

3.7 IERS Working Groups

3.7.1 Working Group on Site Survey and Co-location

The IERS Working Group on Site Survey and Co-location (*jointly with IAG Sub-Commission 1.2 – WG 2, SC1.2-WG2*) was established in February 2004. The major goals and objectives of the WG are:

Site Survey and Standards

- Develop, test, compare and set standards on site survey methods, including observational techniques, network design, classical adjustment, geometrical modelling and/or direct measurement techniques for invariant point determination, reference frame alignment, software implementation and SINEX generation. This will include the development of a standards document for undertaking site surveys;
- Preparation and coordination of a Pilot Project (PP) on site survey. The PP includes test campaigns to be used for the comparison of different approaches to local tie surveys addressing each of the technical elements;
- Develop standards for the documentation of site surveys, including survey report content and format; and
- Suggest a pool of expertise to provide advice to survey teams, as required, on standards for site surveys.

Coordination

- Liaise with local and international survey teams undertaking site surveys at important co-location sites;
- Liaise with the technique combination groups to ensure WG site survey products meet user requirements;
- Coordinate as required and make recommendations to observatories as to survey scheduling and re-survey frequency;
- Develop and distribute software tools to the community to assist in the generation of site survey products, including SINEX generation software; and
- Provide a forum to raise the profile of site survey as a critically important independent geodetic technique.

Site Survey Research

- Investigate new site survey methodologies, including observational techniques, observational modelling, invariant point definition, geometrical modelling and/or direct measurement techniques for invariant point determination, reference frame alignment and structural deformation analysis.

Future Planning

- The WG will make recommendations and prepare for the future in respect to the ongoing site survey needs of the community and how these needs will be met in the long term (to address issues outside of the scope of this WG).
- Develop recommendations as to how the community can provide the IERS database with all information relevant to inter-technique combination and to the maintenance of the ITRF.

Meetings in 2006

Two meetings were held in 2006. The first meeting was held at EGU in April 2006 at Vienna. The minutes and copies of presentations from that meeting can be found at <http://www.iers.org/MainDisp.csl?pid=68-40>. The meeting was well attended and presentations from a number of speakers illustrated current topics of interest. The meeting stressed the need to continue to develop the concept of Local Ties as a key component of the technique combinations and reference frame definition.

The second meeting was held at the ILRS workshop in Canberra. Although this was a smaller meeting it did concentrate more directly on Local Tie issues with SLR stations. The minutes from that meeting are available at the web page mentioned above.

Other Activities

Geoscience Australia continues to develop guidelines document for Local Tie Surveys. A draft of this document should be available by EGU2007 for the broader working group to discuss.

IGN is now undertaking routine local tie surveys at numerous sites and offers this service to observatory operators who are unable to complete their own surveys.

Geoscience Australia will also visit the Syowa, Antarctica, VLBI site to undertake survey planning and design for a later complete Local Tie Survey. This preliminary visit will occur in January 2007.

The Canberra meeting highlighted the benefit of exchanging survey data and reduction utilities as a means of standardising and calibrating survey analysis techniques.

Future Meetings

The working group has planned to meet again at the EGU2007 meeting in Vienna, Austria.

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