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		SPIRE-ALC-MOM-002560			
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COMpte Rendu de Reunion / MINUTES OF MEETING		LIEU / PLACE : Munchen			
OBJET / PURPOSE : Herschel Instruments- Data base meeting		CLASSIFICATION :			
PARTICIPANTS ATTENDEES	SOCIETE FIRM	SIGNATURE SIGNATURE	PARTICIPANTS ATTENDEES	SOCIETE FIRM	SIGNATURE SIGNATURE
M. Benedettini	PACS		F. Chatte	AAS-F	
E. Wiezorrek	PACS				
L. Dubbelham	HIFI				
S. Sidher	SPIRE				
S. Valera	ESA				
S. Dos Santos	SKYSOFT				
S. Ilse	ASED (Pt)				
REDACTEUR / WRITTEN BY :	F. Chatte				
<p>CONCLUSION :</p> <p>The constraints applicable to Herschel instruments in order to get the instrument S2K MIB files generated by HPSDB equal to the S2K MIB files produced by the instrument as input to HPSDB, have been identified.</p> <p>No major points are open.</p>					
<u>DISTRIBUTION</u> : PARTICIPANTS / ATTENDEES	POUR ACTION : FOR FURTHER ACTION				
	POUR INFORMATION : FOR INFORMATION				
APPROUVE PAR / APPROVED BY					
NOM / NAME					

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SIGNATURE / SIGNATURE			

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SUITE / CONTINUED :

ACTION

0 Agenda

Refer to annex 1

1 History

Refer to annex 2

2 Short HPSDB presentation: high level data model

Refer to annex 3

3 Short presentation: low level data model

Refer to annex 4

The issue reported by AAS-I and confirmed by AAS-F relevant to the "one to n relation between TM packet and SPID" due to the impossibility to select the different records except via the date for the test check to be reported via NCR to ESA.

AAS-F to clarify the problem of the one to one relation between TM packet and SPID and report it in the AAS-F guideline To be reported in the AAS-F guideline.

AI-01 – AAS-F
31/10/05

ESA/SV suggests that from now all instrument data problems are formally reported to ESA by NCR / RID for processing by ESA / instrument team.

AI-02 – ESA
07/10/05

ESA project to confirm (applicable to all Herschel and Planck instrument)

4 MIB ICD field by field clarification about how this field is

1. Loaded
2. Generated inside HPSDB
3. Constraints to get input=output

Refer to annex 5 – Note document has been updated in line during the meeting, the annex represents the current status at the end of the

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meeting. The document is still not complete : last tables missing

Potential problem about the limitation on number of curves. PACS to confirm if this number shall be increased

AI-10 – PACS
15/10/05

DST table is not generated, some instrument complain, some instrument don't care.

AAS-F recall that the facility to load instrument MIB files was proposed to load MIB files from instrument test level (where this table is needed) only once in order to be able to generate then bridge files for both IEGSE (S2K) and CCS. Since during system EGSE activities, the IEGSEs are not allowed to send commands to the spacecraft, there is no need to re-generate this DST table.

ESA points out that :

- the objective of this meeting is to solve the problems of incompatibility between data provided by Instrument teams (i.e. input to HPSDB) and instrument data generated by HPSDB.
- To reach this objective, both parties (i.e. instruments and prime) should be cooperative, i.e.
 - o ESA position : for Alcatel, to ensure that data, provided by HPSDB is "complete" i.e. can be used to configure the IEGSE as required for instrument testing – AAS-F position : it was not foreseen to use HPSDB for generating instrument subsystem tests level (ILT)
 - o ESA statement : for Instrument team, to verify and confirm that data provided by HPSDB can be used at IEGSE level (i.e. for instrument testing) – AAS-F statement : as above

The completeness of the IEGSE data produced by HPSDB being an ideal objective, ESA recommends that any discrepancy (e.g. non generation of the DST table, absence of HFAconfig file, TMDcacheSetup file) is flagged (e.g. generation of NCR) and a common to Instruments, Alcatel and ESA agreement is found on whether the problem should be solved at Instrument or HPSDB level.

Instrument teams point out that some scripts have been developed to e.g. generate automatically the HFAconfig and TMDcacheSetup.

ESA points out that the IEGSE uses a minimum database provided by ESA that do not comply with the naming convention. To remove all inconsistencies,

AAS-F will send to ESA the common definitions as from HPSDB (e.g. TC packet header GX00000, CDF, CPC common definitions). Refer to AI-06

AI-11 - ESA
31/10/05

ESA to update the minimum database and to send the corrected one to all H/P instruments.

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CVS table : a difference has been highlighted on how CCS and IEGSE behaves. I-EGSE : in case "ack's" are defined (for instance Completion) but the CVS table is not filled, the IEGSE does not wait for the completion service 1 report. The same instrument data used at CCS level, implies the CCS wait for the completion service 1 report. AAS-F to confirm the CCS behaviour.

AI-03 – AAS-F
07/10/05

AAS-F to finalize the draft ("MIB files processing by HPSDB" – refer to annex 5) for ESA review

AI-04 – AAS-F
15/10/05

AAS-F to dispatch the final document

AI-05 – AAS-F
31/10/05

Warning : The S2K input and output files can be the same and the behaviour between CCS and IEGSE can be different (Danger limit, critical flag... and mainly MISCconfig file). Alcatel to query TERMA for the changes that have been made by CCS developers, changes that change the behaviour of the IEGSE (i.e. version 2.3eP3).

AI-12- AAS-F
31/10/05

ESA mentioned that a function has been developed at IEGSE level that allows processing service 1 reports as any other TM packet (i.e. in addition to the common TC verification function). If an entry is added in the PID.dat table for a given service 1 report, the report will be copied within the related SPID (in addition to the SPID used for TC verification). Such mechanism allows e.g. to decode specific code/parameters associated with some reports. The question is raised whether such mechanism is also in place in CCS.

PACS reports a problem with the IEGSE related to rounding parameter values, problem that does not exist in CCS.

5 Instrument per instrument – review of differences

Note : Most of the remarks made on the first instruments apply also to the following instrument and are not reported (HIFI has not more or not less differences than any other instrument but it is the first one to be processed)

5-1 HIFI

Refer to annex 6

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Constraints to add : Do not put unreferenced items inside the S2K/CCS input MIB files. (G19)

CPC_DISPFMT to be set to "R" in case no discrete calibration curve associated (HPSDB NCR)

HPSDB corrected automatically a wrong sequence of limits (from H/S/H to H/S) accordingly to MIB ICD, but no error were reported : HPSDB is required to report an error in this case and to not commit data (HPSDB NCR 526)

GENERIC data to be send to ESA under S2K MIB files format

PCF_INTER to be set to "null" as default value (HPSDB NCR 529)

PID_TIME is forced to "Y" by HPSDB : this is agreed.

Curve, CVS and parameter range set : generic constraints to be added.

ESA queries why there is no possibility to define generic items (in this case curve) at subsystem level like it is done at model level.

AAS-F answers that it is not possible because the current generic data do not apply to a model but apply to all HPSDB objects. Having subsystem generic item which can be referenced by any item of any element part of the subsystem is against the general principle of HPSDB that there is no visibility at lower level of data defined at a higher level object. AAS-F clarifies that the generic items are not defined at model level (as wrongly understood by ESA) but at lowest level (visible from anywhere).

The drawback of the current implementation of HPSDB is need for each element developer to define its own item (typically curve) even if this item is used by many element within a subsystem.

It is mentioned that to avoid such duplication, having AAS-F defining this common item at generic level is still an option. If needed, AAS-F is ready to analyse Instrument requirements related to additional generic items.

Note : for the curve the initial HPSDB specification was such that a curve identifier can, contrary to other items, be only instantiated physically and not logically.

AI-06 – AAS-F
15/10/05

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5-2 PACS

Refer to annex 7

HPADB rejects some "not correct" TC packets while those packets are aimed effectively to test that they are effectively rejected on-board.

AAS-F to add in the enumerated APID, Type and subtype lists a specific wrong item. AAS-F to define them.

Note : those packets can be flagged as "AIT" only

5-3 SPIRE

Refer to annex 8

-

6 Feed back from instruments

The objective is to facilitate the exchanges between all users about anomaly or work arounds or ... some problem are discovered by a user while the error was already known by others.

To be discussed between ESA and AASF how this feed back will be recorded. Refer to Action AI-02 ESA.

7 Remarks on some MIB files

. Problem of comments on Synthetic parameters : if the comment is not the first line of the file SCOS fails.

. Usage of global variable inside synthetic parameters – The global variable shall be used only to exchange value between different occurrences of the same synthetic parameter calculation (it does not allows to exchange value between different OL expressions)

. SCOS allows TM parameter overlapping : no need of synthetic parameters

8 Common usage

AAS-F to issue a guideline mainly oriented for a common way of definition of monitoring.

Do not forget the critical flag for TC, the danger sequence ("E")

AI-07 – AASF
15/10/05

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9 Improvement of data exchange

ESA (Serge and Luciano Di Napoli) will be in copy of all exchanges of data / anomaly report between AAS-F and instruments

AAS-F will check the status of the internet access to HPSDB for instrument

AI-08 – AAS-F
15/10/05

AAS-F to deliver for information the XML files of each instrument (in order instrument can trained themselves using XML on their own data).

AI-09 – AAS-F
15/10/05

10 Miscellaneous

10-1 Long description


For each item (parameter, curve, packet, ...) HPSDB allows in addition to the SCOS field to enter a field "long description" of 256 characters. AAS-F asks instruments if they can fill this field when relevant (via Internet access or XML).

Instrument answer : No all relevant information are included in the user manual

10-2 MISCConfig file

It is pointed out that even if input and output MIB files are the same, if they are run on different SCOS system (configured differently via the MISCConfig file) the behaviour can be different. This could be the case between instrument and CCS. Refer also to action AI-12

END OF MEETING

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INITIATOR Firm / person	ACTION			DATE
	N°	DESCRIPTION	ACTIONEE Firm / person	DUE
Herschel instruments	1	AAS-F to clarify the problem of the one to one relation between TM packet and SPID and report it in the AAS-F guideline	AAS-F (FC)	31/10/05
AAS-F (FC)	2	ESA project to confirm (applicable to all Herschel and Planck instrument) the way to process via NCR data anomaly and tool anomaly	ESA	07/10/05
ESA	3	AAS-F to confirm the CCS behaviour about TC ACK flag and CVS	AAS-F (FC)	07/10/05
ESA	4	AAS-F to finalize the draft ("MIB files processing by HPSDB" – refer to annex) for ESA review	AAS-F (FC)	15/10/05
ESA	5	AAS-F to dispatch the final document	AAS-F (FC)	31/10/05
ESA	6	GENERIC data to be send to ESA under S2K MIB files format	AAS-F (FC)	15/10/05
Herschel Instruments	7	AAS-F to add in the enumerated APID, Type and subtype lists a specific wrong item. AAS-F to define them.	AAS-F (FC)	15/10/05

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Herschel Instruments	8	AAS-F will check the status of the internet access to HPSDB for instrument	AAS-F (FC)	15/10/05
Herschel Instruments	9	AAS-F to deliver for information the XML files of each instrument (in order instrument can trained themselves using XML on their own data).	AAS-F (FC)	15/10/05
AAS-F	10	PACS to confirm if this number of curve shall be increased	PACS	15/10/05
Herschel Instruments	11	ESA to update the minimum database and to send the corrected one to all H/P instruments	ESA	31/10/05
ESA	12	Alcatel to query TERMA for the changes that have been made by CCS developers, changes that change the behaviour of the IEGSE (i.e. version 2.3eP3)	AAS-F (FC)	31/10/05

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Annex 1

Agenda

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Title : Herschel instruments – Data base meeting

Dear all,



Following different mail exchanges, this is to confirm that a meeting will take place in ASTRIUM Ottobrun starting on Thursday 29/09/2005 at 09:00 a.m. and ending on Friday 30/09/05 (at 12:00 (tentatively) but could be extended up to 05:00 p.m.

This meeting is intended to explain and to find solutions for solving the problems we (you and us) have when using HPSDB, mainly relevant to the fact that the S2K or CCS MIB files we generate from HPSDB are different from the S2K MIB files you provided as inputs.

We propose, during this meeting, mainly the first day, to explain, from the processes applied to load and generate the MIB files, why some data can be modified by HPSDB and what are the constraints, if any, on instrument side to follow in order to get the same values.

As a consequence we propose the following agenda:

- First day :
 1. History (mainly why the HPSDB data model is not mapping with SCOS) – 15'
 2. Short HPSDB presentation : high level data model – 30'
 3. Short HPSDB presentation : low level data model – 30'
 4. MIB ICD filed by field clarification about how this field is : (6 hours)
 - a. Loaded inside HPSDB
 - b. Generated in S2K bridge file
 - c. Generated in CCS bridge files
 - d. Constraint to get input = output
 - e. SCOS anomaly if any
- Second day :
 5. Instrument per instrument : review of the differences – 1 hour per instrument
 6. Feed back from instruments – 30'
 7. Remarks on some MIB files – 30'
 8. Common usage – 30'
 9. Improvement of data exchange – 30'
 10. Miscellaneous
- For the points 1, 2 and 3 AAS-F will prepare viewgraphs
- For the point 4 AAS-F will prepare a document,
- For the point 5 AAS-F will prepare the list of differences between the last input and output S2K MIB files per instrument
- For the point 6 : we expect instrument to provide inputs which can benefit to every body (mainly about MIB ICD and SCOS behaviour)

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- For point 7 AAS-F will prepare list of remarks,
- For point 8 – Discussion open
- For point 9 – Discussion open


Please provide Christian with the list of participants from your side.

AAS-F participants will be : Sonia Dos-Santos and F. Chatte

Best regards.
Félix.

Author :

Authorised by :

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Annex 2

History

Diapositive
1

1 – History (1/7)

- Instruments/ESA have decided to base all Herschel / Planck instrument EGSE on a dedicated EGSE SCOS version provided by ESA and based on SCOS 2.3e. As consequence they use a database compliant with MIB ICD 5.1
- At the early beginning of the project ASP did not have such a constraint, the only constraint was to have a system data base compliant with SCOS MIB ICD 5.1 in order to interface with instruments in both direction and with operation in one direction.
- The specification of the system data base (HPSDB) was written before the CCS was selected, so it was written in a way which could support any CCS interface but which can also satisfy the main ESA requirements:

Diapositive
2

1 – History (2/7)

- Commonality
 - between Herschel and Planck)
 - Between different users (AIT / Operations / software)
- Smooth transition
 - from subsystem level tests to system AIT
 - From system AIT to Operations
- Configuration management
- Etc

Diapositive
3

1 – History (3/7)

- CCS was selected based on SCOS 2.3e but with some change in order to adapt it to :
 - Specific AIT needs (conditional calibration curves, delta limit, danger limit, TOPE language, ...)
 - Constraints imposed by HPSDB mainly in term of naming convention (curve, CVS, parameter range set)
- The CCS is nearly compliant to MIB ICD 5.1 but is different for some part (complement to MIB ICD 5.1 reported in a dedicated CCS ICD)

Diapositive
4



1 – History (4/7)

- The usage of IEGSE, the CCS development and the HPSDB development started.
- First major problem on HPSDB (tool level):
 - How to how to map HPSDB data model and the different SCOS data model (CCS and IEGSE) based only on MIB ICD (no support from ESA) – Still some open points today (Some NCR's and some implementations).
- Second major problems on HPSDB (user level):
 - How to explain and transfer the HPSDB constraints to users (NMCVT, DMWG and H-EGSE WG) – If there is no open point we can stop the meeting.

Diapositive
5

1 – History (5/7)

- Third major problems on HPSDB (data):
 - There are as many interpretations of the MIB ICD that there are different users (10 different companies using CCS/I-EGSE, but several person per company)
- The objective of this meeting is to improve the point 2 status on the following problem reported on a mail from ASED on 10/09/05 : "It is not acceptable that the S2K MIB files generated by HPSDB are different from the S2K input files".
 - As pre-requisite the participants (H-instruments) shall be fully aware about the meaning of SCOS MIB ICD 5.1 fields.

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Diapositive
6

1 – History (6/7)

- To raised this objective the full instrument MIB files loading and generation shall be understood in order user can deduce what the input should be if they want to get the same output (this is not always possible) and the proposed agenda is :
 - Short presentation of HPSDB high level data model
 - Short presentation of HPSDB low level data model (there is no presentation of MIB ICD data model : it is not a data model)
 - Field by field explanation of the process (can be boring but ...)
 - Review of the current status instrument per instrument

Diapositive
7

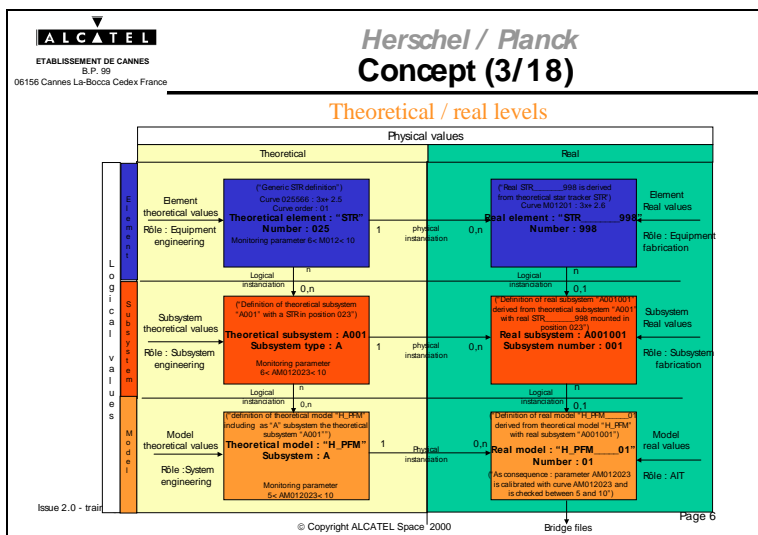
1 – History (6/7)

- Other points:
 - Feed back expected from instruments (we reported many MIB ICD problems to instruments, are there any problems instruments know and which can help us) – Derived parameter comments, ...
 - Some general remarks on problems we have on the S2K MIB files from instruments,
 - Improvement of a common usage of MIB ICD (guidelines, long description, ...)
 - Improvement of the data exchanges

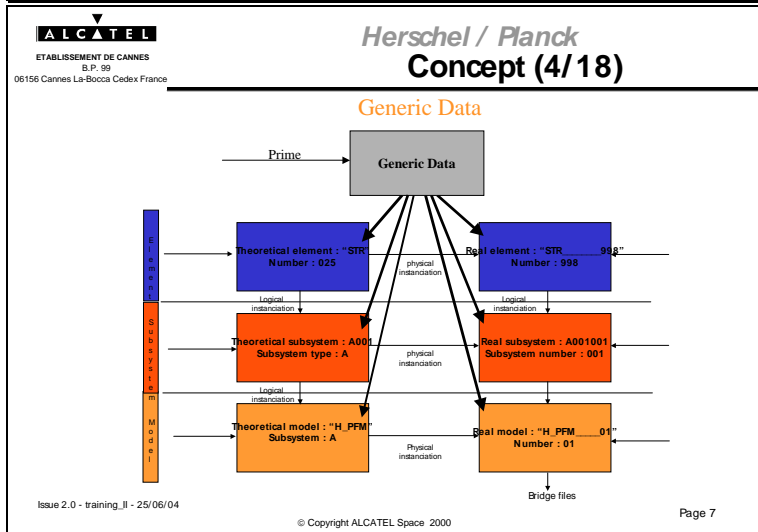
Annex 3

HPSDB : High level data model

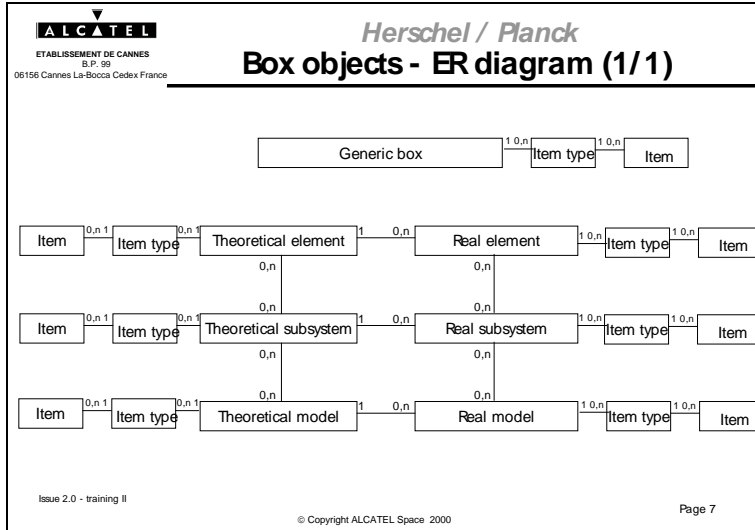
Diapositive
1



Diapositive
2



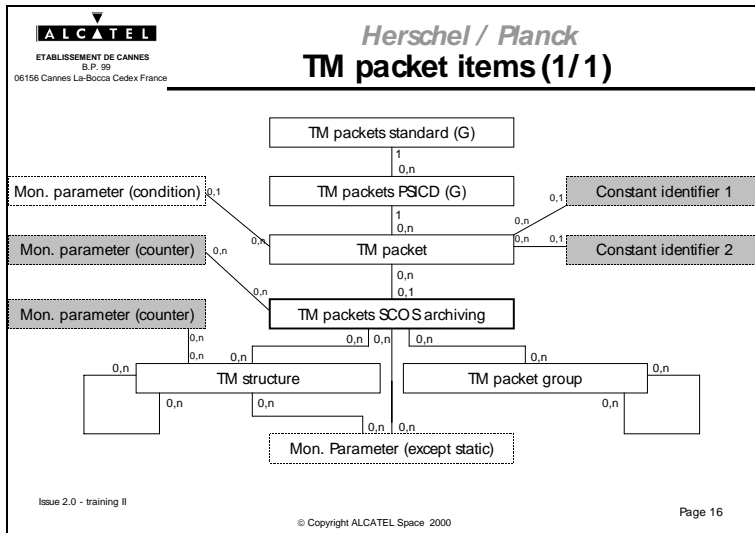
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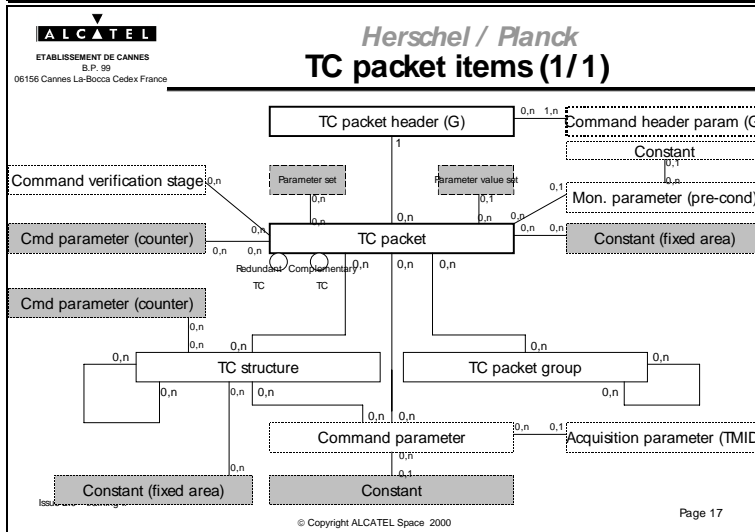
Annex 4

Low level data model

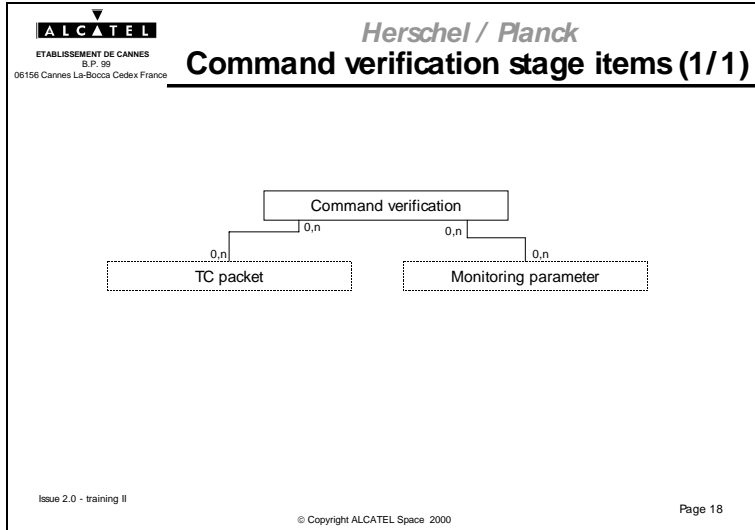
Diapositive
1



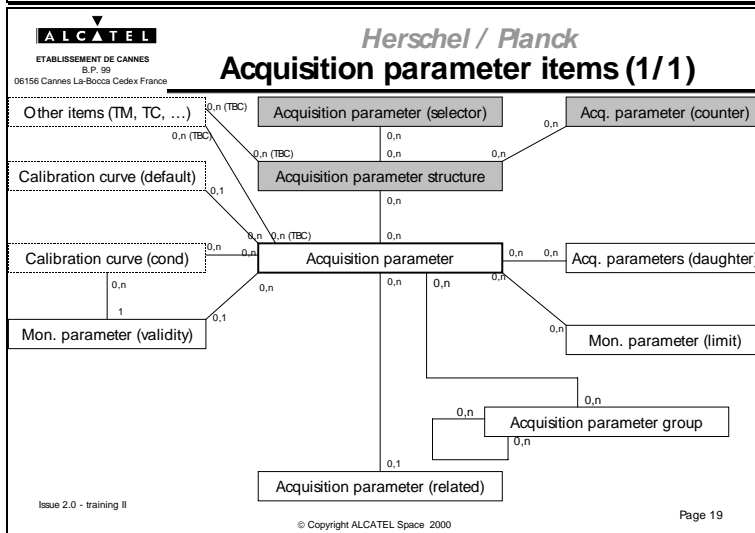
Diapositive
2



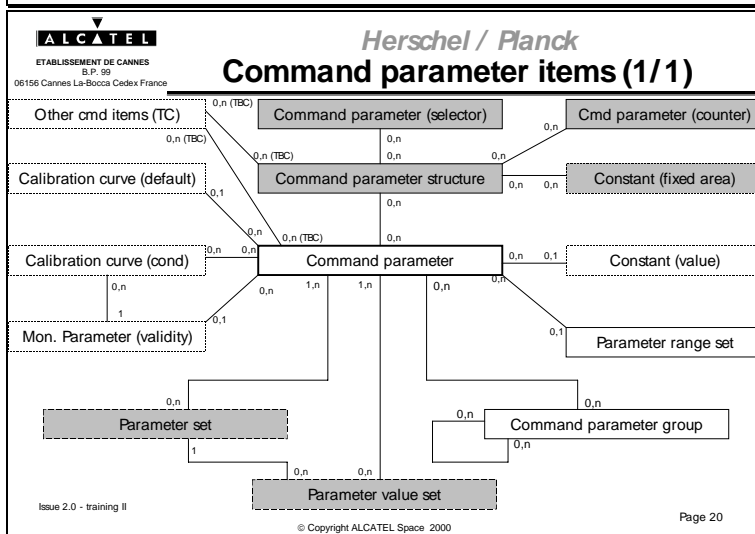
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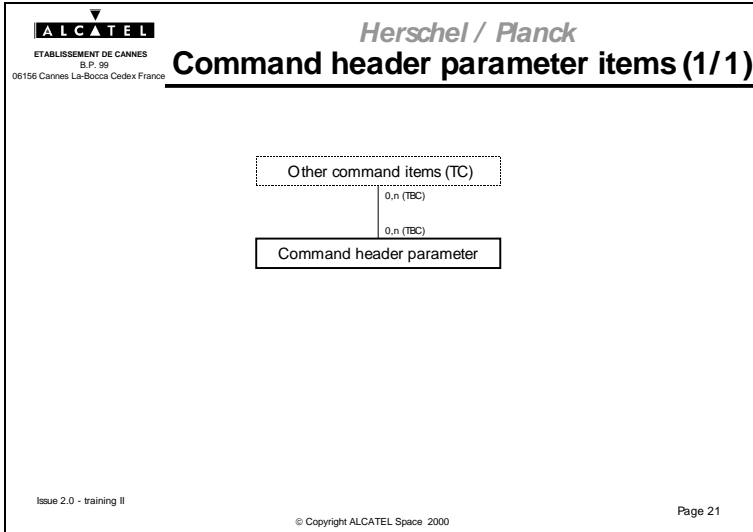
Diapositive
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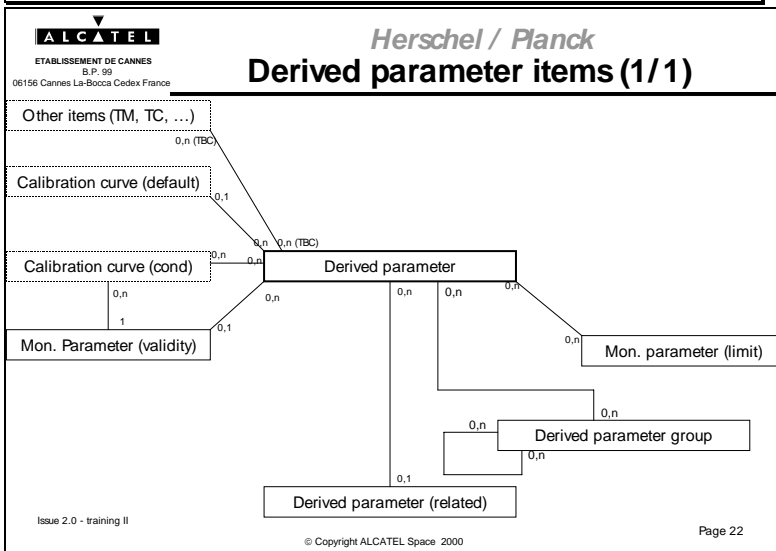
Diapositive
5



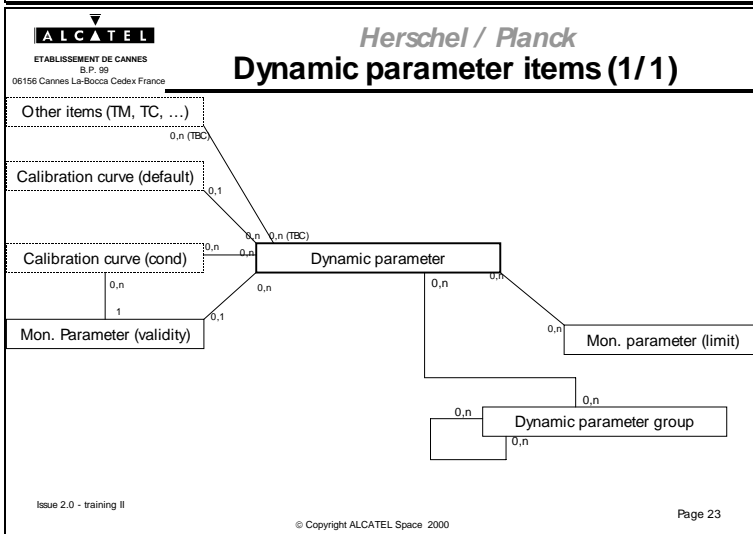
Diapositive
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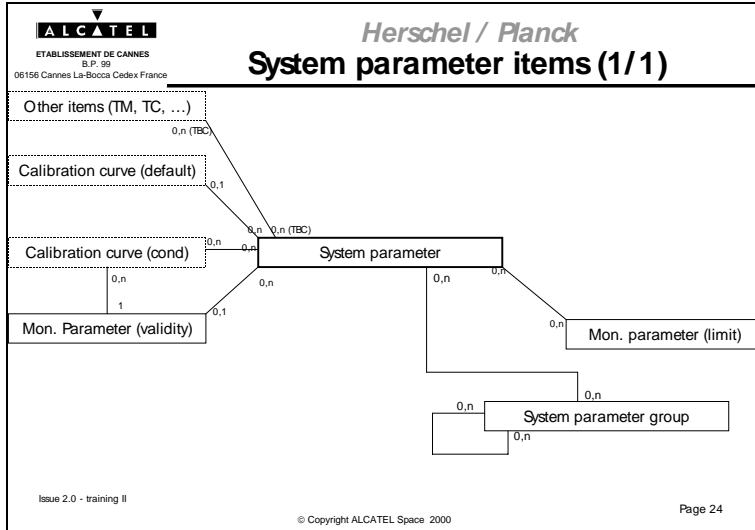
Diapositive
7



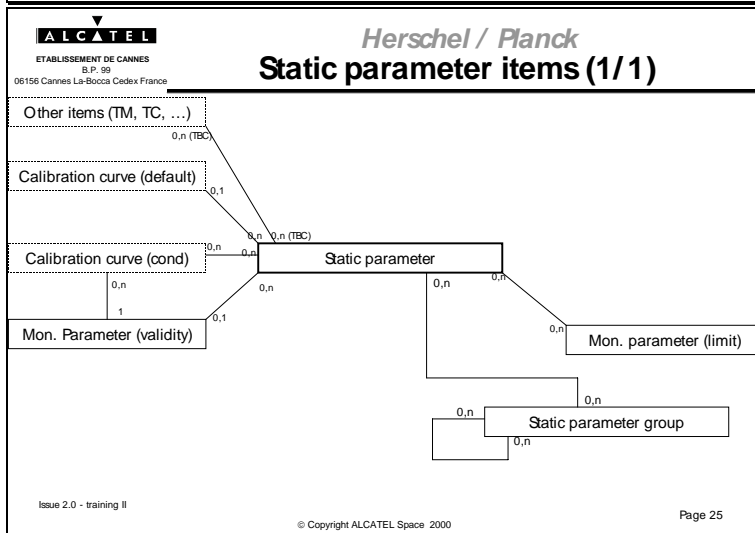
Diapositive
8



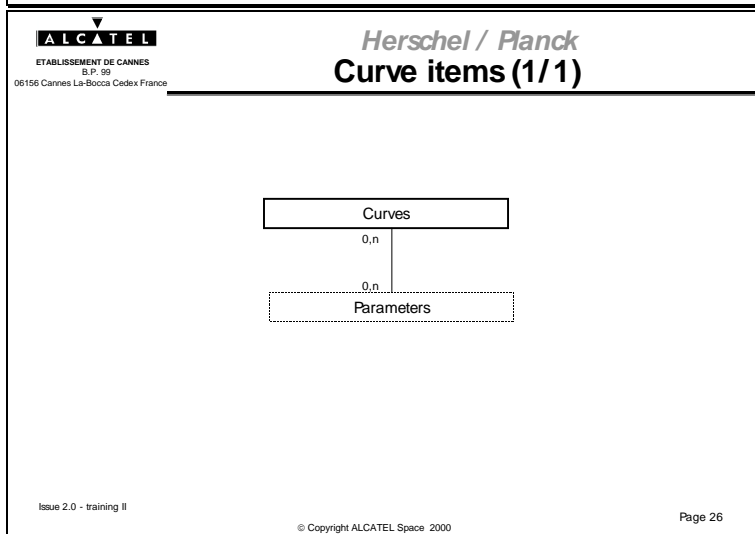
Diapositive
9



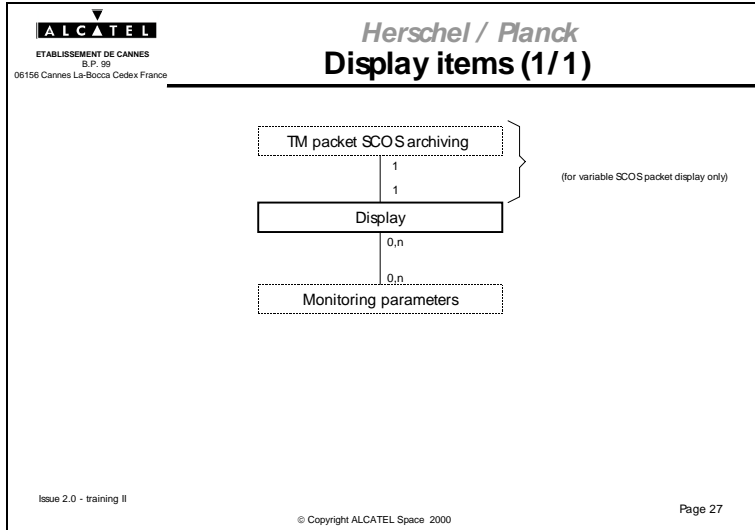
Diapositive
10



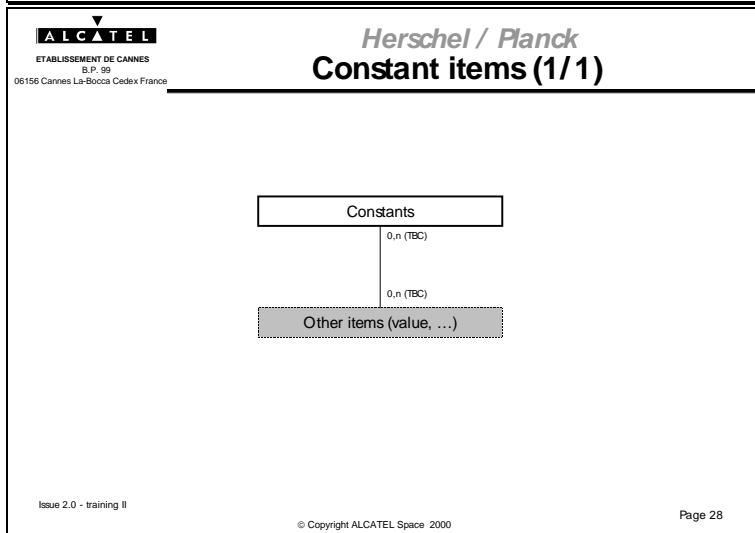
Diapositive
11



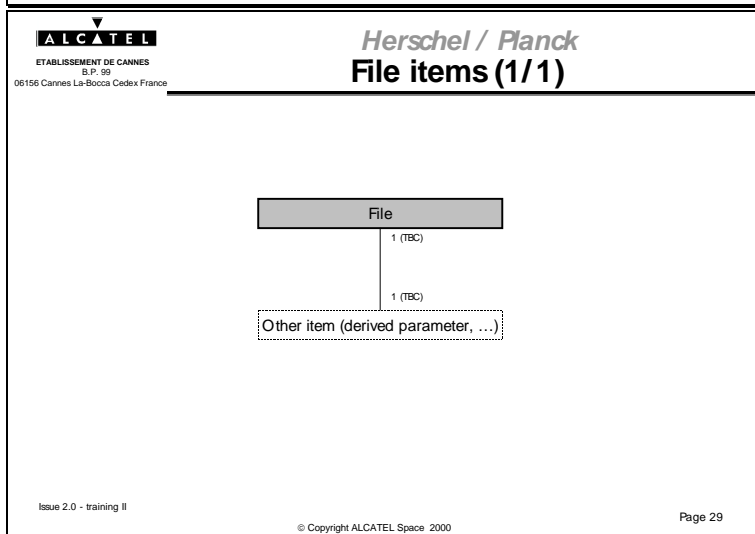
Diapositive
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Diapositive
13



Diapositive
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ANNEX 5

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MIB files processing by HPSDB



Product Code: 460000

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ENREGISTREMENT DES EVOLUTIONS / *CHANGE RECORDS*

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Scope



This document is aimed to document the way HPSDB:

- Ingests the S2K or CCS MIB files
- Generates the S2K or CCS MIB files

From this document the user should be able to understand how to set the different S2K or CCS MIB files fields when he wants HPSDB to regenerate the S2K or CCS MIB files exactly as they were at input time.

However according to the user needs, it will not be always possible because either HPSDB or MIB ICD introduce limitations which can be different (for instance HPSDB allow a 1-n relation between TM packet and SPID, while MIB ICD allows a n-n relation).

The constraints expressed in bold are the constraints which cannot be filtered by HPDSB, while the other ones are filtered by HPSDB.

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Generalities

G1 – Object data model

HPsDB allows to extract S2K and CCS bridge files from any object. When a bridge files generation of an object is required HPsDB will generate the bridge files using all the items referenced inside the object and all the items (even if not referenced) of the generic object. As a consequence each couple (object, generic object) shall be consistent.

To build the “object data model” from the flat MIB files, HPsDB required for object identifier and associated position. Configuration files allows HPsDB to map the different items referenced inside input MIB files to the different objects.

Constraints :

- Inside an object (identified by its position) consistencies shall be ensured (except in case of reference to generic items)
- Provide list of “object identifiers” and associated “positions”

G2 – Naming convention



HPsDB manages identifiers of :

- Objects (for instance PACS, Herschel PLM, DPU_PACS, EGSE, ...)
- Items :
 - Managed by SCOS/CCS (curves, parameter, SCOS packet identifier, ...)
 - Not managed by SCOS/CCS (constants, Files, ...)

Here are addressed only the identifiers of items which are managed also by SCOS/CCS.

For all the identifiers the HPsDB naming convention follows the following rules :

- At element identifier (except for curves and groups – groups are only used by CCS):
 - In case of CHAR field
 - the first letter refers to the items type (derived parameter, command parameter, ...)
 - the other characters are free (except if specific rules expressed in NMCVT)
 - In case of NUMBER field
 - Free (except if specific rules expressed in NMCVT)
 - For curve
 - Number(6) (3 digits for theoretical element number and three digits free)
 - Unique independently of curve type
 - For Groups (packet)
 - Char(11) (3 digits for theoretical element number, “TMGR”, four free digits)

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- o For Groups (parameter)
 - Char(11) (3 digits for theoretical element number, "PAGR", four free digits)
- At subsystem and model level, the identifier is instantiated as follows:
 - o In case of CHAR filed
 - Subsystem letter added in front of element identifier ("Z" in case of pseudo subsystem),
 - Position (number(3)) added appended at the end (Subsystem pseudo position as defined in NMCVT, System pseudo position = "999")
 - o In case of NUMBER field
 - Subsystem number (A=00, ..., Y=25) in front of element identifier ("26" in case of pseudo subsystem),
 - Position (number(3)) added appended at the end (Subsystem pseudo position as defined in NMCVT, System pseudo position = "999")
- The Generic items follows the same rules but with the following constraints :
 - o Only subsystem / model identifiers (no element identifiers – no instantiations)
 - o Subsystem letter is "G"
 - o Subsystem number is "07"
 - o Position is "000"

The same naming convention applies for S2K and CCS MIB files except for S2K curves, S2K command verification stage and S2K parameter range sets due to the fact that those identifiers are too short in S2K MIB ICD to support instantiation at HPSDB level.



When loading bridge files HPSDB ignores the generic items. When generating bridge files all the generic items are generated (even if not used)

Constraints :

- **Generic items shall all be part of the inputs MIB files (even if not used)**
- S2K: to apply naming convention (except for curves, command verification stages and parameter range sets refer to following chapters)
- CCS: to apply naming convention
- CCS : specific curve identifier to be unique independently of type

G3 – Naming convention for S2K curves

In case a S2K curve refers to a specific curve then the curve shall be coded as Number(3) which will match with the 3 free digits of the element curve identifier of HPSDB.

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In case S2K curve refers to a generic curve then the curve shall be coded as number(4) according to the following format: "1xxx" such that "xxx" will refer to generic curve "G000xxx000".

Constraints :

- S2K:
 - specific curve to be coded as NUMBER(3)
 - Specific curve identifier to be unique independently of type
 - generic curve
 - to be coded as NUMBER(4) and as "1xxx"
 - **ensure exactly the same definition with HPSDB "G000xxx000" generic curve**

G4 – Naming convention for S2K command verification stages

In case a S2K command verification stage refers to a specific command verification stage then the command verification stage shall be coded as Number(4) which will match with the 4 free digits of the element command verification stage identifier of HPSDB.

In case S2K command verification stage refers to a generic command verification stage then the command verification stage shall be coded as number(5) according to the following format: "1xxxx" such that "xxxx" will refer to generic command verification stage "07xxxx000".

Constraints :

- S2K:
 - specific command verification stage to be coded as NUMBER(4)
 - generic command verification stage
 - to be coded as NUMBER(5) and as "1xxxx"
 - **ensure exactly the same definition with HPSDB "07xxxx000" generic command verification stage**



G5– Naming convention for S2K parameter range set

In case a S2K parameter range set refers to a specific parameter range set then the parameter range set shall be coded as NUMBER(3) – This will match with the 3 free digits of the element parameter range set identifier of HPSDB.

In case S2K parameter range set refers to a generic parameter range set then the parameter range set shall be coded as number(4) according to the following format: "1xxx" such that "xxx" will refer to generic parameter range set "GRxxx000".

Constraints :

- S2K:
 - specific parameter range set to be coded as NUMBER(3)

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- o generic parameter range set
 - to be coded as NUMBER(4) and as "1xxx"
 - **ensure exactly the same definition with HPSDB "GRxxx000" generic parameter range set**

G6- Enumerated fields

HPSDB controls for enumerated fields that the value is inside the allowed range. This range can be the one defined inside MIB ICD documentation or it can be reduced due to PSICD (example allowed couple of (type, subtype)) or to HPSDB (Octal radix not allowed).

Constraints:



- Enumerated fields shall be in line with the HPSDB ones

G7- Commutation

The way HPSDB implements the commutations of packets is completely different of the way SCOS does.

For all the commutation (fixed or variable, TM or TC packets) the way to implement is always the following:

- A packet or structure is a list of
 - o 0 or n parameters / structures / fixed areas (TC only) with the following attributes
 - For TM packet
 - Offset byte,
 - Start bit,
 - Time offset,
 - For Structure
 - o Number of times the structure is repeated (0 for variable)
 - o Monitoring parameter as counter or dummy counter
 - For parameter
 - o Number of occurrences (super commutation – default 1)
 - o Number of bit between two occurrences (super commutation)
 - o Time delay between two occurrences (super-commutation, for TM only)
 - For TC packet
 - Offset byte,
 - Start bit,
 - For structure
 - o Number of times the structure is repeated (0 for variable < 0 if counter not editable, > 0 if counter editable)

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- o Command parameter as counter or dummy counter
- For parameter
 - o Number of occurrences (super commutation – default 1)
 - o Number of bit between two occurrences (super commutation),
 - o Editable flag,
 - o Value,
 - o Monitoring parameter identifier (echo)
- For fixed areas :
 - o Field length,
 - o Description,
 - o Value

A TM structure can be referenced by several TM packets or TM structures.

A TC structure can be referenced by several TC packets or TC structures.

For variable packet, HPSDB manages a dedicated display definition (to allow reconstruction of full VPD table merging de-commutation and display data).

For TM packet HPSDB manages a flag just to identify if a packet shall be interpreted as:

- A fixed packet only (only PLF table will be generated as output)
- A variable packet (only VPD table will be generated),
- Both variable and fixed packet (both PLF and VPD table are generated).

In case in the MIB input files a packet is interpreted as fixed (PLF) and variable (VPD) then HPSDB will first loaded HPSDB as a fixed packet then it will set the flag to both (fixed and variable) and build the associated variable display (TBC).

Constraints:

- The link between SPID and variable packets is a one to one correspondence
- **The description of fixed and variable packet associated to the same SPID shall map exactly** (warning on HIFI ...)



G8- default value

In case a value is "null" but default value is needed, the default value is forced by HPSDB in order it appears at MMI level. (Note in SCOS the importer set the default value)

However for some default values defined by SCOS are modified :

- Because they seem not to be adequate for HP (for instance PID_CHECK)
- Or due to commonality (for instance CAF_RADIX and CCA_RADIX)

Constraints:

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- Set all the default value according to HPSDB

G9- Commonality

HPSDB has been specified to adapt commonality as far as possible.

For instance refer to the "commutation" chapter.

In addition inside HPSDB curves (discrete and status) can be shared by TM and TC. This has for consequence that the filed shall have the same format (same description for description, default value identical, ...).

When loading MIB files the process will detected a duplicated curve id if the same identifier is used on TM and TC side.

Constraints :

- Do not used common TM and TC curves identifiers.

Note : this means that bridge files generated by HPSDB and containing at minimum one curve shared by TM and TC parameters will fail at loading time.

G10 Category flag

HPSDB supports data for different users : AIT, Operation, software, Flight Dynamics data.

Each item is associated with a category flag, which is a 8 bit words, each bit reserved for a user.

This allows to make each item visible to only a subset of users.

In addition the same principle applies also for some item attribute (limits, packet contents, ...)

When loading the MIB files the category flag is set for all items to "all except FDD".



When MIB files are generated, the items are filtered according to the user role : AIT, operations, software, FDD.

Constraints :

G11- HPSDB common fields

HPSDB is such that for each item the following field are defined :

- Identifier according to NMCVT (refer to G2)
- Mnemonic over 64 characters (required by software users) – Not supported by S2K and CCS

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- Short description : by default 32 characters else in accordance with corresponding S2K / CCS MIB file field
- Long description over 256 characters – Not supported by S2K and CCS
- Set of configuration data (not supported by S2K and CCS):
 - Type of last action (creation, modification or suppression),
 - User
 - Date and hour
 - Reason of change
 - Area (working, reference, archive)
 - Source,
 - Site,
 - Validation date on central
 - Validation date on source,
 - Archive date

When loading bridge files those fields are automatically filled.

Constraints : None

G12– TC packet header

The different types of TC packet header are defined at generic level inside HPSDB. The MIB files from S2K or CCS are required to make reference to one of those generic TC packet header in CCF table (CCF_PKTID). When loading S2K or CCS bridge files the tables TCP , PCPC and PCDF are ignored.

Constraints : **Define PCP, PCPC and PCDF tables according to the generic TC packet referenced in CCF and defined inside HPSDB**

Remark : NCR open on HPSDB. Only one generic packet can be referenced.



G13– Reserved characters

Due to XML, the following characters (interpreted by XML), shall never be used : ">", "<", "" (quote), "" (double quote) and "&" (commercial and).

The description (short description inside HPSDB) shall be expressed using a character subset :

Constraints :

- The following characters shall never be used : ">", "<", "" (Quote), "" (double quote) and "&"
- Description shall use the following character subset
 - Upper case [A .. Z]

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- o Lower case [a .. z]
- o Decimal digit [0 .. 9]
- o Special characters : " " (blank), "+" (plus), "-" (minus), and "_" (underscore)

G14- Radix

In case of unsigned integer value the radix cannot be "O" (for Octal) only "D" (for decimal) and "H" (for Hexadecimal) are allowed.

Constraint :

- Do not use octal radix

G15- Range allocation

Due to SCOS limitation, mainly its non adaptation to support easily "smooth transition", for some attributes, some value allocation have been made and are listed in NMCVT. For instance : PID number, UDC packet location,

Constraint :

- Respect the range allocation as defined inside NMCVT



G16- Automatic instantiation

Some items attributes are automatically instantiated when the an element is allocated inside a subsystem. This automatic instantiation concern the following attributes :

- Short description : the last character (attribute of the position of the element inside the subsystem) will be automatically appended at the end of the inherited short description.
- APID : will be automatically generated by adding the offset (APID defined at element level) and the base (associated to the position of the element inside the subsystem)
- PID : will be automatically generated by adding to the PID defined at element level a delta associated with the position of the element inside the subsystem. For CCS at bridge file generation the value inside HPSDB will be overwritten by curve Z999999999.
- UDC parameter position (inside the unique UDC packet) will be automatically calculated by adding the position defined at element level and a delta position associated with the position of the element inside the subsystem
- MISC parameter position (inside the unique MISC packet) will be automatically calculated by adding the position defined at element level and a delta position associated with the position of the element inside the subsystem

Constraints :

- **Take care about last position of short description (recommendation use one character less than allowed)**

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- Take care about APID allocation
- Take care about PID allocation
- Take care about UDC parameter position
- Take care about MISC parameter position



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Field by field presentation

General

Data base version: VDF

Field	Input processing	HPSDB	Output processing	Constrains	Remark
NAME	None	None	Automatic	Impossible	(1)
COMMENT	None	None	Automatic	Impossible	(2)

(1) this field is calculated by HPSDB according to the last HPSDB validation date. Several records are created.

(2) For each record a format is defined inside HPSDB specification

Monitoring data

Monitoring parameters characteristics: PCF

HPSDB define all parameters: TC, TC software, TC header, TM, TM software, dynamic UDC, static UDC, saved synthetic, Misc, system (CCS only) in the same table, the attributes and controls are specific to each type of parameters.

Field	Input processing	HPSDB	Output processing	Constraint	R.
NAME	Copy	Param id NMCVT	Copy	G2	
DESCR	Copy	Short desc Instantiation	Copy	G13 & G16	
PID	Copy	PCF_PID NMCVT instantiation	<ul style="list-style-type: none"> • S2K: Copy • CCS: Calibrated using Z999999999 	<ul style="list-style-type: none"> • S2K: G16 • CCS: Compliance with Z999999999 curve 	



UNIT	Copy	Units	Copy	G6	
PTC	Copy	PTC	Copy	G6	
PFC	Copy	PFC	Copy	G6	
WIDTH	Ignored		Forced to Null	Set it to "Null"	(1)
VALID	Copy	PCF_VALID NMCVT	Copy	G2	
RELATED	<ul style="list-style-type: none"> • Saved synthetic parameter: copied as attribute of saved synthetic parameter • Deduced parameter: saved as attribute of deduced parameters 	PCF_RELATED NMCVT	<ul style="list-style-type: none"> • Copy 	<ul style="list-style-type: none"> • G2 	
		PCF_RELATED NMCVT	<ul style="list-style-type: none"> • Copy 	<ul style="list-style-type: none"> • G2 	
CATEG	<ul style="list-style-type: none"> • If "N" and If CURTX is "null" then forced to • If "N" and if CURTX refers to numerical calibration then forced to • If "N" and CUTX refers to polynomial calibration then forced to • CCS: If "N" and CUTX refers to logarithmic 	Cal category "Null" "Numerical" "Polynomial" "logarithmic" "Numerical"	<ul style="list-style-type: none"> • Forced to "N" • If PTC <> 8 Forced to "N" • Forced to "N" • Forced to "N" • If PTC = 8 forced to 	<ul style="list-style-type: none"> • None • None • None • None • None 	(2)

	calibration then forced to <ul style="list-style-type: none"> If "T" then forced to 		"T"		
NATUR	Set according to naming convention and, for synthetic parameter only, according to NATUR	PCF_NATUR	Set according to function parameter code (NMCVT-0110) <ul style="list-style-type: none"> If "D" – according to parameter nature <ul style="list-style-type: none"> Dynamic => "D" Hard coded => "H" Saved => "S" If "E" => "R" If "M" => "R" If "N" => "R" If "U" => "C" If "Y" => "R" If "Z" => "R" 	None	
CURTX	<ul style="list-style-type: none"> S2K G2&G3 CCS G2 	Def curve NMCVT	<ul style="list-style-type: none"> S2K G2&G3 CCS G2 	<ul style="list-style-type: none"> G2&G3 G2 	
INTER	<ul style="list-style-type: none"> S2K: Copied as attribute of discrete curve referenced in CURTX. In case several parameter address the same discrete curve last 	PCF_INTER (at discrete curve level)	<ul style="list-style-type: none"> S2K: copied from discrete curve referenced y the parameter (all parameters addressing the same curve will have a 	<ul style="list-style-type: none"> S2K: parameters addressing the same numerical curve shall have the same INTER and to be "null" for all other type of curves (polynomial) 	

	one will overwrite the previous ones.		common INTER)	<ul style="list-style-type: none"> • G8 (default value = "F") • CCS: None 	
	<ul style="list-style-type: none"> • CCS: None 		<ul style="list-style-type: none"> • CCS : None 		
USCON	Ignored		Forced to "Y" if a minimum of one limit is "C" for this parameter	Set it accordingly to OCP_NAME and OCP_TYPE	(3)
DECIM	Copy	PCF_DECIM	Copy	None	
PARVAL	Copy	PCF_PARVAL	Copy	None	
SUBSYS	Ignored		Forced to "Null"	Forced to « Null »	(4)
VALPAR	Copy	Param value	Copy	None	
STYPE	Ignored		Fixed to "Null"	Forced to "Null"	

(1) PCF_WIDTH is not used only VPD_OFFSET is used.

(2) CURVE NMCVT is unique independently of its type

(3) What's happen if there is a condition (in the worse case always false) associated to the limit ?

(4) Will be used in future HPSDB version (By default forced according to subsystem A=1 .. Z=26)

Numerical calibration curves: CAF

Due to commonality with CCA (numerical de-calibration for TC parameters) some constraints on field has been "aligned" on the most restrictive one.

Field	Input processing	HPSDB	Output processing	Constraint	R.
NUMBR	<ul style="list-style-type: none"> • S2K G2&G3 • CCS G2 	Curve id NMCVT	<ul style="list-style-type: none"> • S2K G2&G3 • CCS G2 	<ul style="list-style-type: none"> • G2&G3 • G2 	
DESCR	Copy	Short desc Instantiation	Copy	24 characters & G13 & G16	
ENGFMT	Copy	Eng format	Copy	None	
RAWFM	Copy	Raw format	Copy	None	

T		NMCVT			
RADIX	Copy	Raw radix	Copy	Default value "D"	
UNIT	Copy	Unit	Copy	G6	
NCURVE	Ignored		Calculated	Set it correctly	
INTER	<ul style="list-style-type: none"> • S2K : none • CCS : Copy 	PCF_INTER	<ul style="list-style-type: none"> • S2K : none • CCS : Copy 	<ul style="list-style-type: none"> • S2K : None • CCS : G8 (default value = "F") 	

Numerical calibration definition: CAP

When a numerical curve can be addressed also by a TC parameter inside HPSDB delta eng value / delta raw value shall be always >0 or always <0

Field	Input processing	HPSDB	Output processing	Constraint	R.
NUMBR	<ul style="list-style-type: none"> • S2K G2&G3 • CCS G2 	Curve id NMCVT	<ul style="list-style-type: none"> • S2K G2&G3 • CCS G2 	<ul style="list-style-type: none"> • G2 and G3 • G2 	
XVALS	Copy	Raw value	Copy	None	
YVALS	Copy	Eng value	Copy	None	

Textual calibration curves: TXF

Due to commonality with PAF (textual de-calibration for TC parameters) some constraints on field has been "aligned" on the most restrictive one.

Field	Input processing	HPSDB	Output processing	Constraint	R.
NUMBR	<ul style="list-style-type: none"> • S2K G2&G3 • CCS G2 	Curve id NMCVT	<ul style="list-style-type: none"> • S2K G2&G3 • CCS G2 	<ul style="list-style-type: none"> • G2&G3 • G2 	
DESCR	Copy	Short desc Instantiation	Copy	24 characters & G13 & G16	
RAWFM	Copy	Raw format	Copy	None	
T		NMCVT			



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NALIAS	Ignored		Calculated	Set it correctly	
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Textual calibration definition: TXP

When a textual curve can be addressed also by a TC parameter inside HPSDB "Low value" = "High value" and unique status.

Field	Input processing	HPSDB	Output processing	Constraint	R.
NUMBR	<ul style="list-style-type: none"> S2K G2&G3 CCS G2 	Curve id NMCVT	<ul style="list-style-type: none"> S2K G2&G3 CCS G2 	<ul style="list-style-type: none"> G2 and G3 G2 	
FROM	Copy	Low value	Copy	None	
TO	Copy	High value	Copy	None	
ALTXT	Copy	Status	Copy	None	

Polynomial calibration curves: MCF

Field	Input processing	HPSDB	Output processing	Constraint	R.
NUMBR	<ul style="list-style-type: none"> S2K G2&G3 CCS G2 	Curve id NMCVT	<ul style="list-style-type: none"> S2K G2&G3 CCS G2 	<ul style="list-style-type: none"> G2&G3 G2 	
DESCR	Copy	Short desc Instantiation	Copy	24 characters & G13 & G16	
POL1	Copy	MCF_POL1	Copy	None	
POL2	Copy	MCF_POL2	Copy	None	
POL3	Copy	MCF_POL3	Copy	None	
POL3	Copy	MCF_POL4	Copy	None	
POL5	Copy	MCF_POL5	Copy	None	

Monitoring checks: OCF

As far as this table establish a 0,1 to one correspondence, inside HPSDB the above attributes are optional attributes of monitoring parameter.



Field	Input processing	HPSDB	Output processing	Constraint	R.
NAME	Copy	Param id NMCVT	Copy	G2	
NBCHE CK	Copy	OCF_NBCHE CK	Copy	None	
NBOOL	Ignored		Calculated	Set it correctly	
INTER	Copy	OCF_INTER	Copy	None	
CODIN	Ignored		Calculated	Set it correctly	(1)

(1) warning in case of polynomial or logarithmic (CCS only) calibration shall be set to "R"

Monitoring checks definition: OCP

As far as this table establish a 0,1 to one correspondence, inside HPSDB the above attributes are optional attributes of monitoring parameter.

Field	Input processing	HPSDB	Output processing	Constraint	R.
NAME	Copy	Param id NMCVT	Copy	G2	
POS	Copy	OCP_POS	Copy	None	
TYPE	Copy	OCP_TYPE	Copy	S2K: Warning in case "E" (refer to (1))	
LVALU	Copy	OCP_LVALU	Copy	None	
HVALU	Copy	OCP_HVALU	Copy	None	
RLCHK	Copy	Param id NMCVT	Copy	G2	
VALPAR	Copy	OCP_VALPAR	Copy		

(1) CCS : "E" (event) will generate automatic execution of a "danger test sequence".



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Telemetry packet definition: PID

This table is quite misleading. From this table

- one (AAS-F) can understand that a TM packet (identified by : TYPE, STYPE, APID, PI1_VAL and PI2_VAL) can be referenced by several SCOS packet (identified by SPID) and reciprocally a SCOS packet can be referenced by several TM packet, and if there are redundant keys in the table (more than one (TM packet, SCOS packet) couple) there MIB importer will extract the last one with VALID = "Y".
- an other one (ESA) can understand that a TM packet (identified by : TYPE, STYPE, APID, PI1_VAL and PI2_VAL) can be referenced by several SCOS packet (identified by SPID) and reciprocally a SCOS packet can be referenced by several TM packet, and if a TM packet is referenced in several SCOS packets then MIB importer will extract the last one with VALID = "Y".
- What is the instrument interpretation ?
- We consider the AAS-F position as the correct interpretation (the worse case is always the SCOS one)

In order to prevent any further discussion, HPSDB allows only : one TM packet can be referenced in only one SCOS packet and a SCOS packet can be referenced by several TM packets (Note : AIT requires also to change this &-n link to a 1-1 link)

Consequently HPSDB implements in two separate tables (MMI) :

- The TM packet definition (TM packet identifier are generated when loading MIB ICD via configuration files),
- The SCOS packet definition.

Field	Input processing	HPSDB	Output processing	Constraint	R.
TYPE	Copy	PIC_TYPE	Copy	G6	
STYPE	Copy	PIC_STYPE	Copy	G6	
APID	Copy	PID_APID Instantia.	Copy	G6 & G16	
PI1_VAL	Copy	PID_ID1_VAL	Copy		



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PI2_VAL	Copy	PID_ID2_VAL	Copy		
SPID	Copy	PID_SPID NMCVT	Copy	G2	
DESC	Copy	Short desc. Intantia.	Copy	G13 & G16	
UNIT	Ignored		Forced to "Null"	Set it to "Null"	(1)
TPSD	Ignored		Forced to SPID	Set it to SPID in case of variable packet	
DFHSIZE	Copy	PID_DFHSIZE	Copy	None	
TIME	Ignored		Forced to "Y"	Set it to "Y"	
INTER	Copy	PID_INTER	Copy		
VALID	Ignored		Forced to "Y"	Set it to "Y"	(2)
CHECK	Ignored		Forced to "1"	SET it to "1"	(3)
EVENT	Copy	PID_EVENT	Copy	None	
EVID	Copy	PID_EVID	Copy	None	

(1) will be used in future HPSDB evolution

(2) Ensure that a the TM packet / SCOS packet is a 1-n relation (each TM packet shall reference a unique SCOS packet)

(3) Will be introduced in HPSDB to allow value 0 (for SCOE)

Packet identification criteria: PIC

In order to support "smooth transition" this table shall be the same on all the SCOS and CCS system used on HP. As a consequence it has been defined in the generic part of HPSDB and all HP SCOS and CCS users have been required to implement this table inside their own system. This table is not loaded when ingesting SCOS or CCS bridge files. When generating bridge files the PIC table is generated from generic HPSDB data.

Field	Input processing	HPSDB	Output processing	Constraint	R.
TYPE	Ignored		From generic definition	Set according to HPSDB	

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STYPE	Ignored		From generic definition	Set according to HPSDB	
PI1_OFF	Ignored		From generic definition	Set according to HPSDB	
PI_WID	Ignored		From generic definition	Set according to HPSDB	
PI2_OFF	Ignored		From generic definition	Set according to HPSDB	
PI2_WID	Ignored		From generic definition	Set according to HPSDB	

Parameter location in fixed packets: PLF

Refer to G7

Field	Input processing	HPSDB	Output processing	Constraint	R.
NAME	Copy	Param id NMCVT	Copy	G2	
SPID	Copy	PID_SPID NMCVT	Copy	G2	
OFFBY	Copy	PLF_OFFBY	Copy (1)		
OFFBI	Copy	PLF_OFFBI	Copy (1)		
NBOCC	Copy	PLF_NBOCC	Copy (1)		
LGOCC	Copy	PLF_LGOCC	Copy (1)		
TIME	Copy	PLF_TIME	Copy (1)		
TDOCC	Copy	PLF_TDOCC	Copy (1)		

(1) As there is no structure in input there is no structure in output.

Variable packet definition: VPD

Refer to G7

Field	Input processing	HPSDB	Output processing	Constraint	R.
TPSD	Ignored		Forced to SPID	Set it to SPID in case of variable packet	

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POS	Ignored		Calculated	Set the order according to parameter order inside the packet (2)	
NAME	Copy	Param id NMCVT	Copy	G2	
GRPSIZE	Ignored except the value: <ul style="list-style-type: none"> • If "0" or Null then forced to "0" • If >0 then HPSDB will create a structure (OFFBY and OFFBI will be then set according to begin of structure) 	Structure number of elements	Calculated from the number of parameter inside the structure	G7 Do not use Null value	
FIXREP	Ignored		Calculated from the fixed number of repetition	G7	
CHOICE	Ignored		Forced to "N"	Set it to "N"	
PIDREF	Copy	VPD_PIDREF	Copy		
DISDESC	Copy	VPD_DISDESC C	Copy	G13 & G16	
WIDTH	Copy	VPD_WIDTH	Copy		
JUSTFY	Copy	VPD_JUDTIFY	Copy		
NEWLIN E	Copy	VPD_NEWLIN E	Copy		
DCHAR	Copy	VPD_DCHAR	Copy		
FORM	Copy	VPD_FORM	Copy		
OFFSET	Parameter position is	PLF_OFFBY	Calculated from PLF_OFFBY		

	converted in absolute position from the previous parameter characteristics (position, PTC, PFC) and VPD_OFFSET	PLF_OFFBI ²	and PLF_OFFBI		
--	--	------------------------	---------------	--	--

- (1) Can ESA clarify VPD_PIDREF and VPD_DCHAR
- (2) Can ESA clarify processing of deduced parameters (in fixed and in variable packets)
- (3) To be clarified with Order field of variable display

Alphanumeric displays: DFP

Field	Input processing	HPSDB	Output processing	Constraint	R.
NUMBE	Copy	DPF_NUMBE NMCVT	Copy	G2	
TYPE	Copy	DPF_TYPE	Copy		
HEAD	Copy	DPF_HEAD	Copy	G13 & G16	

Alphanumeric displays definition: DFC

Field	Input processing	HPSDB	Output processing	Constraint	R.
NUMBE	Copy	DPF_NUMBE NMCVT	Copy	G2	
NAME	Copy	DPC_NAME NMCVT	Copy	G2	
FLDN	Copy	DPC_FLDN	Copy		
COMM	Copy	DPC_COM	Copy		
MODE	Copy	DPC_MODE	Copy		
FORM	Copy	DPC_FORM	Copy		

Graphic displays: GPF

Field	Input processing	HPSDB	Output processing	Constraint	R.
NUMBE	Copy	GPF_NUMBE NMCVT	Copy	G2	
TYPE	Copy	GPF_TYPE	Copy		
HEAD	Copy	DPF_HEAD	Copy	G13 & G16	
SCROL	Copy	GPF_SCROL	Copy		
HCOPY	Copy	GPF_HCOPY	Copy		
DAYS	Copy	GPF_DAYS	Copy		
MINUT	Copy	GPF_MINUT	Copy	Set in the range [00..59] Real value forbidden	
AXCLR	Copy	GPF_AXCLR	Copy		
XTICK	Copy	GPF_XTICK	Copy		
YTICK	Copy	GPF_YTICK	Copy		
XGRID	Copy	GPF_XGRID	Copy		
YGRID	Copy	GPF_YGRID	Copy		
UPUN	Ignored	GPF_UPUN	Not generated	Set it to "NULL" (1)	

(1) NCR open on HPSDB to allow loading and generation (because it is supported inside the MMI and the data base)

Graphic displays definition: GPC

Field	Input processing	HPSDB	Output processing	Constraint	R.
NUMBE	Copy	GPF_NUMBE NMCVT	Copy	G2	
POS	Copy	GPC_POS	Copy	[0..7] (1)	

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WHERE	Copy	GPC_WHERE	Copy		
NAME	Copy	GPC_NAME NMCVT	Copy	G2	
RAW	Copy	GPC_RAW	Copy		
MINIM	Copy	GPC_MINIM	Copy		
MAXIM	Copy	GPC_MAXIM	Copy		
PRCLR	Copy	GPC_PLCLR	Copy		
SYMBO	Copy	GPC_SYMBO	Copy		
LINE	Copy	GPC_LINE	Copy		

(1) NCR on HPSDB to allow range [0..9] – Very strange that a key is not used by SCOS and could be “Null”.

Scrolling displays: SPF

Field	Input processing	HPSDB	Output processing	Constraint	R.
NUMBE	Copy	SPF_NUMBE NMCVT	Copy	G2	
HEAD	Copy	SPF_HEAD	Copy	G13 & G16	
NPAR	Ignored		Calculated	Set it correctly	
UPUN	Ignored	GPF_UPUN	Not generated	Set it to “NULL” (1)	

(1) NCR 264 open on HPSDB to allow loading and generation (because it is supported inside the MMI and the data base)

Scrolling displays definition: GPC

Field	Input processing	HPSDB	Output processing	Constraint	R.
NUMBE	Copy	SPF_NUMBE NMCVT	Copy	G2	
POS	Copy	SPC_POS	Copy	None (1)	



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NAME	Copy	SPC_NAME NMCVT	Copy	G2	
UPDT	Copy	SPC_UPDT	Copy		
MODE	Copy	SPC_MODE	Copy		
FORM	Copy	SPC_FORM	Copy		
BACK	Copy	SPC_BACK	Copy		
FORE	Copy	SPC_FORE	Copy		

(1) NCR to written on HPSDB – to control the range [1..9] with 5 records max.

Printout proforma: PPF

This file are not loaded

Constraint : **PPF shall not be present.**

Printout proforma definition: PPC

This file are not loaded

Constraint : **PPC shall not be present.**

Commanding data

Packet header characteristics: PCF

Field	Input processing	HPSDB	Output processing	Constraint	R.
TCP_ID	Ignored		From generic data	Set according to generic data	



DESC	Ignored		From generic data	Set according to generic data	
------	---------	--	-------------------	--------------------------------------	--

- (1) two other TC packet header are defined but normally not used by instruments :
- a. One without data field header (not processed by software)
 - b. No header at all (for TC decoder : segment or frame)

Packet header parameter: PCPC

Field	Input processing	HPSDB	Output processing	Constraint	R.
NAME	Ignored		From generic data	Set according to generic data	
DESC	Ignored		From generic data	Set according to generic data	
CODE	Ignored		From generic data	Set according to generic data	

Packet headers definition: PCDF

Field	Input processing	HPSDB	Output processing	Constraint	R.
TCNAME	Ignored		From generic data	Set to "GX000000"	
DESC	Ignored		From generic data	Set according to generic data	
TYPE	Ignored		From generic data	Set according to generic data	
LEN	Ignored		From generic data	Set according to generic data	
BIT	Ignored		From generic data	Set according to generic data	



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PNAME	Ignored		From generic data	Set according to generic data	
Value	Ignored		From generic data	Set according to generic data	
Radix	Ignored		From generic data	Set according to generic data	

Command characteristics: CCF

Field	Input processing	HPSDB	Output processing	Constraint	R.
CNAME	Copy	TCPK id NMCVT	Copy	G2	
DESCR	Copy	Short desc Instantiated	Copy	G13 & G16	
DESCR2	Copy	Long desc	Copy		
CTYPE	Copy	CCF_CTYPE	Copy		
CRITICAL	Copy	CCF_CRITICAL	Copy		(1)
PKTID	Copy	TCPK header	Copy	Shall refer to a HPSDB generic TC header	
TYPE	Copy	CCF_TYPE	Copy	G6	
STYPE	Copy	CCF_STYPE	Copy	G6	
APID	Copy	CCF_APID	Copy	G6 & G16	
NPARS	Ignored		Automatically calculated	SET it correctly	
PLAN	Copy	CCF_PLAN	Copy		
EXEC	Copy	CCF_EXEC	Copy		
ILSCOPE	Copy	CCF_ILSCOP	Copy		



		E			
ILSTAGE	Copy	CCF_ILSTAGE	Copy		
SUBSYS	Ignored		Forced according to subsystem letter type ("01" for "A" ... "26" for "Z")	Set it accordingly	(2)
HIPRI	Ignored		Calculated from <ul style="list-style-type: none"> • "Y" if (type, subtype) = (2,3) • "N" if (type, subtype) << (2,3) 	Set it accordingly	(3)
MAPID	Copy	CCF_MAPID	Copy	G6	(4) (5)
DEFSET	Copy	CCF_DEFSET NMCVT	Copy	G2	
RAPID	Copy	CCF_RAPID	Copy	G6	
ACK	Split in four fields	CCF_ACK acep CCF_ACK_str t CCF_ACK_pr og CCF_ACK_c omp	Calculated	None	

(1) At CCS level that mean the TC shall be first armed before sending it.

(2) Will be modified in future HPSDB evolution

(3) Changes are expected :

a. ESA to clarify the meaning of this field

- b. The current calculation id no more in line with PSICD 5.0 (some HP command can be issued by S/W)
- c. The current implementation is no more in line with specification
- (4) Not used by CCS – How is it used by MCS : ESA to clarify
- (5) Can be "0" (High priority), "1" (normal computer), "2" (redundant computer), "5" (reset CROME), "6" (TC only mode) and "32" (TBC)

Command routing: DST

This file is not loaded

Constraint : **DST shall not be present.**

Command parameters: CPC

Field	Input processing	HPSDB	Output processing	Constraint	R.
PNAME	Copy	Param id NMCVT	Copy	G2	
DESCR	Copy	Short desc Instantiated	Copy	G13 & G16	
PTC	Copy	PTC	Copy	G6	
PFC	Copy	PFC	Copy	G6	
DISFMT	Ignored		Calculated according to MIB ICD description excerpt in case none of the condition are satisfied then set according to PTC	Set it correctly	
RADIX	Copy	CPC_RADIX	Copy	G14	
UNIT	Copy	Units	Copy	G6	
CATEG	Copy	CPC_CATEG	Copy	G8	

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PRFREF	<ul style="list-style-type: none"> S2K G2&G5 CCS G2 	CPC_PRFREF NMCVT	<ul style="list-style-type: none"> S2K G2&G5 CCS G2 	<ul style="list-style-type: none"> G2&G5 G2 	
CCAREF	<ul style="list-style-type: none"> S2K G2&G3 CCS G2 	Def curve NMCVT	<ul style="list-style-type: none"> S2K G2&G3 CCS G2 	<ul style="list-style-type: none"> G2&G3 G2 	
PAFREF	<ul style="list-style-type: none"> S2K G2&G3 CCS G2 	Def curve NMCVT	<ul style="list-style-type: none"> S2K G2&G3 CCS G2 	<ul style="list-style-type: none"> G2&G3 G2 	
INTER	Copy	CPC_INTER	Copy	G7	
DEFVAL	Copy	Def value	Copy		

Command definition: CDF

Field	Input processing	HPSDB	Output processing	Constraint	R.
CNAME	Copy	TCPK id NMCVT	Copy	G2	
ELTYPE	Copy	TYPE	•	None	(1)
DESC	Copy	Short desc Instantiated	Copy	G13 & G16 In case of parameter shall be equal to CORRESPONDING CPC_DESCR	(2)
ELLEN	<ul style="list-style-type: none"> Copy for fixed area Ignore for parameters 	CDF_ELLEN	<ul style="list-style-type: none"> Copy for fixed area Calculated for parameter (from CPC_PTC, CPC_PFC) 	<ul style="list-style-type: none"> None for fixed area Set it correctly 	
BIT	Converted in OFFBY and OFFBI	Offset byte Offset bit	Converted in CDF_BIT	No gap and no overlapping	(3)
GRPSIZE	Ignored except the value: <ul style="list-style-type: none"> If "0" or Null then 	Structure number of	Calculated from the number of parameter inside	Do not use Null value	

	forced to "0" <ul style="list-style-type: none"> If >0 then HPSDB will create a structure (OFFBY and OFFBI will be then set according to begin of structure) 	elements	the structure		
PNAME	Copy	PStr/param id NMCVT	Copy	G2	
INTER	Copy	CDF_INTER	Copy	G6 and G8	
VALUE	Copy	CDF_VALUE	Copy	None	
TMID	Copy	CDF_TMID	Copy	None	

(1) because HPSDB managed : fixed area, parameter and structure only parameter can be editable or not.

(2) To be implemented in HPSDV V3.1.9 (10/11/05)

(3) Control not yet implemented inside HPSDB

Command pre-transmission validation: PTV

Field	Input processing	HPSDB	Output processing	Constraint	R.
CNAME	Copy	TCPK id NMCVT	Copy	G2	
PARNAME	Copy	PTV_PARNAME NMCVT	Copy	G2	
INTER	Copy	PTV_INTER	Copy	G6	
PTV_VALUE	Copy	PTV_VAL	Copy		



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Command sequence characteristics: CDF

To be written



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Annex 6

HIFI differences

2005-09-22
S Dos Santos- AAS-F

Comparison between files sent by HIFI 9.0
and files send to HIFI 9.1 (HPSDB generated including changes from HIFI))

#####

CAF.DAT

1)The following curves are not loaded on HPSDB because they are not used:
549
550
551
552
HIFI: to be corrected

CAP.DAT



1)The following curves are not loaded on HPSDB because they are not used:
549
550
551
552
HIFI: to be corrected

CCF.DAT

1)TC Header HSO_TD replaced by GX000000 (see TN Generic)
HIFI: to be corrected
2)Generic data is generated by HPSDB
3)HPSDB add the CCF_SUBSYS =8 (ie HIFI subsystem)
HIFI: to be corrected
4)HPSDB set by default the CCF_MAPID=1
HIFI: to be corrected

CDF.DAT

1)HPSDB add SCOS default value CDF_GRPsize=0
HIFI: to be corrected
2)HPSDB add SCOS default value CDF_INTER=0
HIFI: to be corrected

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- 3)HPSDB add the value CDF_VALUE=1 for counter parameters when CDF_VALUE=NULL
HPSDB: to be corrected
4)Generic data is generated by HPSDB

CPC.DAT

- 1)Generic data is generated by HPSDB
2)CPC_DISPfmt, different when there is not calibration (shall be set to R, esa answer.)-
NCR 528
HPSDB: to be corrected
3)HPSDB add SCOS default value of CPC_Inter =R
HIFI: to be corrected



CVS.DAT

- 1)HPSDB removes the leading zero, because it causes errors on SCOS side.
HIFI: to be corrected

2)The following CVS are not loaded inside HPSDB, because they are not used:

2	S	R 0	60
3	0	R 0	60
4	1	R 0	60
5	2	R 0	60
6	3	R 0	60
7	4	R 0	60
8	5	R 0	60
9	6	R 0	60
10	7	R 0	60
11	8	R 0	60
12	9	R 0	60
13	C	R 0	60

HIFI: to be corrected

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GPC.DAT

- 1)HPSDB add SCOS the default value GPC_LINE=0
HIFI: to be corrected

GPF.DAT

- 1)HPSDB add SCOS the default value GPF_SCROL=N
HIFI: to be corrected

OCF.DAT

- 1)On the parameter HM003194 the value OCF_CODIN is changed on HPSDB from R to I, because the parameter is uncalibrated and is not Real, accordingly with MIB CDF_CODIN shall be 'I' and not 'R'.
HIFI: to be corrected
- 2)OCF_NBOOL related to the error 1) on the OCP.DAT
- 3)Removed limits on HPSDB requested by L Dubbeldan on 06/09/2005

OCP.DAT

- 1)HPSDB error on loading (NCR 526)

HPSDB replaces

HM206192	1	H 0	90
HM206192	2	S 20	70
HM206192	3	H 0	90
by			
HM206192	1	S 20	70
		1	
HM206192	2	H 0	90
		1	

HPSDB: to be corrected (NCR 526)

- 2)HPSDB add SCOS default value OCP_VALPAR=0
HIFI: to be corrected
- 3) Remove limits on HPSDB requested by L Dubbeldan on 06/09/2005

PAF.DAT

- 1)HPSDB add the Generic data.
- 4)Differences on the SDESC 1001,1002 and 1009, HIFI shall follow the Generic data TN
HIFI: to be corrected

PAS.DAT

- 1)HPSDB add the Generic status curve even if not used.

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PCDF.DAT

1)HIFI shall follow generic data (common to all Herschel Planck Project)
HIFI: to be corrected

PCF.DAT

1) HPSDB add SCOS default value PCF_USCON=N
HIFI: to be corrected
2) HPSDB add SCOS default value PCF_VALPAR=1
HIFI: to be corrected
3) HPSDB changes the flag PCF_INTER from 'P' (extrapolation) to 'F'(no extrapolation) for status curve.
HPSDB:The value shall be set to NULL when no numerical curve is defined (NCR 529)
HIFI: The value shall be set to NULL when no numerical curve is defined
4) HPSDB add the Generic parameters even if not used

PCPC.DAT

1)HIFI shall follow generic data (common to all Herschel Planck Project)
HIFI: to be corrected



PIC.DAT

1)HIFI shall correct the PIC_PI1_OFF and PIC_PI1_WID. This table is defined as generic and is common to all Herschel Planck Project.
(Minor error HIFI does not uses (3.10) (3,12))
HIFI: to be corrected

PID.DAT

1)HPSDB add SCOS default value PID_EVENT=N.
HIFI: to be corrected
2)HPSDB forces PID_TIME=Y , see PSICD document.
HIFI: to be corrected
3)PID_DESC is truncated at char (31)
HPSDB: to be corrected NCR 396
4)HIFI wrong value packet 80017289 PID_CHECK=2 not defined on the MIB.
HIFI: to be corrected

PLF.DAT

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- 1)HPSDB removes the leading zero, because it causes errors on SCOS side.
HIFI: to be corrected
- 2)HPSDB add SCOS default value PLF_NBOCC=1
HIFI: to be corrected
- 3)HPSDB add SCOS default value PLF_LGOCC=0
HIFI: to be corrected
- 4)HPSDB add SCOS default value PLF_TIME=0
HIFI: to be corrected
- 5)HPSDB add the default value PLF_TDOCC=0
HIFI: to be corrected
- 6)Following changes between the HIFI v 9.0 Mib files and the HPSDB output (changes requested by L Dubbeldan on 06/09/2005)

HM048190	80010289	22 0	61
	32	0 0	
HM330191	80032289	28 0	39
	32	0 0	
HM327192	80033289	28 0	16
	32	0 0	
HM328192	80035289	28 0	16
	32	0 0	
HM097193	80037289	28 0	5
	32	0 0	
HM098193	80038289	28 0	5
	32	0 0	
HM196194	80039289	28 0	11
	32	0 0	
HM057190	80044289	17 0	64
	32	0 0	



PRF.DAT

- 1)Parameters range 100,108,109 not loaded on HPSDB because they are not used.
HIFI: to be corrected

PRV.DAT

- 1)Parameters range 100,108,109 not loaded on HPSDB because they are not used.
HIFI: to be corrected

SPF.DAT

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1) HPSDB does not set the field SPF_UPUN because it is not used by SCOS
HPSDB: (still an HPSDB NCR 264 exists)

TCP.DAT

- 1) Differences TC packet header
HIFI: to be corrected
- 2) HPSDB add the Generic data even if not used.

TXF.DAT

- 1) Duplicated information curves on the TXP.DAT
curve 182 and 199 because they are used by different equipments HRS and WBS, HIFI:
to be corrected on their mib
HIFI: to be corrected
- 2) HPSDB add the Generic status curve even if not used.
- 3) Differences on the SDESC 1001 and 1002, HIFI shall follow the Generic data TN
HIFI: to be corrected

TXP.DAT

- 1) Following changes between the HIFI v 9.0 Mib files and the HPSDB output (changes requested by L Dubbeldan on 06/09/2005)

```

                207                0 0
                HIFI_ASPI_09_1

```



- 2) Duplicated information curves on the TXP.DAT
curve 182 and 199 because they are used by different equipments HRS and WBS, HIFI:
to be corrected on their mib
HIFI: to be corrected
- 3) HPSDB add the Generic status curve even if not used.

VDF.DAT

- 1) File defined automatically by HPSDB

VPD.DAT

- 1) HPSDB removes the leading zero, because it causes errors on SCOS side.
HIFI: to be corrected
- 2) HPSDB changes the field VPD_FIXREP from 0 to 1

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HPSDB: NCR 525

3)HPSDB add SCOS default value VPD_FORM=N

HIFI: to be corrected



The following files have no changes:

CCA.DAT
CCS.DAT
CVE.DAT
CVP.DAI
DPF.DAT
DPC.DAT
SPC.DAT
TPCF.DAT

The following files are empty:

CPS.DAT
CSF.DAT
CSP.DAT
CSS.DAT
MCF.DAT
PSM.DAT
PST.DAT
PSV.DAT
PTV.DAT
PVS.DAT

SDF.DAT

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Annex 7

PACS differences

2005-09-23
S Dos Santos- ASP

Comparison between files sent by PACS 7.18
and files HPSDB generated SCOS PACS files

#####

CAF.DAT

1)HPSDB does load curve 114 because is not used.

PACS: to be corrected

2)HPSDB does not allow links at the same level.

The curve 105 shall not be used by different elements (DPU, SPUL, SPUS), new definition shall be included in the mib.

PACS: to be corrected

CAP.DAT

1)HPSDB does load curve 114 because is not used.

PACS: to be corrected

2)HPSDB does not allow links at the same level.

The curve 105 shall not be used by different elements (DPU, SPUL, SPUS), new definition shall be included in the mib.

PACS: to be corrected

CCA.DAT



1)CCA_DESCR max char (23) remove last char from
410 BOLC VINJ BIAS ALL GROUP
V

R U D
2

PACS: to be corrected

CCF.DAT

1)HPSDB CCF_DESCR max char (23) remove last char of:
PC022380 DPU_REPORT_ENABLED_PACKT
PC030380 DPULLSW_LOAD_TC_AND_WAIT
PC031380 DPULLSW_LOAD_TC_AND_BOOT
PC047400 SPUS_ACT_BOL_BGND_CANCEL
PC048390 SPUL_ACT_BOL_BGND_CANCEL

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PC103420 DMC_SEND_COMMAND_TO_BOLC
 PC125420 DMC_MOVE_CHOP_ABS_DITHER
 PC126420 DMC_MOVE_CHOP_REL_DITHER
 PC161420 DMC_WRT_DIAG_HK_CONF_TAB
 PC164420 DMC_WRT_FW_SPEC_CONF_PAR
 PC165420 DMC_WRT_FW_PHOT_CONF_PAR
 PC177420 DMC_WRT_B_PACKT_ENC_LINK
 PC178420 DMC_WRT_R_PACKT_ENC_LINK
 PC188390 TEST_SPUL_INVALID_ACT_ID
 PC189400 TEST_SPUS_INVALID_ACT_ID
 PC190420 TEST_GENERAL_TRIGGER_CMD
 PC203420 DMC_WRT_GRAT_INDUCT_SIGN
 PC205420 DMC_SELECT_MEC_CTRL_MODE
 PC216410 BOLC_SET_HSP_HEATER_CURR
 PC217410 BOLC_SET_HSE_HEATER_CURR
 PC224410 BOLC_FINE_TIMING_SETTING
 PC369420 DMC_WRT_GRAT_DEGMODE_PAR

PACS: to be corrected

2)The following packets are lot loaded inside of HPSDB, because HPSDB controls the allowed APID + Type, subtype:

PC179380	TEST_APID	TEST ILLEGAL APID
PC181380	TEST_TYPE	TEST ILLEGAL TYPE
PC182380	TEST_SUBTYPE	TEST ILLEGAL SUBTYPE

HPSDB : To be added on HPSDB



- 3)HPSDB generates all Generic Data
- 4)HPSDB add CCF_SUBSYSTEM=16 (PACS subsystem)
- PACS: to be corrected
- 5)HPSDB set by default the CCF_MAPID=1
- PACS: to be corrected

CDF.DAT

1)CDF File: Note on the (PTC,PFC)=(7,0) Variable octet string (PP004380)
 PACS has the following data:
 PC010380 E 8 32 PP004380 R

On HPSDB this line is generated as

- PC010380 E 0 32 0 PP004380 R
- PACS: to be corrected, because the field CDF_ELLEN shall be set to zero for PTC,PFC=(7,0)
- 2)HPSDB generates all Generic Data
- 3)HPSDB not possible to add fixed counters on HPSDB.

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HPsDB: to be corrected (NCR 478)
4)HPsDB add SCOS default value CDF_GRPSIZE=0
PACS: to be corrected

CPC.DAT

1)CPC_DISPFORMAT, different when there is not calibration (shall be set to R, esa answer.)-
NCR 528
HPsDB: to be corrected
2)HPsDB generates all Generic Data

DPF.DAT

1) DPF_HEAD max char(31) the following display:
PA015420 1MECHANISM AND CALIBRATION SOURCE
has been replaced by
PA015420 1MECHANISM AND CALIBRATION SOURC
PACS: to be corrected

DST.DAT

1)This file is filed by the System. Generated empty by HPsDB

OCP.DAT

1)HPsDB add SCOS default value OCP_VALPAR=1
PACS: to be corrected

PAF.DAT



1)HPsDB generates all Generic Data
2)HPsDB does not allows links at the same level.
The curve 600 shall not be used by different elements (DPU, SPUL, SPUS), new definition shall be included in the mib.
PACS: to be corrected

PAS.DAT

1)HPsDB does not allows links at the same level.
The curve 600 shall not be used by different elements (DPU, SPUL, SPUS), new definition shall be included in the mib.
PACS: to be corrected

PCF.DAT

1)HPsDB does not load PCF_PID

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TCP.DAT

1)Differences TC packet header

PACS shall follow the Generic data TN (common to all Herschel Planck Project)

PACS: to be corrected

2) HPSDB add the Generic data even if not used.

TPCF.DAT

1)Packets to be added by PACS (to be clarified):

168995429	PBLUSPECT429	1024
168996429	PREDSPPECT429	1024
168997429	PBLUPHOTO429	1024
168998429	PREDPHOTO429	1024
168999429	PDIAGNOST429	1024

Those are science packets add after loading PACS 7.18

TPC.DAT

1)HPSDB add the Generic data even if not used.

2)PACS shall follow the Generic data, TCP_DESC to be corrected.

PACS: to be corrected

TXF.DAT

1)Generic data is generated by HPSDB

2)The curve 325 is not loaded on HPSDB because is not used.

PACS: to be corrected

3)The curve 320 shall be redefined because its used on the element DPU and DMC

PACS: to be corrected

4)The curves 334, 335 ,336 shall be redefined because its used on the element SPUL and SPUS

PACS: to be corrected

TXP.DAT



1)Generic data is generated by HPSDB

2)The curve 325 is not loaded on HPSDB because is not used.

PACS: to be corrected

3)The curve 320 shall be redefined because its used on the element DPU and DMC

PACS: to be corrected

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4)The curves 334, 335 ,336 shall be redefined because its used on the element SPUL and SPUS
PACS: to be corrected

VPD.DAT

1)HPSDB changes the field VPD_FIXREP from 0 to 1.

HPSDB: to be corrected (NCR 525)

2)HPSDB add SCOS default value VPD_FORM=N

PACS: to be corrected

The following files have no changes:

CCS.DAT



DPC.DAT

GPC.DAT

PLF.DAT

OCF.DAT

GPF.DAT

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Annex 8

SPIRE differences

2005-09-26
S Dos Santos- ASP

Comparison between files sent by SPIRE 20050630 (with new vpd.dat send on 2005075) and files HPSDB generated SCOS SPIRE files

#####

CCF.DAT

- 1)HPSDB generates all Generic Data
 - 2)HPSDB set CCF_MAPID=1
- SPIRE: to be corrected

CDF.DAT



- 1)HPSDB generates all Generic Data
 - 2)HPSDB does not load CDF_DESCR for parameters (SCOS only uses CDF_DESCR for fixed areas)
- SPIRE: not to be corrected, because it will change for HPSDB next version where CDF_DESCR=CPC_DESCR.
- 3)HPSDB add SCOS default value CDF_GRPsize=0
- SPIRE: to be corrected
- 4)HPSDB add SCOS default value CDF_INTER=R
- SPIRE: to be corrected

CPC.DAT

- 1)HPSDB add SCOS default value CPC_INTER=R
- SPIRE: to be corrected
- 2)HPSDB generates all Generic Data

CVS.DAT

- 1) HPSDB does not allows links at the same level, ie the same CVS can not be share by different elements
- and 1000,1001,1008 are shared by MCU, OBS and DPU. This shall be redefined on SPIRE MIB files
- SPIRE: to be corrected

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DST.DAT

1)This file is filed by the System. Generated empty by HPSDB

OCP.DAT

1)Add missing mandatory field OCP_POS
SPIRE to update the mib.

PAF.DAT

1)HPSDB generates all Generic Data

PAS.DAT

1)HPSDB generates all Generic Data

PCDF.DAT

1)SPIRE shall follow the Generic data, (common to Herschel and Planck Project)
SPIRE: to be corrected

PCF.DAT

1)The field PCF_DESC is max_char(15)changed with SPIRE agreement on the instrument loading

SPIRE: to be corrected

2)The field PCF_SUBSYS not used by SCOS , not loaded by HPSDB

SPIRE: to be corrected

3)Update unit

from

SMT1A520

SPHTRV

V

to

1127:

SMT1A520

SPHTRV

mV

Requested by SPIRE team on 20050707

SPIRE: to be corrected

4)HPSDB add the SCOS default value PCF_VALPAR=1.

SPIRE: to be corrected

5)HPSDB generates all Generic Data



6)HPSDB add the SCOS default value PCF_USCON=N.

SPIRE: to be corrected

PCPC.DAT

1)SPIRE shall follow generic data (common to all Herschel Planck Project)

SPIRE: to be corrected

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PIC.DAT

1)SPIRE shall update this table accordingly with HPSDB Generic data (common to Herschel and Planck)
 SPIRE: to be corrected

PID.DAT



1)HPSDB forces PID_TIME=Y , see PSICD document.
 SPIRE: to be corrected
 3)PID_DESC is truncated at char (31)
 PID_DESC changed from
 191165500 Out_of_Limit_Error_Power_Failure
 to
 191165500 OL_Error_Power_Failure
 HPSDB: to be corrected (NCR 396)
 4)Add PID_TPSD for variable packets
 SPIRE: to be corrected

TCP.DAT

1)Differences TC packet header
 SPIRE shall follow the Generic data TN (common to all Herschel Planck Project)
 SPIRE: to be corrected
 2) HPSDB add the Generic data even if not used.

TPCF.DAT

1) Update on loading with pid_desc the following packet:
 190024525 STCEXECF0525
 to
 190024525 INV_LEN_SELT 0
 SPIRE: to be corrected
 2)add the following missing packets:
 190000525 ILLEG_MEMID
 > 190001525 ILLEG_STARTA
 > 190002525 ILLEG_NSAU
 > 190003525 BAD_NSAU
 > 190004525 BAD_CRC
 > 190005525 BAD_LOAD
 > 190006525 ILLEG_FUNCID
 > 190007525 ILLEG_ACTIVI

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- > 190008525 ILLEG_TABID
- > 190009525 ILLEG_TAB_ID
- > 190010525 BAD_DATA
- > 190011525 TAB_SPACE_FU
- > 190012525 VM_INACTIVE
- > 190013525 VM_ACTIVE
- > 190014525 BAD_NDATA
- > 190015525 LS_SYNC_ERRO
- > 190016525 ILLEG_FIFOFL
- > 190017525 VM_UNDEF_TAB
- > 190018525 UNDEF_TAB
- > 190019525 EEPROM_FAILE
- > 190020525 TAB_BUSY
- > 190021525 ILLEG_FRAMEI
- > 190022525 ILLEG_SELECT
- > 190023525 UNDEF_SELTAB
- > 190025525 INV_CON_SELT
- > 190026525 PEAKUP_ERROR
- > 190027525 ILLEG_HK_PKT
- > 190028525 ILLEG_HK_SID
- > 190029525 ILLEG_HK_TAB
- > 190030525 ILLEG_HKSMPI
- > 190031525 UNDEF_HK_TAB
- > 190032525 UNDEF_MONTAB
- > 190033525 REPORT_INUSE
- > 190034525 UNDEF_HKID
- > 190035525 FUNC_ACTIVE
- > 190036525 FUNC_STOPPED
- > 190037525 ILLEG_TYPE
- > 190038525 ILLEG_SUBTYP
- > 190039525 ILLEG_SID
- > 190040525 BAD_NPCKTS



SPIRE: to be corrected

4)Add Tpcf_Size= 0 for the variable packets

190600500	TRANSPARENT	0
190700500	HKDEFREP	0
190800500	REPTABREP	0

SPIRE: to be corrected

TXF

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1)curve 651 not used
SPIRE: to be corrected
2)replace curve 992 by Generic Curve 1002
SPIRE: to be corrected
3)replace curve 996 by Generic Curve 1006
SPIRE: to be corrected

TXP

1)curve 651 not used
SPIRE: to be corrected
2)replace curve 992 by Generic Curve 1002
SPIRE: to be corrected
3)replace curve 996 by Generic Curve 1006
SPIRE: to be corrected

VDF.DAT


1)File defined automatically by HPSDB

VPD.DAT

1)HPSDB changes the field VPD_FIXREP from 0 to 1
HPSDB: to be corrected (HPSDB NCR 525)

The following files have no changes:

CAP.DAT
CVP.DAT
DPC.DAT
DPF.DAT
MCF.DAT
OCF.DAT
PLF.DAT
GPF.DAT
GPC.DAT
CAF.DAT

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