流量欄取商店位址設置問題之研究

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摘 要

在設施設置理論中，均假設需求發生於節點上；然而，日常生活中，需求常發生於網路路徑上，顧客於路徑行走過程中，會順道光顧設置之商店，此類商店如便利商店、加油站，甚至最近風行的泡沫紅茶店，都具有上述特質。此類商店之設置問題在近幾年漸漸受到重視，稱為路徑需求商店設置問題(Flow-Capturing Location-Allocation Model , FCLM)；而在路徑需求商店設置問題中，存在許多假設，如顧客只能光顧一間商店、不考慮競爭情形等等；有鑑於此，本研究針對此問題，去除部分假設，發展更符合實際情形之問題及模式。首先針對傳統路徑需求商店設置問題，進行部分學理之探討；且由於傳統路徑需求商店設置問題中，具有多項目標，因此本研究導入多目標規劃技術，探討可行性及目標間衝突性。 而由於傳統路徑需求商店設置中，存在顧客只能光顧一間商店以及不考慮同型商店間競爭情形之假設；因此，本研究分別去除上述假設，發展多型態流量攔取商店位址設置問題，以及競爭型流量攔取商店位址設置問題，構建其最佳化數學模式及發展啟發式解法。繼而針對本模式所構建之多目標流量攔取商店位址設置模式，以及多型態流量攔取商店位址設置模式，提出範例進行求解，除此之外，亦探討傳統路徑需求商店設置問題中目標間衝突性，並針對傳統路徑需求商店設置問題，研究模式中使用之參數及設施數目變動對解的影響，進而探究其原因；在競爭型流量攔取商店位址設置模式方面，則以彰化縣員林鎮之便利商店為研究對象，並進行資料蒐集及部分假設，繼而以本研究所發展之啟發式演算法求解，以求出新進商店之設置位址。第七章則進行結論，以及建議未來研究方向。

關鍵詞 : 多型態流量攔取商店位址設置模式 ; 路徑需求商店設置 ; 多目標規劃 ; 多目標流量攔取商店位址設置模式 ; 競爭型流量攔取商店位址設置模式

目錄

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