Uitlization Of Remote Sensing And Geographic Information System For Investigation Of Best Route Between Iraq And Kingdom Of Saudi Arabia

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Abstract: Road network designing is required standard techniques. Remote sensing technology can provide accurate tool for highway planning and reconstruction. This study is aimed at utilizing LANDSAT TM for road network designing between Republic of Iraq and Kingdom of Saudi Arabia. In doing so, the visible bands of LANDSAT TM were selected. Edge detection algorithm was used to determine the appropriate road boarder in LANDSAT TM data. Then, multi-polyline technique in geographic information system was utilized with Digital Terrain Model to reconstruct a rural highway route which is connecting two selected cities in Iraq and Saudi Arabia. The study shows that the route highway is required approximately 500,000 USD to be reconstructed. Further, the route high way reconstruction is effected by DTM of Iraq and Saudi Arabia. In conclusions, the integration between LANDSAT TM and geographic information system is provided low cost, and less time consuming for investigation the appropriate routes between different digital terrain models (DTM).

Keywords: LANDSAT TM, Visible bands, Geographic Information System, Digital terrain model, Highway route.