1.0 Evaluating All the Way Down (Alpha release)

All the Way Down's target audience has been identified as the intersection of gamers and mountain-biking enthusiasts, with a bias toward the latter. The user-testing strategy for the game has been heavily influenced by the short lead-time to the game's Beta release, and by practical considerations such as the need for the game to be run on powerful gaming machines.

Testing sessions are conducted using the Alpha release of the game. As the game is iterated on toward a Beta release, tests will continue on the Alpha platform to allow for consistent correlation of test results and feedback.

To aid the user-testing process, the development team have identified the game elements to be evaluated and the user groups to test against. The team has also formulated a structure for user testing sessions, and created descriptors to aid in the recording and correlation of results.

This document details the testing methodology used to evaluate *All the Way Down* (Alpha).

2.0 Game Elements to be Evaluated

The following game features have been identified as core elements to be evaluated during the user-testing process. Given a longer timeframe for user testing, the team would certainly like to expand the below list, and granulise elements. As, however, time is limited, these categories have been chosen to maximise possible feedback.

2.1 Discoverability of Game Options and Human Interface Features

Many of the *All the Way Down*'s core features exist outside of the game proper. Take as example the ability to customise bike options, or view leader boards. As these features are major contributors to the overall experience, it is important that they are easily discoverable. Testing of these features will be bundled with general testing of human interface elements which are not direct controls to the game mechanics (menu navigation, customising game options, etc.)

2.2 Discoverability and Intuitiveness of Game Controls

Usability and discoverability of in-game controls in *All the Way Down* will be pivotal to the game's success, as would be the case in any interactive experience. Of particular importance here, however, is ensuring that controls work for both target markets, and their intersection (both gaming and mountain-biking enthusiasts). Evaluation of test results should compare the difficultly level faced by each group in relation to the discovery and use of in-game controls.

2.3 Opinions on Game Play Mechanics and Immersive Elements

It is predicted that feedback on the overall look and feel of the in-game experience (level design, atmosphere, realism, mechanics and bike-handling, etc.) is likely to result in a wide variety of variation. To maximise the usefulness of this feedback for practical reaction by the development team, participants will be asked a series of open questions on these elements. It is believed that this is the best way obtaining rich data on a vast array of interconnected systems which would be hard to untangle for non-experts.

2.4 Opinions on Identifiable Core Elements (Audio, Visuals, Level Design)

Three core elements from the game experience (audio design, style of HUD elements and Menus, and aesthetics of the stage track) has been identified as elements with enough

prominence to be individually identifiable by non-experts. Opinions on each of these elements will be sought.

Additionally, testers will have the option to offer open feedback on their experiences during the testing session. Processes and timelines for evaluating each of these elements, and soliciting user feedback, can be found in section 4.0, *Structure for User Testing Sessions*.

3.0 User Categories

User testing sessions for All the Way Down will focus on the following user groups and parties:

3.1 Expert User Input

The game's primary expert users will be consulted on game development progression, but will not undergo a formal user-testing session in this role. Direct feedback from expert users will be considered authoritative.

3.2 Gaming Enthusiasts

The first audience targeted for user-testing will be general gaming enthusiasts / gamers. Feedback from these users will be most valuable in evaluating general game mechanics and difficulty level. Users in this category are not expected to have previous mountain-biking experience. The majority of test sessions in this category will be carried out remotely with testers using their own computing equipment to run the game.

3.3 Mountain-biking Enthusiasts

The second audience targeted for user-testing will be mountain-biking enthusiasts. Feedback from these users will be most valuable in evaluating the game's accessibility to non-gamers, and in gauging the appropriateness of the game mechanics to a non-gaming audience. Test sessions in this category will likely require the test lead to provide an in-person gaming set-up for participants.

3.4 Target Market (intersection)

The game's primary target audience is the intersection of the audiences identified in 3.2 and 3.3. This is not a distinct user-testing group; individuals should be identified from section 3.2, and 3.3 participants.

4.0 Structure for User Testing Sessions

Each testing session should follow the format described below, in the order presented.

4.1 Introduction to the Game and the Testing Process

Before starting a test session, subjects should be made aware of the game's background, its current status, and the reasoning behind the testing process. In particular, subjects should be made aware of the following:

- All the Way Down is a product in the very early stages of development. It has been created as part of a final year college project. The version of the game being tested is not market-ready, has not been previously played by non-experts (excluding other test participants), and may contain serious bugs which have not yet been observed.
- The above point should be emphasised to distance testers who have elected to use their own computing equipment to test the game. This group of testers should be made aware that the game has the potential (however unlikely) to result in an unresponsive system which may need to be restarted.
- The purpose of the test session is to observe how players interact with the game, determine completion and progression difficulty, and to solicit player opinions on the game idea, its mechanics, and other distinct elements of its presentation. This data is being compiled to aid in the game's design, *not*, to in any way, to profile or evaluate individual players or their abilities. The object of the test session is the game, not the individual playing it.

4.2 Soliciting Participant Consent

Once the test lead has made subjects aware of the items mention in 4.1, s/he should then confirm the subject's willingness to partake in the test.
If the subject is unwilling to proceed, s/he should be thanked for their time.
If the subject is willing to proceed, the test lead should start by soliciting the following information:

- The subject's name (required), and the subject's age (optional).
- Whether or not the subject considers themselves to be a gamer, or gaming enthusiast.
- Whether or not the subject considers themselves to be a mountain-biking enthusiast.

Once this information has been recorded, the test session can begin proper.

4.3 Setting Tasks and Observing Gameplay

Participants will be asked to complete the below tasks in the order they are presented. For each task, the test lead should:

- Request that the participant verbalise their thought processes.
- Record the amount of time taken to complete the task.
- Record any observations verbalised by the subject while undertaking the task.
- Answer any direct questions put to them.

The test lead should not:

- Direct the user in their actions, or offer any unsolicited advice relating to the task, save where noted below.

Task 1	Change the sound options in the game.
Task 2	Customize bike settings.
Task 3	Open the game leader board.
Task 4	Start the Irish stage.
Task 5	Investigate and identify in-game controls. *(Test lead may give information on what actions are possible, but may not identify controls).*
Task 6	Complete the Irish stage

4.4 Direct Questionnaire

Once the participant has completed the above tasks (or elected to stop), their answers to the following questions should be recorded:

Question 1	Do the in-game controls make sense? Are there any other control mappings you expected but did not find?
Question 2	On a scale of 1 to 10, 1 being easy, and 10 being hard, how would you rate the difficulty of the track?
Question 3	On a scale of 1 to 10, 1 being fun, and 10 being frustrating, how would you rate the challenge of the track?
Question 4	What is your opinion on the handling of the bike?
Question 5	Do you have any opinions on the sound effects or music in the game or menus? For example: what did you think of the overall effect? Did anything stand out as not fitting? Etc.
Question 6	What are your opinions on the look of the menus and HUD elements? For example: what did you think of the overall effect? Did anything stand out as not fitting?
Question 7	What are your opinions on the look of the Stage Ireland track? (Emphasise aesthetics, not function).
Question 8	Do you have any other opinions, observations or feedback you would like to offer?
Question 9	Have you any questions you would like to ask?

Once the participant has completed the above questions, they should be informed that the test session is over, and should be thanked for their participation. If, after this point, a participant offers any additional feedback, the test lead should seek explicit permission to record it before doing so.

5.0 Collating and Organising Test Results

5.1 Categorising Responses

Once all test sessions have been completed, responses should be grouped into 3 categories:

- Responses from participants who identified themselves as gamers, but not as mountain-biking enthusiasts.
- Responses from participants who identified themselves as mountain-biking enthusiasts, not as gamers.
- Responses from participants who identified themselves as both gamers, and as mountain-biking enthusiasts.

5.2 Quantitative Results Gathering

In each of the above categories, the amount of time taken to complete assigned tasks will be charted for comparison between the category groupings. These results will then be ready for inspection and interpretation by the development team. Answers to scale-based questions (questions 2 and 3) should also be graphed.

5.3 Qualitative Results Gathering

All remaining results and feedback will be collated and grouped by associated functionality or game component (menus, audio, bike and mechanics, visuals, level design, difficulty). As with quantitative results, these should be sub-divided by tester category groupings. Here, the development team should, in particular, attempt to identify conflicting feedback from categories, or recurring feedback patterns (as much as it is possible to do so with open responses).

6.0 Reporting on Identified Issues

Issues identified by the development team as a result of user testing should be scheduled for revision based on their urgency. Each identified issues should be reported in the following format:

<table>
<tr><th colspan="2">Issue N</th></tr>
<tr><td>Description of Issue
Brief description of the issue identified during user testing sessions.</td><td>Severity
Categorise the issue as one of:
Catastrophic
Severe
Intermediate
Minor
Enhancement</td></tr>
<tr><td>Details of Issue
Describe the issue in detail. Include metrics / feedback used to identify the issue.</td><td>Visual
Where applicable, include a visual related to the identified issue.</td></tr>
<tr><td colspan="2">Details of Solution
Describe the details of a solution here. Be very clear as to whether the process described is a definite solution, or possible solution. Where possible, estimate time needed for implementation of solution.</td></tr>
<tr><td colspan="2">Future Avoidance
Where possible, offer suggestions as to how this problem, or a similar problem, could be avoided in future, or could be identified at an earlier stage of development.</td></tr>
</table>

Reporting format adapted from the examples on:

http://www.gamasutra.com/view/feature/130745/better_games_through_usability_.php

7.0 Enhancing Test Data with Game Analytics

In addition to the use of formal user testing sessions for metric gathering, the team will make use of in-game analytics to record aggregated information on the below points. It should be noted that this is a proof-of-concept implementation of in-game analytics where the team has added information trigger points to a variety of game location, with the intention of expanding analytics integration at a later point. Analytics integration does *not* exists in the alpha version used for formal user testing. Analytics data will come from a newer version of the game, and a different pool of players.

Analytics will be used to record data on the following:

- Crash points
- Lines taken in first rock garden (simple left or right line detection)
- Track completion times