

Templates & guidelines

# 4ourth mobile design patterns

## Diagrams and Illustrations for Designing Mobile Interfaces

Prepared by **Steven Hooper**

for the O'Reilly book *Designing Mobile Interfaces* by Steven Hooper & Eric Berkman

*9 December 2011*

# Introduction

This file contains editable copies of all the illustrations (and a few of the screenshots and photos) included in the book *Designing Mobile Interfaces*.

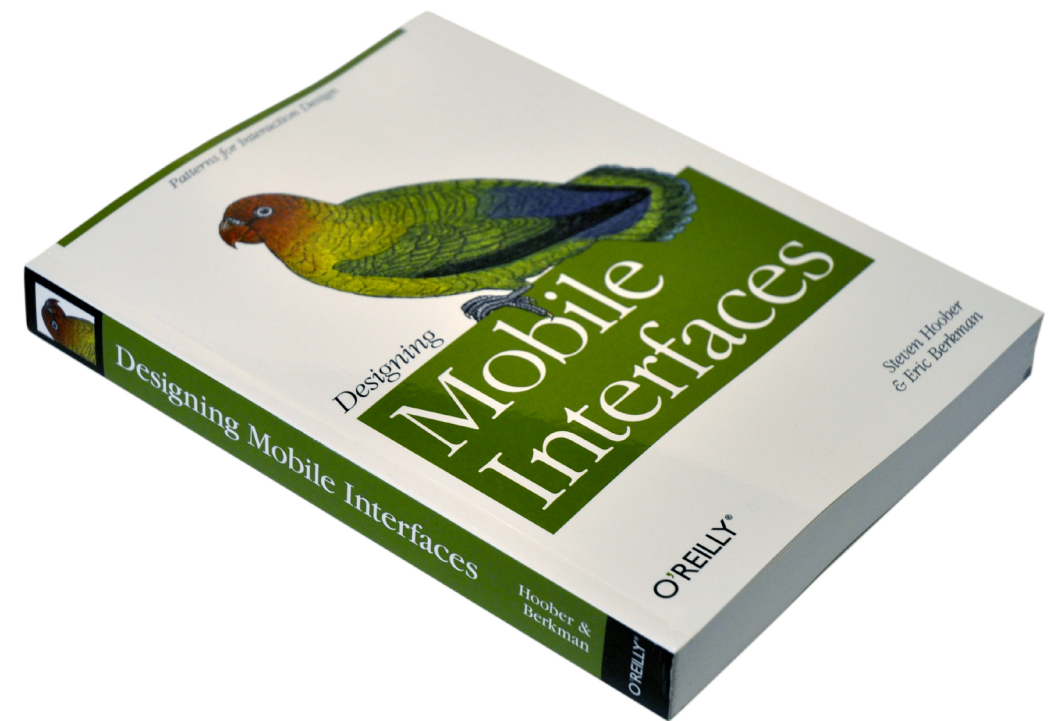
*Designing Mobile Interfaces: Patterns for Interaction Design* can be purchased from [Amazon](#) or direct from [O'Reilly](#) in both print and various eBook formats.

The entire contents (regularly updated as well) are also shared on a wiki at 4ourth Mobile:  
<http://4ourth.com/wiki/>

If you didn't notice the Creative Commons thing in the bottom of each page, look now. The whole point of the book is to share knowledge, so to that end you are free to re-use any of these diagrams when designing or specifying anything yourself.

These are derived from one type of drawing in the *Mobile Design Elements* document I have shared since 2007. You can find it, and every other design template, stencil or guideline at:

<http://4ourth.com/wiki/Drawing%20Tools%20%26%20Templates>





# Examples & Illustrations

We deliberately chose not to include a lot of screenshots. In fact, we include hardly any. We did not arrive at this decision lightly; we gathered and extensively annotated screen- shots for the first several patterns.

To solve the problems with screenshots, we used illustrations almost exclusively throughout the book. These are all of the same basic style, but vary widely in the detail level used, sometimes in adjacent drawings in the same pattern.

In each case, only the required amount of detail is used. Sometimes that detail is just boxes and lines, and the words and images are implied. Sometimes words and so on have to be in there to communicate the point. Sometimes actual raster icons or websites, drop shadows, and other effects are used.

As a general rule, large blank areas on a page do not mean there's nothing there. It just means we're not discussing that component, so we removed placeholder information for clarity. The Annunciator Row is almost always assumed, so space is provided, but is not displayed—again, for clarity and to reduce clutter.

Color, especially when clearly not naturalistic, generally has a meaning:

- **Yellow** usually refers to the displayed, interactive elements.
- **Blue** is for images, and graphical displays such as information visualizations. A different color is used so that it is clear that it's not just a box.
- **Grays** represent nonselectable items, like the parent when a child has popped up over it.
- **Orange** is used when the item is in focus, as when scrolling in a list, or to indicate the primary button that is going to be selected for a process. This includes hardware buttons, and the arrows or other indicators of gesture and directional control.
- **Fuchsia** squares are visible in this document, but not the book. They are just spacers to keep grouped frames a consistent visual distance apart. Ignore or delete them.

Preface

Page

Figure 1-1

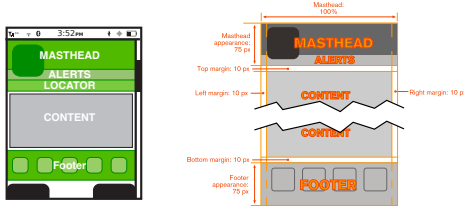
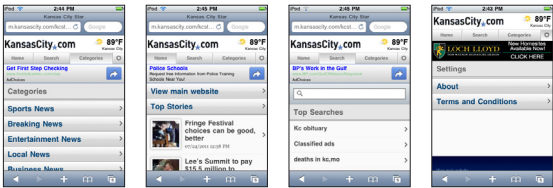


Figure 1-2



# Page

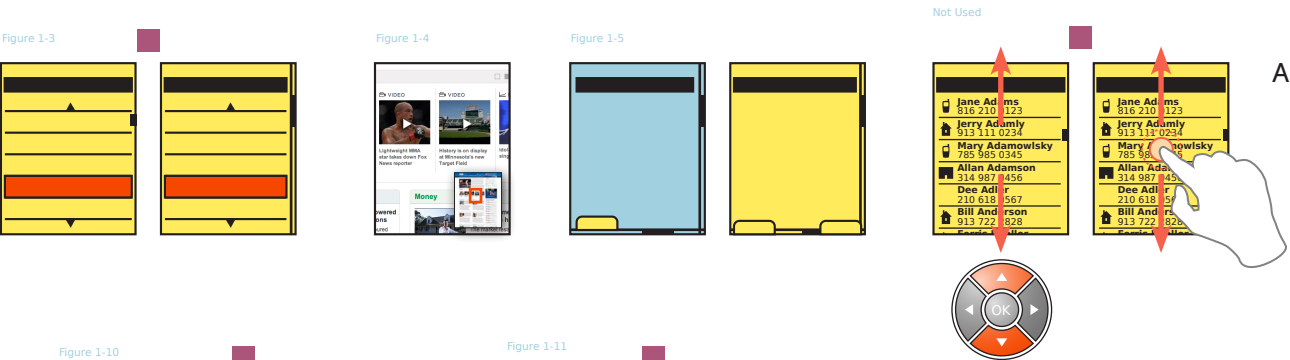
The page is the area that you will spend your time designing for any application or web- site. A part of it is visible in the viewport of the mobile screen during its current state.

There are states and modes and versions to be considered, as well as addressing what is fixed to the page, what can float, and what is locked to the viewport.

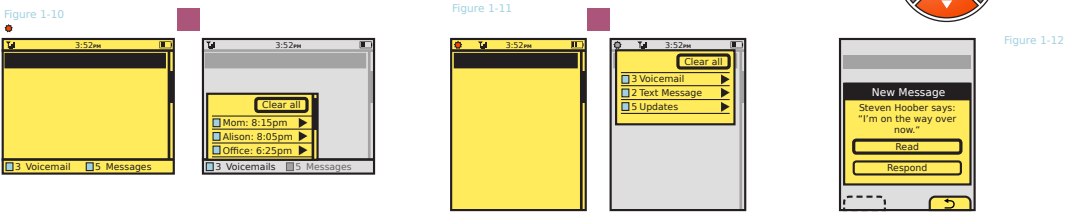
Based on cultural norms of reading conventions and how people process information, you have to design elements for the page, and place items on it in ways your users will understand. You also want to create information that is easy to access and easy to locate. Your users are not stationary, nor are they focused entirely on the screen. They're everywhere, and they want information quickly and to be able to manipulate it easily.

2 Wrapper

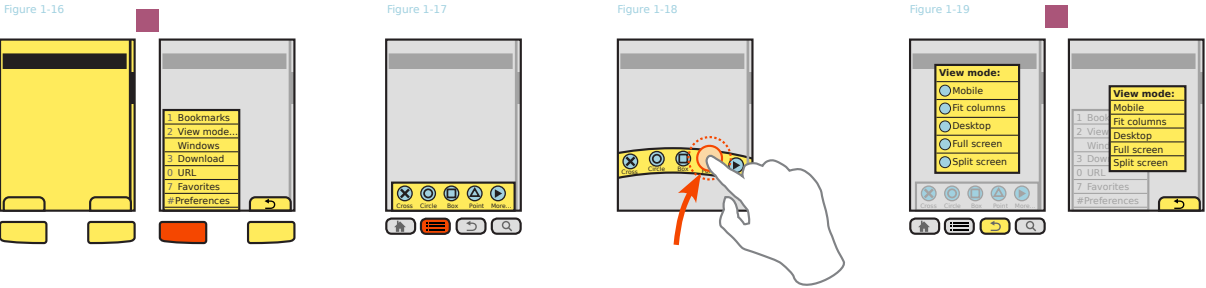
Scroll



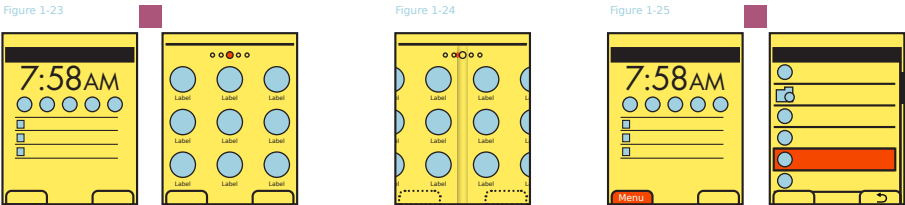
Notifications



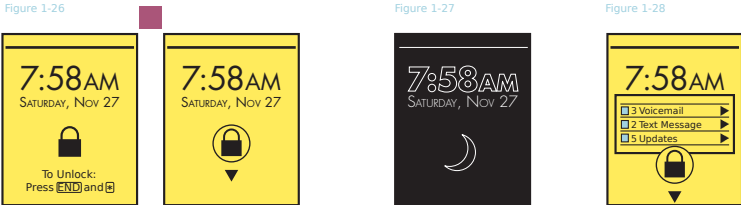
Reveal Menu



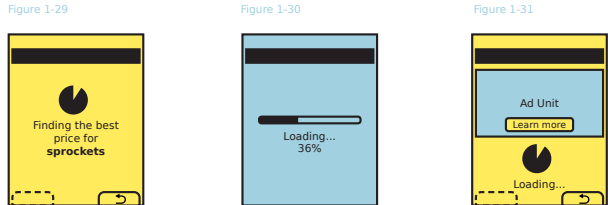
Home & Idle Screens



Lock Screen



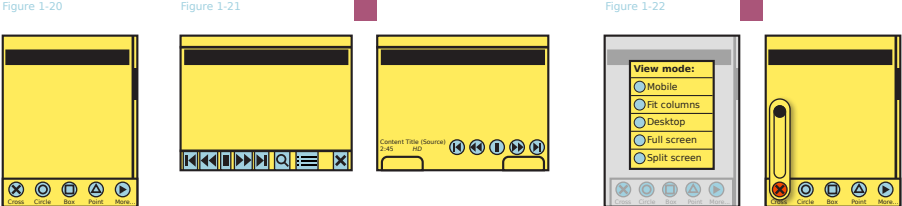
Interstitial Screen



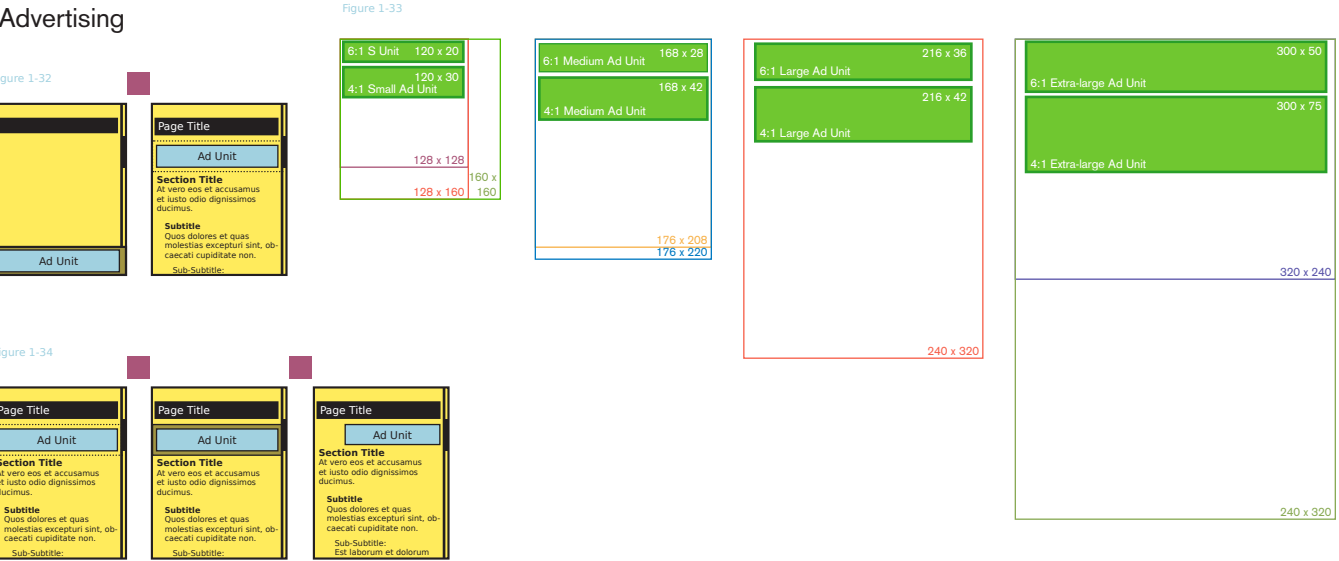
Titles



Fixed Menu



Advertising





# Components

Components, as described here, are a section or subsection of a designed interactive space.

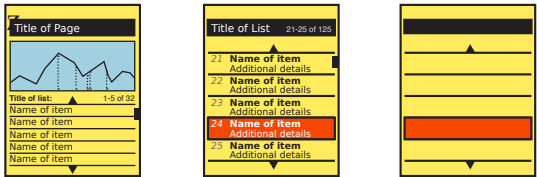
They take up a significant portion of the screen and may be as large as the viewport (or larger) or, when smaller, may appear to be in front of other displayed information.

Components must display a range of information types—images, ordered data, expand-able lists, and notifications. They also allow the user to interact with the system in some significant, primary manner. Combining them with small, reusable, interactive, or display widgets gives the designer an almost unlimited number of options.

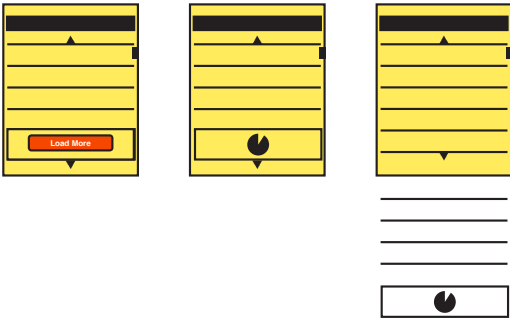


# 3 Display of Information

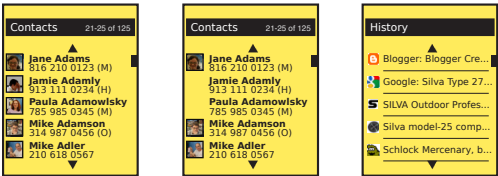
Vertical List:



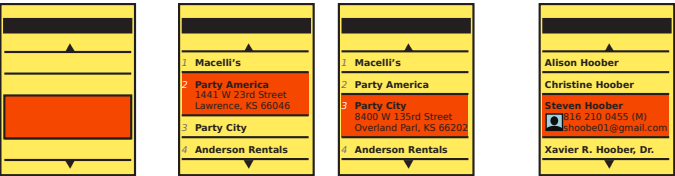
Infinite List:



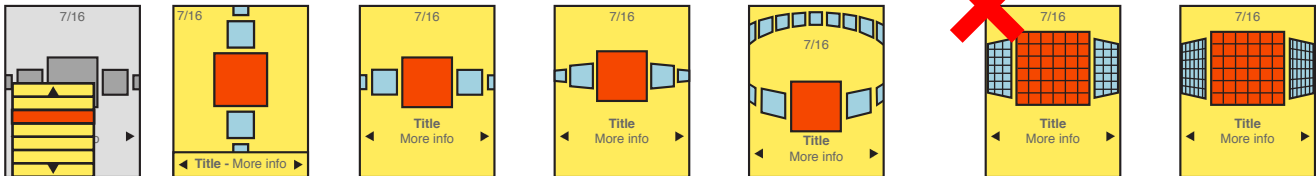
Thumbnail List:



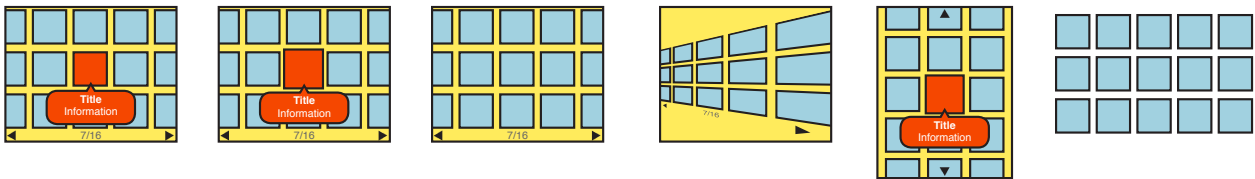
Fisheye List:



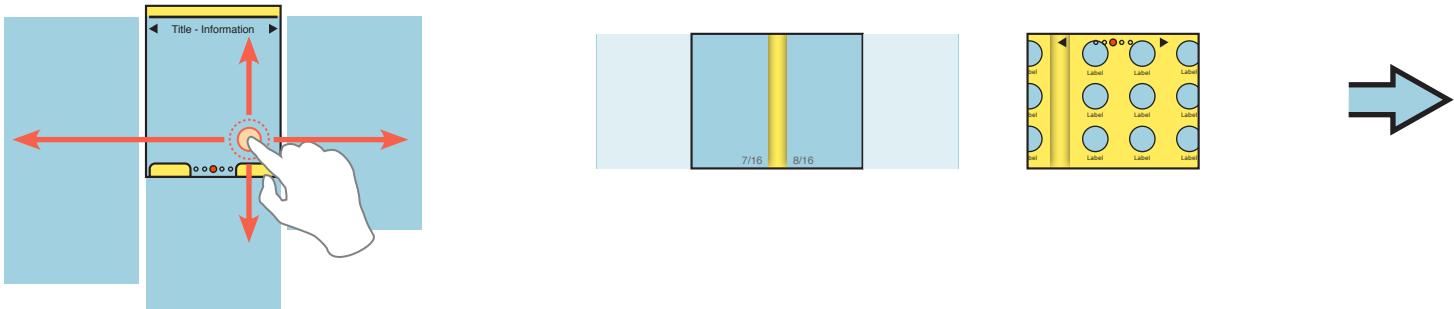
Carousel:



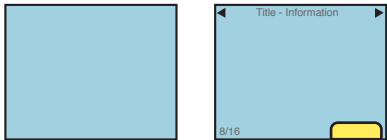
Grid:



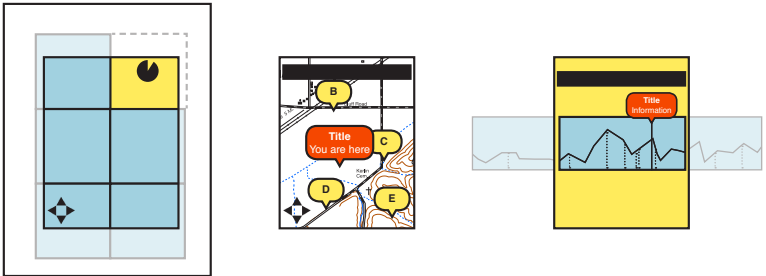
Film Strip:



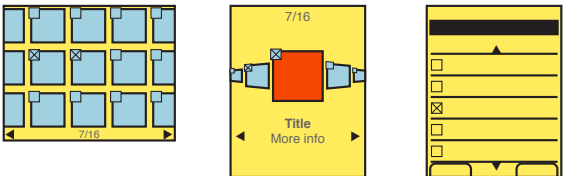
Slideshow:



Infinite Area:



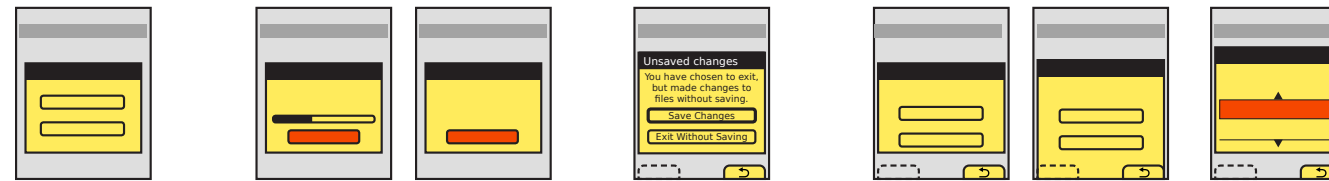
Select List:



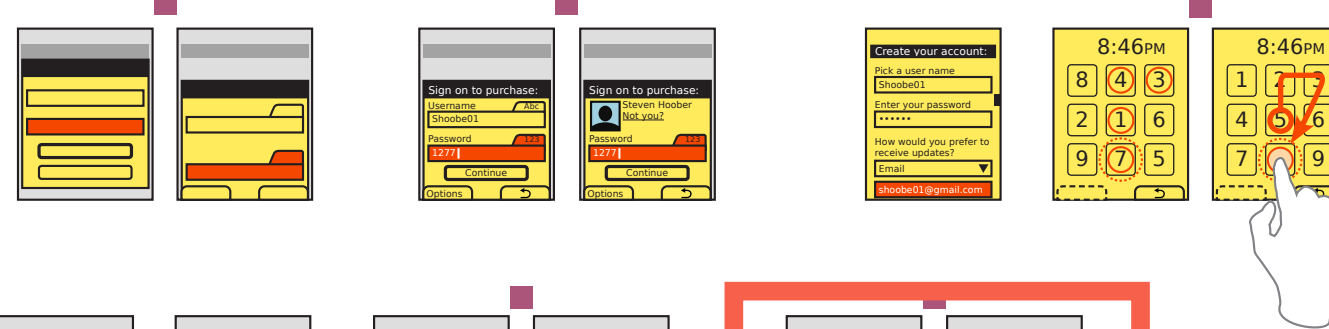


# 4 Control & Confirmation

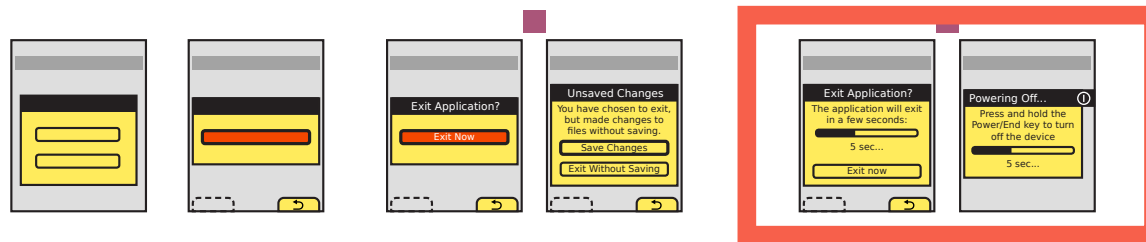
## Confirmation



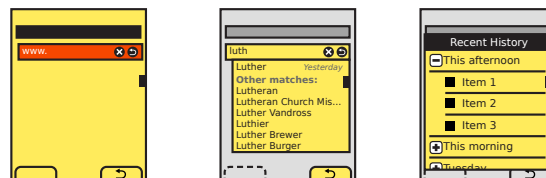
## Sign On



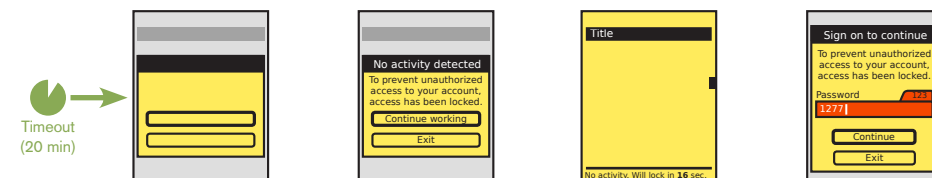
## Exit Guard



## Cancel Protection

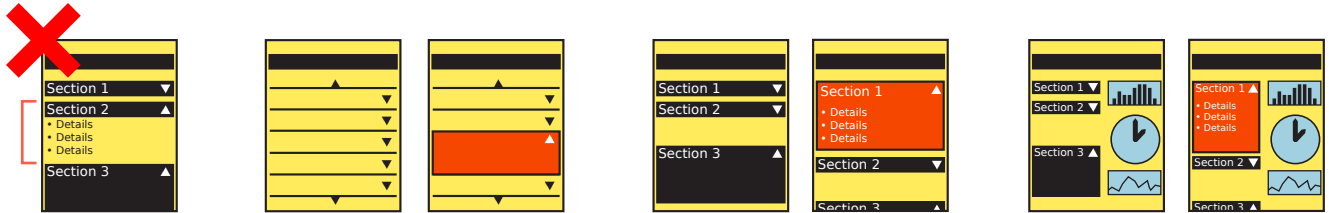


## Timeout



# 5 Revealing More Information

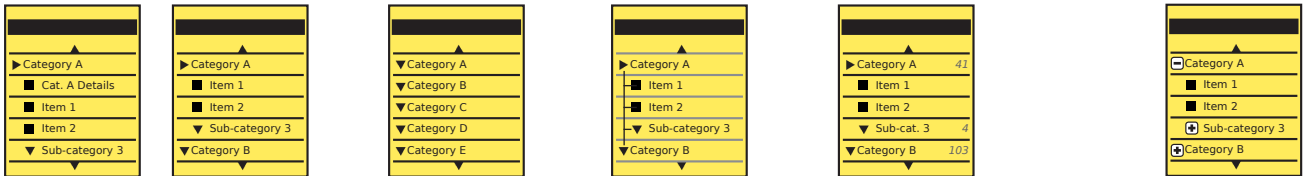
Windowshade



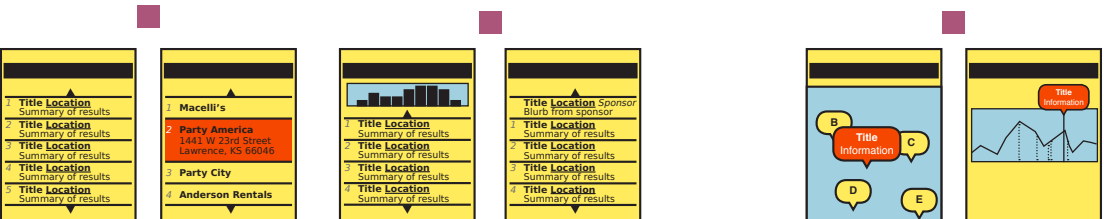
Pop-Up



Hierarchical List



Returned Results



# Widgets

The word widget can mean a number of things, even within related Internet technologies. Even the savvy user may be confused by the lack of common terminology and the lack of any inherent meaning.

The term may apply to bits of code, applets, engines, and GUI elements.

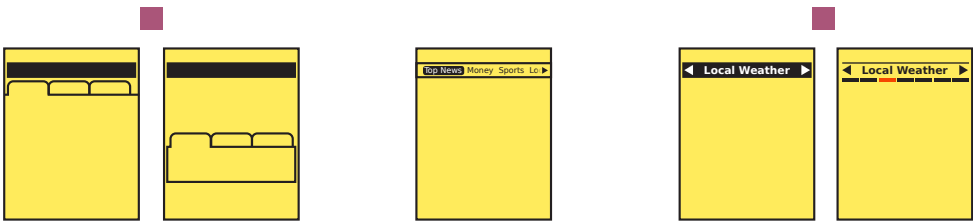
However, the scope of this book, and of this part of the book, is solely concerned with mobile GUI widgets. These widgets are display elements such as buttons, links, icons, indicators, tabs, and tooltips. Numerous additional elements (sometimes called GUI widgets), such as scroll bars, are discussed as components and functions in Part I.



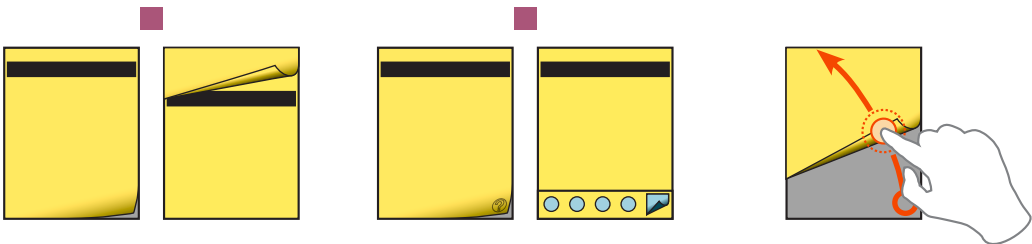


# 6 Lateral Access

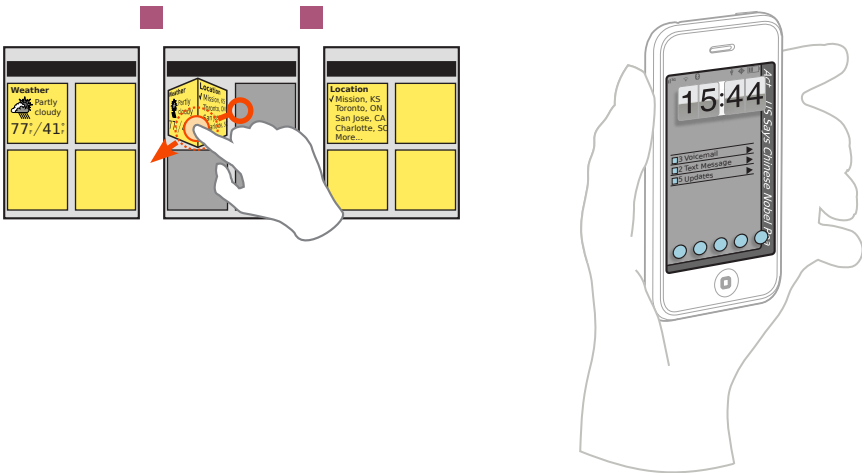
Tabs



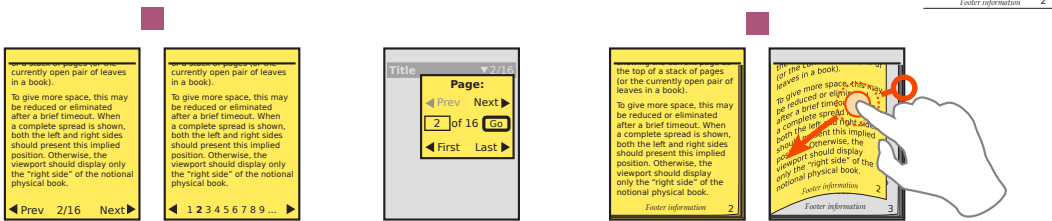
Peel Away



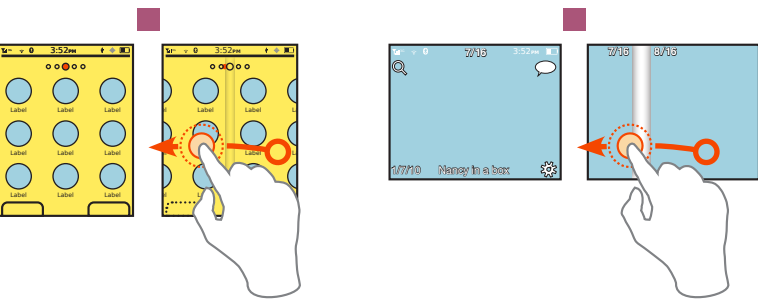
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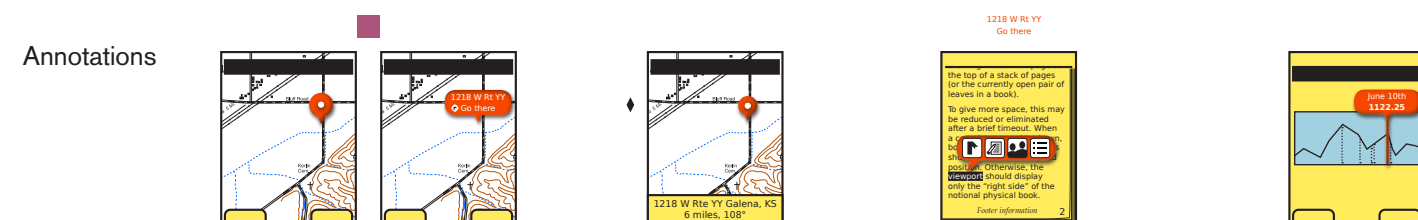
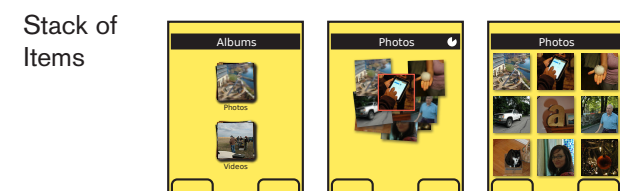
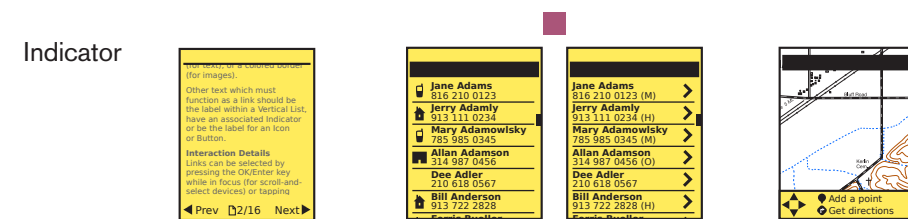
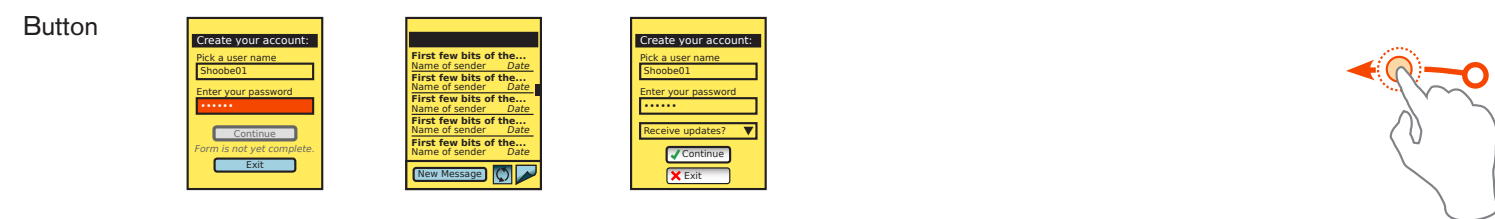
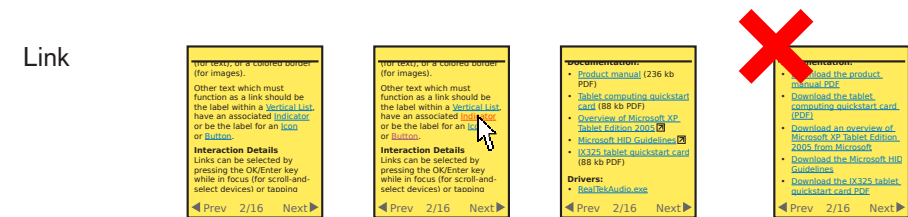


Pagination



Location Within







# 8 Labels and Indicators

Ordered Data

2) Abbreviate:  
Wind direction, common terms, even dates, can all be abbreviated to save space.

1) Remove descriptors:  
As in the wind direction, when there is no extra space, remove the "from the" portion to save space.

3) Remove information:  
Value-added features – like this percentage of precipitation – can be removed when space becomes scarce.

4) Reduce information:  
When ranges, or other multiple datapoints are offered, consider if a single value can serve as a summary. Here, only the high is shown for the day.

5) Combine fields:  
Items which are already closely coupled (like wind direction and speed) can be displayed concatenated to save on table formatting space.

December 23	Wintry Mix to Rain/ Wind	37°	2°	60%	From the South	23mph
Dec 24	AM Snow Showers	25°	7°	50%	Northwest	15mph
Dec 25	Few Showers	38°	5°	30%	South-Southeast	17mph
Dec 26	Few Showers	58°	6°	30%		19mph
Dec 27	Partly Cloudy	37°	6°	10%	WNW	16mph
Dec 27	P-cloud	37°	6°	WNW	16	
Dec 28	Sunny	45°	0°	SW	15	
Dec 29	Sunny	46°	S9			

Wait Indicator

Reload, Synch, Stop

Tooltips

Avatar

DesigningMobileInterfaces-2011dec9 Saved on 9 December 2011 at 12:10 PM

©2011 Steven Hoober

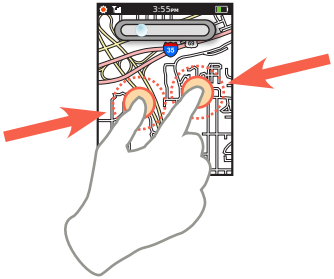
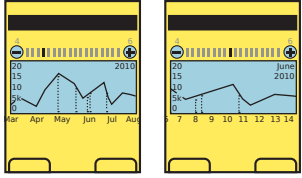
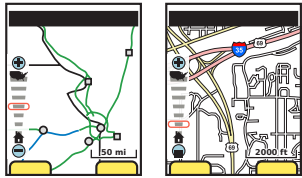
Elements, unless noted, shared under Creative Commons Attribution-Share Alike 3.0  
<http://creativecommons.org/licenses/by-sa/3.0/>

14

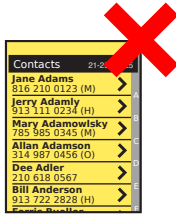
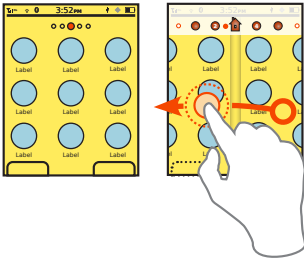
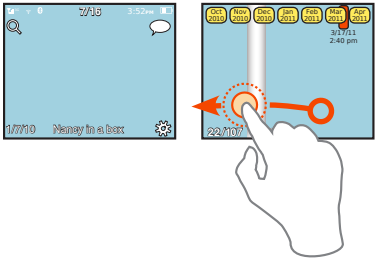
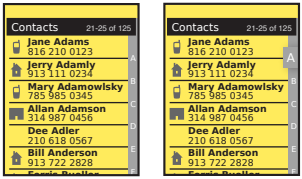


# 9 Information Controls

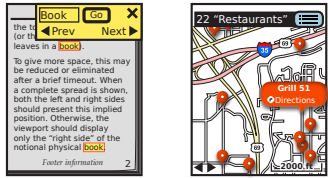
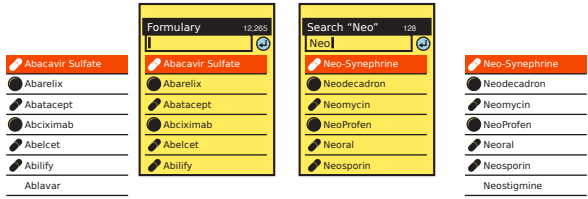
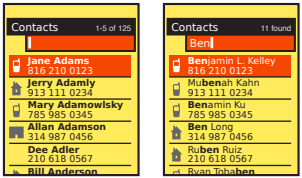
Zoom & Scale



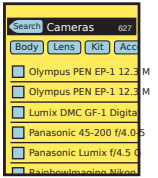
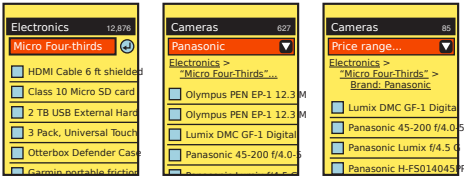
Location Jump



Search Within



Sort & Filter



# Input & Output

The varying ways in which people prefer to interact with their devices highly depend upon their natural tendencies, their comfort levels, and the context of use.

As designers and developers, we need to understand these influences and offer user interfaces that appeal to these needs.

User preferences may range from inputting data using physical keys, natural handwriting, or other gestural behaviors. Some users may prefer to receive information with an eyes-off-screen approach, and instead relying on haptics or audible notifications.

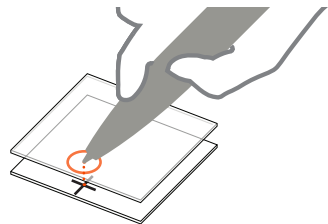
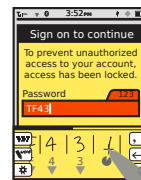
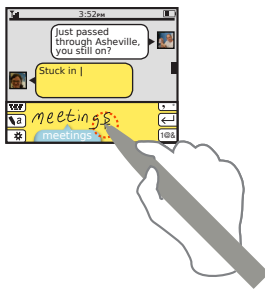
This part of the book will discuss in detail the different mobile methods and controls users can interact with to access and receive information.

10 Text & Character Input

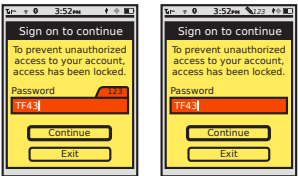
Keyboards & Keypads



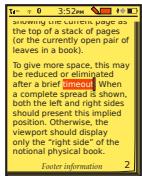
Pen Input



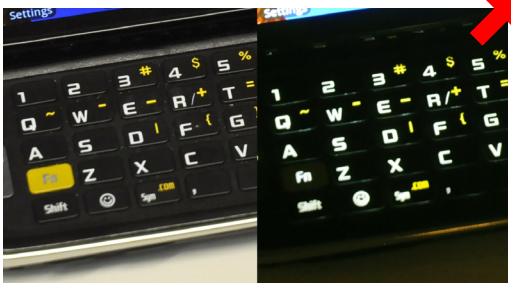
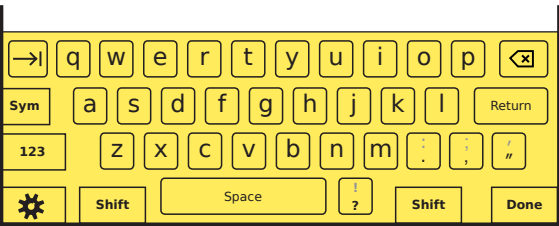
Input Method Indicator



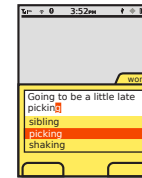
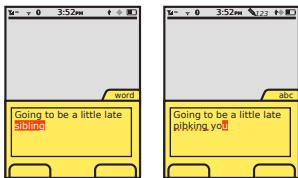
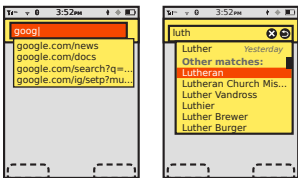
ABC	(ALL CAPS)	ABC
Abc	(Initial cap)	Abc
abc	(lower case)	abc
123	(numeric)	123
!@# or Sym	(symbol)	!@#
T9 word	predictive lower case	abc
T9 Word	Predictive initial cap	Abc



Mode Switches



Autocomplete and prediction

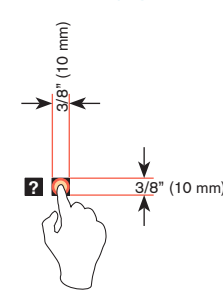




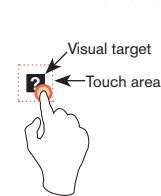
# 11 General Interactive Controls

General Interactive Controls - Chapter Introduction

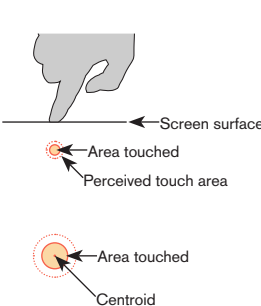
GlCintro-Size.png



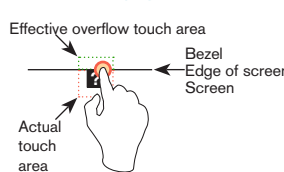
GlCintro-Target.png



GlCintro-Centroid.png



GlCintro-Bezel.png

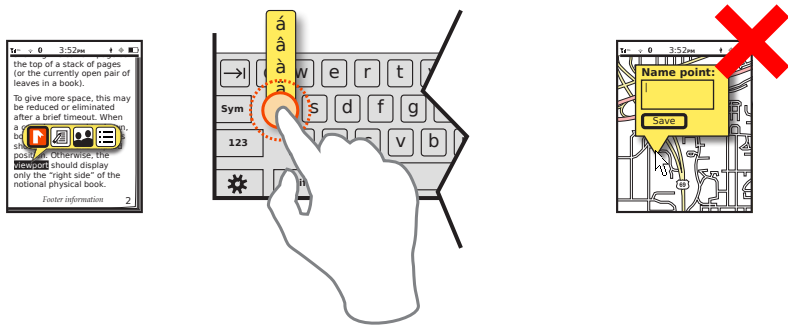


# 11 General Interactive Controls

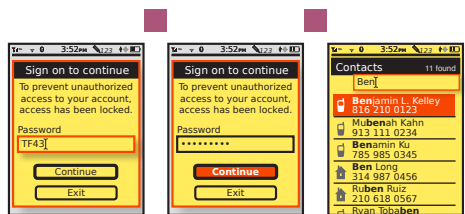
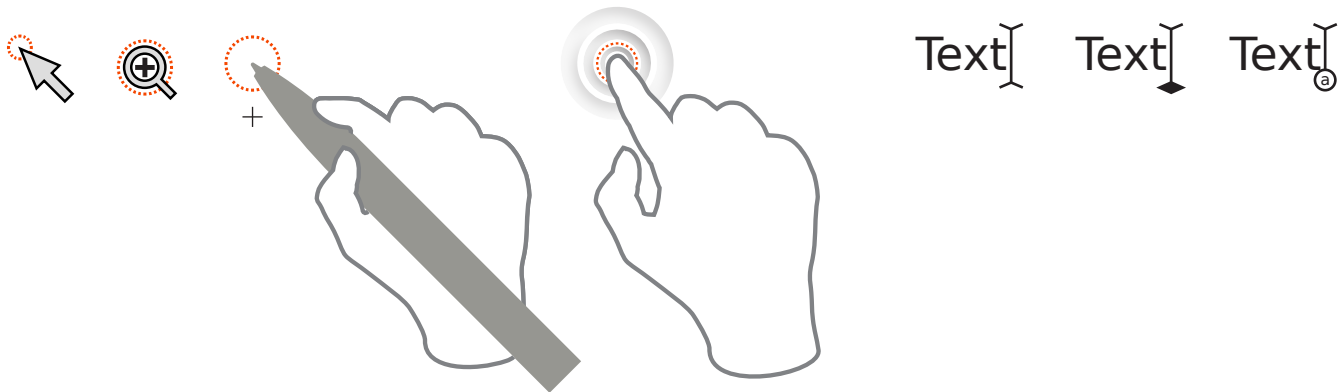
Directional Entry



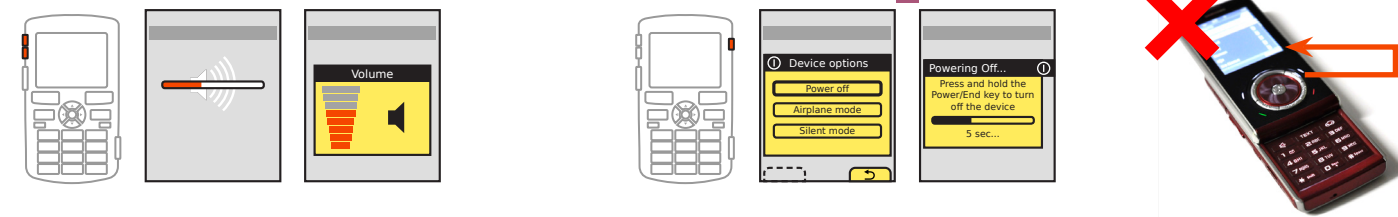
Press & Hold



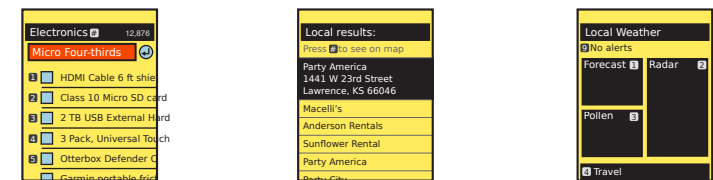
Focus & Cursors



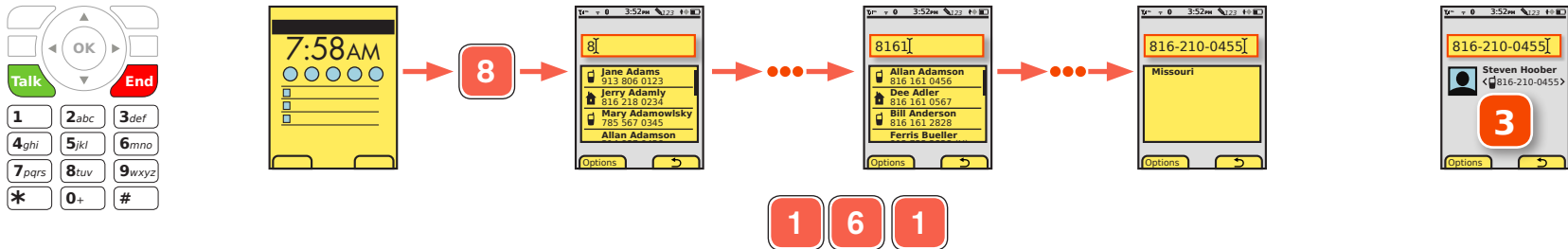
Other Hardware Keys



Accesskeys



Dialer



# 11 General Interactive Controls

On-screen Gestures

Tap

Press & hold

One-axis drag

One-axis drag

Two-axis drag

Free movement drag

Both move, drag

Both move, pinch

Axis and movement

Kinesthetic Gestures

Roll handset (face up to face down)

Shake handset

Gesture towards handset (non-handset hand moves)

Tap two handsets together

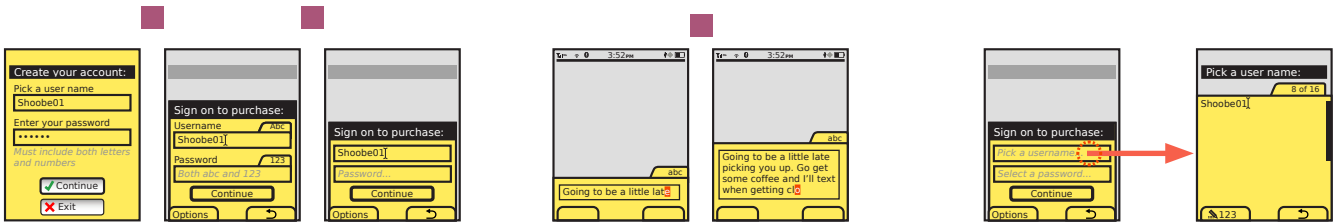
Handset towards non-phone NFC/RFID detector

Remote Gestures

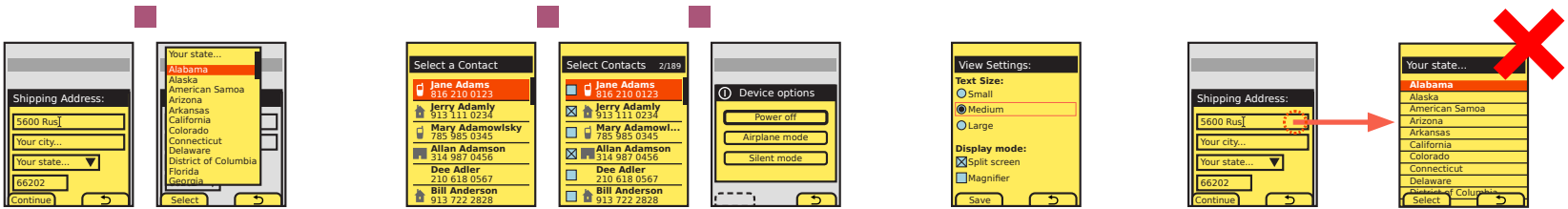


12 Input & Selection

Input Areas



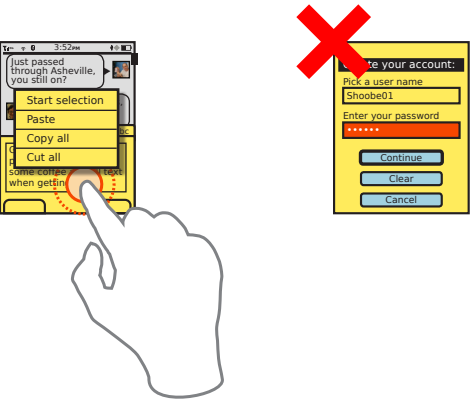
Form Selections



Spinners & Tapes

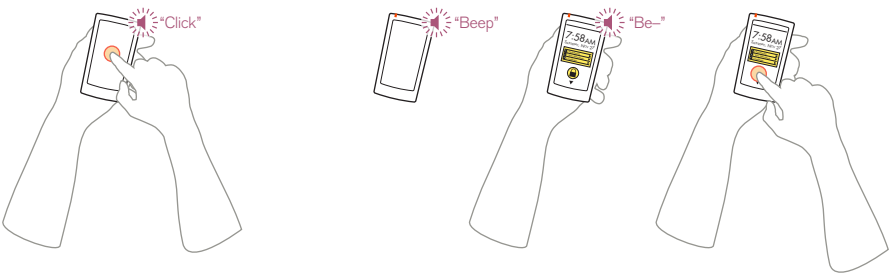


Clear Entry

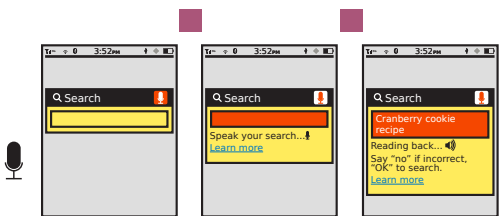
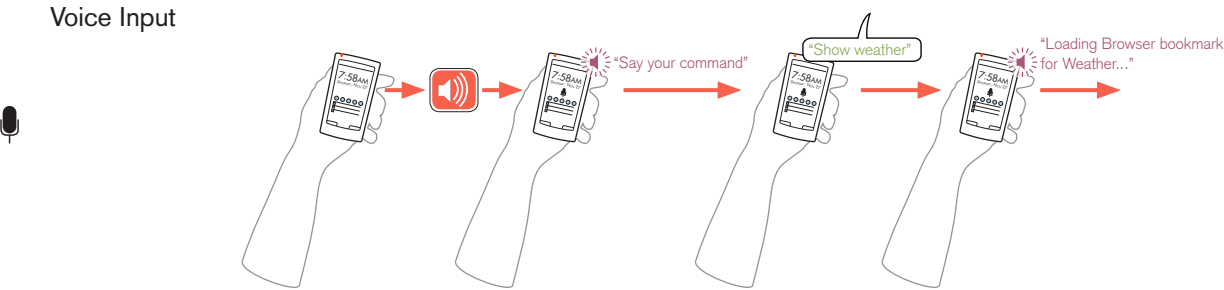


# 13 Audio & Vibration

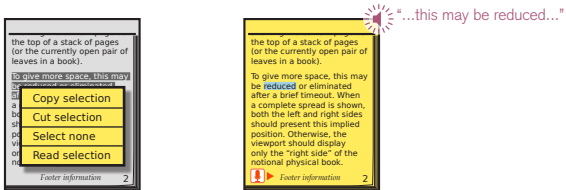
## Tones



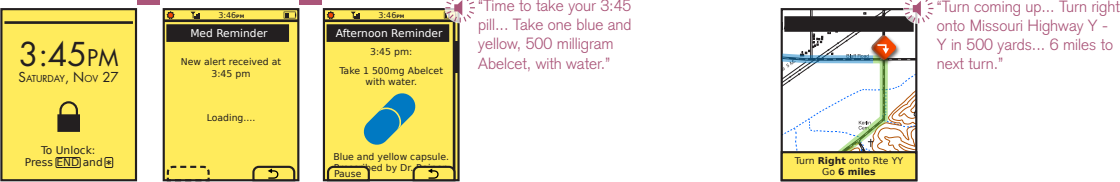
## Voice Input



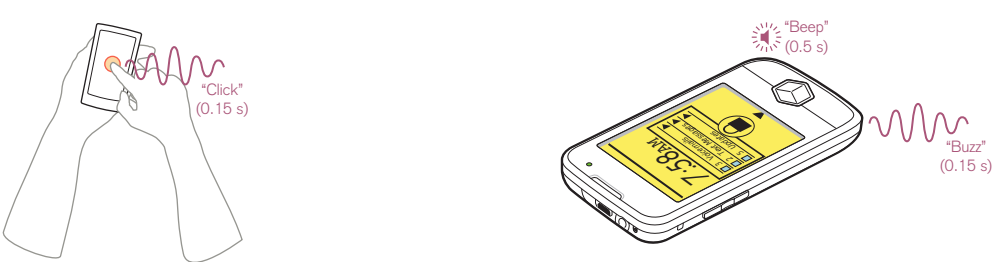
## Voice Readback



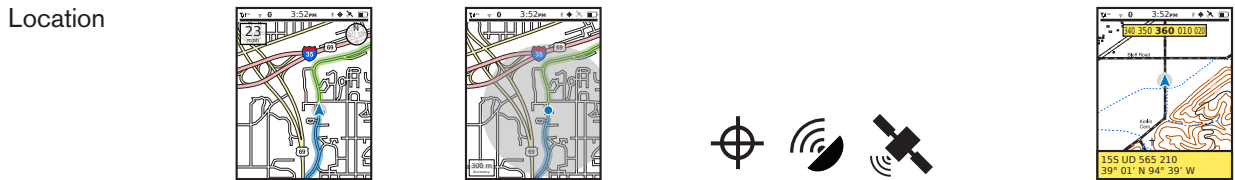
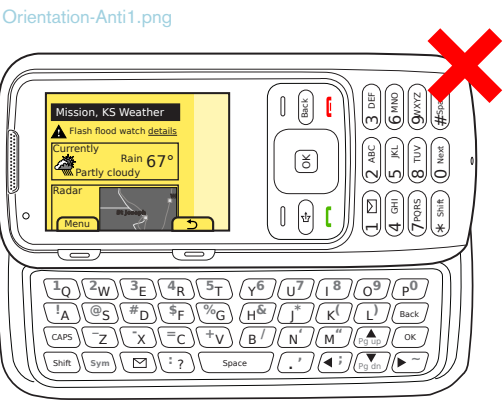
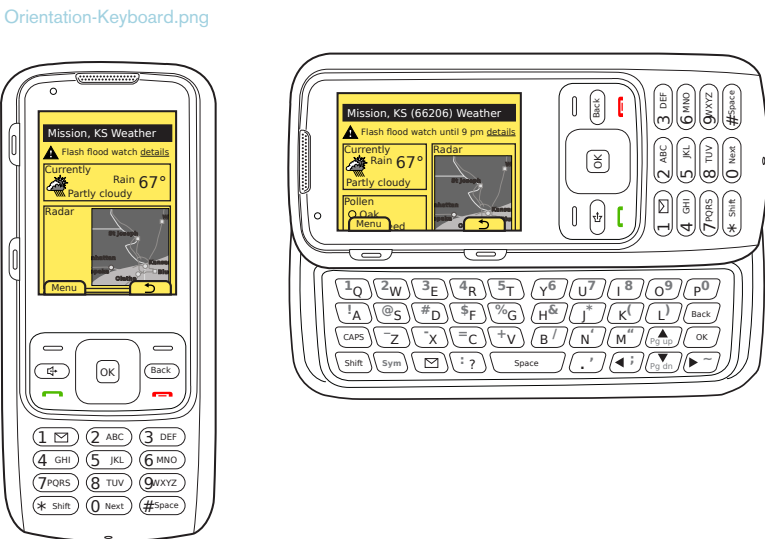
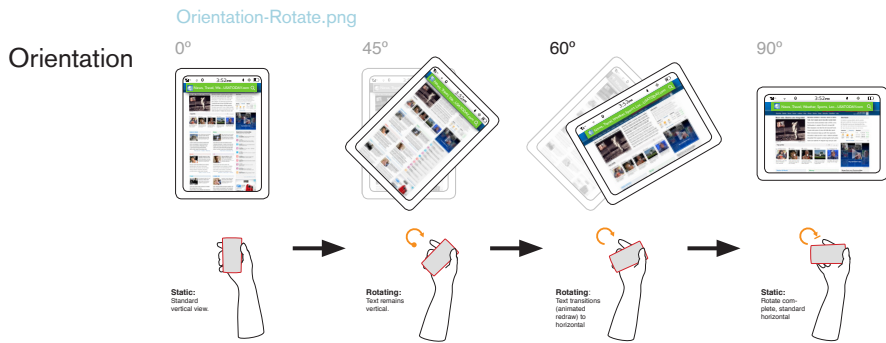
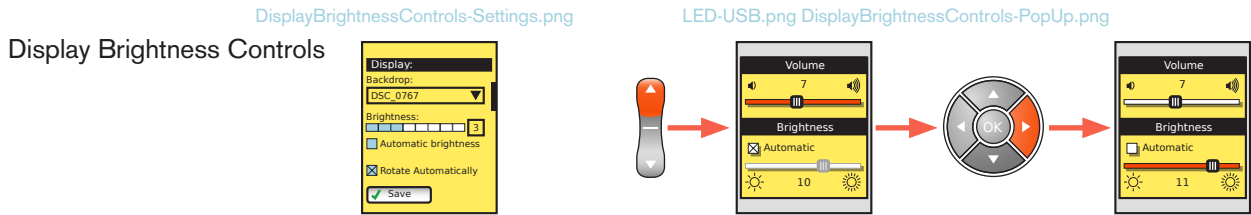
## Voice Notification



## Haptic Output



14 Screens, Lights & Sensors



# Appendixes

To keep the patterns focused on design and implementation, we have pulled all kinds of supporting information out of them. However, a lot of it is still very interesting.

And there's no good way for a designer or developer to get a summary of this sort of information.

So we have included it here in the form of appendixes, ordered so that you can just pretty much read it from one end to the other.

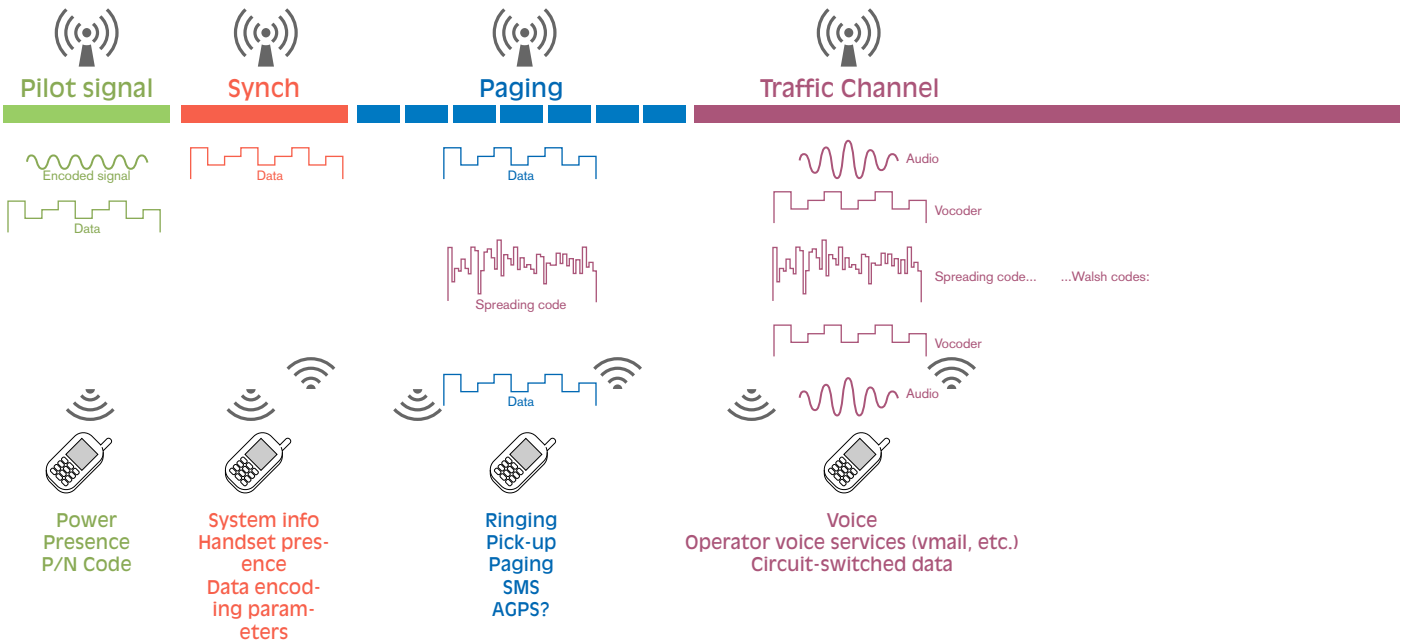
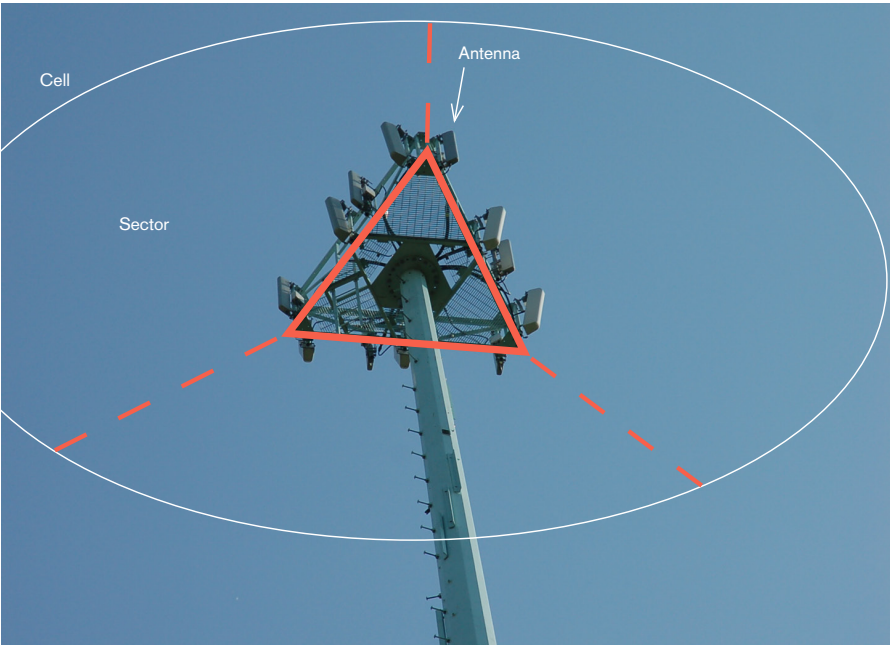
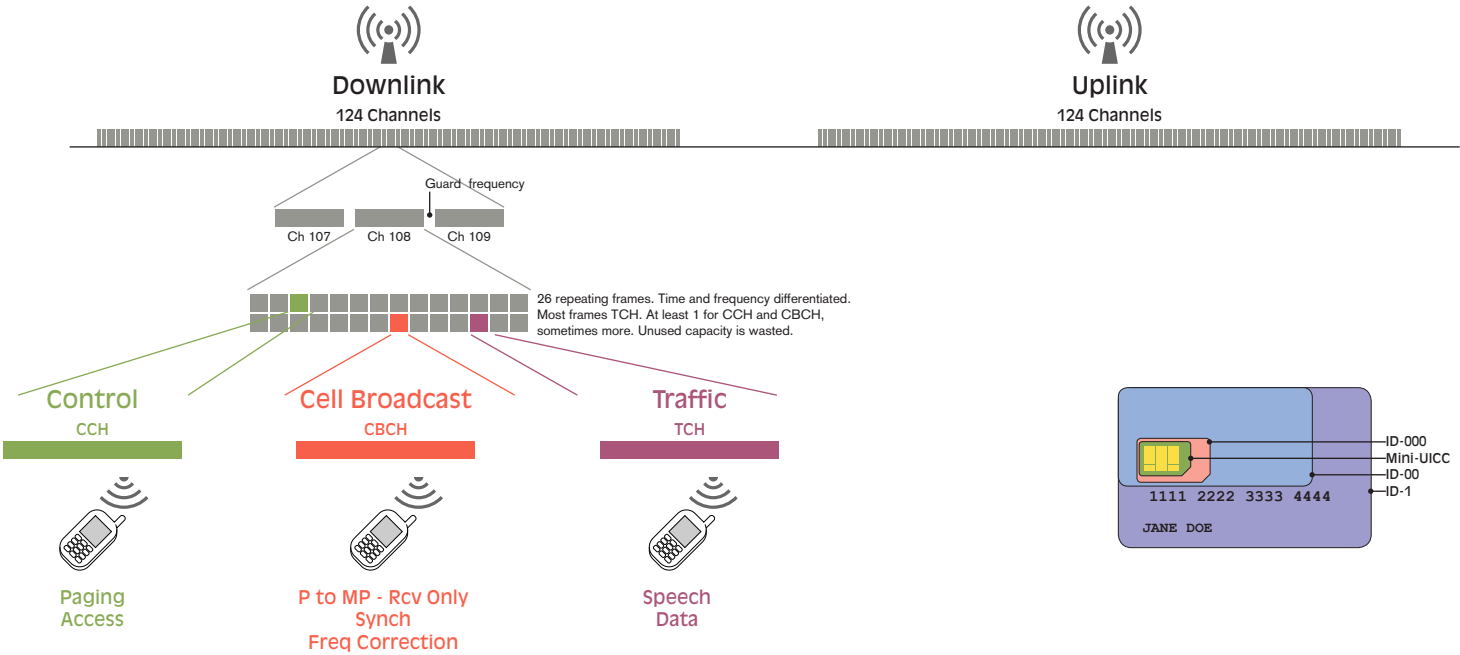
You'll find that a few of the appendixes are actually just lists of resources. And in this day and age, resources are links to websites—which, of course, will go out of date soon. Luckily, we keep this up to date on the [4ourth Mobile Design wiki](#).

Visit anytime to get the latest updates, or just to avoid typing in long links from a piece of paper. And please add your own information, or update old or changed links.



Appendix


Intro to Mobile Radiotelephony



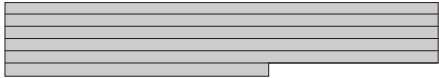
Appendix

Greeking

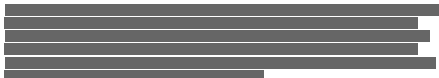
Title



Title



Title



Title

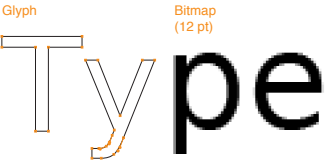
Sed ut perspiciatis, unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam eaque ipsa, quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt, explicabo. nemo enim ipsam voluptatem, quia voluptas sit, aspernatur aut.

Designing with words


Many of these issues become worse on mobiles, with small column widths. Greeked text will wrap in ways unlike real content. This is even worse if the real text is in a particular technical language as there are no compound words, and phrasing is not organized in this manner.

Introduction to mobile typography

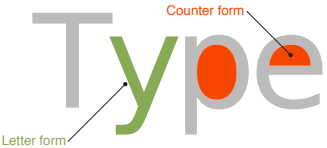
Type-rasterVector.png



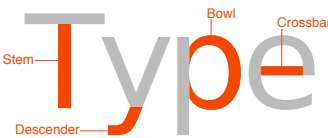
Type-lines.png




Type-forms.png



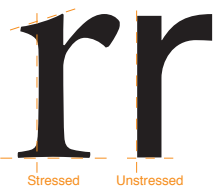
Type-parts-1.png



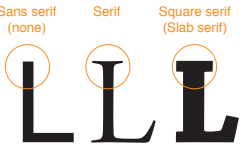
Type-parts-2.png



Type-stress.png



Type-serifs.png



Type-legs.png

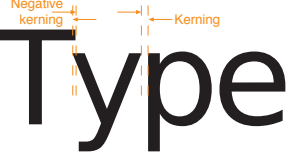
letterform

Type-width.png

Weight and width

**Weight and width**

Type-kern.png



Type-leading.jpg

Too tight leading causes collisions

Give enough leading for depth of the descenders

Leading is the distance between baselines

Type-accents.png

Conventional accents are above the cap height...

...but letterforms are available that are modified to reduce the required leading.



Type-s60sans-sample.png

S60 Sans 16 pt:

The quick brown fox.

Un-stressed forms

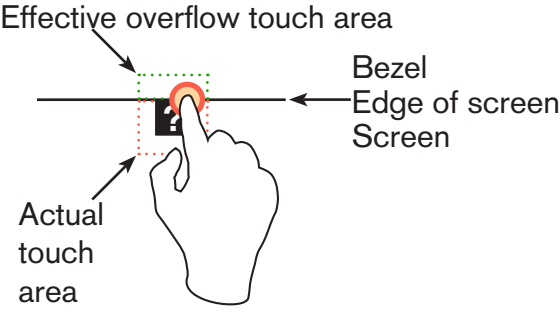
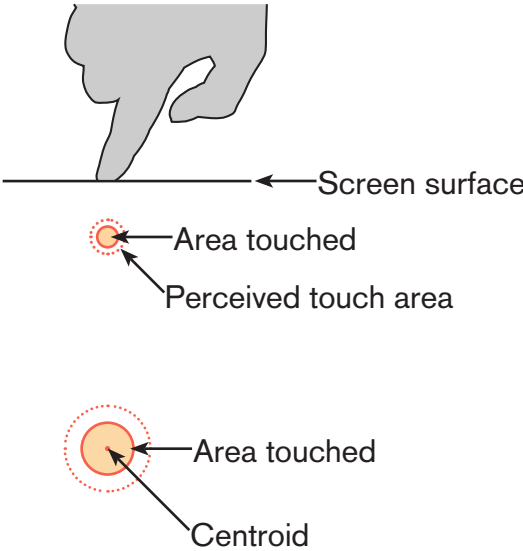
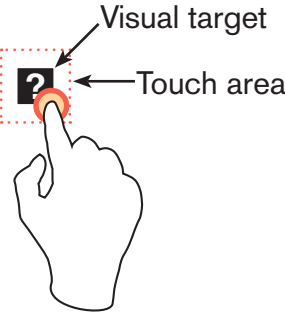
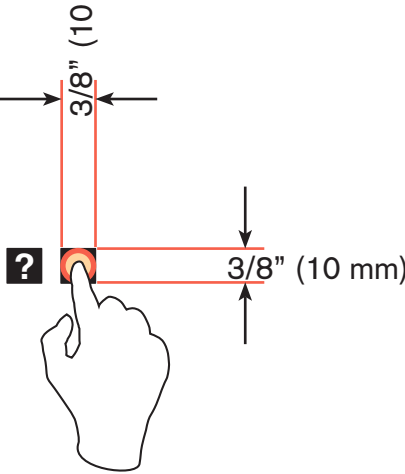
Descender height 17%

x-height 69%

Clean, open counters

# Appendix

General Touch Interaction Guidelines



Join the mobile community

Visit [4ourth.com/wiki](http://4ourth.com/wiki) to view and add to patterns and other mobile design resources

# 4ourth mobile design for every screen



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