

# 由建築資訊模型提取鋼筋混凝土工程數量之應用實證

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## 摘要

Budget Control, composed mainly of quantity and unit price, is one of the key successful factors of construction projects. Traditional processes for budgeting relies on estimation of quantities by manual interpretation of 2D design drawings, which turns out to be extremely complicated and time consuming in engineering practice. Recently, with the popularity of 3D design, object oriented programming, and agreement of interoperability among software vendors, building information modeling (BIM) would not only be a visualized communication tool for collaboratively design buildings in order to eliminate much of the waste, error, and inefficiency, but also as a base for speeding up the quantity take-off. The aim of this particular study is to verify the quantities of concrete and steel taken off from the BIM models of a 12-story reinforced concrete building by comparison with traditional estimation of the same project. Although the quantity is not automatically taken off, it has been shown that with BIM models, a visualized estimation could be performed rapidly and precisely.

**關鍵字：**Building Information Modeling (BIM), Quantity Takeoff, Reinforced Concrete Building