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APPLICATIONS OF REMOTE SENSING TECHNIQUES
TO UPDATE THE FOREST INVENTORY DATA
BASE IN BRITISH COLUMBIA

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The Inventory Branch of the Ministry of Forests is required to develop, compile and maintain the inventory of forests and range resources on all crown lands in the Province, including the management of the data base, the annual update of resource maps and associated data files, the collection of growth and yield statistics, the estimation of decay, waste and breakage, and the continuous monitoring of forest depletion. The Branch is also charged with assessing the actual potential effects of changing patterns of land use and any resulting shifts in environmental values.

This paper describes the applications of remote sensing and satellite image analysis techniques to monitor the forest and range resources over 94.8 million hectares. The monitoring involves the acquisition and processing of conventional aerial photography, supplementary large-scale 70 mm photography, LANDSAT imagery and airborne multi spectral scanner data. Prime interest is the forest land base, consisting of 52.1 million hectares, and the changes which occur in it continuously. For example, the approximately 200 000 hectares that are being harvested annually must be located by the end of each year, mapped and entered into the data base. This dynamic data base was developed during the past 10 years with remote sensing techniques and is now worth around \$100 million. In 1978, the Branch acquired an Interactive Graphics Design System (I.G.D.S.) for computerized mapping. Currently, the 7000 forest cover maps are being digitized with the aid of I.G.D.S. and the corresponding inventory data attributes are set up on flexible data management systems.

Highlights of the paper and results of operational applications of remote sensing are illustrated at the conference through a slide presentation.