在隨意式無線網路上針對目的端移動所作的路徑維護

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摘 要

由於掌上型電腦(PDA)和筆記型電腦的快速成長，無線網路對現今之電腦及通訊業而言，成為一項極 重要的觀念及技術。而AD HOC NETWORKS是一種完全經由無線連結的行動節點所建構而成，是無基礎建 設(INFRASTRUCTURELESS)及無集中式管理的無線網路，主要提供不限量的用戶，能隨時架設無線通訊 網路，每個節點都具備繞送(ROUTING)的功能，並且能尋找(DISCOVERY)和維護(MAINTENANCE)這繞送資 訊。但移動的節點會改變網路的拓撲，因此要選擇一適合的繞徑協定(ROUTING PROTOCOL)，來為移動的 節點尋找一溝通的路徑。由此可知，繞徑協定扮演一個很重要的角色。近年來，有許多學者致力於研究AD HOC NETWORKS的繞徑協定，如AODV[4]、DSR[5]等皆是。另外，在 其中考量備份繞徑(BACKUP ROUTE)與多重繞徑(MULTIPLE ROUTE)的方法也陸續被提出。但大部分都是針 對中間的節點移動時來做探討，卻忽略當一連接建立好，目的端或來源端移動時對網路繞徑協定效能之 影響。本篇論文乃針對增進網路繞徑協定的效能作探討，以受歡迎的AODV繞徑協定為基礎，考量路徑端 點(SOURCE/DESTINATION)移動的情況下，有關路徑維護的議題，提出一個有效率的方法，在不增加額外 的OVERHEAD情況下，提高資料封包傳送率，有效的維持網路連接。

關鍵詞 : 繞徑協定，備份繞徑，多重繞徑，隨意式無線網路，路徑維護。

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