FURRY JUMP

Game Design Systems and Elements

Furry Jump is an endless jumping adventure, set against a dazzling and ever changing landscape. The game is centred around physics-based move movement, procedurally generated platforms and achieving incredible speeds.

The core mechanic of the game is simple; tap at the right time before you bounce on a platform to receive a bigger jump, landing consecutive jumps will multiply this effect. Perform mid air tricks at high speeds to receive a score multiplier and chain the two mechanics to maximise speed and compete for high scores and distances. As you progress through objectives, you will float along clouds, jump over vast distances and rescue your furry friends—watch out for hazards and the evil furry that lurks in the dark woods!

Fullerton's Model (Fullterton, 2008)**:**

The Player: The game requires one player to play but is focused on multilateral competition through high scores

The Objective: This game doesn't fall into any major category, it is to race other players to get a higher score but also a chase from the evil furry. By not setting a clear objective and milestones players wont have to tolerate anything too stressful, at its core Furry Jump is all about fun.

Procedures: The player achieves the highest score by travelling the furthest distance, collecting the most furry friends/coins and performing the most tricks. The procedure is a combination of these goals to get the highest total score so agency is exerted through the player discovering the best way to combine these mechanics in order to achieve the highest score or choosing to collect coins over points in order to purchase something from the Furry shop which will help achieve an even higher score the next time the player attempts a run.

Boundaries: Systems in the game restrict play rather than theme in regards to how hazards will always reset multipliers (unless armour is worn), and how falling off platforms or being caught by Evil Furry will always result in game over. Additionally, the system will restrict the movement - only being able to move forward with some movement to secure a safe landing.

Rules:

Constitutive Rules	Definition, restriction or effect
All platforms are inherently bouncy	This a rule which defines an object in game
Hitting a 'hazard' will reset multipliers to zero and there will be a short recovery period	This is a rule which determines an effect – reset-ting the multiplier back to zero is the effect
Collecting Furry's friends will score the most points per action	This rule defines score based on an object
If the evil Furry 'catches' the player then it is game over	This rule determines an effect (the effect being game over)
Using armour protects the player from collisions with hazards (has a one-time use)	This rule defines the properties of what armour is
Using the slingshot will protect the player from a fall (has a one-time use)	This rule defines the properties of what a slingshot is
Clouds are a 'surfing' surface which score trick points	Rule which defines what a cloud is/how to use
Multiplier limits are restricted by player level	Rule which restrict the player
Operational Rules	**Definition, restriction or effect**
If the player taps/clicks at the right time before hitting a platform then a mega jump will be per-formed (extra height and distance)	Rules which have an effect (effect being a mega jump)
Landing consecutive jumps in a row will increase the size of the mega jump	Rules which have an effect (effect being a mega jump)
Landing flips will plus one to the score multiplier (which increases speed)	Rules which determine an effect (score multiplier and speed)
Completing in game objectives (e.g. collect five Furry friends in one round) will increase player level	Rule which determines an effect (effect here being level increase)

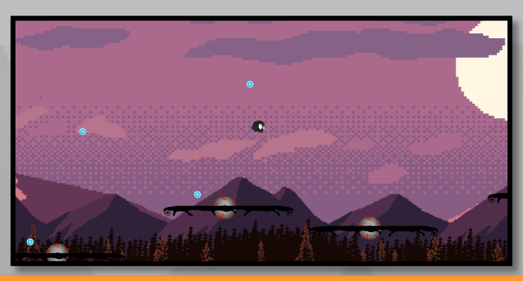
Resources:

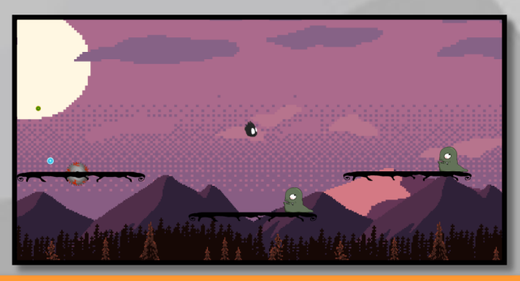
Resource Name	Resource Type	Resource Description
Coin	Expendable	An in game pickup which players can collect and spend in the 'Furry shop'
Mega Coin	Expendable	A larger variant of the coin which contains 10-20 coins
Slingshot	Expendable	Allows the player to be shot back into the game if they fall off (one time use)
Armour	Expendable	Allows players to hit a hazard with no negative effect (one time use)
Coin Magnet	Enhancements	Coins are magnetised towards player (picked up in game with an upgradeable time limit)
Super Furry Orb	Enhancements	Gives player the ability to 'fly' (super speed at a massive height – lasts 10 seconds and is a rare in game pickup)
Start with max multi-pliers	Durational	Starts the players with max multipliers for thirty seconds (purchased in the shop)

Conflicts:

Conflict Type	Conflict Name	Conflict Description
Obstacle	Hazards	Hazards are the main obstacles which are items such as spinning saws, moving enemies etc. If the player hits one of them then multipliers are set back to default with a small recovery period.
Opponent	Evil Furry	If caught by this enemy then the game is over!
Dilemma	The key choice	The main dilemma is the decision of collecting coins or getting a high score. For example, the player has the opportunity to collect a furry friend or ride a cloud which could result in more points overall. This is supported through level design.

Conclusions: Creating the magic circle relies on smooth transitions between game states, the main menu will be the actual game with a UI overlay so players always feel as though they are active in game. Additionally, character selection is useful for personalisation in game and also an incentive to play. Finally, cohesion between sound and graphics is important—this game is about fun and the aesthetic should reflect this. Fullerton's model has outlined the key components of this game but level design and flow is key to acquiring users who will play more than once. It is important that they feel competition with others but most importantly, themselves.

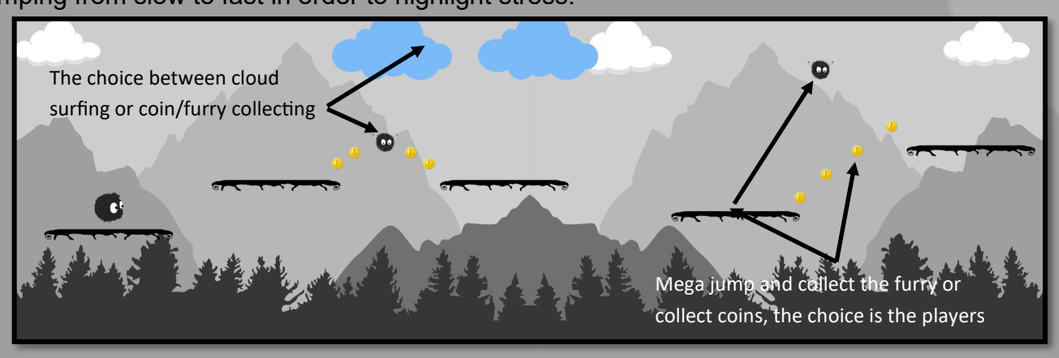




Level and Tutorial Design

The theme for the game is simple; a stylised mountain/tree scape with foreground elements passing through during the journey. It was important that the platforms stand out in order for the player to easily recognise where to land next so the game will feature platforms that glow. The music needs to be consistent with the theme of the game; ambient music which increases in tempo as the player gets faster. Sound effects when players pick up coins, ride on clouds etc. will help build the flow of the game and set the fun and fast theme for the game.

In regards to genre; Taking Ernest Adams (Adams, 2013) school of thought on genre then the game would fit into the Action and Arcade category as there is a contrast between rest and conflict (increasingly getting faster or jumping higher which can be reset by colliding with hazards). The idea of varying pace is important, the game will slowly build speed rather than jumping from slow to fast in order to highlight stress.



Tutorial Design: When the game begins, Furry's friends will bounce away from the camera to the right and a pop up will say 'Your friends are lost, help them get back home!' Starting the game for the first time allows the player to jump from platform to platform without any input to show users how the game works. Before the player hits the fifth platform the game will stop and a hint will pop up telling them to 'Press before you hit the platform!' and a mega jump will be performed. After they have made the jump the player will be falling towards a hazard, the game will slow down and inform the player that they will have to move or die—this stage will be repeated until the player succeeds. The next jump will allow time to perform a flip, the player will be prompted to do so and be informed on the goal. On the initial pick up of both the coins and furry friends a hint will pop up saying that collecting these things scores points and furry friends score the most. These hints will only appear at the start of the game.

Adams, Ernest. *Fundamentals Of Game Design*. 3rd ed. New Riders, 2013. Print.
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Fullerton, Tracy, Steven Hoffman, and Christopher Swain. *Game Design Workshop*. 1st ed. San Francisco, CA [u.a.]: CMP Books [u.a.], 2008. Print.
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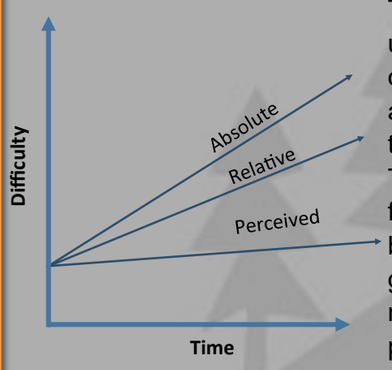
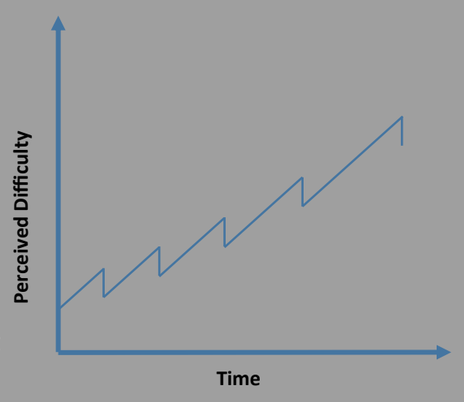
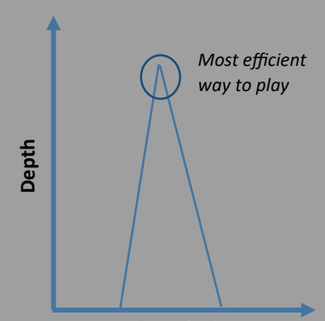
Difficulty and Complexity



The mechanics of the game are relatively easy to understand but utilising them for maximum efficiency/score will be tricky. As demonstrated by the figure below, the difference between absolute and relative difficulty is small—this is due to the fact that there are not many items in the game that can help new players. The armour and slingshot abilities will be available for the first few runs to encourage players to keep going as well as ensuring beginning stages of the run aren't too difficult. Furthermore, the gap between relative and perceived difficulty is substantial as mastering these mechanics/controls will take time, skill and patience.

The difficulty of the game will increase as each run progresses but to ensure that there isn't too much stress the difficulty will decrease slightly to allow a moment to catch up with oneself before increasing again— this will go on until a max difficulty is reached in which there will be no breaks in difficulty. Using Jenovas Chen's (Chen, 2009) work on flow a custom saw tooth model was created; as the graph shows, once the player reaches a certain point difficulty will be lowered slightly before it is increased significantly (which increases each time the difficulty is raised) in the hope that players feel more anxiety the further they get but not too much to throw them off.





Innate complexity regards the mechanics of the game and for this example there isn't too many - this is due to there only being one true control which is to tap or hold the tap (plus some small movement to allow for control/accuracy). But this does not mean there is a lack of depth within the game; players will consider how to get the max multipliers in the smallest time, whether going for Furry friends or landing a flip is more beneficial. As the game is built from different sections then we should see varying tactics for each of these sections and players will change their tactics based on previous runs creating true variation and depth.