ON THE INTEGRATION OF A GEOGRAPHIC INFORMATION SYSTEM WITH LANDSAT-5 DATA

by

David G. Goodenough, Ko B. Fung
Canada Centre for Remote Sensing

and

Mary Geekie
Intera Technologies Limited

ABSTRACT

The Canada Centre for Remote Sensing (CCRS) has been working with the Inventory Branch of the British Columbia Ministry of Forests and Lands (BCMFL) to integrate a geographic information system (GIS) with remotely sensed data. The objective of this work is to update the forestry inventory maps effectively using remote sensing techniques.

An area north of Cranbrook, British Columbia has been selected as the test site for our study. The selected area has a topographic variation of about 1,000 meters. The input data to this project include the forest inventory maps and attribute files from BCMFL, TM images and corresponding digital terrain models. The TM images are geometrically rectified to federal NTS maps at 1:50,000 scale with ground control points. The inventory maps are UTM at 1:20,000 scale and are produced using the British Columbia provincial maps.

This paper reports the analysis of the spectral distribution of the forest classes in the TM data, the methodology used for identifying the forest classes, and an evaluation of the results.