Feature doc: Player Movement

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# Executive Summary –

The strength of this game resides in its strong level design coupled with interesting fighting mechanics, which are heavily influenced by pickups. However, in order to obtain those pickups, the player needs to be in control of the map and needs to be able to reach them and go from one of them to the other. This requires compelling and satisfying movement capacities, to engage the player in a perpetual motion which should be thought through.

Player movement relates to the player’s ability to move around and to jump. The roll is NOT a player movement but a specific player power, and as such isn’t included in this feature document (To check it out, refer to the Rolling feature doc).

## Goals:

* + The player should be fast, a sort of “speed fantasy” (like a power fantasy, but *fast*)
  + The capacities should be very accessible and easy to use but have depth.
  + Feel satisfied and enjoyable in and on itself.
  + The jump needs to be freeing, meaning it needs to last long and cover some distances.

## High Level Summary:

* + The player should have a default high speed. This will probably be hard to gauge for the player since the map is large, but it can still be felt in some situations (changing directions). Need to FEEL the fast, not only BE the fast.
  + Jump height should be quite height, to let the player cover a lot of ground mid-air in order to feel like he is jumping fast. Also, very freeing for the player to jump (player has some air control to feel this freedom)
  + The controls should be tight, snappy, and responsive.

# Feature breakdown –

## Controls:

* + WASD or the 4 directional ARROWS moves the player characters in the respective directions.
  + SPACE BAR makes the player character jump. Can vary the height of the jump by holding the spacebar.

## Mechanics:

* + The player’s speed needs to be and feel fast, so he needs to go to a speed of TBD/s (Should cover the lava room from door to door in 10 seconds approx.). (Need to be tested and iterated). It is currently 8.5 seconds, however slower feels sluggish. It will be kept at this pace for now, and may be increased if need be.
  + The player default movement is running (no sprinting, no walking. Goes from standing directly to a run).
  + There is no acceleration time, or an extremely small window if it feels more comfortable and deceleration.
  + The longest human jump is less than a second. The jump needs to be longer than that (TBD, maybe 1.5 or 2s) long on flat ground.
  + The jump needs to feature a slightly lower gravity than in real life.
  + The player needs to retain most of his air control in a jump.
  + Players can walk into each other without any special reaction. They must not phase through each other (collision between their mesh) but there should be no extra force applied when collision happens.

## Visuals:

* + A running animation, exaggerated to demonstrate the speed and power of players.
  + A jumping animation, simple, maybe a simple pose, to contrast it with the running animation for readability in combat. -> NOT A SIMPLE POSE, jumping is composed of 3 animations: the initial push off the ground needs to be juicy, fast and exaggerated. Last very few frames to make the movement seem faster, since in a few frames the character will move a lot. The landing animation is simple, we see the character bend under the force of the fall but doesn’t last long. Finally, while in mid-air, the animation should be a simple pose (this will be the contrasting part, to differentiate moving while on the ground and moving in midair).
  + Idle standing animation, the speed fantasy must be kept up with the character jumping in place, a bit like a boxer. Very springy, looking like he is ready to move at any time.
  + A slower running animation for when the player is slowed by Lava goo (see Lava gun feature DOC).

## Sound Effects:

* + Player footsteps, not too loud.
  + Can hear other players footsteps when they are close enough.
  + A jumping and landing sound. The jump should be a grunt, must feel like the character put strength and effort into his jump. A single cue is sufficient if it can be modified at each cast, making it “unique” for every jump (change pitch for example, by a random amount per cast). The landing should be a basic contact noise between the player’s feet and the ground, an impact noise.

## Challenge & Connections:

## Backstory:

## The Island dwellers send their most powerful Monk to pray in the Volcano arena. These monks are supposed to be powerful but also nimble and fast.

Flags:

- Think about jump controls / hold or not. Solved

- What should be idle animation / additional information. Solved

- What is the Land/jumping sound. Solved

- Jumping made of 3 different phases / animation. Solved

- Specify physics and their interaction with weapons / other. -> This might not be the place for this. Since the player character will make bullet disappear on-hit, essentially meaning that the character mesh will never come into direct contact and under the influence of the physics of the projectile mesh. So maybe the part about the bullet disappearing should be added to the lava gun feature ?

- What happens when a player collides ?