

Generating Land Cover Maps for Urban Areas Using Satellite Imagery and Aerial Photography

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Abstract: A number of different techniques for developing land cover maps of urban areas were studied. Multi spectral and panchromatic aerial imagery of different resolutions were evaluated for use as base maps, and the impact that image resolution has on the final classification was assessed. The multi spectral imagery was registered to georectified panchromatic imagery with a maximum error of 15 cm inside the study area. A dual process of digitizing both the panchromatic and multi spectral imagery was used. Each land cover type was digitized as a separate GIS coverage. Additionally, a sequential GIS process was developed that involves overlaying, clipping, and snapping to generate a final coverage that contains all the cover types with their respective layer attributes. Attributes of the final coverage include the address of each property, the type of property, and the irrigation account.

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