Staatliche Museen zu Berlin
Preußischer Kulturbesitz

museum4punkt0

Stiftung Preußischer Kulturbesitz
& Staatliche Museen zu Berlin

Trompe-l’œil

A prototype for Gemaldegalerie

This is a prototype developed by NEEEU Spaces GmbH and museum4punkt0 to test different ideas on how Augmented Reality could help to improve the visiting experience of the Gemaldegalerie.

The project works using ARKit to recognise the paintings, and then triggering action points that depend on the painting. Each painting had different interactions, in order to understand which were the most attractive for visitors.

ARKit works only for iOS devices which are compatible.

The list of compatible devices is here:

https://developer.apple.com/library/archive/documentation/DeviceInformation/Reference/iOSDeviceCompatibility/DeviceCompatibilityMatrix/DeviceCompatibilityMatrix.html

Description

The app is build up out of multiple parts working together, the UnityARKit plugin is used to connect Unity to ARkit for tracking the phone's movement, adding the camera feed and tracking the marker images used for localisation.

Installing / Getting started

Install Unity 2018.2.14f1.

Download the repository from

https://bitbucket.org/neu-io/trompeloleil.git

Open the project using Unity Hub.

The project will open, and you will find more information about the parts inside.

Initial Configuration

1. Make sure the build target is set to iOS in *File -> Build Settings*.

Deploying / Publishing

For building in Unity3D, for iPad.

1. Make sure the build target is set to iOS in *File -> Build Settings*.
2. In the same menu hit the *Build and Run* button.
3. In XCode select your iPad and hit run.

Might anything go awry consult the documentation here:

https://unity3d.com/learn/tutorials/topics/mobile-touch/building-your-unity-game-ios-device-testing

Features

This app uses the UnityARKit plugin. The documentation for it can be found here: https://docs.unity3d.com/Manual/index.html

Everything is based on Unity's regular Event system to enable and disable the different states of the app. It is recommend to look through the Main scene to see the build up. Comments have been added describing which parts do what.

The different states of the app are controlled by turning on and off gameobjects that contain their respective parts.
Each painting's content is saved in a Scriptable Objects in the Assets/Areas/, these define the audio that should be played and the text that is visible.

Configuration

The app can be in one of two states, administrative mode, this mode sees all the options for the app and can control what is visible on the other devices that have their state set to player mode.

This state can be changed through the iOS Settings app, scroll down to the name of the app and select a different role. This will be activated the next time the app is relaunched. Make sure to kill the app through the app switcher by swiping up (iOS 12)

Contributing

If you'd like to contribute, please fork the repository and use a feature branch. Pull requests are warmly welcome.

Links

- Museum4punkt0 website: https://www.museum4punkt0.de/en/
- NEEEU website: www.neu.io
- Project homepage in NEEEU's website: https://www.neeeu.io/portfolio/projects/gemaeldegalerie/
- Repository: https://bitbucket.org/neu-io/trompeloleil.git

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