



PLATYPUZZLER

GAME DESIGN DOC

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VERSION HISTORY

V0.7 – TBC

- Added Version History section
- Added Basic Prototype section

V0.6 – 24 MAY 2016

First version for public consumption

DESIGN PHILOSOPHY

I've played lots of games, but this is the first I've made. I'm interested in meaningful play and the world of 'serious games' and in future I would like to be involved in making games that sit at the intersection of technology, education and politics. This project is a way for me to dip my toe in the water and understand more of what's involved in making even a simple game in a well-established genre. However, I also want this project to be a well-designed, original and polished effort in its own right, that is both thought-provoking and fun to play in its own way.

GAME WORLD

STORY

In Platypuzzler, a platypus is swept away in a storm drain during a large thunderstorm and becomes lost. The player, in the role of a spirit guide, has to help the platypus home through a variety of beautiful river system environments, but the platypus cannot be controlled directly. Instead, the player will have to manipulate the surroundings to influence the behaviour of the platypus while learning to work with and around the animal's natural inquisitiveness.

The story is a platypus odyssey – a platypodyssey? As Platypus makes his wandering way home, he will encounter a variety of other river creatures who have also been affected by the storm, each of whom will need help in their own way. These encounters form memorable episodes in the story, and through them we gradually discover more about Platypus' character. With time, the platypus may come to trust the player more, forming a special partnership.

LEVELS

Specific levels are not designed yet, however will take place over a variety of settings:

- At the creek
- In the freshwater stream
- Below the surface
- In the burrow
- In the storm drain

PROGRESSION

The game takes place over three Acts, though the player will experience this seamlessly as a natural progression through the story.

ACT I: TUTORIAL

The game's early levels are about gradually introducing the player to the various gameplay systems and mechanics, while increasing in complexity and giving the player the opportunity to experience different aspects of these systems and mechanics in new combinations. The player will learn key techniques that will be critical in later stages of the game.

ACT II: GAINING TRUST

After the tutorial, the game opens up and the player will begin to meet new characters and explore new settings, while mastering techniques already learned and trying out new combinations. In the story, Platypus will be gradually coming to trust the player as spirit guide more and more, culminating in a moment of connection.

ACT III: HOMECOMING

After the end of Act II, the player will now be able to play as the platypus for short periods of time. Switching between two game states and control modes opens up new possibilities for more complex and challenging puzzles. The player will still be under time pressure to navigate these to ensure the platypus makes it home safely to his burrow and family.

DEVELOPMENT

ENGINE

As I do not have programming skills, a fully playable prototype will be developed using Stencyl.

PLATFORM

A fully playable prototype will be released for PC on the Kongregate platform. If this proves successful, I will scope the feasibility of developing a fuller, more polished version for PC and mobile.

VISUAL DESIGN / AESTHETICS

OVERALL AESTHETIC

The visual design of Platypuzzler will have depth and nuance despite its 2D setting. A realistic yet highly stylized aesthetic will draw the player into the otherness of the game world. The following reference images show an interpretation of the intended look and feel.

REFERENCE IMAGES



(Credit: 'House Held Up By Trees', Jon Klassen)



(Credit: Deer, Jon Klassen)



(Credit: 'Pax', Jon Klassen)



(Credit: 'Song of the Sea', Cartoon Salon)

Klassen uses a combination of pencil, ink, crayon, gouache and digital to achieve this distinctive style.

WORLD DESIGN

The following reference image shows a real-world river system environment typical of the game's setting, and a colour palette sourced from this environment.



GAMEPLAY

SYSTEMS

There are five game systems underpinning Platypuzzler's gameplay, as follows:

DAY/NIGHT CYCLE

Platypuzzler runs a day/night cycle where 1 minute of real-time corresponds to 1 hour of game time – 1 day of game time passes every 24 minutes at normal speed. Platypus is crepuscular and is designed to be most active for two four-hour periods at dawn and dusk each day (two periods of 4 real-time minutes). This mechanic is controlled by the Energy meter.

The player cannot control the Day/Night cycle. The game can be paused, and saved. However, the saved game state is erased once the player resumes, so it is not possible to save and go back to make multiple attempts at levels from a desired point.

After a pre-determined number of full day/night cycles, the game will end with Platypus being rescued by humans if the player has not yet completed the level. The player does not know how long this will be, although the player will learn to recognize subtle design cues when a rescue is imminent. Certain actions and events can delay the rescue, but the player will need to discover what these are.

CURIOSITY METER

Curiosity affects Platypus' receptiveness to the player's actions in the Spirit Guide game state. Platypus is naturally curious, so he starts being receptive to player actions, and his curiosity will always gradually recharge. The player's actions each incur a cost to curiosity, the amount of which depends on the type of action, how frequently the action is performed and what other actions have been performed recently.

For example, one of the most basic actions the player will perform is clicking the water's surface to attract Platypus' attention. When the player clicks the water's surface, Platypus will usually come over to investigate – this will usually be the first in a chain of actions to influence what Platypus does. However, if the player clicks the water's surface too often in quick succession, Platypus will lose interest and ignore the player until his curiosity has sufficiently recharged.

The player does not see the CM directly represented in the game, but a subtle visual effect shows when Platypus' CM is fully recharged. The player will need to gradually discover the mechanics of the system from experience and small cues the UI provides through early tutorial levels.

See the Basic Prototype section for more detailed mechanics of the Curiosity meter.

AIR METER

Platypus can swim underwater, but needs to come up for air at regular intervals. The Air mechanic is managed automatically by the game. Platypus will never run out of Air - if he is running low, he will automatically resurface. However, the player will need to carefully consider Platypus' Air meter, as success in many levels will require the player to first engage Platypus' curiosity and then manipulate something on the river bed.

The Air meter is shown in the HUD when it is in use. Air has a maximum of 30 seconds. It recharges automatically while on the surface and at a slower rate from underwater bubble streams and trapped air pockets.

ENERGY METER

Platypus has a lot of energy for exploring, but needs to recharge regularly by eating and resting. The Energy mechanic is managed automatically by the game. Platypus will never run out of Energy – if he is running slow, he will automatically surface and return to his burrow to rest. Rest is essentially lost time to the player, so Platypus' energy will need to be carefully taken into account. Energy recharges at different rates depending on the time of day – more quickly during the daytime and during the night – so the player will need to optimize actions to ensure most of Platypus' activity takes place at dawn and dusk. If the player takes too long to complete a level, Platypus will be rescued by humans and put in a wildlife sanctuary (this is the lose state for the game).

The Energy meter is shown in the HUD. Platypus has 4 minutes of real-time energy when fully recharged. This recharges at the rate of 1 minute per 2 hours of game time when Platypus is resting. Food will also recharge Energy, depending on what it is. The game moves into fast-forward mode when Platypus is resting.

TRUST METER

A large part of the gameplay experience consists in the player learning to understand Platypus. Apart from minimal initial instructions and subtle UI cues, the game mechanics are never explicitly communicated to the player. However, over the course of the game, Platypus will come to trust the player more, resulting in more information and actions being available to the player. This mechanic is controlled by the Trust meter, which is invisible to the player except for its effects. For example, the Curiosity, Air and Energy meters are not visible to the player at the beginning of the game, but become available once a certain level of Trust is reached. Trust is therefore analogous to game XP points in Platypuzzler.

Trust is earned by completing levels and side-quests. The game will give a subtle visual cue to indicate when trust has been earned.

Trust is the mechanic that ultimately advances the story and adds depth and complexity to the gameplay. Eventually, achieving enough Trust will allow the player to move Platypus directly for short periods of time, introducing a second game state and control system. Later levels will

require the player to skilfully move back and forth between direct and indirect game states to solve puzzles and advance the story.

CONTROLS

Platypuzzler has two control systems corresponding to different game states:

- Spirit Guide Mode: point-and-click controls that indirectly affect Platypus
- Platypus Mode: Direction/action buttons that directly control Platypus

Input	Spirit Guide State	Platypus State
Click	Manipulate A	-
Click + drag	Manipulate B	-
Click + hold	Manipulate C	-
Up		-
Down		Move Down
Left		Move Left
Right		Move Right
Action		Interact

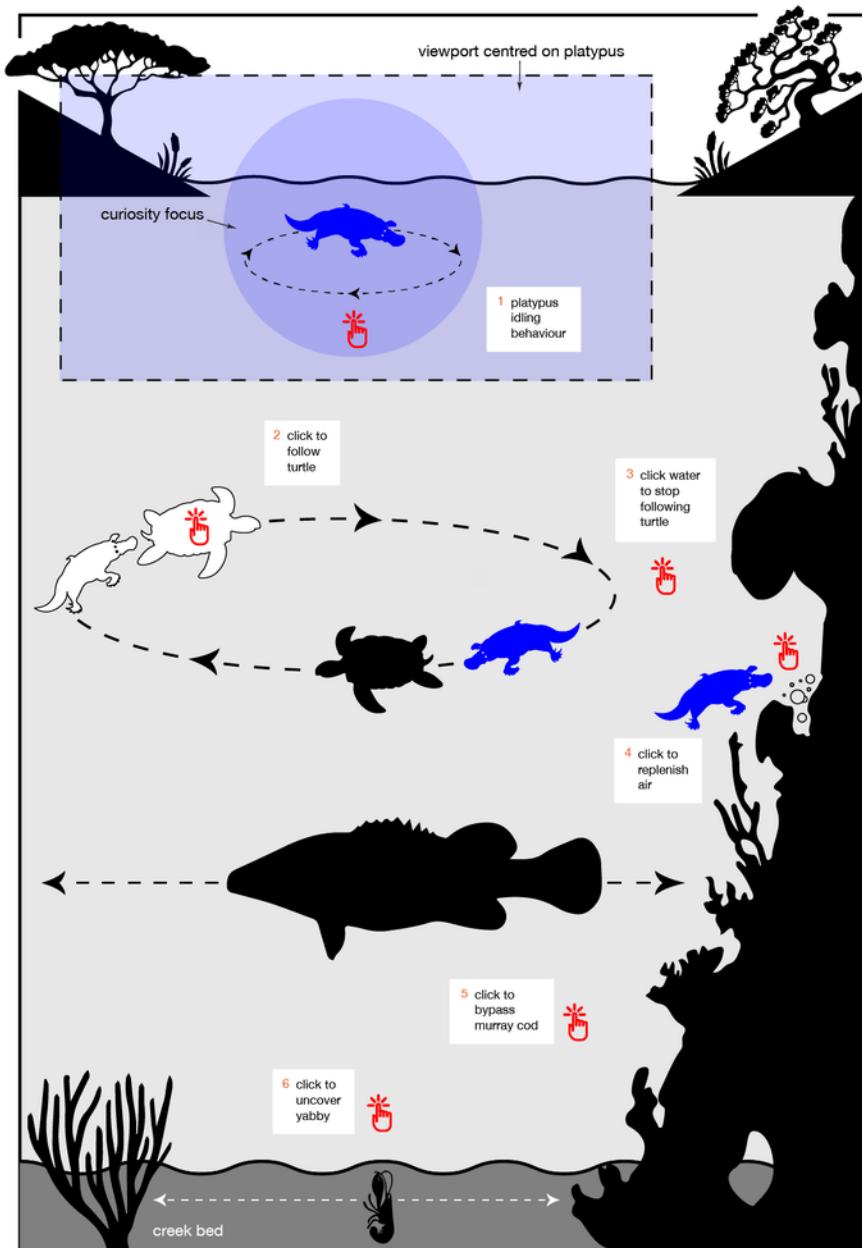
BASIC PROTOTYPE

OBJECTIVES

In this prototype, we are testing the basic indirect control mechanics, including the interaction of the Curiosity and Air gameplay systems. The aim is to test whether the mechanics for indirect control as presently conceived are feasible for core gameplay, whether they are fun and engaging for the player, and the extent to which they adequately represent the playful independent qualities of the Platypus character.

PROTOTYPE LEVEL DESIGN

The Basic Prototype contains a single level of simple design, shown in the following graphic. Features of the level are described in more detail below.



WIN CONDITION

The player must manage Platypus' curiosity and air to guide him to the yabbie hiding in the river bed. The win condition is met when Platypus eats the yabbie.

VIEWPORT

The viewport remains centred on Platypus during gameplay. There is a small amount of tolerance in movement (estimated 10-20%) before the viewport adjusts to follow.

CURIOSITY FOCUS AREA

Platypus has an area of effect (estimated 300px radius) in which he can detect curiosity events. The CFA is invisible to the player normally, but slightly visible in the Basic Prototype. Events with a curiosity value outside the CFA have no effect.

PLATYPUS IDLING BEHAVIOUR

When nothing is attracting Platypus' curiosity, or the Bored flag is in effect, Platypus has a default behavior. For the Basic Prototype, the default idling behaviour is to paddle around in a tight circle at the surface.

1 – ATTRACT CURIOSITY

While Platypus is idling, he cannot see the turtle. The player will need to click to attract curiosity, moving the viewport and CFA so Platypus can see the turtle.

2 – FOLLOW TURTLE

The turtle attracts Platypus' curiosity automatically. If the turtle's curiosity value is higher than the player's, Platypus will go snuffle around the turtle. This will annoy the turtle and halt its default swim cycle. The player will need to click on the turtle while they have Platypus' curiosity to entice Platypus to follow the turtle rather than interfere with it. (Unclear at present whether it will be better for gameplay if the player has to keep clicking the turtle to keep curiosity in balance, or whether a Follow event temporarily freezes curiosity calculations)

3 – STOP FOLLOWING TURTLE

If Platypus keeps following the turtle around, either he will eventually become Bored or will run out of air. In either case, Platypus will leash to the default idling behaviour. The player needs to click in the water near the bubble stream to get Platypus' attention and stop him following the turtle.

4 – REPLENISH AIR

Platypus can replenish his air supply from the bubble stream. (Unclear at present whether Platypus will be attracted to bubble streams of his own accord or require player intervention. If the former, will he get Bored of bubble streams?)

5 – BYPASS MURRAY COD

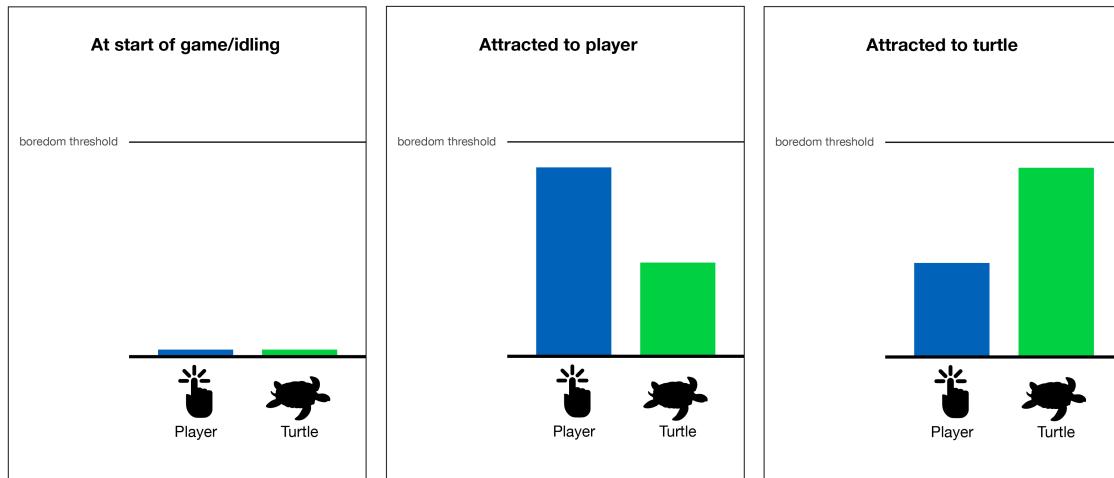
The murray cod is in the way most of the time and exerts considerable attraction on Platypus, who will snuffle around it and eventually get Bored or run out of air. To reach the yabbie, the player will need to place a well-timed click in the water to get Platypus past the murray cod without becoming too distracted by it.

6 – UNCOVER YABBIE

The yabbie moves slowly along the riverbed, partially submerged in the mud. It stays still when Platypus is nearby (it has a Platypus-sensing radius), because it knows Platypus can detect movement in the water via electrical signals. If the player clicks the riverbed, Platypus will nose along and disturb the mud in that area. If he uncovers a yabbie, it will exert considerable attraction and Platypus will eat it.

CURIOSITY METER

Objects in the game that are within Platypus' Curiosity Focus Area exert an effect on Platypus' curiosity meter. The object with the highest curiosity value will attract Platypus' attention. If no objects are within the CFA, Platypus will engage his idling behaviour. The following images provide examples:

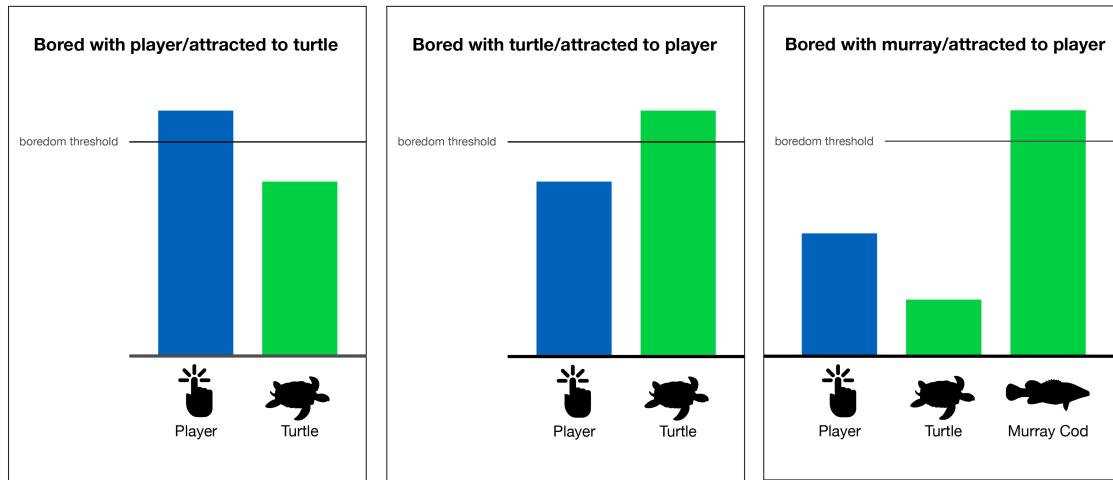


BOREDOM

If curiosity rises too high for a particular object, Platypus will become bored and lose interest in it. While the Bored flag is in effect, Platypus will not be attracted to the object, and no new

Curiosity will accrue to it. The Bored flag remains in effect until Curiosity drops to 0 for that object.

If Platypus is Bored with an object, his attention will pass to the object with the highest Curiosity with which he is not Bored. The following examples illustrate:



CALCULATING CURIOSITY

Each object has a unique Curiosity multiplier and Boredom threshold and holds an updating Curiosity value. Precise values will need to be arrived at through playtesting, but the included graphic provides some starting examples:

Typical values include:

AMBIENT CURIOSITY	+x per second
EVENT CURIOSITY	+x per event
BOREDOM THRESHOLD	x
AMBIENT DECAY	-x per second
DECAY WHEN BORED	-x per second

A curiosity event could include a player mouse click, or a pocket of bubbles that streams every x seconds.

Effect on Curiosity	
	+10 Curiosity -2/s
	+3/s
	+4/s
	+15/s
	+5/s No Boredom