



## Georeferencing the historical cadastral map sheets of Hungary

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In the historical Hungary, as a part of the Habsburg Empire, the first preserved and systematic cadastral survey was carried out between 1856 and 1859. Interestingly enough, this cadastral mapping, which was called in Hungary as 'Provisional' was surveyed simultaneously with the Stable Cadastre in the Austrian regions of the Empire. By the commission of the State Archives of Hungary, the Hungarian company Arcanum Ltd. scanned over 46,000 cadastral sheets of the Provisional Cadastre, mostly covering the present-day Hungary but also some copies covering parts of the present-day Croatia, Slovakia and Austria. The base ellipsoid was the Zach-Oriani hybrid ( $a=6376130$  m;  $f=1/310$ ). The fundamental point of the geodetic datum was the eastern pillar of the later destroyed astronomical observatory on the Gellérthegey, Budapest and the abridging Molodensky parameters from this datum to WGS84 are:  $dX=+1763$  m;  $dY=+282$  m;  $dZ=+568$  m. The Cassini projection can be used for GIS integration with a projection center at the Gellérthegey with longitude=19d 3m 5.55s east of Greenwich; latitude=49d 29m 15.97s. The sheets were rectified by the calculated coordinates at the corner points. With the above given projection and datum parameters, the cadastral mosaic, based on the individual sheets and the digitized borders of the administrative units, is presented in any modern coordinate systems in GIS. Using this feature, the product is published as a DVD series by old counties as well as the distribution in the Internet.