VERTIGO

GAME DESIGN DOCUMENT

REVISION DATE: MAY '08

FORMATS:
Wii & PC

PLAYERS:
1–4 (Wii)   1-2 (PC)

ICON GAMES ENTERTAINMENT LTD

Document by Richard Hill-Whittall
http://www.richardhillwhittall.com/

Contents

CONCEPT SUITABILITY

VERTIGO is a fresh original title with exciting gameplay and knockout visuals. Featuring wild stunt courses, huge arenas with breathtaking drops, multiple game modes, exciting multiplayer races and battles, and much more.

Game sessions are designed to be quick to get into with short sharp single races, or, for longer sessions; best race times to beat, new sections to reach and many unlockables to discover.

VISUAL APPEAL

A colourful futuristic look with high detail photo based texture maps and huge, detailed game environments. Each environment is very different to the next, with a wide range of Themes, architecture styles and lighting effects.

One of the key visual features to the game is the sense of height and scale as you race hundreds of metres above ground and spiral around huge man made and natural landscape features:

Audio Experience

High energy music specific to each Theme, with several additional tracks for various game events.

Extensive use of spot effects to provide audio feedback to the player for all gameplay events, such as receiving damage, running low on energy, running out of time. These effects are provided by your Xorb computer, which monitors the key vital statistics of the Xorb such as damage and time remaining.

All interaction with scenery and objects is accompanied by a suitable sound effect, for example, hitting a metal object gives a metal clang. Additionally different surfaces influence the rolling sound the Xorb makes as it travels.

Speech also accompanies key game events – such as running out of time.

Weather Effects

Certain stages feature visual weather effects, such as falling snow, rain, sparks and space debris.

INNOVATION

Innovation of Features and Project Goals

- **Death Defying Courses** - amazing sense of height and scale as you race hundreds of metres above ground and spiral around huge man made and natural landscape features

- **Stunt Action** - hunt for special pick-ups as you travel through obstacle-strewn courses, along the inside and outside of pipes, wild twisting rollercoaster tracks and over jumps and loops

- **Multiplayer Mayhem** – race or battle with up to 4 players; unleash an explosive range of weaponry. Dirty tricks and aggressive tactics thoroughly encouraged!

- **Stunning Game Themes** - 9 very detailed and lavishly presented fully interactive game environments, split over 54 game courses – you can explore all areas as you hunt for extra manna and bonuses

- **Fully Customisable Xorb** - use the manna earned in races to customise the look of your Xorb; over 2 million unique combinations

- **Xorb Handling Mods** - each Xorb has an upgrade path with four different improvable performance parameters

- **Real-time Damage System** - with real-time deformable Xorb meshes

- **Unlockable Rewards and Secrets** – unlock new courses, Xorb customisations and multi-player games

- **Varied Single Player Game Modes** – including Practice, Arcade, Time Trial and Career

GAME MODES

VERTIGO Game Modes:

- **PRACTICE MODE**
- **ARCADE MODE**
- **TIME TRIAL MODE**
- **CAREER MODE**
- **XORB-RACE (multi-player)**
- **XORB-BALL (multi-player)**
- **BONUS GAMES**

Practice Mode

Practice any of the courses unlocked in the Career mode, no time limit applies in this mode. You can select courses in any order, providing you have already accessed them in the Career mode.

Arcade Mode

An Arcade style mode where the player must play through 36 courses in a non-linear order.

Unique Arcade mode specific unlockables and rewards are included, such as:

- New Xorb model
- Extra custom Xorb packs

Time Trial Mode

The objective here is to complete the courses in the quickest time to win a place on the fastest time score board. This mode features a Best Time 'Replay Xorb', which appears after the first attempt at a course. This Xorb will replay your fastest time whilst you race - effectively you are your own opponent. You can select courses in any order, providing you have already accessed them in the Career mode.

CAREER MODE

The Career mode is based around your Auto-Nav system – which is where you can select destination planets. Each of the 9 planets features a special Xorbing venue (Theme), and within each Theme there are 6 separate courses.

The Auto-Nav system is an interactive solar system map where you can cycle through the planet Themes – some are locked and can only be unlocked by completing all courses within a previous Theme.

Once the player has selected a planet Theme, he can choose to play any of the courses within that Theme in any order. For each course you can win Aqua, Air or Fire awards, depending on your completion time. Each course has 3 Goal times for the 3 awards; Aqua being the slowest (easiest to obtain) and Fire the fastest (hardest to obtain).

Longevity & Replay Appeal

With a total of 54 courses and a wealth of unlockables there is plenty of lasting appeal and replayability. There is an average minimum of 10 minutes play per course for an average-to-good player to reach Fire Medal standard. This equates to over 30 hours of gameplay in the single player modes. Add to that the Multiplayer modes, extra Single Player modes and Xorb upgrades there is considerable lasting appeal to the game.

Other Features

Best Times
Displays 'Best Time' tables for each of the 54 courses, with the best 10 times saved for each course.

THE THEMES

One of the key elements of *VERTIGO* is the visual style and variation of the courses. The game is set on 9 different planets, each of which features a special Xorbing venue (Theme), and within each Theme there are 6 separate courses (6 courses per Theme, 54 courses in total).

Because each Theme is on a different planet there are no restrictions on the types of environment. To ensure plenty of variety we have made each Theme very different to the next, both architecturally and in terms of the actual environment and landscape. We have harsh forbidding vistas, wild slopes with twin suns, retro theme planets, lush paradise planets, etc…

Our goal with the Theme courses is to provide a gentle learning curve for the player that spreads features throughout the game, so there is always something new – both visually and in the way a course plays. Each Theme has an entirely different set of courses which use construction materials native to the planet, such as hi-tech metal work, grimy pipes, reclaimed wood & chippings, ancient stones & rocks, water & ice, lava, etc…

Additionally, the physics objects (those the player can interact with) change in each Theme; rocks, boulders, barrels, carts, neon signs, light boxes, radar dishes, logs, hard light holograms, etc…

Course Navigation

Many of the courses have multiple routes that rejoin the main track at later stages – but you can't get lost within a course as the game always leads you in the direction of the Goal, whichever route chosen.

We have also made each course its own self-contained environment, so the player is not just relying on the Themes to provide architectural changes and variety. Course examples are included below:

- Oil rig
- Golf course
- Wooden rollercoaster
- Celestial palaces
- Treetop village
- Castles
- Construction site
- Spiralling mountain pathways
- Pipe drainage network
- Recycling factories
- Spaceships

Theme Descriptions

1. Metroscape

The very first of the modern city building projects; designed to replace the outdated city environments of the twenty-first century. Designed to accommodate both road vehicles and air shuttles.

An exciting venue featuring hazy neon, gravity defying skyscrapers & buzzing air shuttles.

2. Jade

The Xorbing venue of choice for extreme Xorbers - bumpy, rocky canyons with dense woodland, wild gnarly peaks and ancient ruins and some of the wildest courses of all.

A wide variety of course types and surfaces; castle runs, cooled lava ranges, spiralling mountains and ancient stone walls.

3. Iridim Reaktor Town

A dark brooding landscape, home to a mish-mash of industrial structures and pipe work which produce energy to power the surrounding moon colonies.

The course types reflect the nature of Reaktor Town, such as; oil rigs, construction sites, pipe drainage networks and recycling plants.

4. Ecos Orbit

Witness the beautiful glow of the Ecos paradise planet as you race around a network of space stations, satellites and tanker vessels.

The courses are based around the space station structures and are designed to challenge the players Xorb control, race over; Spaceships, control stations, neon tubes, asteroids and repair stations.

5. Ecos

A paradise sanctuary, lush green vegetation, shimmering rivers, beautiful statues and structures all combine to make this a favourite holiday destination.

All courses are environmentally balanced and very challenging. Treetop villages, recycled wooden roller coasters and entire Eco towns.

6. Wolf666

Affectionately known as Hell, this planet is a barren wasteland with a burning lava core. Closest planet in the system to the sun, it is very hot, completely inhospitable and hated by everyone. Hell also has many mysteries – strange sinister structures and buildings, built by a long dead civilisation.

7. Olympia

A swirling ethereal vista of floating cities, angelic carvings and statues. Stunning glowing golden temples and palaces, gold liquid waterfalls flowing from cloud to cloud in the sky and mighty ships sailing the skies.

8. Mystic

A man made planet of glowing plasma and electricity. Home to the most advance research posts and scientific experimentation stations. Witness amazing sights such as lightning & weather generators, gravity creation machines, terraforming satellites and cloning colonies.

GAME DYNAMICS

The player pilots a Xorb - which is basically a large spherical vessel, controlled by the Wii Remote/Mouse. You alter the direction of travel and speed of roll, but often gravity and momentum will lead you round parts of the course.

The basic aim of the game is to pilot your Xorb from a course start point to the exit point, without falling off the track. This is not as easy as it sounds; various obstacles and course designs require fast reactions and steady nerves. In short, it is very easy to control the Xorb on a flat surface, but the courses are not designed like that - the player will soon encounter twisting, spinning, bumpy tracks with huge jumps, shear drops, banking turns, spirals, tunnels and many more features.

Game Physics

VERTIGO uses the Open Dynamics Engine "ODE". ODE is good for simulating articulated rigid body structures. It is particularly good for simulating moving objects in changeable virtual reality environments. This is because it is fast, robust and stable, and the user has complete freedom to change the structure of the system even while the simulation is running.

Its usage in *VERTIGO* is to provide an accurate physics system for the player Xorb and allow interaction with both static and moving course objects, and for all collisions to be accurate, believable and impressive to the player.

Xorb Handling

A realistic physics system has been utilised to ensure the Xorb handles exactly as it should – its weight, mass and construction affect the handling and control.

The player is given total control of the Xorb – which can be moved backwards and forwards, left and right. Rather than simply rotating the Xorb this allows for very subtle control, which is necessary to pilot the course twists and turns.

Every action the Xorb performs is realistic – each object in the world has its own weight and mass, including the Xorb – and the outcome of collisions with scenery objects is determined by those factors combined with the speed of movement. Different surfaces affect handling, i.e. the Xorb has more grip on rough stone than smooth polished metal.

The following elements can be tuned by the player:
Extra Xorb tuning is available to the player:

- **Acceleration**
- **Braking**
- **Weight**
- **In Air control**

Xorb Deformation

In certain multiplayer modes the Xorb deforms as it takes damage.

The Xorb is constructed with a series of hull panels fastened onto a sub-frame; panels fly off after major collisions, and the sub-frame mesh distorts.

Saving/Loading Games

Games can be saved after completing a course, which allows the player to constantly save progress and resume play from the last course played.

Multiple (at least 4) save game slots are included, accessible through the Player Profiles menu.

CUSTOMISE XORB

Each Xorb also has an upgrade path with four different improvable performance parameters. These parameters fine tune the feel, handling and performance of the Xorb, enabling the player to beat their best times by careful use of the upgrades.

- **Acceleration**
  Acceleration performance
- **Braking**
  Efficiency of the Airbrake system, higher levels give faster breaking
- **Weight**
  Influences the way the Xorb handles and its general 'bounciness'
- **In Air control**
  After touch factor for controlling the Xorb once it is in the air

How to Upgrade

The Xorb Custom Shop is located in the Player Profiles menu. The player can select individual body parts and cycle through the available custom options. The player is given a real-time preview of each part prior to equipping. The custom options are:

- **Bodywork** – the Xorb construction material & paintwork
- **Trims** – each Xorb has a centre decorative trim that can be customised
- **Neon's** – neon strips are applied to certain models of Xorb
- **Hatch** – the finishing touch; the entrance/exit hatches for that extra bling

MULTI-PLAYER RACING

Multiplayer game modes are an integral aspect of the product. These modes allow competition between 2-4 players on Wii, and 2 players on PC.

Xorb-Race

Turn based time-trial racing for up to 4 players – the player with the best course time wins.

Race Settings:
Single Race - select from one of the unlocked courses
Tournament - choose a 5, 10 or 15 course Tournament, players can select courses

Xorb-Ball

A competitive sport – the aim is to compete within the specially-design arenas collecting tokens of increasing value (in increasingly harder-to-reach spots). These tokens must then be deposited in 'goal' areas to score. Tokens can be stolen off opponents through hard impacts.

XorbBall Settings:
Single Game – single game mode
Tournament - choose a 3, 5 or 10 game Tournament, players can select courses
Arena – select one of 4 venues
Time Limit – set time limit for the game
Goal Limit – set a goal limit (first player to x goals)
Weapons – turn these on or off

Bonus Multi-Player Games

The following extra unlockable Bonus Games are also included; each supporting up to 4 players:

Game 1: Astral Bowling

Astral Bowling scores like conventional bowling, but the style of play is entirely unique. The player steers their Xorb to the pins over one of five different courses, avoiding obstacles and finding the best route.

After 10 frames of play, each game is automatically scored and the winner is declared.

Players can either compete over a single course or in a tournament over the five different courses.

NOTE: This is a turn based game and as such supports up to 4 players on BOTH Wii and PC.

Game 2: Astral Fight

A competition of dexterity and determination, set within specially constructed competition ring courses. There are two play modes:

Normal Mode
Fight for points in a time limited match, players can set the time limit. Points are awarded for hitting an opponent, with extra points for knocking them out of the ring.

Survival Mode
Last Xorber standing wins. The only thing that counts is being knocked out of the ring – if that happens, its game over and the player is out of the current round.

Multi-Player Weapons

The following is a list of weapons featured in the multi-player modes.

NOTE: The weapons ONLY feature in the Multi-Player game modes.

The Xorb deforms as it takes damage – hull panels fly off and the sub-frame mesh distorts.

E.M.P Missile
Homing device which uses a laser sight, once locked onto an opponent it turns from green to red and follows the target until impact

Flare
Flashes the screen, disorientating all players. Ideal to fire while an opponent is negotiating a tricky corner as they won't be able to see where they are going.

Rocket
Fire a single rocket forward, each rocket pack provides 3 shots.

Shield
Temporary protection from damage.

Disc
Fires a metallic disc forward, if the disc hits a wall it deflects and bounces off. It will deflect up to 3 times before detonating, but will instantly detonate on contact with an opponent or physics object.

Proximity Mine
Drops a mine which explodes once a Xorb enters close proximity OR can be manually detonated with a second press of the CROSS button.

Energy Charge
Fires a bolt of negative energy, which if it hits a Xorb causes the player controls to reverse and the brakes to stop working.

Mini Guns
High velocity guns, uses a laser sight to lock on. Every bullet that hits make it harder to control the target Xorb and inflicts damage.

Deform Charge
Fires a charge, which if it hits a Xorb causes the Xorb mesh to warp and distort making navigation next to impossible.

Matter Distort
Fires a charge, which if it hits a Xorb causes the Xorb hull to change properties at random. It can become very heavy and slow or fast, bouncy and uncontrollable – the physical appearance of the Xorb changes accordingly.

Repel & Attract
Opposition Xorbs can be pushed away on activation of this power up, ideal for pushing them off ledges and drops. Additionally, tokens are 'sucked' off them if within a medium-to-close range.

Multi-Player on Wii

For the Wii implementation, the multiplayer game modes are played on one console using split screen, i.e. the screen is divided into multiple viewports, one for each player. Up to 4 viewports (4 player) are supported.

Multi-Player on PC

For the Wii implementation, the multiplayer game modes are played on one console using split screen, i.e. the screen is divided into multiple viewports, one for each player. Up to 2 viewports (2 player) are supported.

CONTROL DETAILS

Wii Controls

Menu Control:

BUTTON	ACTION
+Control Pad	Move between menu items
A	Primary select
B	Back to previous menu

Ingame Control:

BUTTON	ACTION
Tilt Remote	Move Xorb
A	Accelerate
B	Brake
+	Pause
1	Skip Intros

PC Controls

Menu Control:

BUTTON	ACTION
Cursor Keys	Move between menu items
Enter	Primary select
Esc	Back to previous menu

Ingame Control:

BUTTON	ACTION
Mouse or Cursor Keys	Move Xorb
LMB or Q	Accelerate
RMB or A	Brake
Esc or P	Pause
Enter	Skip Intros

REWARDS AND REPLAYABILITY

Locked Features

Certain features and courses are only playable once unlocked in the Career mode.

Bonus Multiplayer Games

These are unlocked depending on progress in the Career mode allowing you to play against 2-4 players in Race and Battle modes.

Xorb Upgrades

Over 2 million unique customisations are available for the player Xorb – these are purchased with manna points.

Xorb Tuning

Each Xorb has an upgrade path with four different improvable performance parameters.

Best Times

Extensive, saveable 'Best Time' tables for every course.

Replay Xorbs

Further incentive for the player to try and better his Best Times; the replay of the fastest course run can be saved to memory card and raced against at any time in the Time Trial game mode.