

Herschel	PIPE GW SOW	Doc. no. : SRON-U/HIFI/SP/2003-001
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Title **Herschel EGSE router SOW**

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1 SCOPE OF WORK

The purpose of the PIPE-GW as described in this document is to establish a connection between the CCS and the Instruments-EGSE.

The PIPE-GW has the following funtions:

- Forward packets from the CCS to the EGSE-Router
- Forward packets from the EGSE-Router to the CCS

2 APPLICABLE DOCUMENTS

- AD-1.** H-P-ASPI-IS-0121 EGSE interface requirements specification.
- AD-2.** SRON-G/HIFI/ICD/2001-001 Herschel EGSE Packet Router ICD

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3 REQUIREMENTS SPECIFICATION

3.1 Router connection

- REQ- 3.1-1 The PIPE-GW shall connect to the EGSE-Router. The name is PIPE_GW.
REQ- 3.1-2 Upon connection the PIPE-GW shall request for a configurable list of packet-addresses.
REQ- 3.1-3 In case the connection dies, the PIPE-GW shall try to re-establish the connection.

3.2 CCS connection

- REQ- 3.2-1 The PIPE-GW shall expect a request from the CCS to establish a connection or to re-establish the connection. (IFRQT-0050)
REQ- 3.2-2 The PIPE-GW shall raise an alarm in case the connection dies.
REQ- 3.2-3 The PIPE-GW shall send its own RM packet as soon as the connection is (re)established. (IFRQT-0110, IFRQT-0562)
This way the PIPE-GW is considered as a SCOE/DFE/IS on its own, generating its own HK-packet.
Specification of this RM-packet TBD- 3.2-1.
Rate of this RM-packet is TBD- 3.2-2.

3.3 Data distribution

- REQ 3.3-1 The PIPE-GW shall forward all packets (the body message of the PIPE-messages) received from the CCS to the EGSE-Router.
Note: The PIPE-GW does not read or interpret the content of the body message. This implies that the PIPE gateway does not expect any commands from either the CCS or the EGSE-Router.
REQ 3.3-2 The PIPE-GW shall acknowledge the receipt of an RC packet (IFRQT-0161)
REQ 3.3-3 The PIPE-GW shall forward all packets received from the EGSE-Router to the CCS. These packets shall be forwarded as RM packets.
Note: The PIPE-GW only receives packets with the packet address requested at startup.

4 WORK DESCRIPTION

The work to complete the PIPE-GW consists of the following items:

1. Design and code implementation
2. Preliminary test
3. Design documentation and user manual
4. Acceptance test

During the preliminary test-phase cooperation with Industry is requested to allow an efficient development. This implies that we expect that industry makes a CCS-client available (either to install local or to test remote), this to reduce travel expenses as much as possible.