How to create an experiment

Version of Unity used for ExileToHome : 2018.3.7f1

Go to Asset/Resources/AllExperiences.

You can look at already created experiments such as MAIA and the Tutorial for inspiration.

Create a folder with the name as your experiment.

You need to create exactly two folders inside this folder :

* Contexts
* Group

Asset/Resources/AllExperiences/Contexts

Contexts are represent the different difficulties or audiences for your experiment.

You can create as many contexts as you want.

To do this, Right-click>Create>Experience>XpContext.

Give the name you want to this context.

Here are the fields you can fill right now :

* Context Name : the name you want to give to that context.
* Description
* Context : the difficulty or audience.
* Tubex Type : the ingame aspect of the tube that contains your experiment.

For now leave the other fields empty.

Asset/Resources/AllExperiences/Group

Group is the description of your experiment.

To create a group, Right-click>Create>Experience>XpGroup.

Give the name you want to the group.

Here are the fields you can fill right now :

* Experiment name
* Description
* Type : type of gameplay
* Subject : subject for the pedagogical content

For now leave the other fields empty.

Fill the XpGroup field of your(s) context(s) with the XpGroup you just created.

Go to Asset/Experiment.

You can look at already created experiments such as MAIA and the Tutorial for inspiration.

Create a folder with the name as your experiment.

You need to create at least three folders inside this folder :

* Prefabs
* Scriptable Objects
* Scripts
* Settings

Asset/Experiment/Scriptable Objects

You need to create at least two folders here :

* Actions
* Zones

Prefabs

Create two folders here :

* Elements
* Other

Elements

Here are the areas of the station room that will be occupied by the experiment during the game.

An experiment contains at least :

* A XpManager : an Empty that will monitor each element and allow them to communicate together.
* A Top Screen : the computer screen that will tell the players what they should do.
* A Tablet Screen : the tablet to interact with the screen.
* A TubeX : the tube that contains the experiment.
* As many Holograms as you want : the display 3D elements at the center of the room.

You can create some optional elements to improve the gameplay :

* Up to four Bottom Screens : screens or wall areas that display informations under the tablet.
* Up to four Corner Screens : screens or wall areas that display informations in the corners of the room.
* A door : some experiments will want to interact or display informations on the entrance door of the station.

Each of these prefabs must belong to a namespace under the Experience namespace :

namespace CR.HelloHouston.Experience.YourExperimentName

XpManager

Create an Empty.

Attach a script to the empty.

The script must use the calibration system from ExileToHome :

using CRI.HelloHouston.Calibration;

The script must derive from XPManager.

Save the prefab inside your Elements folder.

Reference your XpManager in your Context located in the folder

Asset/Resources/AllExperiences/Contexts

Top Screen

Create a 1148\*1148 canvas.

Attach a script.

The script must derive from XPElement.

Save the prefab inside your Elements folder.

Tablet Screen

Create a (3895\*881?) canvas.

Attach a script.

The script must derive from XPElement.

Save the prefab inside your Elements folder.

Hologram

Create a prefab with a 3D model.

The model should have a holographic material (you can use the ones used for MAIA or the tutorial experiment if you wish).

Attach a script.

The script must derive from XPHologramElement.

Save the prefab inside your Elements folder.

Bottom Screen

Create a \* canvas.

Attach a script.

The script must derive from XPElement.

Save the prefab inside your Elements folder.

Corner Screen

Create a \* canvas.

Attach a script.

The script must derive from XPElement.

Save the prefab inside your Elements folder.

Asset/Experiment/Scriptable Objects/Zones

Zones represent areas of the station room occupied by one or several experiment elements.

Here you will create at least two Zones :

* WallTopZone : this wall panel will allow you to interact with the experiment. It contains the Top Screen Element, the Tablet Element and the TubeX Element.
* HologramZone : it can contain as many Holograms Elements as you wish.

You can create additional Zones if you wish :

* WallBottomZone
* CornerZone
* DoorZone

To create a Zone :

Create>Experience>Zone>Click on the type of Zone you wish to create.

Reference each Zone you just created in your Context located in the folder

Asset/Resources/AllExperiences/Contexts

Reference all your Elements prefabs created previously in your Zones.

At this point your experiment should work. It won’t do anything, but you can already run the game to check if everything works fine. Check the Game Master documentation for instruction on how to select the experiment ingame.

If you encounter any error, recheck the previous steps.

From now you won’t have to do every instruction in a fixed order. You can jump to the parts that correspond to what you want to do.

Manager

Top Screen

Tablet Screen

Hologram

Bottom Screen and Corner Screen

Holocube

Translation