

Trainer Tuesday Vision

1. Introduction

When the weather outside sucks, you have to ride your bike inside on a stationary trainer. There are multiple software options designed to receive the wireless signals transmitted by the special equipment that most bicycle racers ride with. The available programs allow one person to see their data on a computer. The equipment most people train with include a power, cadence and heart rate sensors.

Riding your stationary bike alone gets boring, so a lot of bike shops host group trainer rides in the winter when the sun sets too early to get a training ride in after work, or when road conditions are unsafe for biking. There is no program designed to connect multiple users through one screen, and easily display the workout. Shops have to get creative with how to communicate the workout to everyone.

2. Positioning

2.1 Problem Statement

The problem of	No simple way to communicate the workout for group trainer rides
affects	the event host and customers
the impact of which is	Creating extra work for host and takes away from workout for customers
a successful solution would be	Software to allow host to easily design workout, then display it on a screen for the trainer ride session would solve this problem

2.2 Product Position Statement

For	Bike shops
Who	Host group trainer rides
The (product name)	Trainer Tuesday software
That	Will make it easy for the users to follow the designed workout
Unlike	Unlike current methods involving cardboard and a bullhorn
Our product	Our product will improve communication of the workout

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3. Stakeholder Descriptions

3.1 Stakeholder Summary

Name	Description	Responsibilities
Program Developers	Nathan Franklin and Josh Baker are writing this software for class. Our class grades depend on this project	Complete the project deliverables and submit before the deadlines
Singletrack bikes	bike shop that hosts Trainer tuesday	This business will test our software during the development phase and give us feedback

3.2 User Environment

The bike shop moves merchandise around to clear floor space so customers can bring their bikes in and set up around the room. The workout for the evening is designed by the host and written on 3-5 pieces of cardboard that are then spread around the room. The host designs the workout and instructs the class by using a bullhorn during the workout. Most people have a bike computer mounted to their handlebars to display the information that their ANT+ devices are transmitting.

4. Product Overview

4.1 Needs and Features

Need	Priority	Features	Planned Release
Java library for ANT+ USB stick communications	High	ANT+ USB Stick is complicated hardware that uses wireless communication to receive data from bike sensors.	Already released (written by a different programmer and available on github)
Workout input	High	Easy to use GUI.	Spring 2017
Display workout	High	Workout is easy to understand and follow. Timer for segments.	Spring 2017
User account database	Medium	When device serial numbers are detected, search database to find user .	Spring 2017
ANT+ capabilities	Medium	Show users' ANT+ devices on the screen.	Spring 2017
Website for users	Low	Allow users to view their past workouts.	Summer 2017
Host account database	Low	Allow hosts to download and upload workouts, upload trainer data.	Summer 2017
Make the software run on a raspberry pi	Low	Makes the setup more portable and straightforward for shop to use.	Summer 2017

5. Other Product Requirements

Requirement	Priority	Planned Release
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ANT+ capable devices	High	65% of users have these devices
ANT+ usb stick	High	3 have been acquired for development and demonstration purposes
Display (projector/screen, tv, laptop, etc.) large enough for everyone to see	High	Projector and screen have been acquired for demonstration purposes

Group Participation

Nathan Franklin was able to locate this form and began filling in the required information and uploaded to EasyChair. Also provided updates and reformatting for final draft.

Josh Baker reviewed the document and added items where needed then uploaded to Github. Provided updates and reformatting for final draft.