

New Coordinate System for Countries with Big Territories

Authors : Mohammed Sabri Ali Akresh

Abstract : The modern technologies and developments in computer and Global Positioning System (GPS) as well as Geographic Information System (GIS) and total station TS. This paper presents a new proposal for coordinates system by a harmonic equations "United projections", which have five projections (Mercator, Lambert, Russell, Lagrange, and compound of projection) in one zone coordinate system width 14 degrees, also it has one degree for overlap between zones, as well as two standards parallels for zone from 10 S to 45 S. Also this paper presents two cases; first case is to compare distances between a new coordinate system and UTM, second case creating local coordinate system for the city of Sydney to measure the distances directly from rectangular coordinates using projection of Mercator, Lambert and UTM.

Keywords : harmonic equations, coordinate system, projections, algorithms, parallels

Conference Title : ICGE 2014 : International Conference on Geomatics Engineering

Conference Location : Paris, France

Conference Dates : April 28-29, 2014