EUROLAS Data Center (EDC)
Improvements of the EDC-Website for the ILRS Community

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Overview

- State of the Art
- New features of the EDC-Website
- Conclusion/Outlook

Screenshoot of the EDC-Website
The Website

- EDC-Website was launched on 2011-11-15
- URL: [http://edc.dgfi.badw.de](http://edc.dgfi.badw.de)
- Current features of the EDC-Website:
  - Information about submitted SLR data (normal point data, full-rate data), predictions and products
  - Data sets in CRD, CPF, CSTG and MERIT-II format are managed
  - Detailed information about all stations and satellites
  - Stations can track the EDC data flow and the current status of their submitted data
  - Information about each submitted data set can be retrieved
  - Information on how the Operation Center (OC) checks all submitted data sets
CRD-Check

- Online tool for checking CRD data (NPT, FRD) for format errors
- Users can upload their data for checking them via web interface
- Target groups are
  - station managers of new stations
  - stations after software updates

Example of CRD-Check of a valid data set

Example of CRD-Check of a data set with errors
CPF-Check

- Online tool for checking predictions (CPF) for format errors
- Users can upload their data for checking them via web interface
- Target groups are
  - prediction providers updating their software
  - prediction providers creating predictions for new satellites

Example of CPF-Check of a valid data set

Example of CPF-Check of a data set with errors
User-defined CPF-Mailer

- Recipients of the CPF-mailer will receive the latest predictions submitted to the EDC
- The user-defined CPF-mailer enables users to configure the CPF-mailer individually
- CPF predictions can be selected by
  - satellite
  - prediction provider
- The existing CPF-mailer maintained by the EDC will be migrated to the user-defined CPF-mailer
- All recipients of the former CPF-mailer will be requested in the near future to register for the new user-defined CPF-mailer
Statistics

- Monthly and yearly EDC reports are available for download since 2012/05
- Content of reports:
  - Daily/monthly/yearly number of observations/files/passages for satellites and stations
  - Daily number of predictions for satellites
  - Yearly number of predictions for prediction centers
  - Status of the stations
  - Time-delay from measurement to the data center
  - etc.
- Most statistics are also available on the EDC-Website
SLR Mailing Lists

- SLR-Mails and SLR-Reports are now stored in a database
- Both archives are accessible via the EDC-Website and FTP
SLR Mailing Lists

- New search function for searching the archives
- Search criteria: mail no., date, sender, subject, author and content
EDC-API

- EUROLAS Data Center - Application Programming Interface (EDC-API)
- The EDC-API allows users to access the EDC data holding by using their own programs via socket connections
- The user can send queries to the EDC data holding and receive user-defined database listings

Flow chart of the EDC-API
• Communication using the EDC-API occurs in two steps (authentication, database query)

• The authentication occurs by sending an API-key which is available after registration on the EDC website

• The database request contains parameters for the database selection (e.g. data type, output parameters, constraints for the selection, ...)

• The database response contains an array with all datasets returned by the database selection
EDC-API

• First application using the EDC-API is the “Station Monitor”
• The “Station Monitor” lists the latest submitted data sets of a certain station and updates itself automatically
• The program can be downloaded from the EDC-Website
• The Source code (Python) can be modified for other applications
Conclusion / Outlook

Conclusion

• The new tools
  • help station operators to track their data more efficient
  • help analysts to get more information about the data holding
  • help users to find information they are looking for (SLR Mail, etc.)

Outlook

• The functionality of the EDC-API will be improved (in collaboration with stations)
• Provide more statistics about the data holding (suggestions of interesting statistics are welcome)
• Internal near real time data processing (decrease of the time from the data submission to the availability of the data on FTP).
• Reorganization of the incoming FTP structure (one FTP account for each station, prediction center, etc.)
• Stop sending data in old format (CSTG, MERIT-II) data to DCs.