

以電源保存為考量的繞徑協定在隨意式網路上之效能評估

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摘要

隨意式無線網路具有相當靈活與便利的特性，可以在沒有網路基礎建設的環境中隨時建立網路。另外，在隨意式無線網路中，並不需要特定的路由器，每一個網路節點都可以扮演路由器的角色，來傳遞所收到的封包。運用在隨意式無線網路中的裝置，由於具有可移動的特性，所以必須依賴電池做為電力的來源。因為每一個節點都是路由器，如果其中某個節點的電力消耗特別快，很容易造成網路被分割，而使得網路上的節點無法建立封包傳遞路徑。在目前相關的研究中，多以控制節點射頻功率大小節省電力或依據現有電池剩餘電量的方式來控制繞徑達成整體網路使用壽命最大化的目的。我們在本研究中，在AODV繞徑協定上實現了以LPR機制來評估電源保存為考量的繞徑協定在隨意式無線網路上之效能；並提出了改進的繞徑協定—LPR-plus，來延長整體網路使用壽命。由模擬的結果來看，相較於LPR，LPR-plus能夠有效地延長整體網路使用壽命。

關鍵詞：隨意式網路，繞徑協定，電源保存

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