



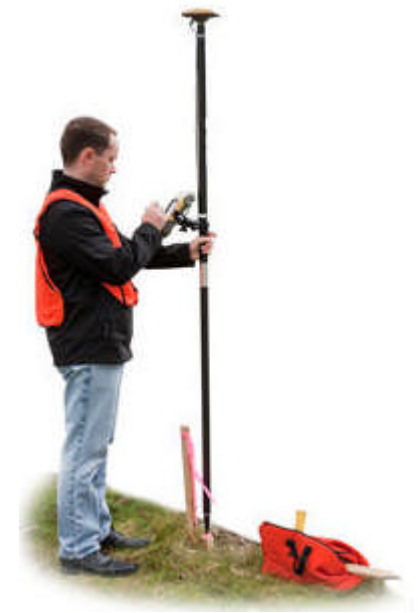
EZSurv™ GNSS Post-Processing Software

October 10th 2012

2012 - Training documents

What is EZSurv™?

- Designed to get the best accuracy out of a GNSS equipment in post-mission
- Translates raw GNSS observations (GPS&Glonass) into precise positions (in static or kinematic mode, for all type of receivers)
- Used to deliver highly accurate positions for geodetic network
- Used as an offline RTK solutions
- Used as Quality Control tool for your RTK jobs





Why do we need EZSurv™?

1. In kinematic mode:

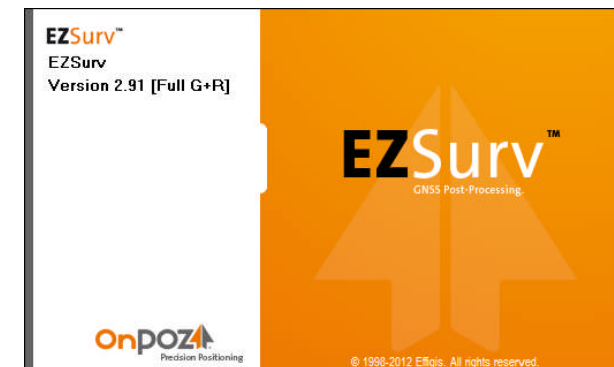
- to fill RTK failures
- to secure centimeter accuracy when there is no RTK infrastructure
- to significantly improve single frequency receiver accuracy (for GIS and/or survey).

2. In Static mode:

- to perform sub-centimeter geodetic survey.

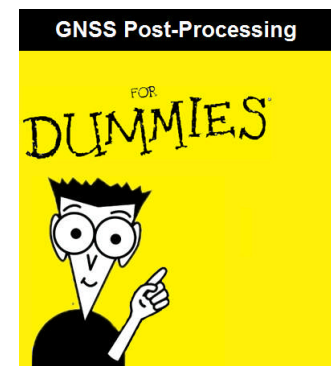
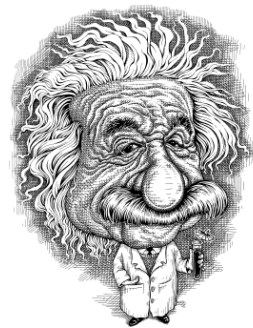
3. To perform QC on your RTK results.

4. When a specific legislation requires post-mission positions.



Is it complicated to use EZSurv?

- In the old days you needed a PhD to operate a Post-Processing Software
- Today, most of complexities (geodetic concepts) are well embedded into EZSurv Post-Processing Software

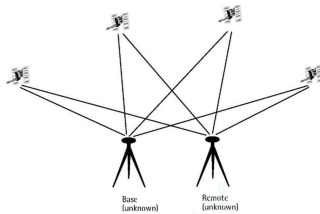




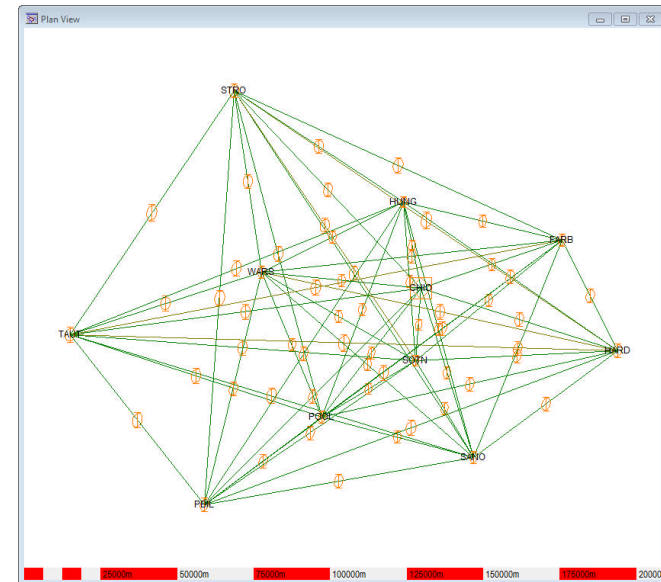
What does EZSurv™ do ?

Static differential positioning

- When the remote data is a **static file**, EZSurv™ computes 3 baseline components (static, rapid static)



So it could be used as a **baseline processor**





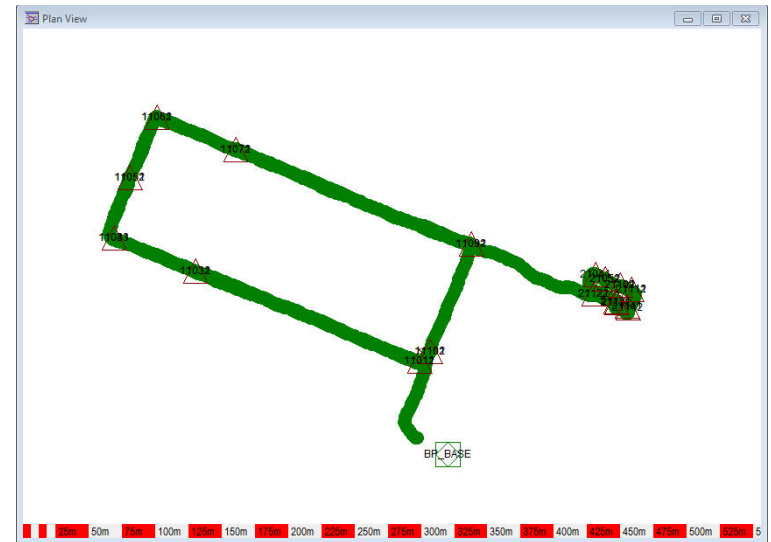
What does EZSurv™ do ?

Kinematic differential positioning

- When the remote data is a kinematic data file, EZSurv™ computes one position at every single epoch (OTF, Stop&Go)



So it could be used as a **PPK processor**

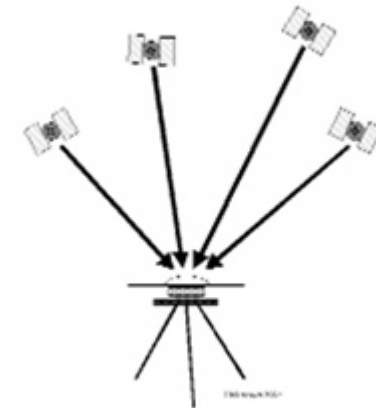




What does EZSurv™ do ?

Static Precise Point Positioning

- If remote data is a **static data file**, it computes the 3 position components

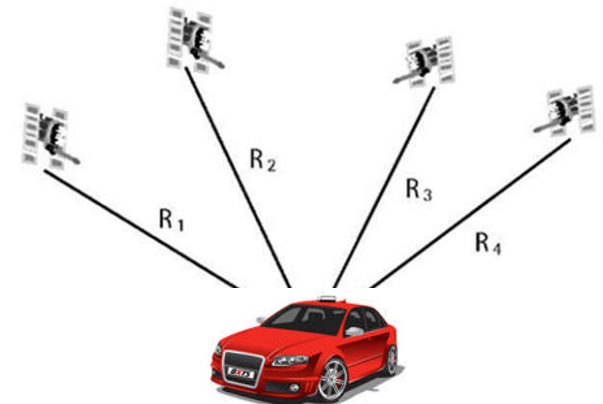


So it could be used as a **PPP processor**

What does EZSurv™ do ?

Kinematic Precise Point Positioning

- If remote data is a **kinematic data file**, it computes one position at every single epoch

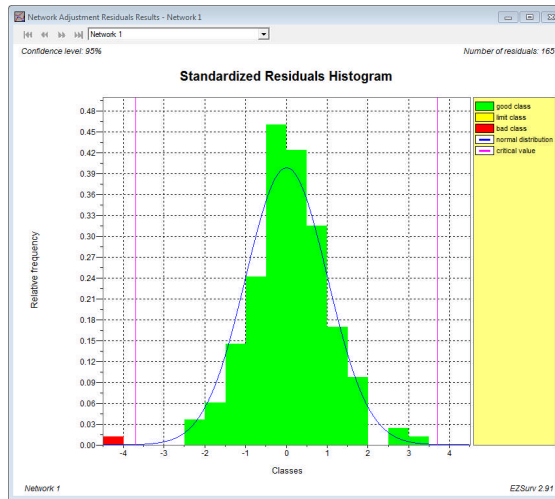


So it could be used as a **PPP-K processor**



What does EZSurv™ do ?

It also has a Least-Squares adjustment module



NETWORK ADJUSTMENT SUMMARY			
EZSurv 2.91			

Network	Network 1		
Project	New Project		
Adjustment Date	2012/09/19 10:48:36.75 (LOCAL)		
Mapping System	Geo NAD83Base		
Projection Template	Geographic		
Datum	NAD83 - Canadian Spatial Reference System		
Geoid Model	<None>		
Units	m		

ADJUSTMENT PARAMETERS			

Confidence Region Type:	2D+1D	Confidence Level:	95%
Number of Sites:	11	Number of Vectors:	53
Adjustment type:	Fixed		

ADJUSTMENT RESULTS			

Iterations:	2	Residual Critical Value:	3.695
Degrees of Freedom:	129	Residuals over Critical Value:	1
Estimated Variance Factor:	2.7045	Chi2 Test:	0.797 < 1 < 1.237 (PASSED)

APRIORI REFERENCE STATIONS COORDINATES			

N.B. Fix status codes are (U)ser fixed and (S)oftware fixed. Fix order is Latitude, Longitude, Height.			

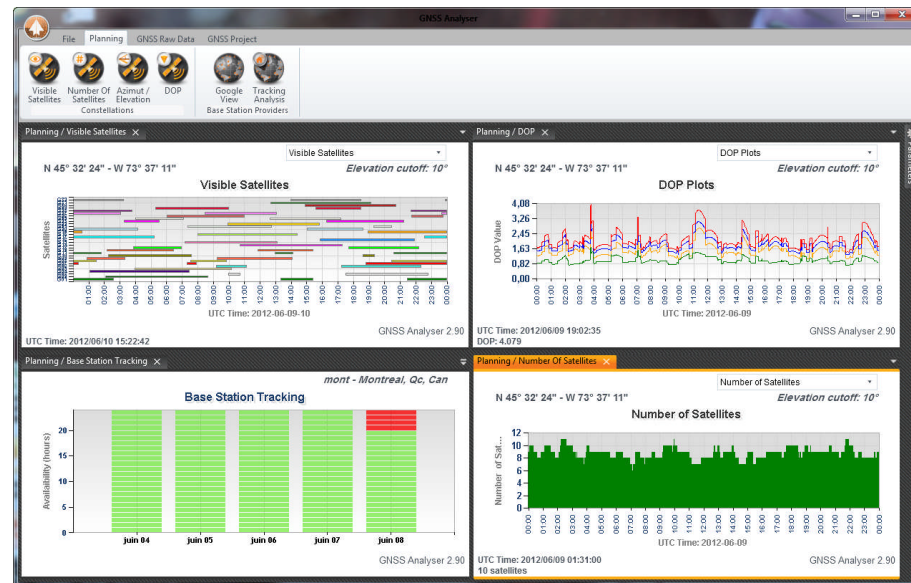
UUU CHIO			
WSS84		m	NAD83 - Canadian Spatial Refer***m
Lat: N 51 08 56.37115	+/- 0.000	Lat: N 51 08 56.33260	+/- 0.000
Lon: W 1 26 17.94071	+/- 0.000	Lon: W 1 26 18.01527	+/- 0.000

Elevation (m)		Elevation (m)	
Hgt: 128.239	+/- 0.000	Hgt: 128.546	+/- 0.000
Und: 0.000	+/- 0.000	Und: 0.000	+/- 0.000
MSL: 128.239		MSL: 128.546	



What does EZSurv™ do ?

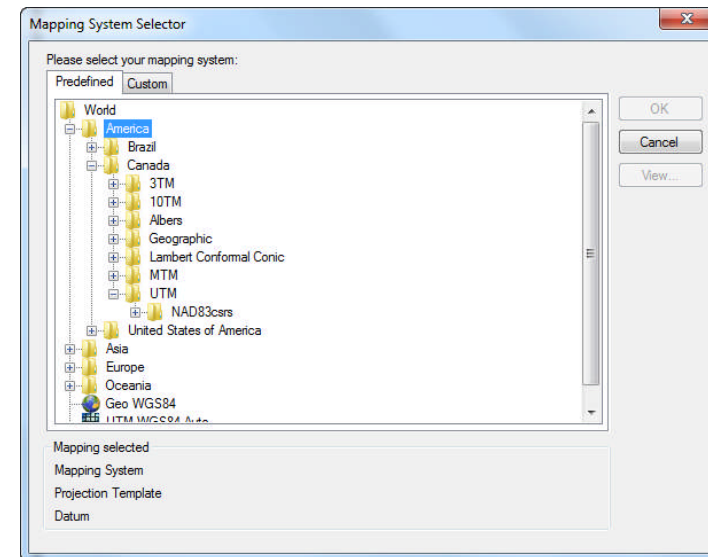
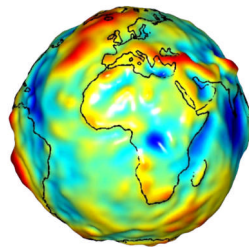
It also includes an external **Planner module**, that can be used to plan your survey, to analyze your raw data as well as your final position results





Coordinate Systems and Geoid Support

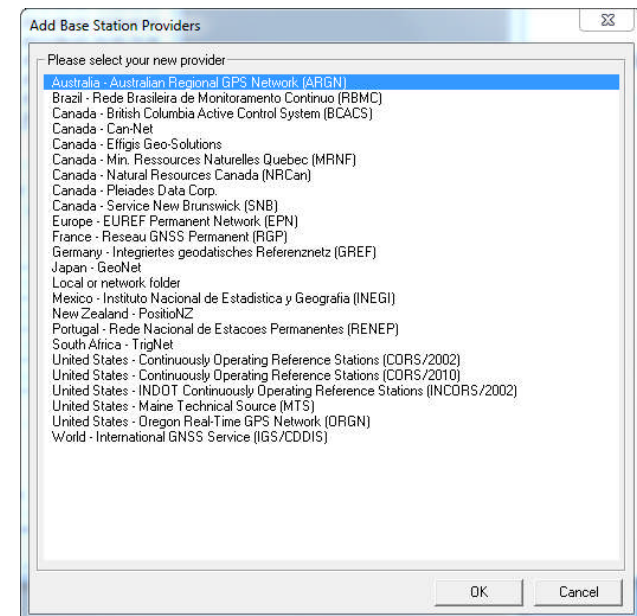
- EZSurv™ has a mapping/Datum tool that can be customized for your specific needs or can be upgraded by a simple Internet download.
- Many Geoid model are supported (including the EGM 2008).
- We support *.GRD file so any Geoid file can be converted and imported in EZSurv™





Base Station Providers

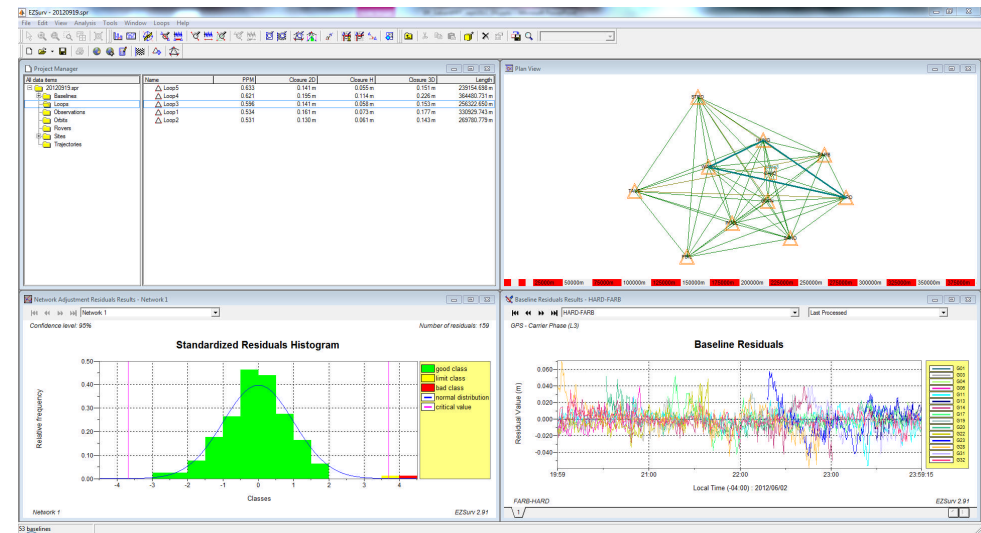
- EZSurv™ has the capability to download Base station data from **Base Station Providers**
- The Base Station Providers list is derived from a catalog stored on our Web Server.
- **This catalog can be updated any time** by a simple request sent to our technical support



QA Tools

Many QA tools are available to assess GNSS results:

- Loop closure tool
- Graphical tools
- RTK versus PP discrepancy analysis
- Raw data quality analysis
- Least-Squares adjustment
- Customizable export for data analysis





Field Software compatibility

Post-processing GNSS data is much more easier when PP software is compatible with **Industry standard** data collection software. EZSurv™ is compatible with the following data collection software:

- **FieldGenius** from MicroSurvey (Survey Software)
- **SurvCE** from Carlson Software (Survey Software)
- **ArcPAD** from ESRI (it requires a driver from OnPOZ (GIS software))
- **EZField** from OnPOZ Precision Positioning (Basic Survey software)
- **EZTagCE** from OnPOZ Precision Positioning (GIS Software)





Receiver Compatibility

- EZSurv is fully compatible with PENTAX GNSS
- Reads the native raw data files (along with S/N, Antenna model and site information)





EZSurv Overview in Short

- Easy to use PP software
- GNSS Baseline Processor
- GNSS PPK Processor (Offline RTK)
- Precise Point Positioning Processor (for Static)
- Precise Point Positioning Processor (for kinematic)
- An Engine to search Base Station Providers DataBase
- An Engine to search Precise Orbits/Clocks Providers DataBase
- A Least-Squares adjustment module
- A Coordinate System/Mapping/Datum Tool
- A set of QA tools for your RTK job

***Translated in English, French,
Spanish and Portuguese***