C 208

Visual interpretation of 3D aerial photogrammetric models for decision makers

In space technology airbome remote sensing (Aerial Photographs) provides ways and means for mankind to understand the environment, to measure, map and monitor the changes of environment.

The Survey Department being the only national organization that provides base data for such a study, was requested by the Ministry of Agriculture & Lands to map the changes within a certain period of Ambuluwawa Mountain situated in Kandy district. The photogrammetric Unit of the Survey Department undertook this task.

1:20,000 aerial photographs, which were taken by two difference years namely 1981 & 1999, were available for this project and formed the two photogrammetric models for the respective years for Ambuluwawa hill. These models were oriented using aerial triangulation data. Planimetric and altimetric information were extracted from these models as per 1:10,000 data library with 1m and 0.6m accuracy respectively. Planimetry and 5m contour interval data sets were extracted for analyzing. Data collection and analyzing were done using analytical stereo plotter, 333 MHZ 64MB RAM computer system. In each model we could identify the changes that had been taken mainly due to the human activities.

Only persons who have special knowledge about data format and particular software can do this evaluation. In this connection for the sake of decision-makers the interpretation was converted to 3d modeling. The existing contour data was converted to real surfaces with aid of computer. Materials were assigned after careful examination fo the aerial photographs. In the final out put anybody who has analytic eyesight can see these changes that had taken place. Presentation of information in this manner can help the decision-makers to manage the environment.