Iranian Permanent GPS Network (IPGN) which includes more than 100 dual frequency GPS receivers has been established basically by National Cartographic Center (NCC) for tectonic deformation monitoring. The average spacing of the IPGN stations is about 30-300 km, so it is convenient for implementation of a multi reference RTK. For sub decimeter accuracy requirements in real time positioning and mapping, NCC extended and improved IPGN in the areas that stations were spatially sparse. Also NCCNET software was developed and VRS method with a regional ionosphere model was used for computation of network corrections. In order to real time transmission of the VRS RTK corrections, NTRIP protocol has been used and NTRIP Caster software developed. In this paper IPGN is introduced, different aspects of the NCCNET and advantages of using regional ionosphere model in network ambiguity resolution is presented.