INPUT: MOVING BEYOND STATIC FORMS

LUKE WROBLEWSKI
UIE WEB APP MASTERS TOUR 2010
To visit the Rock Band Music Store, you must be signed into a gamer profile on the Xbox 360 Controller you are using to enter the Music Store.

SIGN IN
CANCEL
Reasons to Join Xbox LIVE

**Game Marketplace**
Get the most out of your games. Download free game demos, game add-ons, pick-up-and-play Arcade games, plus full Xbox 360, original Xbox, and indie games.

**Video & Music Marketplace**
Get the best in video entertainment. Check out the newest movies and TV shows (standard and HD), music and game videos, new release trailers, and independent videos.

Join Xbox LIVE
Welcome to Xbox LIVE

Sign up for Xbox LIVE in four basic steps.

1. Create your account.
2. Choose a membership.
3. Create your gamer profile.
4. Pick your gamer picture.

Xbox Live

Account
- E-mail address
- Password
- Secret question
- Birthday
- Verify information
- Terms of use

Choose membership
- Gamertag
- Gamer picture
Your Account

First, we need your e-mail address. You'll use this to manage your new account.

E-mail Address:  

Continue
Enter the e-mail address for your Windows Live ID.
Welcome to Windows Live

Email. IM. Blog. And more.

Windows Live™ makes it easy to keep up with all your favorite people - all in one place.

Check it out

Mail - Faster, easier, and more reliable than ever before.  
Go to Hotmail

SkyDrive - Free, password-protected online storage.  
Go to SkyDrive

People - Add people to your network and stay in touch more easily.  
Go to people

Welcome back!

Sign in to Windows Live

If you have a Hotmail, Messenger, or Xbox LIVE account, you already have a Windows Live ID.

New to Windows Live?

Sign up

Messenger - Stay in touch, instantly—send and receive photos, play games, and more.  
Get Messenger

Photos - Share your favorite shots with friends, and comment on their photos, too.  
Go to photos

On your PC or mobile device - More for your PC or mobile device - Get free programs for your PC. Use Windows Live on your mobile device, too.  
Free downloads | More about mobile

© 2010 Microsoft | Privacy | Terms of use
Create your e-mail address and password

**E-mail address:** lukewy

The address can contain only letters, numbers, periods (.), hyphens (-), or underscores (_).

**Password:** ********

Six-character minimum with no spaces
Learn how to create a strong, memorable password.

**Password strength:** Medium

**Retype password:** ********

Type the characters you see in this picture
This ensures that a person, not an automated program, is creating this account. Why is this important?

**Picture:** [Image]

The picture contains 8 characters.

**Characters:** blank

Continue Cancel
Create credentials
Enter an e-mail address and password to use for your Windows Live ID. Choose a question and secret answer to help you reset your password if you forget it.

Create your e-mail address and password

E-mail address:
The address can contain only letters, numbers, periods (.), hyphens (-), or underscores (_).

Password:
Six-character minimum with no spaces
Learn how to create a strong, memorable password.

Password strength:
Not rated

Create your password reset option
If you forget your password, you can provide the secret answer to reset it. Learn more about resetting your password

Question: Favorite teacher

Secret answer: edna
Five character minimum; not case sensitive

Picture:
The picture contains 8 characters.

Characters:
Create credentials
Enter an e-mail address and password to use for your Windows Live ID. Choose a question and secret answer to help you reset your password if you forget it.

Create your e-mail address and password

- **E-mail address:**
  - The address can contain only letters, numbers, periods (.), hyphens (-), or underscores (_).

- **Password:**
  - Six-character minimum with no spaces
  - Learn how to create a strong, memorable password.

- **Password strength:**
  - Not rated

- **Retype password:**

Type the characters you see in this picture
This ensures that a person, not an automated program, is creating this account. Why is this important?

- **Picture:**

The picture contains 8 characters.

- **Characters:**

Continue  Cancel
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Learn how to create a strong, memorable password.

Password strength: Not rated

Retype password:

Type the characters you see in this picture
This ensures that a person, not an automated program, is creating this account. Why is this important?

Characters:
Enter the 8 characters you see

Continue  Cancel
Windows Live ID

Create credentials
Enter an e-mail address and password to use for your Windows Live ID. Choose a question and secret answer to help you reset your password if you forget it.

Create your e-mail address and password

Please type your e-mail address in the following format: yourname@example.com.

E-mail address: lukew
The address can contain only letters, numbers, periods (.), hyphens (-), or underscores (_).

The new password and the confirmation password do not match. Please type the same password in both boxes.

Password: ********
Six-character minimum with no spaces
Learn how to create a strong, memorable password.

Password strength: Not rated

Retype password: ********

Secret answer: edna
Five character minimum; not case sensitive

Continue Cancel
Create credentials
Enter an e-mail address and password to use for your Windows Live ID. Choose a question and secret answer to help you reset your password if you forget it.

Create your e-mail address and password

 Please type your e-mail address in the following format: yourname@example.com.

E-mail address: lukew
The address can contain only letters, numbers, periods (.), hyphens (-), or underscores (_).

 Please type the same password in both boxes.

Password: ********
Six-character minimum with no spaces
Learn how to create a strong, memorable password.

Create your password reset option
If you forget your password, you can provide the secret answer to reset it. Learn more about resetting your password

Question: Favorite teacher

 The secret answer is too short. Please type an answer that is at least 5 characters long.

Secret answer: edna
Five character minimum; not case sensitive
Create credentials
Enter an e-mail address and password to use for your Windows Live ID. Choose a question and secret answer to help you reset your password if you forget it.

Create your e-mail address and password

- Please type your e-mail address in the following format: yourname@example.com.

E-mail address: xbox@lukew.com
The address can contain only letters, numbers, periods (.), hyphens (-), or underscores (_).

- The new password and the confirmation password do not match. Please type the same password in both boxes.

Password: *********
Six-character minimum with no spaces
Learn how to create a strong, memorable password.

Password strength: Medium

Retype password: *********

Create your password reset option
If you forget your password, you can provide the secret answer to reset it. Learn more about resetting your password

Question: Name of first pet

- The secret answer is too short. Please type an answer that is at least 5 characters long.

Secret answer: charlie
Five character minimum; not case sensitive
We're unable to complete your request
Windows Live ID is experiencing technical difficulties. Please try again later.
Forms Suck.
MOVING BEYOND STATIC FORMS

1. Rich Interactions to enhance standard forms
2. Commonly used tools for input
3. Web services to bypass registration & set-up
4. New capabilities on mobile devices
MOVING BEYOND STATIC FORMS

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Rich Interactions

Inline Validation
- Real time feedback to validate inputs, improve quality, & eliminate the need for additional inputs

Input Masks
- Take the burden of formatting answers off people

Inline Multi-step Forms
- Utilize rich interactions to maintain context
Inline Validation on Yahoo! Registration

1. Tell us about yourself...
   - My Name
   - Last Name
   - Gender
   - Birthday
   - I live in United States
   - Postal Code

2. Select an ID and password
   - Yahoo! ID and Email
   - Password
   - Re-type Password
   - Check

3. In case you forget your ID or password...
   - Alternate Email
   - Security Question
   - Your Answer

Just a couple more details...
Validating Before Input

Create a Mint Account

Your E-Mail
That is not a valid email (ex. help@mint.com).

Confirm E-Mail

Zip Code

Password

Confirm Password

I agree to Mint’s Terms of Use

Why you’ll love Mint

- Takes only minutes to setup
- Your accounts are sync’d automatically and available anywhere
- Mobile alerts for bills, fees, budgets, low balances, and more
- Finds you ways to save every month

Sign Up
Inline Validation Testing

VS. a page submit/refresh model

- **22%** increase in completions
- **31%** increase in satisfaction ratings
- **42%** decrease in completion times
- **22%** decrease in errors made
- **47%** decrease in number of eye fixations
Where to Show Inline Validation

30% noticed inline validation in top part of form: name, email, gender, location

“How do you know that’s my correct email address?”

etre usability testing, March 2009
Where to Show Inline Validation

etre usability testing, March 2009

80-100% noticed inline validation in bottom part of form: user ID & password
When to Show Inline Validation

Highest success rates, lowest number of errors, shortest time to completion, highest satisfaction rates

7-10 seconds slower

“It’s frustrating that you don’t get the chance to put anything in [the field] before it’s flashing red at you.”
When to Show Inline Validation

User ID
5 characters minimum.

Password
5 characters minimum, must include a special character. Example: secr3t

Strength
Most people are “hunt and peck” typists

Persistent messages support both “check as you go” & “check after complete” done strategies
BEST PRACTICE

- Use inline validation for inputs that have potentially high error rates
- Validate “open” inputs after people finish
- Keep validation messages persistent
- Use suggested inputs to disambiguate
- Avoiding “jumping” forms around
“Usability suffers when users type in passwords and the only feedback they get is a row of bullets. Typically, masking passwords doesn’t even increase security, but it does cost you business due to login failures.” - Jakob Nielsen, 2009
Password Masks

How to Mask Passwords Like the iPhone

Password

[Image of ZURB logo]
Required Formats

Phone Number
(ex. 555-123-4444)

(555) 123-4444
555-123-4444
555 123 4444
555.123.4444
5551234444
### Input Masks

<table>
<thead>
<tr>
<th>Field</th>
<th>Formatting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Surface formatting right up front</td>
</tr>
<tr>
<td>Phone</td>
<td></td>
</tr>
<tr>
<td>Tax ID</td>
<td></td>
</tr>
<tr>
<td>SSN</td>
<td></td>
</tr>
<tr>
<td>Product Key</td>
<td></td>
</tr>
<tr>
<td>Eye Script</td>
<td></td>
</tr>
<tr>
<td>US Phone Number</td>
<td>Do not gradually reveal formatting as people enter input</td>
</tr>
<tr>
<td>US Dollar</td>
<td></td>
</tr>
<tr>
<td>US Date</td>
<td></td>
</tr>
</tbody>
</table>
Verify your order

Credit Card Security Code:
Before placing your order please enter the security code
VISA: 15776

Enter security code: [ ]
What is this?

Billing Address:
Luke Wroblewski
123 Main St.
San Francisco, CA 94112

Shipping Address:
Luke Wroblewski
235 Regent Street
London
W1B 2EL
United Kingdom
40B 242–252
lukawro@ly.com

Order Confirmation Email:
lukawro@ly.com

Payment Method:
VISA: 15776
Expires: 09/12/11

Promotion Savings
Enter Promotion Code: [ ]

Tax Information
VAT Reg. No.:

Shipping Information:
Delivered via courier service within 3–7 business days after shipping.
Tracking will be available online.
The shipping method for your order will be confirmed on
the notification email you receive when your order has shipped.

Giving a gift?
Add gift options to your order.
Our signature gift box, personalized messages, and other gift options
are available for many products we sell.
Add gift options

Order Summary
Luke, your order will be shipped when all individual items become available - as one single shipment
Estimated Shipping: within 24 hours
Estimated Delivery: 17 Dec, 2009 – 21 Dec, 2009
Learn more About shipping & delivery options.

<table>
<thead>
<tr>
<th>Item Details</th>
<th>Quantity</th>
<th>Item Price</th>
<th>Item Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple TV with 160GB drive</td>
<td>1</td>
<td>£190.43</td>
<td>£190.43</td>
</tr>
</tbody>
</table>
Multi-page Forms
Testing Inline Multi-step Forms
Testing Inline Multi-step Forms
Testing Inline Multi-step Forms

Page 1

Shipping Info

Payment Info

Label

Label

Label

Label

Label

Label

Label

Label

Submit

Submit
• Inline multi-step (accordion) forms should not effect conversion rates
• People were fastest with the inline multi-step form
• People do not think of section headers as form actions/elements
• Inline multi-step forms do not inherently have more usability issues than single or multi-page forms
Inline Multi-step Forms

Member Registration

The Club Nintendo registration process requires additional information. Follow the steps below.

Date of Birth

Date of birth: May 24, 1975

Email Address

Email address: info@lukew.com

Username / Password

Preferred Username: lukew
Preferred Screen Name: lukewdesign
Password: ************
Re-enter Password: ************

Additional Information
MOVING BEYOND STATIC FORMS

1. Rich Interactions to enhance standard forms
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3. Web services to bypass registration & set-up
4. New capabilities on mobile devices
## Commonly Used Tools

### Communication Tools
- Email: 247 billion emails/day (worldwide)
- Text Messaging: 4.1 billion text messages/day (US only)
- Instant Messaging, Twitter, etc.

### Web Browsers
- People spend more time off your site than on it
- Integrate Input options into the Web browser

### Supporting Multiple Tools
- Input can come from anywhere
- Let people use their existing workflow to provide input
Invitation from Bob Baxley

Luke,

Please join my Reputation Network on Naymz. As a Naymz user, like me, you will enjoy these FREE benefits:

- Enhance and monitor your online reputation
- Promote your good name in Google, Yahoo! and other search engines
- Keep track of what others in your network are up to
- Connect with other reputable professionals
- Get Perks based on your RepScore

To accept, please complete the form to the right or click here to transfer this invitation to an existing Naymz account.

Sincerely,
Bob Baxley
Using Email for Input

Trip Details

- Thursday, November 29, 2007
  - Flight from San Francisco (SFO) to Cancun (CUN)
  - Alaska Airlines 298
  - Depart: San Francisco (SFO), 10:30am
  - Arrive: Cancun (CUN), 5:35pm
  - Nonstop
  - 5h 05min
  - Aircraft 73H
  - 2404 miles
  - Economy
  - Seat 26F, 26E
  - Conf. # LJPMEB

- Map of Cancun, Mexico
  - Cancun, Mexico

- Friday, November 30, 2007
  - Cancun, Mexico (Edit)
  - Avg: Sunny / Hi 86°F / Lo 71°F

- Saturday, December 1, 2007
  - Cancun, Mexico (Edit)
  - Avg: Sunny / Hi 84°F / Lo 70°F

Passengers
- Amanda Siegel
- Luke Wroblewski

Booking Information
- Booked on Orbitz
- Orbitz Conf # AP1101013S6L3P7
- http://www.orbitz.com/
- 1-888-656-4546

Help us improve Triplt! How accurate is this imported booking?
Using Email for Input

Posterous™ is the dead simple place to post everything, just email us.

Step 1: Create an account.
Skip it! No setup or signup.

Step 2: Email anything to post@posterous.com
Attach photos, video, MP3’s, and files.

Try it now by emailing post@posterous.com from

Gmail • Windows Live Hotmail • Yahoo! Mail • AOL

...or any other email. Posterous works wherever you have email.

Email post@posterous.com »

Or see what others are posting...
Using Email for Input

Posterous | Re: Hello World

Posterous to me

--- Reply above this line to create a new post ---

posterous

Your email has been posted!

Welcome to Posterous! We think e-mailing is such a natural way to share information, there can be no better way to publish something on the internet. So go for it, send us something else! We’ll add it to the blog you have already created.

Your new post

Do you want to edit or remove this post?

Click here to edit or remove
Using Email for Input

Set a password

Select the web address you'd like for your posterous below, and choose a password to go along with it.

Choose a name for your posterous site

lukew .posterous.com

Password

**************

Sign up

Already have an account?
Merge this site to an existing Posterous account by logging in.

Log in with Posterous
Using Email for Input

Great! Now that you have a password, here's where you can manage everything about your posterous.

Manage

Try the Posterous Bookmarklet!
It's a special bookmark you can use to grab big photos, video, audio and text right out of the page you're looking at, comment, and post it fast.

Click here to set it up »
Hide this message »

Luke's posterous •

0 subscribers // 1 posts // 0 site views

Hello World

To post new stuff, just email post@posterous.com

Edit Settings » Manage this site »

Get another posterous site!
Got more to say? Want a place to say it? Your 2nd posterous site is one click away.

Create a new posterous

View my profile » Edit my profile »

You haven't filled out your profile yet. How about telling us more about yourself? Edit now »

Manage emails and phone »
Post from more email addresses and your mobile phone.

Autopost to Everywhere »
Make your posterous posts show up automatically on Facebook, Twitter, Flickr or your other blogs.

Change password »
Posterous does more!
“At Posterous, we’ve always believed in avoiding account creation as much as possible. You can post without an account, and you can subscribe without an account. Accounts get in the way.” -Sachin Agarwal, Posterous CEO

Comscore & Quancast data: http://techcrunch.com/2010/07/05/posterous-700-percent/
Using SMS Text for Input

**SMS2QUIT**

*In just 30 days, you can quit smoking.*

Combining clinically proven techniques with today’s lifestyle, SMS2Quit is the modern way to stop smoking. Change your life for the better starting today!

Start Today  **$19.95** for the full program!

Tell a Friend  Buy a Gift Membership

- **FAST**
  With SMS2Quit, you can stop smoking in just **30 days**.

- **EASY**
  Just carry your cell phone with you, we’ll do the rest.

- **EFFECTIVE**
  SMS2Quit is a modern enhancement of clinically proven methods.

“SMS2Quit combines the best of what science now knows about how to best **end the habit and addiction of smoking**. SMS2Quit’s Enhanced Gradual Reduction Method is highly effective, and offers new hope to many who have tried to quit smoking without success.”

**Dr. Anthony Jenkins**, M.D.
Chief Cardiac Physician,
Stanford Medical Center

More about [how SMS2Quit works](#)

Learn More

Members

User Name

Password

Sign up

Sign In

Forgot your Password?
Using the Web Browser for Input
Using the Web Browser for Input

Web Form Innovation for Mobile Devices

by Luke Wroblewski
February 11, 2010

Mobile Web forms tend to have significantly more constraints than their desktop cousins: mobile screens are smaller; connection speeds are slower; entering text is harder; and so on. As a result, it’s generally a good idea to limit the number of Web forms in mobile applications and sites. In situations where you do have to get input from people on mobile devices, radio buttons, checkboxes, select menus, and lists tend to fare much better than open text fields.

But constraints breed innovation and mobile Web forms are no different. The limitations of mobile devices have forced developers and designers to find new ways to make providing input faster and easier. Several of these innovations are now making their way back to the desktop and beyond.

Field Zoom

When a user selects an input field in a Web form, field zoom brings it to the foreground and expands it to fill the screen’s viewable area. This makes an otherwise tiny input field large enough for people to actually see the input they enter. When you consider that many form errors are caused by people not seeing their input well enough to correct misspellings, the usability implications of this approach become clear.
Using the Web Browser for Input
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Field zoom also provides another great reason to top-align input field labels in forms. As you can see in the example of Google's
Using the Web Browser for Input

Enables anyone who knows HTML, CSS, and JavaScript to create powerful Firefox add-ons.

Add browser actions, page actions, and content scripts to the Google Chrome browser using HTML, CSS and Javascript.

Safari Extensions are built with web standards, so you can do it all using the power of HTML5, CSS3, and JavaScript.
Supporting Multiple Tools

- Email
- Twitter
- Calendar
- Portal/Home
- Browser
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Web Services

Remove barriers to account creation
- Over 60 million people use Facebook Connect on external sites per month

Don’t re-create what they’ve already done
- Identity, bio, profile, contact information
- Friends & contact lists

Deliver an instant-on start experience
Web Services

Remove barriers to account creation
  • Over 60 150 million people use Facebook Connect Platform on external sites per month

Don’t re-create what they’ve already done
  • Identity, bio, profile, contact information
  • Friends & contact lists

Deliver an instant-on start experience
Typical Account Creation

Brightkite is a location-based social network. In real time you can see where your friends are and what they're up to. Depending on your privacy settings you can also meet others nearby.

Learn about Brightkite  Sign up

Welcome to Brightkite  Meet keep the friends
Post photos & notes to locations
Explore & discover new places

Recent activity around Portland

factoryjoe checked in @ Ace Hotel - less than a minute ago
nttma checked in @ Target - 39 minutes ago

Brightkite for iPhone
Brightkite for iPhone is now available! Download it from the
Typical Account Creation

Are you human?

Type the two words:

Please type in the two words above to verify that you are human.

I have read and agree to the Brightkite Terms of Service & Privacy Policy

Sign Up
Thanks for signing up for Brightkite

Okay, so what now? Well, during the beta, we'd like you to explore a little, and figure things out for yourself. We'd love to guide you through everything, but we just haven't gotten to that part yet.

Things you do with Brightkite:

- Check in at places (enter your current location at the top, then hit checkin on the place page).
- Post notes and photos at a place
- See what's going on at a place, who's there right now, and who's been there
- Friend people and keep track of what they're doing in the real world

Here are some links to get you started:

- Use Brightkite via text messaging on your phone
- See what people are doing on Brightkite
- Set up your profile
- Read our FAQ
- Give us feedback
The simple way to keep up with friends & places

We're all about helping you keep up with your friends, meet new people, and discover new places. All while you're out and about.

Sign up – it's fun!

Enter your email:

Pick a username:

Make a password:

Sign up

Learn more

Available on the iPhone
App Store
Available for Android
ANDROID

Download to your mobile device: iPhone, Android, BlackBerry

What's happening in San Jose

about 18 hours ago @ Togo's
about 19 hours ago @ Fantezia
about 19 hours ago @ Fantezia
about 19 hours ago @ San Jose Trolley Barn
about 23 hours ago @ San Jose Airport

What people are saying

“Brightkite does this beautifully”

BusinessWeek

“The true king has just been submitted”

ars technica
Web Services for Account Creation

The simple way to keep up with friends & places

We're all about helping you keep up with your friends, meet new people, and discover new places. All while you're out and about.

Join with one click!

Connect with Facebook

or sign up with your email address

Already have an account? Log in

Available on the iPhone App Store
Available for Android Android

Download to your mobile device:

iPhone, Android, BlackBerry, all other phones

What's happening in South San Francisco

What people are saying

“IT’s a great design... the application’s interface is dead simple... it’s all here.”

TechCrunch

“Brightkite is a great location-based service.”

cnet
Instant-on Start Experience

Whobilluke474 @ Somewhere in the world - shared with everybody - check in elsewhere

Post | Check In

You can also post from your mobile phone

Friends on the town

Nearby people

Share with twitter
One Windows Live ID gets you into **Hotmail, Messenger, Xbox LIVE** — and other places you see.

**Sign up**

Windows Live ID gives you access to Microsoft services including MSN, Hotmail, Office Live, Xbox LIVE, and many more.

Don't have a Windows Live ID?

[Sign up](#)

[More about Windows Live ID](#)

[Privacy Policy](#)

**Click a Windows Live ID to sign in**

[![xbox@lukew.com](#)](#)

Forget me

Sign in with a different account

Use enhanced security

©2010 Microsoft Corporation  About  Privacy  Trademarks  Account  Help Central  Feedback
Hi Luke. Pandora is using Facebook to personalize your experience. Learn More - No Thanks

We created Pandora to put the Music Genome Project directly in your hands.

It's a new kind of radio - stations that play only music you like.

Enter an artist, song or composer. We'll create a radio station featuring that music and more like it.

We're starting you off with a station based on artists you like from Facebook.

now playing: Jamming by Bob Marley on Exodus (Deluxe Edition)
Instant-on Start Experience

Application for elegant.ly

Startups need you. Apply and be connected to early-stage companies that realize great design and user experience will make or break their businesses.

Luke Wroblewski
Chief Design Architect (VP), Yahoo! Inc. | Speaker & Author, LukeW Ideation & Design
San Francisco Bay Area | 24 recommendations

YOUR AREAS OF EXPERTISE
Select all that apply to you

- Visual Design
- Icon Design
- Motion Design
- Experience / Product Strategy
- UX Design / Wireframes
- Identity Design / Illustration
- Web Development
- User Research

TELL ME ABOUT YOU
Passions, design interests, side projects, etc.

LukeW is an internationally recognized product design leader who has designed or contributed to software used by more than 700 million people worldwide. He is currently Chief Design Architect (VP) at Yahoo! Inc. where he works on product alignment and forward-looking integrated customer experiences on the Web, mobile, TV, and beyond.

Luke is the author of two popular Web design books (Web Form

ATTACH WORK PHOTOS
Instant-on Start Experience

From: Toolmark <yourlinks@toolmark.com>
Subject: Your Sample Email from Toolmark
Date: November 30, 2009 9:13:57 PM PST
To: cdr@lukew.com
Reply-To: Toolmark <yourlinks@toolmark.com>

Daily email reminders for your Delicious bookmarks.
Want to customize your tags? Finish signing up.

Thanks for trying it out.
This is a sample of the email reminders you would receive. The only difference is your
email will contain links from the tags you specify, such as items tagged toread.

Want to finish registering? Click here and customize your tags. If you're not interested, just delete this email and we’ll pretend this never happened.

Here are the 10 latest links from wookash:

- New challenges for Nintendo
- Kindle has best sales month in November, Amazon says
- New Xbox Live iPhone App Now Available
- lericson/programming/ - Multitouch on Unibody MacBooks
- Mobile Opportunity: The mobile data apocalypse, and what it means to you
MOVING BEYOND STATIC FORMS

1. Rich Interactions to enhance standard forms
2. Commonly used tools for input
3. Web services to bypass registration & set-up
4. New capabilities on mobile devices
Why Care About Mobile?

Mobile Web growth has outpaced desktop Web growth 8x. Smartphone sales will pass PC sales in 2012.

<table>
<thead>
<tr>
<th>Year</th>
<th>PC</th>
<th>Desktop Internet</th>
<th>Mobile Consumer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>100M+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2000</td>
<td>1B+</td>
<td>1B+</td>
<td>-</td>
</tr>
<tr>
<td>2010</td>
<td>10B+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2020</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

"The rule of thumb is to limit the use of forms in the mobile context"

-Mobile Web Design & Development, O’Reilly 2009
Mobile Device Input Capabilities

- **Multi-touch**: input from one or more simultaneous gestures
- **Location**: Precise location information from GPS; Less precise from cell towers, WiFi, IP
- **Audio**: input from a microphone; output to speaker
- **Video & image**: capture/input from a camera
- **Push**: real-time notifications “instant” to user

- **Gyroscope**: 360 degrees of motion
- **Dual cameras**: front & back facing

- **Proximity**: device closeness to physical objects
- **Ambient Light**: light/dark environment awareness
- **Motion**: full or partial body motion detection
- **RFID reader**: identify & track objects with broadcasted identifiers
- **Haptic feedback**: “feel” different surfaces on a screen
- **Biometrics**: retinal, fingerprint, etc.
Field Zoom on the iPhone
Field Zoom on the iPhone

on for Google account

e.g. myname@example.com

Used to sign-in to your account.

Required information for Google account

Your current email address: e.g. myname@example.com. This will be used to sign-in to your account.

Choose a password: Password strength is important.

Re-enter password:

Stay signed in

Creating a Google Account will enable Web History. Web History is a feature that will provide you with a more personalized experience on Google that includes more relevant search results and recommendations. Learn More

Enable Web History:

Get started with Google Mobile

Location:

Birthday: MM/DD/YYYY (e.g. '2/1/2010')

Word Verification:

Tenace of Service:

Please check the Google Account information.
Google accounts

Create an account

Your Google Account gives you access to Google Mobile and other Google services. If you already have a Google Account, you can sign in here.

Required information for Google account

Your current email address: e.g. myname@example.com. This will be used as your sign-in to your account.

Choose a password:
Minimum of 8 characters in length.

Re-enter password:

Stay signed in

Creating a Google Account
Top Aligned Labels

- When data being collected is familiar
- Minimize time to completion
- Flexibility for localization and complex inputs
- Easier to code: no floats or tables
- Accessibility: label, field in order
- Better format for mobile screen
- Support help/error messaging column
- Require more vertical space
HTML5 Input Types

Images from Dive Into HTML5 by Mark Pilgrim
**HTML5 Input Types**

Images from Dive Into HTML5 by Mark Pilgrim

```html
<form>
  <input type="email">
  <input type="submit" value="Go">
</form>
```
HTML5 Input Types

Images from Dive Into HTML5 by Mark Pilgrim
Pop-Up Menus on iPhone
Pop-Up Menus on iPhone

Begin Date: Feb 9 2010
End Date: Feb 16 2010

Year Options:
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
Multi-Field Pop-Up Menus on iPhone

Enter personal profile information

Height

5 Feet, 7 Inches

Birthday

Jan 1 1975

November 30 1973
December 31 1974
January 01 1975
February 02 1976
March 03 1977
Multi-Field Pop-Up Menus on Android

![Image of a mobile application interface with pop-up menus for selecting dates and times. The main screen shows a date picker set to February 16, 2009, and a time picker set to 6:37 PM.]
Input Controls on Mobile Devices

Android

WebOS

iPhone OS
Input Controls on Mobile Devices

Windows Phone
Input Controls on Mobile Devices

Windows Phone

- **Slider**
  - Set sample value
  - Set sample value
  - Set sample value

- **Checkbox**
  - Check box group label
  - Rest state
  - Rest state
  - Finger down
  - Finger down
  - Finger up
  - Finger up
  - Disabled checked
  - Disabled unchecked

- **Radio Button**
  - Radio button interaction states
  - Rest state
  - Rest state
  - Finger down
  - Finger down
  - Finger up
  - Finger up
  - Disabled unselected
  - Disabled selected
Multiple Orientations
Location as Input

Now in the UK!

Search for (e.g. taco, cheap dinner, Max's)

Near (Address, City, State or Zip)

Welcome | About Me | Write a Review | Find Reviews | Invite Friends | Messaging | Talk | Events

1 to 10 of 5125 - Results per page: 10

50% off featured beverages! March 8th - 14th.

restaurants San Jose
Browse Category: Restaurants

Sort By
- Best Match
- Highest Rated
- Most Reviewed

Cities
- San Jose
- Santa Clara
- Sunnyvale
- Milpitas

Distance
- Bird's-eye View
- Driving (5 mi.)
- Biking (2 mi.)
- Walking (1 mi.)
- Within 4 blocks

Features
- Open Now (4:05pm)
- Good for Groups
- Good for Kids
- Take-out

Price
- $$$
- $$
- $$
- $ 

Category
- Chinese
- Japanese
- Vietnamese
- Mexican

1. SJ Omogari Korean Restaurant
Category: Korean

154 E Jackson St
San Jose, CA 95112
(408) 288-8134

Delicious Korean cuisine in San Jose! Looking at the exterior of this restaurant, you might not expect good food, clean venue and friendly service. However, it's got all of those! I've been here.

2. Vung Tau Restaurant
Categories: Vietnamese, Thai

535 E Santa Clara St
San Jose, CA 95112
(408) 288-9055

First Impressions: I have been to this restaurant since I was small with my family. Oh how have they updated the image. It is really fancy inside now. It use to be a old bar and dining place.

3. Taiwan Restaurant
Categories: Chinese, Caterers, Food

1306 Lincoln Ave
San Jose, CA 95112
(408) 281-6843

More categories →

Mo' Map
Map, stay put
del. search in map

Map
San Jose
Sunnyvale
Saratoga
Cupertino
Camino Park
Los Gatos

Add to Map
Add to My Review
Add to My List

Report
My Review
Report to Yelp
Report this review

Add Review
Submit Review

Report
Add to My Review
Add to My List

Report
My Review
Report to Yelp
Report this review

Add Review
Submit Review

More Cities →

More features →
Location as Input

- Restaurants
  - Rangoli India Restaurant
    - 1.4 miles
    - 3695 Union Ave, San Jose
    - $$
    - Indian
  - Dona Maria Mexican Restaurant
    - 1.4 miles
    - 3974 S Bascom Ave, San Jose
    - $$
    - Mexican
  - Lanna Thai Restaurant
    - 1.5 miles
    - 2043 Camden Ave, San Jose
    - $$$
    - Thai
  - Yeung Shing Restaurant
    - 2 miles
    - 14107 Winchester Blvd, Ste S, Los Gatos
    - $$$
    - Chinese
  - La Maison Du Cafe
    - 2 miles
    - 14103 Winchester Blvd, Los Gatos
    - $$$$
    - Restaurants
  - Chef Li
    - 1.5 miles

- Bars
- Coffee & Tea
- Banks
- Gas & Service Stations
- Drugstores
- Sales & Special Offers
- More Categories

Hot On Yelp Nearby

1. Zimmer J Kirk MD
   - 0.3 miles
Location as Input

Home Screen

Page 2
- YP.COM
- Events
- Traffic
- The Pulse

Page 3
- Movies

Search

5372 Keene Dr, San Jose CA

$2.96 CHEVRON
Regular

66° F Los Gatos, CA
Clouds And Sun
powered by AccuWeather.com

Indiana’s Evan Bayh won’t seek re-election to Senate

Live Oak Kitchen
Los Gatos, CA

What's New
## Location Systems

<table>
<thead>
<tr>
<th></th>
<th>Accuracy</th>
<th>Positioning Time</th>
<th>Battery Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPS</td>
<td>10m</td>
<td>2-10 minutes (only outdoors)</td>
<td>5-6 hours on most phones</td>
</tr>
<tr>
<td>WiFi</td>
<td>50m (improves with density)</td>
<td>Almost instant (server connect &amp; lookup)</td>
<td>No additional effect</td>
</tr>
<tr>
<td>Cell tower triangulation</td>
<td>100-1400m (based on density)</td>
<td>Almost instant (server connect &amp; lookup)</td>
<td>Negligible</td>
</tr>
<tr>
<td>Single Cell Tower</td>
<td>500-2500m (based on density)</td>
<td>Almost instant (server connect &amp; lookup)</td>
<td>Negligible</td>
</tr>
<tr>
<td>IP</td>
<td>Country: 99% City: 46% US, 53% Intl ZIP: 0%</td>
<td>Almost instant (server connect &amp; lookup)</td>
<td>Negligible</td>
</tr>
</tbody>
</table>

Smartphones: hybrid of GPS, Wifi, and cell tower triangulation
Laptops/desktops: WiFi, IP, rarely GPS
Location & Orientation as Input
When discovered by users boosted their sustained traffic by 40 to 50 percent.

“It was sort of beyond our expectations. We had no idea.”

Yelp CEO, Jeremy Stoppelman
Gestures as Input
Gestures as Input
Touch Gestures

www.lukew.com/touch

<table>
<thead>
<tr>
<th>user action</th>
<th>gesture</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjust</td>
<td><img src="https://via.placeholder.com/150" alt="Gesture" /> or <img src="https://via.placeholder.com/150" alt="Gesture" /></td>
<td>Press surface with one finger and move second finger over surface without losing contact.</td>
</tr>
<tr>
<td>press and drag</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Supporting materials for this guide can be found online: http://www.lukew.com/touch/
Voice as Input

nexus one™

Helping Grandpa Get His Tech On
New York Times
Images as Input

Scans: UPC (8, 12 digits) 
EAN (13 digits)

Hold still for scan.

Barcode must be upright. Avoid glare and shadows.

Powered by Occipital

Results

Designing Web Interfaces: Principles and Patterns for Rich Interactions
From $17.10 online

Google Search Results

Designing Web Interfaces $23.21
www.betterworldbooks.com

Designing Web Interfaces:... $25.47
www.valorebooks.com

Designing Web Interfaces:... $26.50
www.alibris.com

Designing Web Interfaces:... $28.99
www.frys.com

Designing Web Interfaces:... $31.18
www.overstock.com

Designing Web Interfaces:... $31.48
www.alibris.com

Designing Web Interfaces:... $33.43
Images as Input

- Designing Web Interfaces: Principles and Practice
  - Web: 25 items, $17.10
  - Local: 7 items, $35.99

Map showing local product locations around San Jose, including Campbell, Cambrian Park, and Los Gatos.
Images as Input

Designing Web Interfaces: Principles and Patterns for Rich Interactions (Paperback)

Online prices (2) from $31.49
Local prices (1) from $35.99

Amazon.com
New (35) from $23.95; Used (9) from $23.00

Google

Wikipedia

eBay
Images as Input

Google maps

We’re a Favorite place on Google

google.com

QR Code
Images as Input

Kasa Indian Restaurant - Indian Food Delivery
4001 18th Street
San Francisco, CA 94114
www.kasaindian.com - web site
4★ 4★ 4★ 4★ 4★ 14 reviews

"Kasa was a nice take on Indian ‘fast food’. "... "San Francisco likes Indian food."... "The portions were very generous and tasted really good."... "And besides, who needs ambiance with an idea this good?"... "I'm a little obsessed with Kasa...it's that good!"... "I am hooked!"
insiderpages.com, citysearch.com

(415) 621-6940
Map »

Details

Hours Of Operation: Monday: 11:00AM - 10:00PM, Tuesday - Sunday: 4:00AM - 10:00PM, Website:
Images as Input

Google Goggles Labs

Before: Image of a flower and a smartphone.

After: Smartphone with text input. The text reads: "Schmandtörtchen mit Holunderragout" and the translation is "Sour cream cake with elderberry sauce".
Input Capabilities

Form Fields
Audio
Location
Gestures
Images
MOVING BEYOND STATIC FORMS

1. Rich Interactions to enhance standard forms
2. Commonly used tools for input
3. Web services to bypass registration & set-up
4. New capabilities on mobile devices
CAN I USE THIS NOW?

1. Rich Interactions to enhance standard forms
   IE6 is less than 20% of all browsers

2. Commonly used tools for input
   Email: 247 billion emails/day (worldwide)
   Text Messaging: 4.1 billion text messages/day (US only)

3. Web services to bypass registration & set-up
   Over 150 million people use Facebook Connect per month
   2/3 of ComScore’s Top 100 sites have integrated with Facebook

4. New capabilities on mobile devices
   RIM, Android, iPhone, Nokia all use WebKit browser
   Smartphone sales will pass PC sales in 2012
For more information...

- **More Information**
  - @lukew
  - lukew.com

- **Web Form Design**
  - [www.rosenfeldmedia.com/books/webforms/](http://www.rosenfeldmedia.com/books/webforms/)
  - **Discount code: LUKE (25%)**