3D Action Role Playing Game

LOST IN UST

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LOST

This project aims to develop an Action Role-Playing Game (ARPG) which introduces the impressive 3D graphics and enhance interactive elements through Android mobile devices platform.

- To develop a fancy adventure story
- To design various scenes of HKUST with 3-dimension graphics where the game objects (monster, main characters etc.) are original
- To maximize the utilization of the resources of mobile devices by creating plugins to game engine in order to enhance the interactions between the game and real environment.
  - Use of Indoor positioning system (HKUST) Library borrowed from Dr S.H. Song
  - Use of Android Eclipse to program the android and create the plugins for game engine
  - Use of Open Source plugins to assist the game development process

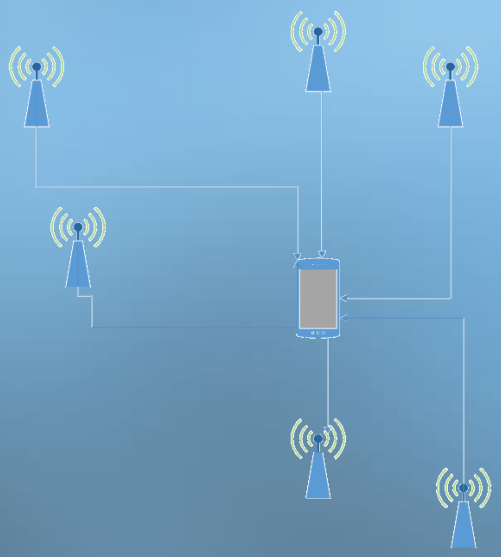
Story

Player in “Lost in UST” has to survive in strange environment, resist the enemies and complete the requests from the NPCs (Non-player characters). The main story contains 5 chapters and the scenes take place in HKUST. By combining with Android functions, the interaction between real environment and virtual game world is enhanced.

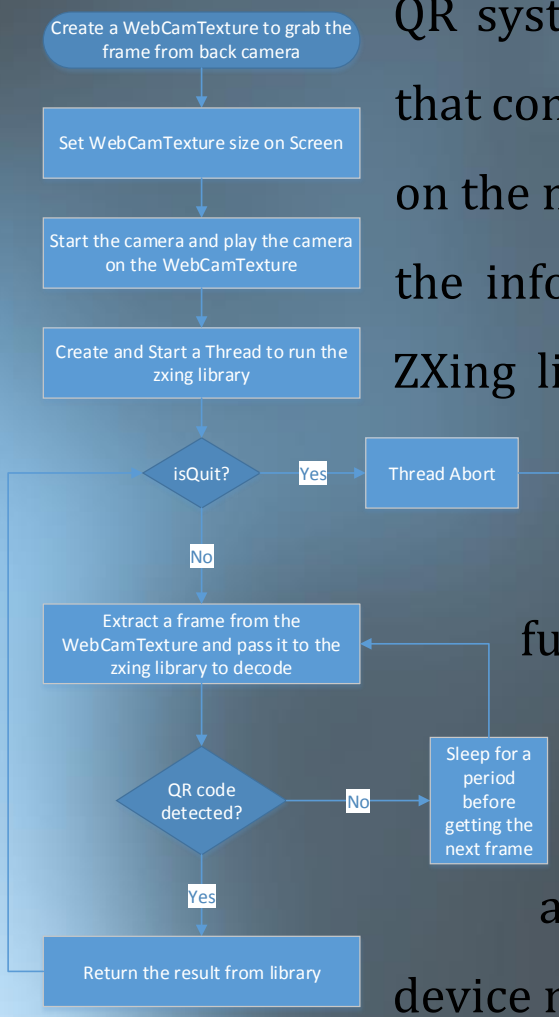
3D Modelling

UST appeared in game in 3-dimension, with 15 monsters are designed and created. The 3-dimentional idea is designed to increase the attractiveness of the game as well as make it best-fit for the theme. The design process is a critical part as quality and complexity is adjusted to optimize the performance and capacity of the game.

Indoor Positioning System & QR code



Utilizing the sensors and computing power of mobile devices, Lost in UST can detect the surrounding environment of users and automatically ask players to achieve tasks. For an instance, player is required to arrive particular classroom and the game will keep track of their position. Once they arrived specific location, the corresponding events will be triggered. This Indoor Positioning System is embedded into the game system to receive the signals from the Access Point and determine the position based on the signal strength.



QR system is a type of two-dimensional barcode that contains information. By accessing the camera on the mobile device and scanning on the QR code, the information in the QR code can be reached. ZXing library is used in this project which is an open source project on GitHub. It provides full support on Unity3D and android. Decoding the QR code enables players to obtain the special items (e.g. Task's items) and special weapons. The camera of mobile device must be present to access the function.