

riffBites

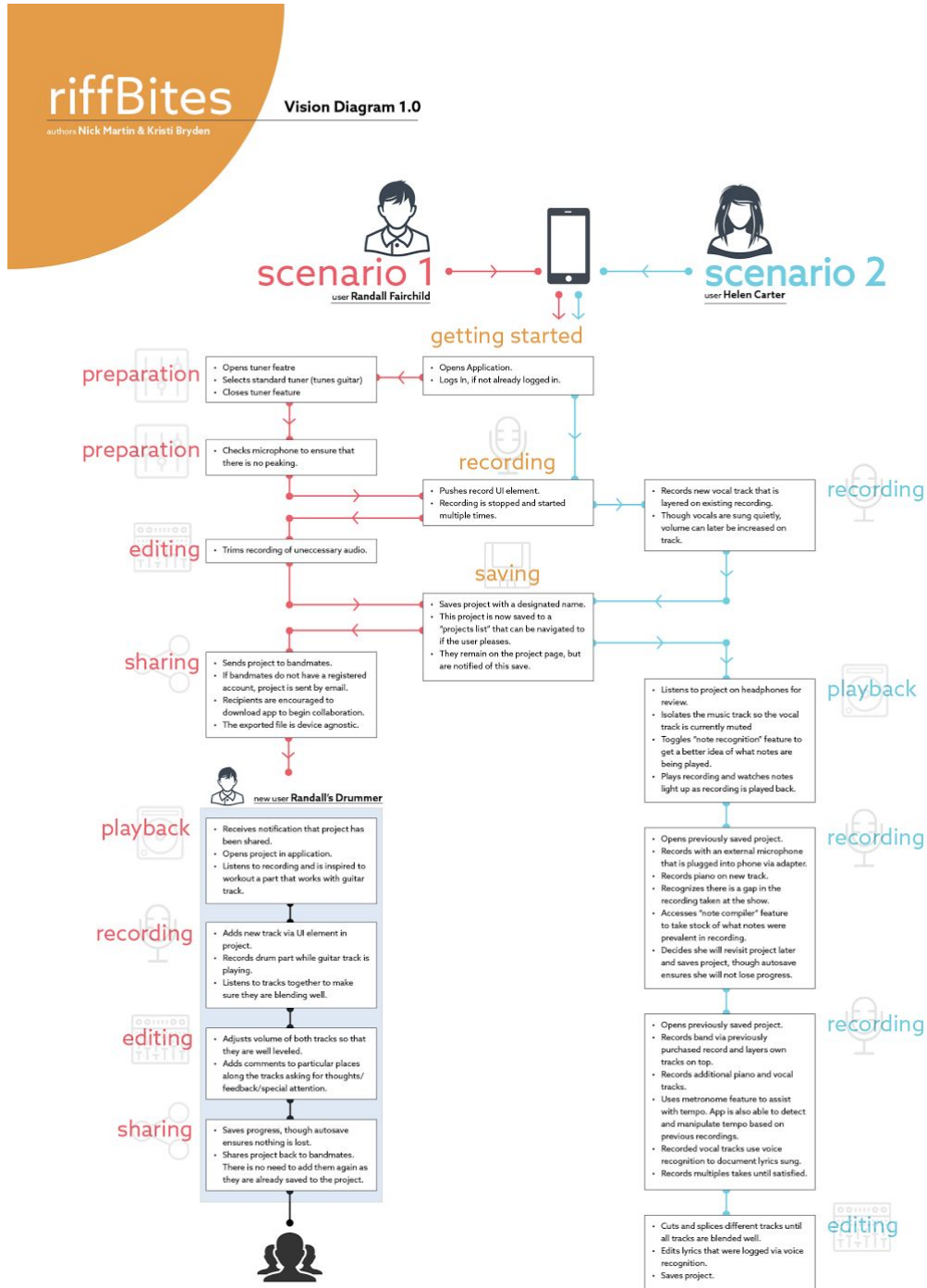
project scope 1.0

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Vision Diagram



Introduction

Recording music can often seem like an intimidating endeavor. When most people think of recording, they likely conjure images of audio engineers perched behind massive audio mixers, pushing buttons, sliding sliders, mixing, mastering, and so on. It's pretty obvious why musicians, both solo artists as well as bands, wait until their songs are absolutely polished before booking time in a professional studio. This leaves a ton of artists with limited choices when it comes to recording their work for the sake of personal review, and even more so, collaboration. What riffBites seek to add to a musician's toolkit is a lightweight application that lends itself to quick, user-friendly recording with an interface that can be utilized for collaborative projects. It allows for the recording of multiple tracks within a single project that can be edited with clean and simple UI tools. While it is not intended to offer the full range of functionality of professional audio recording software, it does facilitate the creative process by allowing musicians to record, share, and iterate upon their work.

Executive Summary

The application will be primarily focused on quick and easy recording, that can then be shared to other users, who can add to the recording, slowly creating a larger project. The features of this project mostly involve the ability to record, manipulate, playback, and share audio.

This application will be designed for mobile use, as prior user research indicates that recording artists will overwhelmingly be using mobile devices to record. It is imperative that functionality is extremely smooth for mobile use, and from there, larger displays will be derived.

In developing this application, the following stipulations will need to be adhered to:

- Usability - The application should be extremely simple and approachable, even to those with minimal technical skill. This is especially true for recording, which is a function that should be available upon opening the application. Additionally, each action should be able to be completed within as few clicks as possible.
- Mobile Use - Development will focus on a mobile application (with larger displays intended for future expansions, if necessary).

- Sharing capabilities - There will need to be a handful of options available for sharing; files as separate tracks, or as a cohesive song. Also, in what formats are these file (projects) available for export? WAV, mp3, mp4, ACC, and potentially a proprietary file type for when tracks are separated; something that's intended to be accessed from only within the application.
- Equipment Interface - While it is predicted that users will most often be recording via the built-in microphone on a mobile device, consideration will need to be given as to how the application will interface with external equipment.
- Audio Manipulation - Recorded audio will need to be able to be slightly modified, such as volume adjustment or the application of simple effects, like reverb for example. The application has been designed with ease of use in mind and features some inventive functionality. However, there may be some capabilities that could be pushed back due to delays in development since the design incorporates ideal possibilities.

Target Audience

The target audience for this application is musicians, unsurprisingly. More specifically, musicians who are looking for some form of technological aid to their creative process. Our age range is from mid to late teenagers who are starting their first bands, to late thirty somethings looking to speed up as well as reflect upon their creative process. Additionally, it should be noted that we are targeting practicing musicians who are seeking to expand their creative talent.

Functional Requirements

- **1.0 - User Login/Account Signup**

- 1.01 - Upon first use of application, user will generate an account via an email and password form. Verification email is sent to user's email.
- 1.02 - Once verified, user is returned to application and taken to an untitled project screen where they can begin their first recording.
- 1.03 - User will only be presented with login screen again if they have purposefully logged out of the application previously.

- **2.0 - Recording/Playing/Adjusting a Track**

- 2.01 - User is presented with a project screen that has no tracks in it. This is the default screen when opening the application, assuming the user has not explicitly logged out on previous use.
- 2.02 - There is a prominent recording UI element that establishes total dominance in the visual hierarchy.
- 2.03 - Also on screen is an element that fluctuates in real time to confirm whether or not the microphone is picking up audio. User can adjust mic level from here.
- 2.04 - Upon pressing the recording button, the user is presented with a running track that confirms they are now in a recording state.
- 2.05 - When finished recording, the recorded track is layered into the recording. If the user pushes record again, a new track is added below the previous one, again indicating the user is in a recording state.
- 2.06 - Additionally, once the user stops recording on the first track, they are prompted to name the project via a modal. Once named and saved, the user is notified that it has been added to a "projects list", which they can navigate to, but are not taken to immediately (**see 3.0**).
- 2.07 - The user can play the recorded audio via a play button located in relative proximity to the recording button.
- 2.08 - On tracks that have been recorded, the user can adjust the volume, even during playback. The user can even mute the track for playback. The user can also trim off parts of the audio with a cropping tool.

- 2.09 - The user can also access more advanced editing features for a selected track via a UI element positioned relative to the corresponding track. **(see 4.0)**.
- 2.10 - User can delete tracks.
- 2.11 - User can access a “sharing screen” from here via a UI element opposite from the projects list **(see 5.0)**.
- 2.12 - User can access additional features pertinent to recording **(see 6.0)**
- **3.0 - Projects List**
 - 3.01 - The user can access their projects list from a button on the recording screen.
 - 3.02 - The projects list screen displays all of the user’s projects in a list format.
 - 3.03 - The user can jump into any project on this list, which will take them to the recording screen for that project, in which all recorded tracks are displayed.
 - 3.04 - The user can create a new project from this screen, which will take them to an empty recording screen **(see 2.0)**.
 - 3.05 - The user can search for projects by name, in the event they have grown a lengthy list of projects.
- **4.0 - Editing Recorded Audio**
 - 4.01 - Once a track has been recorded, it appears on the recording screen, relatively high in the visual hierarchy.
 - 4.02 - Located relative to the recorded track is a UI element that opens an audio editing modal.
 - 4.03 - Within the modal are a list of effects the user can scroll through and adjust with sliders that range from 0 - 100%.
 - 4.04 - There is a playback feature for the track being modified.
 - 4.05 - The effects can be applied during playback so the user can hear as well as adjust the effects in real time.
 - 4.06 - Once finished, the user can close the modal and return the recording screen.
- **5.0 - Sharing Projects**
 - 5.01 - User can access a sharing screen from the recording screen that contains a handful of export options.

- 5.02 - User can share with registered users who are selected from either a favorites list or frequent collaborators list. Users can also search for recipients by name.
 - 5.03 - User can invite unregistered users to collaborate via email or from their contact's list on their phone.
 - 5.03.01 - This generates a custom email or text message that invites that recipient to download the app, create an account, and begin collaboration.
 - 5.04 - Users can add multiple recipients.
 - 5.05 - Users can share file in a format in which the recorded tracks remain separated, as they are shown within the application. This is ideal for collaboration and can only be accessed in the application.
 - 5.06 - Users can export the project as an audio file in which the tracks are consolidated into a single song.
 - 5.06.01 - Users can select from a handful of commonplace audio file formats (mp3, WAV, AAC).
 - 5.07 - Users can share projects via social media.
 - 5.08 - Users can close the sharing screen, which returns them to the recording screen.
- **6.0 - Additional Features**
 - 6.01 - An “instrument tuner” is available within the recording screen, which when accessed, will bring the user to a tuner screen where the user can tune a guitar for example.
 - 6.01.01 - The default instrument is guitar, but the user will be able to select others from a menu. Users can change their default through settings.
 - 6.01.02 - The user will also be able to change the desired tuning, which defaults to standard for the relevant instrument.
 - 6.01.03 - The tuner feature depends on the microphone as well, and as notes are played, the user is shown an indicator of how close they are to the target note. If they are too far off, the tuner indicates what note they are playing (i.e. D instead of a target E).
 - 6.01.04 - Once tuned, the user can close the tuner screen, which returns them to the recording screen.
 - 6.02 - Note recognition, accessible for single tracks, perhaps bundled with editing features in a “more menu”. When turned on, it will display the notes being played during playback of the track. Notes can be logged to a

list of frequent notes and chords, that is then saved as a note to the project.

- 6.03 - Lyric compiler, which when turned on, will display the lyrics being sung (only works for vocals). These lyrics can be saved as a note to the project, filed under “lyrics”. These can be edited.
- 6.04 - User can toggle a metronome on and off for recording. If metronome is on, user is prompted to set the BPM (beats per minute) via a metronome modal.
- 6.05 - User(s) can add comments at certain points on tracks. All comments on all tracks are added to a notes section, filed under “track comments”. Each comment in here is tagged with track info and position it was placed (i.e. 2:34).
 - 6.05.01 - Notes can be accessed from recording screen under a “more menu”.

Platform Requirements

App should maintain consistent UX and familiar UI across platforms. These include mobile/tablet (iOS, Android, in-browser web app) as majority of users are predicted to access on iPhone or Android devices. Architecture and data states must be consistent across devices. Architecture and back end must plan for future scaling and expansion with minimal restructuring. UX and UI must also account for new unknown devices and future device specs.

Application Qualities

- Approachable
 - UI must be presented in a fashion that facilitates intuitive use of the application.
- Speed of Project Generation
 - User must be able to jump into recording immediately after opening application.
- Reciprocal Sharing

- Application must be conducive to iterative sharing as projects are developed. Tracks must be maintained and stored securely in application server/cloud.
- Future-proof
 - Architecture and UI design should allow for future expansion of functionality and scope, as well as for adoption of new platforms.
- Accessibility
 - App should surpass accessibility guidelines (Sec 508, W3C guidelines, etc) and work with non-screen devices as much as possible.

Potential Risks

- Too many features on Recording Screen
 - There is the potential to have a crowded recording screen with all of our intended features. As such, UI will need to be tiered and potentially categorized to avoid overcrowding in any given state
- Challenges in implementing audio effects.
 - Recording and playing audio is one thing. To manipulate that audio and apply effects is another. There could be potential challenges in effectively deploying this feature. As it is not a primary feature, it will be approached with simplicity, with only a small handful of effects intended for initial release.
- Shunning users if application is too “feature rich”
 - The application must approachable, and not intimidating. This relates back to our first risk in that UI must be simple, and minimize if not entirely eliminate confusion. We must consider our less tech-savvy users and make sure that additional features do not obstruct primary functionality, which is recording and sharing.

Future Changes

- Expansion of track editing capabilities. Additional effects.
- Potential “Pro Version” of application that unlocks additional features for a nominal fee.
- Featured Projects page that pools from application community.
- Development of Desktop Application.