

MOBILE INPUT

- 1. Put in the effort where there's payoff.
- 2. Take the pain out of forms. Put it on yourself.
- 3. Look beyond forms for input.



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GROWTH = OPPORTUNITY

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

PC Desktop Internet 10B+

Desktop Internet 10B+

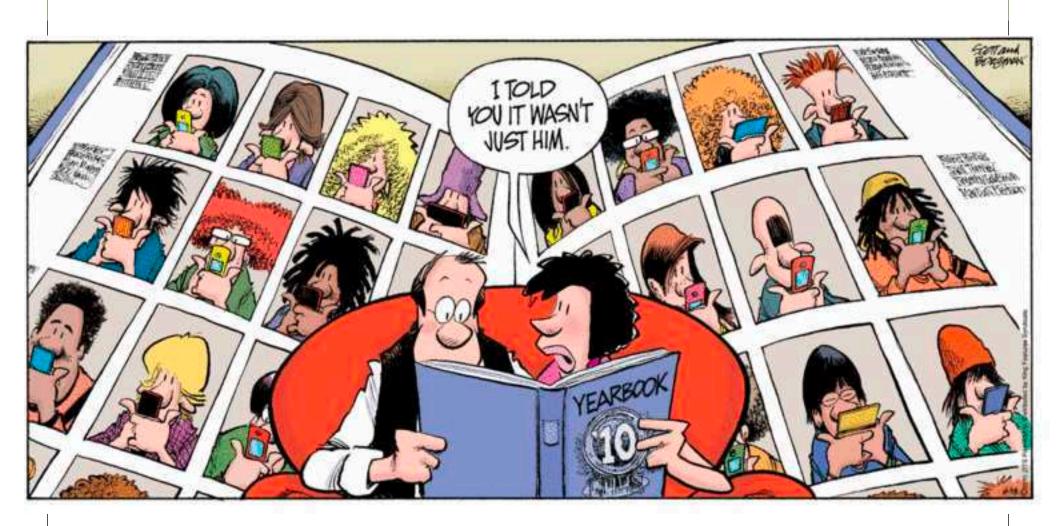
2010

2020

Note: PC installed base reached 100MM in 1993, cellphone / Internet users reached 1B in 2002 / 2005 respectively;25 Source: ITU, Mark Lipacis, Morgan Stanley Research.

2000

1990







During a typical day...

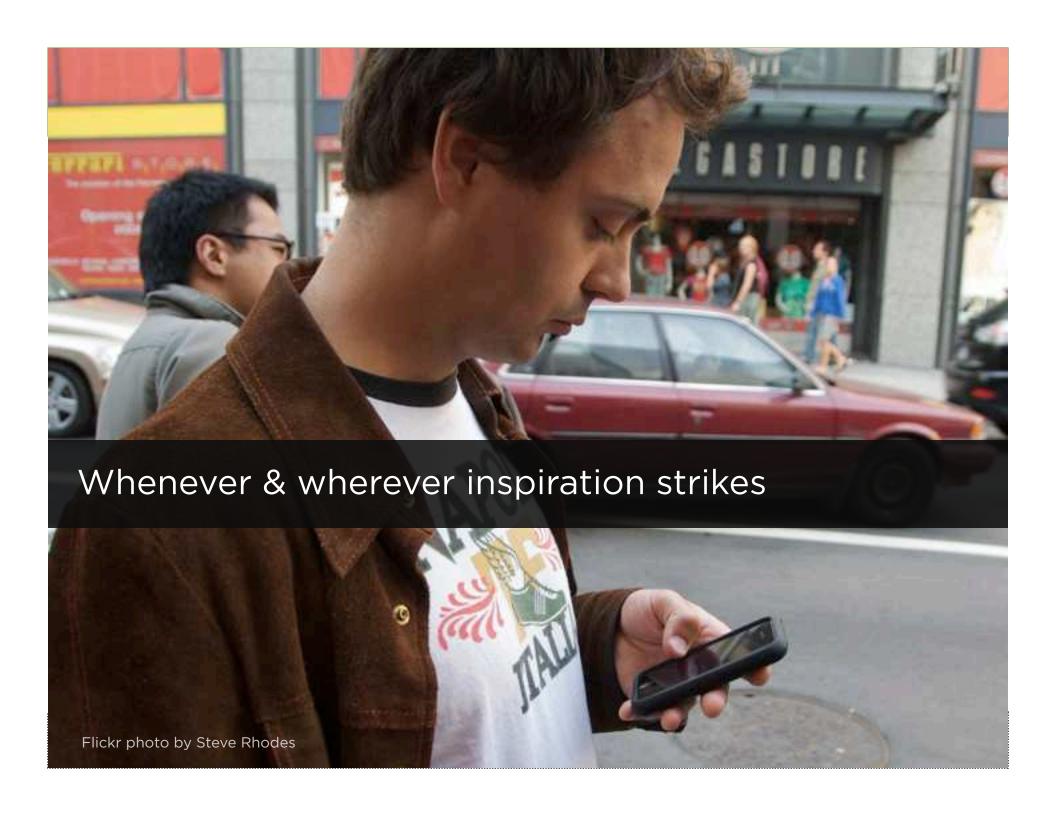
84% at home

80% during misc. times throughout the day

74% waiting in lines

64% at work

Flickr photo by Laughing Squid



Where Input Matters...

- Commerce: purchasing, maximizing sales
- Social: participating, growing communities
- Productivity: managing info, selling (or saving on) services





Commerce

- Amazon: over \$1 billion spent via mobile devices in the past 12 months
- PayPal: mobile transactions increased six-fold in 2009: \$25M to \$141M
- Best Buy mobile Web users doubling every year:
 30M (10), 17M (09), 6M (08)

Social

- Double-digit (28%) rise in social networking on mobile Web
- Twitter: 16% of all new users start on mobile
- Facebook: 150 million active mobile users

Productivity

- Email activity is 41% of US mobile Internet time
- 70% of smartphone users have accessed Email on their mobile device



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

Mobile Web Design & Development, O'Reilly 2009

Filling out forms for web based services on mobile devices is a very time consuming and frustrating task for users.

ACM Pervasive and Mobile Computing, 2008

In general, using input elements is difficult for users. Avoid text input where possible.

Sprint Web Style Guide, 2005







2006

High-end RAZR-inspired phone with class 12 EDGE high-speed data & WAP 2.0/xHTML Web browser.

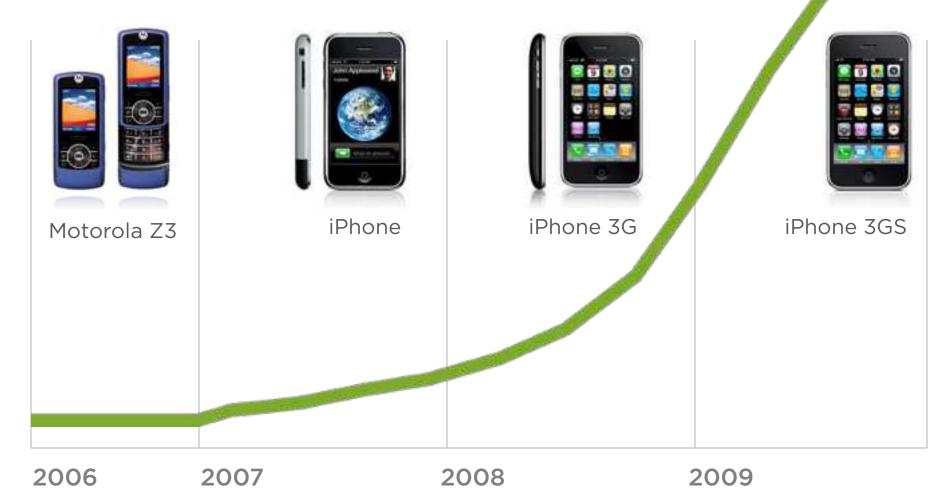
2G network GSM 850 / 900 / 1800 / 1900 SMS, EMS, MMS, Email, Instant Messaging 2 megapixel camera Music player

Resolution: 176 x 220 pixels Colors: 262,144 (18-bit)



4,932% Increase

AT&T mobile data traffic increased 50x in 3 years



Source: AT&T, Morgan Stanley Research.

30x the Mobile Traffic

1 iPhone



30 basic feature phones



Source: Cisco's "Visual Networking Index Global Mobile Data Traffic Forecast Update"

Feature Phones

Smart Phones



- 4% browse the mobile Internet at least daily
- 6% have accessed social networks using their mobile browser
- 12% have accessed Email on their mobile



- **35%** browse the mobile Internet at least daily
- 30% have accessed social networks using their mobile browser
- 70% have accessed Email on their mobile

27% of searches come from 4% of users



- 27% of all Yelp searches come from their iPhone application which had
 1.4 million unique users in May 2010
- That month Yelp had 32 million monthly unique users around the world

Devices are different.

Sales in Q2 2010

87M 24M 11M 14M

Series 40



Symbian





Maemo



Android

iPhone

8M



HARDER

Input Effort

EASIER

Source: http://bit.ly/akk2U7

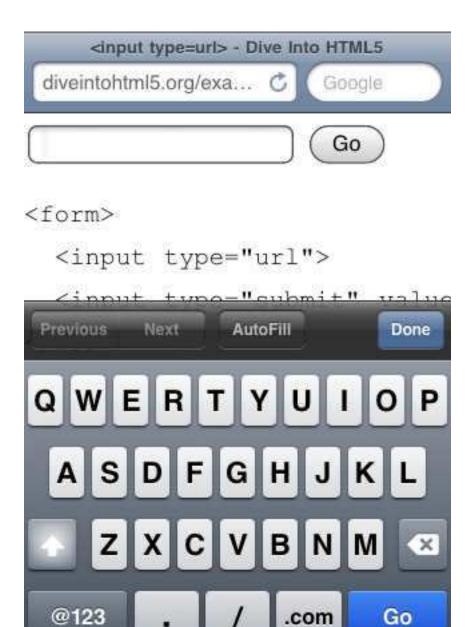


What Makes Input Easier?

- Screen Size
- Network Speeds
- Web Browser
- Device Capabilities



Images from Dive Into HTML5 by Mark Pilgrim



Sales in Q2 2010 87M 24M 11M 14M 8M Android Series 40 Symbian Blackberry Maemo So what... no input here?

Input Effort

EASIER

Source: http://bit.ly/akk2U7

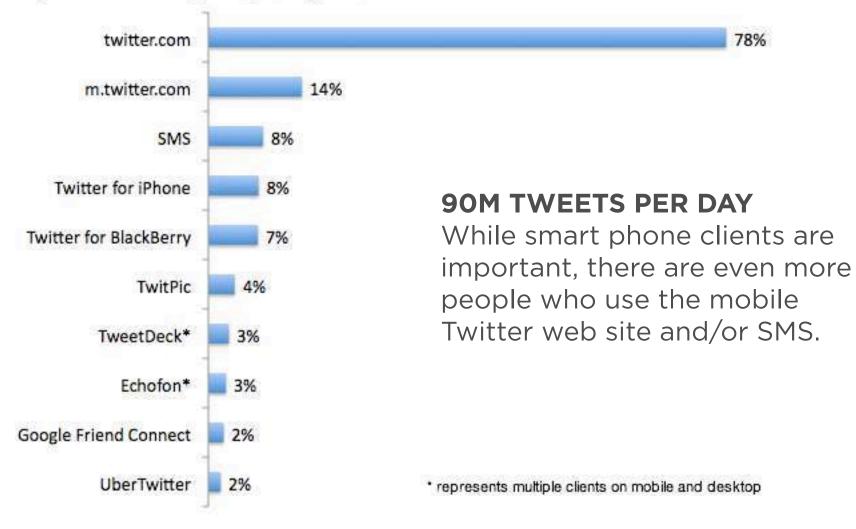
HARDER



- 4.1 billion text messages sent per day in the US
- 1 in 3 teens send more than 100 text messages a day
- 72% of adults were sending and receiving texts in May 2010
- 61% of smartphone owners send or receive texts daily
- 32% of feature phone owners send or receive texts daily











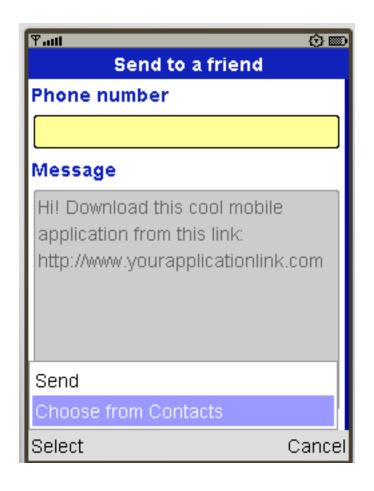
SMS FAST FOLLOW

Anyone in the US can receive Tweets on their phone even if they haven't signed up for Twitter.

Released August 2010



SMS Form Pattern



- Single-line field for the receiver's phone number
- Button (typically placed near the phone number's field, or in the soft-keys' menu) to allow users to choose a phone number from the device's phonebook
- Multi-line field to allow users to type the message body
- Button to send the SMS

Put Effort Where There's Payoff

- Mobile Internet usage is growing rapidly
- Input on mobile devices has been difficult
- Capable devices have a disproportionate share of mobile Internet use
- There are many more opportunities for input on these devices
- But... don't forget SMS!



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Take the pain out of forms

- Length
- Layout
- Text Inputs
- Targets



Take the pain out of forms

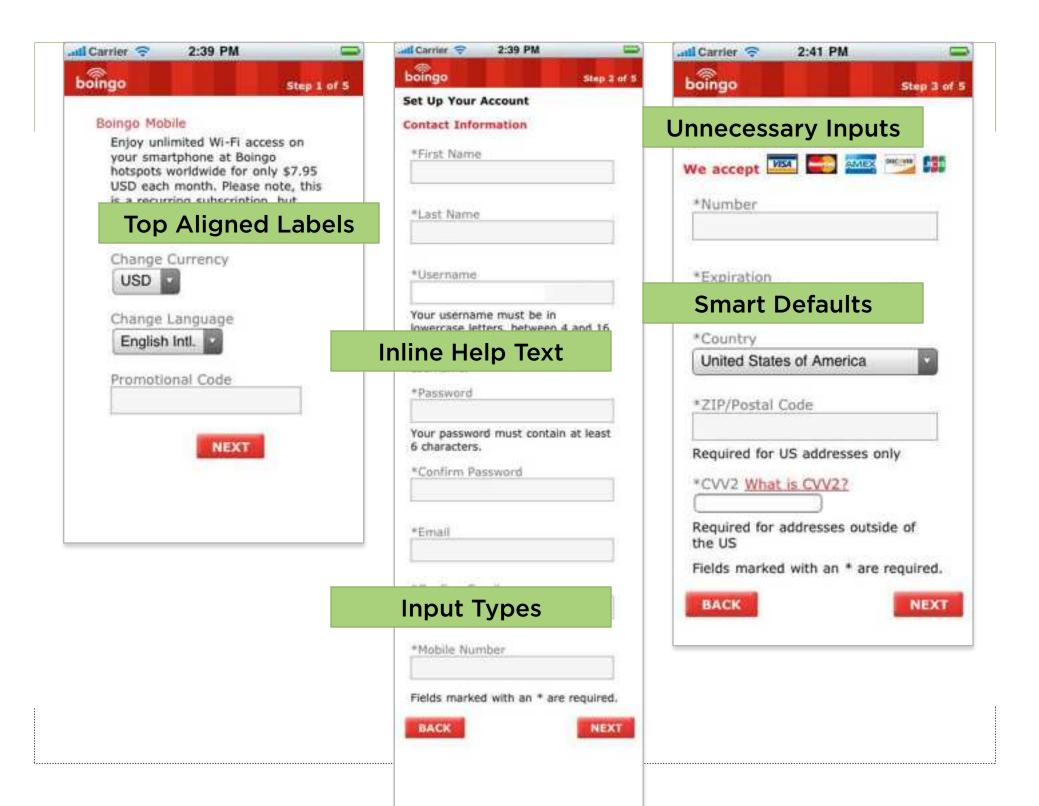
- Length
- Layout
- Text Inputs
- Targets



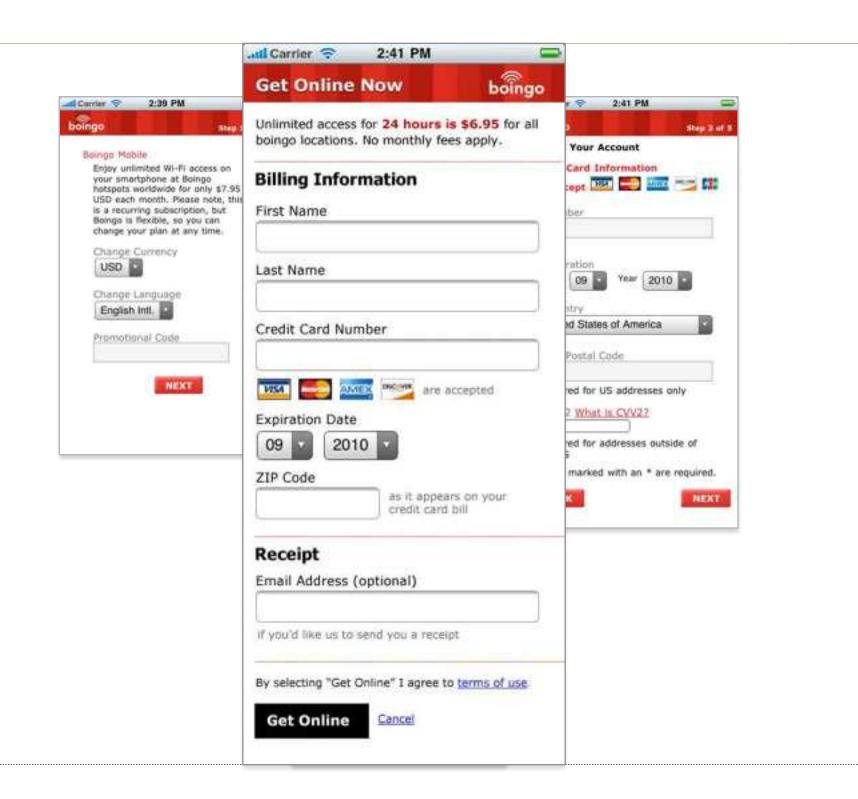
	Billing Name and Address	
*Billing Name	Enter exactly as it appears on your credit card statement	
*Address		
		56
*City		
*Country	United States of America	٥
State/Province	AE - Armed Forces - Europe	
Eip/Postal Code	Required for US addrasses only Required for US addrasses only	
	Credit Card Information	
*Number	Enter could card number with his spaces or destree	
*Expiration	Month 11 4 Year 2008 4	













Unnecessary Inputs



Chiltern Railways	Chiltern Railways	Chiltern Railways	
make a payment with your phone.	make a payment with your phone.	make a payment with your phone.	
Card Number	Card Number	Card Number	
Start Date	Start Date	Start Date	
Expiry Date	Expiry Date	Expiry Date 223 Clear	

Version: Multiple Pages



Page 1



Version: Single Page



Page 1

Shipping Info	
Label	
Label	
Label Option A	
Option B	
Option C	
Label	
Label	
Label	
Laber	
Payment Info	
Payment Info	
Label	
T1125	
Label	
Label	
Label	
Label	
Label Label Label	
Label Label Label Label Option A	
Label Label Label Option A Option B	
Label Label Label Label Option A	



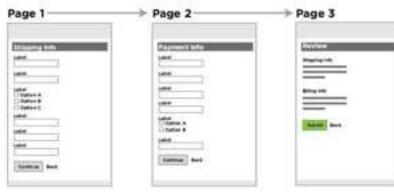
Page 1

Shipping Info Payment Info Label Label	
Payment Info	
Label	Ī
Label	
Label	
Label	
Label	
NAME OF THE PARTY	
Label	
Label	
Label	
Option A Option B	
Label	
Submit Submit	

Testing Inline Multi-step Forms







- В
- Page 1





- All four versions delivered 100% pass rate
- Conversion did not go up or down on the accordion form
- Using a one page, multiple pages, or an inline multi-step form does not impact inherently impact completion
- So what does?



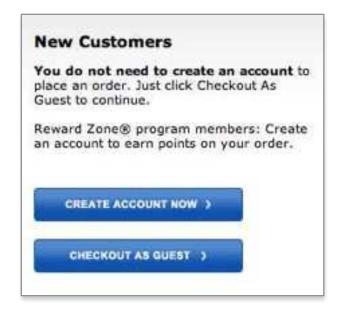
Case study

- Compared two types of contact forms on its website.
- 11-field Contact Us form
- 4-field Contact Us form

Impact

- 160% increase in number of forms submitted
- 120% increase in conversion ratio
- In addition, the quality of the submissions remained the same





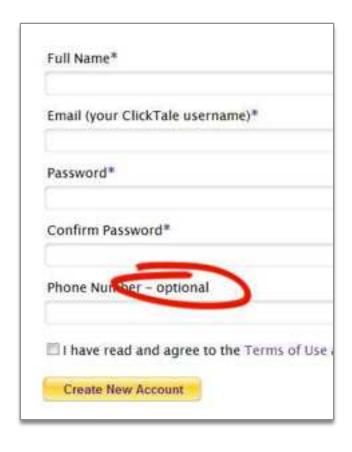
Case study

- Checkout form (page one) with two actions: Login or Register
- Changed Register to Continue with "you do not need an account to buy" message.

Impact

- 45% increase in number of purchasing customers
- \$1.5M increase in first month
- \$300M increase in first year





Case study

- Added "optional" indicator on phone number field
- 6-field Contact form

Impact

- 2x increase in conversion
- 42% conversion rate jumped to 80% conversion rate
- Required phone number field had 37% drop off rate



LENGTH

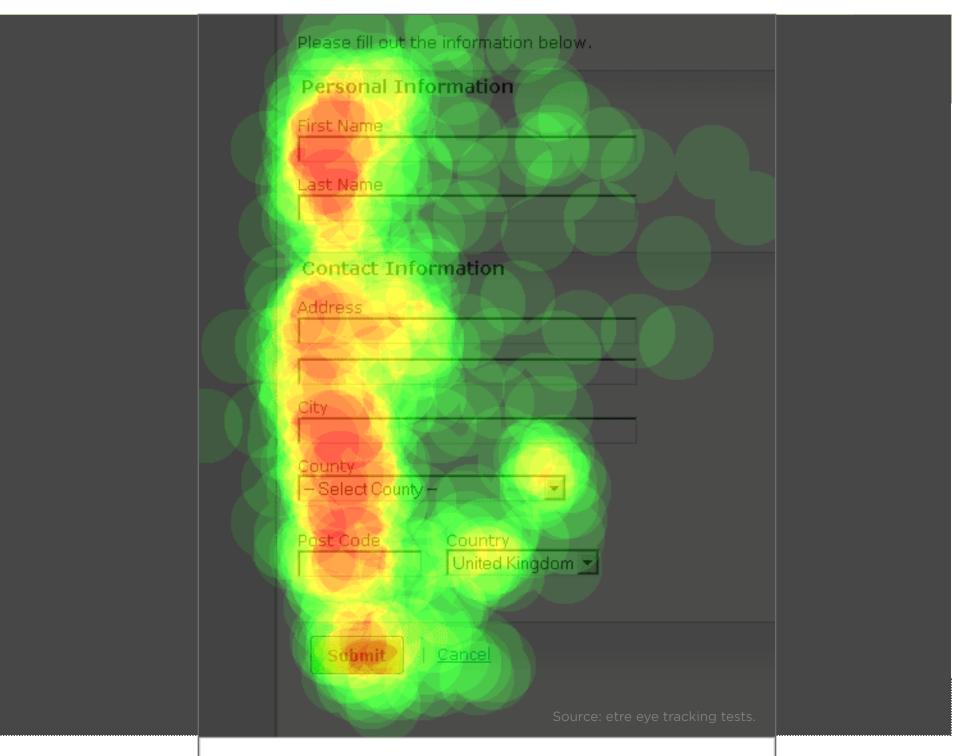
- Evaluate every question you ask
- Strive for succinctness
- Multiple pages help organize but...
- Removing requirements has impact!
- Look for unnecessary inputs



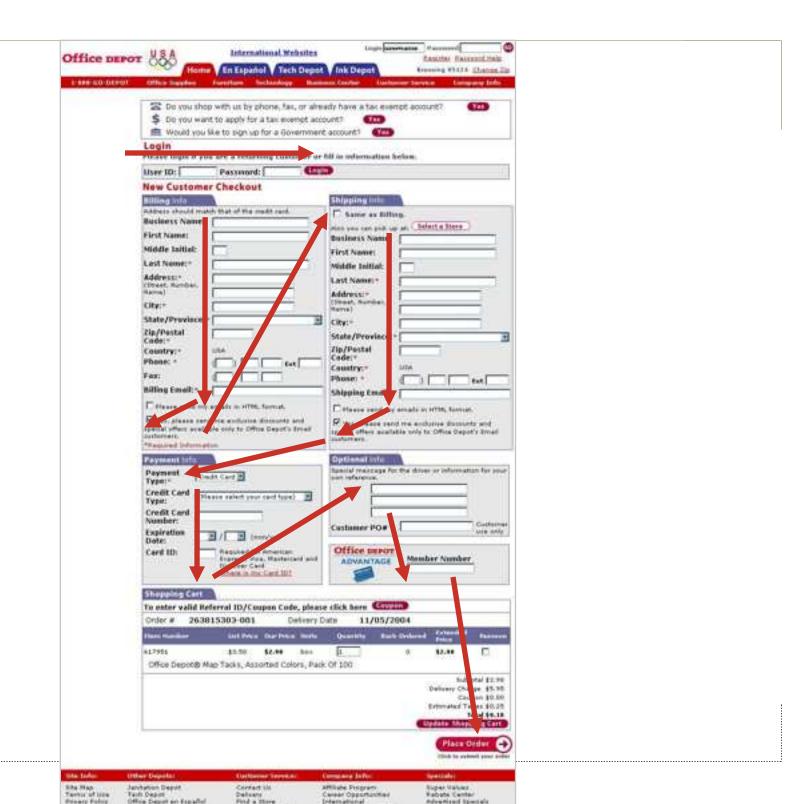
Take the pain out of forms

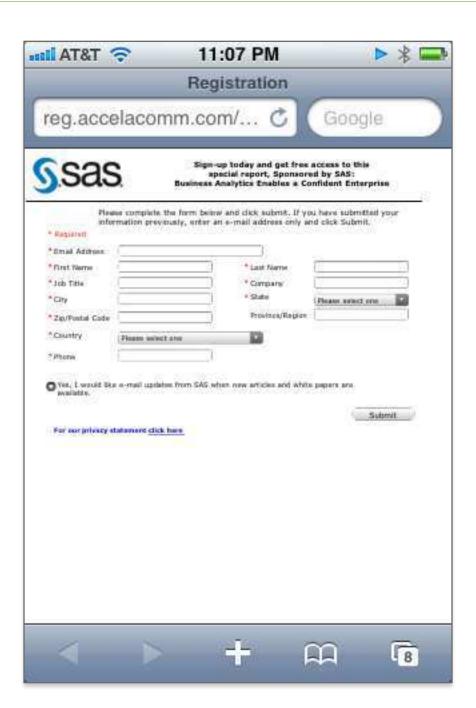
- Length
- Layout
- Text Inputs
- Targets





A: HEAT MAP









Field Zoom on the iPhone

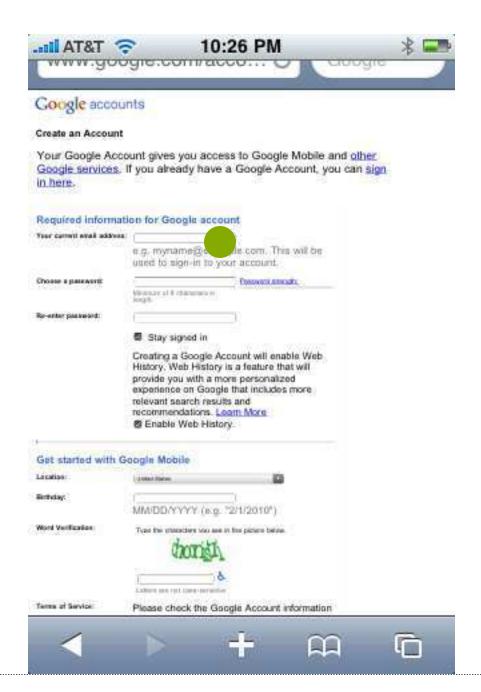




III AI &I	10:25 PM	VI.	*
	200		
1000 10	IP — it's fun!		
Enter	your email:		
			_
Pick a	username:		
Previous	Next Auto	HIII	Done
QWE	RTY	UI	O P
AS	DFG	нЈ	K L
Z	x c v	BN	M
.?123	space		Go

Field Zoom on the iPhone







on for Google account

e.g. myname@example used to sign-in to your a



Left Aligned Labels on Android





Create an account

Your current email address:

Choose a password:

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

e.g. myname@exa

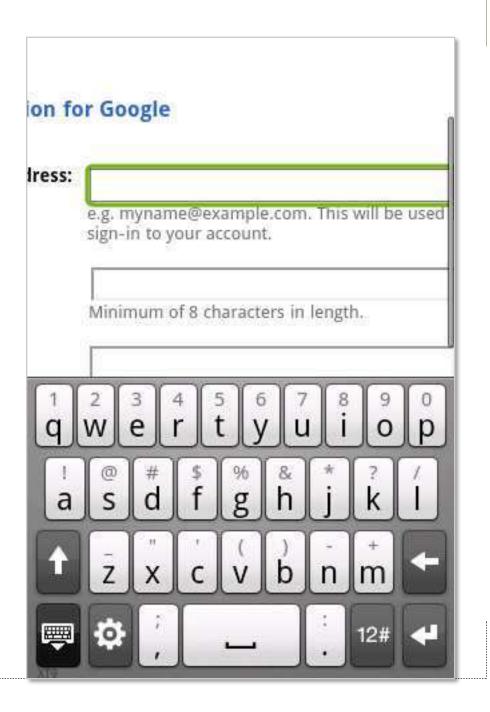
sign-in to your acco

Minimum of 8 char

Re-enter password:

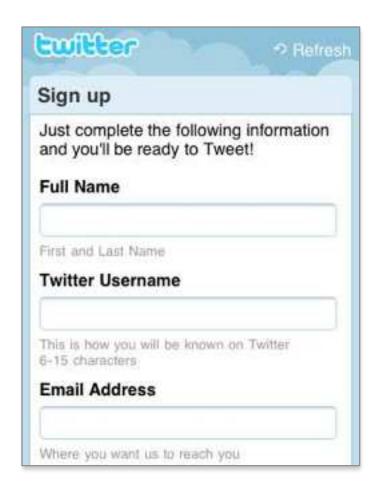
Stay signed in

Creating a Google A



Top Aligned Labels

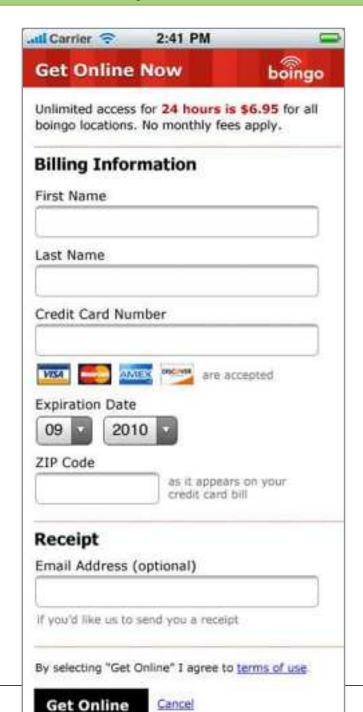




- When data being collected is familiar
- Minimize time to completion
- Flexibility for localization and complex inputs
- Easier to code: no floats or tables
- Accessibility: label, field in order
- Better format for mobile
- Support multiple screen resolutions
- Require more vertical space

Labels Within Input Fields

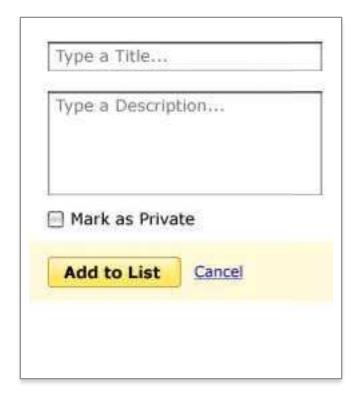


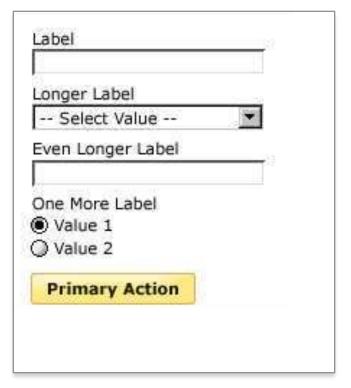


-	2:41 PM	-
Get Online	Now	boing
주시 경영 시간 중요 하다면 하다	for 24 hours is No monthly fee	The state of the s
Billing Infor	mation	
First Name		
Last Name		
Credit Card No	umber	
Annual Control of the Control	are ac	and the s
Expiration Date 09 201 ZIP Code		s on your
Expiration Date	0 as it appear	s on your
Expiration Date 09 201 ZIP Code	as it appear credit card i	s on your

Labels Within Input Fields



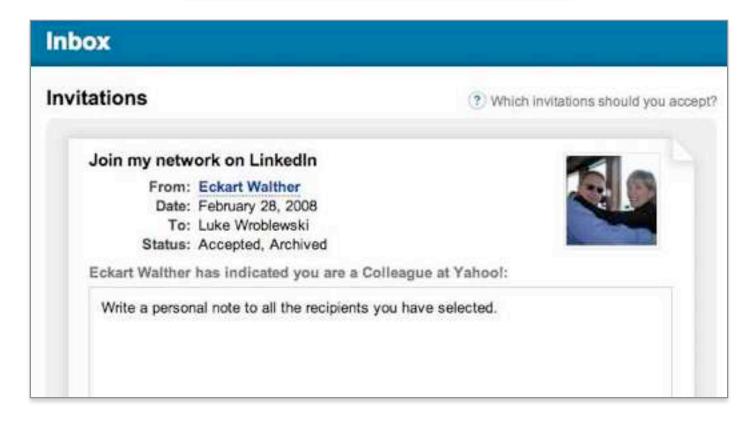




Labels Within Input Fields

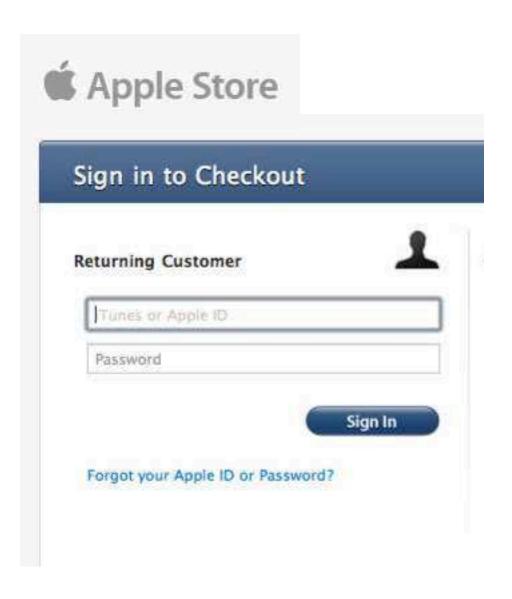


Write a personal note to all the recipients you have selected.



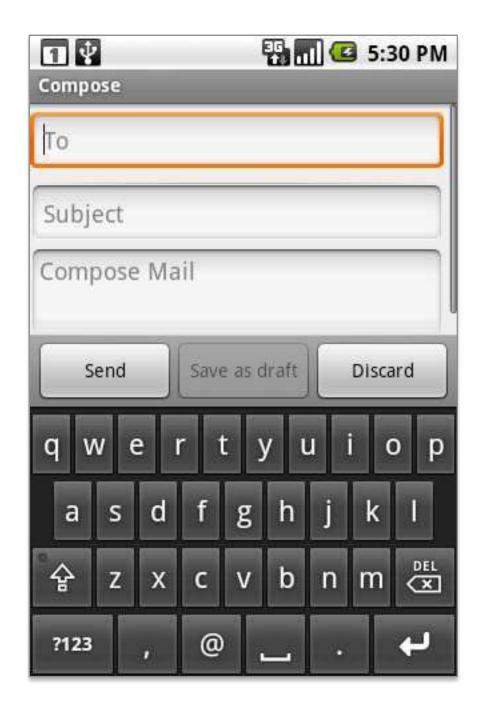












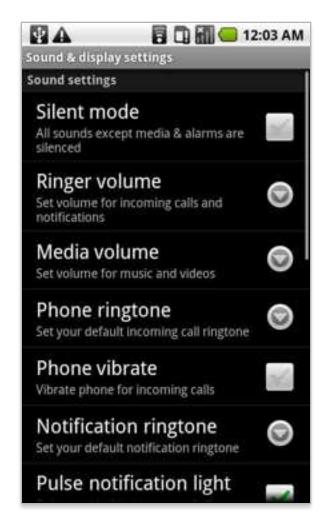


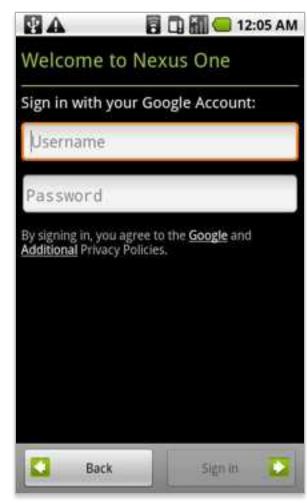




Label Alignment on Android











Label Alignment on Blackberry



📟 🛊 🛜 3G 👬 "..ul **New Contact** Instant Messaging AIM: Google Talk: Labels Windows Live Messenger: Yahoo! Messenger: Address Add Address Dates Birthday: Edit Anniversa... Edit Categories





LAYOUT

- Avoid multiple column layouts
- Top-aligned labels on mobile Web pages
- Labels within inputs on capable devices
- Labels in native apps where there's consistency!



Take the pain out of forms

- Length
- Layout
- Text Inputs
- Targets



Form Input Elements



Text Box	First name	
Radio Buttons	Gender Male Female	
Drop-down Menu	Country United States \$	
List Box	Interests Form Design Jazz Guitar Mountain Biking Water Polo	
Checkbox	☐ Include me in your survey.	
Button	Submit	



Auto-capitalization

 Turn off on email, password, URL, and other case-sensitive inputs

Auto-correct

- Turn off on email, password, URL, and other non-alpha inputs
- Trim trailing spaces that may come from auto-correct (thanks Barbara!)

Language, Mode, Format

Specify if supported by devices

Numerical Inputs



 Phones were designed for numerical input

Number Declarations

- Define input mode using Wireless CSS or CSS-MP
- Define input types using HTML5 or native OS declarations
- On devices without virtual keyboards, people will not have to switch into number mode.

Common Numerical Inputs

- Use a single line field for phone numbers
- Don't split up price fields (period is present on keyboards)

Phone Number







Email

Users can insert an at sign (@) or a period (.) in an email address field by pressing the Space key.

Date and time

Users can change the date or time on devices with a trackpad using the keyboard or by moving a finger vertically on the trackpad or swiping up or down on the screen (touch).

Number

The device switches to number lock mode so that users do not need to press the Alt key to type numbers or the number keyboard appears (touch).

Password

When users type in a password field, asterisks (*) appear instead of text

Phone Number

The device switches to number lock mode so that users do not need to press the Alt key to type numbers or the number keyboard appears (touch).

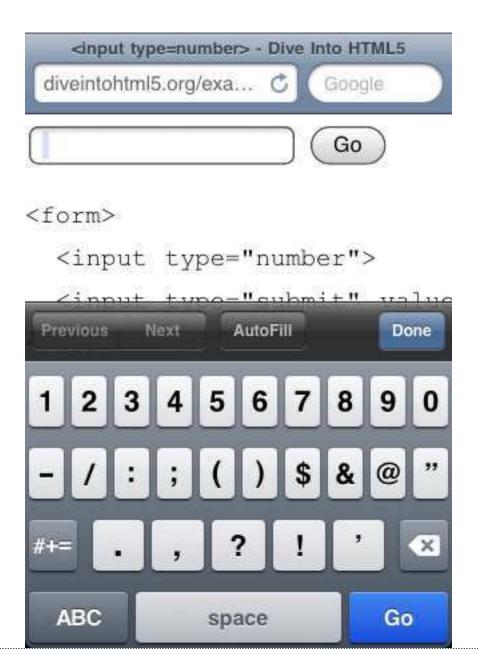
Web Address

Users can insert a period (.) in an address field by pressing the Space key.

Source: http://www.blackberry.com/go/uiguidelines

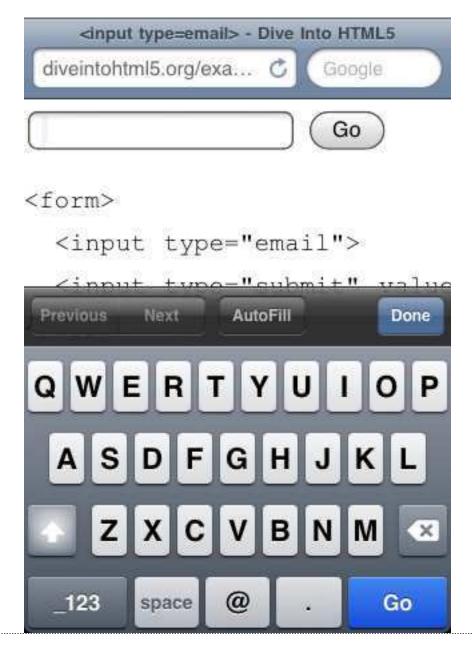


Images from Dive Into HTML5 by Mark Pilgrim



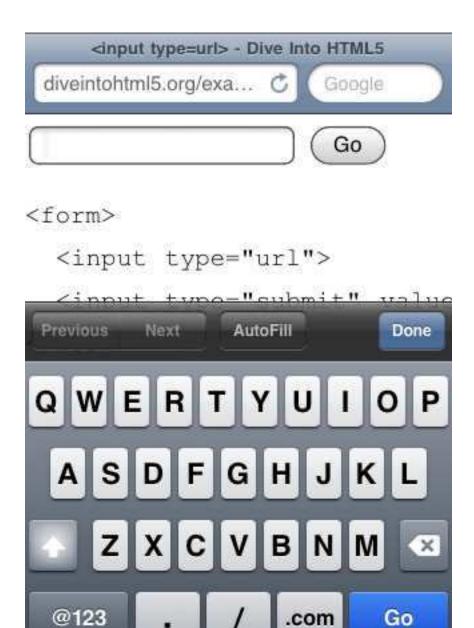


Images from Dive Into HTML5 by Mark Pilgrim



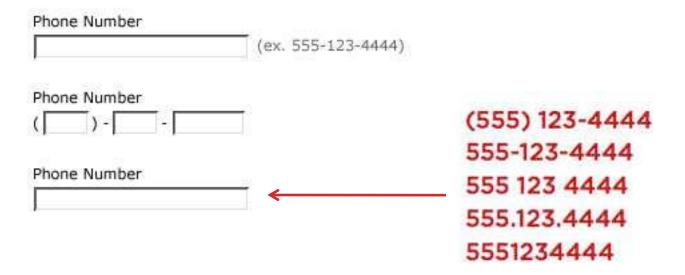


Images from Dive Into HTML5 by Mark Pilgrim



Flexible Inputs



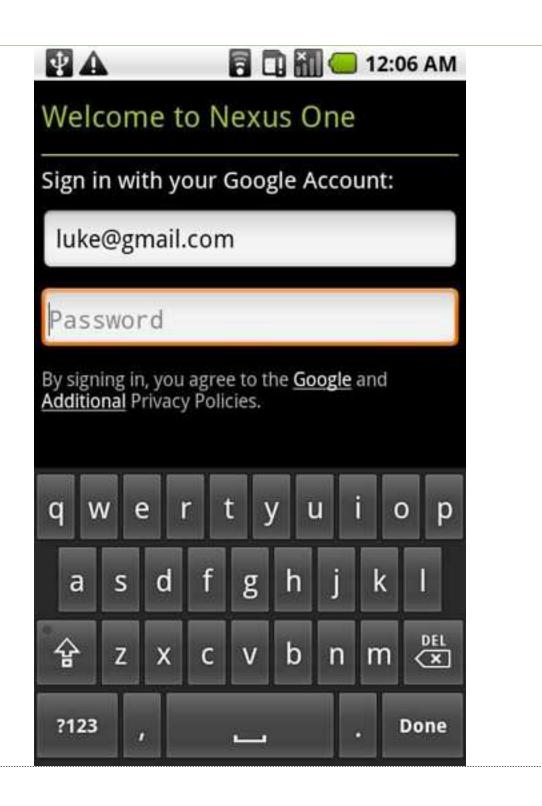












Input Masks



Date 🔥	
Phone	
Tax ID	
SSN	
Product Key	
Eye Script	

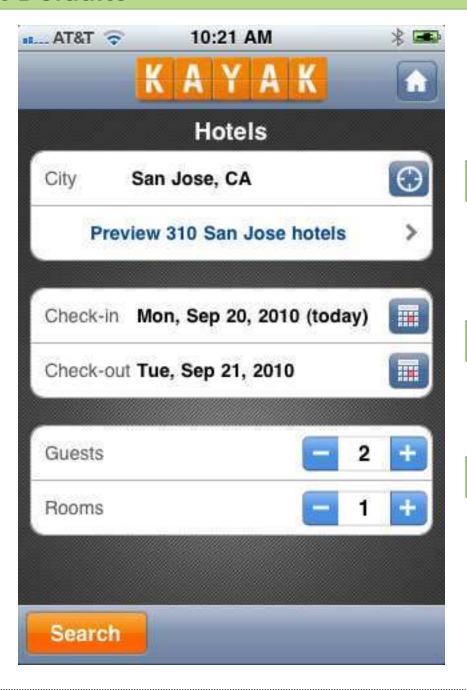
Surface formatting right up front

US Phone Number	er:
US Dollar:	
US Date:	

Do not gradually reveal formatting as people enter input

Smart Defaults





Personalized

Mobile Use Case

Most Common



	(i) Empty forms	(ii) Pre-filled forms
1. run	240 seconds	60 seconds
2. run	170 seconds	37 seconds
3. run	115 seconds	33 seconds

TEXT INPUTS

- Define input types & attributes
- Input masks to help formatting
- Smart defaults



Take the pain out of forms

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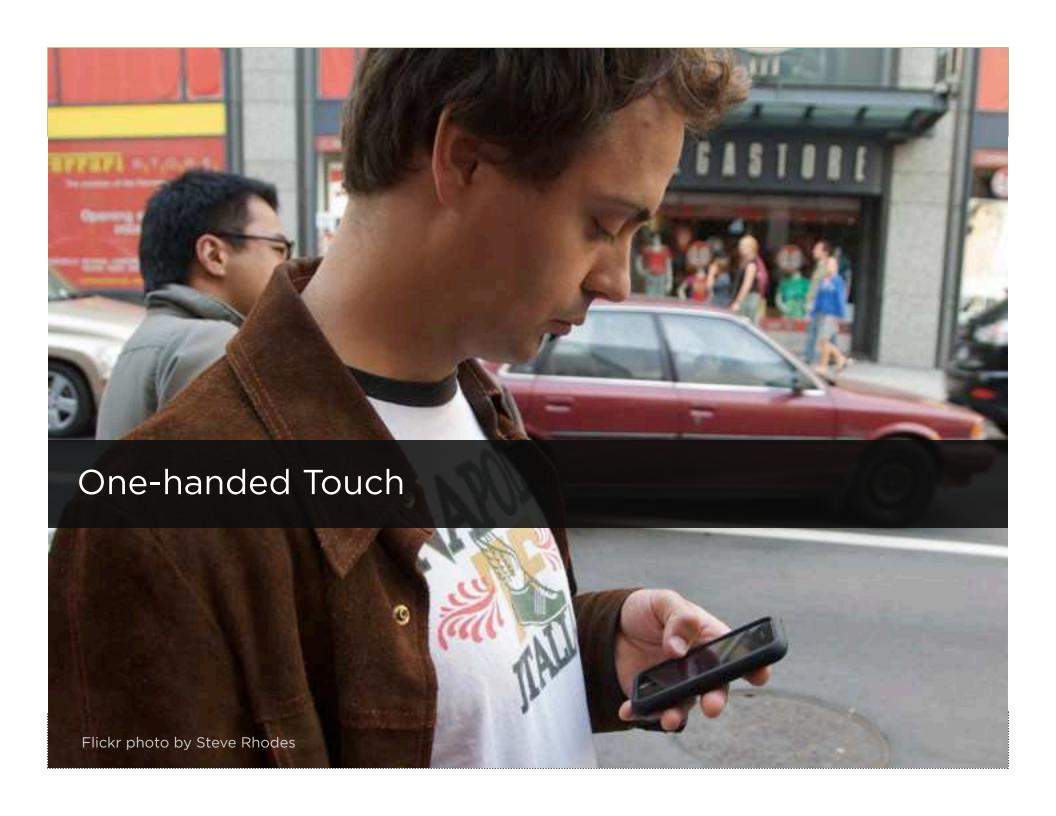
Nokia smartphone mix

- Keypad
- Qwerty Only
- Touch includes QWERTY + TOUCH

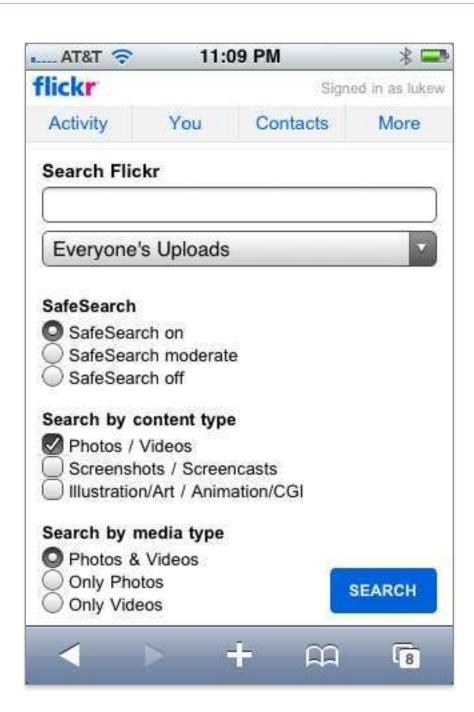
1.1 billion consumers with Nokia devices in 2009



Source: Nokia -deices sold. Nokia Capital markets day 2009.



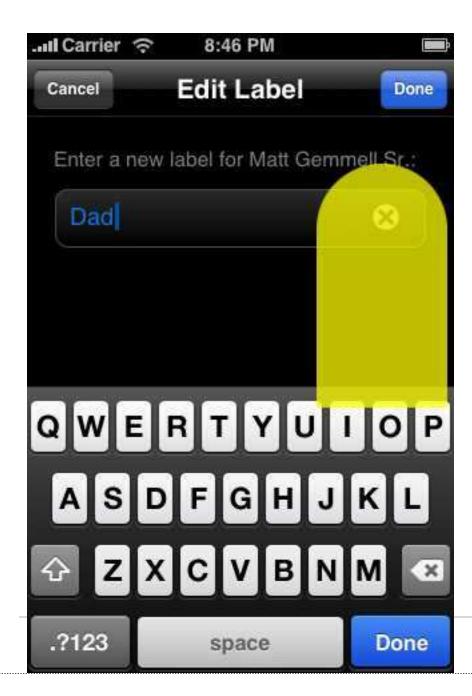


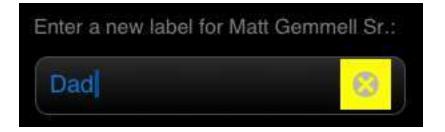




Touch Targets







Apple recommends a minimum target size: **29px** wide **44px** tall

Source: Matt Legend Gemmell - mattgemmell.com

Touch Targets

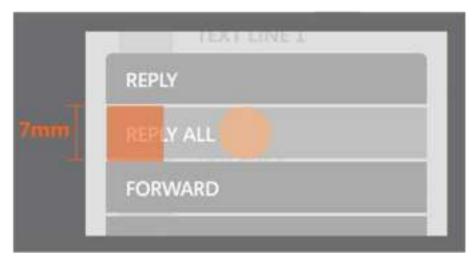
Recommended touch target size is 9mm/34px

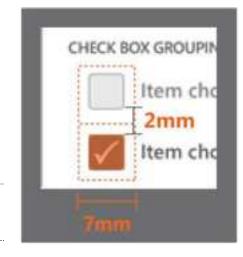
Minimum touch target size is **7mm/26px**

Minimum spacing between elements is **2mm/8px**

Visual size is **60-100%** of the touch target size















If you tap and hold in the yellow area, button will highlight

If you drag finger & release in green area, button will still trigger

If you let go outside green area, button does not trigger

Source: Matt Legend Gemmell - mattgemmell.com

TARGETS

- Accommodate touch target sizes
- Account for errors with flexibility



Take the pain out of forms

- Form Length
- Structure
- Label Placement
- Inputs
- Targets



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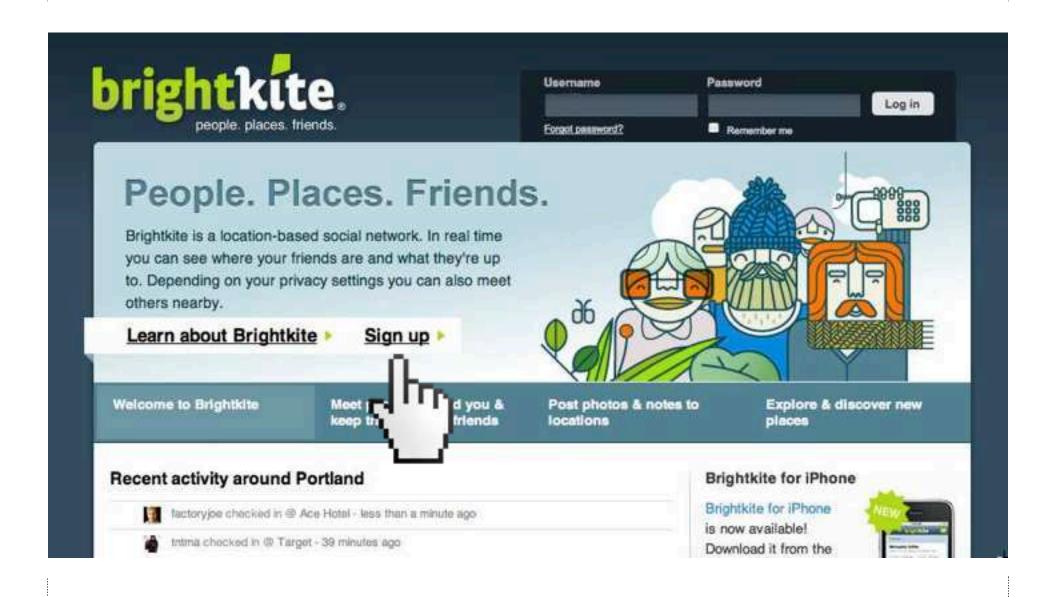


Going Beyond Forms...

- 1. Web Services for Instant Experiences
- 2. Touch
- 3. Location Detection
- 4. Audio
- 5. Images & Video











Are you human?



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

(Sign Up)

Terms of Service & Mode Information | Privacy Policy | Bing | Corport Up

10 2000-2000 No. Design Media LLO. All agrics reserved. Corport on all info@inglificite.com.

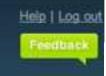
Re-create your identity & friends list

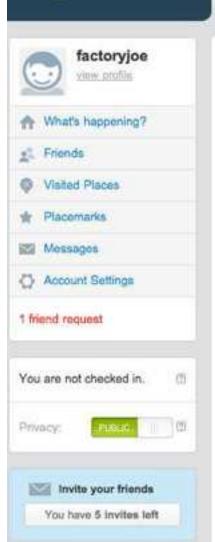




Enter a street address or city...

e.g. 2911 Walnut St. Denver, CO or Denver or Japan





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

Copyright 2006-2008 No Sleep Media LLC. All rights reserved. Contact us at info@brightkite.com. Terms of Service & Mobile Information | Privacy Policy | Blog | Contact Us.



brightkite

Posts

People

Learn more



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.





What's happening in San Jose



about 18 hours ago @ Togo's



about 19 hours ago @ Fentazia



about 19 hours



about 19 hours ago @ Fantazia



ago @ San Jose Troley

Barn!



2 days ago (il Carrows Restourant

What people are saying

"Brightkite does this beautifully"

BusinessWeek

"The true king has just been submitted"





brightkite

Posts

People

Learn more



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





Download to your mobile device:

iPhone, Android, BlackBerry, all other phones

What's happening in South San Francisco



about 5 hours ago dit Salaway



about 7 hours ago: @ Saly's Restaurant



ago @ San Francisco



ago @ San Francisco



about 9 hours ago @ San Francisco



about 10 hours ago ii0 Brignisha

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."





brightkite

Posts

People

Learn more

Q = Places



Instant-on Start Experience



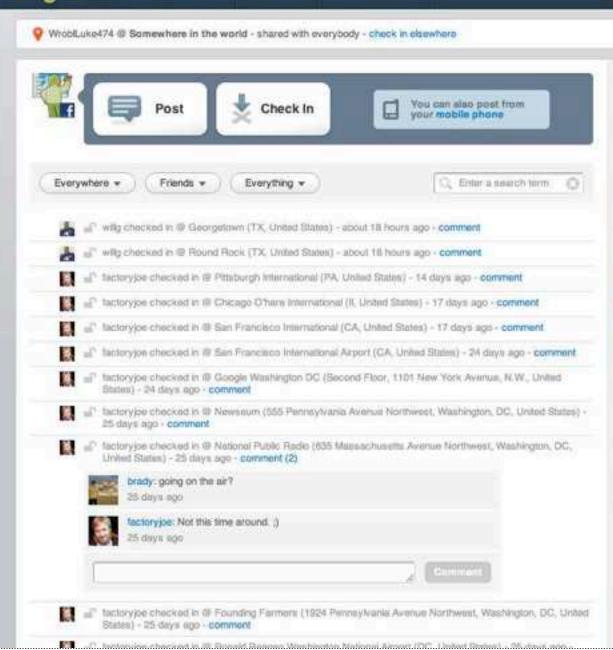
brightkite

Posts

People

Learn more

Q . Places



Friends on the town





Nearby people

noo all





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), Yahool Inc. | Speaker & Author, LukeW Ideation & Design San Francisco Bay Area | 24 recommendations

YOUR AREAS OF EXPERTISE

Select all that apply to you

■ Visual Design / Wireframes

☐ Icon Design ☐ Identity Design / Illustration

☐ Motion Design
☐ Web Development

Experience / Product Strategy 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 Yahool Inc. where he works on product alignment and forwardlooking 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

Web Services on Mobile









Michael Albers
Check-in
@Beach Chalet Brewery &
Listening to tunes for kids
about 12 hours ago



Jessica McNabb Speiser Check-in @Malibu Castle Golf & Games Birthday Party! about 13 hours ago



Lucy Choi Pullara Check-in @Philz Coffee

Fraiche ran out of beans :(. Trying this new



Instant on from the Mobile





Instant Purchasing







WEB SERVICES

- Remove barriers to account creation
- Don't re-create what they've already done
- Deliver an instant-on start experience



Gestures as Input

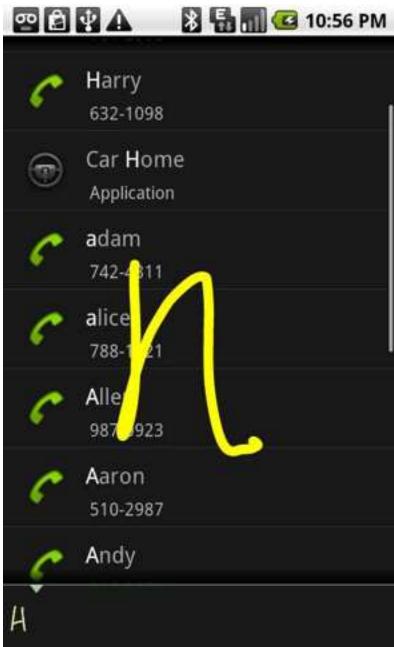












TOUCH

Consider core gestures for input

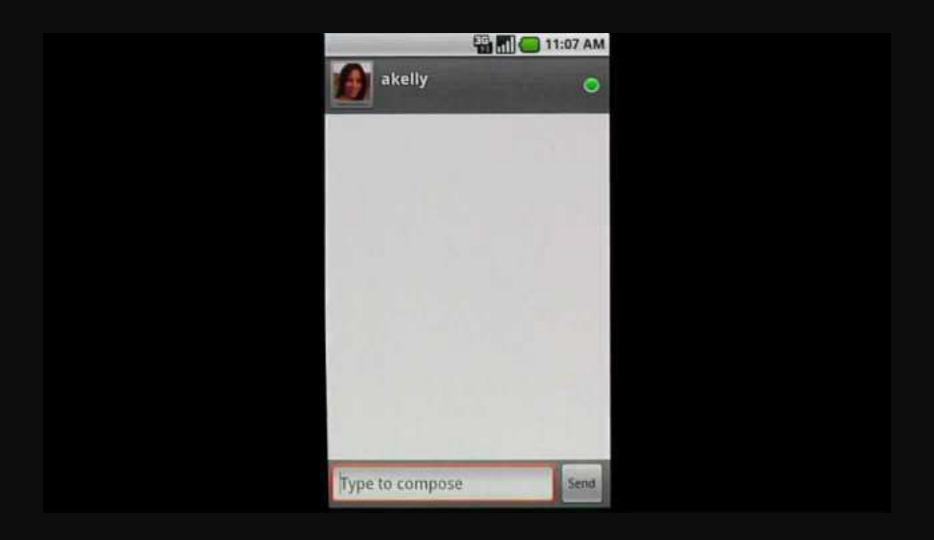












AUDIO

Voice commands can substitute text input

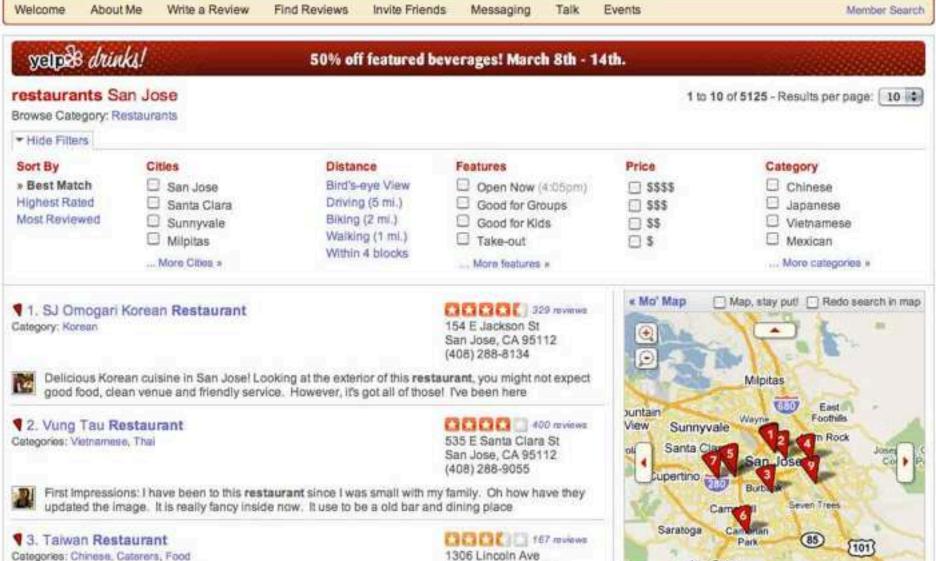


Location as Input



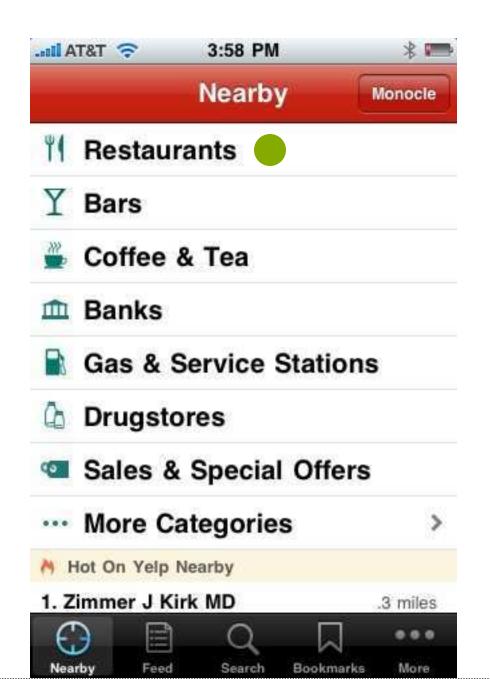
Now in the UK!

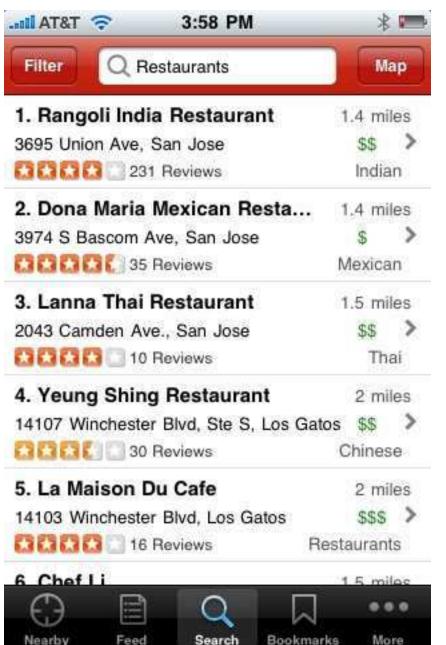




Location as Input



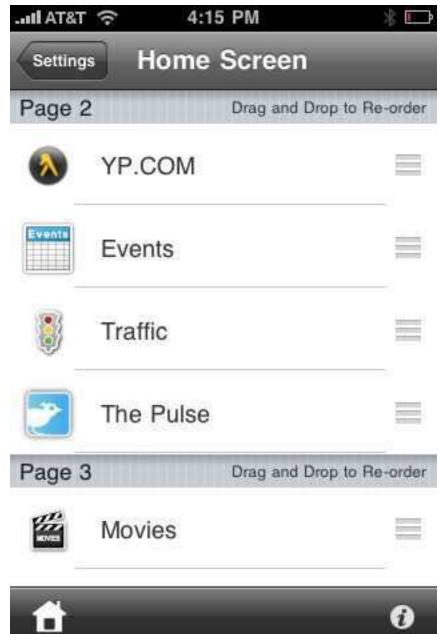




Location as Input







Location Systems

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

Smartphones: hybrid of GPS, Wifi, and cell tower triangulation

Laptops/desktops: WiFi, IP, rarely GPS

LOCATION

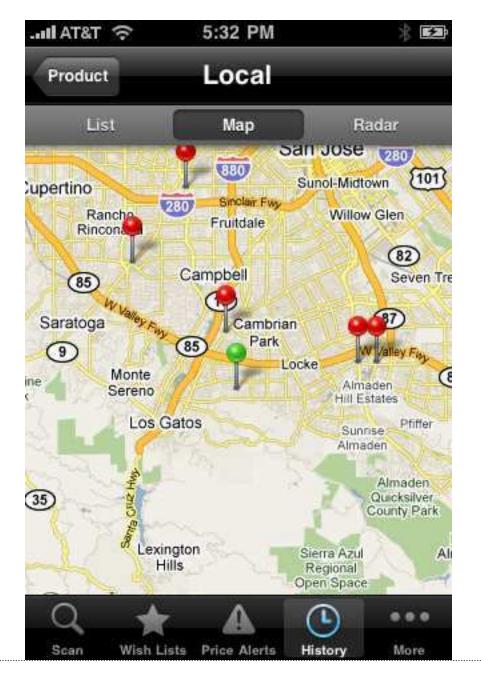
Location detection can deliver relevant content without requiring a lot of input



Images as Input













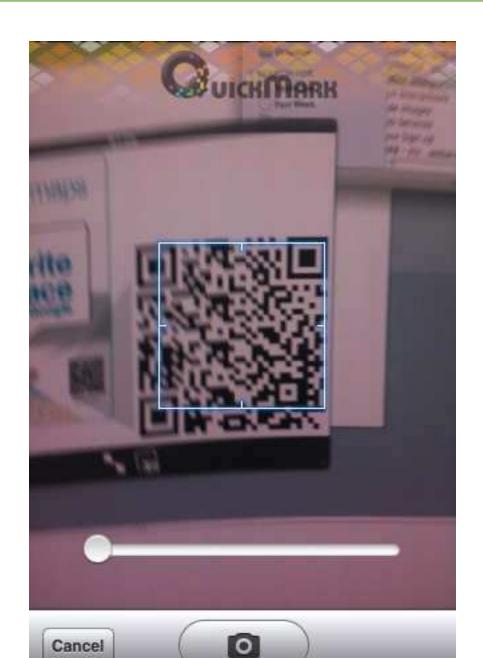


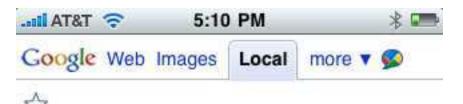












Kasa Indian Restaurant - Indian Food Delivery

4001 18th Street San Francisco, CA 94114

www.kasaindian.com - web site





"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,









IMAGES & VIDEO

Consider how photo and video integration simplify or extend input



Mobile Device Capabilities

- Multi-touch sensors
- Location detection
- Device positioning & motion: from an accelerometer
- Orientation: direction from a digital compass
- Gyroscope: 360 Degrees of motion
- Audio: input from a microphone; output to speaker
- Video & image: capture/input from a camera
- Dual cameras: front and back
- Device connections: through Bluetooth between devices
- Proximity: device closeness to physical objects
- Ambient Light: light/dark environment awareness

MOBILE INPUT

- 1. Put in the effort where there's payoff.
- 2. Take the pain out of forms. Put it on yourself.
- 3. Look beyond forms for input.





More Information

- @lukew
- www.lukew.com

Web Form Design

- www.rosenfeldmedia.com/ books/webforms/
- Discount code: (25%)

