EARTH EXPLORER MISSION CFI SOFTWARE

Release Notes –Version 3.7.5

1 INTRODUCTION

This document describes the changes introduced in this release of the Earth Explorer Mission CFI Software.

2 RELEASE DESCRIPTION

2.1 Software

The following table lists the released libraries and version:

Library Name	Version
File Handling	3.7.5
Data Handling	3.7.5
Lib	3.7.5
Orbit	3.7.5
Pointing	3.7.5
Visibility	3.7.5

The above libraries are written in C and provide an API for C.

The libraries installation packages are available for download at the following URL (registration required):

http://eop-cfi.esa.int/index.php/mission-cfi-software/eocfi-software/branch-3-x/eocfi-v3x-download

2.2 Documentation

The following documents are available:

Document Name	Version
Mission Conventions Document	3.7.5
General Software User Manual	3.7.5

Quick Start Guide	3.7.5
File Handling Software User Manual	3.7.5
Data Handling Software User Manual	3.7.5
Lib Software User Manual	3.7.5
Orbit Software User Manual	3.7.5
Pointing Software User Manual	3.7.5
Visibility Software User Manual	3.7.5

The documentation is available for download at the following URL:

http://eop-cfi.esa.int/index.php/mission-cfi-software/eocfi-software/branch-3-x/eocfi-v3x-documentation

More information on the Earth Explorer CFI Software can be found at the following URL:

http://eop-cfi.esa.int/index.php/mission-cfi-software/eocfi-software

2.3 Supported platforms

The following platforms are supported by this release of the CFI:

- **LINUX**
  - LINUX 32-bits
  - Platform Requirements: x86 based PC, Linux Operating System (Kernel v2.4.x)
  - Software Requirements: gcc compiler v3.4.x, glibc (C Library) v2.3.x, libxml2 v2.6.x

- **LINUX64**
  - LINUX 64-bits
  - Platform Requirements: x86_64 based PC, Linux Operating System (Kernel v2.6.x)
  - Software Requirements: gcc compiler v4.2.x, glibc (C Library) version 2.7.x, libxml2 v2.7.x

- **WINDOWS**
  - Microsoft WINDOWS PC (32-bits)
  - Platform Requirements: x86 based PC, Microsoft Windows XP Operating System.
  - Software Requirements: Microsoft Visual C++ Compiler (Visual Studio 2008 Professional)

- **MACIN64**
    - MACOSX on Intel (64-bits)
    - Platform Requirements: x86_64 based Mac Computer, Mac OS X version 10.5.x or higher
    - Software Requirements: gcc compiler version 4.2.x

2.4 Installation Packages

The CFI libraries are provided as zip packages:

Package Name	MD5 Checksum
EXPCFI-3.7.5-CLIB-LINUX.zip	eb74b22c75ea2adca6d5ed2c5aba3a39
EXPCFI-3.7.5-CLIB-LINUX64.zip	c7d574fd7047c289b4f3a52500cad07d
EXPCFI-3.7.5-CLIB-MACIN64.zip	d0fd8ff27f34b0a20a14a33c1c60873c
EXPCFI-3.7.5-CLIB-WINDOWS.zip	27c07e8c4e391bda8512c53699975e0a

DEM datasets are distributed separately and are available for download at the following URL:

http://eop-cfi.esa.int/index.php/mission-cfi-software/eocfi-software/support-files

2.5 Installation Hints

The CFI libraries can be installed by expanding the installation package in any directory.

For specific hints related to the usage of the libraries, please consult Section 6 "CFI LIBRARIES INSTALLATION" of the General SUM and Section 6 "LIBRARY USAGE" of each Library User Manual.

In order to be able to use the XML validation function in the explorer_data_handling library, it is necessary to install the xerces libraries and the SAX2Count binary. The PATH environment variable shall be pointing at the SAX2Count location.

3 NEW FEATURES

None.

4 SOLVED PROBLEMS

The following Anomalies have been solved:

ANR Id	Description
417	gen_swath executable fails in some specific conditions.

445	Time transformation functions introduce UTC-UT1 correlation different from zero if UTC=UT1 in all records of time_id.
449	xv_zone_vis_time returns an error if orbit range includes any of the last two orbits in Predicted Orbit file
450	Wrong result for xv_zone_vis_time using a multi-point swath.
452	Swath generation fails: "Could not propagate the state vector"
454	xo_orbit_init file, interpolator mode: when two or more files are given as inputs and they partially overlap, OSVs in the overlap segment belonging to the least recent file shall be discarded and OSVs belonging to the most recent file shall be kept. **NOTE:** in previous versions, the function was instead discarding OSVs from the most recent file and keeping OSVs from the least recent. This is considered not correct as most recent files are supposed to contain more reliable data. Therefore the user has to expect a different behavior w.r.t. previous versions when loading multiple files.
462	Segmentation fault when computing OSV for the stop time of restituted orbit file.
463	If the source frame in the attitude_id is set to Earth-FIxed, xp_target_inter returns an error (target not found).
479	The leap second is inserted at 23:59:59 TAI instead of UTC.
480	False gap detected when reading DORIS Navigator file. **NOTE:** this problem has been raised by the CryoSat-2 project.
481	Elevation angle not correct if target computed using attitude quaternion file.
490	xo_time_to_orbit : error raised when orbit_id initialized with single OSV.
491	Propagator fails when init with Doris+orbit file.
501	Unexpected error returned by MLST jump check in function appending orbital changes to existing OSF. **NOTE:** discontinuity checks on OSF generation return now a warning instead of an error if the thresholds are exceeded.
510	xv_station_vis_time: wrong computation when search interval > cycle length.
512	xo_orbit_init_file: error with ROF file and last OSV close to next ANX.
513	xo_orbit_init_file: error with ROF file and first OSV close to previous ANX.
521	Visibility Lib, function xv_zone_vis_time: incorrect computation when zone segment is on the equator.

	NOTE: this problem has been raised by the CryoSat-2 project (RPF).
549	xl_time_processing_to_ascii: problem with leap second handling

5 KNOWN PROBLEMS

None.

6 USER SUPPORT

For any question related to the usage of the Software or to report a problem, please contact:

EOCFI Software Support Team

email: cfi@eopp.esa.int