

Attachment no 1
for the inquiry no 19/EAGLEEEYE/2023
Technical parameters

Order subject:

Delivery of Toolboxes for Mission Control System

CPV code and name:

48120000-5 - Flight control software package

Brief description of the device:

Set of toolboxes providing Mission Control System functionalities for Ground Segment software

1. General requirements for the Mission Control System toolboxes:
 - a. Provide Monitoring and Control capabilities of a satellite.
 - b. Toolboxes for PC-based application (not cloud based)
 - c. Support for local and remote connection and operation
 - d. Support for single and multi-user
 - e. Use Client/Server infrastructure
 - f. Support for multi-mission approach
 - g. SCOS-2000 MIB database format support
 - h. Provide data visualization for telemetry parameters
 - i. Live and recorded session support
 - j. Multiple data source selection: at least TCP/IP, SpaceWire
 - k. Intuitive UI
 - l. Plugin based
 - m. Toolboxes shall be delivered in versions able to run on Windows (minimum version - Windows 10) and Linux Platform (Ubuntu/Debian based distributions, minimum version - Ubuntu 20, preferable Linux Mint)
 - n. Each delivery milestone shall contain test suite, test report and documentation/user guide
 - o. Toolboxes for Mission Control System software shall provide ability to receive and process data with at least 2Mbps (TBC) throughput
 - p. Sending and receiving PUS packets compatible with ECSS-E-ST70-41C standard and Space Packet CCSDS 133.0-B-2 and defined in imported MIB database.

Two deliveries are foreseen: 1st in November 2022, 2nd in March 2023.

2. Toolboxes features needed for 1st delivery
 - a. Desktop 1 client, multi-operator, multi-OS (Windows and Linux)
 - b. TMTC Space Packets live view
 - c. Alphanumeric & Graphical Display for parameter live monitoring
 - d. Events/Alarms management (Out Of Limits, etc.)
 - e. TC stack auto/manual management (loading, editing, sending, export)
 - f. Support for TC time-based scheduling (PUS Service 11)
 - g. SCOS-2000 MIB ASCII (SRDB) files import
 - h. Tool for SRDB validation

3. Toolboxes features needed for 2nd delivery
 - a. TMTC Space Packets archived history view
 - b. Interface for Creotech owned OCS (Orbit Control System) application as defined in section 5
 - c. Parameter historical time series archiving and visualization
 - d. Logbook for data/messages archiving
 - e. Level0 product generation from payload data received via PUS Service 6 understood as a functionality of receiving PUS Service [6,4] and storing the packet content in the files on the hard drive of the PC
 - f. Functionality of loading binary file content and sending using PUS Service [6,1] TC frames
4. Technical support
 - a. Support during mission phases C/D
 - b. Support during mission phases E/F
5. Interface with the OCS application
 - a. Provide remote control over the COP-1 engine
 - b. Allow to remotely execute and stop Python scripts in the OCS Python scripting module
 - c. Allow to remotely clear OCS TM input socket buffers
 - d. Remote control of the KSATLite Management Module (TBC)