



HOUSING FEATURE CONCEPT

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INTRODUCTION

A/ What is housing

In video games, especially in RPGs and MMO-RPGs, housing is a secondary feature that allows players to build their own house and decorate it with various elements.

One of the first game (excluding construction games) to have implemented a housing feature is the MMO-RPG **Ultima Online**, released in 1997.

Today, the concept of housing has evolved a lot, and with technical progress, it now allows players to give free rein to their imagination.

Housing then became a feature eagerly awaited by players in MMO-RPGs.



B/ Why World of Warcraft needs a housing feature

World of Warcraft is one of the most influent games in video game history.

For nearly 15 years, World of Warcraft dominated the MMO-RPG market. Despite its size, WoW is to date one of the only MMO-RPGs that does not have a housing feature.

The game contains more than a hundred beautiful zones, each having its own unique design and environment: we have mountains, deserts, forests, meadows, swamps, volcanos, corrupted woods, a pirate bay, medieval towns, a flying city, underwater zones... and many others inspired by China, Northern Europe, Africa...

There is no valid reason why we shouldn't be able to exploit these zones to build beautiful houses on them to enjoy the view.

COMPETITOR ANALYSIS

Most MMO-RPGs and many RPGs have a more or less extensive housing feature. It is based on what exists elsewhere that I was able to design this housing feature for World of Warcraft.

Let's analyze what's good and what needs some improvement in the housing systems of the following games:

Final Fantasy XIV

New World

Black Desert Online

The Elder Scrolls Online

Free Realms

ArcheAge: Unchained

Club Penguin

Pokémon ASOR

The Witcher 3: Wild Hunt

World of Warcraft: Warlords of Draenor

Developers: Square Enix

Editor: Square Enix

Release date: 2010, rework in 2013

Genre: MMO-RPG

Platforms: PC, PS4, Xbox One

Classification: PEGI 12, ESRB T

Target: mid-core

Game monetization: premium, monthly subscription, cosmetic shop (real money)

World type: semi open-world

Housing type: instanced + layered

Housing monetization: full soft currencies

PROS

- The different houses are located in residential areas, all the houses of an instance are then accessible by all the players present in it
- A lot of decorations, purchasable with soft currencies or craftable
- Some houses are large and spacious

CONS

- We lost our houses if we don't visit them for 45 days
- The number of layers for a single house is very low
- The exterior decorations are quite limited



NEW WORLD

Developers: Amazon Game Studio

Editor: Amazon Game Studio

Release date: 2021

Genre: MMO-RPG

Platforms: PC, PS4, Xbox One

Classification: PEGI 16, ESRB T

Target: mid-core, core

Game monetization: premium, cosmetic shop (hard currency)

World type: open-world

Housing type: world layered

Housing monetization: soft and hard currencies

PROS

- Lot of decorations
- Houses are well integrated into the world

CONS

- The housing is more a base useful to the player and having an influence on the world rather than being a purely cosmetic secondary feature
- No money to pay the taxes = no housing
- Decorations have to be crafted, it costs many resources for a single basic furniture
- We can't interact with decorations

BLACK DESERT

ONLINE

Developers: Pearl Abyss

Editors: Pearl Abyss, Kakao Games, GameNet, RedFox Games

Release date: 2015

Genre: MMO-RPG

Platforms: PC, PS4, Xbox One

Classification: PEGI 16, ESRB T

Target: mid-core, core

Game monetization: premium, subscription possible, massive P2W items and cosmetic shop (hard currency)

World type: open-world

Housing type: world layered

Housing monetization: almost full hard currency

PROS

- Houses are well integrated into the cities
- We can have many houses at a time
- Lots of decorations...

CONS

- ... but most of them can only be purchased in hard currency
- Basic houses are very small
- We can't buy houses, only rent them
- The editing mode isn't very ergonomic

The Elder Scrolls

— O N L I N E —

Developers: ZeniMax Online Studios

Editors: Bethesda Softworks

Release date: 2014

Genre: MMO-RPG

Platforms: PC, PS4, Xbox One

Classification: PEGI 18, ESRB M

Target: mid-core

Game monetization: premium, subscription possible, paid content and cosmetic shop (hard currency)

World type: semi open-world

Housing type: world layered

Housing monetization: mostly soft currency

PROS

- Unlimited number of houses at a time
- Different sizes of houses for all budgets
- Good preview system for decorations

CONS

- Limited number of decorations at a time
- Editing mode not very ergonomic



FreeRealms™

Developers: SOE San Diego
Editor: Sony Online Entertainment

Release date: 2009

Server shutdown date: 2014

Genre: MMO-RPG

Platforms: PC, PS3

Classification: PEGI 12, ESRB T

Target: mid-core

Game monetization: monthly and life subscription, massive P2W items and cosmetic shop (hard currency)

World type: open-world

Housing type: instanced

Housing monetization: almost full hard currency

PROS

- Vast choice of plots and houses (desert, forest, beach, houses, manors...)
- Plenty of rooms, plots are vast and houses are immense
- Very wide choice of decorations
- Activities and mini-games accessible via certain decorations
- Good editing mode
- Unlimited number of houses and plots

CONS

- Most of the houses, plots and decorations are only buyable in hard currency
- Rating system is too punitive (edit a house makes us lost all its rates)
- DOB are kind of fun but not to reproduce for a Blizzard's game



ArcheAge
—UNCHAINED—

Developers: XL Games

Editor: XL Games, GAMEON, Trion Worlds, Tencent Games

Release date: 2014, rework in 2019

Genre: MMO-RPG

Platform: PC

Classification: PEGI 16, ESRB M

Target: mid-core, core

Game monetization: premium, cosmetic shop

World type: open-world

Housing type: world located

Housing monetization: mostly soft currencies

PROS

- Many houses and decorations
- Large community aspect in residential zones

CONS

- Weekly taxes: leaving the game more than 2 weeks = losing your houses
- No dedicated editing mode
- Limited number of decorations per house

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CLUB PENGUIN

Developer: New Horizon Interactive
Editor: Walt Disney Internet Group

Release date: 2005
Server shutdown date: 2017
Genre: MMO-RPG
Platform: PC
Classification: PEGI 3, ESRB E
Target: casual

Game monetization: monthly subscription

World type: semi-linear
Housing type: instanced
Housing monetization: full soft currency

PROS

- Vast choice of themed igloos and plots
- A lot of various decorations
- Igloos are rather spacious
- A new catalog of exclusive decorations every month
- Good editing mode
- Our igloos and the other players' igloos are easy to access

CONS

- The perspective makes the understanding of the "fake 3D" elements rather messy
- We can only have 3 active igloos at a time



OMEGA RUBY ALPHA SAPHIRE

Developers: Game Freak
Editors: Nintendo, The Pokémon Company

Release date: 2014
Genre: RPG
Platform: 3DS
Classification: PEGI 3, ESRB E
Target: mid-core

Game monetization: premium

World type: semi-linear
Housing type: instanced
Housing monetization: full soft currency

PROS

- Several biomes of secret bases (forest, mountain...)
- It's fun to explore the world to find a secret base

CONS

- Bases are very small, sometimes unusable
- Small number of decorations
- We can only have one secret base at a time
- There is no way to know where our current base is located in the world



THE WITCHER WILD HUNT

Developers: CD Projekt

Editor: CD Projekt RED

Release date: 2015

Genre: RPG

Platforms: PC, PS4, Xbox One

Classification : PEGI 18, ESRB M

Target: mid-core

Game monetization: premium

World type: open-world

Housing type: world located

Housing monetization: full soft currency

PROS

- Enjoyable break, we leave aside all the combat and exploration aspect to focus on the development of our vineyard
- The domain is large and pleasant to explore

CONS

- Too little customization, only paintings and armors to expose
- Difficult to realize the changes we've made
- Housing comes down to talking to the butler, waiting x days (in-game) and coming back to see the changes
- There is not much to do except exploring the domain

Made by HERLEHOS





Developers: Blizzard Entertainment

Editor: Activision-Blizzard

Release date: 2004 (WoD: 2014)

Genre: MMO-RPG

Platform: PC

Classification : PEGI 12, ESRB T

Target: mid-core, core

Game monetization: premium, monthly subscription, cosmetic shop (real money obtainable with soft currency)

World type: semi open-world

Housing type: world layered

Housing monetization: full soft currencies

PROS

- The buildings are beautiful and very detailed
- Very good atmosphere, the garrison is full of life

CONS

- Only a few buildings are available
- Impossible to place buildings ourselves
- The decorations are limited to those of World Events
- The housing feature is wasted and left out

HOUSING CONCEPT FOR WORLD OF WARCRAFT

To sum up, based on all the examples above, it seems that the following elements are expected by players when designing a housing feature:

- ✓ Lot of houses, plots and decorations
- ✓ Large plots and spacious houses
- ✓ Free placement of decorations and furniture
- ✓ Unlimited number of houses at a time
- ✓ Everything must be obtainable with soft currencies
- ✓ Houses must be world located with layering and no limited slots
- ✓ No rent, no taxes, no lost of property
- ✓ Ergonomic tools (for editing our houses and for visiting other players' houses)
- ✓ Housing must be fully cosmetic and secondary

A/ Introduction

1. Houses all over Azeroth

Housing in Azeroth cannot be limited to a small house in a city.

Let's see things big by offering players the opportunity to buy building plots from EVERYWHERE in Azeroth!

Each zone can contain 1 to 3 plots, in various places. Players can then buy these plots, build their houses on them, and then decorate their houses as they want.

Mountain, desert, seaside, forest, city... there is something for every taste!



2. New currency: House Resources

House Resources is the new currency dedicated to the housing feature.

There are many way to obtain these resources:

- By opening the **house cache**, available at the real estate agencies of Orgrimmar and Stormwind (resources are generated over the hours to a certain cap).
- By completing **house daily quests** (given in your houses and at the real estate agencies)
- By winning the house contest when it's available

These resources can then be use to buy **decoration blueprints** (more information in the following parts).

3. House score

The **house score** represents the investment of a player in housing.

Each house has its own house score, which is added to the general house score.

Buying plots and decorating houses with decorations increases the house score.

The player can consult his house score in the housing menu.

A ranking of the players with the highest house score is displayed in the real estate agencies of Stormwind and Orgrimmar (World – Region – Server).

Increasing the house score allows players to unlock new decorations and to obtain Achievements and other cosmetic rewards.

B/ Buying houses and plots

1. Buy a city house

Inside big cities like Orgrimmar, Stormwind, Silvermoon City, Dalaran, Ironforge... players can buy houses (with golds) that are directly implemented inside buildings.

It's not possible to modify walls or to place exterior decorations inside city houses, but they are way cheaper than plots and are a good way to introduce the housing feature to players.

It is also very pleasant to have his own house inside a living city.

Houses are world located and layered. Entering a house will phase the player in his own layer.

2. Buy a building plot

The most interesting part of housing is buying plots all over Azeroth.

As seen previously, most zones of the game have 1 to 3 plot slots that the player can buy in order to build a house on it.

Prices (in golds) vary depending on the plot and whether the player decides to buy a pre-built house on it.

Everything is possible here: placing exterior decorations, modifying the walls, the floor and the roof...

As for the houses, plots are world located and layered. When approaching his plot, the player will be phased.

C/ Obtain decorations

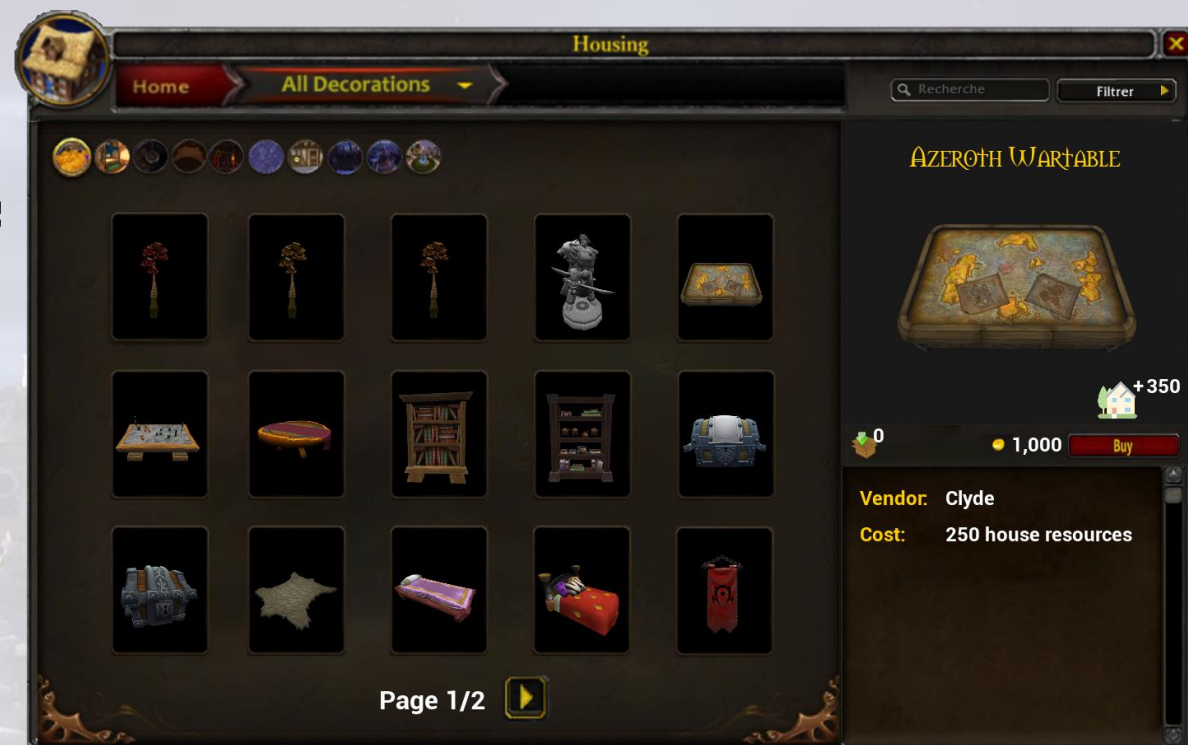
1. Decoration catalog

After buying a house, it's time to decorate it.

The decoration tab of the housing menu lists all the decorations of the game (in grey if they have not been unlocked, in color if they are).

The way of obtaining the blueprint, its price in golds and its score are displayed in this tab.

The tab is accessible at any time, but to be able to buy a decoration, the player has to be inside one of his house.



2. Unlock new decorations

To obtain a decoration, players have to obtain its blueprint first.

Blueprints can be obtained in various ways:

- **Housing traders** against house resources
- **World events traders** against world event currencies
- **Housing quests**
- **Profession crafting**
- **Housing achievements**
- **Housing contests**
- **Secrets**

Learning a blueprint permanently unlocks the related decoration, which can then be purchased in gold in an unlimited number of copies, then placed into a house.

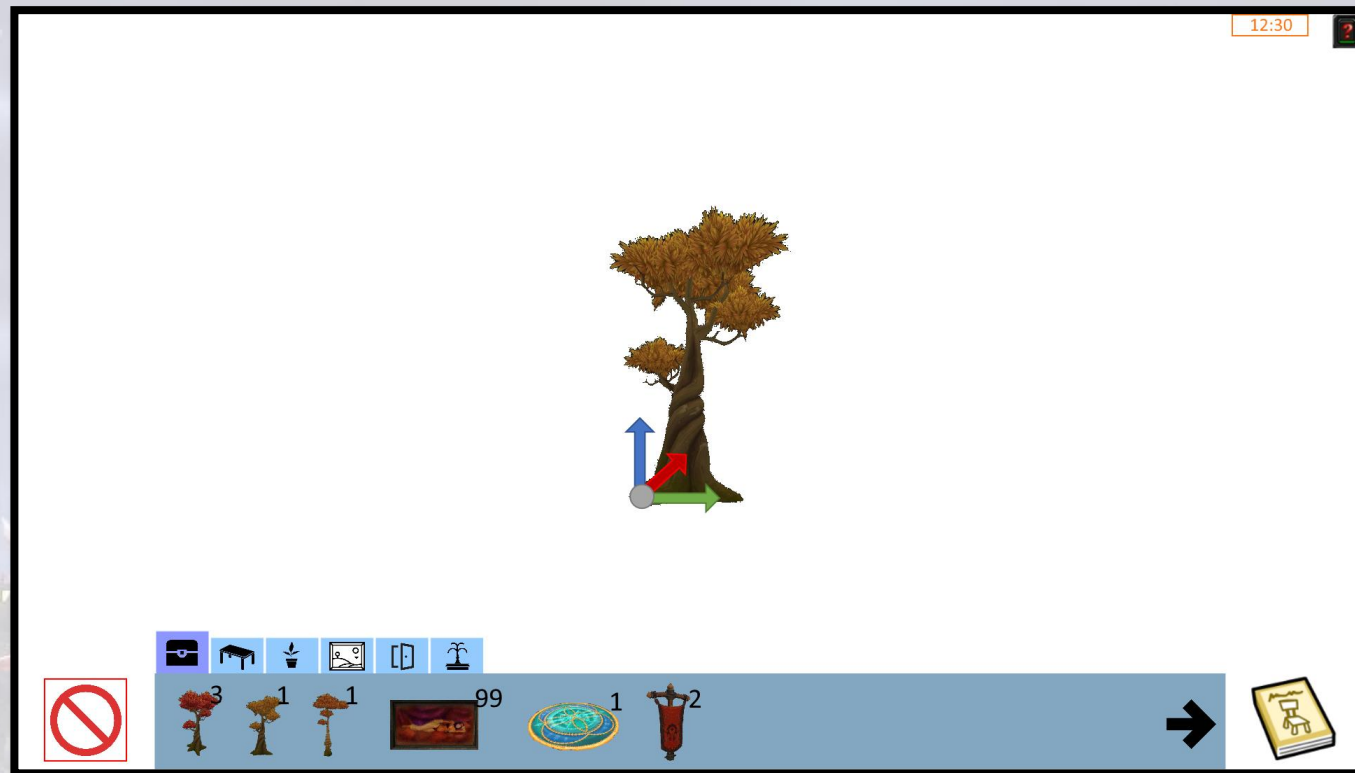
D/ Edit system

In order to decorate his house, the player has to click on the **architect table**.

This will hide the current HUD to make way for an interface dedicated to edit mode. The player will then control a free camera that he can move over the plot.

This new interface contains only the necessary:

- The **decoration panel**, from which the player can drag and drop the decorations he own
- The **housing catalog**, to buy decorations
- The **quit button**, to exit the edit mode



Each decoration has its own parameters. Thus, not all of them can be placed anywhere.

Some such as large trees are reserved for outdoor areas, while paintings or garlands can be placed on the walls.

The edit tool indicates the player where he can or can not place a certain decoration with red and green colors.

As for a game engine, player can use many functionalities, such as:

- a snapping tool
- a 3 axed transform tool (location and rotation)
- a merge tool
- an intelligent tool for editing floors, walls, doors and windows
- and many others

More details:

- There is no limit of decoration, players can place as many decorations as they want, as long as there is free space on the ground.
- The decoration inventory is specific to each house. Buying a Varian's Statue permits the player to place one Varian's Statue in each of his houses.
- If a character gets stuck due to the placement of certain decorations, the player can use the option to kill his character and respawn him at the entrance of his house without any penalty.
- Some decorations can be interactable and start a sound, an animation... but **no gameplay!**

E/ Access the houses

1. Access your own houses

The world of Azeroth is now filled with many houses.

Obviously, in order to keep a certain consistency and not destroy the exploration aspect by offering unlimited travels between houses (and therefore between the different zones of the game), players have only two ways to join their houses:

House Hearthstone: this new hearthstone can be attached to one specific house and has a 20 minutes cooldown. Using it teleports the character directly in front of the entry of the plot.

Walking: what could be better than getting some fresh air by walking (or flying) to one of its properties.

2. Visits between players

To open the doors of his house to other players, the owner must go to the billboard at the entrance of his plot, and check the option "open to other players".

When the owner is logged in, all other players can then visit his house(s) by clicking on the billboard of a plot, and then searching for his house on the list of open houses.

The visitor doesn't need to possess a plot to visit the other houses on it.

It is also possible to enable and disable this option at the real estate agencies of Orgrimmar and Stormwind for all your plots.

VI INTENTIONS

Let's take a look at what this housing feature might look like once integrated into the game:

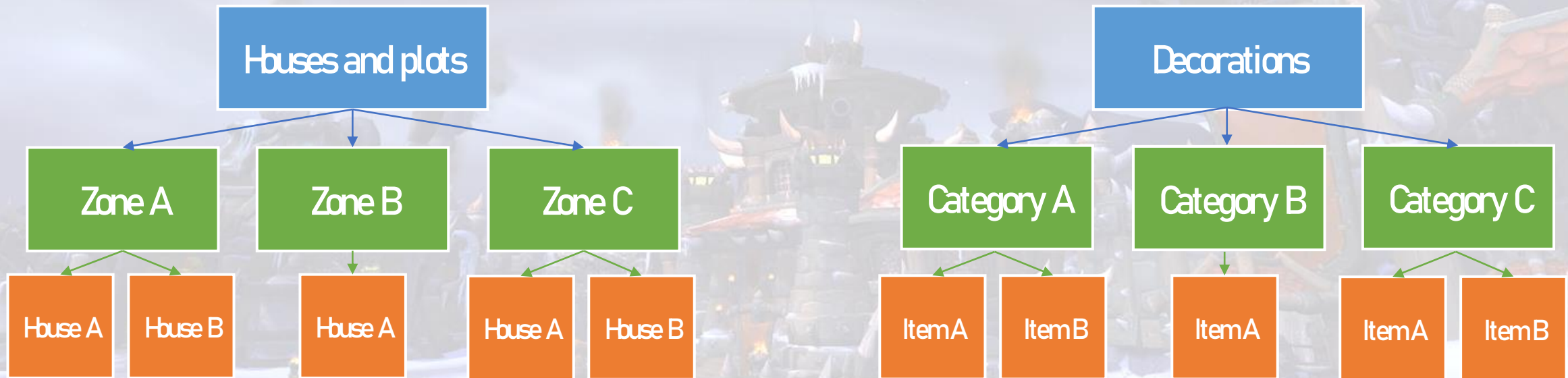
- **A/ Housing menus**
- **B/ Editing tool**

A/ Housing Menus

The housing management tool is accessible via this new icon.



The tool is divided in two main categories, themselves divided into several sub-categories:





Housing



Home

Plots & Houses

Decorations



ORGRIMMAR



WINTERSPRING



ULDUM



GRIZZLY HILLS



DALARAN



SILVERMOON
CITY



JADE FOREST



HIGHMOUNTAIN



SHADOWMOON
VALLEY



NAGRAND



DESOLACE



MULGORE

Made by HERLEHOS



Housing



Home



Houses & Plots

Decorations



XXX.XXX.XXX



ALL



FURNITURE



BAUBLES



FLOOR
DECORATIONS



WALL
DECORATIONS



FLOORS AND
STAIRS



WALLS AND
FOUNDATIONS



DOORS AND
WINDOWS



ROOF



OUTDOOR

Made by HERLEHOS



Home

Grizzly Hills

Recherche



Grizzly Hills

Amberpine Lodge

Thor Modan

Venture Bay



A pleasant abode at the top of a cliff: take a sit and enjoy this magnificent view!



Housing

Home

All Decorations

Recherche

Filtrer



AZEROOTH WARTABLE



+350

0

1,000

Buy

Vendor: Clyde

Cost: 250 house resources



B/ Editing tool

Having an ergonomic UI is very important.

When the player use the **editing table** of one of his houses, the camera becomes free, and all that is superfluous disappears from the screen (NPCs, basic UI...) in order to give way to the housing dedicated UI.

This UI is mostly non-diegetic, but a spatial UI appears close to an item when it is selected, allowing the player to move and rotate it easily.

Also, colored feedbacks indicate the player when he can or cannot place an item into the world.

Reminder: the player can also use his keyboard for more simplicity.

The screenshot shows the housing menu interface. In the center, a tree is selected, indicated by a blue arrow from the label 'Selected item'. Below the tree are three movement arrows: a blue arrow pointing up, a red arrow pointing right, and a green arrow pointing right. At the bottom, there is a horizontal bar with several sections. On the left, a red 'no' symbol is labeled 'Exit mode'. Next to it are icons for different categories: a chest, a table, a plant, a painting, a rug, and a chair. Below these are the inventory items: three trees, one tree, one tree, 99 paintings, one rug, and two chairs. On the far right of the bar is a shop icon labeled 'Inventory Housing Menu (shop)'. In the top right corner of the menu, there is a clock showing '12:30' and a help icon with a question mark, both labeled 'Help Time'.

Selected item

12:30



Help
Time

Categories

Exit mode

Inventory

Housing Menu
(shop)

ADDITIONAL CONTENT

A/ Achievements

Each major content brings its lot of achievements.

Housing makes no exception and even has its dedicated category.



The screenshot shows the 'Achievements' window in World of Warcraft. At the top, it displays 'Achievement Points' with a value of 32,960 and a search bar. On the left, a list of achievement categories is shown, with 'Housing' highlighted in green. The main area on the right is currently empty.

Achievement Points
32,960

Search

- Summary
- Character
- Quests
- Exploration
- Player vs. Player
- Dungeons & Raids
- Professions
- Reputation
- World Events
- Pet Battles
- Collections
- Housing**
- Houses and plots
- Decorations
- Social
- Expansion Features
- Feats of Strength
- Legacy

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Achievement examples:

Sub-Category	Title	Description
Houses and plots	Home, sweet home	Buy your first house.
Houses and plots	Little Houses on the Valley	Buy a house in 5 different zones.
Houses and plots	Master of the place	Buy all the houses of a zone.
Houses and plots	House Hunter	Buy a total of 20 houses.
Decorations	Interior decorator	Place a total of 50 decoration inside a house.
Decorations	Going To Need A Bigger Cellar	Obtain a total of 500 different decorations.
Decorations	This is Hallow's end	Obtain 20 different Hallow's end decorations.
Decorations	Day at the Museum	Place a total of 30 different paintings inside a house.
Decorations	Botanical Garden	Place a total of 20 different plants or trees inside a house.
Social	Party rock tonight!	/dance with 14 other players on a dance floor while everyone is wearing a party hat.
Social	All your house are belong to us	Visit a total of 100 players' houses.
Social	I'm famhouse!	Receive a total of 100 players inside your houses.
Social	There is, a house, in Azeroth...	Take first place in a housing contest for a given theme.



Achievement title references:

Title	Reference
Little Houses on the Valley	“Little House On The Prairie” TV series.
House Hunter	“House Hunters”, American telereality show about houses for sale or to buy.
Going To Need A Bigger Cellar	“Going To Need A Bigger Bag” achievement.
This is Hallow’s end	Pun between the Danny Elfman song “This is Halloween” and the world event “Hallow’s End”.
Day at the Museum	“Night at the museum” movies.
Party rock tonight!	“Party Rock Anthem” song from LMFAO.
All your house are belong to us	“All your base are belong to us” internet meme from the bad translation of the “Zero Wing” japanese game.
There is, a house, in Azeroth...	“There is a house in New Orleans” lyrics from the Animals’ song “House of the Rising Sun”.

B/ Housing contests

From time to time there will be house decorating contests, a bit like tmog contests.

Players from the same server can then register one of their houses for a category (specific theme, specific decorations, etc.).

To participate in a contest, the player must go to the real estate agent in Orgrimmar or Stormwind.

Once 5 players are in the same queue, the contest begins. The houses are presented two by two in the form of a duel. Other players can vote for their favorite house between these two.

When each house has met each house, the one with the most votes wins the contest.

The prizes to be won are various, from House Resources to exclusive decorations.

PROTOTYPE

I have made a prototype of this housing feature on **Unreal Engine**.

Here is everything I developed in this prototype:

- ✓ Switch gamemodes (normal / edit) + pawn possess
- ✓ Item ghosting + placement
- ✓ Item modification
- ✓ House score + resource management
- ✓ trader trading
- ✓ Simple quest
- ✓ Basic combat with AI
- ✓ Death and respawn system
- ✓ Inventory system
- ✓ Achievement proc
- ✓ Layering
- ✓ And sounds, animations, UI, widget management* ...

* all 3D models, textures, images, sounds and animations come from WoW Model Viewer, WoW Export and WoWHead. I didn't design any of this by myself.

Controls – Normal Mode

INPUTS	EFFECT
WASD (ZQSD) / RIGHT CLICK + LEFT CLICK	Move Character
RIGHT CLICK / LEFT CLICK	Rotate Camera
LEFT CLICK	Interact (World) / Click (UI)
SPACE	Jump
ESCAPE	Open Menu



Controls - Editing Mode [WIP]

INPUTS	EFFECT



Gameplay video [WIP]

10/26/2021 build: https://www.youtube.com/watch?v=Jjwr4ZJWag4&ab_channel=Herlehos

Features: menu navigation, interactions, quest, trader trading, combat with AI, inventory system, death and respawn system, resource management and house score, achievement proc, layering, sounds, animations and UI.

Next build [WIP]:

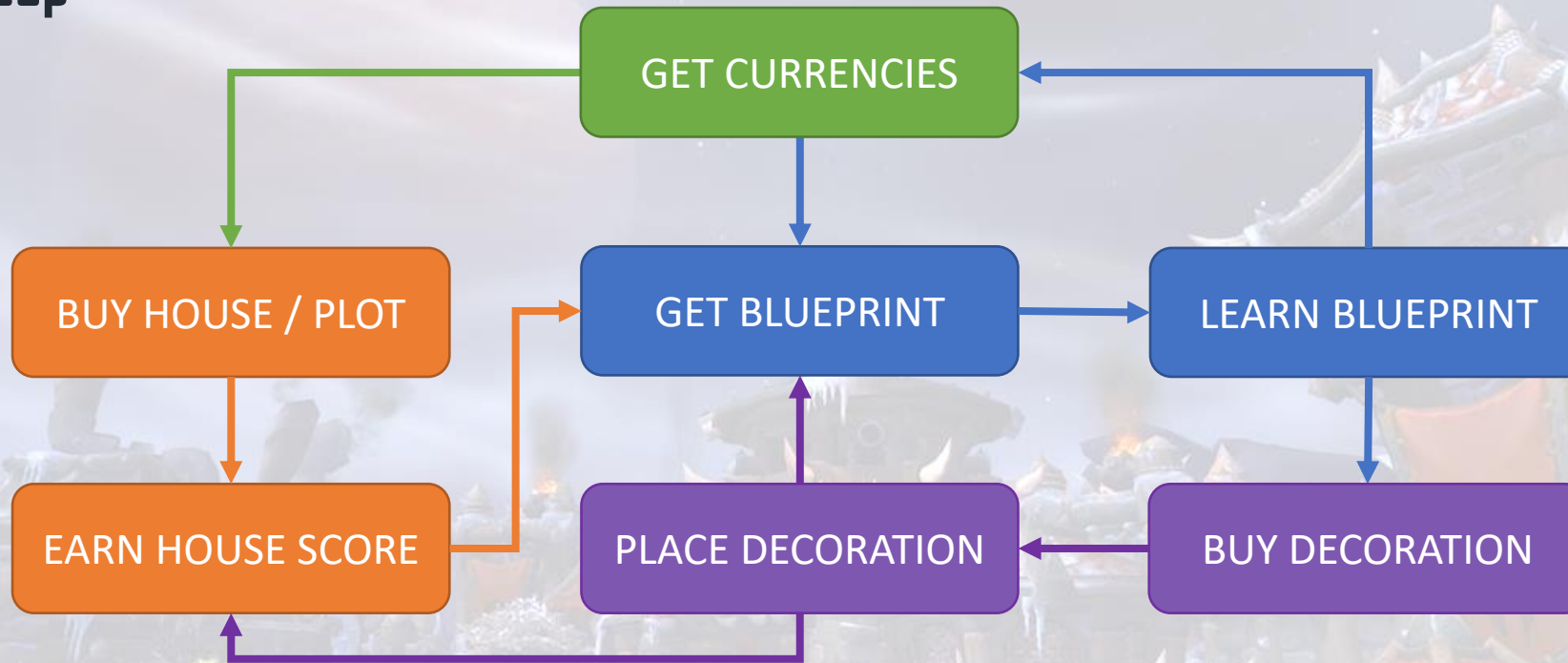
Coming Features: switch gamemodes, item ghosting, item modification, landscape creation.

Screenshots [WIP]

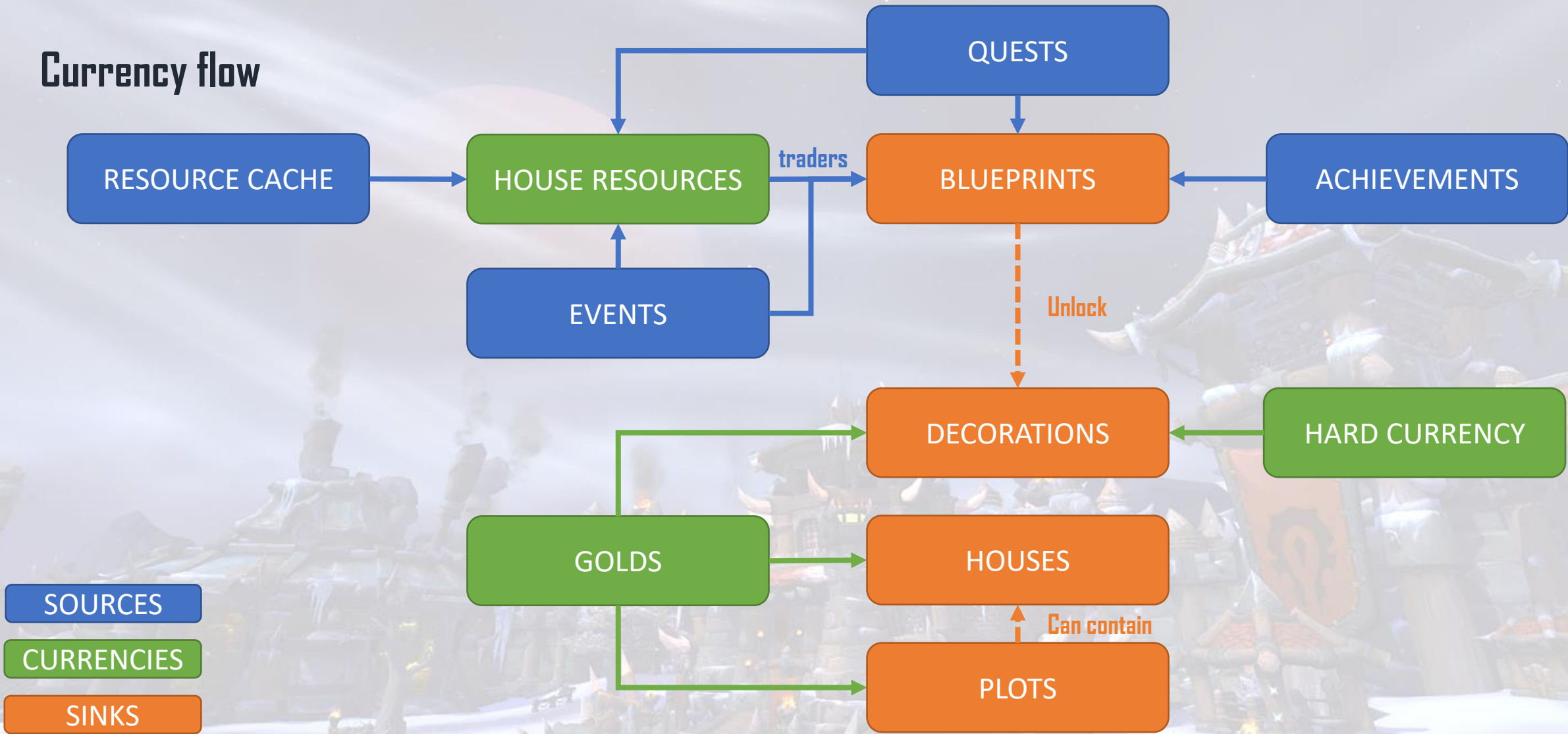


APPENDICES

Core feature loop



Currency flow





Balancing - House resources income (cache)

TOTAL HOUSE SCORE	HOUSE RESOURCES / DAY	CACHE MAX CAPACITY
1 – 9 999	100	500
10 000 – 24 999	150	1000
25 000 – 49 999	200	1 500
50 000 – 99 999	250	2 000
100 000 – 199 999	300	2 500
200 000 – 299 999	350	3 000
300 000 – 399 999	400	3 500
400 000 – 499 999	450	4 000
500 000 +	500	5 000

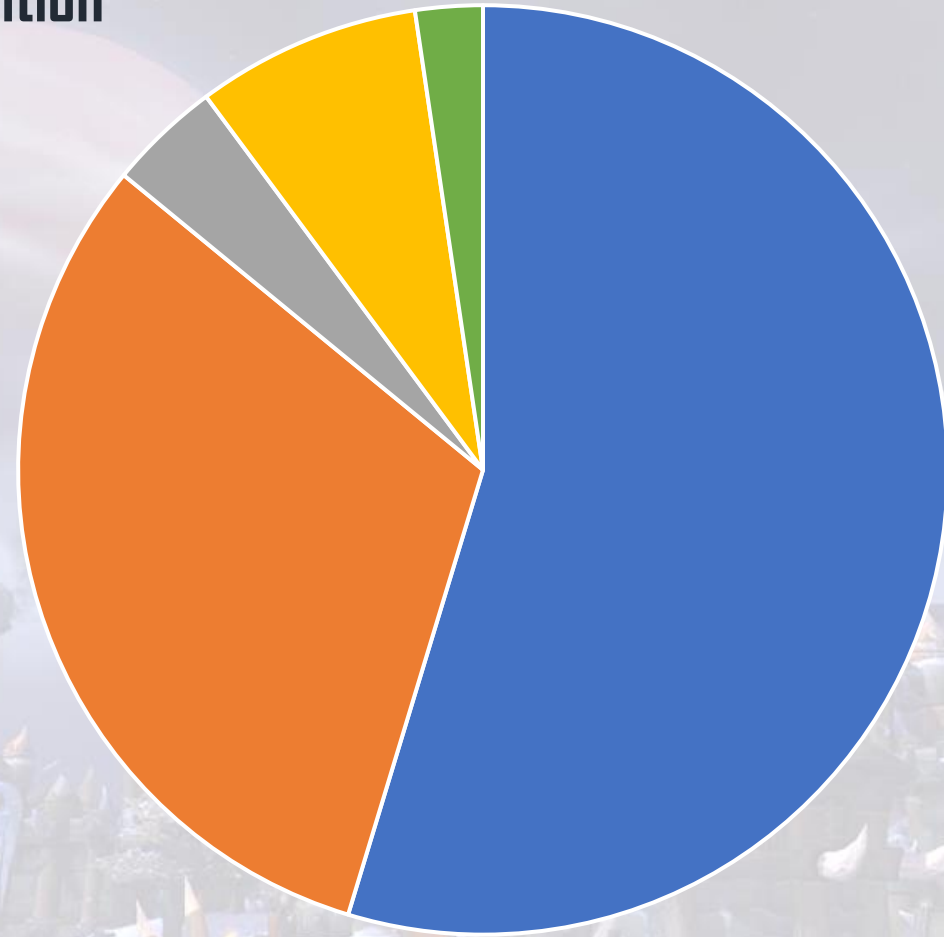
Balancing - Houses and plots prices

TYPE OF HOUSE / PLOT	PRICE IN GOLD
Small city house	8 000
Large city house	15 000
Small plot without house	20 000
Medium plot without house	30 000
Large plot without house	40 000
Small plot with house	30 000
Medium plot with house	50 000
Large plot with house	70 000

Balancing – Decorations and blueprints price ranges

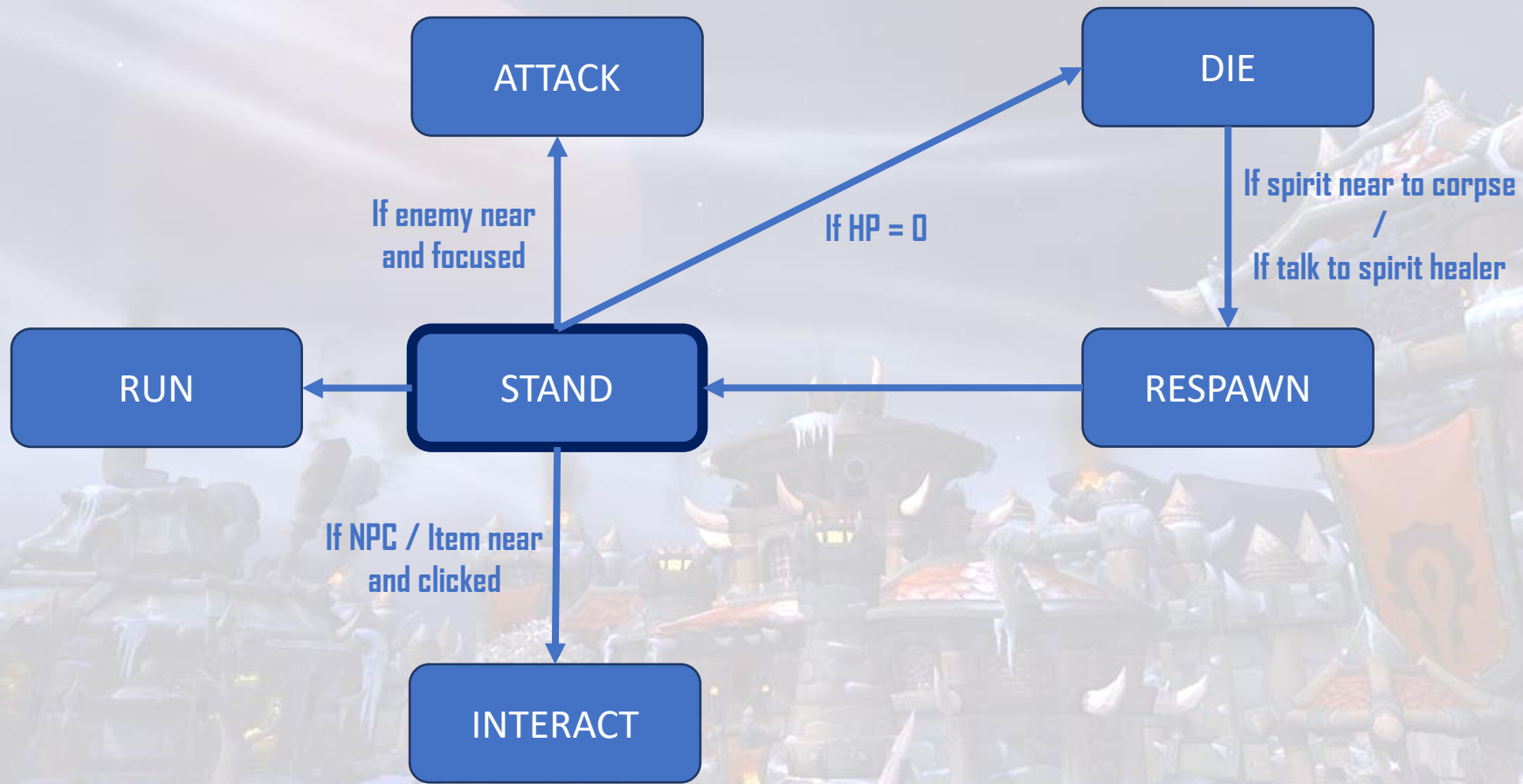
BLUEPRINT PRICE RANGE (HOUSE RESOURCES)	CATEGORY	DECORATION PRICE RANGE (GOLDS)
50 - 200	Furniture	500 – 5 000
10 - 25	Baubles	50 - 500
25 - 100	Floor Decorations	200 – 2 000
25 - 100	Wall Decorations	200 – 2 000
10 - 50	Floors and stairs	50 – 500
25 – 100	Doors and window	300 – 3 000
25 – 100	Walls and foundations	50 – 500
25 - 100	Roof	200 – 2 000
50 – 200	Outdoor	500 – 5 000

Balancing - Blueprints repartition

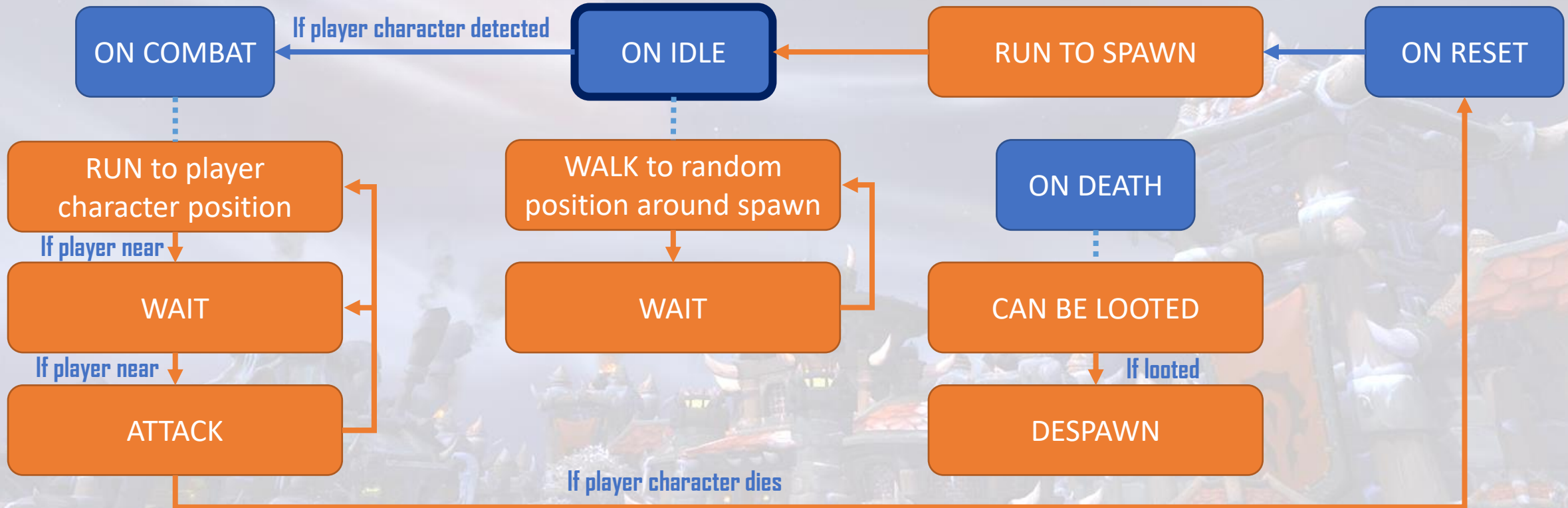


■ Traders ■ Quests ■ Achievements ■ Base ■ Other sources

Prototype - Player Character Flowchart



Prototype - Wolf AI Flowchart





THANKS FOR READING!