BEST PRACTICES FOR FORM DESIGN

LUKE WROBLEWSKI
AN EVENT APART, CHICAGO 2007

LUKEW INTERFACE DESIGNS | YAHOO!

Luke Wroblewski



Yahoo! Inc.

- Senior Principal, Product Ideation & Design

LukeW Interface Designs

- Principal & Founder
- Product design & strategy services

Author

- Site-Seeing: A Visual Approach to Web Usability (Wiley & Sons)
- Form Design Best Practices (Rosenfeld Media) - Upcoming
- Functioning Form: Web applications, product strategy, & interface design articles

Previously

- eBay Inc., Lead Designer
- University of Illinois, Instructor
- NCSA, Senior Designer

http://www.lukew.com

WHY DOES FORM DESIGN MATTER?



LUKEW INTERFACE DESIGNS

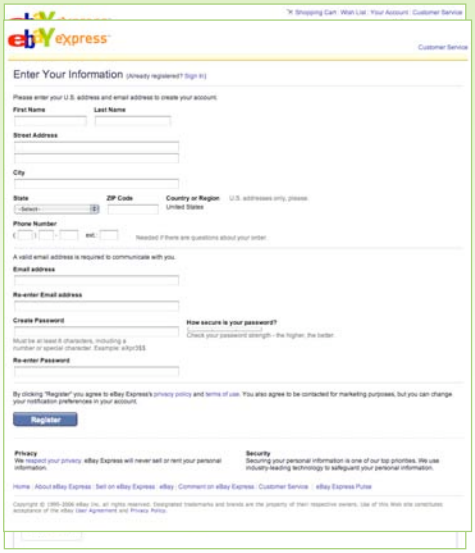
SHOPPING



http://www.flickr.com/photos/[illegible]/853/

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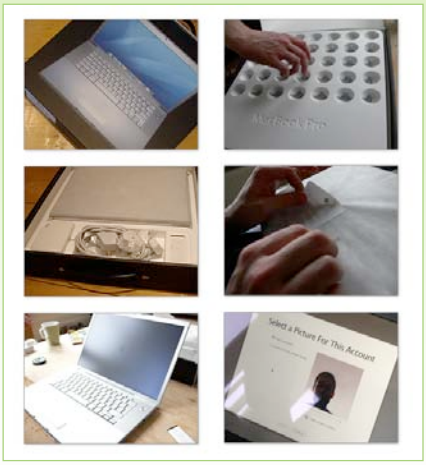
SHOPPING ONLINE



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ACCESS

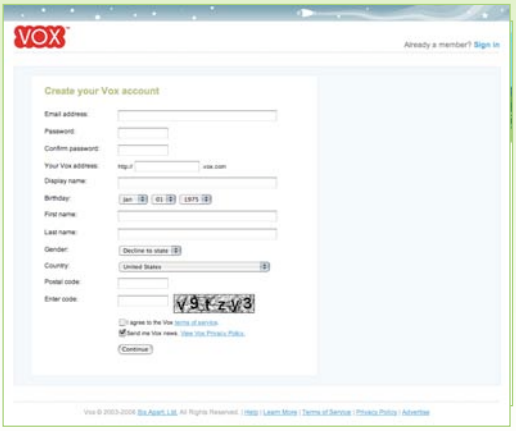


Images from Flickr users katielips, pealco, and *nathan

LUKEW INTERFACE DESIGNS

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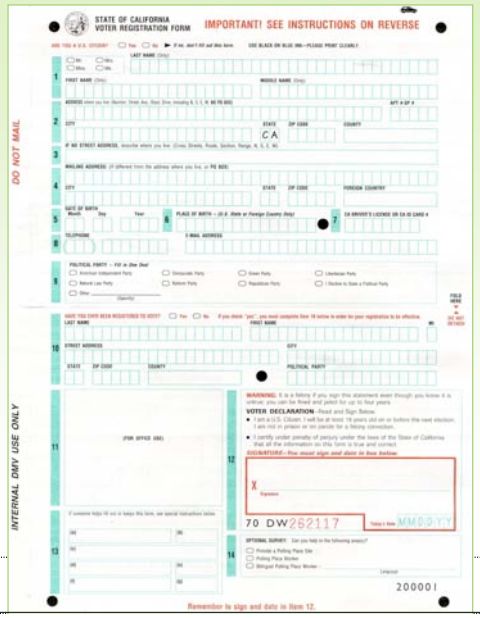
ACCESS ONLINE



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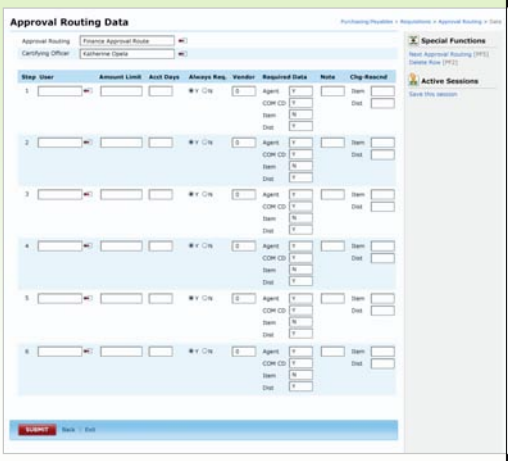
DATA INPUT



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DATA INPUT ONLINE



Why Forms Matter

- How customers “talk” to companies online
- Commerce ($)
  - User: Enable purchasing
  - Business: Maximize sales
- Access (membership)
  - User: Enable participation
  - Business: Increase customers & grow communities
- Engagment
  - User: Enable information entry & manipulation
  - Business: Accumulate content & data

Design Principles



- Minimize the pain
  - No one likes filing in forms
  - Smart defaults, inline validation, forgiving inputs
- Illuminate a path to completion
- Consider the context
  - Familiar vs. foreign
  - Frequently used vs. rarely used
- Ensure consistent communication
  - Errors, Help, Success
  - Single voice despite many stakeholders

Multiple Data Sources





- Usability Testing
  - Errors, issues, assists, completion rates, time spent per task, satisfaction scores
- Customer Support
  - Top problems, number of incidents
- Best Practices
  - Common solutions, unique approaches
- Site Tracking
  - Completion rates, entry points, exit points, elements utilized, data entered

BUSINESS OF DESIGN, EBAY INC. APRIL 2004

Design Patterns

Information	Visual Communication Affordances
+	
Interaction	Engagement Disclosure
+	
Feedback	Response Verification

LUKEW INTERFACE DESIGNS

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INFORMATION



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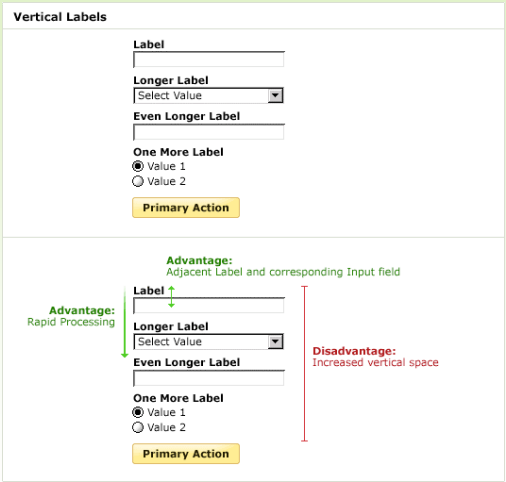
14

Information

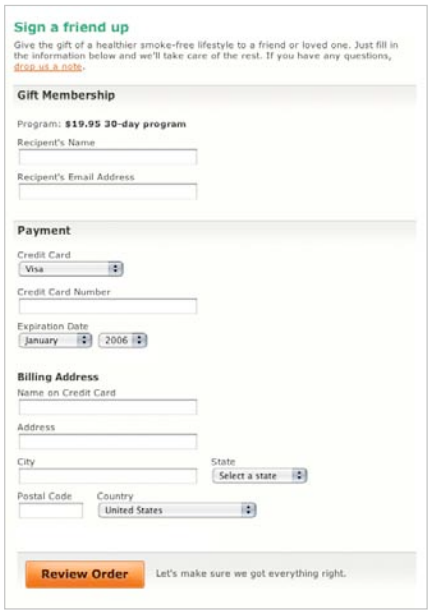
- Layout
  - Label positioning
  - Content groupings
- Input Affordances
  - Formats, required fields
- Actions
  - Primary & secondary
- Help & Tips
- Visual Hierarchy

Top Aligned Labels

- When data being collected is familiar
- Minimize time to completion
- Require more vertical space
- Spacing or contrast is vital to enable efficient scanning
- Flexibility for localization and complex inputs



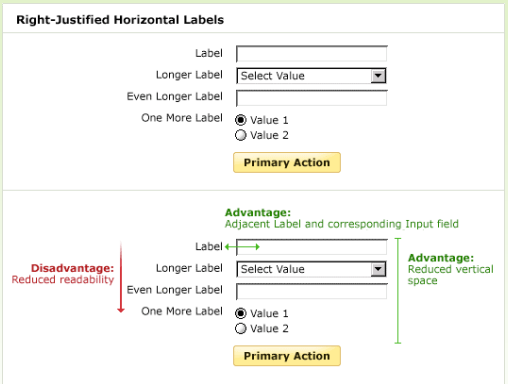
Top-aligned Labels



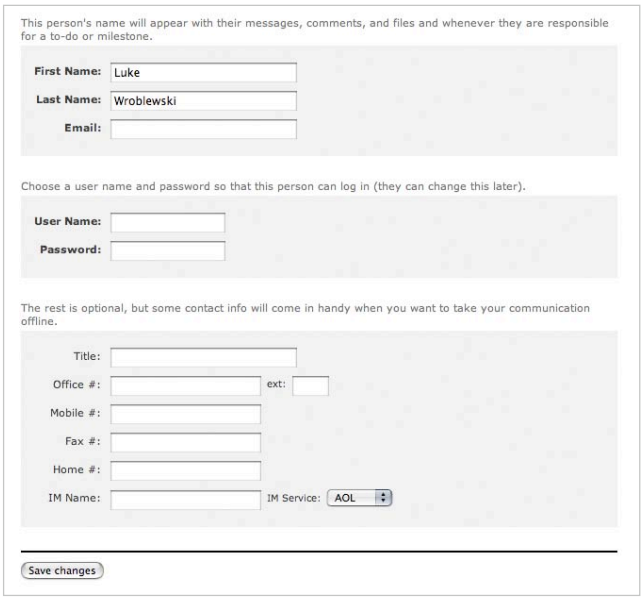
Right Aligned Labels



- Clear association between label and field
- Requires less vertical space
- More difficult to just scan labels due to left rag
- Fast completion times



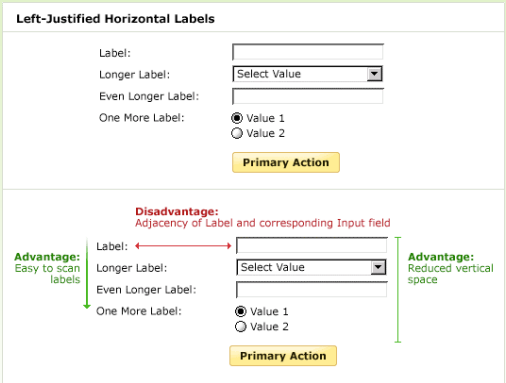
Right-aligned labels



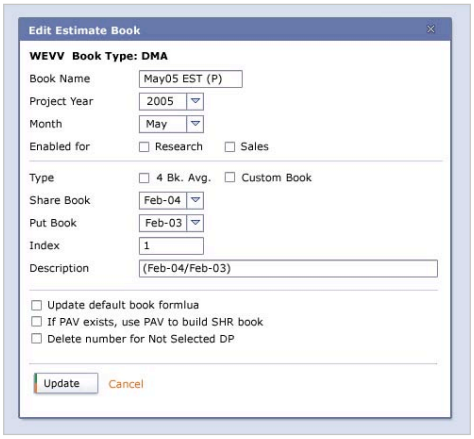
Left Aligned Labels



- When data required is unfamiliar
- Enables label scanning
- Less clear association between label and field
- Requires less vertical space
- Changing label length may impair layout



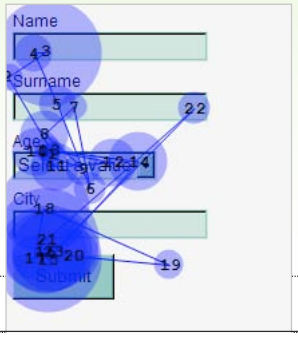
Left-aligned labels



Eye-tracking Data

- **July 2006 study by Matteo Penzo**
- **Left-aligned labels**
  - Easily associated labels with the proper input fields
  - Excessive distances between labels inputs forced users to take more time
- **Right-aligned labels**
  - Reduced overall number of fixations by nearly half
  - Form completion times were cut nearly in half
- **Top-aligned labels**
  - Permitted users to capture both labels & inputs with a single eye movement'
  - Fastest completion times





LUKEW INTERFACE DESIGNS

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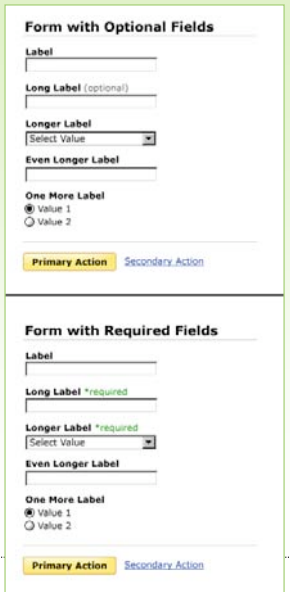
BEST PRACTICE

- For reduced completion times & familiar data input: top aligned
- When vertical screen space is a constraint: right aligned
- For unfamiliar, or advanced data entry: left aligned

LUKEW INTERFACE DESIGNS

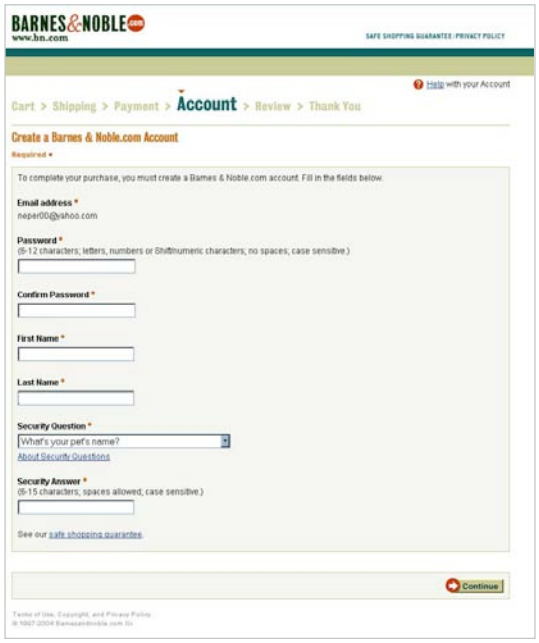
Required Form Fields

- Indication of required fields is most useful when
  - There are lots of fields
  - But very few are required
  - Enables users to scan form to see what needs to be filled in
- Indication of optional fields is most useful when
  - Very few fields are optional
- Neither is realy useful when
  - All fields are required

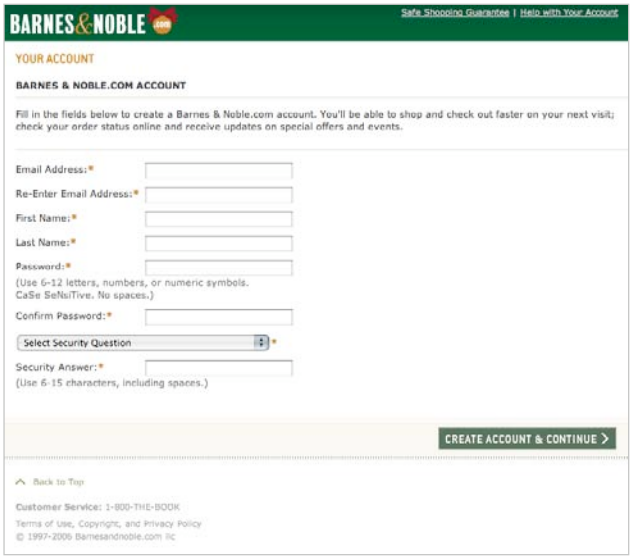


LUKEW INTERFACE DESIGNS

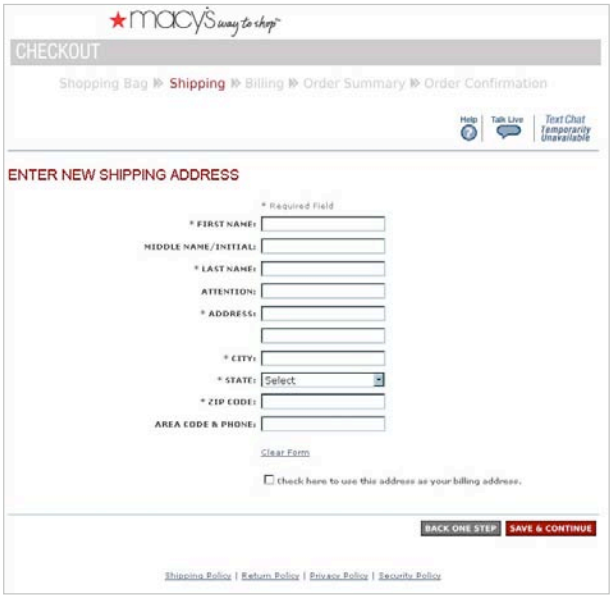
All fields required



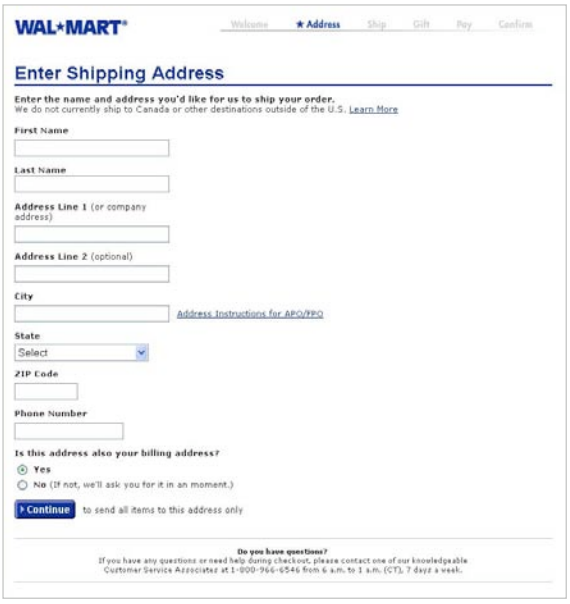
All fields required



Most fields required



Few fields optional




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ネットストア
ネットコミュニティー
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Ｅメールアドレス *
Ｅメールアドレス（確認）*
携帯アドレス
携帯アドレス（確認）
郵便番号 *
住所表示
7桁の郵便番号を入力して「住所表示」ボタンを押して下さい。
県／市区町村名を郵便番号から自動検索し、入力されます。
都道府県 *
市区町村 *
それ以降の住所（丁目／番地など）*
ビル／マンション名
電話番号 *
メンバー登録 *
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会員登録する
戻る
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新規アカウントの作成
新規にアカウント情報を作成します。
下記の項目をご記入の上、確認画面へ進んで下さい。
基本情報入力 *この内容は必須項目となります。すべての項目にご記入下さい。
お名前
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（郵便番号から住所が検索できます）
都道府県選択
市区町村*（全角）
番地等*（全角／半角英数字）
建物ビル名等（全角／半角英数字）
電話番号
ＦＡＸ番号
メールアドレス
メールアドレス（確認）
パスワード
パスワード（確認）
（４文字以上８文字以下の半角英数字）
オプション情報入力 *以下の内容はご希望の方のみご回答下さい。また、初回登録時以外は表示されません。
性別 男性 女性 設定しない*
生年月日
既婚／未婚 既婚 未婚*
家族構成（人数）
どこでこのSHOPを知りましたか？
広告
新聞／雑誌の記事（紙／誌名）
友人／知人から
テレビ／ラジオ
インターネット上の情報（サイト名）
検索エンジン
イベント／店舗
メールマガジン（誌名）
その他
購入動機を教えて下さい
デザイン
機能
色
材質／質感
価格
その他
戻る
次へ

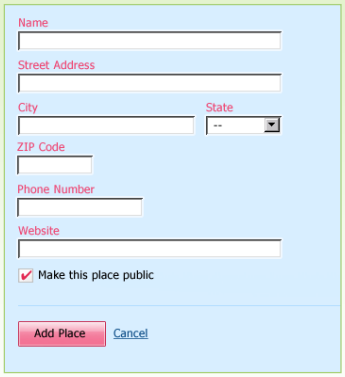
BEST PRACTICE

- Try to avoid optional fields
- If most fields are required: indicate optional fields
- If most fields are optional: indicate required fields
- Text is best, but * often works for required fields
- Associate indicators with labels

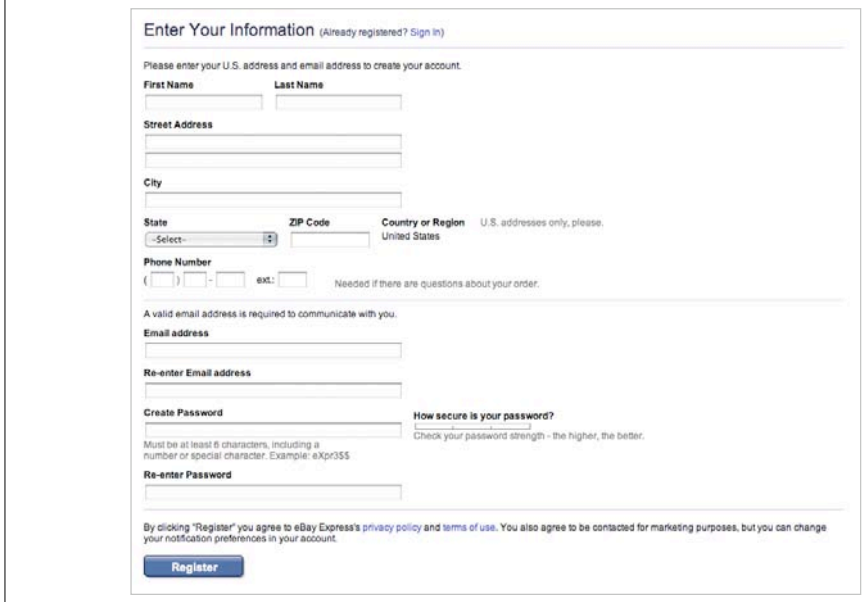
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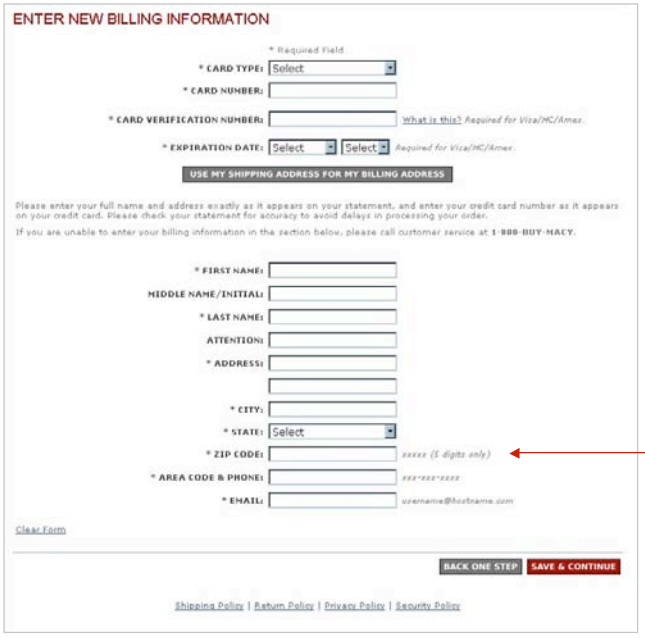
Field Lengths

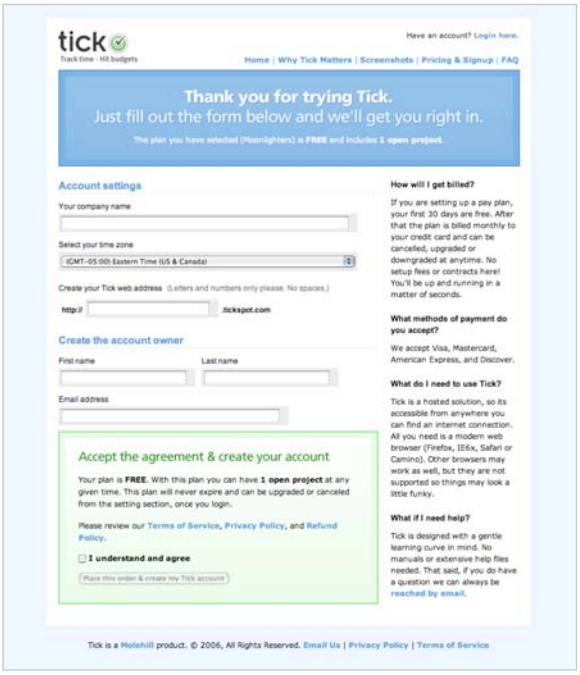
- Field lengths can provide valuable affordances
- Appropriate field lengths provide enough space for inputs
- Random field lengths may add visual noise to a form



LUKEW INTERFACE DESIGNS


Enter Your Information (Already registered? Sign In)
Please enter your U.S. address and email address to create your account.
First Name
Last Name
Street Address
City
State
-Select-
ZIP Code
Country or Region
United States
U.S. addresses only, please.
Phone Number
ext.:
Needed if there are questions about your order.
A valid email address is required to communicate with you.
Email address
Re-enter Email address
Create Password
How secure is your password?
Check your password strength - the higher, the better.
Must be at least 6 characters, including a number or special character. Example: eXpr3$$
Re-enter Password
By clicking "Register" you agree to eBay Express's privacy policy and terms of use. You also agree to be contacted for marketing purposes, but you can change your notification preferences in your account.
Register


ENTER NEW BILLING INFORMATION
* Required Field
* CARD TYPE:
Select
* CARD NUMBER:
* CARD VERIFICATION NUMBER:
What is this? Required for Visa/MC/Amex.
* EXPIRATION DATE:
Select
Select
Required for Visa/MC/Amex.
USE MY SHIPPING ADDRESS FOR MY BILLING ADDRESS
Please enter your full name and address exactly as it appears on your statement, and enter your credit card number as it appears on your credit card. Please check your statement for accuracy to avoid delays in processing your order.
If you are unable to enter your billing information in the section below, please call customer service at 1-800-BUY-MACY.
* FIRST NAME:
MIDDLE NAME/INITIAL:
* LAST NAME:
ATTENTION:
* ADDRESS:
* CITY:
* STATE:
Select
* ZIP CODE:
xxxxx (5 digits only)
* AREA CODE & PHONE:
xxx-xxx-xxxx
* EMAIL:
username@hostname.com
Clear Form
BACK ONE STEP
SAVE & CONTINUE
Shipping Policy | Return Policy | Privacy Policy | Security Policy



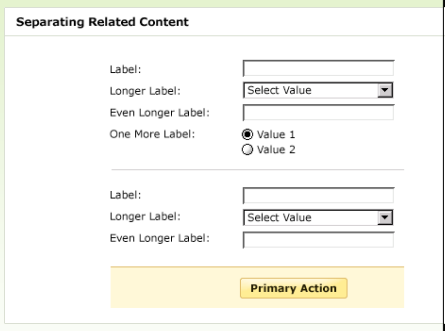


BEST PRACTICE

- When possible, use field length as an affordance
- Otherwise consider a consistent length that provides enough room for inputs

Content Grouping

- Content relationships provide a structured way to organize a form
- Groupings provide
  - A way to scan information required at a high level
  - A sense of how information within a form is related



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Lots of content grouping

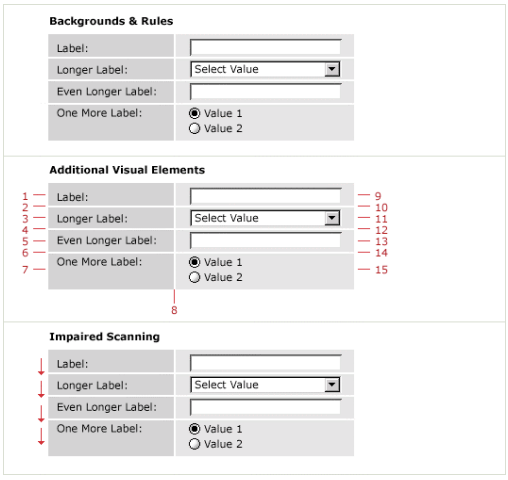


Disadvantage:
Excessive visual noise
Reduced readability



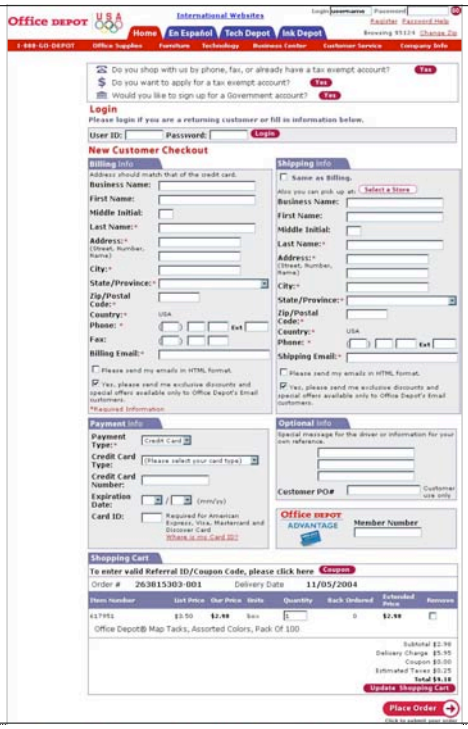
Disadvantage:
Visual noise

Excessive visual noise

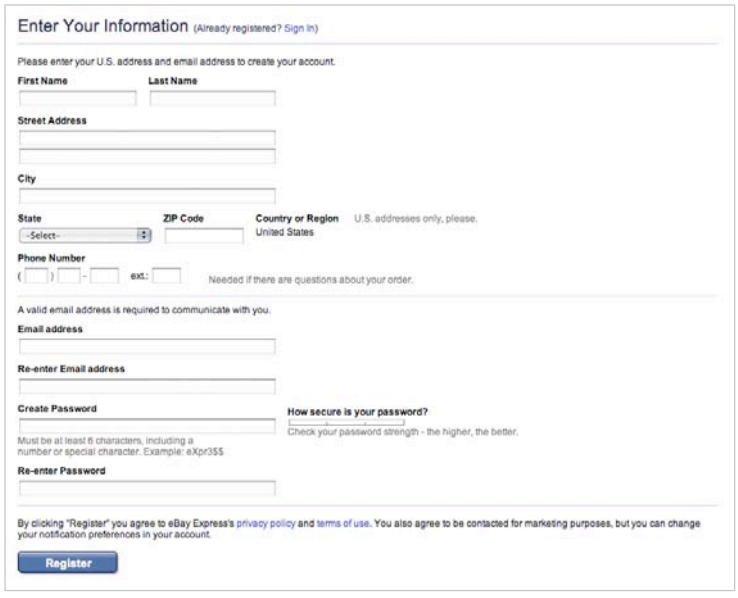


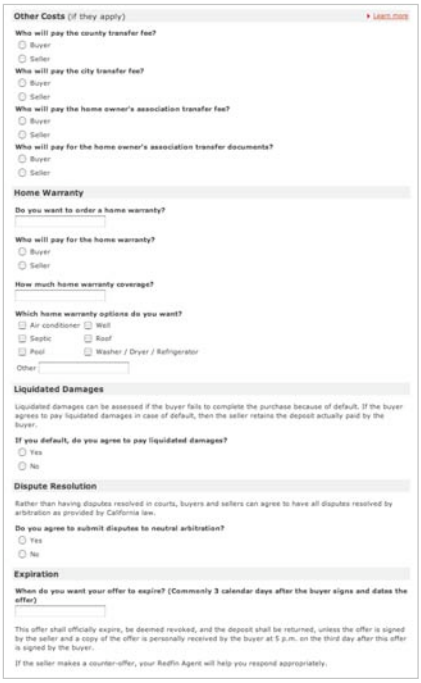
Minimum amount necessary





Minimum amount necessary



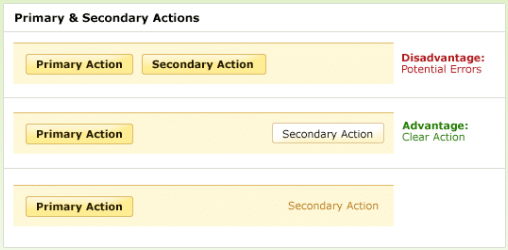




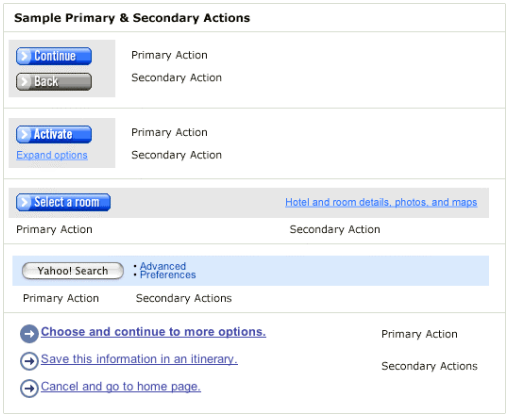
BEST PRACTICE

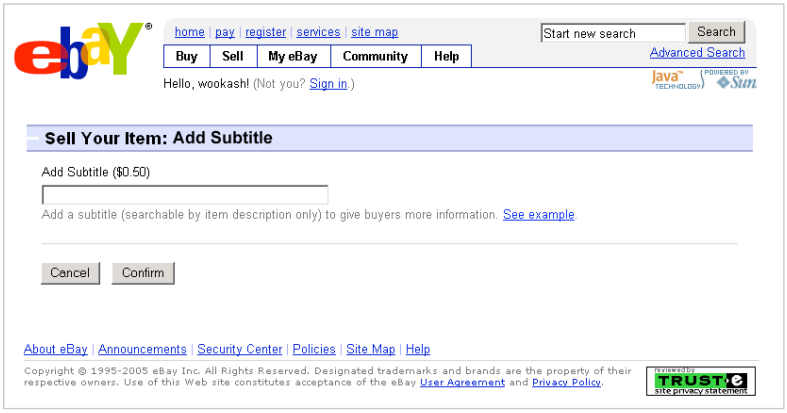
- Use relevant content groupings to organize forms
- Use the minimum amount of visual elements necessary to communicate useful relationships

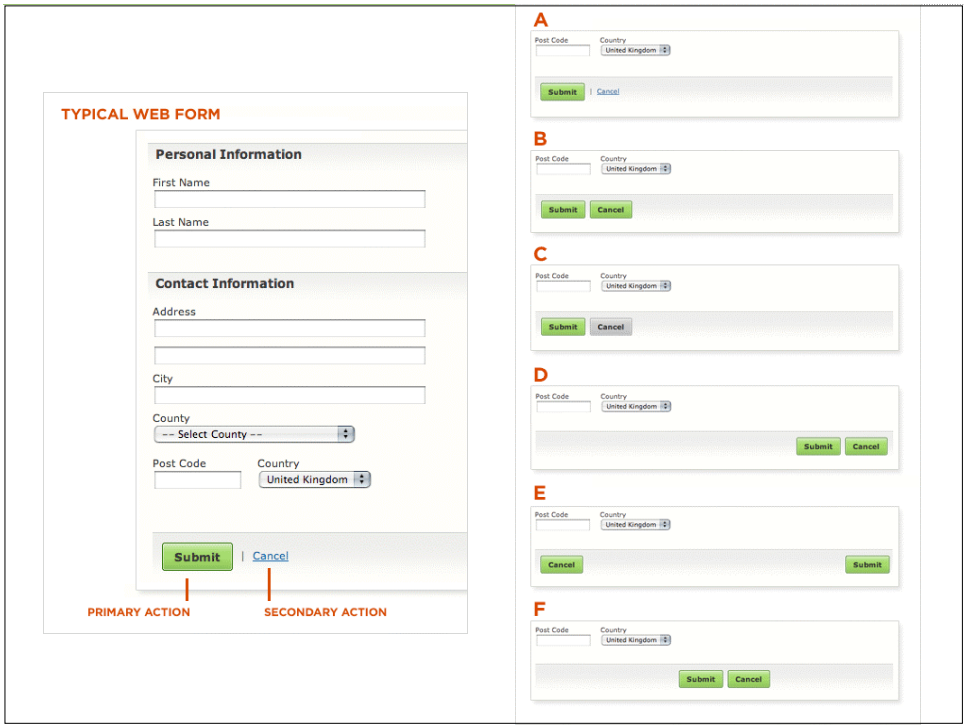
Actions

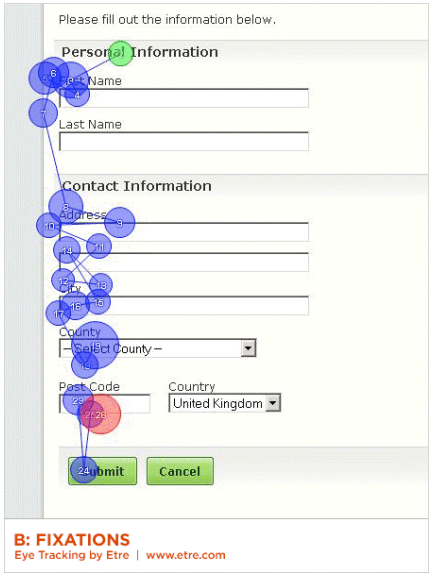


- Not all form actions are equal
  - Reset, Cancel, & Go Back are secondary actions: rarely need to be used (if at all)
  - Save, Continue, & Submit are primary actions: directly responsible for form completion
- The visual presentation of actions should match their importance

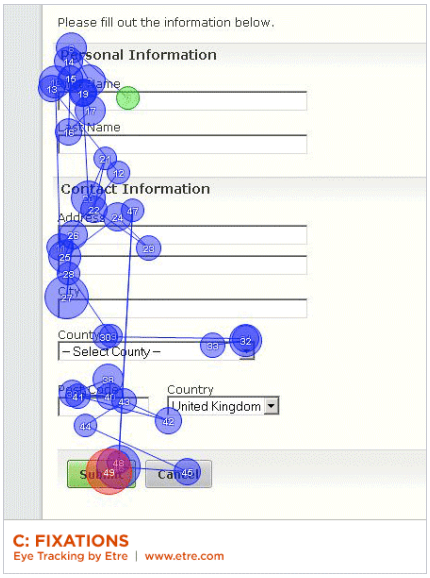



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Add Subtitle ($0.50)
Add a subtitle (searchable by item description only) to give buyers more information. See example
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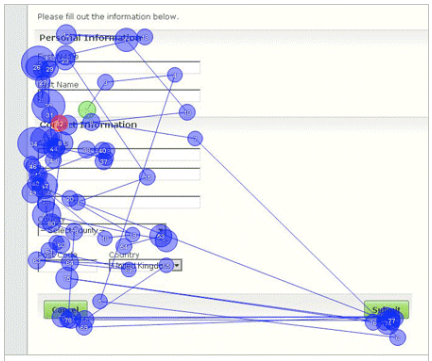

TYPICAL WEB FORM
Personal Information
First Name
Last Name
Contact Information
Address
City
County
-- Select County --
Post Code
Country
United Kingdom
Submit
Cancel
PRIMARY ACTION
SECONDARY ACTION
A
B
C
D
E
F



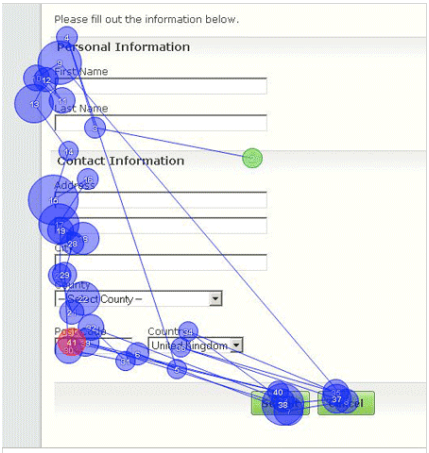
B: FIXATIONS
Eye Tracking by Etre | www.etre.com



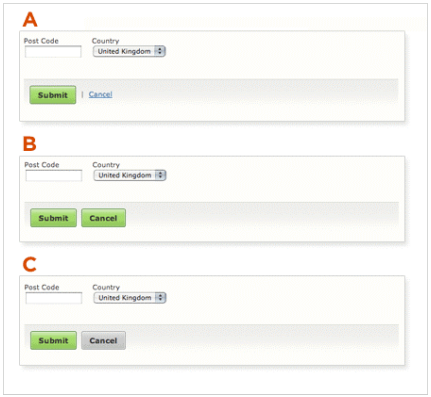
C: FIXATIONS
Eye Tracking by Etre | www.etre.com

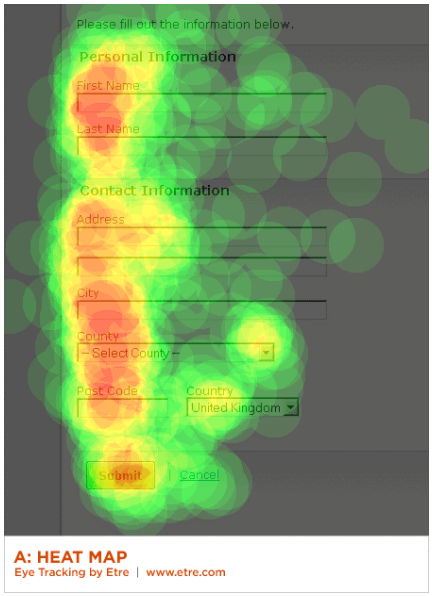


E: FIXATIONS
Eye Tracking by Etre | www.etre.com



F: FIXATIONS
Eye Tracking by Etre | www.etre.com





A: HEAT MAP
Eye Tracking by Etre | www.etre.com

BEST PRACTICE

- Avoid secondary actions if possible
- Otherwise, ensure a clear visual distinction between primary & secondary actions
- Align primary actions with input fields for a clear path to completion

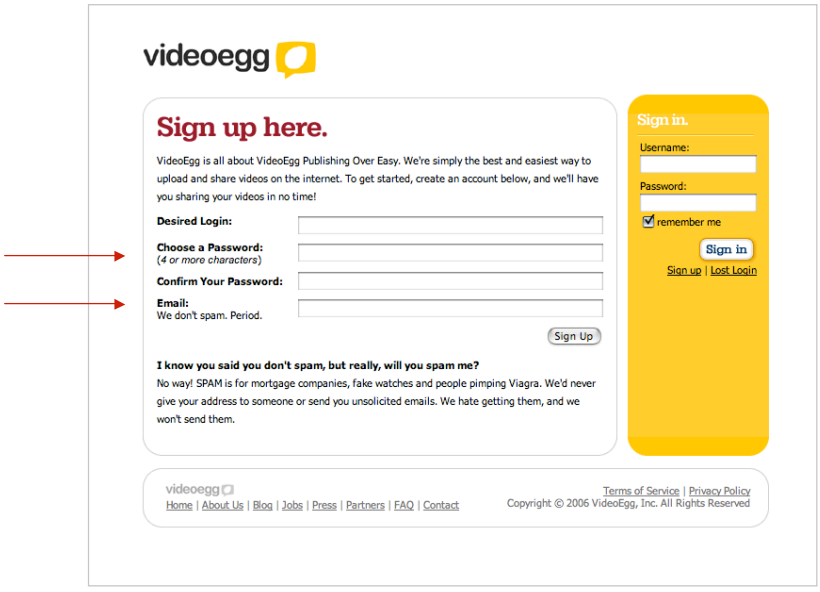
LUKEW INTERFACE DESIGNS

Help & Tips

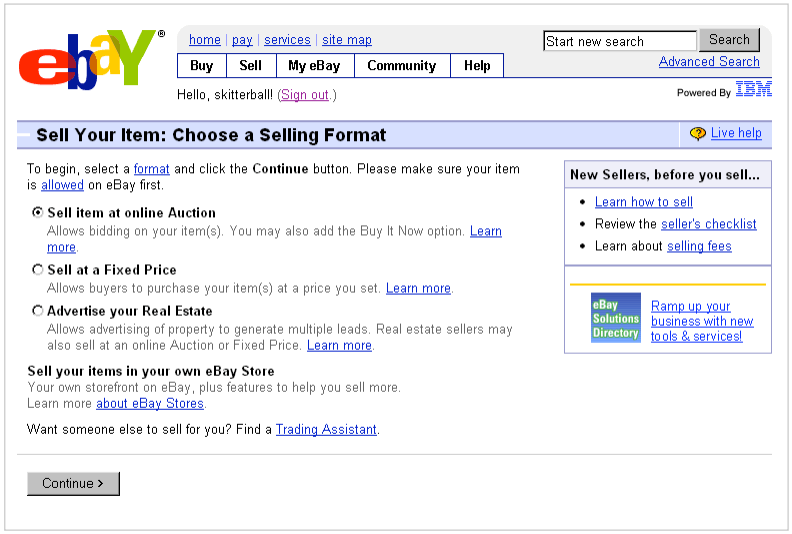


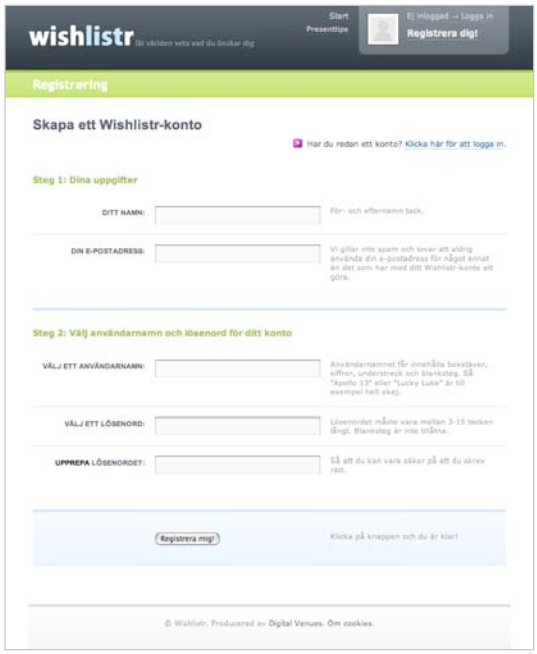
- Help & Tips are useful when:
  - Asking for unfamiliar data
  - Users may question why data is being requested
  - There are recommended ways of providing data
  - Certain data requests are optional
- However, Help & Tips can quickly overwhelm a form if overused
- In these cases, you may want to consider a dynamic solution
  - Automatic inline exposure
  - User activated inline exposure
  - User activated section exposure

Help Text

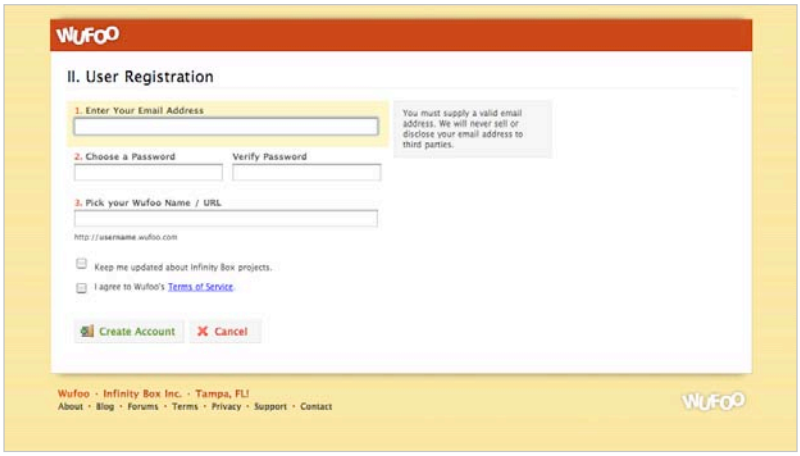


Lots of Help/Tips

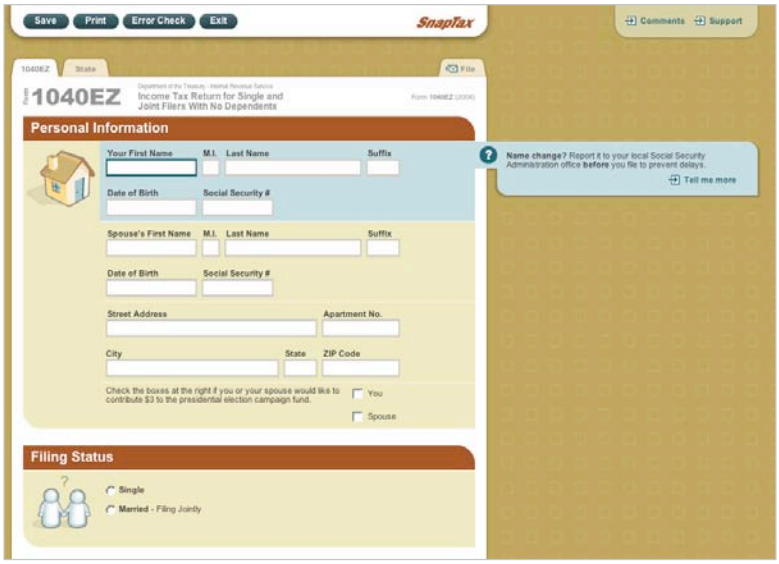




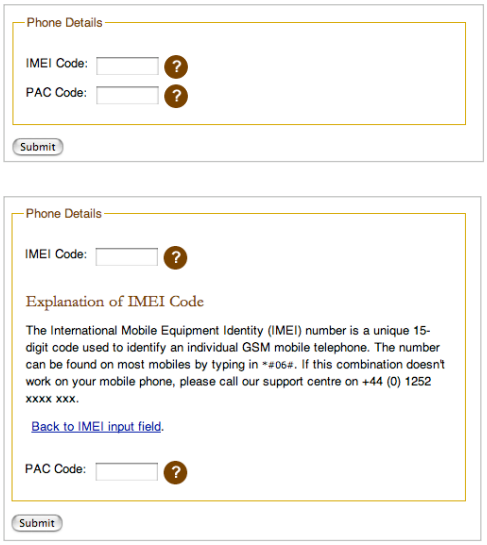
Automatic inline exposure



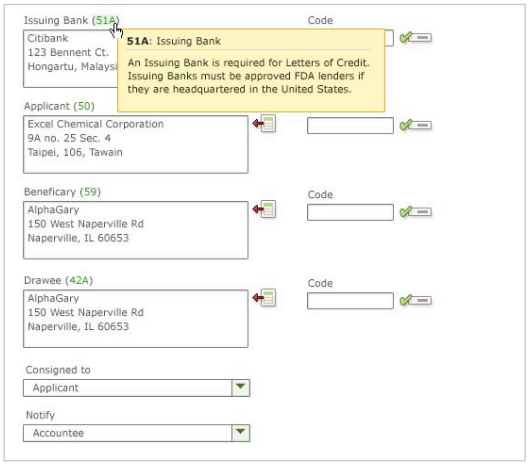
Automatic inline exposure



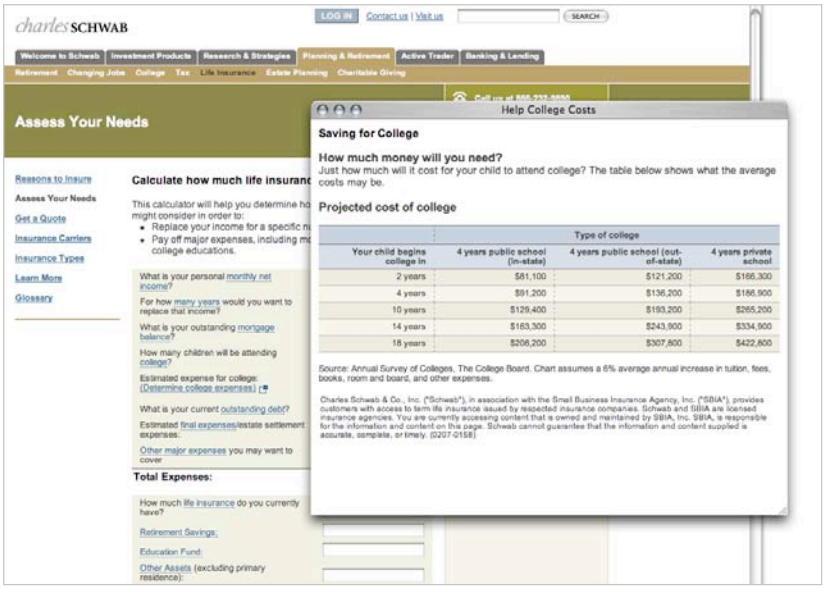
User-activated inline exposure



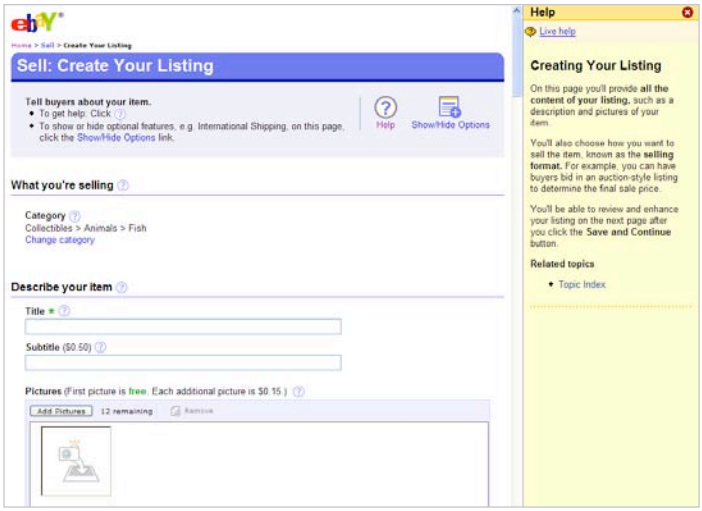
User-activated inline exposure



User-activated dialog exposure



User-activated section exposure



BEST PRACTICE

- Minimize the amount of help & tips required to fill out a form
- Help visible and adjacent to a data request is most useful
- When lots of unfamiliar data is being requested, consider using a dynamic help system

LUKEW INTERFACE DESIGNS

INTERACTION



LUKEW INTERFACE DESIGNS

Interaction



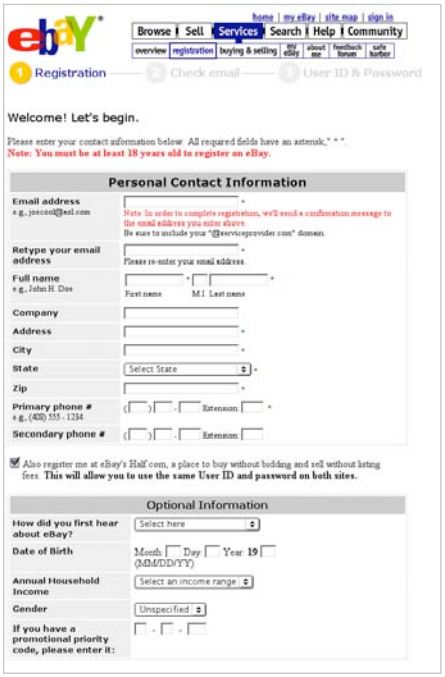
- Path to Completion
- “Tabbing”
- Progressive Disclosure
- Exposing dependencies

Path to Completion

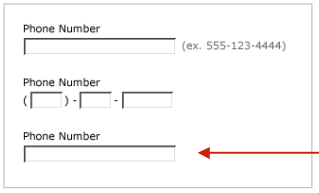


- Primary goal for every form is completion
- Every input requires consideration & action
  - Remove all unnecessary data requests
  - Enable flexible data input
- Provide a clear path
- Enable smart defaults

Remove Unnecessary Inputs

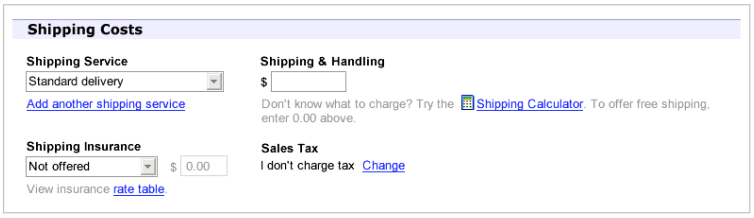


Flexible Data Input

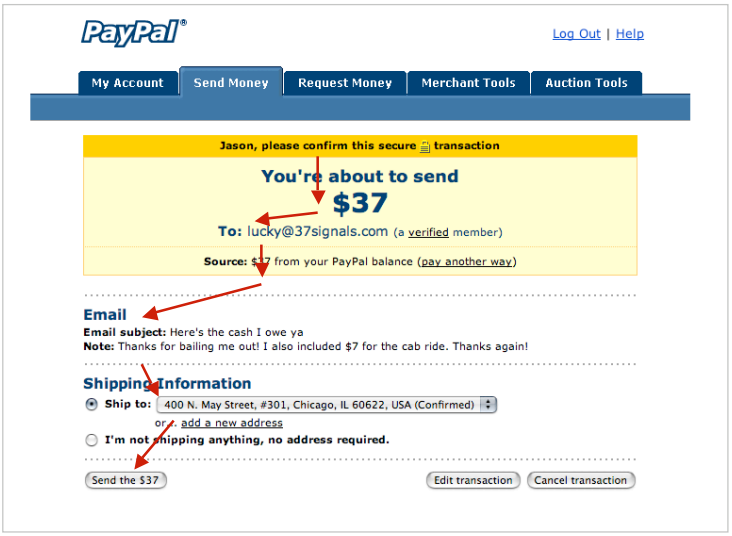


(555) 123-4444
555-123-4444
555 123 4444
555.123.4444
5551234444

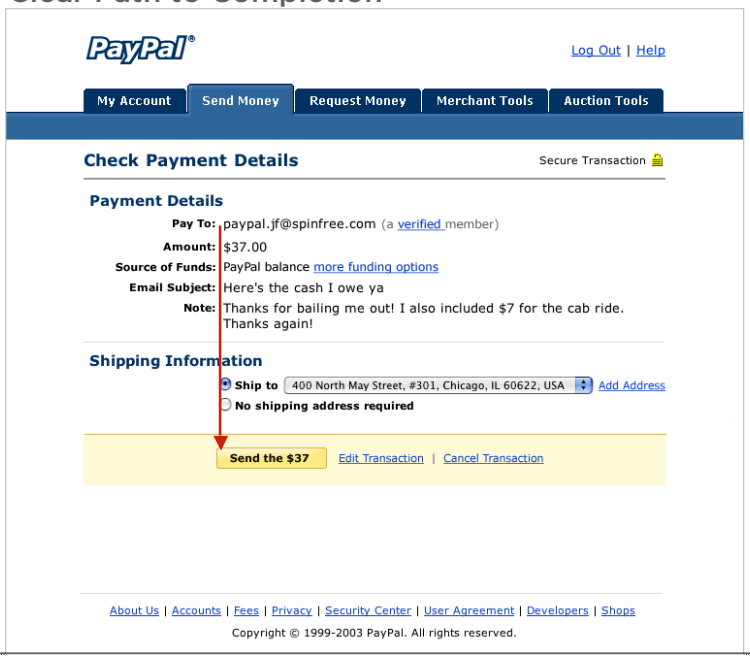
Smart Defaults



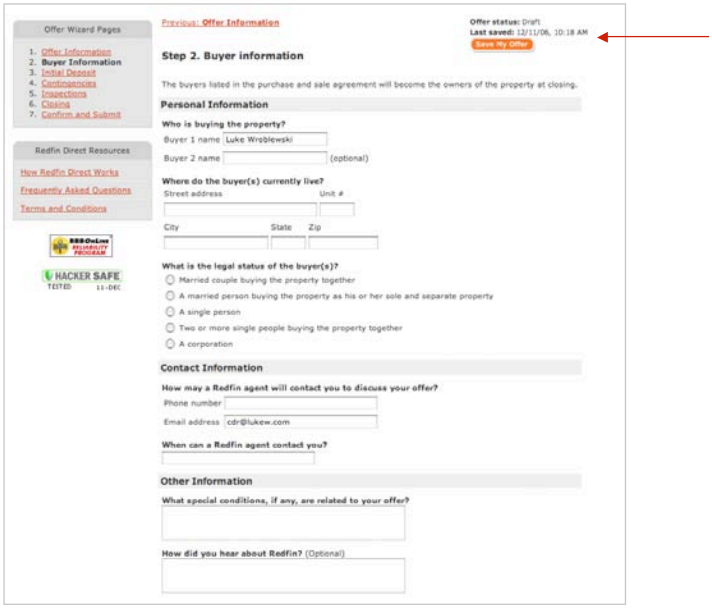
Path to Completion



Clear Path to Completion



Path to completion





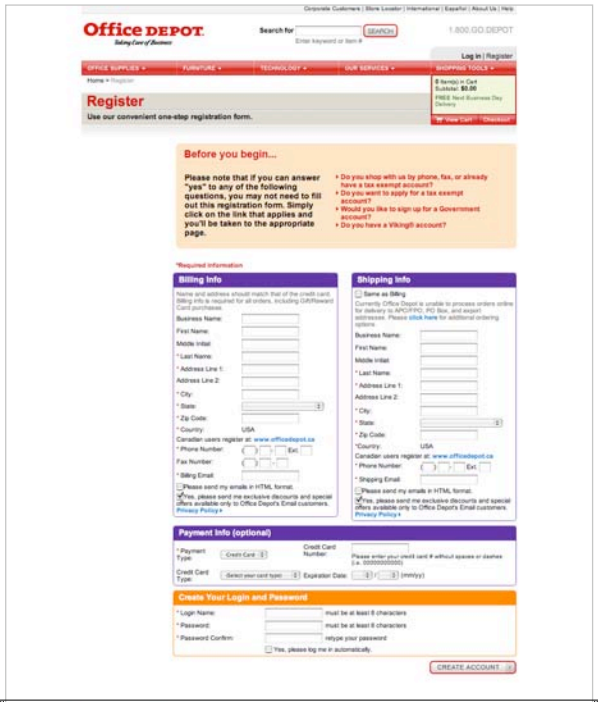
BEST PRACTICE

- Remove all unnecessary data requests
- Enable smart defaults
- Employ flexible data entry
- Illuminate a clear path to completion
- For long forms, show progress & save

Tabbing



- Many users interact with a form by "tabbing" between fields
- Proper HTML markup can ensure tabbing works as expected
- Multi-column form layouts may conflict with expected tabbing behavior





BEST PRACTICE

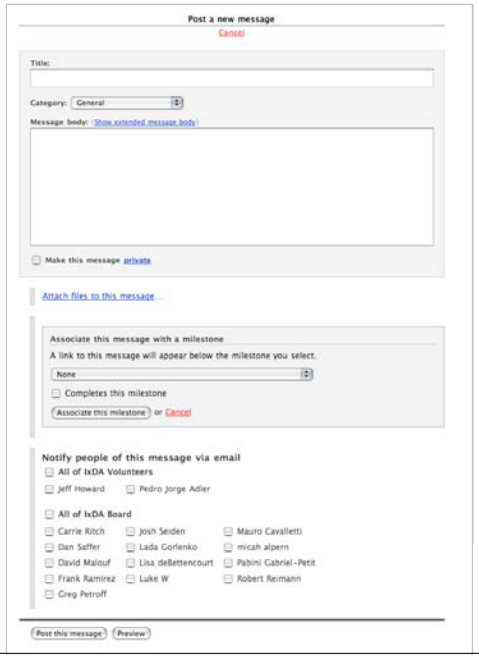
- Remember to account for tabbing behavior
- Use the tabindex attribute to control tabbing order
- Consider tabbing expectations when laying out forms

Progressive Disclosure

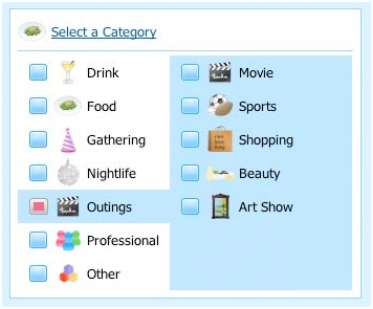


- Not all users require all available options all the time
- Progressive disclosure provides additional options when appropriate
  - Advanced options
  - Gradual engagement

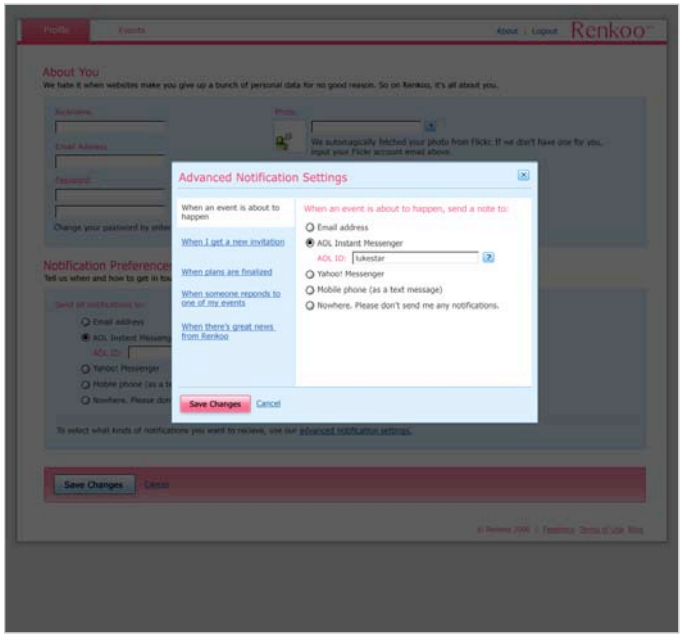
Exposing Options



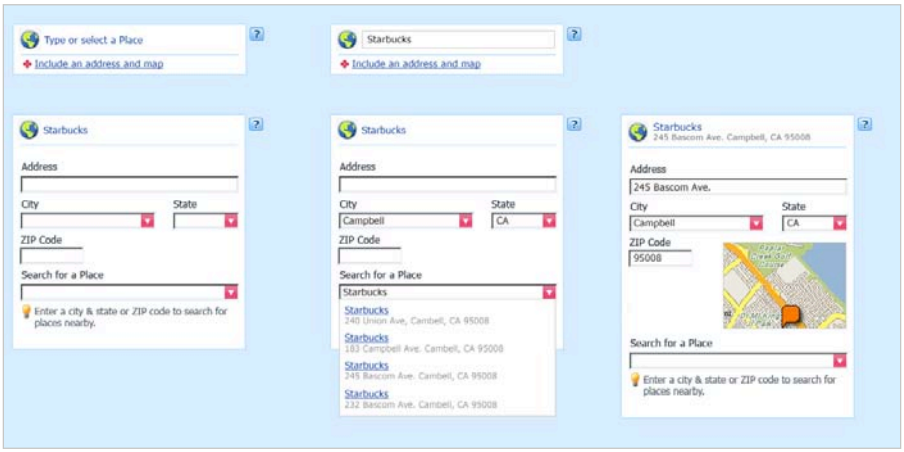
Exposing Options



Dialog

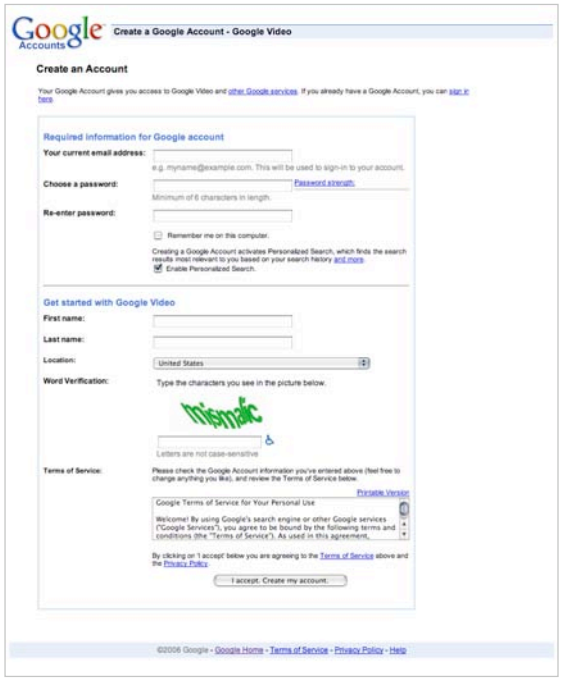


Progressive Disclosure



Gradual Engagement







BEST PRACTICE

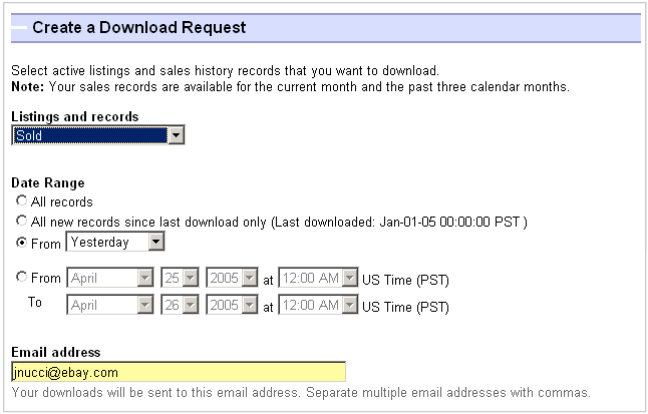
- Map progressive disclosure to prioritized user needs
- Most effective when user-initiated
- Maintain a consistent approach

Selection Dependent Inputs

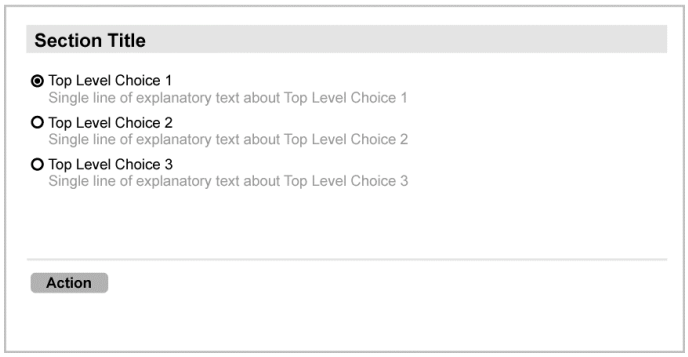


- Sometimes an initial data input requires or enables additional inputs
  - More options become available because of an initial input
  - Further clarification required due to initial input

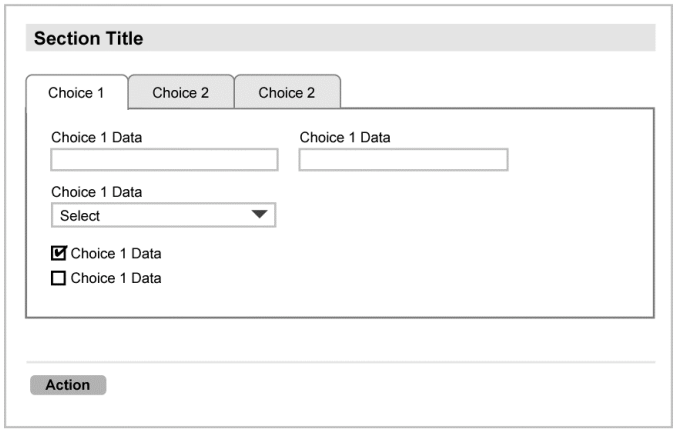
Selection Dependent Inputs



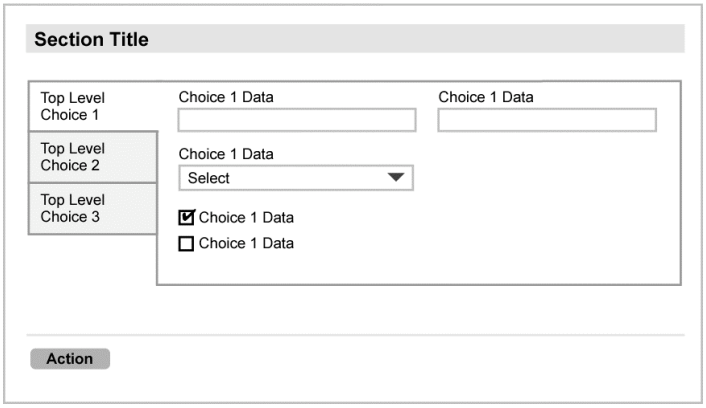
Page Level



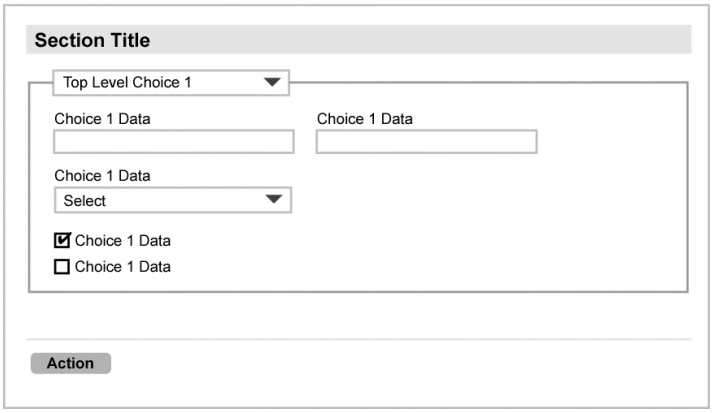
Section Tabs



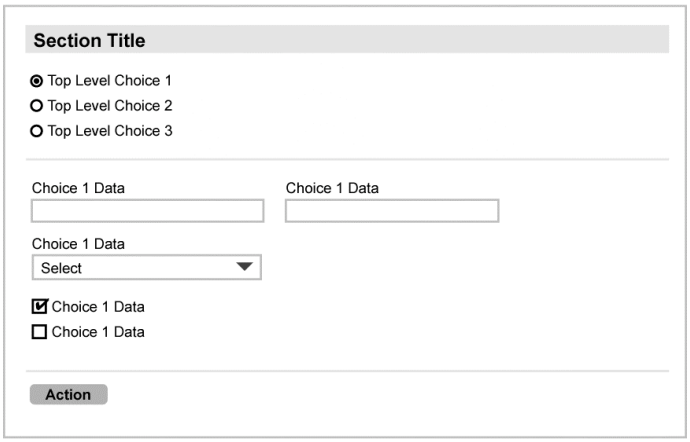
Section Finger Tabs



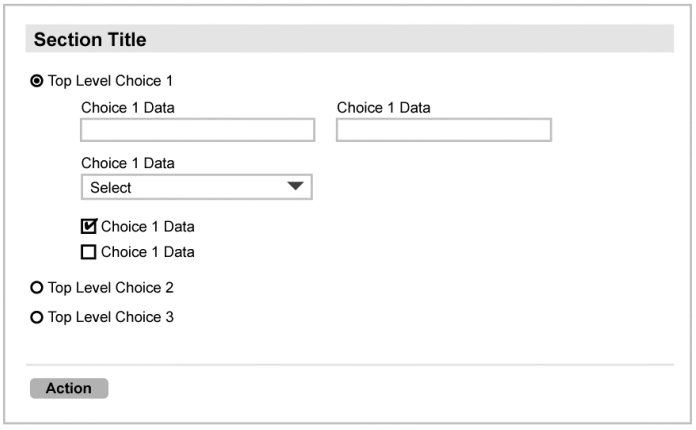
Section Selectors



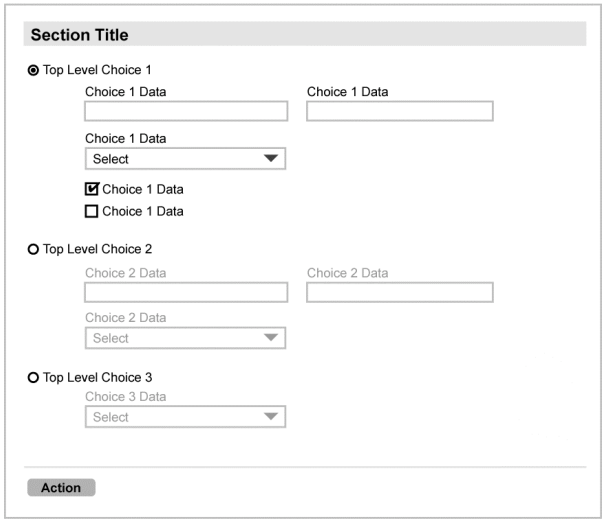
Expose Below



Expose Within



Inactive Until Selected



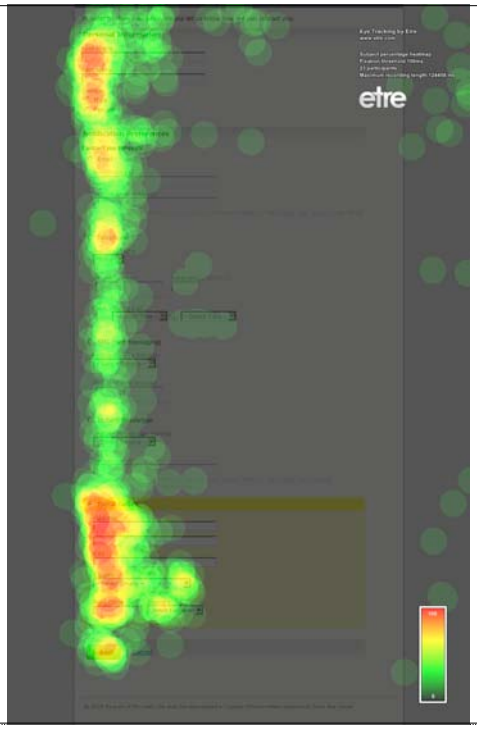
Exposed & Grouped



Exposing Dependent Inputs

- Page Level
  - Requires additional step
- Section Tabs
  - Often go unnoticed
  - Require smart defaults
- Finger Section Tabs
  - Follow path to completion scan line
- Section Selectors
  - Effectively Group information
  - Hide some options
- Expose Below & Expose Within
  - Potential for confusion
- Inactive Until Selected & Exposed within Groups
  - Association between primary selection is impaired





BEST PRACTICE

- Maintain clear relationship between initial selection options
- Clearly associate additional inputs with their trigger
- Avoid “jumping” that disassociates initial selection options

FEEDBACK



Feedback

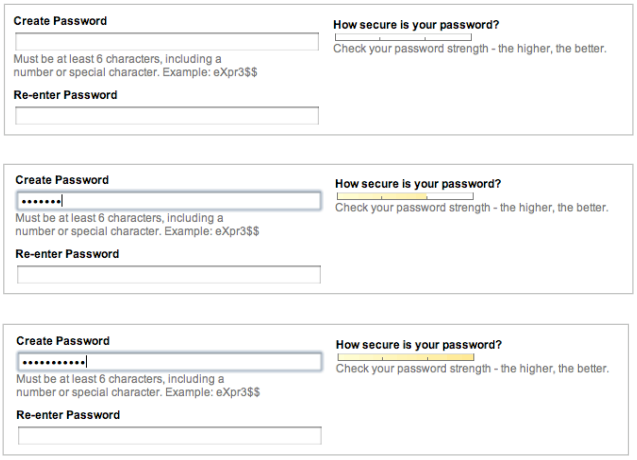
- Inline validation
  - Assistance
- Errors
  - Indication & Resolution
- Progress
  - Indication
- Success
  - Verification

Inline Validation

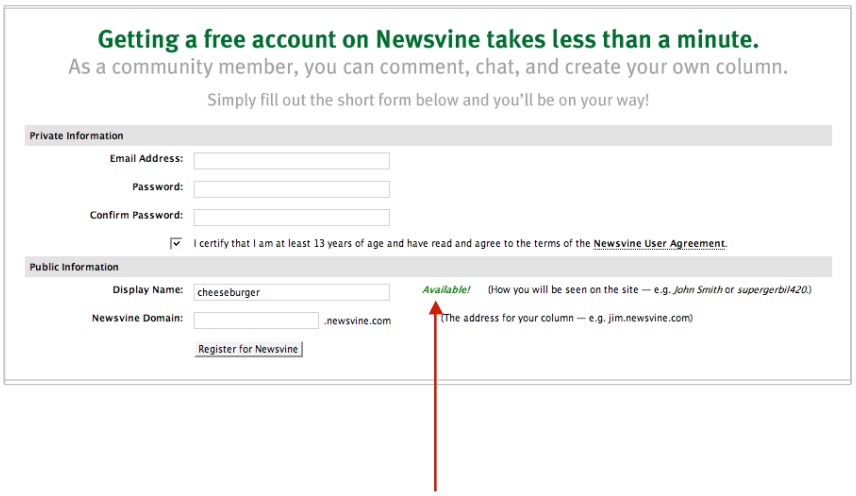


- Provide direct feedback as data is entered
  - Validate inputs
  - Suggest valid inputs
  - Help users stay within limits

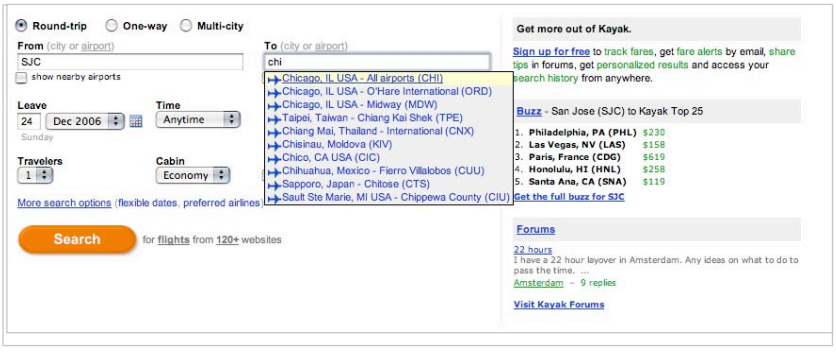
Password Validation



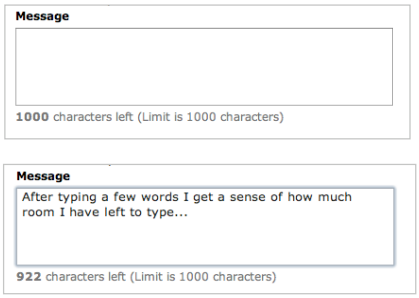
Unique User Name Validation



Valid Input Suggestions



Maximum Character Count



BEST PRACTICE

- Use inline validation for inputs that have potentially high error rates
- Use suggested inputs to disambiguate
- Communicate limits

Errors



- Errors are used to ensure all required data is provided and valid
  - Clear labels, affordances, help/tips & validation can help reduce errors
- But some errors may still occur
- Provide clear resolution in as few steps as possible

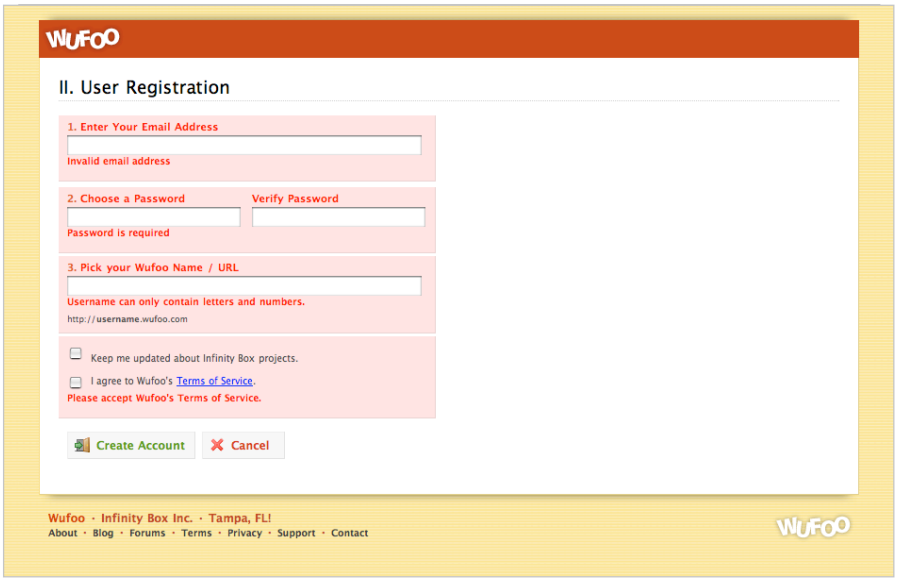
Error Messaging



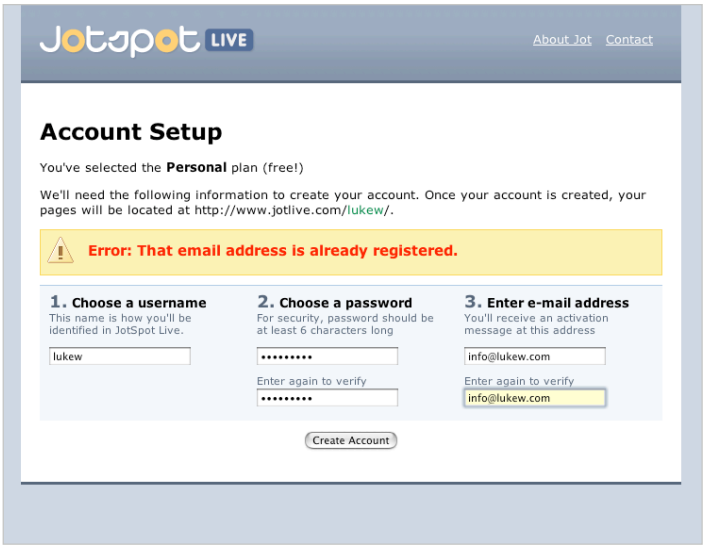
Short Forms: too much?

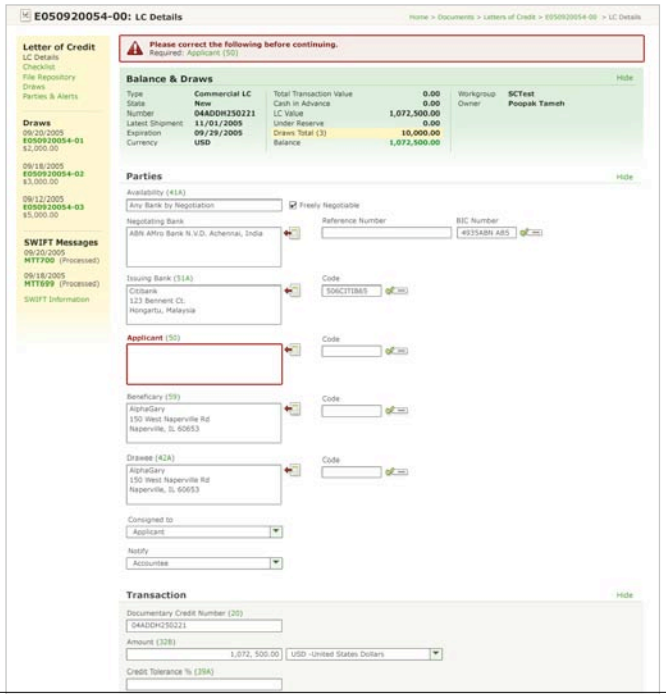


Short Forms



Short Forms


Jotspot LIVE
About Jot
Contact
Account Setup
You've selected the Personal plan (free!)
We'll need the following information to create your account. Once your account is created, your pages will be located at http://www.jotlive.com/lukew/.
Error: That email address is already registered.
1. Choose a username
This name is how you'll be identified in JotSpot Live.
lukew
2. Choose a password
For security, password should be at least 6 characters long
Enter again to verify
3. Enter e-mail address
You'll receive an activation message at this address
info@lukew.com
Enter again to verify
info@lukew.com
Create Account


E050920054-00: LC Details
Letter of Credit
Please correct the following before continuing.
Balance & Draws
Parties
Transaction



BEST PRACTICE

- Clearly communicate an error has occurred: top placement, visual contrast
- Provide actionable remedies to correct errors
- Associate responsible fields with primary error message
- "Double" the visual language where errors have occurred

LUKEW INTERFACE DESIGNS

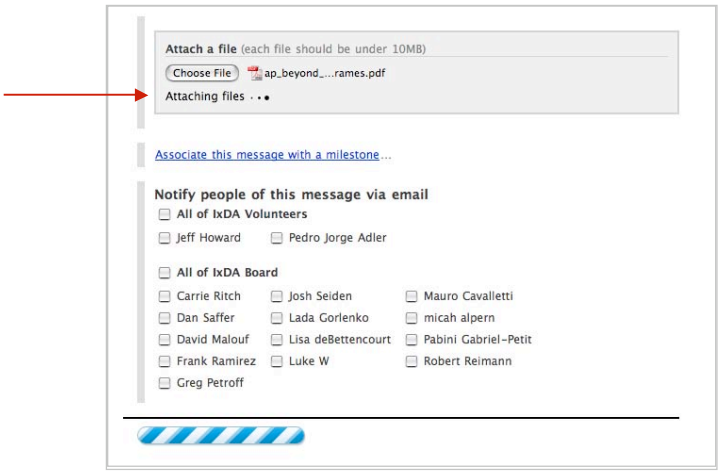
Progress



- Sometimes actions require some time to process
  - Form submission
  - Data calculations
  - Uploads
- Provide feedback when an action is in progress

LUKEW INTERFACE DESIGNS

Disable Submit Button



BEST PRACTICE

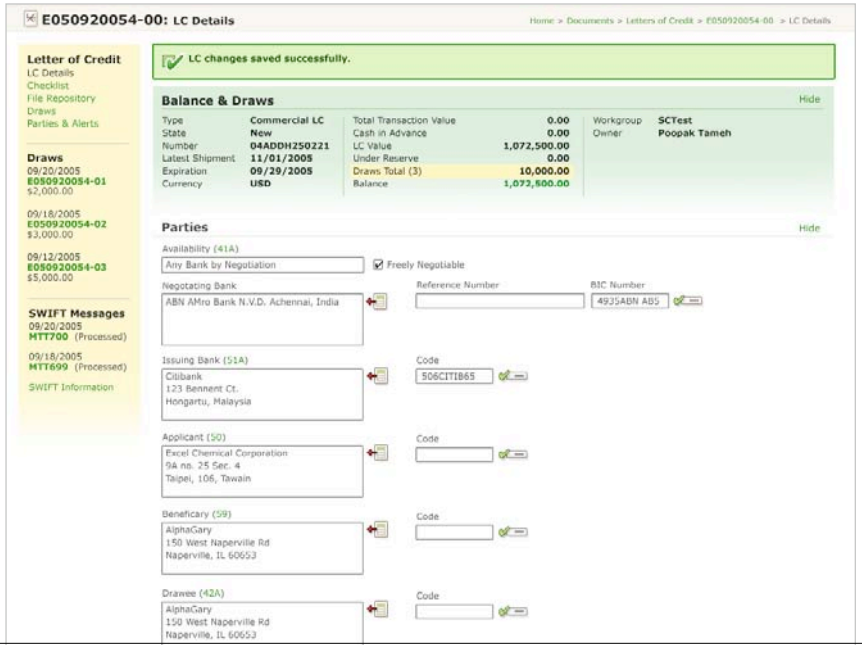
- Provide indication of tasks in progress
- Disable "submit" button after user clicks it to avoid duplicate submissions

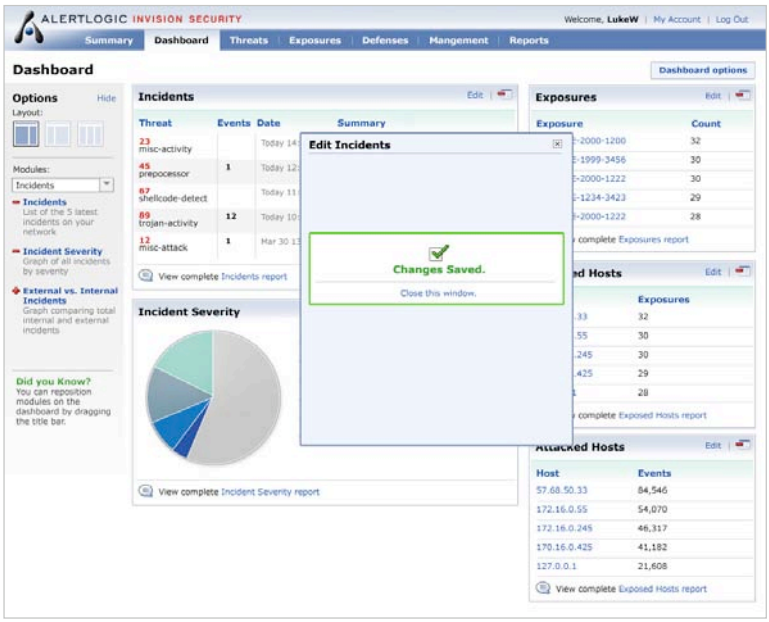
Success



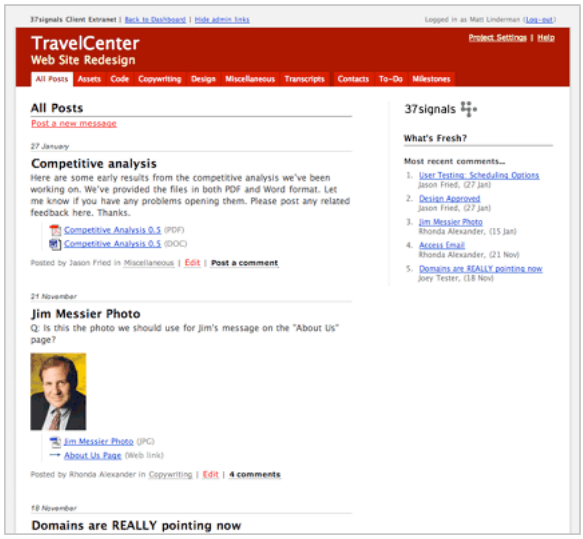
- After successful form completion confirm data input in context
  - On updated page
  - On revised form
- Provide feedback via
  - Message (removable)
  - Animated Indicator

LUKEW INTERFACE DESIGNS





Animated Indication





BEST PRACTICE

- Clearly communicate a data submission has been successful
- Provide feedback in context of data submitted

LUKEW INTERFACE DESIGNS

Additional Tips



- Avoid changing inputs provided by users
  - With later inputs
  - After an error has occurred
- Let users know if difficult to obtain information is required prior to sending them to a form

LUKEW INTERFACE DESIGNS

Accessibility & Mark-up



- Use <label> tags to associate labels with inputs
  - Properly read by screen readers
  - Most browsers treat text with <label> tags as clickable: larger actions
- Use the tabindex attribute to provide a "tabbing" path
  - Provides control over tabbing order
  - Enables forms to be navigated by keyboard
- Consider the accesskey attribute for additional keyboard support
  - Direct access to associated input fields
- Consider <fieldset> to group related form fields

Web Form Creation Tools





- Wufoo
  - http://www.wufoo.com
- Form Assembly
  - http://www.formassembly.com
- icebrrg
  - http://www.icebrrg.com

For more information...



- Functioning Form
  - www.lukew.com/ff/
- Web Form Design Best Practices
  - www.rosenfeldmedia.com/books/webforms/
  - Early 2008
- Drop me a note
  - luke@lukew.com