

Identification and Processing of Cloud Images from Geostationary Satellite

王建宏、劉仁俊

E-mail: 8809531@mail.dyu.edu.tw

ABSTRACT

This research focuses on improving the performance of cloud identification and classification from satellite images. We first extract localized images of size from the original satellite images of size . The cloud identification process is concentrated on the local areas. The sub-images are then divided into small blocks for feature extractions. Methods of SVD and DCT are used to observe the textural feature of each block. The extracted-featured are fed into Kohonen SOM classifier for unsupervised classification. An decision making process is then applied for identifying clouds and background. Since the results of the previous processing steps are blockwised , a high order correlation edge detection scheme can be utilized for removing background remained in blocks that contain clouds. This process is called smoothing, which can make the visualization more apparent. Simulation results will be presented to demonstrate the effectiveness of this research.

Keywords : SVD ; DCT ; Feature Extraction ; SOM ; Cloud Identification ; Cloud Classification

Table of Contents

圖目錄	圖2.1 (a)台灣周圍的紅外線雲圖(1999.05.05).....13	圖2.1 (b)台灣周圍的可見光雲圖(1999.05.05).....13
圖3.1 雲辨識系統流程圖.....16	圖3.2 一張完整的GMS紅外線衛星雲圖(2291x2291) (1999.05.05).....18	圖3.3 台灣周圍的雲圖範例選取(600x600) (1999.05.05).....19
圖5.1 自組織映射網路架構圖.....35	圖5.2 自組織映射網路的『拓樸座標』觀念.....37	圖5.3 自組織映射網路之學習流程圖.....41
圖6.1 高階相關法垂直掃描示意圖.....49	圖7.1 台灣周圍的雲圖範例選取(600x600) (98.10.08).....52	圖7.2 雲圖資料的訓練處理程序.....53
圖7.3 block134的實際小雲圖區塊.....61	圖7.5 (a)訓練用的雲圖(1999.09.21).....62	圖7.5 (b)辨識後的結果(1999.09.21).....62
圖7.5 (c)訓練用雲圖的邊緣偵測(1999.09.21).....63	圖7.5 (d)平滑處理後的雲圖(1999.09.21).....63	圖7.6 (a)訓練用的雲圖(1998.10.26).....64
圖7.6 (b)辨識後的結果(1998.10.26).....64	圖7.6 (c)訓練用雲圖的邊緣偵測(1998.10.26).....65	圖7.6 (d)平滑處理後的雲圖(1998.10.26).....65
圖7.7 (a)測試用的雲圖(1999.03.20).....66	圖7.7 (b)辨識後的結果(1999.03.20).....66	圖7.7 (c)測試用雲圖的邊緣偵測(1999.03.20).....67
圖7.7 (d)平滑處理後的雲圖(1999.03.20).....67	圖7.8 Block100的實際小雲圖區塊.....72	圖7.9 Block200的實際小雲圖區塊.....75
圖7.10 (a)訓練用的雲圖(1999.09.21).....76	圖7.10 (b)辨識後的結果(1999.09.21).....76	圖7.10 (c)訓練用雲圖的邊緣偵測(1999.09.21).....77
圖7.10 (d)平滑處理後的雲圖(1999.09.21).....77	圖7.11 (a)訓練用的雲圖(1998.10.26).....78	圖7.11 (b)辨識後的結果(1998.10.26).....78
圖7.11 (c)訓練用雲圖的邊緣偵測(1998.10.26).....79	圖7.11 (d)平滑處理後的雲圖(1998.10.26).....79	圖7.12 (a)測試用的雲圖(1998.10.08).....80
圖7.12 (b)辨識後的結果(1998.10.08).....80	圖7.12 (c)測試用雲圖的邊緣偵測(1998.10.08).....81	圖7.12 (d)平滑處理後的雲圖(1998.10.08).....81
圖7.13 (a)測試用的雲圖(1999.03.20).....82	圖7.13 (b)辨識後的結果(1999.03.20).....82	圖7.13 (c)測試用雲圖的邊緣偵測(1999.03.20).....83
圖7.13 (d)平滑處理後的雲圖(1999.03.20).....83	圖7.14 雲之邊緣雲塊偵測示意圖.....84	圖7.15 (a)左上方有雲的平滑處理方式.....85
圖7.15 (b)左方有雲的平滑處理方式.....85	圖7.16 為圖7.12(a)的傳統門檻值法處理結果.....88	表目錄
表2.1 各雲族出現高度表.....9	表2.2 雲族家屬表.....11	表2.3 可見光雲圖和紅外線雲圖的判讀表.....14
表7.1 block134的SVD特徵值內容.....56	表7.2 block134的SOM分類與SVD正規化特徵值.....57	表7.3 block134所得之輸出勝利神經元.....58
表7.4 block50的SVD特徵值內容.....59	表7.5 block50的SOM分類與SVD正規化特徵值.....60	表7.6 block50所得之輸出勝利神經元.....61
表7.7 Block100的DCT特徵值內容.....70	表7.8 Block100的SOM分類與DCT正規化特徵值.....71	表7.9 Block100所得之輸出勝利神經元.....72
表7.10 Block200的DCT特徵值內容.....73	表7.11 Block200的SOM分類與DCT正規化特徵值.....74	表7.12 Block200

所得之輸出勝利神經元.....	75	表7.13 平滑處理的演算法.....	84	表7.14 決策法則.....	87	表7.15 各測試情況執行使用時間表.....	87	目錄封面內頁 簽名頁 授權書.....	iii	簽署人須知.....	iv	中文摘要.....	v	英文摘要.....	vi	誌謝.....	vii	目錄.....	viii	圖目錄.....	xi	表目錄.....	xiv	第一章 緒論.....	1	1.1 研究背景.....	1	1.2 研究動機與目的.....	2	1.3 論文架構.....	4	第二章 衛星雲圖分析.....	5	2.1 衛星雲圖來源.....	5	2.2 雲的種類.....	7	2.2.1 雲的形成.....	7	2.2.2 雲的分類.....	9	2.3 雲對衛星感測器的效應.....	11	2.4 結語.....	14	第三章 研究流程.....	15	3.1 衛星雲圖區域分割與雲塊特徵擷取.....	15	3.2 應用類神經網路於雲塊分類.....	20	3.3 雲塊決策與系統測試使用.....	21	3.4 辨識結果之平滑處理.....	21	3.5 結語.....	22	第四章 特徵擷取法則.....	23	4.1 影像資料壓縮.....	23	4.2 奇異值分解轉換.....	24	4.3 離散餘弦轉換.....	26	4.4 結語.....	27	第五章 應用類神經網路於雲塊分類.....	28	5.1 類神經網路之特性.....	28	5.2 類神經網路之類型與其應用.....	31	5.3 自組織映射網路.....	33	5.3.1 自組織映射網路簡介.....	33	5.3.2 網路結構.....	34	5.3.3 自組織映射網路之重要概念.....	35	5.3.4 網路演算法.....	39	5.4 結語.....	42	第六章 應用高階相關法於辨識結果.....	43	6.1 高階相關法介紹.....	43	6.2 高階相關法應用於邊緣偵測.....	46	6.3 結語.....	50	第七章 模擬結果與分析.....	51	7.1 輸入資料介紹.....	51	7.2 SVD特徵擷取法訓練與辨識結果.....	53	7.3 DCT特徵擷取法訓練與辨識結果.....	68	7.4 比較與討論.....	86	7.5 結語.....	89	第八章 結論.....	90	8.1 結論.....	90	8.2 未來展望.....	90	參考文獻.....	92
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