Glossary
Network Services 06-GPS

GPS: (Global Positioning system): satellite navigation system for military and civil applications. Using a GPS-receiver combined with a GPS-antenna, positions on earth can be determined by distance measurements to satellites. These positions have no geodetic accuracy because of many error sources (such as atmospheric distortions). By using several receivers one can apply relative positioning and then these error sources will mainly be eliminated and geodetic accuracies become achievable. Relative positioning can take place both by processing obtained GPS data of several receivers afterwards (post processing), or by sending data directly from a base, a reference receiver or a reference network to a mobile receiver. Combining several GNSS (Global Navigation Satellite Systems) will result in higher accuracies and availability.

GLONASS: (GLObal NAvigation Satellite System): Russian equivalent of GPS.

GALILEO: European equivalent of GPS.

BEIDOU / BDS: Chinese equivalent of GPS.

RTK: (Real Time Kinematic): GNSS (calculation) method using a GNSS data link sending corrections from a base receiver to a mobile receiver. Because of this, the points to measure can be determined with high accuracy in real time.

RTCM: (Radio Technical Commission for Maritime Service): a organization advising on the standardization of data formats. RTCM has proclaimed several internationally accepted formats of GNSS messages.

RINEX: (Receiver Independent Exchange format): This is a standard exchange format for raw GNSS-data for post-processing applications (processing afterwards). This is mainly done for reference point determination at sub-centimeter level. The data of every type of receiver can be converted into RINEX format. Also the orbits of the satellites are included, next to the standard observations to all satellites.

NMEA: (National Marine Electronics Association): The NMEA has defined several messages for sending data for navigation applications. One of these messages (NMEA-GGA) contains coordinates which can be send by a GNSS-receiver to the network, as an indication of its approximate position.

NTRIP: Networked Transport of RTCM via Internet Protocol.

VRS (Virtually Reference Station): Method of correction sending where an imaginary reference station is simulated in the surroundings of the user. This technique can also be used for the delivery of Rinex-data.

FKP: (Flächen Korrektur Parameter): Spatial modulation of distance depended error sources, which influence the GNSS signal. These can be calculated by combining several GNSS base stations at various (permanent) locations. By individualizing these spatial correction parameters for the location of a mobile GNSS-receiver, an excellent quality of GNSS-positioning with RTK-technique is gained over a large area.

MAC (Marker Auxiliary Concept).GNSS networking method. RTK corrections are sent from 1 marker station and several surrounding auxiliary stations, in order to enable a RTK rover to interpolate or model the corrections for its own location.

i-MAC. A representation form where RTK corrections are individualized like VRS corrections, but represented from the nearest physical station instead of a nearby VRS.

GEO++: A German, in GNSS specialized, software company. GEO++ provides software for GNSS networks of base stations, which makes GNSS-RTK measurements possible by means of FKP calculations. Like many foreign companies and governments, 06-GPS uses Geo++ software as well.

SAPOS: German (governmental) counterpart of 06-GPS. The SAPOS representatives of the German states Lower Saxonie and Northrine Westfalia cooperate with 06-GPS.

FLEPOS: Flemish (governmental) provider of a GNSS reference network, that cooperates with 06-GPS.

WALCORS: Wallonian (governmental) provider of a GNSS reference network, that cooperates with 06-GPS.

RDNAPTRANS2018: A coordinate transformation procedure defined by the Dutch Kadaster , that ensures an unique and high precision transformation of (European) ETRS89 coordinates to the Dutch NAP (height) and RD-system (plane) . RDNAPTRANS2018 takes into account the Dutch geoid NLGEO2018 and the inhomogeneous distortions in the RD-system. (RDNAPTRANS2008 has been succeeded by RDNAPTRANS2018 on October 1st 2022.)