Task AR-07-03:
Global Geodetic Reference Frames

Report to ADC-6

prepared by
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Recalling:

Task AR-07-03: Global Geodetic Reference Frames

"Ensure the availability of accurate, consistent, homogeneous, long-term stable, global geodetic reference frames as a mandatory framework and the metrological basis for Earth observation."

Goals:

- **User requirement coordination:** Establish a comprehensive GEOSS database of user requirements concerning georeferencing and geodetic reference frames by identifying, describing and establishing links to relevant user communities in the nine societal benefit areas and conducting appropriate surveys.
- **Georeferencing:** Ensure the availability of appropriate global geodetic reference frames for GEOSS.

Membership and Contributors:

- POC: IAG/GGOS (Hans-Peter Plag)
- Lead organization: IAG/GGOS
- Current contributions:
  - Germany
  - CEOS
  - IAG/GGOS
  - Korea
  - Italy

- Additional contributions:
  - Through GGOS 2020: more than 40 Experts
    (including IGOS-P, GLOSS, GOOS, GCOS)

Overall Status of Work:

Anticipated Deliverables in 2007:

- GGOS 2020 Reports
- GGOS 2007 Workshop

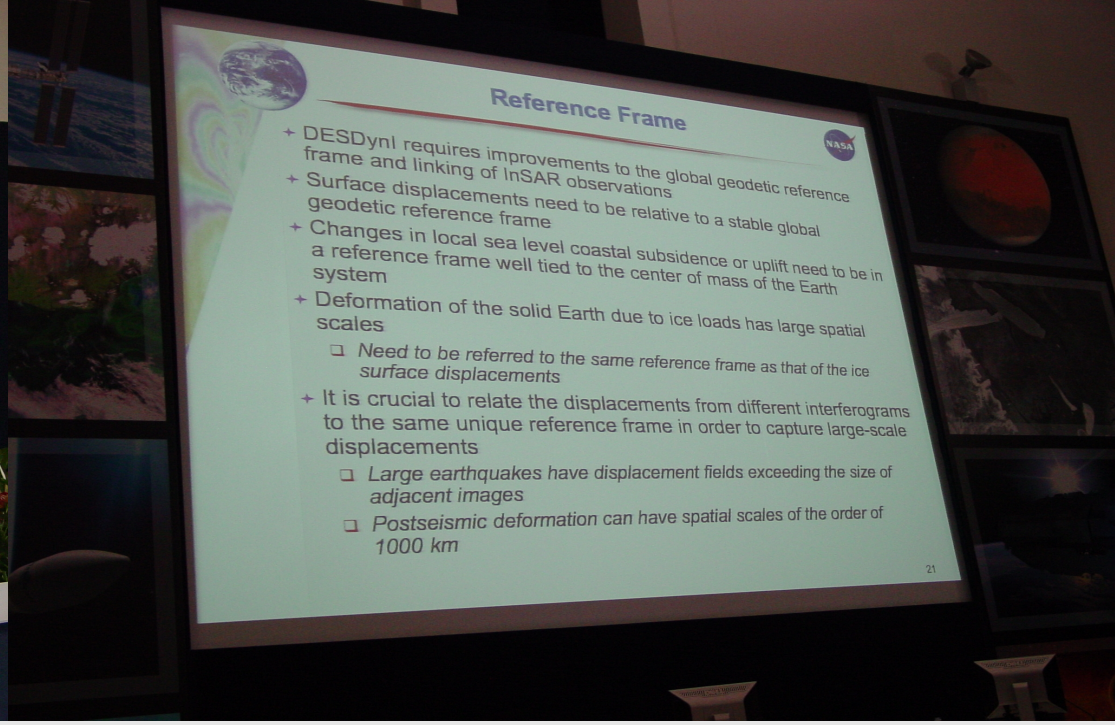
Achievements in 2007:

- Task AR-07-03 was reported as Early Achievements to the
- Ministerial Summit.
- GGOS 2020 Draft Report (about 200 pages) in final edits before
- external hearing.
- GEO/GGOS Workshop "The GGOS Contribution to GEOSS and
- an Observing System for Geohazards and Disaster Prevention"
- took place on November 5-6, 2007, ESRIN, Frascati Italy as part of
- the "International Geohazards Week" : Presentations and summary
- available at http://geodesy.unr.edu/ggos/ggosws_2007/.

GEO/GGOS 2007 Workshop

Opening Session:

- Space agencies contribute and depend crucially on GGOS/reference frames.
- Renewed commitment to continue space-geodetic infrastructure
- GGOS core element of GEOSS.



Session on GGOS and Geohazards:

- Prediction and Early warning systems work best if mutually informed and consistent, and GGOS has the bandwidth and should play both roles.
- GGOS/space-geodesy support new research and moves frontiers in research.
- InSAR is extremely versatile for the early detection of hazardous areas and thus can enable informed decisions on where to invest in dedicated monitoring systems.

Task Activities in 2008:

- Finalize GGOS 2020: External hearing of "Reference Document"; produce brief "Strategy Document"
- Discussion of GGOS 2020 Recommendations with GEO Members and Participating Organizations
- GGOS Stakeholder Conference (preferably co-located with a relevant GEO or CEOS meeting)
- User Requirements Database
- Development of intergovernmental frame work

- Consider two new issues:
  * Unified global height system
  * Transformation global to regional/national
  --> *Coordination with relevant GEO Tasks*

Relevant GGOS Activities in 2008:

- GGOS Retreat 2008, March 25-28, 2008, Bertinoro, Italy: Implementation of components (*Coordinating Office, Bureaus for Networks and Communication, Standards and Conventions, Satellite Missions, Web Portal*).
- GGOS Science Workshop later in 2008, potentially co-located with the ICG Meeting in Pasadena, California, December 2008: *Mass transport (water cycle) in and dynamics of the Earth System: Invitations to relevant GEO Task Teams.*