

VR智慧駕訓體驗車

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Accton
Making Partnership Work



國立中興大學
National Chung Hsing University

應用數學系
Department of Applied Math.



A Driver License Field Test Simulation System - VR Edition



animation
gif



Project members

- Government Supervision Office
- A Driver License Training School
- Multimedia Laboratory, Department of Information Management, National Kaohsiung University of Science & technology

參加行政院創新大賽











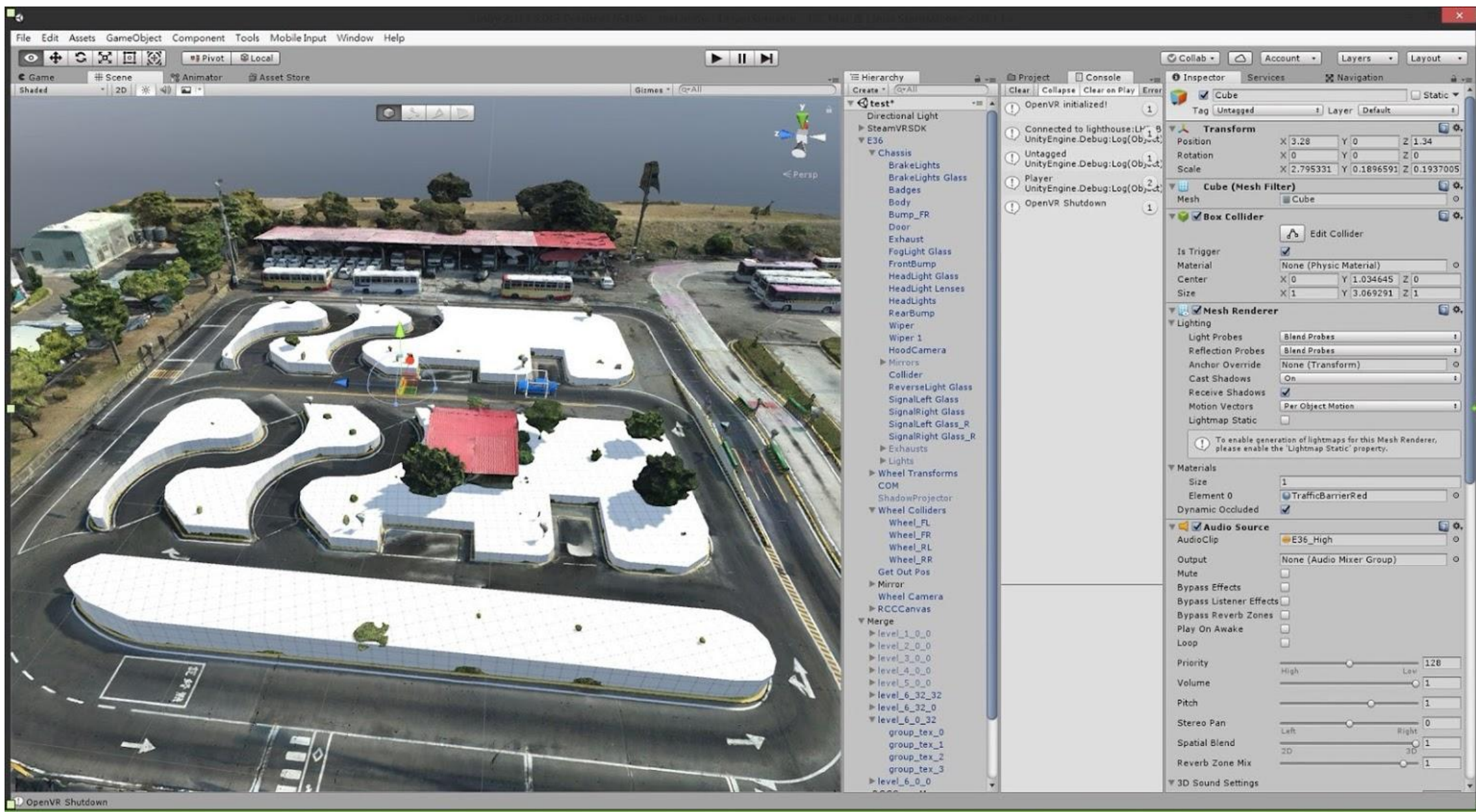
Procedures

- Using Drone to create a 3D-image model (by Altizuire)
- Import the model into Unity Scene
- Using Realistic Car Controller
(<https://assetstore.unity.com/packages/tools/physics/realistic-car-controller-16296>)
- Using EasyRoads3D Pro v3
<https://assetstore.unity.com/packages/tools/terrain/easyroads3d-pro-v3-469>
- Using ProBuiler <https://unity3d.com/unity/features/worldbuilding/probuilder>
- Using Logitech Driving Gear
<https://www.logitechg.com/en-us/products/driving.html>

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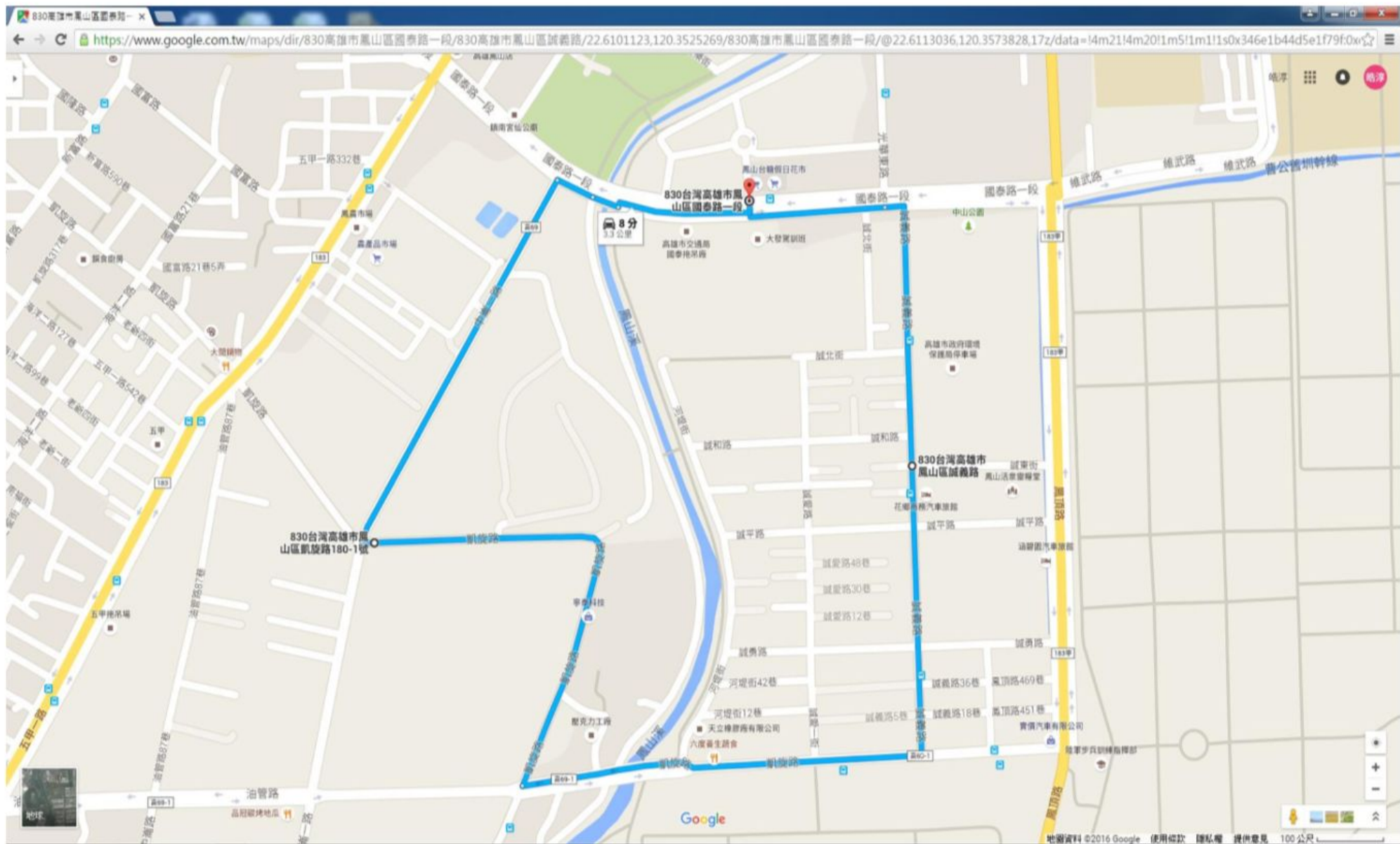


PROFESSIONAL-GRADE VR

Built to meet the needs of today's most demanding VR users, VIVE Pro is an easy-to-deploy VR system that scales with your business and provides the richest feature set for professional users. From seated environments to expansive, multi-user deployments, VIVE Pro delivers the highest fidelity, clearest audio and most immersive VR experience.



國泰壽險 機車VR



學習道路駕駛暨道路駕駛考驗路線 1：駕訓班→右轉國泰路一段→右轉誠義路→右轉凱旋路(高 69-1)→右轉中崙一路(高 69)→右轉國泰路一段→右轉駕訓班

- **The integration of block chain and online to offline virtual reality smart store system**
- **The Digital Platform Using Virtual Reality Technology - Implementation in HTC VIVE**

Workshop on Customs Administration and Trade Facilitation

The integration of blockchain and online to offline virtual reality smart store system

(1) User login system



(2) System menu and operation



(3) Shopping environment



(4) Product Instructions



(5) settle accounts system



(6) Block chain system



**The integration of blockchain and online to offline
virtual reality smart store system**

- **HTC VIVE**

Put on a VIVE VR head-mounted display, and the fantasy experience instantly replaces the real world! With virtual reality tracking technology, excellent image rendering, a 110-degree wide-angle view, intuitive controls, and high-resolution tactile feedback, SteamVR delivers unparalleled immersion.



- **3d scanner**

It is used to detect and analyze the shape (geometric structure) and appearance data (such as color, surface, etc.) of objects or environments in the real world. The collected data is often used to perform three-dimensional reconstruction calculations to create a digital model of the actual object in the virtual world.



Procedures: 6 steps

(1) User Registration and login system



Consumers use the member registration and login system, to login the username/password and enter the proposed VR shopping system

(2) System menu and operation



The operation instruction menu has text and video operation instructions as well as system setting options.

(3) Shopping environment



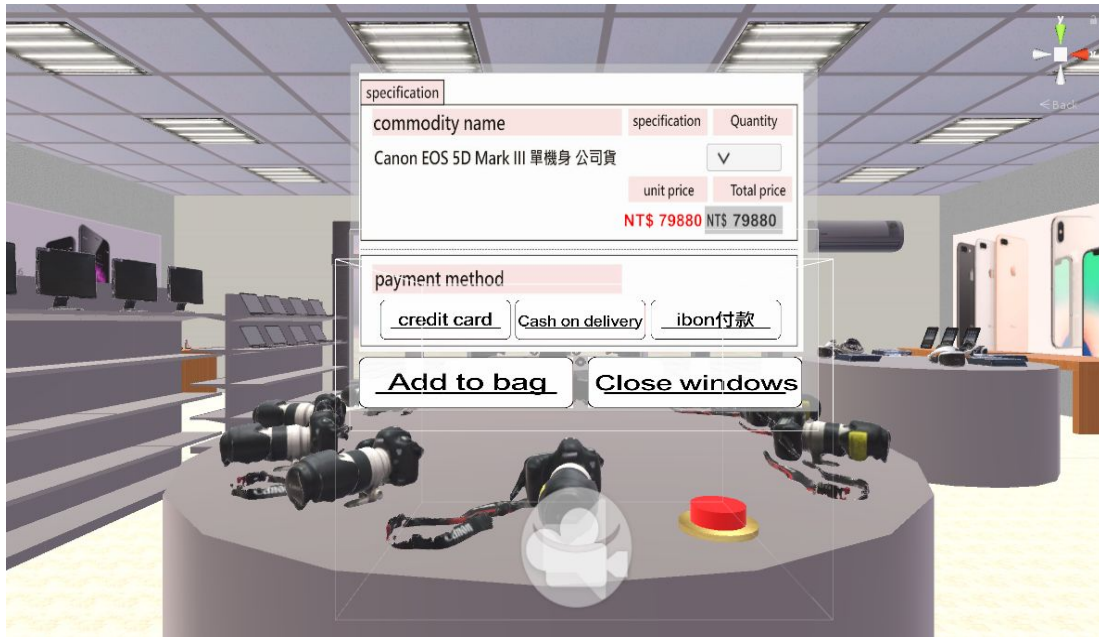
After entering the VR mall, you can browse and pick any item in 3D view.

(4)Product Information



Click the product (red) button to open the product description window to view the product details.

(5) On-line Shopping System



Inside the shopping cart menu, you can choose the desired item's quantity, color, and payment methods for on-line shopping.

(6)Block chain system

智慧合約交易清單

合約書編號	購買品項	數量	規格	金額	購買日期	賣家姓名	買家姓名
A07022601	Canon5D MarkIII	1	NA	NT\$50,000	107.02.26	張三	李四
A07022602	HTC VIVE	2	NA	NT\$60,000	107.02.26	張三	王五
A07031005	Apple iphone8	1	金色	NT\$28,500	107.03.10	張三	陳七

After the checkout, the entire consumption process will be recorded in the blockchain.

The Digital Platform Using Virtual Reality Technology - Implementation in HTC VIVE

https://www.youtube.com/embed/v7TzLJw6D5o?rel=0&fbclid=IwAR0dHMmDBD3fIYQGBkkLKk0SG-VyEgvi6_a8CistKAfrYYroYoV87o787ZA

- This research uses virtual reality technology to construct a simulation **3D scene exhibition hall**, and combines VR virtual reality devices with a **head-mounted display** as the presentation and browsing of the screen.
- Three types of themes to be presented:
 - **360-degree surrounding space**,
 - **Simulation Painting style based on deep learning technology**
 - **game experience hall**



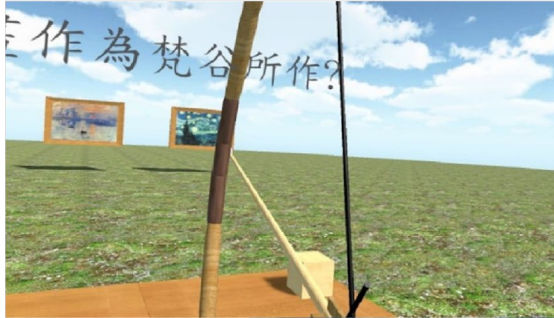
360-degree surrounding space



Simulation Painting style based on deep learning technology



game experience hall



動態猜題遊戲

