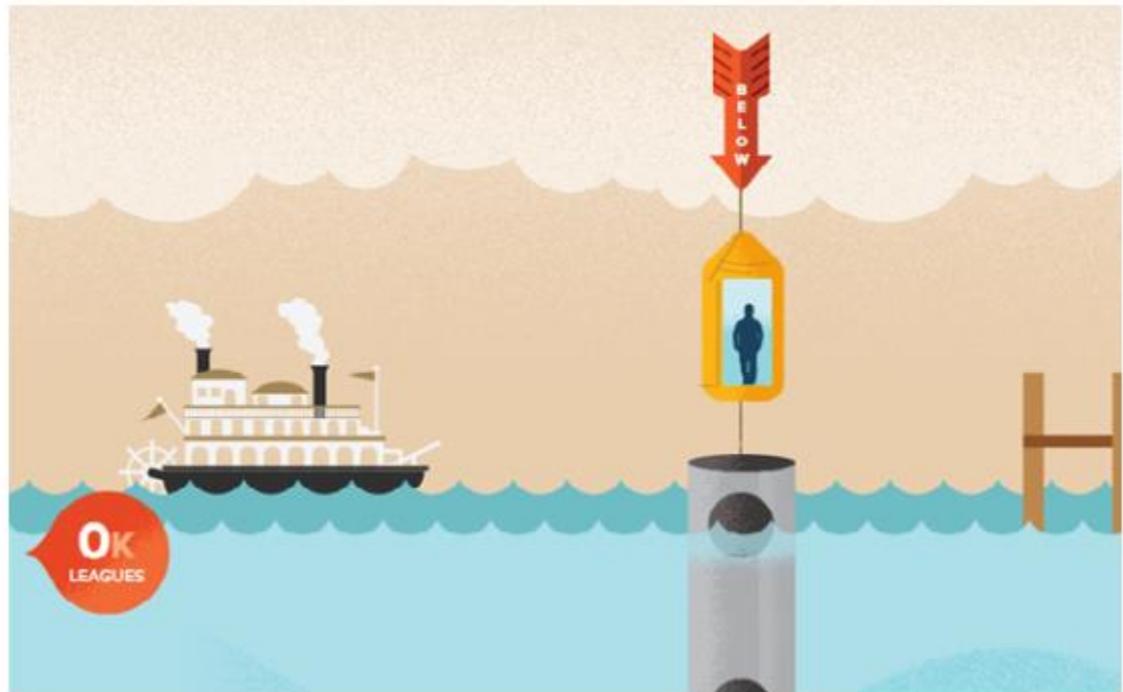
- **Cabedge** uses a dropdown animation effect which blends in perfectly into the paper-like feel of the site.
  - In the top ribbon, hover over any of the links to trigger a quick hover effect.
  - If your cursor stays on the link for 1-2 seconds, then a sub-menu animates and drop downwards.
- The effect makes the interface feel fun and presents more content without clutter.

## 2. Parallax background scrolling

- Parallax sites will usually have background images which change as you scroll downwards, creating the effect of 3D motion while static page elements follow the user downwards.

## 2. Parallax background scrolling

- **Atlantis World Fair**, the elevator shaft follows your scroll downwards and draws attention to the fact snippets.
- This animation effect encourages interaction with the content because scrolling actually creates a form of visual storytelling

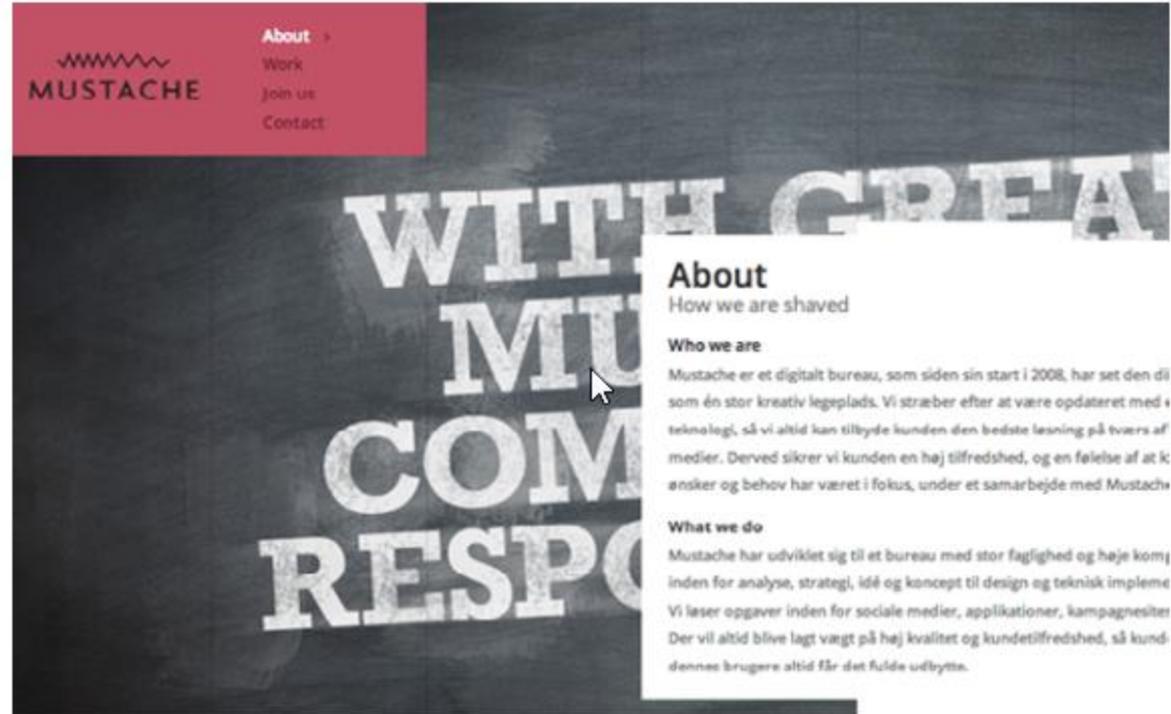


# 3. Webpage transitions

- Animating the transitions between pages makes the website experience feel like a friendly guided tour.
- It also provides more visual feedback to your interface. The animated transitions may follow tooltips, content blocks, or sliding panels.

# 3. Webpage transitions

- Mustache, animated transitions can be executed with a nice Ajax effect that doesn't force refreshing of the page.



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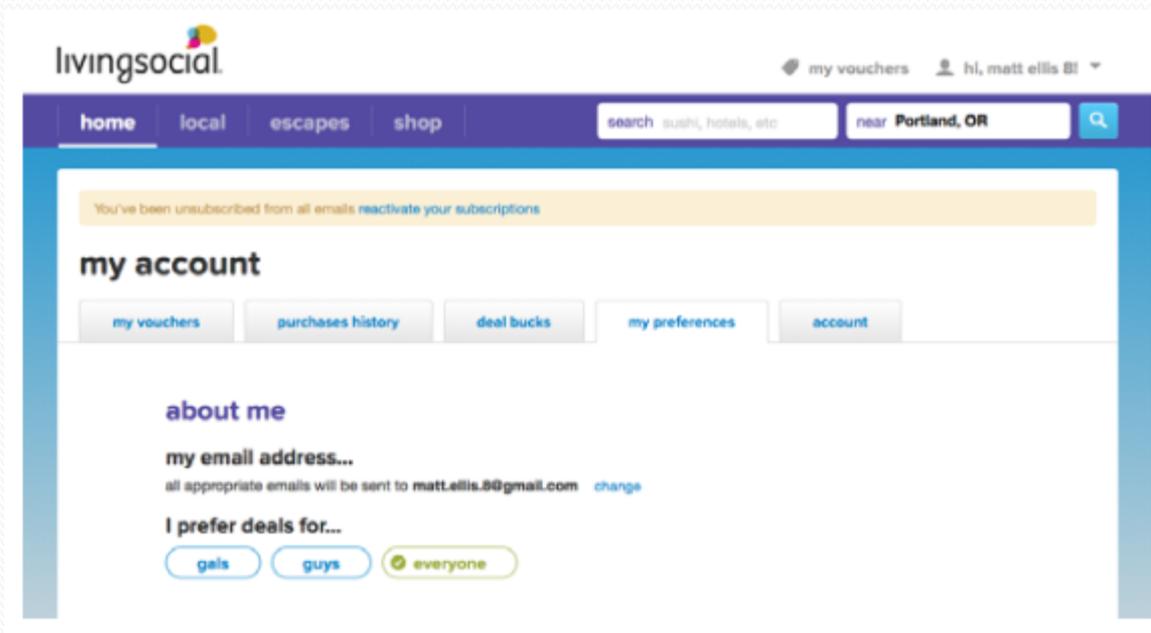
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# Default Settings

- Users will rarely change the default settings, even if customization options are available. That means it's on you to get it right the first time.
- As a UI designer, you have the responsibility of foreseeing how the user wants their settings before they even use the site.
- There is an upside, though: you can use the default settings to instigate the actions you want the user to follow. Living Social takes a smart approach by making the default audience for email deals “everyone”, which encourages users to forward deals to people of the other gender (which presumably, helps with the company's goal of user acquisition).

# Default Settings

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# Default Settings

- Only use **default settings** when:
  - your back-end can make qualified guesses regarding user preferences
  - or that you know those defaults benefit the user.
- When it comes to input fields, do not use defaults for anything that requires user thought
  - e.g. signing up for newsletters or accepting terms of use

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# Guided Actions

- People are open to suggestion → you can encourage deeper involvement, interaction, and even feedback — as long as the action you're suggesting isn't cumbersome

# Example: LinkedIn

- Whenever the user opens the page, there are usually prompts to actions, for example, endorsing your connections' skills.
- People like helping their friends so prompting this action works because it's something they want to do, but may not have thought of it on their own (plus, it creates a deeper involvement with the site).



**Monica Wright**

Community Editor at Search Engine Land

Portland, Maine Area | Internet

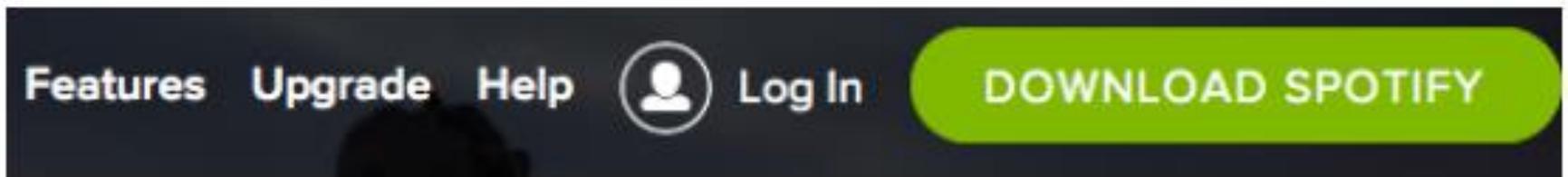
Current Marketing Land, Search Engine Land,  
monicawright.com

Previous Hall Internet Marketing, SEOmoz, MicroArts  
Creative Agency

*LinkedIn*

# Example: Dmitry Fadeyev

- Points out that guided action can be used on a more subtle level by emphasizing *key functions*, *controls*, and *buttons*.



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# Visual Clarity & Language Clarity

- One of the marks of a bad UI is confusion, usually resulting from when controls, functions, or other elements aren't fully explained.



source: [Imgur](#)



source: [Stack Exchange](#)

# Guideline for clarity

- **Simplicity is key**
  - Don't overload the user with too many functions or controls.
- **Check your wording**
  - Proper wording can solve problems of confusion, while poor wording causes them.
- **Avoid contradictions**
  - Keep language consistent.
  - In the example from StackExchange, if the button says "Choose File," don't refer to it as "click browse".
- **Avoid overstating**
  - Be succinct; over-explaining can produce the opposite of the desired effect.
- **Hover explanations**
  - There's no better way to clear up confusion over icons without cluttering your screen.

# Visual Clarity & Language Clarity

- Make sure that your website provides **user feedback**
- Breaks down complex actions into simple steps.
  - For example, Gmail provides notifications for every action, → makes people feel more in control and confident about your site

The screenshot shows a shopping cart interface titled "Your bag". At the top right, there is a "Back to Shop" link and a progress indicator "1/3". The cart contains one item: "Lucky No Seven T-shirt" in size XXL, priced at \$24.00. The item has a quantity of 1 and an "Update Bag" button. Below the item, there are sections for "Calculate Shipping" (with a dropdown for "United States (US)", a "Select an option" dropdown, and a "Postcode / Zip" field), a "Coupon" field with an "Apply" button, and a summary section showing "Bag Subtotal" and "ORDER TOTAL" both at \$24.00. The summary also includes "Secured by" logos for GeoTrust, Visa, and MasterCard. A "Next Step" button is located at the bottom right.

Product Description	Price	Quantity	Line Total
 Lucky No Seven T-shirt Size: XXL	\$24.00	- 1 + Update Bag	\$24.00

Calculate Shipping: United States (US) [v], Select an option [v], Postcode / Zip [input], Update Totals [button]

Coupon: Enter any valid coupon or promo code here to receive your discount. [input] Apply [button]

Bag Subtotal: \$24.00  
**ORDER TOTAL: \$24.00**  
Secured by: GeoTrust, VISA, MasterCard

Next Step [button]

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# The "MAYA" Principle

- Your goal as a UI designer is:
  - to create the greatest, most extremely new and original interface that goes far beyond the average user's wildest dream
- We've provided advice on how to ensure your UI is as sleek and streamlined as possible, it's important to keep the MAYA Principle in mind as a checks - and balances methodology.

# The "MAYA" Principle



Most  
Advanced  
Yet  
Acceptable

# The "MAYA" Principle

- **Familiar Visual Metaphors**

- the actions on your site should have roots in actual tasks the users have experience with.
- for example, users embraced scrolling and slider functions when they were introduced because they resembled flipping through pages or notebooks. When applied literally, the concept is known as skeuomorphism.

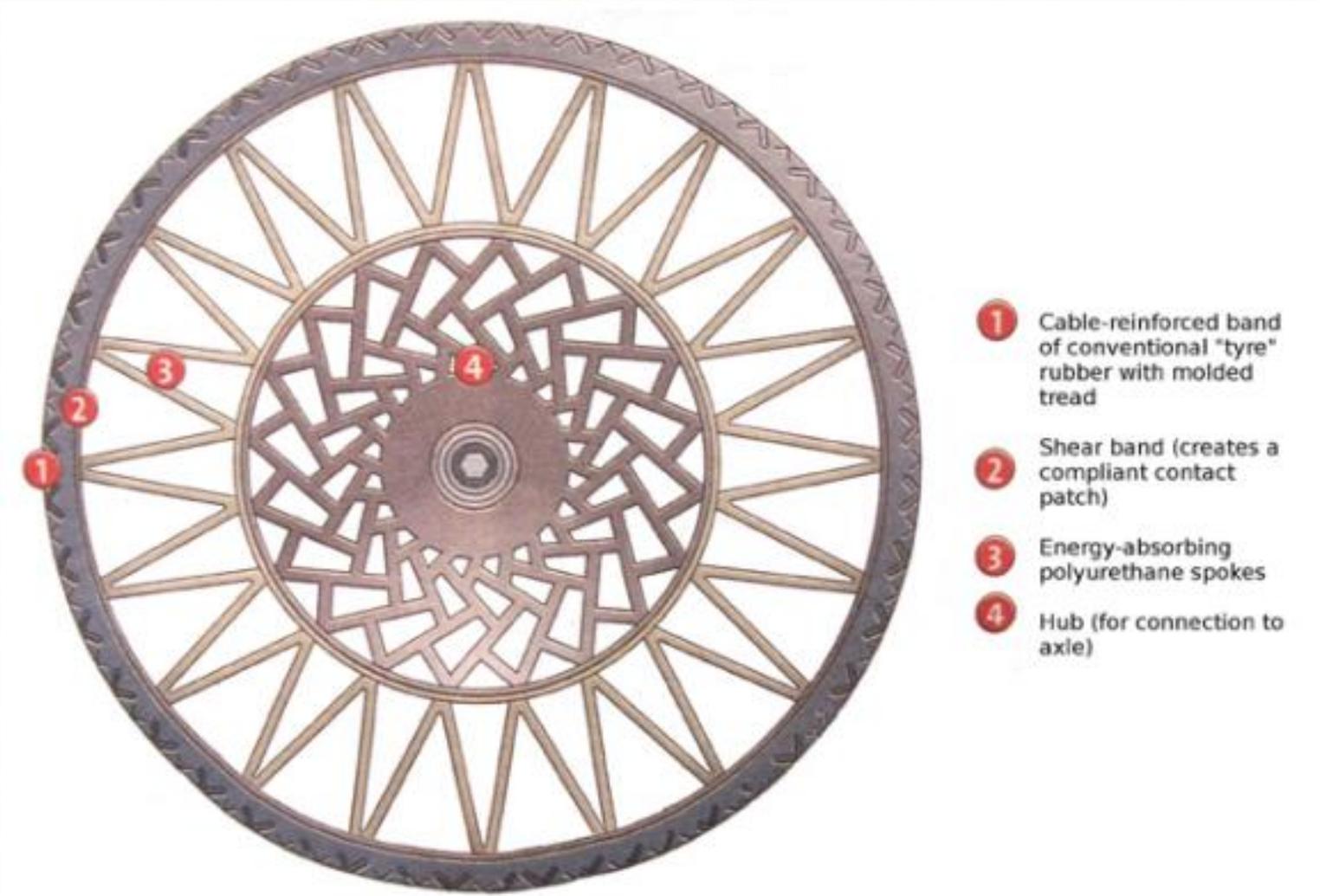
- **Traditional Fallback Options**

- different users will have different comfort levels. Offering a “traditional” option in addition to a new and different one will give users a sense of security - even if they never use it.
- for example, Etsy has an animated “search by color” option complemented by a traditional search bar

- **Sensible Scope**

- don't reinvent the wheel
- unnecessary additions touted as “new,” “better,” or “improved” only frustrate the users.
- if you're putting in the effort to create something groundbreaking, make sure it's truly worth it

# The "MAYA" Principle



# The "MAYA" Principle

- One of the most important factors for new and different designs is pacing.
  - its best to unveil your brilliant new idea in small doses and incremental updates as opposed to all at once

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# Takeaway

- An **Interface** is more than pretty visuals → users can accomplish their goals on your website.
- Done properly, **input controls** can add fun and interaction to a normally boring process.
- **Navigation** should be shaped around content, like a pleasant boulevard guiding users to their destination.
- **Animations** add life to the interface, and **guided actions** and **default settings** help read the user's mind without feeling invasive.
- **The MAYA Principle** ensures clarity by serving as a gut-check on your interface

# Bài tập lab4: deadline 20/11

- Bài tập cá nhân:
  - Tạo một trang Web có nội dung bất kỳ, sử dụng linh hoạt tất cả những phần sau: Input Controls, Navigation, Animations, Default Settings, Guided Actions
  - Có biểu mẫu liên hệ
- Bài tập nhóm:
  - Tiếp tục cập nhật Group Diary cho tuần này, phân công công việc cho từng thành viên.
  - Có biểu mẫu liên hệ
  - Cập nhật lại bài tập của nhóm để đảm bảo có sử dụng Navigation, Animations, Default Settings và Guided Action
  - Chú ý: Tất cả các chức năng trong project phải có cả file thiết kế và file html → cập nhật cả 2 loại file này.
  - Up lên Azure



# Reference

- **Web UI design best practices, Dominik Pacholczyk**