

# vms-rtk 運用在加密控制測量之探討

## The Implication of vms-rtk on Densification Control Survey

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### 摘要

目前臺南縣轄區地段尚有圖解區約百萬筆土地未辦理重測或地籍整理，數值區僅約三十餘萬筆。為使地籍測量全面數值化，如何加速控制測量作業及確保精度為目前重點。本研究以官田鄉四等控制測量之靜態觀測量，運用 vms-rtk 程式作後處理計算（與 vms-rtk 外業實測作業使用程式相同），再經坐標轉換後成果比較靜態計算結果，避免再次施測產生偶然誤差，作精度分析。

藉由此項研究探討 vms-rtk 技術的精度分析外，期望引入本項技術辦理加密控制測量作業，並尋求配套地殼監控（比較長時間前舊有坐標）及測量作業為一體，使地籍測量測量工作兼具地殼監控的附加價值，為本項研究的精神。

### Abstract

There is a great need of densification of control points for cadastral resurvey and land consolidation in Tainan County. Rapid survey, good quality control and effective maintenance are current issues. The installation of GPS network real-time kinematic (VMS RTK) positioning play the key role throughout the county. This network is eliminating the need for traditional control networks and changing the way survey data is collected. A case of GuanTien 4<sup>th</sup> order static GPS control survey were postprocessed with vms-rtk software in computer server. Both internal vms-rtk precision and coordinates transformation with respect to static solution were evaluated. Collecting RTK precise positions in this way has vast implications on survey, construction, project management, archival and backup. This paper will discuss the technology used and implications on the cadastral control points and surveying industries considering crust movement.

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