IERS SINEX Working Group Meeting Minutes

Wednesday, April 6, 2011
13:30 h – 15:00 h
EGU General Assembly 2011, Vienna, Austria
Room SM1

Participants:

Zuheir Altamimi [ZA], Sabine Bachmann [SB], Tom Herring [TH], Urs Hugentobler [UH], Guilhem Moreaux [GM], Axel Nothnagel [AN], Erricos Pavlis [EP], Gérard Petit [GP], Jim Ray [JR], Paul Rebischung [PR], Bernd Richter [BR], Cecilia Sciaretta [CS], Laurent Soudarin [LS], Daniela Thaller [DT]

Excused: Pierguido Sarti [PS], Manuela Seitz [MS]

Organizational topics

UH mentioned that he will handover the chair of the GGOS Bureau for Standards and Conventions (BSC) to Detlef Angermann. As DGFI is already represented within the WG SINEX via one of the ITRS Combination Centers (by MS), UH suggested to ask Peter Steigenberger from TU München to represent the GGOS BSC within the WG SINEX.
The WG members agreed on this suggestion.
Remark: In the meantime, Peter Steigenberger agreed to take over this role.

IDS

- LS presented the need of the DORIS community to include the list of satellites used for generating the solution, especially the information on satellite-specific weights.
- EP commented that this is relevant for the ILRS as well, and that standardized names should be used for the satellites.
- Discussion: check block SATELLITE/ID whether it can be used; some generalization is needed for non-GNSS solutions

IGS

- PR mentioned the phase center issues and the list of station discontinuities
- Agreement that the block SOLUTION/DISCONTINUITIES is added to the official format description, with the format as it is actually used by the ITRF combination centers.
- ZA added that the Analysis Centers should be forced to provide reliable information in the block SOLUTION/EPOCHS.
- DT commented that according to the decisions of the IGS Antenna Working Group made at the IGS Workshop at Newcastle 2010 (information provided by Ralf Schmid, head of the IGS Antenna WG), the implementation of parameters for the phase center variations in SINEX is postponed as there is no trivial solution how to do this.
- Discussion: The blocks related to SITE/xxx_PHASE_CENTER should be homogenized if possible. At the moment one block is defined for GPS and one for GALILEO, whereas GLONASS is missing. If a homogenization into one GNSS_PHASE_CENTER block is not possible, a GLONASS-related block should be added.

- All phase center issues in SINEX should be done in close cooperation with the IGS Antenna WG.

ILRS

- EP reported that the ILRS will soon start to include low-degree spherical harmonic coefficients of the Earth's gravity field in the weekly SINEX files. The definition of these parameters is already included in the latest format description.
- There should be a possibility to document the nutation model applied (i.e. either IAU2000 model only or including the corrections determined by VLBI). Could the block NUTATION/DATA be extended? Or include this information in a new block containing modeling issues?
- A block for documenting the center-of-mass (COM) values and the offsets of the laser retro-reflector arrays (LRA) used for the satellites should be added. A station-dependency is needed there.

IVS

- AN asked to add the continuous piece-wise linear (cpwl) polygon parameterization for EOPs (and station positions) to the format description.
- Discussion about cpwl parameterization did not come to a consensus: on the one hand, cpwl is an unremovable constraint at the interval boundaries (cannot be removed for combination with other contributions); on the other hand, jumps for ERPs at interval boundaries are not physically meaningful. As this question concerns a much broader community than only the SINEX WG, the discussion was stopped.
- SB reported about the request of the IVS Analysis Centers that the values of the block STATISTICS should be defined more clearly.
- DT mentioned that there is an Appendix II of the format description containing the mathematical background for the SINEX files.
- Discussion: Appendix II should be revised and missing topics on the mathematical background should be added.

ITRS Combination Centers

- ZA commented that the type of constraining should be clearly stated in the SINEX file. The column "constraint code" is not used by the Analysis Centers in a consistent and reliable way, so that it cannot be used by the combination centers.
- Discussion: The constraining issues can be added to a new block related to the modeling aspects.

GGOS Bureau for Standards and Conventions

- UH reported that two topics have been discussed within the GGOS BSC: TIDE_SYSTEM and TIME_SYSTEM

IERS Analysis Coordination, Conventions, Central Bureau

- TH and GP emphasized again that a new block containing modeling issues should be added to the format description. This ensures traceability of the models throughout the series of SINEX files.
- BR asked whether a proper documentation on how the solution has been generated should be provided in SINEX.
- Discussion: problem of reliability of the meta data provided

Other topics

- LS proposed to install a mailing list for the working group. The WG members agreed on this suggestion. (Remark: The mailing list has already been installed at the IERS Central Bureau: sinex@iers.org; only members can send emails; no archive)
- DT reported that a website for the SINEX WG will be established at the IERS Central Bureau. (Remark: The website is now available at http://www.iers.org/WGSINEX)

Summary of Action Items

Action Item	**Who**	**Remark**
Ask Peter Steigenberger to be representative of GGOS BSC (replacing UH)	DT	done
Generalize SATELLITE/ID block to be usable for all satellite techniques (satellite numbers and weighting)	LS, EP, JR, DT	31-Aug-2011
SOLUTION/DISCONTINUITIES to be added to the format description	ZA, PR, DT	31-Aug-2011
Check whether SITE/xxx_PHASE_CENTER can be generalize for all GNSS	JR, PR + IGS Antenna Working Group	31-Aug-2011
New block for SLR reflector issues (COM, LRA offsets)	EP, CS, DT	31-Aug-2011
Apriori nutation model (extend NUTATION/DATA or include in MODEL block)	All	31-Aug-2011
Extend / improve description of mathematical background (APPENDIX II)	SB, MS, TH, DT	31-Aug-2011
New block containing modeling aspects (including constraining issues)	All (lead by TH)	31-Aug-2011
Proposal for meta data to be included in SINEX file	BR	31-Aug-2011
Install mailing list for SINEX WG	DT + IERS Central Bureau	done
Install website for SINEX WG	DT + IERS Central Bureau	done