



INTERNATIONAL EARTH ROTATION SERVICE (IERS)
SERVICE INTERNATIONAL DE LA ROTATION TERRESTRE
WWW: <http://hpiers.obspm.fr>

REPORT ON THE IERS DIRECTING BOARD MEETING No 27

Tuesday 30 March 1999, 9:00
U.S. Naval Observatory, Washington D.C.

prepared by D. Gambis, Central Bureau

Attendance: C. Reigber (Chairman), B. Kolaczek, D. Gambis, C. Ma, P. Shelus, B. Melbourne,
B. Schutz, P. Willis, B. Chao, D.D. McCarthy, C. Boucher.
J. Ray (invited)

GENERAL GLOSSARY

DB: Directing Board
CfP: Call for Participation
FAGS: Federation of Astronomical and Geophysical Data Analysis services
GFF: Global Geophysical Fluids
IGS: International GPS Service
IVS: International VLBI Service
ILRS: International Laser Ranging Service
IDS: International Doris Service (in development)
ICRS: International Celestial Reference System
ICRF: International Celestial Reference Frame
ITRS: International Terrestrial Reference System
ITRF: International Terrestrial Reference Frame
TN: Technical Note
ToR: Terms of Reference

I - ACTIONS SINCE LAST BOARD MEETING

FAGS representative

H.G. Wenzel is the FAGS representative to the IERS DB since October 1998. However, he was absent of the last DB meetings. It is of prime importance that the FAGS representative be concerned by the IERS activities. C. Reigber will contact H.G. Wenzel.

List of corresponding members

D. Gambis circulated during last fall a proposed corrected list in which various names were removed due to changes of activities or retirements. It was agreed that D. Gambis would update and circulate a new list with suggested people active within the IERS.

Geocenter activities

The technical note on geocenter motion will be distributed in May, 1999. The question of the future of the geocenter topic was raised. Geocenter motions address different aspects linked to geophysics (cause of excitation, atmosphere, ocean...), gravitation (gravity fields) and geometrical (reference frame monitoring). The gravity aspects are part of GGF's Special Bureau for Gravity/Geocenter (Mike Watkins). It is assumed that monitoring activities of geocenter motion is not an activity of GGF. Ben Chao was asked to present the future activities of the Geocenter Special Bureau at the next Board meeting.

II - IERS EXTERNAL COOPERATIONS

Status and progress of the ILRS (Bob Schutz)

The ILRS is in a phase of development. No product combination is expected this year. Several campaigns are currently supported by the ILRS:

- The International GLONASS Experiment 1998 (IGEX98) which began on 19 October 1998 and will end on 19 April 1999 since a 3 month extension was decided.
- The GEOS-3 campaign which began on 15 October 1998 will end on 20 April 1999.
- The ERS-1 campaign which began on 20 July 1998 is extended until 31 December 1999.

Future campaigns concern the tracking of low orbiting spacecrafts. There will be an ILRS meeting during the EGS 99 meeting in Den Haag (The Netherlands) on Thursday 22 April. Information relative to the ILRS activities can be found on: <http://ilrs.gsfc.nasa.gov>

Status and progress of the IVS (Chopo Ma)

The IVS began its activities officially on 1 March 1999. Wolfgang Schlueter, the IVS Chairman reported to the IERS on March 22, 1999 that Chopo Ma was nominated as the IVS representative to the IERS Directing Board. There was no proposal for the IVS Analysis Coordinator task. In view of the great charge of the activity, a team of 3 people volunteered to fulfill this charge. An annual report is being prepared. All IVS components are invited to submit reports. The publication of this annual report will likely be ready by late summer. Information relative to the IVS activities can be found on: <http://lupus.gsfc.nasa.gov/ivs/ivs.html>

Status and progress of the IGS (Bill Melbourne)

The IGS Terms of Reference are now finalized. A first international LEO workshop jointly organized by the IGS, GFZ and JPL was held in Potsdam on March 9-11, 1999. The GPS user community is increasing in both scientific and commercial areas. Due to near real-time user requirements, the latency of the products delivering was shortened to 22/24 hours. Additional products will involve ephemerides of low-orbiter satellites. Questions arose on the future of GPS constellation. Information relative to the IGS activities can be found on: <http://igscb.jpl.nasa.gov/>

Status and perspectives of the "future" IDS

The project of an International Service based on the DORIS technique (IDS?) is in the air. There was an extension of the IGEX/GLONASS campaign. There is great interest in the way IGEX will contribute to the ITRF. A meeting on the results of the GLONASS Experiment, co-sponsored by the IERS, will take place September 13-14, 1999 in Nashville, Tennessee, U.S.A. This workshop will be an opportunity for participants to present and compare their findings, observations, and analyses resulting from the IGEX campaign. It will be a time to assess whether or not the objectives of the experiment were met and to discuss future plans for using and supporting GLONASS. More information at: <http://lareg.ensg.ign.fr/IGEX>

ToR IMPLEMENTATION

Chris Reigber presented a proposal concerning the schedule of the implementation of the new structure of the IERS. The Call for Participation (CfP) to the various components will be sent out before the IUGG meeting. This Call will be accompanied, for each component of the structure, by a detailed description of its role and responsibilities, expected functions, etc..

Schedule:

April-May 1999:	Preparation of a detailed document of about one page for each component.
June 1999:	Dissemination of the Call for Participation and documents.
July-September:	Preparation of proposals from the various institutes.
Oct-Nov 1999:	Evaluation of the proposals by a Review Board composed of the DB+outside experts.
Dec 1999 (AGU) :	Selections and final approval.
January 2000:	Implementation up of the new structure.

- **Technique Centers:**
 - IGS
 - ILRS
 - IVS
 - IDS
- **Product Centers:**
 - EOP
 - Rapid/Predicts
 - Conventions
 - ICRS
 - ITRS
 - Combinations
 - GGF
- **Analysis Coordinator:**
- **Central Bureau:**

B. Melbourne
B. Schutz
C. Ma
P. Willis

D. Gambis, D. McCarthy
J. Ray
D. McCarthy
F. Arias, C. Ma
C. Boucher, C. Ma
D. McCarthy, C. Boucher
B. Chao (only a description, not a CfP element)

B. Melbourne, C. Reigber

D. Gambis, B. Kolaczek, C. Reigber

Two possibilities exist:

- 1 - Data center outside the IERS
2 - Data center developed and maintained by the IERS. This could be the task of the Central which is coordinating and doing interfaces with IERS users.

VOTING PEOPLE: 8

YES : 7

NO : 0

ABSTENTION : 1

Relation with Unions: The Unions have to be informed of the new organization process.

- | | |
|---------|---|
| 1 - IAU | Dennis will distribute the ToR to Commission 19 and Division 1 (ICRS) |
| 2 - IAG | During the IAG Executive Committee meeting held in Paris (22-23 March 1999) the IERS ToR was presented and approved. (Cf Report by M. Feissel, "New IERS Charter"). |

Technical notes

Two TN (on Geocenter and El Nino) are being published and should be printed and distributed in May, 1999. B. Chao also intends to publish a TN on the GGF activities prior to the IUGG. A discussion on the future of the TN on the Geocenter occurred. It is important to continue the activities concerning the geocenter.

D. Gambis presented a draft concerning the new IERS Web. He should proceed with the work in order to make a proposition to the Board. It was asked that the project should be accessible somewhere through a password for the Board members. The Data base should be developed within this site.

It seems to be premature to involve the CDDIS in the development of the IERS data center. This should be discussed later. According to different people, it is the role of the Central Bureau to set up a Data Center with a mirrored site elsewhere.

ITRF97 and ITRF2000

The new solution ITRF97 is now available from the following site:

["http://lareg.ensg.ign.fr/ITRF/ITRF97"](http://lareg.ensg.ign.fr/ITRF/ITRF97).

The individual solutions selected for the analysis are 4 VLBI , 5 SLR , 6 GPS, 3 DORIS and one multi-technique (SLR + DORIS) solutions.

The main characteristics are the following:

- All the individual matrices were orthogonally projected ;
- Station positions of the projected solutions were then propagated at their Epochs of Minimal Position Variance;
- The reference frame definition (origin, scale, orientation and time evolution) is achieved in such a way that ITRF97 is in the same system as the ITRF96;
- Station velocities are constrained to be the same for all points within each site; ITRF97 positions were estimated at epoch 1997.0;
- Transformation parameters (at epoch 1997.0) and their rates from ITRF97 to each individual solution were also estimated.

More details can be found on the web site. A dedicated Technical Note will be published in the course of June.

ITRF2000

C. Boucher circulated a scenario with specifications for approval. Submissions will be due for Summer 1999, the solution will be performed at the end of 1999. Three types of inputs are expected:

- A) global solutions (usual call for annual computations)
- B) densification solutions (for instance regional GPS campaigns)
- C) local surveys

A call for participation will be distributed in the near future.

GGF

The web site is being developped. A Technical Note is expected to be issued for the IUGG. The next meetings of the GGF components in 1999 will be during the assemblies of the EGS in Den Haag, Spring AGU in Boston, IUGG in Birmingham and the Fall AGU in San Francisco.

CONVENTIONS 2000

Two key aspects concern the future nutation model and the CEP issue. This document is expected for the end of 1999.

D. McCarthy is doing the coordination with E. Groten responsible for the Special Commission of the IAG Standards.

GEOSPECTRA

Three International Services, BGI, IGS and IERS are concerned. 9 square meters are available for poster presentations. Daniel Gambis is in charge of preparing the IERS posters.

IUGG Birmingham (18-30 July 1999)

- 1- Preparation of a report on the IERS activities 1995-1999 (6 pages).
- 2- There will be a 3-day symposium on the topic "Geodesy beyond 2000", Services will be presented (15 min presentation for the IERS). The poster used for Duesseldorf could be used at Birmingham.

FUTURE BOARD MEETINGS

- 1 - Birmingham, 18-30 July 1999: to be organized for the 2nd week.
- 2 - AGU Fall Meeting - December 13-17, 1999 San Francisco, California.
- 3 - Cagliari University, Sardinia, Italy, 27-30 September 1999.