



Comprehensive geo-spatial data creation for Ar-Riyadh region in the KSA

M. Alrajhi and M. Hawarey

Deputy Ministry for Land and Surveying, Riyadh, Saudi Arabia (mapping@momra.gov.sa)

The General Directorate for Surveying and Mapping (GDSM) of the Deputy Ministry for Land and Surveying (DMLS) of the Ministry of Municipal and Rural Affairs (MOMRA) in the Kingdom of Saudi Arabia (KSA) has the exclusive mandate to carry out aerial photography and produce large-scale detailed maps for about 220 cities and villages in the KSA. This presentation is about the comprehensive geo-spatial data creation for the Ar-Riyadh region, Central KSA, that was founded on country-wide horizontal geodetic ground control using Global Navigation Satellite Systems (GNSS) within the MOMRA's Terrestrial Reference Frame 2000 (MTRF2000) that is tied to International Terrestrial Reference Frame 2000 (ITRF2000) Epoch 2004.0, and vertical geodetic ground control using precise digital leveling in reference to Jeddah 1969 mean sea level, and included aerial photography of area 3,000 km² at 1:5,500 scale and 10,000 km² at 1:45,000 scale, full aerial triangulation, and production of orthophoto maps at scale of 1:10,000 (480 sheets) for 10,000 km², with aerial photography lasting from July 2007 thru August 2007.