The south Malay peninsula, Sumatra, central Java, and east Borneo have been settled from circa 1st century B.C. by Hindu Pallavas from southeast India. In the early 15th century the Malay states came under Chinese influence but later Muslim traders gained ascendancy in several states such as Malaka. After the early 16th century Malaya was dominated by the Portuguese who were succeeded by the British (Merriam-Webster’s Geographical Dictionary 3rd Ed., 1997). Set up as the Union of Malaya in 1946, later formed the Federation of Malaya which became independent in 1957. Malaya was formed in 1963 when the former British colonies of Singapore and the East Malaysian states of Sabah and Sarawak on the northern coast of Borneo joined the Federation. Singapore (PE&RS, January 2006), seceded from the Federation in 1965. Bordered by Thailand (506 km), Brunei (381 km), and Indonesia (1,782 km), Malaysia is slightly larger than New Mexico and has a coastline totaling 4,675 km, Peninsular Malaysia (2,068 km) and East Malaysia (2,607 km). The lowest point is the Indian Ocean (0 m), and the highest point is Gunung Kinabalu (4,100 m) (The 2008 World Factbook).

“...”

“...”

“The Survey Department, Federated Malay States and Straits Settlements (FMSS&SS) accomplished most of the basic surveying and mapping of Malaya between 1923 and 1945. Topographic sheets for most of the country were based on planetable surveys at 1:31,680 and 1:63,360 ping of Malaya between 1923 and 1945. Topographic sheets for most of India. In the early 15th century the Malay states came under Chinese
dated as far back as 1885. The MRT 1948 has been adopted as a result of the re-computations of the earlier network together with the Primary (Repsold) Triangulation carried out between 1913 and 1916. The reference ellipsoid used for the MRT 1948 is the Modified Everest where \(a = 6,377,304.063\) m and \(\frac{1}{f} = 298.257223563\). According to TR 8350.2, the transformation parameters from “Kertau 1948 Datum” to WGS 84 Datum are: \(\Delta X = +11\) m \pm 10 m, \(\Delta Y = +851\) m \pm 8 m, \(\Delta Z = +5\) m \pm 6 m, and the solution is based on 6 satellite stations.

(Note the hopping magnitude of the \(\Delta Y\) component … likely the result of errors in time transfers to determine longitudes. – Ed.)

The Geodetic Datum of Malaysia 2000 (GDM 2000) has re-defined the Cassini-Soldner (cadastral) Grid origins of the various states of Peninsular Malaysia as follows: Johor State is @ GPS Station GP58, Institut Haivan Klang where: \(\phi = 02^\circ 07' 18.04708''\) N, \(\lambda = 103^\circ 25' 40.57045''\) E, Cassini Northing = +8,758,320 m, Cassini Easting = –14,810,562 m, Offset Northing = +14,810,562 m, North Sembilan & Melaka State is @ GPS Station GP10, K. Perindustrian Senawang, Seremban where: \(\phi = 02^\circ 40' 56.45149''\) N, \(\lambda = 101^\circ 58' 29.65815''\) E, Cassini Northing = –4,240,573 m, Cassini Easting = +3,673,785 m, Offset Northing = –3,929,026 m, Offset Easting = +3,915,790 m. Pahang State is @ GPS Station GP31, Sek. Ren. Keb. Kuala Mai, Jerantut where: \(\phi = 03^\circ 46' 09.79712''\) N, \(\lambda = 102^\circ 22' 05.87634''\) E, Cassini Northing = +6,485,858 m, Cassini Easting = –7,368,228 m, Offset Northing = +6,485,858 m, Offset Easting = –7,368,228 m. Selangor State is @ GPS Station 251D, Felda Soeharto, K. Kubu Pahang where: \(\phi = 03^\circ 23' 12.30640''\) N, \(\lambda = 101^\circ 58' 29.65815''\) E, Cassini Northing = +56,464.049 m, Cassini Easting = –34,836.161 m, Offset Northing = +503.095 m, Offset Easting = –1,076.704 m. Terengganu State is @ GPS Station 2022, Kg. Macapat, Hulu Terengganu where: \(\phi = 05^\circ 04' 34.62627''\) N, \(\lambda = 103^\circ 04' 12.99225''\) E, Cassini Northing = +317,895 m, Cassini Easting = +19,594.245 m, Offset Northing = +3,371,895 m, Offset Easting = +19,594.245 m. P. Pinang & S. Pereali State @ GPS Station 314, TLDM Georgetown where: \(\phi = 05^\circ 25' 17.46315''\) N, \(\lambda = 100^\circ 20' 39.75707''\) E, Cassini Northing = +62,283 m, Cassini Easting = –23,414 m, Offset Northing = +62,283 m, Offset Easting = –23,414 m. Kedah & Perlis State is @ GPS Station TG35, Gunung Perak, Kuala Muda where: \(\phi = 05^\circ 57' 52.82177''\) N, \(\lambda = 100^\circ 38' 10.93600''\) E, Cassini Northing = 0 m, Cassini Easting = 0 m, Offset Northing = 0 m, Offset Easting = 0 m. Perlak State is @ GPS Station TG26, Gunung Larut Hiljau.