

為流動應用程式提供加速服務的雲計算平台

Cloud Computing Platform Providing Acceleration as a Service (AaaS) for Mobile Applications

通過利用雲計算技術來為手機端的互動式應用程序提供加速服務

Design and implement a new platform to accelerate the execution of mobile interactive applications by leveraging cloud computing technologies

當前，裝有各種傳感器和多媒體功能的手機及流動裝置十分普遍，為流動應用程式開發者提供了龐大的硬件平台，開發創新應用。然而，由於流動裝置運算能力的限制，一些需要消耗大量計算資源的應用，特別是互動式應用在手機端運行速度未如理想，用戶體驗欠佳。因此理大設計了一個新的移動雲計算平台，可以為手機端的互動式應用程序提供加速服務。



建築物自動識別
Mobile augmented reality

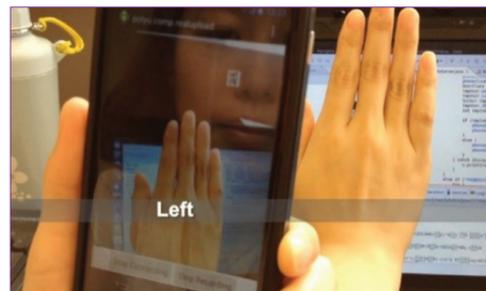
Modern mobile devices equipped with a multitude of sensors and multimedia capabilities provide opportunities for the creation of various new mobile applications. However, these applications usually encounter poor user experiences because of the inherent resource constraints on mobile devices, especially when running interactive applications. To address this problem, a new mobile cloud platform is developed to accelerate the execution for mobile interactive applications.

特色與優點

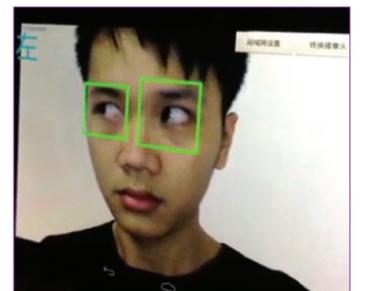
- 通過在兩個流動終端和雲計算，節約資源消耗
- 自適應分區的流動互動應用，提高應用程序的運行速度
- 易於開發和部署，為開發者提供加速服務

應用

- 人機交互 (HCI)：特別是非接觸式互動操作，如：手勢、動作、眼球等
- 流動虛擬實境：識別用家周圍的物理環境，並根據用家移動呈現相關的有用信息



非接觸式手勢識別
Touch free HCI - Hand gesture



跟蹤眼球動作
Touch free HCI - Eyeball movements

Special Features and Advantages

- Performance improvement of mobile interactive applications by adaptive partitioning of applications
- Resources consumption saving at both mobile side and cloud side
- Easy development and deployment through providing Acceleration as a Service (AaaS) for developers

Applications

- Touch free Human Computer Interaction (HCI) on Mobile Devices – this project enables the control of mobile applications by contactless interactive ways, e.g., hand gestures, eyeballs movements, etc
- Mobile Augmented Reality - To recognize the physical environment surrounding the mobile users, and rendering related useful information to users

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