EUROLAS Data Center (EDC) – Recent Developments

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Introduction

Since 1991, the EUROLAS Data Center (EDC) is one of two global data centers of the International Laser Ranging Service (ILRS) which has been archiving SLR data and related products for the ILRS community. In recent years, the optimization and automation of data transfer and information exchange has become increasingly important. Until now, Site Logs which provide detailed information of each ILRS station and Station History Logs which provide information of station upgrades were managed manually. Both, the new Site Log Manager and Station History Log have now been integrated into the EDC website which enables station easily to update relevant information. This information is very important for SLR data analysts. In this paper, the procedure of the information flow of the "Site Log Manager" and the station history log management are presented in detail. Additionally, a new online tool for checking data using the new format of CRD and CPF is shown.

Site Logs

Site logs provide important and detailed information about stations changes of hardware, software, personal etc. which are essential for analysts of SLR data. Until **August 2018**, the new site log format specification (Version 2) was developed. In this step, 18 fields were updated and 100 new fields were added. Finally, the new format has been released in **September 2018**. The latest site logs of 89 stations have been converted to the new format version. In this process, the new site log structure was adapted, existing default values were removed and obvious errors were corrected. In **October 2018**, the new "Site Log Manager" on the EDC-website has been released. Stations submitting their data to EDC can use their FTP-Account to access the "Site Log Manager" on the EDC-website. All approved site logs of version 2, will be released in the preliminary directory on FTP (*ftp://edc.dgfi.tum.de/pub/slr/slrlog/v2/*).

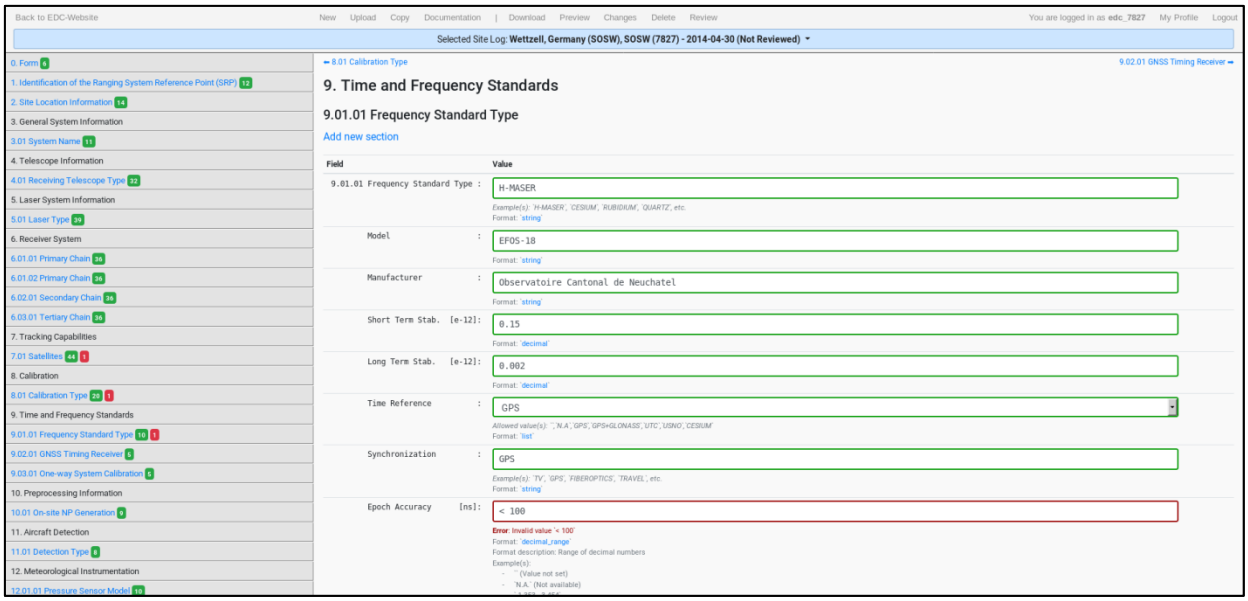

Figure 1: "Site Log Manager" on the EDC-website

Until **January 2019**, all station managers will be informed to review, fix remaining errors and update their site logs. Then all site logs should be approved. In case of small format errors, the review and approval of site logs will be performed by the EDC without involving the ILRS CB. Finally in **February 2019**, the review process will be switched to the operational mode in which site logs will be reviewed and approved by the ILRS CB only.

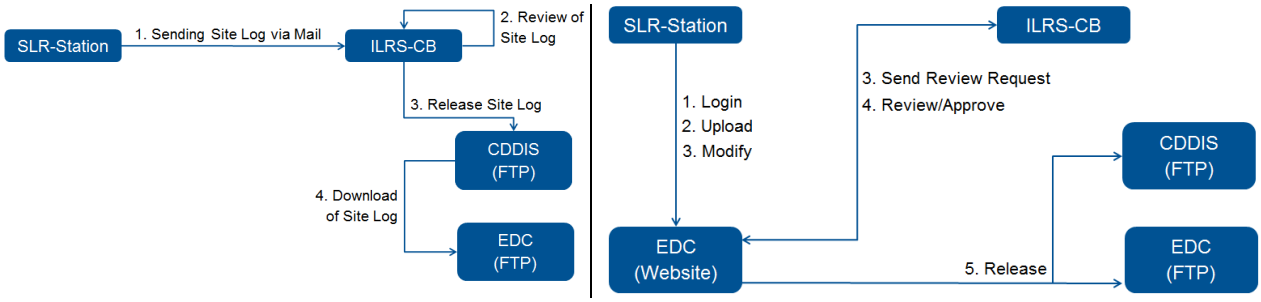

Figure 2: Site log update procedure for format version 1.0 (left) and format version 2.0 (right)

The current status of the update process for 44 operational stations is that only two site logs could be converted successfully. Two other site logs could not be converted because of structure errors. And 40 remaining site logs still contain smaller format errors which have to be reviewed first. Furthermore, 45 inactive stations for which site logs of version 1.0 exist have been converted. In summary, 7 site logs have been converted successfully, 34 have been converted containing smaller format errors, and four site logs could not be converted because of structure errors.

Station History Logs

Stations history logs provide chronological information of station upgrades which are very important for SLR analysts. The management of the station history logs has been updated on the EDC-website.

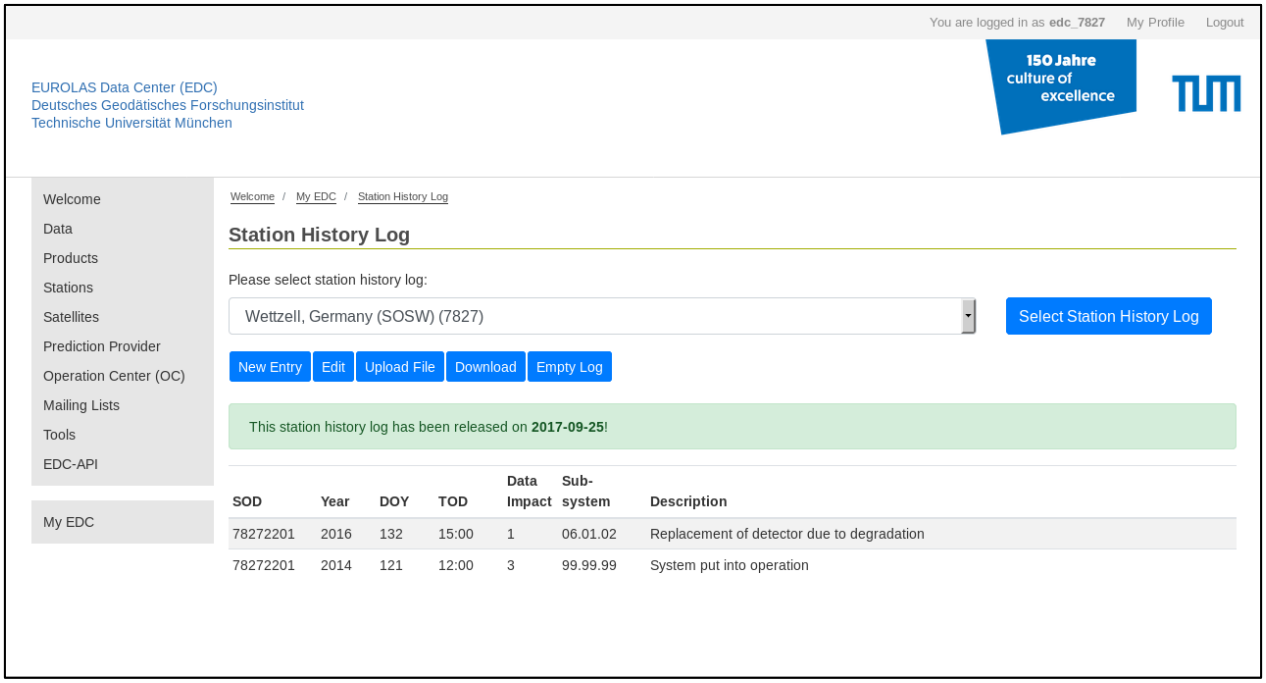

Figure 3: Station history log management on the EDC-website

The station history log files are available on the EDC-website but also on the FTP (*ftp://edc.dgfi.tum.de/slr/slrhst/*). Currently, only 24 station history logs of 44 active stations are available. Stations submitting their data to EDC can use their FTP-Account to access the station history log management on the EDC-website.

Updated CRD and CPF Format Checker

In **July 2018**, the new CPF format version 2 has been released which should be implemented by all prediction providers until **January 2020**. The new CRD format has been released in **September 2018** which should be implemented by all stations until **July 2020**. In order to help stations and prediction providers in the implementation phase, a new online format checker on the EDC-website has been developed. It allows user to check the format of CPF and CRD data for format version 1, respectively 2 before submitting data to their ILRS operation centers. This tool is accessible for all EDC-users after registration.

Conclusion

The new tools will contribute to improve the automation processes in the ILRS. The “Site Log Manager” centralizes now the update procedure and review process of site logs on the EDC-website. Also, station history logs can now easily be updated on the EDC-Website. The updated CRD/CPF format checker is a useful tool for stations and prediction providers in the implementation process of the new format version 2.