

**SPIRE-IFS-COM-001502**

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**From:** Renato Orfei [orfei@ifsi.rm.cnr.it]  
**Sent:** 15 January 2003 10:39  
**To:** Thuerey, Stefan  
**Cc:** Sawyer, Eric; PACS-PPO; HIFI-Proj.Off.; Goeran.Pilbratt@esa.int; Farid.Guettache@esa.int; Yves.Bordes@esa.int; Andrei.Oganessian@esa.int; Astrid.Heske@esa.int; Gerald.Crone@esa.int; Thomas.Passvogel@esa.int; Bauer, Otto; Feuchtgruber, Helmut; Wiezorrek, Erich; Butler, Chris; bart@ster.kuleuven.ac.be; J.Payne@rl.ac.uk; Long, Judy; Parker, David; Gomez, Panchita; Beney, Jean-Luc; Molinari, Sergio; Herreros, José M.; Kevin.Galloway@esa.int; Johannes.Riedinger@esa.int; John.Dodsworth@esa.int; Frederick.Wechsler@esa.int; David.Verrier@esa.int; A.R.W.de.Jonge@sron.rug.nl; Dubbeldam, Luc; King, Ken; Bryan.Melton@esa.int; Serge.Valera@esa.int; Bauer, Otto; Wafelbakker, Kees  
**Subject:** FW: Herschel: 1553 I/F test plan for instruments

Dear Stefan,

Sergio Molinari forwarded me your message about the subject.

I repeat the statement contained in paragraph 1.2 of the document CNR.IFSI.2001TR04, now Issue 1.1:

"....The BU-61580 that will be mounted on the DPU/ICU is provided by DDC and, as such, has been successfully tested by DDC according to RD1. Cosequently, and only limited to PHL and DLL, IFSI will carry out only the tests in AD1 that concern features of the BU-61580 that can be affected by the additional ancillary components, cabling, etc.....The TFL, however, is at the application level and will be tested as part of the On-Board-Software Test Plans of the individual instruments."

RD1: MIL-HDBK-1553A

AD1: FIRST-PLANCK CDMS-interface test requirements specifications

The above statement looks to me reasonable and acceptable as based on a criterion that is basic: no further tests are carried out on the HI-REL components as all the needed tests are carried out (and duly paid for) by the manufacturer and the CPP Agent as the components procurement is organized by a Common Parts Procurement Agency.

Should this principle not be accepted also in general, a small Istitute, like IFSI, should have a huge components/quality section that should check every Hi-REL passive and active component with respect to the guaranteed specifications. Just to give you an idea of the problem think if we should check the specifications of one single DSP 21020: simply impossible in a reasonable span of time!

As far as the TFL is concerned, Sergio will send you a mail with more information about the tests that are carried out.

Ciao,

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-----Original Message-----

From: Sergio Molinari [mailto:molinari@ifsi.rm.cnr.it]  
Sent: martedì 14 gennaio 2003 17.09  
To: Orfei Renato; Cerulli Riccardo  
Subject: FW: Herschel: 1553 I/F test plan for instruments



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| To: Stefan Thuerey/estec/ESA@ESA  
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| cc: Yves Bordes/estec/ESA@ESA  
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| Subject: Re: Herschel: 1553 I/F test plan for instruments  
|  
| (Document link: Stefan Thuerey)  
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Dear Stefan,

Bellow are my comments on the two documents submitted earlier by you.

1. Both documents:

- DPU/ICU Spacecraft Interface Test Plan (CNR.IFSI.2001TR04)
- DPU onboard software validation and verification Plan/Acceptance Test Plan (PACS-CR-PL-012)

do not cover Herschel/Planck Transfer layer Satellite Data Bus Protocol (SDPB) verification aspects.

2. Avionics Lab objective is to evaluate and verify the SDBP for Hershel/Planck onboard communication system. The input test data for such verificaton starts at Transfer layer. Although some test cases with such input data may cover parts of Instrument level Interface testing, specified in the first document ("DPU/ICU Spacecraft Interface Test Plan"), the standard Instrument level interface testing should be performed by Instrument provider. Avionics Lab Testbed is not needed for that purpose as requested in the same document.

Kind regards,

Andrei Oganessian

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Software Engineer

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