

覺化自動查詢擴展之網路影像檢索代理人系統

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摘要

在web 2.0的時代，使用者需要一套可以進行資訊過濾機制與方法，以便迅速的存取數位資源。代理人可應用於影像檢索，然而缺乏自動查詢擴展的能力，無法讓多個代理人協同合作以完成更廣泛的檢索。另一方面，查詢擴展的相關研究，缺少視覺化的展現方式。本論文的目的是整合自動查詢擴展與資訊視覺化，利用代理人的自主性提供使用者有別於現有網站的影像檢索方式。本研究採用PASSI方法論進行+多代理人系統分析與設計，包括以UML描述系統需求模型、代理人社群模型、代理人實作模型與部署模型，並以Java實作編碼模型。自動查詢擴展是透過詞彙網路取得同義詞，由主控代理人重新組織查詢並且派遣影像檢索代理人進行檢索任務。資訊視覺化則是採用prefuse程式庫展現關鍵字、同義詞、同義詞集與代理人之間的關係。本研究的具體成果為：(1)以自動查詢擴展機制降低使用者提交檢索的次數：系統會重新組織使用者所提出的請求，並且送出多個使用同義詞彙的要求給檢索引擎。(2)利用多代理人系統提高檢索效率：利用分散於不同主機的多個代理人提升系統效率。(3)以視覺化方式呈現自動查詢擴展結果。

關鍵詞：代理人、自動查詢擴展、詞彙網路、資訊視覺化、影像檢索

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