

Python Implementation of CCSDS File Delivery Protocol (CFDP)

Saturday, 12 December 2020 16:45 (30 minutes)

CFDP is the CCSDS File Delivery Protocol, which is similar to FTP but designed for application in space communication, mainly spacecraft to ground communication and vice-versa. CFDP is a CCSDS standard and has been published many years ago but has not yet been used widely in space. Upcoming missions, like ESA's Euclid and JUICE missions will make heavy use of CFDP.

Also, CFDP plays a crucial role for the concept of "file-based operations", an operations paradigm that is expected to largely complement the current telecommand based operations.

Over the last several months, we have developed a Python implementation of the CFDP protocol. In this tutorial we will show you how to set up two CFDP entities on your computer to send files back and forth using the CFDP protocol.

For the near future, a Class 2 implementation is being worked on. Also, a porting of this Python module to MicroPython is foreseen.

Repositories:

<https://gitlab.com/librecube/prototypes/python-cfdp>

<https://gitlab.com/librecube/prototypes/python-cfdp-gui>

Primary author: Mr SCHOLZ, Artur (LibreCube Initiative)

Session Classification: Room #2