

交通部運輸研究所合作研究計畫出版品摘要表

出版品名稱：公路投入成本暨服務績效評估資訊系統建置計畫			
國際標準書號 (或叢刊號)	政府出版品統一編號 1009202008	運輸研究所出版品編號 92-60-5241	計畫編號 91-IB01
本所主辦單位：運輸資訊組 主管：吳玉珍 組長 計畫主持人：吳玉珍 組長 研究人員：李霞 聯絡電話：02-23496886 傳真號碼：02-25450426	合作研究單位：康地科技顧問股份有限公司 計畫主持人：顏應明 研究人員：黃南輝、許翹宣、莊捷媚、 李麗娟、蕭振龍、鄭凱文 地址：台南市中華東路三段 380 巷 55 弄 1 號 聯絡電話：(06)2692332		研究期間 自 91 年 02 月 至 91 年 11 月
關鍵詞：投入與產出分析、績效評估、資訊系統			
摘要： <p>本計畫目的乃在於構建一可以反映路網修建與管理養護成本的投入，以及道路改善後所造成服務水準變化之評估指標與相關資料庫，並藉由與地理資訊系統 (GIS) 的結合，讓使用者可以方便的依據地理位置關係，將投入與產出績效評估所需的多樣性資料加以彙整與呈現，以利後續資料的分析與應用。</p> <p>本計畫以台灣地區之高快速公路及省、縣道為研究對象，所蒐集資料包括：</p> <p>(1)公路基本資料：包括工務段之轄區範圍，以及公路里程數、道路寬度、車道數等資料。</p> <p>(2)公路投入成本：包括修建工程(新建、拓寬、改善、其它修建)與養護工程，前者以近五年內 (民國 86 年-90 年) 之工程項目為收集重點，養護工程則以近兩年(民國 89、90 年)之工程為主。</p> <p>(3)服務產出資料：包含交通量、公路旅行速率、肇事當量等資料。</p> <p>本計畫核心工作係將所蒐集之資料及評估值，以及不同基準的多年期相關交通與道路異質資料彙整於交通部運輸研究所新世紀台灣地區交通路網數值地圖 1.0版，並建置「公路投入成本暨服務績效評估資訊系統」。依據所確認之績效評估指標及所建立之績效評估資訊系統 本計畫就實際蒐集之資料進行實證分析</p>			
出版日期	頁數	定價	本 出 版 品 取 得 方 式
92 年 6 月	438		凡屬機密性出版品均不對外公開。普通性出版品，公營、公益機關團體及學校可函洽本所免費贈閱；私人及私營機關團體可按定價價購。
機密等級：			

☐ 限閱 ☐ 機密 ☐ 極機密 ☐ 絕對機密

(解密【限】條件：☐ 年 ☐ 月 ☐ 日解密，☐ 公布後解密，☐ 附件抽存後解密，
☐ 工作完成或會議終了時解密，☐ 另行檢討後辦理解密)

☒ 普通

備註：本研究之結論與建議不代表交通部之意見。

**PUBLICATION ABSTRACTS OF RESEARCH PROJECTS
INSTITUTE OF TRANSPORTATION
MINISTRY OF TRANSPORTATION AND COMMUNICATIONS**

TITLE : Establishment of Information System for Highway Cost and Performance			
ISBN(OR ISSN)	GOVERNMENT PUBLICATIONS NUMBER 1009202008	IOT SERIAL NUMBER 92-60-5241	PROJECT NUMBER 91-IB01
DIVISION : Transportation Information System Division DIVISION CHIEF : Jennifer Yuh-Jen Wu PRINCIPAL INVESTIGATOR : Jennifer Yuh-Jen Wu PROJECT STAFF : Hsia Lee PHONE : 886-2-23496886 FAX : 886-2-25450426			PROJECT PERIOD FROM Feb. 2002 TO Nov. 2002
RESEARCH AGENCY : COMDYCS Technology Service Co. Ltd. PRINCIPAL INVESTIGATOR : Ying-Ming Yen PROJECT STAFF : Nan-Huei Hwang, Chia-Hsun Hsui, Chai-Mei Chuang Li-Juan Li, Cheng-Lung Hsiao, Kai-Wen Cheng ADDRESS : 1 Alley 55, Lane 380, Section 3, Chung-Hwa East Rd. Tainan, Taiwan PHONE : 06-2692332			
KEY WORDS : Analysis of Input and Output, Evaluation of Performance, Information System			
ABSTRACT: <p>The purpose of this study is to establish an information system to reflect the relationship between the cost of construction and maintenance on highway and the changes in LOS (Level of Service) of highway due to the improvement alternatives on highway. GIS is integrated into this system(i.e. ArcView) to adopt appropriate indicators for evaluation of highway performance and to build suitable database for analysis and future application of highway network cost and performance in the future.</p> <p>The study covers island-wide Taiwan, including freeways, expressways, provincial roads, county roads and collected the following data:</p> <ol style="list-style-type: none"> (1) Highway data : such as the administration area of agency, the mileage of highway, the width of highway and the number of lanes of highway. (2) Highway network cost data : such as construction cost and maintenance cost of highway. The former is based on the data within the recent 5 years(1997-2001), the latter is mainly based on the data of 2000 and 2001. (3) Level of service data : such as traffic volume, traveling speed, accident data. <p>The core part of this study is to establish an information system of highway cost and performance. This system integrated the above-mentioned data, highway-related performance indicators, and all non-homogenous highway-related data with a GIS database, which is developed by the IOT and named as “2002 National Transportation Road Network Digital Atlas”. Finally, this system is used for practical tests based on the collected data. Besides, according to the analysis results of tests, the users could figure out where the abnormal situations of highway cost occurred and then provide necessary conclusions and comparisons of performance. The above comparisons can be conducted on different segments of the same road in the same year or different years, between different agencies, or different roads.</p> <p>In this study, ArcView 8.2 is used as the platform to establish the information system,</p>			
DATE OF PUBLICATION June 2003	NUMBER OF PAGES 438	PRICE	CLASSIFICATION SECRET CONFIDENTIAL <input checked="" type="checkbox"/> UNCLASSIFIED
The views expressed in this publication are not necessarily those of the Ministry of Transportation and Communications.			

