整合式行動多媒體服務系統之設計與分析

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摘 要

由於多媒體服務之需求與日俱增，加以無線通訊技術之長足進步，促成了行動式多媒體服務系統的產生。目前行動多媒體系統的設計朝向兩大方向。一為以可攜式系統為主的系統，如PDA (Personal Digital Assistant)，一為以車載電腦為主的系統。由於PDA主要以攜帶方便為賣點，所以有體積及電源的限制，無法像車載電腦般可以整合許多系統。故目前還是以車載電腦較有發展空間。 由於目前行動式系統之主要瓶頸在於無線通訊技術，故就本論文目前全球較為普遍之無線通訊及數位廣播系統，由其通訊原理來分析及評估其作為行動式多媒體系統的無線傳輸通道。 本論文所設計與研究的系統分為硬體及軟體兩部分。其中硬體部分先完成車載電腦的設計，然後以車載電腦為發展平台來整合其他子系統，包括無線通訊系統、衛星定位系統、多媒體影音系統及數位廣播接收器。而軟體則有兩大的部分，一為作業系統，二為應用程式，由於行動多媒體系統須連上開放式環境如網際網路，故須採用開放式作業系統，又基於車上環境考量，故選擇採用微軟Windows CE作業系統。然後以作業系統為基礎，在其上發展其他應用軟體，包括衛星導航軟體、多媒體瀏覽軟體等，並進行實地應用測試。

關鍵詞 : 行動式多媒體 ; 衛星導航 ; 車載電腦

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