Samsung Design Exercise: Redesign Pandora

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Overview

Taking as a premise that Pandora's mobile app (Android) is "clumsy, out of date, and not very mobile-friendly", I took a design challenge to redesign it or to add features at my discretion. I focused on the core experience of Pandora's mobile app: its Now Playing screen and its usage while on the go. Inspired by the Audible's "Button-Free" mode, I created a "Driving Mode" for Pandora, focusing on gestural interaction and really large icons for core interactions, and both adding and simplifying what might be a missing, but common bit of navigation. Looking ahead, the gesture-based UI for the core interactions should be ideal for almost direct transplantation to apps for smaller screened devices such as smartwatches.

The Storyboard With High Resolution Screens showcasing the design starts on page 22.

The Design Challenge: "Redesign Pandora"

Terms of The Challenge

Issues with Pandora

- Clunky
- Out of date
- Not mobile friendly
- Think about use cases of listening to music when you're on the go (out running, in the car, on a bike, etc.)

Constraints

- Use the Samsung Galaxy S5 as your target phone (convenient, as I have just switched to this phone within the last month)
- Exercise duration: 48 hours
- Do whatever you want to the app, including add features.

Design Artifact Specifications

- Maybe 3 key screens
- High-resolution, not mockups
- Short write-up

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Current System(s) Summary Description and Evaluation

I have some familiarity with the Pandora service and mobile apps. I signed up with the website when I got my Palm Pre in 2010, noting that it had a Pandora app. It is this webOS Pandora app on my Palm Pre that provided me with the bulk of my Pandora experience.

On receiving the challenge, I did start the Pandora on my Samsung Galaxy S5 for the first time, and conducted an exploration of it, noting UX issues along the way.

Notes From Exploring Pandora's Android App

I explored the app both sitting at my desk and, later, while driving.

Issues Noted

- How do I change or choose what the output device is?
    - Not on the now playing screen, not on the Now Playing right sliding panel, not in the volume panel, …
    - Volume buttons of the GS 5 bring up the sliding volume panel, but not the standard volume pop-up.
    - Bug: On my Bluetooth headset, no sound, despite being connected for media and phone audio.
        - No way to change it aside from:
            - Turning off the headset
            - Turning off Bluetooth on the phone
            - Probably disconnecting the headset via phone's Bluetooth Settings.
- Your current station does not show on the now playing screen.
- There is no way to change your current station from the now playing screen.
- Hierarchical screens with "back" navigation are good and clean conceptually, but a bit awkward and potentially wasteful on larger screens like the GS5's.
    - It'd be nice to be able to view the "station" list without losing the context of the currently playing song.
    - Maybe more could be presented via slide-in panels.
    - Note: the use of a screen hierarchy works well with "back" navigation as seen in stock Android and Samsung's Back button. This may argue against the use of a slide-in left panel, for instance, or something reminiscent of webOS 3.x' panels.
- Even with the large screen of the GS5 (relative to my previous phone, and iPhone 4S), interacting with the app while driving is awkward—requiring precision and attention at time when both those limited resources are better spent on driving:
    - The core interactions require hitting buttons/icons that are limited in size: thumbs up, thumbs down, play/pause, next.
    - Secondary interactions also require those resources: scrubbing the song along the time slider (the targets are very small), changing "stations" requires going back (GS5's back button or an on-screen button at the top left of the screen) and selecting from a list of text elements

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Candidate Elements For Redesign

- Driving Mode a la Audible app
- Offer a way to switch radio stations while on the Now Playing screen
- Add access to an audio output selector
    - Maybe a section on the contextual panel off the right of the now playing screen
    - Maybe a menu off of an icon in the volume panel
- For "background usage":
    - Floating controls (Beat app on Android)
    - Controls in Notification Panel (webOS, Android)

Redesign Target: A More Driving-Friendly Experience

Inspired by the Audible App, I decided that Pandora's app could benefit from having a mode dedicated to greater safety while driving, primarily requiring less precision and attention in interaction.

Process Steps Represented In This Document

This document represents a snapshot of the state of the described RedBeacon design challenge in terms of the process outlined above and how it got there.

1. **User research and heuristic analysis.** While self-observation and introspection can often be suspect as a source of research, as focused design exercise, I executed based on the information in the exercise statement and my own experience with the Android App on my Samsung Galaxy S5. **Artifacts:** Notes included in Issues Noted, above
2. **Design.** Where the rubber meets the road. **Artifacts:** Notes and sketches

Artifacts Included in This Document

- Typewritten notes
- Notes and initial design explorations from sketchbook
- Hi resolution images as prototypes, incorporated into a storyboard. Includes descriptions of available gestures, interaction, and transition animations.

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Design

Artifacts in this section: Notes, screen and interaction sketches, and a storyboard with hi-res screens and UI specifications.

Design Considerations

1. Use bigger gestures over tapping icons and smaller targets
    a. From Fitt's Law
    b. Thumbs up, Thumbs down, pause, next
2. Minimize the precision necessary.
    a. Fitt's Law
    b. Driving safety
3. Minimize context/screen switching for other "common" tasks
    a. Enable changing of station from Now Playing screen
    b. Enable changing audio output device from Now Playing screen
        i. Would not be as necessary if GS5, for instance, managed my Bluetooth devices more along the lines of how I use them: headset for phone, separate Bluetooth device for media to my car. They switch/connect/disconnect unpredictably.

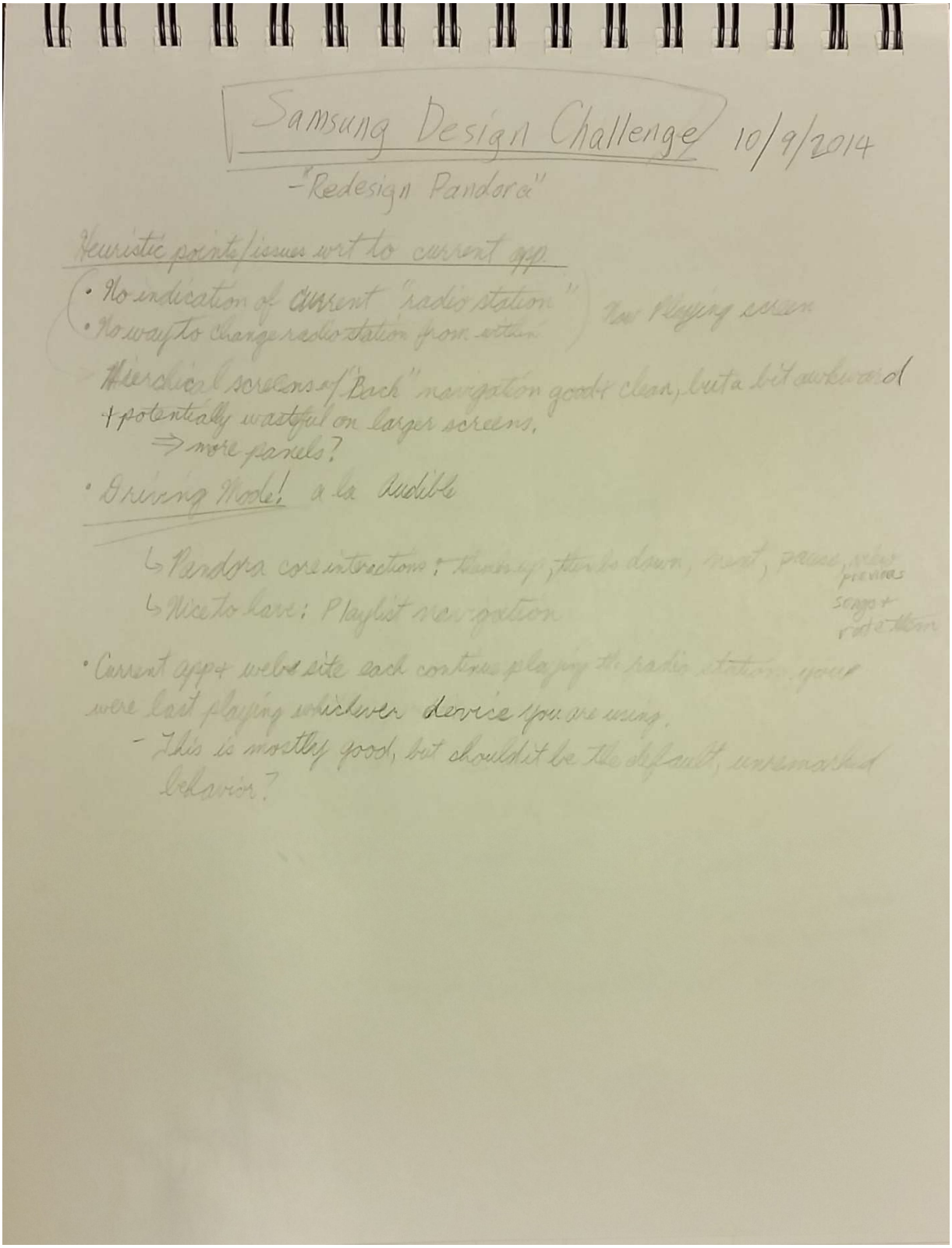
Design Inspirations

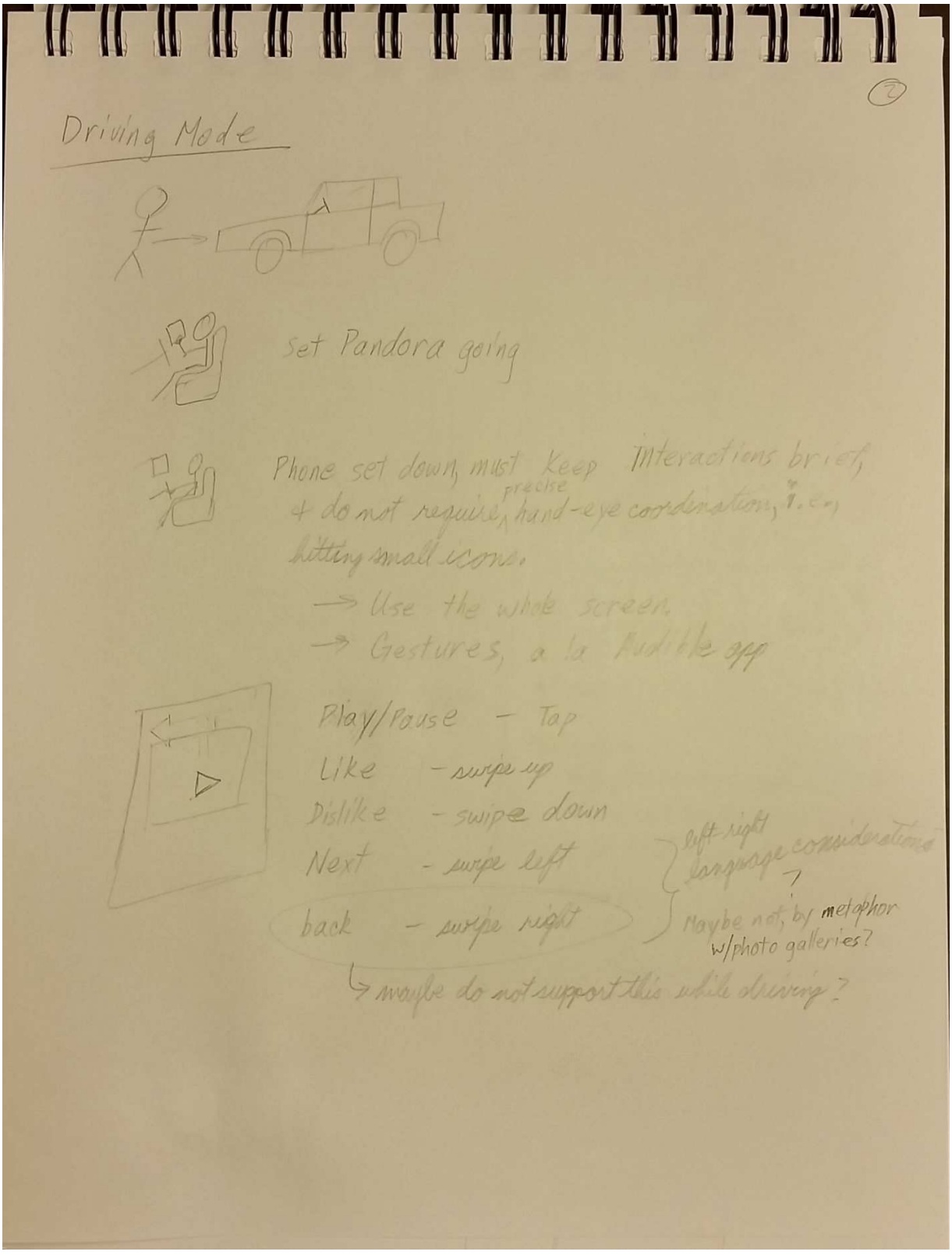
- "Driving Mode": Audible App's "Button-Free" mode
- Interactions
    - Zooming and pinch gestures: iOS, Pad++, Microsoft Surface (table-sized version)
    - Swiping left and right to go through songs or stations: Photo gallery apps on iOS, webOS, Android, etc.
    - Swiping up for Thumbs Up and swiping down for Thumbs Down: Tinder

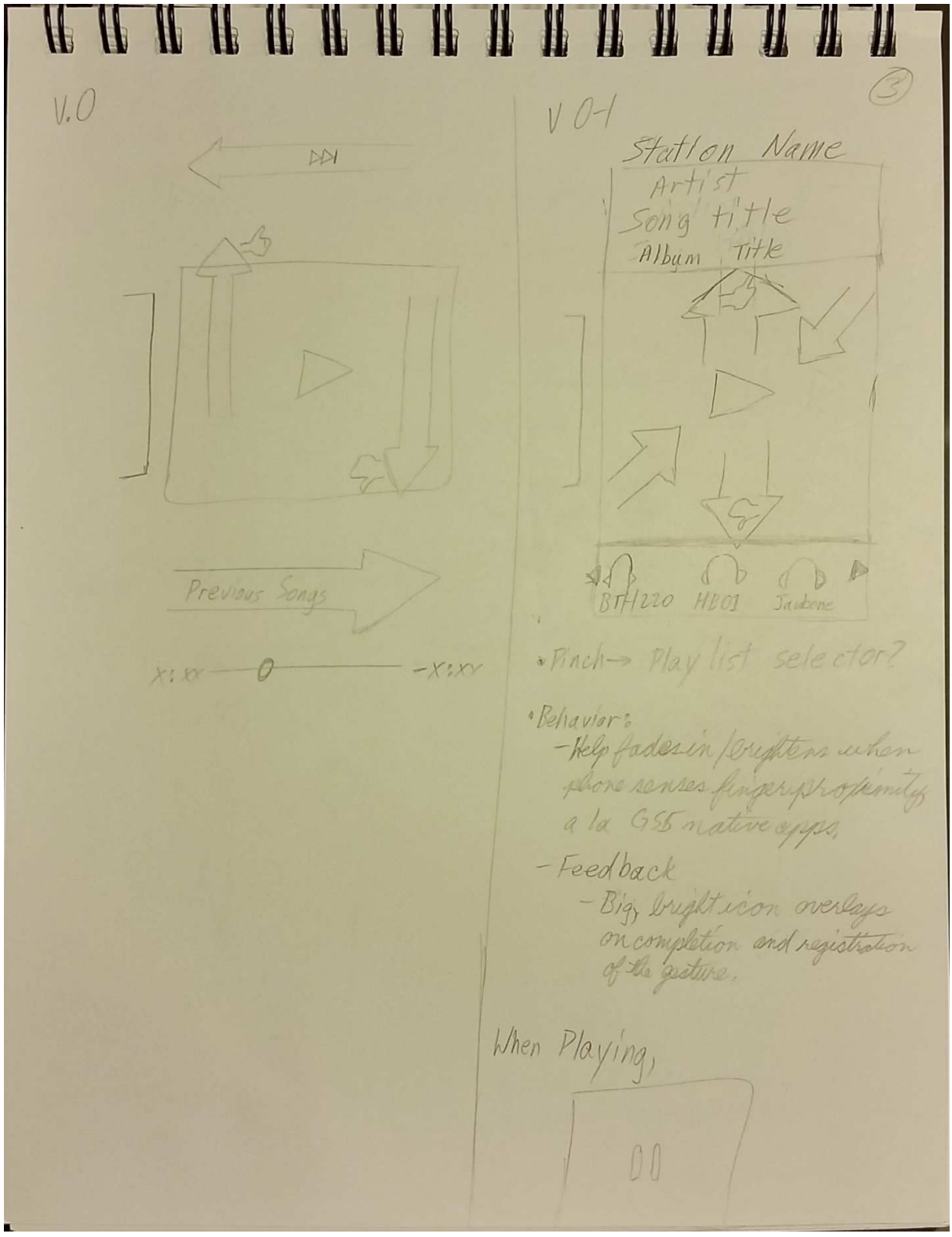
Sketchbook First: Notes, Usage Scenario, and Design Sketches

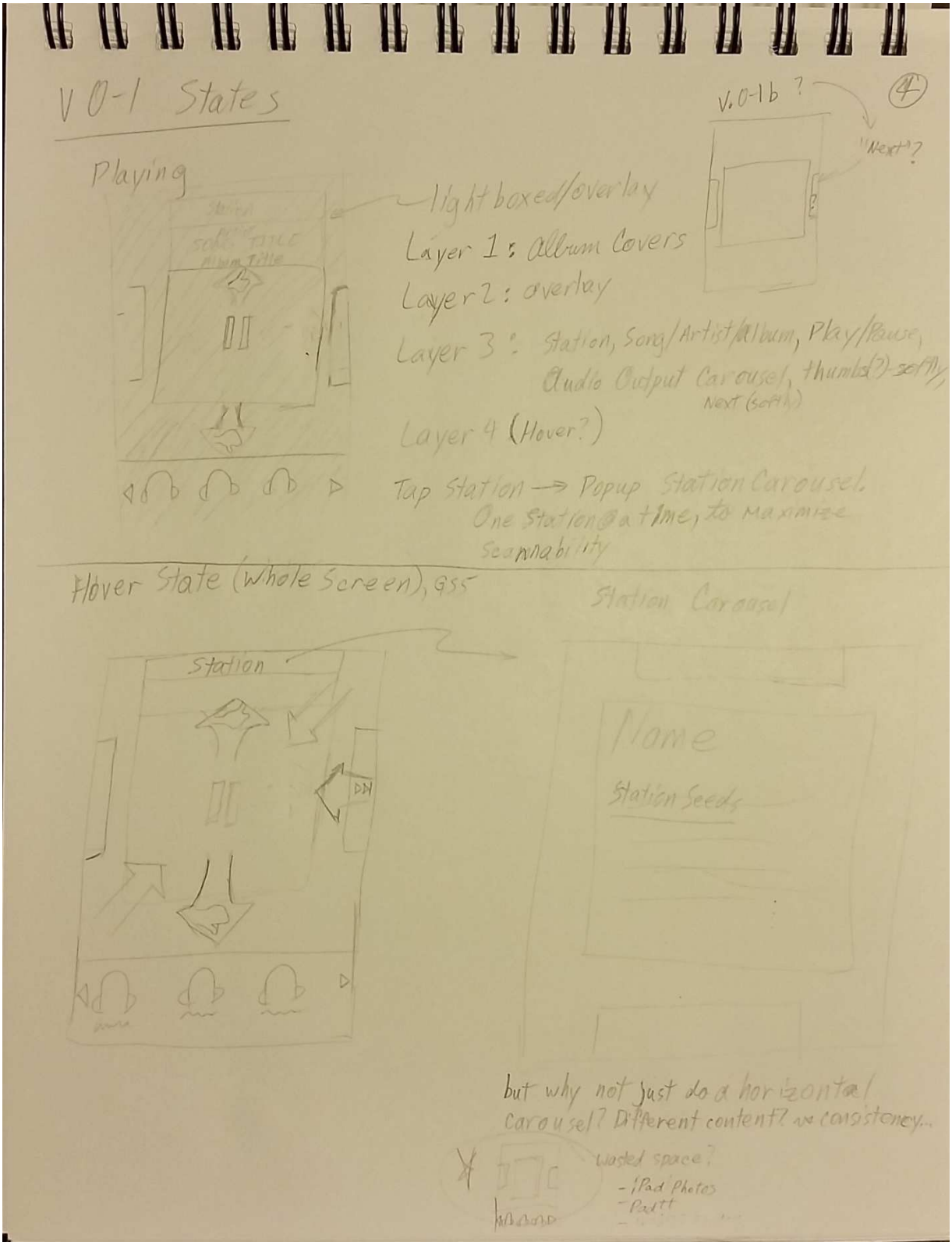
Scans from my sketchbook.

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Samsung Design Challenge 10/9/2014
-"Redesign Pandora"
Heuristic points/issues wrt to current app
• No indication of current "radio station"
• No way to change radio station from within
Now Playing screen
Hierarchical screens of "Back" navigation good + clean, but a bit awkward + potentially wasteful on larger screens.
⇒ more panels?
• Driving Mode! a la Audible
↳ Pandora core interactions: thumb up, thumb down, next, pause, replay previous song + radio station
↳ Nice to have: Playlist navigation
• Current app + website each continue playing the radio station you were last playing whichever device you are using.
- This is mostly good, but should it be the default, unremarked behavior?


Driving Mode
set Pandora going
Phone set down, must keep interactions brief, & do not require precise hand-eye coordination, i.e. hitting small icons.
→ Use the whole screen.
→ Gestures, a la Audible app
Play/Pause - Tap
Like - swipe up
Dislike - swipe down
Next - swipe left
back - swipe right
left-right language considerations?
maybe not, by metaphor w/photo galleries?
↳ maybe do not support this while driving?


V.0
Previous Songs
x:xx
-x:xx
V 0-1
Station Name
Artist
Song title
Album Title
BTH220
HB01
Jawbone
• Pinch → Play list selector?
• Behavior:
- Help fades in/brightens when phone senses finger proximity a la GS5 native apps.
- Feedback
- Big, bright icon overlays on completion and registration of the gesture.
When Playing,


V 0-1 States
Playing
lightboxed/overlay
Layer 1: Album Covers
Layer 2: overlay
Layer 3: Station, Song/Artist/Album, Play/Pause, Audio Output Carousel, thumbs(?)-sorta, Next (sorta)
Layer 4 (Hover?)
Tap Station → Popup Station Carousel. One Station @ a time, to Maximize Scannability
V.0-1b ?
"Next"?
Hover State (whole screen), GSS
Station Carousel
Station
Name
Station Seeds
but why not just do a horizontal carousel? Different content? w/ consistency...
wasted space?
- iPad Photos
- Pandora

Storyboard With High Resolution Screens

In the following storyboard, I present a sequence of screens in a scenario of a user starting out in a Now Playing screen in normal mode and switching to and interacting with a new Driving Mode in the Pandora Android app. The original pngs will also be available separately.

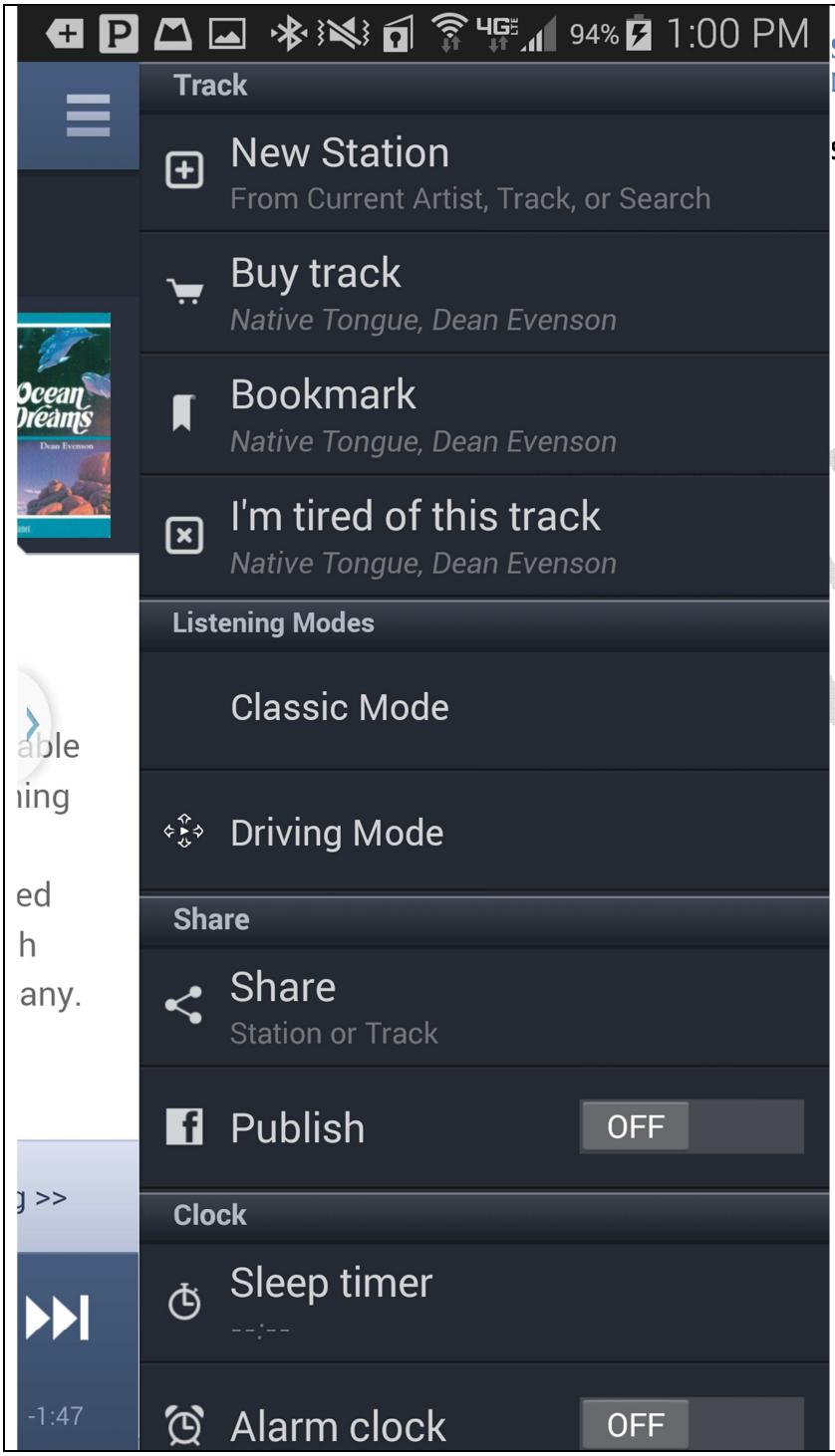


Step 1: Go to the Menu

Not yet driving, users will start from the normal mode Now Playing screen so that they can start Driving Mode before starting their drive.

Mostly the same as the current Now Playing screen, I added a station title and selector at the top of the screen.

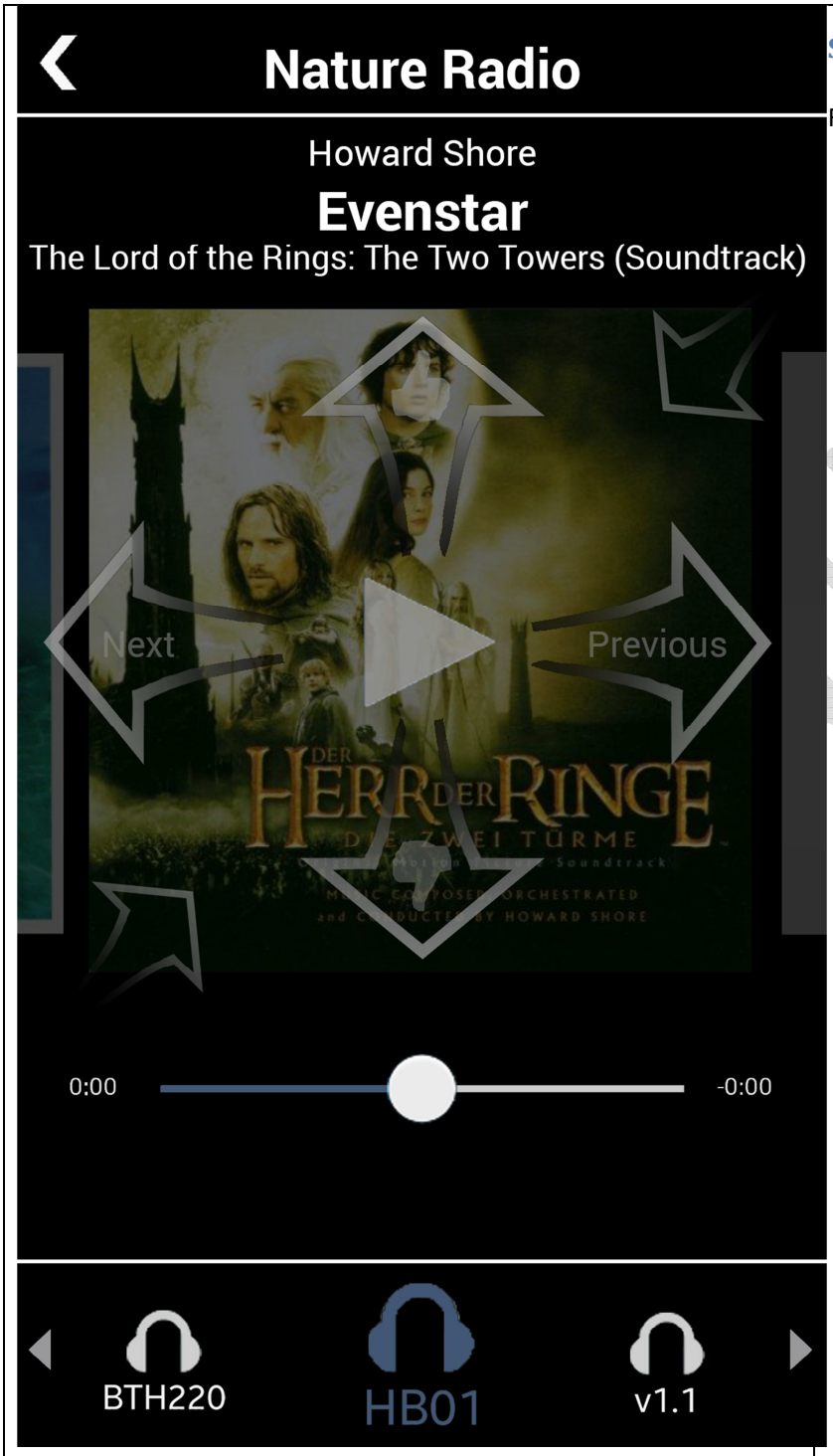
Screen Exit: To get to Driving Mode, users will need to tap the Menu button.



Step 2: Select a Listening Mode—Driving

Screen Exit: Tap Driving Mode

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Step 3: Driving Mode

Features of Driving Mode:

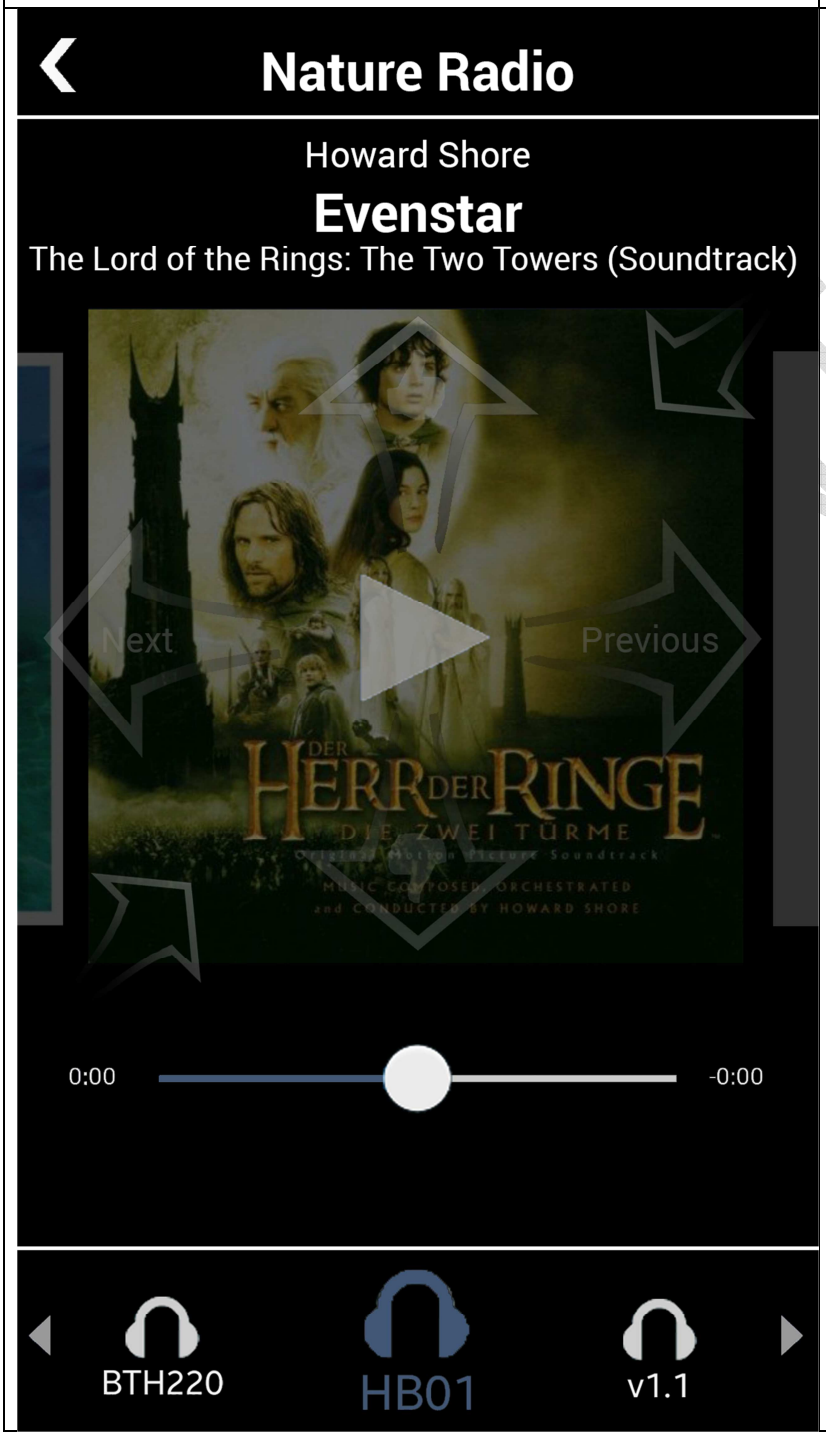
- Full screen: No Status bar. Worth more consideration.
- Station name is included at the top of the screen—visual hierarchy reflecting a conceptual one here.
- The only real tap targets here are the scrub marker for the timeline, the audio selector at the bottom, and the station name at the top.
- For the Pandora core interactions—thumb up, thumb down, next song and previous songs (for rating or reference)—gestures done anywhere on the screen anywhere on the screen . Gestures include:
    - Swipe up: thumb up
    - Swipe down: thumb down
    - Swipe left: next song
    - Swipe right: back to previous song.
    - Pinch: zoom out to station list/selector.
    - Tapping anywhere in the area of the cover art (full width of the screen, not jus the middle where the icon is) will play or pause the song.
    - Tapping on the

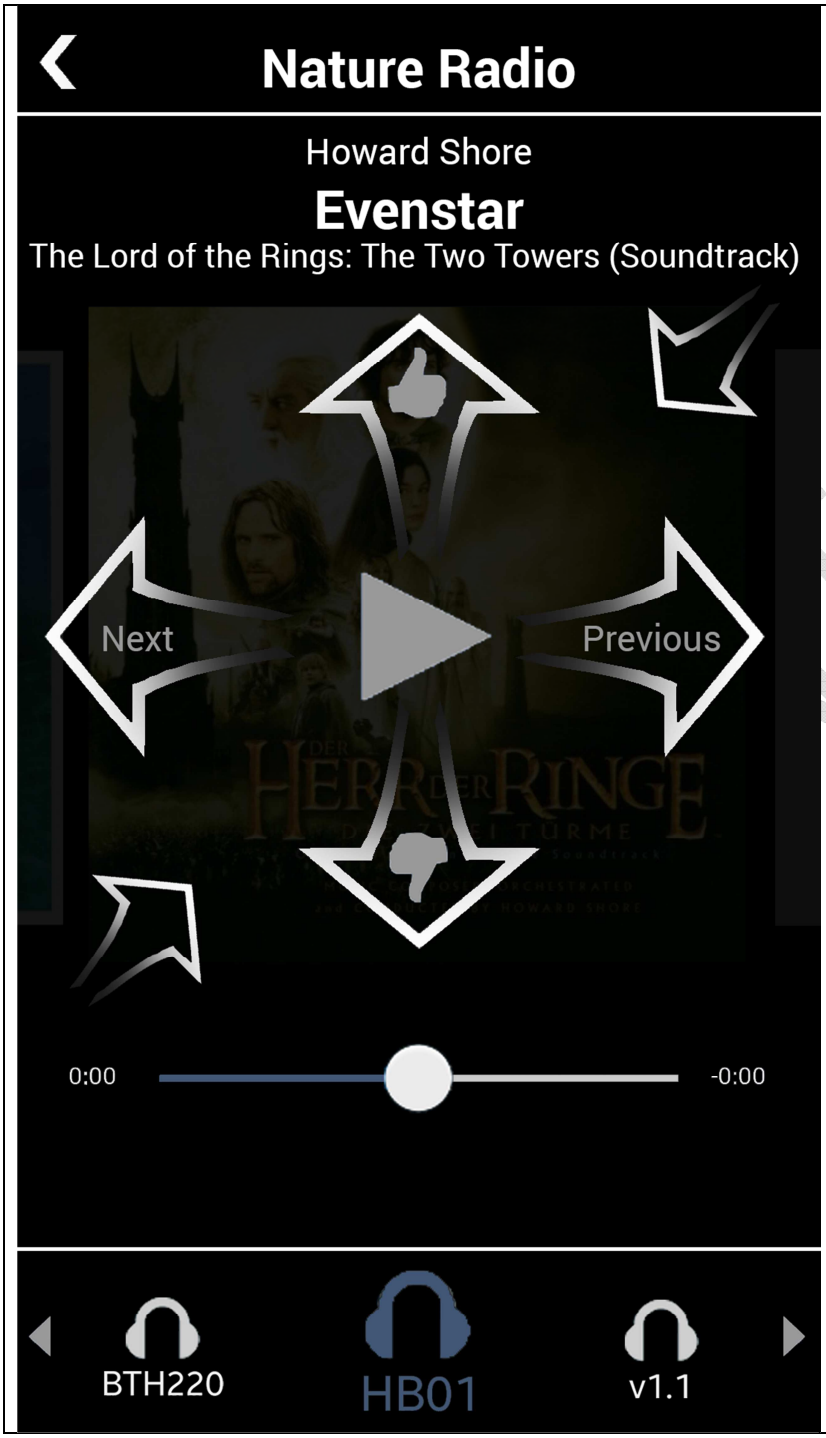
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station name at the top
    - The hinting for the gestures doesn't seem the most elegant, but most elegant here would be no hinting at all, which would be troublesome for novices, though should be an option for experts in the settings. Samsung's GS5 will have a more interesting option, described below.
    - The arrows are faded and go from narrow to wider at the arrowhead to suggest movement—here, swiping, rather than to hit the icons, which are faded a bit to allow attention to be drawn a little by the arrows.
- The timeline scrub target is intentionally large to make it easier to hit when necessary.
- The audio selector is a scrolling carousel, also with intentionally large targets.

Exiting Driving Mode

For GS5s and other Samsung devices with a dedicated Back button, the Back button will allow

	users to exit Driving Mode, taking them back to the Now Playing screen (with the right panel closed). A back button at the top left will do the same thing.
	**Step 3a (for GS5s, etc.): Progressive Enhancement** Because the Samsung GS5 and related phones and tablets can sense the proximity and location of a finger hovering over the screen, our design can use that to provide hinting or reminders on a more just-in-time basis, allowing the baseline state of the hinting to be more subtle. So the normal state of the arrows and other hinting here is a little fainter than the one seen above. Hopefully enough to suggest and remind about the gestures.

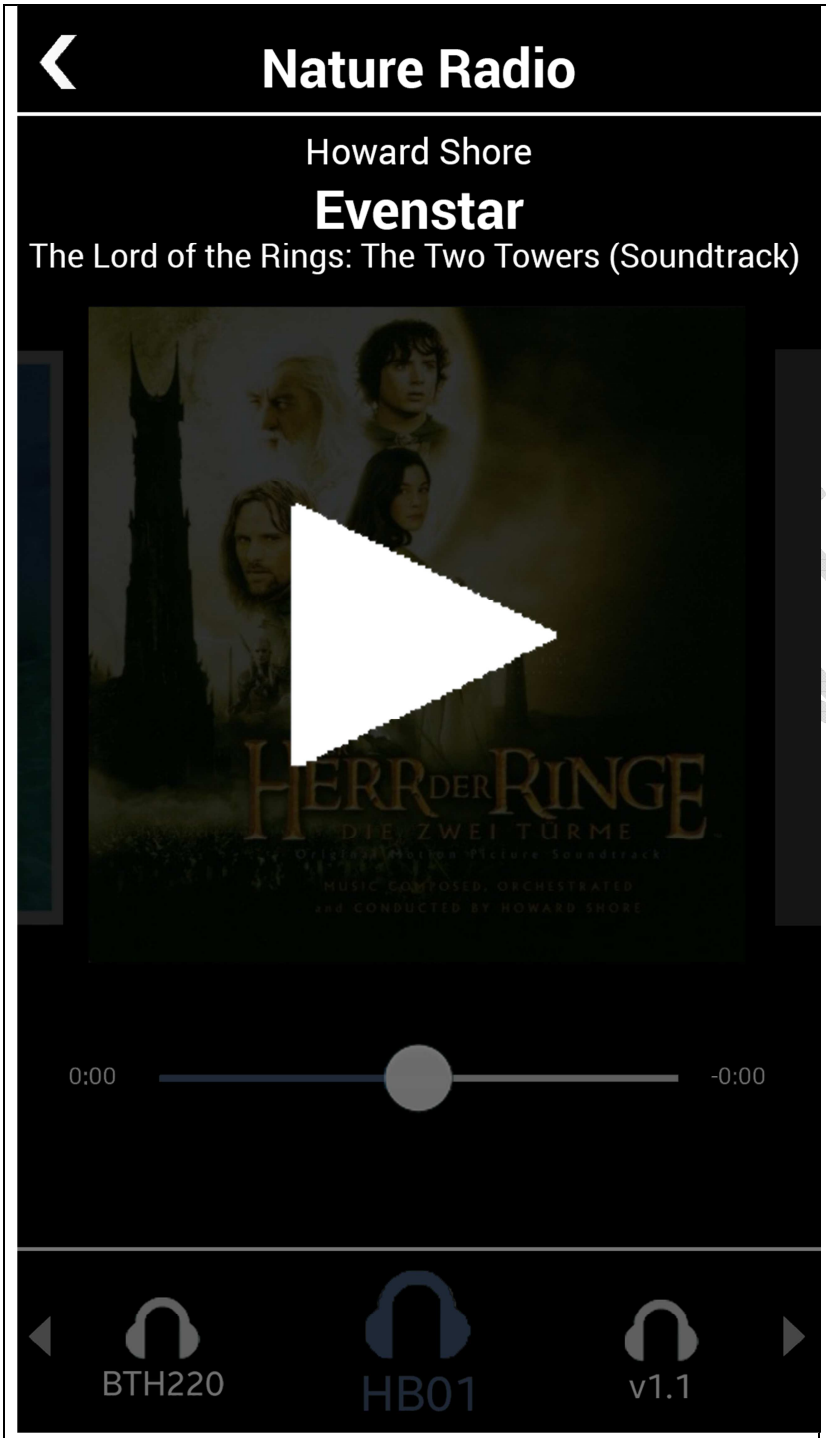


Step 3b (for GS5s, etc.): Hovering Brightens The Hinting

As the GS5 senses a finger's proximity, it can then make the gesture hinting brighter and more obvious.

The option to remove the hinting could have a sub-option to also remove or potentially retain this hover-sensing enhancement.

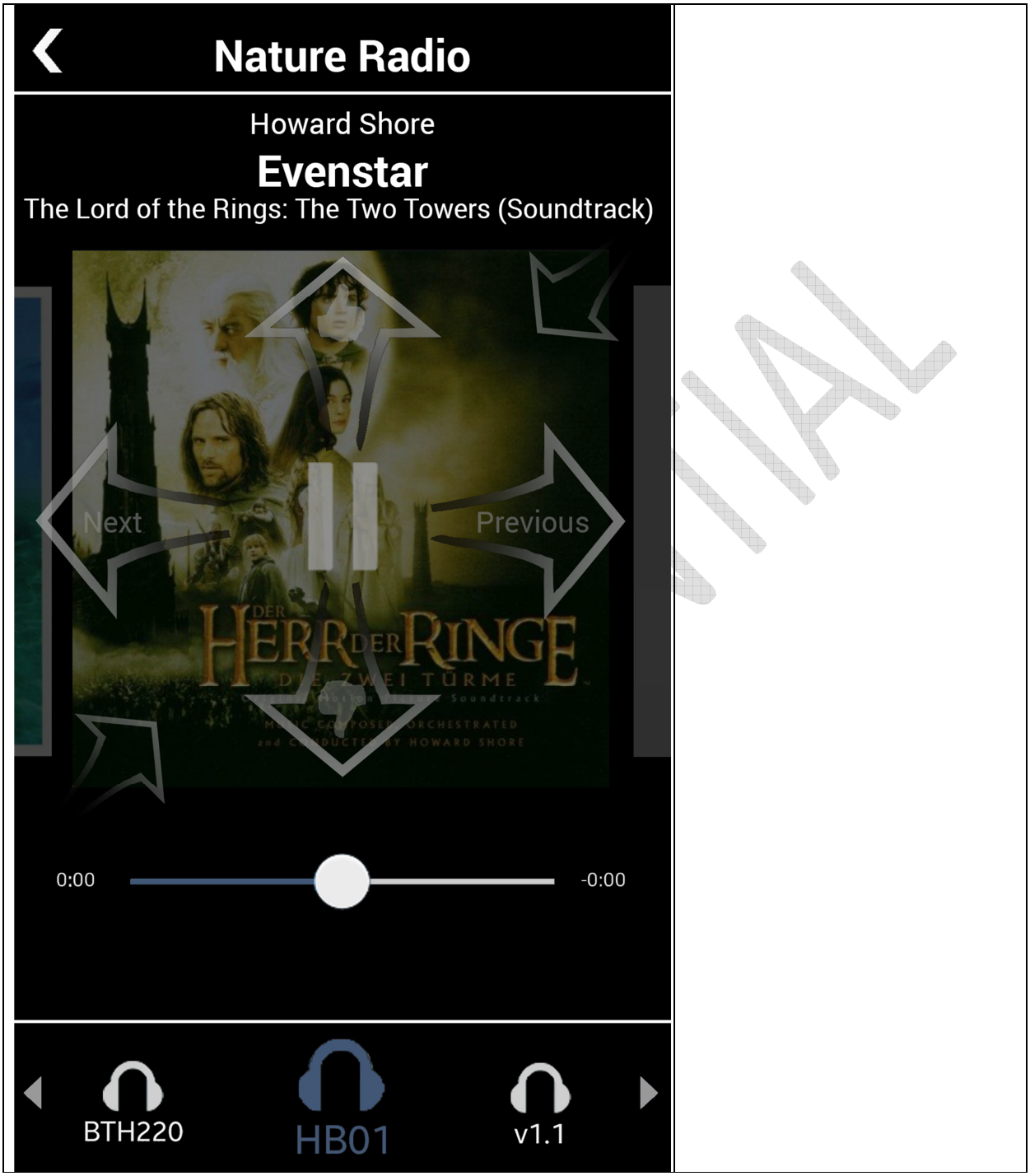
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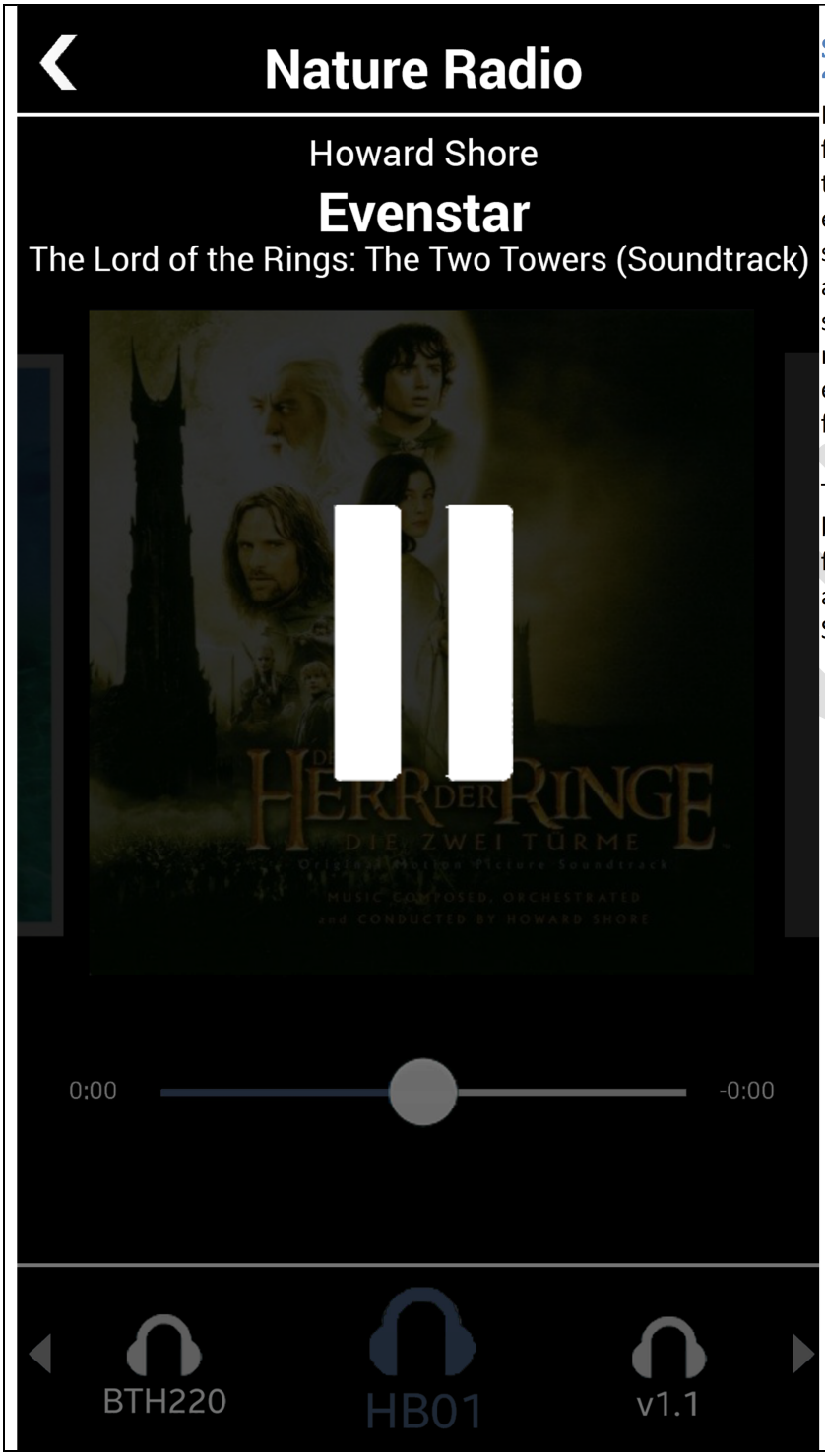


Step 4: Animated Feedback, "Play"

Intended as a keyframe for a feedback animation, here we see the play symbol in white and expanded from its smaller gray self when users tap on the screen around the cover art to play the song. The gesture hinting has also momentarily been faded away to emphasize this "play" action's feedback.

The animation should continue beyond this frame to shrink and fade the play icon back to the appropriate device's Step 3 or Step 3a screen, but now with the Pause icon in the middle, as seen on the left below.

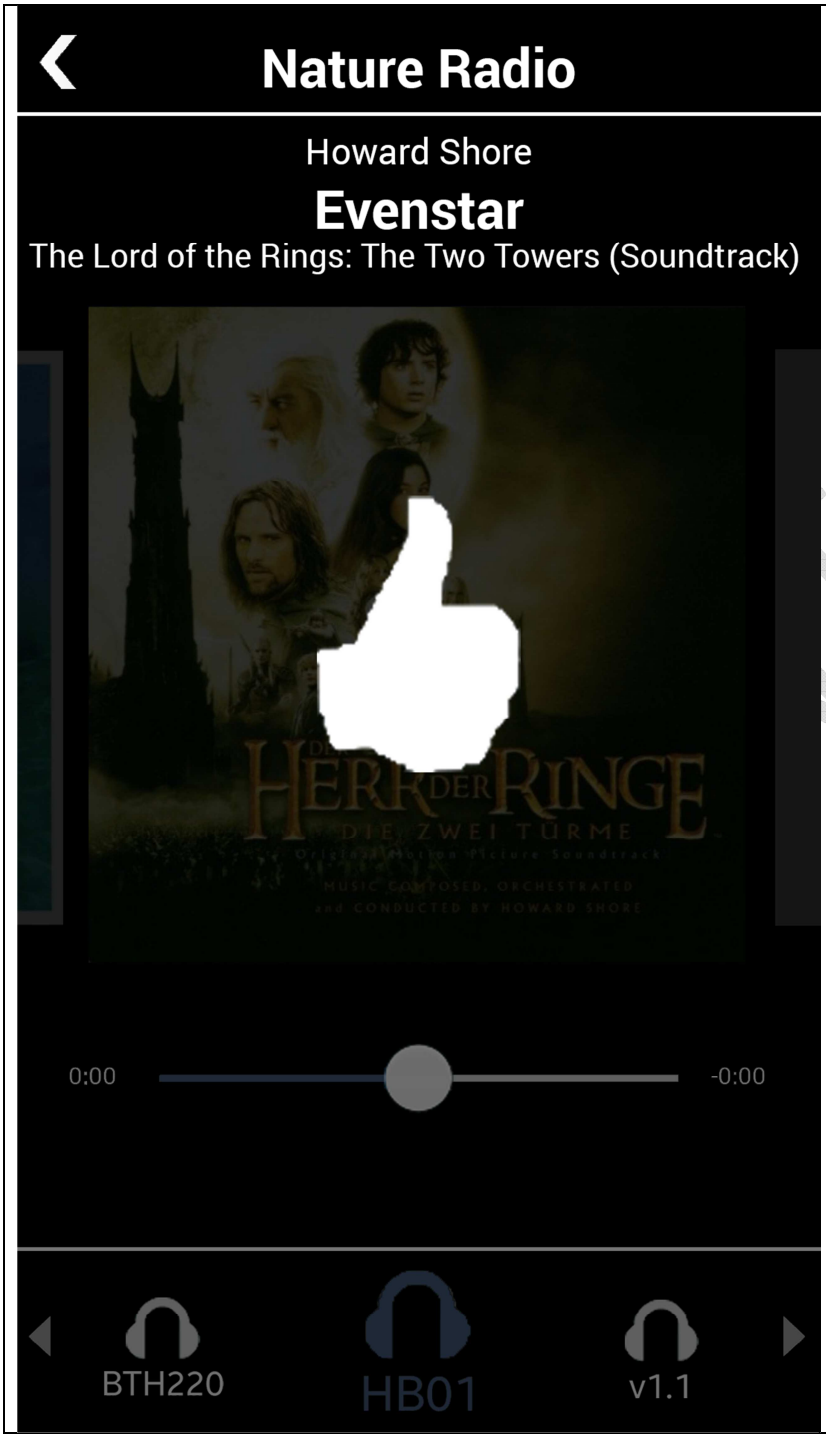

Nature Radio
Howard Shore
Evenstar
The Lord of the Rings: The Two Towers (Soundtrack)
Next
Previous
0:00
-0:00
BTH220
HB01
v1.1



Step 4: Animated Feedback, "Pause"

Intended as a keyframe for a feedback animation, here we see the pause symbol in white and expanded from its smaller gray self when users tap on the screen around the cover art to pause the song. The gesture hinting has also momentarily been faded away to emphasize this "pause" action's feedback.

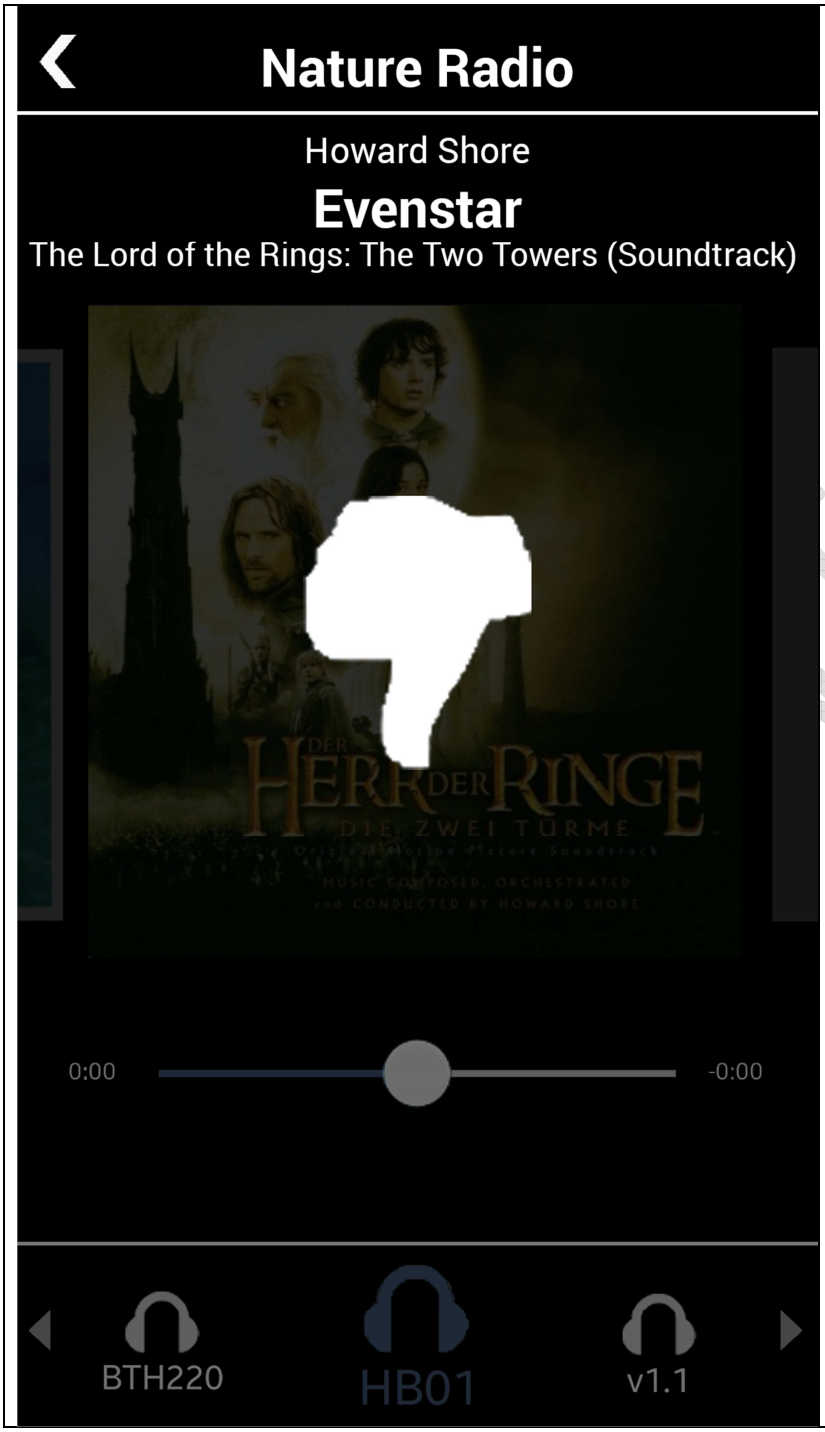
The animation should continue beyond this frame to shrink and fade the play icon back to the appropriate device's Step 3 or Step 3a screen.



Step 4: Animated Feedback, "Thumbs Up"

Intended as a keyframe for a feedback animation, here we see the thumbs up symbol in white and expanded from its smaller gray self after users swipe up anywhere on the screen. The icon is also intended to animate while it expands from its normal position towards the top of the album cover image. The gesture hinting has also momentarily been faded away to emphasize this "thumbs up" action's feedback.

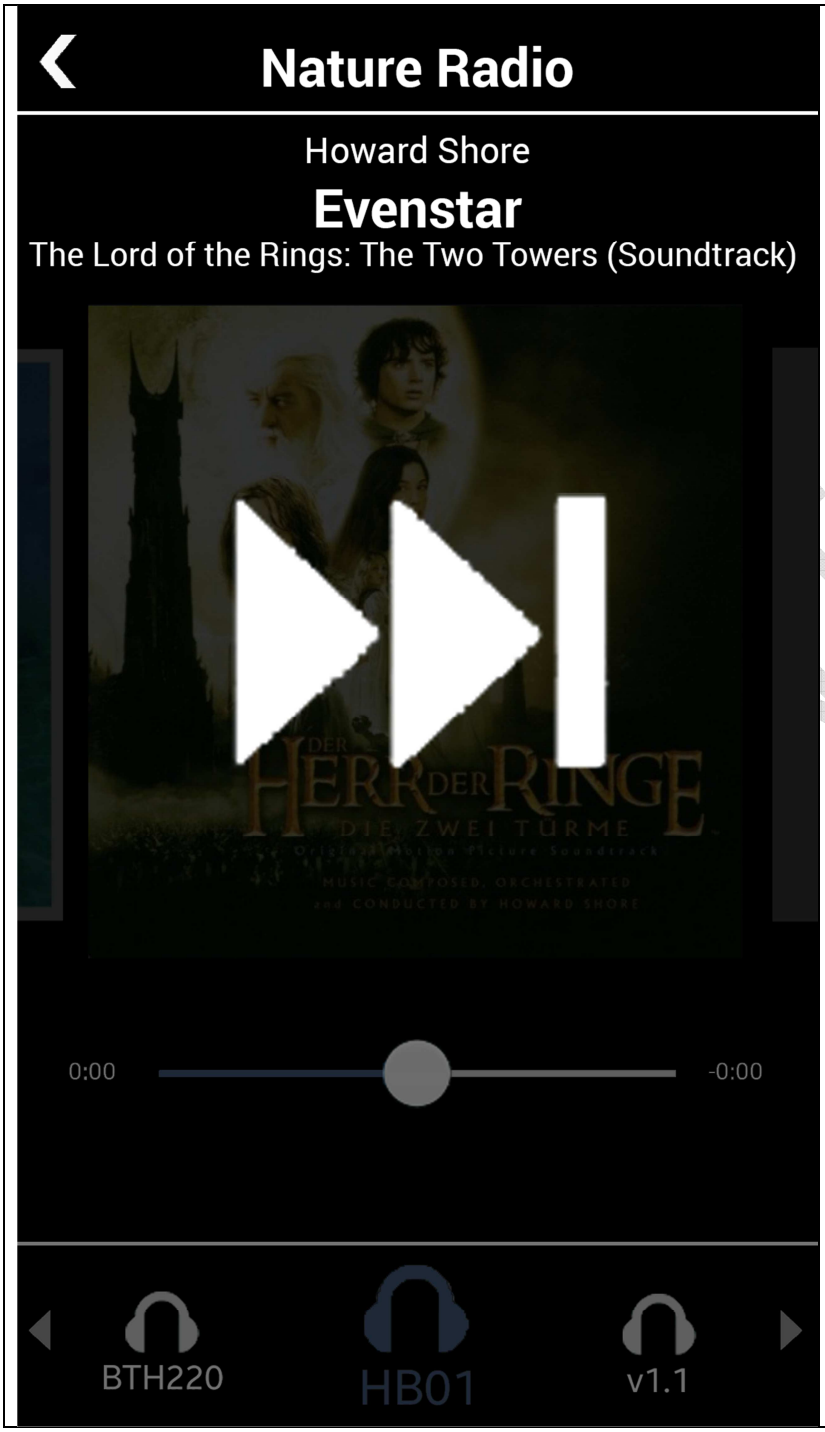
The animation should continue beyond this frame to shrink, fade, and move the thumbs up icon back to the appropriate device's Step 3 or Step 3a screen.



Step 4: Animated Feedback, "Thumbs Down"

Intended as a keyframe for a feedback animation, here we see the thumbs down symbol in white and expanded from its smaller gray self after users swipe down anywhere on the screen. The icon is also intended to animate and move while it expands from its normal position towards the bottom of the album cover image. The gesture hinting has also momentarily been faded away to emphasize this "thumbs down" action's feedback.

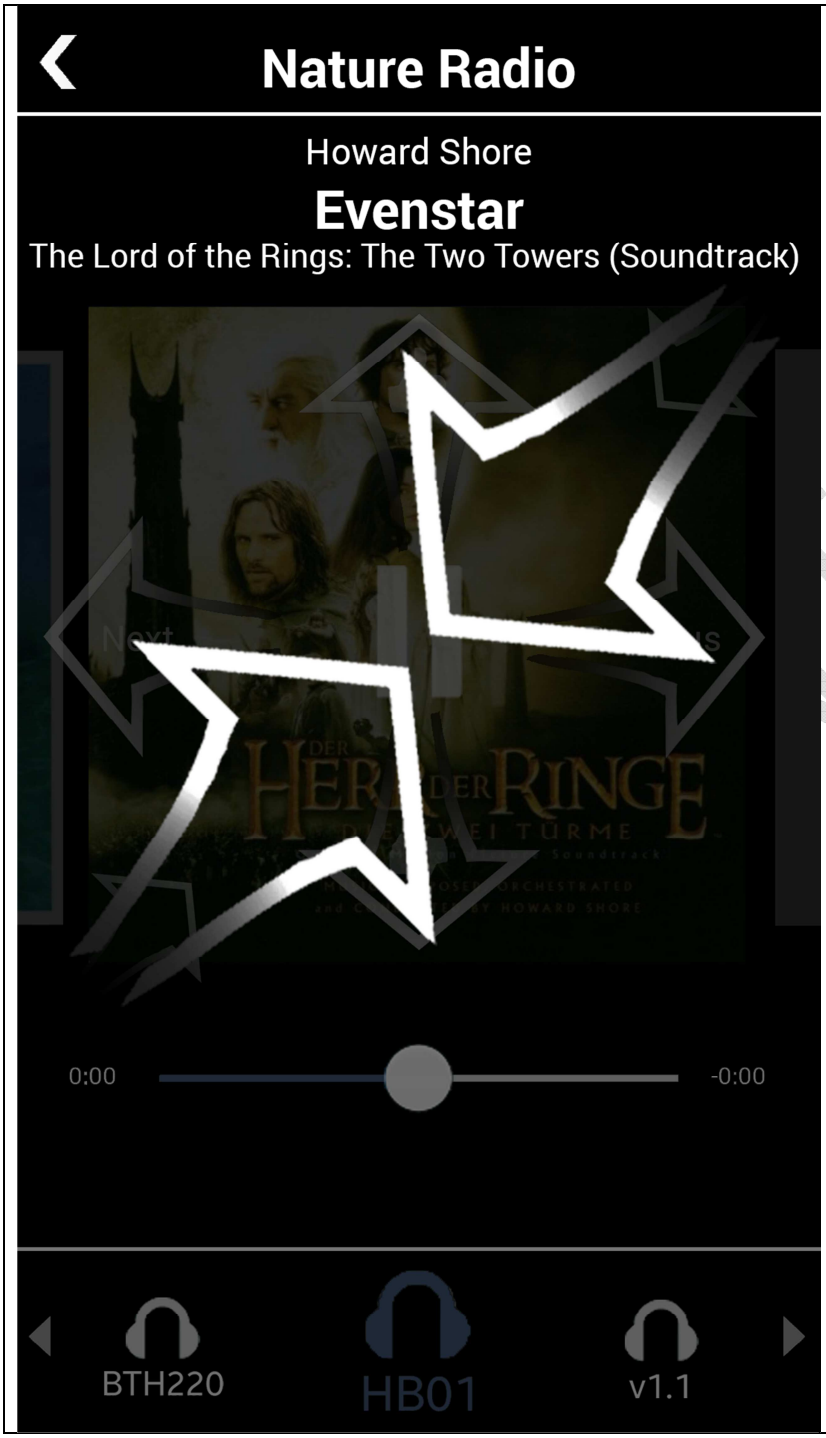
The animation should continue beyond this frame to shrink, fade, and move the thumbs down icon back to the appropriate device's Step 3 or Step 3a screen.



Step 4: Animated Feedback, "Next"

Intended as a keyframe for a feedback animation, here we see the Next symbol in white and expanded from its smaller gray text version of itself ("Next") after users swipe left anywhere on the screen. The "Next" text is also intended to animate, move, and become the icon as it travels from its normal position towards the left of the album cover area. The gesture hinting has also momentarily been faded away to emphasize this "Next" action's feedback.

The animation should continue beyond this frame to shrink, fade, move, and transform the Next icon back to the "Next" text and location for the appropriate device's Step 3 or Step 3a screen.

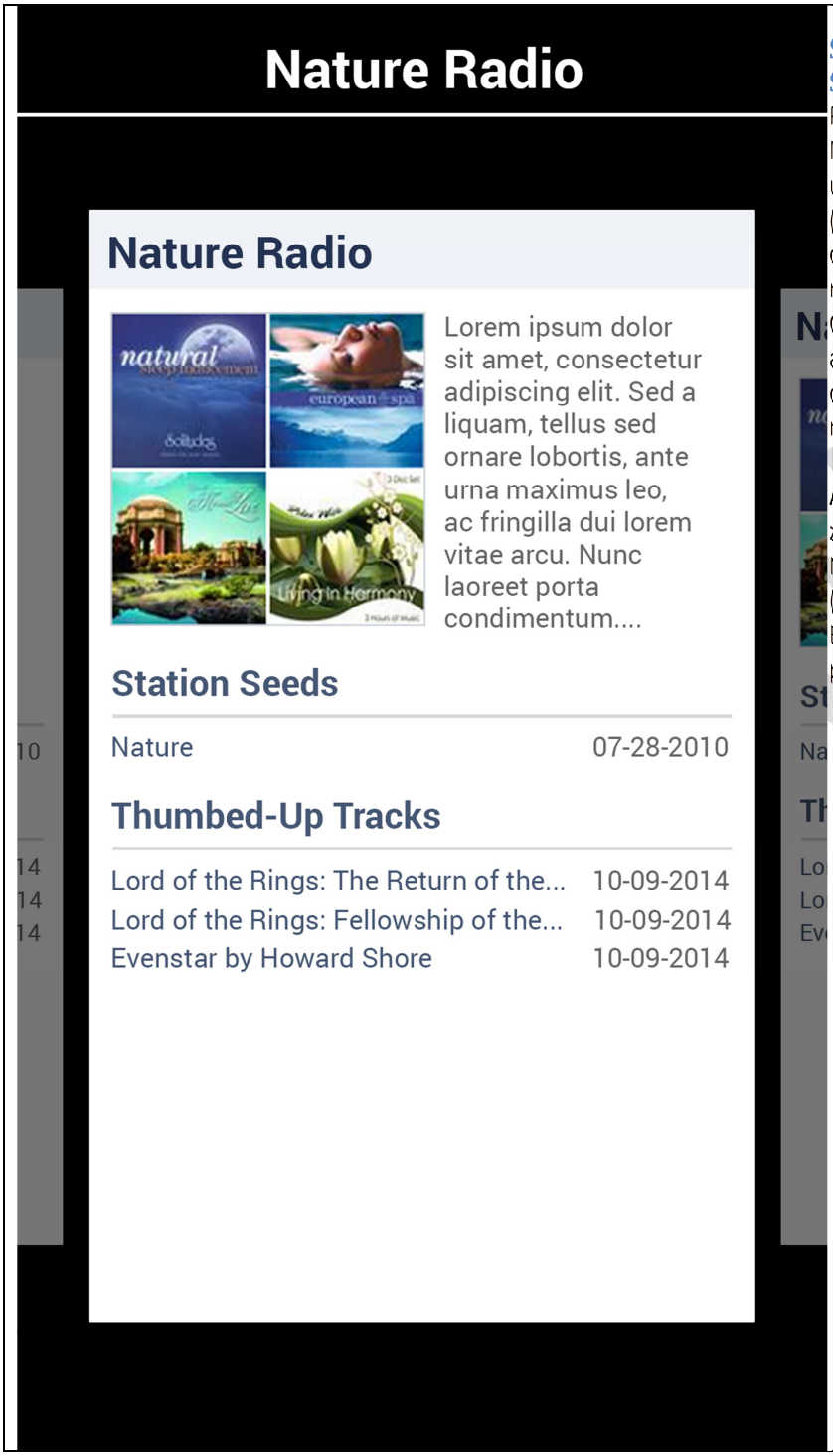


Step 4: Animated Feedback, "Pinch" or "Zoom Out"

Pinching is a command to zoom out from the song level to a station level.

This screenshot, intended as a keyframe for a feedback animation, here we see the Pinch symbol in white and expanded from its smaller gray version of itself after users pinch on the screen. The pinch arrows are also intended to animate, grow, brighten, and move towards the center. The gesture hinting has also momentarily been faded away to emphasize this pinch action's feedback. Semantically, this will zoom out from the song to a view of users' stations.

The animation should continue beyond this frame to shrink, fade, move back to its normal location for the appropriate device's Step 3 or Step 3a screen.



Step 5 (Optional): Changing Stations

Pinching anywhere on the Driving Mode Now Playing screen zooms users out to the Station level (with attendant animation to communicate the conceptual movement up the hierarchy). Once here, users can scroll left and right by swiping in the same directions as in the song navigation (consistency).

A tap on the focused station will zoom into that station, going to a Now Playing screen—e.g., Step 3a (for GS5s, etc.): Progressive Enhancement –with a song playing.

Carrying The Design Beyond The Smartphone

Because the core of the interactions in Driving Mode is gesture-based, and since those gestures can be done over most of the screen, these Driving Mode gestures, especially for Pandora's core interactions

(Thumbs Up, Thumbs Down, Previous Song, Next Song) should be ideal for almost direct transplantation to apps for smaller screened devices such as smartwatches.

Part of that adaptation, I would expect, would be removing the audio output selection section of the screen.

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