CLOUD-BASED AUGMENTED REALITY SYSTEM
LCT3-13

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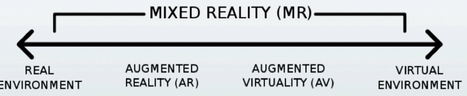
Overview

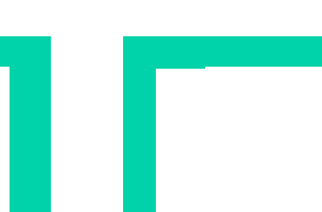
Cloud is not only a method of saving data in an external place, where it is a virtualized pool for saving data, through the network; but also a method of computing without the usage of the processor from a client side.

Augmented Reality (AR) is a combination of the real-world and the virtual environment.



Current technology:

- Most AR applications require physical markers which arise limitation on what and where to be shown.
- GPS navigation system cannot be applied to indoor location.
- HKUST current path advisor is not a real-time system.



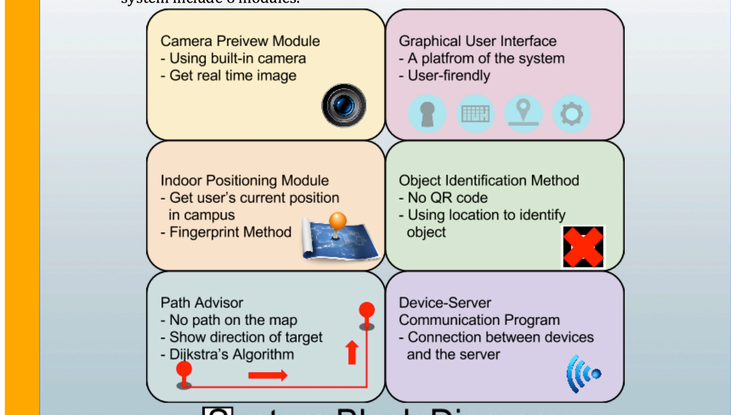
The main goal of this project is to implement an Android mobile application of an AR System with Cloud Storage to be used in the HKUST campus.

Objectives:

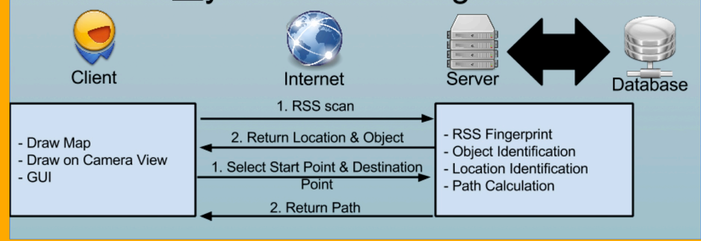
1) To build a user-friendly AR application
2) To have a competitive performance AR System without extensive hardware requirements
3) To develop a real-time path advisor to show the path on a real-time camera image view

Methodology

A cloud-based platform for users is to identify their locations and surroundings in campus. MySQL is used to setup the database to store object identification data in the server. Java is used to implement the program for different functions used in the system. Also, it requires a program to build a link for communication between users and the server. The entries of the system include 6 modules.



System Block Diagrams



Results