

What is MIRAc oor?

MIRAc oor is a web-service
(<https://MIRAc oor.miraspaco..com>)

MIRAc oor is suitable to estimate geodetic-grade solutions that provides coordinates directly from GNSS observations into the *Official* centimeter-level for hourly observations into *National* Coordinate Reference Frame.

MIRAc oor uses an authorized access to the Automatic Precise Positioning Service of the Global Differential GPS System of JPL (NASA, USA) to ensure reliable and fast processing of the raw data based on the Precise Point Positioning technique. MIRAc oor provides official coordinates certified by the National Mapping Agency.

How MIRAc oor works?

The user creates an account and obtains credits to process several points. The user uploads Observation file(s) using his/her account. MIRAc oor communicates with JPL to process the data.

The solution computed at JPL is mapped into the national reference frame selected by the user using a dedicated transformation based on the epoch of observation. MIRAc oor returns the solution (in global and local coordinates) to the user together with the associated uncertainties.



MIRAc oor

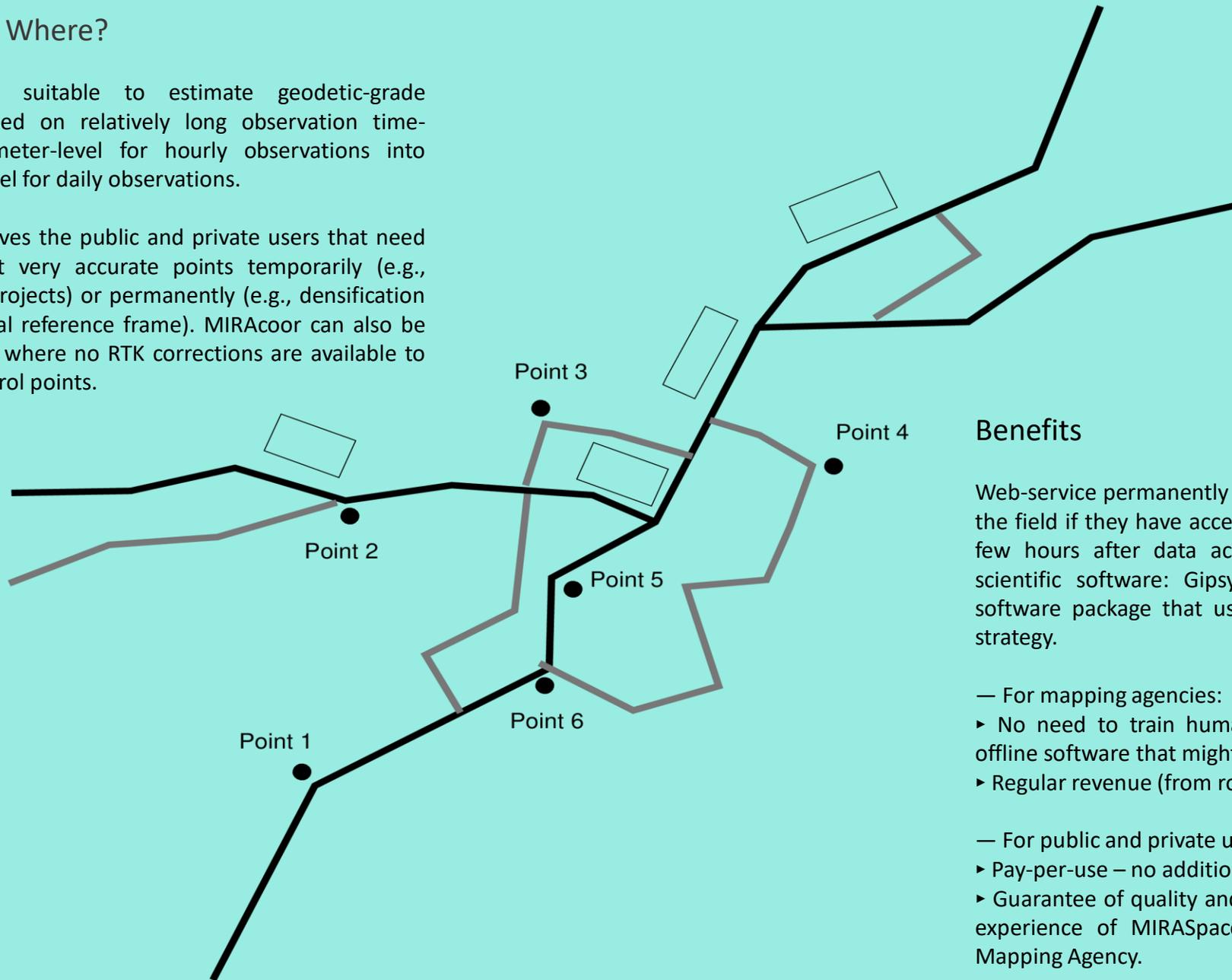
Online Accurate Positioning directly into your
National Reference Frame



When and Where?

MIRAcour is suitable to estimate geodetic-grade solutions based on relatively long observation time-spans: centimeter-level for hourly observations into millimeter-level for daily observations.

MIRAcour serves the public and private users that need to implement very accurate points temporarily (e.g., engineering projects) or permanently (e.g., densification of the national reference frame). MIRAcour can also be used in areas where no RTK corrections are available to establish control points.



Benefits

Web-service permanently available – users can process the solutions in the field if they have access to the internet. Solutions can be obtained few hours after data acquisition. Based on a proven and reliable scientific software: GipsyX, the latest version of the GIPSY-OASIS software package that uses the Precise Point Positioning processing strategy.

— For mapping agencies:

- ▶ No need to train human resources or make large investments in offline software that might be used only occasionally;
- ▶ Regular revenue (from royalties) without any investment.

— For public and private users:

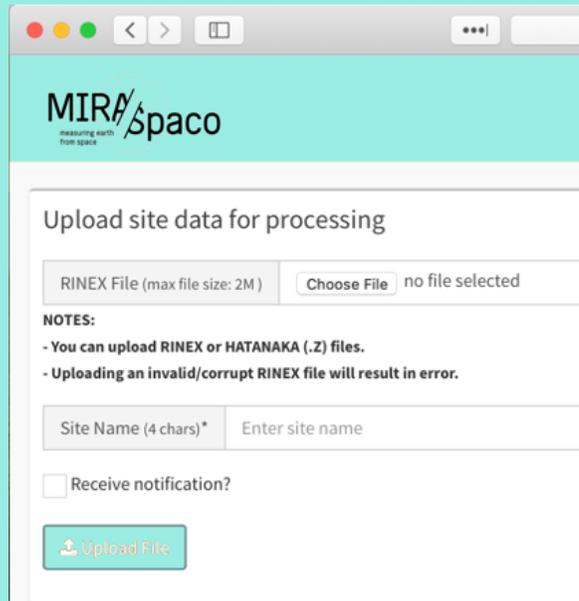
- ▶ Pay-per-use – no additional fees or investments in advance;
- ▶ Guarantee of quality and compatibility of the solutions based on the experience of MIRAspaco & JPL and certification of the National Mapping Agency.

How to use MIRAc oor?

1 GNSS data for an hour or more are collected at a point. The data are converted into a RINEX file.



2 The user logs into MIRAc oor, verifies if he has enough credits, and uploads the RINEX file.



3 The user receives per email a report containing the coordinates of the station in the national reference together with the orthometric height.

2. Outcome of Estimation

Cartesian Coordinates

X: 6284298.475 m +- 0.002 m
Y: 827900.523 m +- 0.000 m
Z: 708988.585 m +- 0.000 m

UTM Coordinates

E: 334662.396 m
N: 710405.316 m
Zone: 32N

Ellipsoidal Coordinates

Latitude: 6.42480585
Longitude: 7.50499115

Heights

Ellipsoidal Height: 254.567 m
Orthometric Height: 231.754 m
Undulation: 22.813 m
Geoid Model: EIGEN-6C4