Design Document for Eskimotion

Vision Statement

In Eskimotion the player is asked to help the main character Chiku to find his little sister that has been taken prisoner by the Yeti King. To save his sister Chiku must travel through vast ice caves while being chased by a giant snow ball set loose by the Yeti King to stop Chiku. While Chiku must travel with great speed to escape the snow ball players must help him avoid the obstacles and dangers of the ice cave.

Genre

The game is a single player 3rd person action game that falls in between the category of 3D platform and racing games by the fact that the player is jumping and dodging to stay clear of the dangers while racing through the ice tunnel environment.

Target Audience

The game is targeted at people from 8 year and up. Both the story and the visuals are created to appeal to a young audience but the jump and dodge mechanics are created to be deep enough that the game can challenge adults. Because of the general theme and tone, the game would most likely appeal only to adults that have some sort of preference towards the platform genre.

Game play

The objective of the game is to move the avatar through the entire tunnel, while the challenge is constituted by the obstacles that will make the avatar fall if the player fails to avoid them. Each time the avatar falls the giant snowball that chases him will get closer, meaning that falling will eventually result in the snowball crushing the avatar.

During the chase through the level the player can collect stars. Collecting the stars will make the challenge of avoiding the obstacles harder, but once 10 stars have been collected the avatar turns into EskiMoFo for a limited time. This will twist the game play so that the player can now smash through the obstacles that otherwise has to be avoided. Smashing the obstacles will slow down the snowball allowing the avatar to lay some distance to it.

At specific points in the level the avatar should come across a wall with a silhouette shape hole. To pass this obstacle the game enters a state where a sequence of up, down, left, right inputs is displayed. The player must then enter the correct sequence to pose the avatar so that it will fit the hole and pass the wall.

Controls

The avatar is running forward through the tunnel on its own because it's afraid of the snowball. The player must dodge objects by running left and right up the sides of the tunnel as well as jumping over obstacles on the floor. The control scheme is based on a press and release technique that functions so that holding the left key for instance will make the avatar run up the left side of the tunnel. At some point the avatar can't get further up the side and the player can press right and run up the right side of the tunnel aided by the gravity he build up by running up the left wall. By this technique the avatar will be able to run higher and higher up the walls of the tunnel until he is able to make the tunnel full circle.

This movement from side to side in order to gain momentum should focus on the timing of the player's input so that the player must strive to change the direction at the right moment. If the player continues to go left the avatar will lose its balance and fall to the floor. This will count as colliding with an obstacle and the snowball will advance.

The jump mechanic is central to the game and like the dodging it also uses the press and release technique. Holding the down button will charge the jump so that the longer the button is pressed the higher the avatar will jump. Holding the button too long will result in the avatar falling on his butt sliding forward into whatever obstacle might be on the floor. Players can however deliberately use this sliding to slide underneath obstacles that is blocking the top part of the tunnel.

The press and release technique is designed to make challenge the players in the respect that they must judge the distance to an upcoming obstacle and time their input carefully to avoid crashing.

Rules

Whenever the player fails to avoid an obstacle the avatar falls. This stops the avatar from running and the snowball gets closer. The snowball has three stages being; far, medium and near referring to the distance from the snowball to the avatar. At the beginning of the level the Snowball is in its first stage being far away from the avatar. The first time the avatar falls the snowball goes into the 'medium' stage, second time the avatar falls the snowball enters the 'near' stage and the third time the avatar falls the snowball will crush it and the game will end.

Upon collision with an obstacle it should break so that the avatar can continue forward once he is back on his feet.

By collecting 10 stars the avatar will transform into EskiMoFo for 30 seconds. During this period the avatar cannot be knocked down by the obstacles, but instead he can smash the obstacles. Smashing 10 obstacles will cause the snowball to go back one stage. The snowball cannot go back beyond the 'far' stage.

Winning conditions/Scoring

The game is won if the avatar reaches the end of the tunnel. A status screen will show the number of times that the avatar fell (the less the better), how many stars was collected (the more the better), and how many obstacles was smashed (the more the better).

User Interface

The user will be presented with a splash screen on opening the program. They will then be presented with a menu screen, from which they can choose to create a new game, view a high score screen, access an option screen and quit the program via an exit splash screen. Should they choose to start a new game, they are presented with the main game interface. On completing the game they are returned to the main menu.

Splash Screen

The splash screen should briefly display the logo of the game and any logos required to be shown as a result of agreements under software licensing, e.g. the Source trademark.

Main Menu

The main menu will feature the game name; Eskimotion and links for accessing the actual game, the options screen, high score table and for quitting the program. The background of the main menu could be an in-game screen shot or a render shot.

Option Screen

The option screen will use the default source setup.

Exit Screen

Upon exiting the program a splash screen containing a list of credits will be displayed.

In-game interface

The game itself will be fairly minimalist in its interface. It is our aim to minimize the HUD (Head-Up Display) or other GUI (Graphical User Interface) elements in the game itself. Rather, the game should be self-contained, with the information you need present and visible in the actual game world. The interface makes substantial use of audio and visual cues to indicate the general state of the game. For instance the level of danger being the current state of the snowball should be communicated through audio and maybe shaking camera or having the avatar look over its shoulder in anxiety. Likewise it should be indicated through animation rather than HUD information whether the avatar is about to lose its balance.

The choice to minimize HUD information is rooted in the assumption that less HUD will add to the immediacy of the game. This is thought to be quite important given the young target audience as it is more likely that the player will be able to connect with the game characters. This also implies that we will as little text as possible to communicate to the player what to do. As such it is the aim that interacting with the game should be highly intuitive.

Level Design

The game will only feature one level. The level will consists mainly of tunnels and a few larger rooms. The tunnel shape is essential because the wall running mechanic is only possible to utilize in this type of environment. Also the level design is directed by the fact that snowball must start at high ground and then travel mostly downwards through the tunnels for the game to make logical sense. Furthermore the tunnel must split into different routes at least once to give the level a maze-like structure. Splitting the level into different routes also allows for a more elegant way of introducing difficulty levels as one route might be easier but give fewer points while completing the harder route would give extra points.

Lastly you should be able to complete the level within a couple of minutes. Having a game that consists only of a single level and that is thought to have a relative short average playtime per session the level design should feature as many different challenges as possible. Because the game functions as a vertical slice the single level should be able to show case the full potential of the game mechanics. As such the level will be constructed by combining a number of tunnel sections that each should try to explore the game mechanics in a somewhat new way.

Section 1

Challenge description:

TBA

Section 2

Challenge description:

TBA

Game Characters

The characters of the game are heavily influenced by those of cartoons and animated movies. This choice in art direction is based solely on assumptions about the likes and dislikes of the young target audience. The cartoon style world means that the game characters will be humans as well as personified animals and fantasy creatures.

Avatar

The player controls the boy Chiku that has to travel through the ice tunnels to save his sister.

NPCs
Penguins

Story
The game takes place in an ice covered world where the cruel Yeti King and his evil penguins are much feared by the enuit people living in the area. The young enuit boy Chiku is alone with his little sister Nukka. Suddenly the evil yeti king appears and steals Nukka while Chiku is not paying any attention to his little sister. Chiku finds out almost instantly that his little sister has been kidnapped and set out in pursuit for the yeti king. Chiku storms into the yeti kings lair but here he finds out that he has been lured into a trap.

Plot
Our hero Chiku is racing through an icy labyrinth to catch the Evil Yeti King who has kidnapped Chiku's little sister while he himself is being chased by a giant snowball.

Narrative Devices
Before the game begins an intro sequence will play. This will present the plot to the player and also gives important information of the terms of the game play. It will be a short animatic and will not contain any dia- or monolog. This is done to make the game understandable in any language and save time on voice recording.

Media List
Following is a list of media that needs to be created in order to realize the game. Under each caption the media assets are listed so that the media that are thought to be most important for the game to function are listed first.

Models

Characters

Chiku: Chiku is the model for the avatar and is as such the most important model of the game. This model will thus be of a relatively high level of detail consisting of 2500-4000 polygons. Even though the model will be visible only from the back during the actual game the front of the model will also be modeled in detail to be used in possible cut scenes and on the box cover. If however the character would need to be modeled in a level of detail that goes above 4000 polygons for these uses it should be made into a different version that is not used for the actual game play.

Obstacles

Ice blocks: Different ice formations will be needed for constructing the level and achieving the desired game play experience. These should be modeled in with great variety as to the shape and size ranging from small blocks that can be scattered through the tunnels to larger walls can cover most of the path.

Penguins: The penguins will function as a dynamic obstacle in the sense that it will move inside the tunnel as opposed to the static ice blocks. Besides adding to the game play simply by moving this will also enhance the game as a fictional world by adding life to the game world. The target audience is believed to be able to relate to the penguins as a fictional character and as such find them interesting.

Animations

Chiku

For the game to work the avatar must have the following animations:

Run animation

Slide animation

Impact/fall animation

Jump animation

Additional animations that would aid the narrative aspect of the game might include animations that show the emotional state of Chiku. This could be used if the player for instance fail to avoid an obstacle and Chiku once he is back on his feet would make an angry gesture at the player, or if the snowball is in the 'near' state and Chiku would look over his shoulder in anxiety.

Penguins

The penguins will only need a walk animation.

Audio

FX

The sound effects ties in with the actual game play and is used to communicate to the player the current events of the game. This mostly concern what the avatar is doing, and includes:

Foot step sounds

Sound of the avatar sliding

Sound of the avatar setting off for a jump

Sound of the avatar landing after a jump

Sounds of the avatar falling

Sounds of the avatar colliding with obstacles

As with the animation additional speak sounds could be used to communicate the mood of Chiku in the case of success or failure for instance.

Ambience

The ambient sounds are used to create the illusion of the fictional world so that the player believes and understands the game world. The ambient sounds include:

Sound of wind in the tunnels

Sounds of ice cracking

Sound of the snowball rolling

Audio-engine

The game engine is used to place sound effects in the 3D-environment. The different sounds are as short as possible, without added reverberation effects to minimize use of memory. Instead the audio design makes use of the DSP-effects inherent to the game engine to characterize the space.

The audio design uses the game engine to ensure variation using as few sounds as possible. The pitch, volume and time delay between the sounds will be randomized by the game engine.

The ambience of the game will consist of wind in the tunnels. Sounds of ice cracking and moving will be added and randomized to give an impression of an environment that is ever changing. These sounds will be placed using a normal stereo perspective.

Certain obstacles in the game will make a sound and as the character slides by in high speed a Doppler effect will be added in the game engine.

Technical Spec

Design of technical aspect of the project involves identifying those game features, which cannot be easily accomplished by the non-technical team members. Those elements have to be then prioritized from the game designer's perspective, while taking into account lead programmer's risk and workload assessment for each one of them.

The Feature List document describes both priorities and risks for the game features. Risk is reflected by the difference in estimated best case and worst case workload.

Both highest priority, risk and workload was associated with getting the character dynamics to work: player should be able to feel, that he is sliding around an icy tunnel, which is a great deal different from the original half life 2 player controls. Other high priority features involve changing the player controls for moving sideways and jumping, the camera path and handling collisions with obstacles.

Subsequent game features will be developed as soon as it's possible according to their priority. Fortunately game design is very flexible and every new feature makes the game more fun to play, but it will be still playable with only a few of the basic features. This way, any time (after the high priority stage) the programmer's get stuck with their tasks, it will be possible to say, that we already have a shippable product.

When it's possible, implementation of a feature is divided to smaller tasks and distributed to all of the three programmers. This way new features can be incorporated into the game as early as possible, according to the spirit 'Release early, release often'.

After implementation, game elements are tested mainly by the game designer – he's goal is to assess how the element in its current state fits into the game play and if it's playable enough.

Feature Priority list

	Feature	Priority
x	Camera following main character (split tunnel)	1
x	Sliding sideways and building up momentum	1
x	Crouching to charge a jump	1
	Tunnel Layout	2
	Custom material - Ice, Snow	2
	Ice block obstacle	2
	Ice spikes from ceiling 1	2
	Ambient background sound	2
	Snowball stages (1 to 3)	2
	Main character falls	2
x	Main character collision	2
	Main character running	2
	Main character crouching and jumping	2
x	Main character animation switching	2
x	Snowball crushing main character	2
	Start menu	3
	Intro movie	3
x	Power up mode (breakable obstacles)	3
	Tetris mode (new game state and control system)	3
	Custom material, rock	3
x	Collectable item	3
	Penguins	3
	Ice block obstacle 2	3
	Ice block obstacle 3	3
	Ice block obstacle 4	3
	Ice block obstacle 5	3
	Ice spikes from ceiling 2	3
	Ice spikes from ceiling 3	3
	Snowball intro chasing main character	3
	Outro movie	4
	Start menu background picture or movie	4
	High score (implement scoring system)	4
	Level refinement	4