# 關連式資料庫元件產生器對專案管理設計階段品質改善之研究


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**摘 要**

採用元件式軟體發展技術(Component Base Software Develop- ment, CBSD)方法將關連式 資料庫特性與物件導向開發技術結合，設計出融合資深開發人員與設計師的商業知識背景之關連 式資料庫元件產生器(Database Business Component Generator, DBCG)，藉由DBCG減少技術人 員異動造成專案品質難以掌控問題、縮減應用系統專案的開發時程與減少錯誤的發生。 本論文是在三層式應用系統架構的商業邏輯層提出關連式資料庫元件產生器(DBCG)，DBCG可 以快速產生資料庫商業元件(Database Business Component, DBC)，可供網頁應用程式(Web Form) 或視窗應用程式(Window Form)所使用，元件是使用ADO.Net物件或OLE DB.Net物件，透過資料提 供者的DataReader、DataAdapter及Command物件連接關連式資料庫，間接與關連式資料庫進行交 易處理，DBC可以做為展示層與資料層進行資料存取的中介元件。 系統開發人員依需求採用軟體元件組裝的方式開發應用系統，隨時可依關連表格增減產生新 的元件，修改時亦僅侷限部分元件而不需要牽動整個系統。軟體開發者只需要專注於有價值的商 業邏輯撰寫，研究結果顯示依照軟體特性與軟體度量，整個開發時程因而減少1/3時程，系統平 均每千行錯誤率也由5.4個錯誤下降至2.3個錯誤，專案管理在設計階段的軟體品質因此獲得改善。



關鍵詞 : 專案管理 ; 元件式軟體發展技術 ; 資料庫商業元件產生器 ; 軟體度量 ; 軟體品質


**目錄**



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