**Game Design Document for:**

**Hover!**

**1995**

**The Ultimate Racing Game**

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WIN CONDITIONS

Game Programming

* *WIN*

The victory condition is that the player collects all the enemy flags (a total of 3 in the first level) before the enemies manage to collect all the player's flags (also 3), if this condition occurs the level stops and a screen with a victory message and sound effects is printed on the screen.

* *LOSE*

If the enemies collect all the player's flags (a total of 3 in the first level) before the player has collected all the enemy flags (also 3), the player loses, the level is blocked and the defeat

Concept Art

* *Win / Lose Screen*

Two specific screens, one for when the victory condition occurs and the other for when a defeat occurs

3D Art

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PLAYER

Game Programming

* *Movement*

To reproduce the movement, a physical simulation with a low friction coefficient and high impact energy conservation must be developed.

Create a highly customizable movement system so that through tests game designers can trace the most faithful reproduction of the original movement

the player's hover must be able to crash into walls by bouncing and maintaining its speed but changing the direction in which it travels by the physically correct angle depending on the impact

* *Rotation*

Even on rotation there is a conservation of the movement which progressively slows down after interrupting the rotation input, the impact with the walls also applies a small rotation thrust.

* *Vertical movement*

The vertical movement, i.e. when moving on the steps, occurs in the following way: climbing the steps is instantaneous, i.e. the over instantly completes the difference in height of the step while ascending while maintaining its speed unchanged on the horizontal axes

Conversely, stepping off a step or walkway causes the hover to float slowly downward at a set speed

* *Movement Controls*

The controls are in the official version via directional arrows, but we could also implement WASD for a more modern re-edition. Below are the complete control setups in the two hypothesized versions, which can be selected in a specific settings area which can then be accessed from the main menu:

First configuration (original):

* Acceleration and Deceleration: arrow UP, arrow DOWN
* Visual Rotation: arrow LEFT, arrow RIGHT
* Power Ups consumption: A, S, D / / 1, 2, 3

Second configuration (modern):

* Acceleration and Deceleration: W , S
* Visual Rotation: A, D
* Power Ups consumption: J, K, L

Concept Art

* *Player Hover*

No work required on the player's hover: since the game is in first person, this is never displayed and therefore a model among those used for enemy hovers can be used; however, a concept art of the player's hover will be used for the promo art

3D Art

* *Player Hover*

No work required on the player's hover: as the game is in first person, this is never displayed and therefore a model from those used for enemy hovers can be used.

ENEMIES

Game Programming

* *Ai*

Development of artificial intelligence of the enemies: first of all equip the enemies with the same movement system as the player, then subordinate it to an artificial intelligence oriented towards reaching targets:

Enemy hovers wander aimlessly until their target appears in their cone of vision, at which point the enemies begin to chase the target until they reach it or lose sight of it. the two possible targets are the player's flags or the player himself.

* *Flag Collectors Empty (Blue)*

The hover symbolized by the blue arrow has the purpose of taking the flags and is not attacking the player. When he takes a flag, the arrow is no longer blue but becomes yellow

* *Flag Collectors With Flag (Yellow)*

Behavior the same as the blue enemy, differences in behavior if any are currently unknown

* *Player Chasers (Green)*

The hover symbolized by the green arrow is intended to hinder the player. When it spots the player, the sound of a whistle is heard and the hover attacks, colliding with the player. The hover completely ignores the flags but if it were to catch one, the arrow would change from green to yellow.

* *Interaction with Power Ups and Traps*

Enemy hovers cannot take power ups or penalties but can fall victim to traps within the game.

* *Enemies Spawn*

Enemies have predefined spawn points in which they have the possibility of spawning, during the game a fixed number of them spawn for each level

Concept Art

* *Enemy Hover*

Semi-realistic graphics inspired by the original models, therefore futuristic. the presence of graphic elements of different interchangeable colors depending on the role of the enemy hover is necessary

3D Art

* *Enemy Hover*

For the enemy Hover models, stick to the original models, enriching the shape with more elaborate models (more polygons), always in theme. equip enemies with bright graphic elements that make them understand their function in correspondence with their color on the minimap (see role-color correspondences in the list above)