

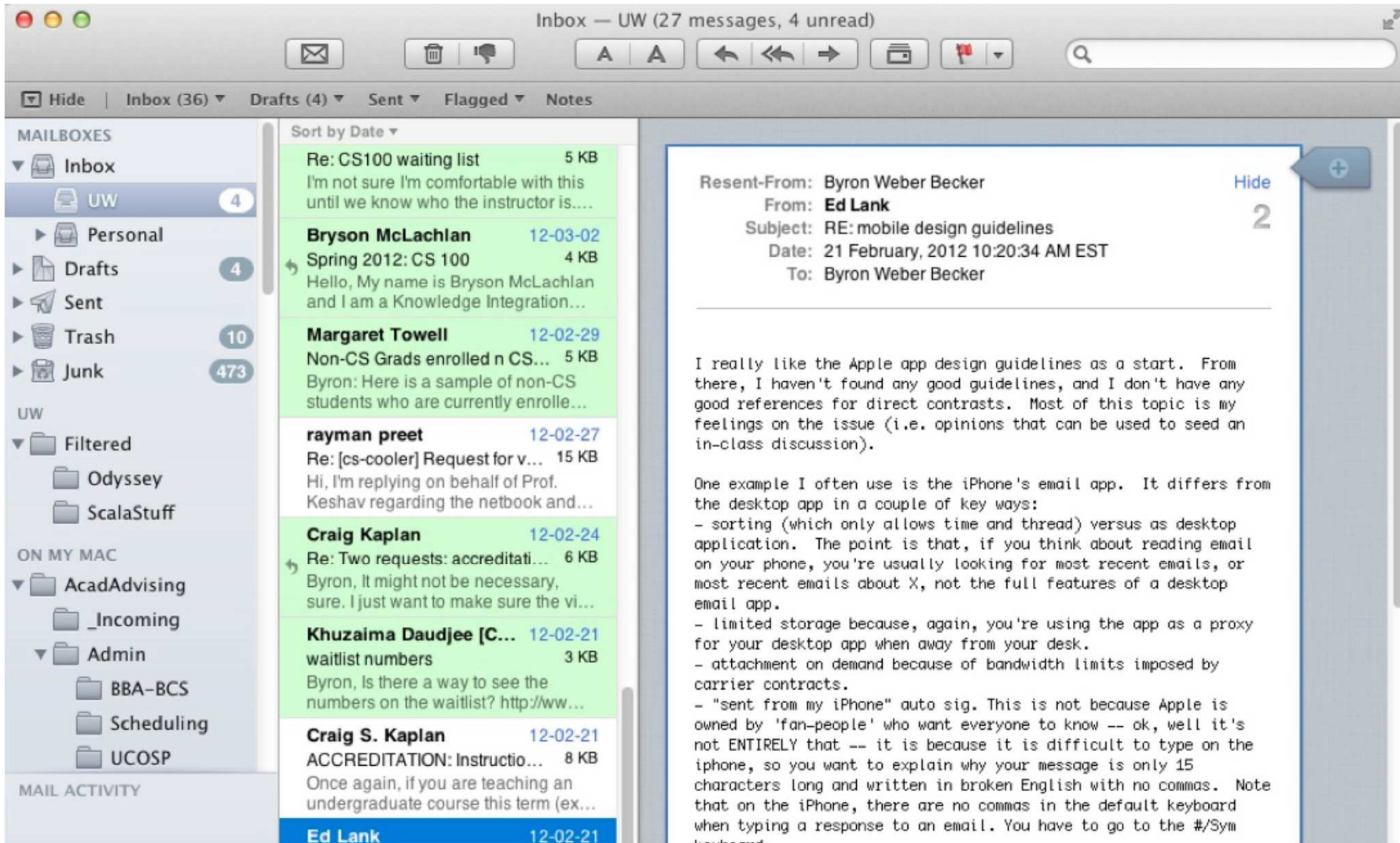
Mobile Design

Overview

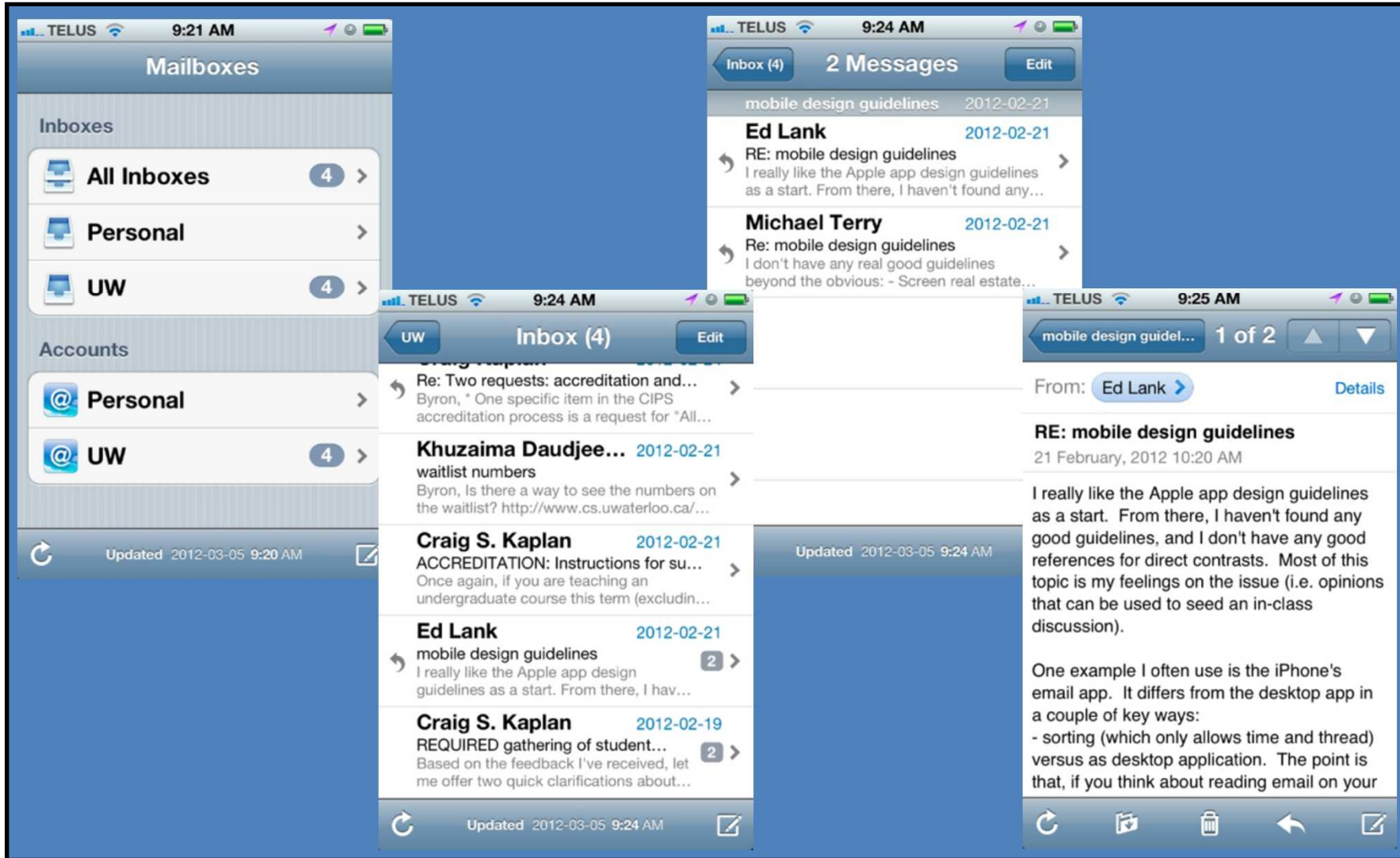
- Mail on desktop vs. mobile
- Platform characteristics
- Guidelines

- References
 - iOS Human Interface Guidelines

Desktop vs. Mobile



Desktop vs. Mobile



Apple's Thoughts

- Distinct, highly focused screens
 - Each screen displays one aspect
 - Scroll when needed
- Easy, predictable navigation
 - One tap per screen to drill down
 - Title bar shows where you are; how to get back
- Simple, tappable controls, available when needed
 - Common ones (compose new message; check for new mail) are available in most places
 - Reply, move, trash only available when viewing a message
- Different types of feedback for different tasks
 - Trash vs. Send vs. Checking mail

Device Characteristics (1/3)

- Display
 - It's smaller! 640 x 960 pixels at 320dpi (iPhone 4)
 - Its orientation can change
- User Interaction
 - Apps respond to gestures, not clicks
 - Users use their fingers
 - Apple: Minimum size of tappable UI element: 44x44 points
44 points = .6 inches = 15mm (hmmm....)
 - Microsoft: recommended -- 9mm; minimum -- 7mm;
minimum spacing -- 2mm
 - Nokia: recommend -- 10mm x 10mm; minimum -- 7x7mm
with 1mm gaps for index fingers; larger for thumbs

Device Characteristics (2/3)

Gesture	Meaning (iPhone)
Tap	Analogous to a single mouse click
Drag	Scroll or pan; drag an element
Flick	Scroll or pan quickly
Swipe	Reveal delete button or notification center
Double Tap	Zoom in and center block of content; zoom out
Pinch	Zoom in/out
Touch & Hold	Display magnifier to position cursor
Shake	Initiate undo or redo

Device Characteristics (3/3)

- People interact with one app at a time
 - Only one app in the foreground
 - Most apps are suspended when not in the foreground
 - Most apps have only one window that fills the entire screen
 - No visible components such as title bar or close button
 - Can't be moved
 - Users experience the app as a collection of screens
- Minimal help systems

Human Interface Principles

- Apple's Human Interface Guidelines lists a number of principles:
 - Aesthetic Integrity: how well does the appearance integrate with its function?
 - Consistency
 - Direct Manipulation
 - Feedback
 - Metaphors for objects and actions in the real world
 - User Control

User Experience Guidelines* (1/6)

- Focus on the Primary Task
 - Analyze what's needed on each screen; get rid of it if it isn't needed right now.
- Elevate the content that people care about
 - Minimize the number and prominence of controls to decrease their weight in the UI
 - Consider fading controls after people have stopped interacting with them for a little while
- Handle Orientation Changes
- Delight People with Stunning Graphics
- Make Targets Fingertip-Size

From Apple's *iOS Human Interface Guidelines*

User Experience Guidelines (2/6)

- **Think Top Down**
 - The top of the screen is most visible; put the most important information there
- **Give People a Logical Path to Follow**
 - Make the path through the information you present logical and easy for users to predict
 - In most cases, give users only one path to a screen
- **Make Usage Easy and Obvious**
 - Make your application's main function immediately apparent
 - Be consistent with the platform's usage paradigms

User Experience Guidelines (3/6)

- Minimize the Effort Required for User Input
 - Balance any request for input with what you offer users in return (good value for their effort)
 - Make it easy for users to input their choices
 - Let users pick rather than type
 - Make sure controls are big enough
 - Get information from iOS, when appropriate
 - Contacts
 - Calendar info
 - Location data
 - ...
 - Use reasonable defaults; past answers; etc.

User Experience Guidelines (4/6)

- Make Search Quick and Rewarding
 - Build indices so you're always prepared for search
 - Live-filter local data to display results more quickly – as soon as users start to type
 - When possible, filter remote data while users type
 - Display the search bar above the list or index
 - If necessary, display placeholder content right away and partial results as they become available
 - Consider providing a “scope bar” if the data naturally sorts into different categories (eg: in an email app, “from”, “to”, “subject”, “all”)

User Experience Guidelines (5/6)

- Start Instantly
 - Avoid an About window or splash screen
 - Launch in appropriate default orientation
 - Avoid asking for setup information
 - Focus on the needs of 80% of your users
 - Get as much info as possible from other sources
 - If you must, prompt for info within your app rather than driving them to the Settings app
 - Delay login for as long as possible
 - Restore the state to what it was the last time it was used

User Experience Guidelines (6/6)

- Downplay File-Handling Operations
 - People shouldn't be aware of the file system
 - As much as possible, allow people to manage documents without opening iTunes on their computer
 - If your app creates/edits documents, have a document picker:
 - highly graphical
 - fewest possible gestures to do what they want
 - include a new document function
 - Ask people to save only when necessary

Summary

- Mobile devices are significantly different from desktops and laptops:
 - Much smaller screen
 - Requires more focus
 - Few overlapping windows
 - Different interactions
- Requires a different set of design guidelines