

Application of GIS Based Field Survey for Remotely Sensed Image Analysis: Urban Land Use Perspective

~ Survey Area – つくば市妻木 (Saiki) ~

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Abstract

This paper focuses on satellite sensor based land use map preparation integrated with state of the art technologies for land use data acquisitions method. Tsukuba city is selected for remotely sensed image analysis. The main database processed in this paper are ALOS satellite image acquired in August 4, 2006, land use map of 1994, road map of 1:25000 scale (dorokukan) and city boundary. A field survey was conducted in Sakura Saiki area during 29th November – 1st December, 2006. A robust technique comprising PDA (built-in GPS), ArcPad, Camera, and a set of portable GIS/RS dataset for field data collection was prepared for field survey. After preprocessing the ALOS image, NDVI, unsupervised, supervised and fuzzy convolution methods are applied while preparing the land use map. Integrating all the techniques together, a vegetation gradient map, a land cover map and a land use map of Tsukuba city are prepared for 2006.

Field survey tools



Collected data

