Summary of the meeting

Formats and conversion tools for local survey observations, May 22nd 2013

Software packages and formats:

Four software packages to process local survey observations have been presented as well as three post-processing software:

- Starnet, presented by Charles Geoghegan (NGS)

Commercial software. Free format for angles.

- GeoLab, presented by Valérie Michel (IGN)

Commercial software. Comments are useful in observation files to make the link easier with raw data.

- Havago, presented by Jim Long (NASA)

Not used and not maintained anymore but raw data stored in this format. No covariance matrices for output solutions of the software. 3 digits only in the input format. Time Tag for the hour of the day.

- Heimdall, presented by Michael Lösler (BKG)

Data stored in a database (but ascii files can be loaded in the database). Temperatures are included. A detailed description of HEIMDALL is given in Lösler et al. (2013). See also Eschelbach et al. (2013) presentation at http://iersworkshop2013.ign.fr/docs/session1/Eschelbach-IERS-WS.pdf.

- Clement, presented by Pierguido Sarti

Sotware developed in Matlab. For circle fitting. Show similar results to Axis software (see *Dawson et al., (2007)*: http://link.springer.com/article/10.1007%2Fs00190-006-0125-x).

- Axis, presented by Ryan Ruddick

For circle fitting.

- GSMAT, presented by Roberto Lanotte

Discussions:

- About the use of archiving raw local survey data:

Everybody recognized that it is useful to archive raw data. Even if they do not aim to be necessarily processed by others, it can be useful to look at them in case of tie vector discrepancy with space geodesy technique measurements. A user friendly way of archiving data would be appreciated.

- About the use of processing raw local survey data observed by others

An IERS call for participation was sent in 2004.
NGS, IGN and GA would be interested in processing data from other groups.
It is unlikely that errors are introduced in the processing of local survey raw observations. Indeed, surveyors design their observation network and observations to insure sufficient redundancy and robustness for the processing. It might not be useful to process data from another group. However, post-processing software could be useful for surveyors.

- About the definition of format converter or exchange format.

At the moment, raw data are archived in software specific file format. Roberto Lanotte has presented an XML format that could be suitable as an exchange format. Geosciences Australia, in the scope of the DynaNet project aims to define an XML format. Ryan Rüddick will start working on an exchange format based on XML. Roberto's input will be analyzed in that process.
All types of observations need to be listed. The question of archiving data from total stations has been raised. Should reduced data be stored or raw data?