DFDL4S/DFDL4S++ Version 1.7.0 - Release Notes

1. RELEASE CHANGE LOG

1.1 New Features/Improvements

- DFDL4S-ANR-0022: Added support for DFDL variables (`dfdl:defineVariable` and `dfdl:newVariableInstance`)

- DFDL4S-ANR-0023: Added support for Reporting capabilities (including CRC/Reed-Solomon)

- DFDL4S-ANR-0035: Added support to checking CRC and apply Reed-Solomon Error Correction

- DFDL4S-ANR-0060: Aligned implementation of `occursCountKind="fixed"` with DFDL standard

- DFDL4S-ANR-0061: Added support for paths to array elements

1.2 Bug Fixes

- DFDL4S-ANR-0062: Corrected faulty instantiation of `DataSize` objects (C++ only)

- DFDL4S-ANR-0066: Corrected trimming in `StorageInFile` detected during Transfer Frame to ISP transformation

- DFDL4S-ANR-0068: Corrected evaluation of non-integer values in length fields

2. RELEASE CONTENTS

2.1 Distribution Packages

A DFDL4S (Java library) distribution package consists of one single archive (multi-platform):
- dfdl4s-1.7.0-bin.zip (MD5: 95b26873ea298f540d7ed79af03e0f14)

A DFDL4S++ (C++ library) distribution package consists of one single archive (one per each supported platform):
- dfdl4s-1.7.0-win64.tar.gz (MD5: 3149a1d0af247bd8a6dd7c4d52e553ee)
- dfdl4s-1.7.0-mac64.tar.gz (MD5: 99edee071347a7418b58f7e555c84ba5)
- dfdl4s-1.7.0-linux64.tar.gz (MD5: 1e62b18e04f5b619a656eec3c8ebd70b)

To install DFDL4S/DFDL4S++, extract the distribution package into a selected installation directory. Please check the DFDL4S/DFDL4S++ developer manual for further information about the installation steps.

2.2 Documentation

For information related to DFDL4S library usage, please refer to the Developer Manual, in particular:
- DFDL4S (Java API): DFDL4S_Developers_Manual_S2G-DME-TEC-SUM078-1M.pdf
- DFDL4S (C++ API): DFDL4S++_Developers_Manual_S2G-DME-TEC-SUM113-1J.pdf

All library documentation can be downloaded from the following location:

https://eop-cfi.esa.int/Repo/PUBLIC/DOCUMENTATION/APPLICATIONS/DFDL4S/

2.3 Software and Hardware Requirements

DFDL4S (Java library) is available for the following computer platforms:

- Windows XP / Vista / 7 (64-bit)
- Mac OS X Intel 10.9 or above (64-bit)
- Linux (64-bit)

DFDL4S++ (C++ library) is available for the following computer platforms:

- Windows XP / Vista / 7 (64-bit)
    - Microsoft Visual Studio 14.0 Express 64-bit
- Mac OS X Intel 10.9 or above (64-bit)
    - Apple LLVM v11.0.0 (clang-1100.33.8) 64-bit
- Linux (64-bit)
    - GNU C++ (v7+) 64-bit

For both Java and C++ libraries, the minimum recommended requirements are:

- Java Development kit v1.8 or higher
- 10+ Mb of hard disk space
- 2 GB RAM

3. ADDITIONAL INFORMATION AND KNOWN PROBLEMS

3.1 Mission Support

The DFDL4S distribution package already includes example mission configuration files (JAR archive containing XML files and schemas). The latest version of the mission configuration files for all supported missions are available in the "Mission Files" section of the S2G website (http://eop-cfi.esa.int/index.php/applications/s2g-data-viewer/mission-files)
The schema files in the website are compatible with the latest versions of the S2G application and the DFDL4S library.

3.2 DFDL4S Java vs C++ API

There is a small set of features available in DFDL4S' Java API, mostly related to use of Callbacks, that are not currently implemented in C++. See the DFDL4S++ development manual for further details.

4. REPORTING PROBLEMS

For any problems or questions contact the DFDL4S helpdesk: dfdl4s@eopp.esa.int