Road Map for the next ITRF

Zuheir Altamimi
Paul Rebischung
Laurent Métivier
Xavier Collilieux

IGN, France
Roadmap for the next ITRF solution: 2019 or 2020?

• Consultation was sent to the technique ACCs and GGFC on January 24, 2018

• An inventory (list) of all effects and model updates to be considered by all techniques in the reprocessing effort

• Questions:
  – Review the list of effects & models
  – Indicate the time needed for Software update
  – Indicate the time needed to accomplish the reprocessing of the full history of observations?
Feedbacks so far (1/5)

• IVS: Response from John Gipson:
  – General agreement, except:
    – HF-EOP model to be recommended by the WG
    – Loading model (Atmospheric?) will be applied
    – Include the “removable” model corrections in SINEX
    – High priority to updating software to apply gravitational deformation.

• IVS time line for reprocessing:
  – No major obstacle. Discussion with ACs at IVS GM in June 2018
Feedbacks so far (2/5)

• **ILRS: Complete:**
  – Mostly agree on ITRS proposal
  – Different opinions on some topics, mainly the gravity field model(s)
  – HF EOP: awaiting for a “consensus” model
  – Will not include a loading model
  – No model for 3D thermal effects

• **ILRS time line for reprocessing:**
  – the next ITRF solution could be ITRF2019, but probably wait until early 2020 to have all 2019 data included
Feedbacks so far (3/5)

• **IDS: Complete:**
  - Mostly agree on ITRS proposal
  - HF EOP: awaiting for a “consensus” model
  - Waiting IERS recommendation to apply or not a non-tidal loading model
  - 3D thermal effects: no opinion
  - A number of DORIS-specific effects will be addressed

• **IDS time line for reprocessing:**
  - ITRF2020 is more realistic
Feedbacks so far (4/5)

• IGS: response from Michael Moore
  – Mostly agree on ITRS proposal
  – Adopt post EGM2008 model: Not all ACs are convinced this has a significant impact on GNSS
  – HF EOP: awaiting for a “consensus” model
  – Most ACs not in favor of applying a loading model
  – 3D thermal effects: little impact on GNSS???

• IGS time line for reprocessing:
  – Most ACs not ready for reprocessing before end 2019!!
  – Go for ITRF2020!
Feedbacks so far (5/5)

• GGFC: response from JP Boy:
  “GGFC is ready to provide the atmospheric, oceanic & hydrology loading in both CF & CM reference frame, and the corresponding geocenter time series.”

==> Well noted!
Summary and Conclusion

• General agreement of all techniques regarding proposed effects and model updates to be considered for the reprocessing

• Most techniques (esp. IGS & IDS) favor ITRF2020

• Will go for ITRF2020, but the ITRS Center will
  – Issue a CfP by end of 2018 with all specifications, in close consultations with all players
  – Request specific solutions for testing purposes, e.g.
    • SLR range biases estimated
    • New HF-EOP model applied
    • Others TBD

• Follow up by all ACCs of the effects and model updates, with regular report to ITRS and IERS DB