EARTH OBSERVATION MISSION CFI SOFTWARE

Release Notes – Version 4.28

1 INTRODUCTION

This note describes the changes introduced in the new release of the Earth Observation CFI software libraries.

2 NEW RELEASE DESCRIPTION

2.1 CFI Software and Documentation Delivery

The new versions of the CFI software libraries are the following:

- EO_FILE_HANDLING -- Version 4.28
- EO_DATA_HANDLING -- Version 4.28
- EO_LIB -- Version 4.28
- EO_ORBIT -- Version 4.28
- EO_POINTING -- Version 4.28
- EO_VISIBILITY -- Version 4.28

The following Software User Manuals have been updated accordingly:

- EO_FILE_HANDLING issue 4.28
- EO_DATA_HANDLING issue 4.28
- EO_LIB issue 4.28
- EO_ORBIT issue 4.28
- EO_POINTING issue 4.28
- EO_VISIBILITY issue 4.28
- GENERAL issue 4.28

2.2 Compilation software and platform

This release of the CFI libraries are provided for LINUX, MACOS and WINDOWS platforms.

- LINUX 64-bits:

  - Linux 4.10 (Ubuntu 17.04) Operating System
  - gcc compiler version 6.3.0 (for linking the software to a C application)
  - glibc 2.24
- LINUX 64-bits (Legacy):
  - Linux 2.6.35 (Ubuntu 10.10) Operating System
  - gcc compiler version 4.5.4 (for linking the software to a C application)
  - glibc 2.12
- PC WINDOWS 64-bits:
  - Microsoft Windows 10 Professional Operating System
  - Microsoft Visual Studio 2022 (for linking the software to a C application)
- MACOSX on Intel (64-bits):
  - Mac OS X version 10.12 (the libraries and executables have been compiled with compatibility with version 10.9 onwards).
  - gcc provided with Xcode 9.2 (for linking the software to a C application)
- MACOSX Apple M2 Max on Arm (64-bits):
  - MACOS 13.5.2 (the libraries and executables have been compiled with compatibility with version 13.5.2 onwards).
  - gcc provided with Xcode 14.3 (for linking the software to a C application)

Note that the distributed binaries have been generated with no debug.

2.3 Installation packages

The following installation packages are provided:

- EOCFI-4.28-CLIB-LINUX64_LEGACY.zip
- EOCFI-4.28-CLIB-LINUX64.zip
- EOCFI-4.28-CLIB-MACIN64.zip
- EOCFI-4.28-CLIB-MACARM64.zip
- EOCFI-4.28-CLIB-WINDOWS64-V10.zip

3 CLOSED SPRS

Anomaly number	Description ANR
977	ANX calculated in True-of-Date when using Predicted Orbit File

1030	Upgrade Java library to Open JDK 11 (and compatible with the latest Java release)
1047	Sign error in xl_geod_distance implementation
1048	JAVA wrapper reports wrong orbit time validity when initialised with state vector
1049	Inconsistent orbit time results for xo_time_to_orbit and xo_osv_compute_extra
1050	Memory leak in XD_Read_ephemeris_xml
1052	xml_validate stopped working since schema repo moved to https
1053	xl_geod_distance incorrectly warns for antipodal points
1054	xv_timesegments_and_compute sometimes produces wrong results
1056	xo_orbit_init_file should not initialise interpolator for GEO satellites
1057	Enable automatic memory checks when building EOCFI

4 NEW REQUIREMENTS

The following new features/requirements have been implemented.

Anomaly number	Description ANR

5 KNOWN PROBLEMS

There are no known problems.