



Actions for the recognition of the International Terrestrial Reference System and Frame

Claude Boucher
IUGG

The International Terrestrial Reference System (ITRS)

- Definition and primary realization ensured since 1988 by the International Earth Rotation and Reference Systems Service (IERS)
 - Definition in IERS Conventions
 - Primary realization: International Terrestrial Reference Frame (ITRF): several solutions : ITRF88 up to the new ITRF2014
- ITRS formally adopted by IUGG for geoscience applications (Resolution of Perugia, 2007)

Relations with CCTF and CGPM

- Recommendation of CCTF to CIPM to adopt ITRS
- Formally recommended by CGPM in 2011 (Resolution 9 of its 24th meeting):
- *“the ITRS, as defined by the International Union of Geodesy and Geophysics (IUGG) and realized by the International Earth Rotation and Reference Systems Service (IERS), be adopted as the unique international reference system for terrestrial reference frames for all metrological applications “*

General considerations

- Other geodetic references are used by various communities
 - WGS84 in civil aviation (ICAO) , hydrography (IHO), cartography (ICA)...
 - ETRS89 in Europe (Inspire directive)
- Objective: to adopt ITRS as unique recommended reference for science and applications
- Requirements :
 - To ensure quality, access and sustainability of ITRS
 - To ensure a proper governance of these infrastructures
 - To clarify links with other systems (WGS84...)
 - To develop necessary standards

Standards related to ITRS

- 2008: an ad hoc WG established by the International association of geodesy (IAG), one of the IUGG associations, recommended an ISO standard related to ITRS
- 2009: Preliminary study submitted by France (AFNOR) to ISO TC 211 (Geographic information)
- 2013: ISO project 19161 on geodetic references at large, including contribution for metrology
- 2015: submission (by France) to ISO TC211 of a New Work Item Proposal (NWIP) on a standard related to ITRS, following one of the recommendations of project 19161
- 2015: IAG reactivated its WG to support this NWIP (IAG is a liaison to ISO TC211)

Conclusions

- To invite the metrological community to contribute to the establishment of this standard
- To investigate the proper procedure to ensure this contribution
 - Role of CCTF
 - Role of CIPM, BIPM..
 - Liaison to ISO TC211 as a way to appoint experts to the NWIP