**Flow Generators**

Last Updated

# Overview

The user adds Flow Generator characters to the game world. These large fan-like objects\* create currents in the air or water that push any ‘thing’ objects or characters. Creator establishes these Flow Generators and their strength, direction, effective range, etc and the game displays the effect by emitting particles from the character.

Generator settings can be modified through tiles.

A Flow generator can be invisible, but still create a current.

The player experiences the currents by placing creatures and objects in the affected area and watching them move. Using preset tile Kode, players can control the current using the generators.

\*(final visual treatment TBD)

# Design Details

**Goals:**

* To get currents working
* To get generators to control currents

**Design Details:**

**Breakdown**:

* Generators
* Currents

**Generators**

**Goal**:

To create and give control of a current and to possibly provide the player with capacity to alter a current to a different speed.

**Details**

Generators create currents in the air/water and the current’s properties can be dynamically changed during play.

To ensure maximum versatility, the creator must be able to create a current and have the physical object invisible. The particles showing current is present should probably still be shown.

Users can edit the following via Kodu tiles. This will require a new action tile.

* If the current is going forwards (Push)or backwards (Pull).
  + Forward is the default setting.
* Strength.

**Object Settings**

The player is able to set most settings just as all other characters. Importantly:

* Invisible

The speed of the current is set in the object settings (i.e. the speed multiplier setting) and has 7 possible rates to match comparatively to movement speed of characters:

* Slowly. Slowly. Slowly. – this setting provides minimal resistance.
* Slowly. Slowly.
* Slowly.
* Normal (default)
* Quickly. – this speed will push a character moving at normal speed against the current, backwards.
* Quickly. Quickly.
* Quickly. Quickly. Quickly.

The range of a generator (i.e. how far the flow will continue on for) is set via the scale setting. The in-editor visualizer will scale with the setting so the player knows how far the current extends.

**Visuals**

Generators have a visual component. This component looks like an old fan or box fan (Final visual treatment TBD). It emits particles to show player current presence, speed and range. Increasing the speed and range of the current generated doesn’t alter the size of the physical asset.

**Currents**

**Goal**:

* To push objects and creatures in the current in direction and strength of current.
* Multiple currents are possible within 1 body of water / volume of air.
* Generators are required

**Details**

The current defaults to pushing at a Medium/Normal strength speed.

Elsewhere there are 7 speeds of movement in Kodu; from slower to fastest (e.g. character speed). We will be mimicking this methodology and speed settings. I.e. Normal current speed pushes a character at the normal pace for movement..

The current ‘volume’ needs to contain the same strength of push throughout its range.