

Data Formats and Procedures Standing Committee Meeting GFZ-Potsdam, October 09, 2016, 11:30 – 13:00

- Welcome members and guests.
- CPF and CRD issues. (see Appndix)
 - Small group met shortly before the meeting to discuss the details related to the ELT mission.
 - New study group will discuss the required ELT changes and a list of possible other changes within the next two years.
- New station change log format
 - Christian reported on his new possibility to edit the station history log on the EDC Web page. (see Appendix)
 - Stations need to log into EDC with the station account and can then edit or update the station history log.
 - During the discussion there was the desire that this procedure could also be used for the site logs. Christian will add this feature.
 - An other wish was that the access can be done using APIs. This can also be realized.
 - Within the next weeks EDC will provide both applications.
 - Christian was invited to report at the Network and Engineering SC by Matt.
- Data harmonization
 - In the future stations will be asked to deliver data to both operation centers for data reliability and safety.
 - Therefore the quality checks at both OCs need to be harmonized. This will be finished during the workshop.
- The question on a common point of contact for all ILRS members came up.
 - Carey will create a list on the ILRS Web pages (point of contact) with at least an email address for stations, analysts and centers.
- New leap second procedure
 - Randy reported on implementing the SC's and CB's recent decisions on handling the leap second.
 - Stations stop tracking before midnight and start again after midnight, with the leap second applied (coffee break procedure).
 - After midnight the stations use CPFs that start on the new day and have leap second applied. The leap second flag is no longer important.
 - The proposal has already been accepted by the CB..
- Preparation for clinic session
 - Restricted tracking required for new missions will be presented in clinic see appendix.
 - go/nogo flag
 - power restrictions
 - segment restrictions
 - schedule restrictions.

- Study Group on Re-use of software
 - Short meeting addressing problems.
 - Separate minutes are available from ILRS.
- Next meeting: 2018 in Canberra, ev. 2017 in Riga.

Participants:

Members:

Horst Mueller
Jan McGarry
Randell Ricklefs
Christian Schwatke
Mike Pearlman
Jens Steinborn
Julie Horvath
Scott Wezel
Carey Noll

Nonmembers:

Kate Stevenson
Franck Reinquin
Anja Schlicht
John Degnan
Kalvis Salming
Jorge del Pino
Matt Wilkinson
You Zhao

Appendix1: Schwatke

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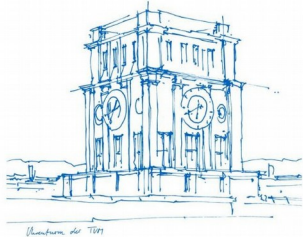
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Update on "Station Change History Log" Procedure

Christian Schwatke

Data Formats and Procedures
Standing Committee meeting

Potsdam, 9th October 2016



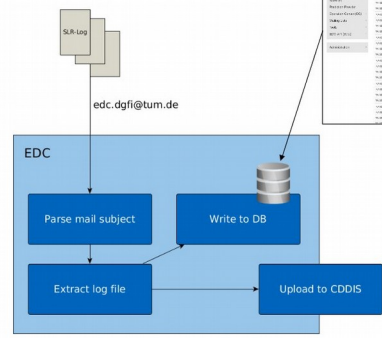
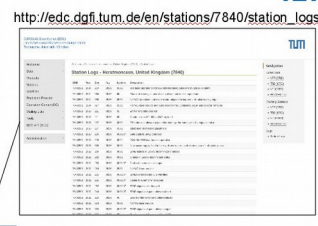
Denkmal der TUM

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State of the Art

http://edc.dgfi.tum.de/en/stations/7840/station_logs/

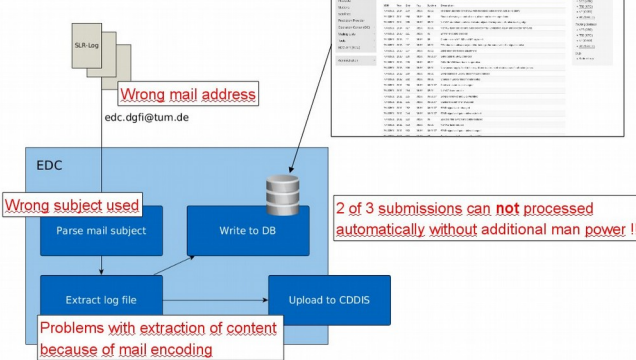



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Problems

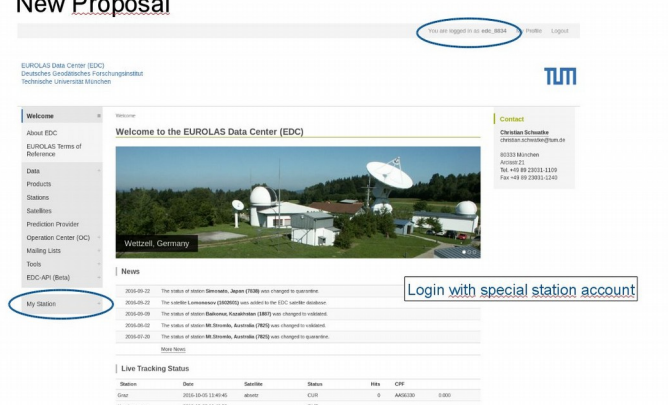
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New Proposal



Login with special station account

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New Proposal

Station Logs - Herstmonceux, United Kingdom (7840) - Station Logs

SOID	Year	Day	Toy	System	Description
78403502	2014	278	08.02		HAZ laser upgrade to Nd:YAG with increased pulse energy and 3kW capability
78403501	2014	056	08.30	99	Electrical re-wiring in control rooms, offices, and in telescope dome.
78403501	2014	005	08.30	05.01	Nd:YAG laser diode and discriminator adjusted to improve calibration leading edge.
78403501	2014	027	08.30	05.01	Nd:YAG laser service and pulse selector trial. Completed 3214 and selector removed.
78403501	2013	221	08.30	05	Emitter and APC changed
78403501	2013	212	08.30	05	Cable re-runs NG, M3 and M4 replaced
78403501	2013	207	08.30	08.01	TR reduction software adjusted for better performance with HAZ signal to noise
78403501	2013	137	08.30	05.02	ZMW laser start date adjustment
78403501	2013	130	08.30	08.01.07	Gate cable to SPND changed
78403501	2013	128	08.30	05.02	ZMW Nd:YAG laser back in operation
78403501	2013	008	08.30	08.01	New power supply fitted to Lecroy discriminators to eliminate cause of calibration jumps
78403501	2012	399	08.30	08.01	SPND signals in Lecroy discriminator changed
78403501	2012	392	08.30	08.01	Change in Lecroy discriminator setup
78403501	2012	390	08.30	08.01.07	Cables to move been changed
78403501	2012	242	08.30	05.01	Nd:YAG laser service
78403501	2012	205	08.30	08.01.07	SPNDs removed and C-SPND fitted
78403501	2012	205	08.30	08.01.07	Cables to move been swapped
78403501	2012	202	08.30	08.01.07	SPND signal cable changed
78403501	2012	244	08.30	08.01.07	SPND signal and gate cables re-routed
78403501	2012	110	08.30	05	Spectral filter switch and cable replaced
78403501	2011	053	08.30	05.01	Nd:YAG laser service
78403501	2011	030	08.30	08.01.07	SPND signal and gate cables changed

- Station log can be edit online
- Adding new records online
- Online format check after saving
- Data Transfer can be realized by a daily cronjob accessing the EDC-DB via EDC-API

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- The new procedure is fail-safe with respect to the user
- The new data transfer is optimized
- Same procedure can also be used for updating station information such as contact etc.

Appendix 2: Ricklefs

Report to ILRS DF&P SC Various Topics

R. L. Ricklefs
UT CSR

CPF Issues – ELT data

- Transponder clock needs to have offset and drift
- Current H4 has transponder oscillator drift rate, but no epoch, which they need
- The record has not been used by any other project, so impact will be minimal if the field is added to the end of the record
- Could be handled with separate file like LRO?

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CPF/CRD issues – longer term

- Several possible updates
 - CRD
 - Time continues past 86400 seconds without wrapping (approved at last Annapolis meeting)
 - Several lunar additions
 - Software version configuration record
 - CPF
 - Rewrite manual without emphasis on transition from TIVs
 - Inertial vector option not used
- Would like to form a study group to workout changes for next meeting in 1-2 years

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Leap Second December 31, 2016

- Changes in handling leap second developed by SG and approved by CB
- Instructions sent to prediction providers, stations, and analysts
- "1) Stations:
 - On December 31, track as normal up until the end of the UTC day.
 - On January 1 UTC, be sure your stations clock is updated, and switch to the CPF files that start on January 1. Do NOT use CPF files that start in December.
 - Tracking a satellite pass through the December 31/January 1 crossover will probably not work properly.
- 2) Prediction providers:
 - Most of you do not need to change anything. It does not matter whether you are setting the leap second flag or not, as long as it is set consistent with the CPF document.
 - The CPF files starting on January 1 and thereafter MUST NOT have the leap second flag set to '1'. After the last leap second, one or two providers did not reset the flag for a few days into January.
 - Be sure to have your leap second files updated properly.
- 3) Analysts:
 - Be sure to update your leap second files!"
- There has been no response.

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Restricted Tracking

- Being discussed in the clinic this week
- Need to change nomenclature
 - Pass segments
 - Real time
 - Laser on and off during short pass
 - ALOS and GPB
 - Schedule segments
 - During CPF scheduling and prep
 - Remove large parts or allow short parts of long passes
 - LROLR and Radioastron

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Reusable Software

- Added link to Herstmonceaux's ADS-B based aircraft safety system software
- Have submitted IP "disclosure" to UT for NASA regarding MLRS lunar software written solely by UT personnel
- "Disclosure" regarding remainder of MLRS software having developers from various contractors as well as civil servants has been released to UT with some remaining issues
- No one has fulfilled their intentions to supply additional software

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