ALCATEL SPACE

HERSCHEL / PLANCK

Naming Convention Specification

H-P-1-ASPI-SP-0141

Product Code : 00000

	HERSCHEL / PLANCK TEAM	Date	Signature
Rédigé par/Written by	C. LECRIVAIN	15/10/02	
Vérifié par/Verified by	F. CHATTE	15/10/02	
Vérifié par/Verified by	P. RIDEAU	24/10/02	
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Approbation/Approved	J.J. JUILLET	25/10/02	

Entité Emettrice : Alcatel Space - Cannes
(détentrice de l'original) :

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System Database Specification

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(détentrice de l'original) :

ENREGISTREMENT DES EVOLUTIONS / CHANGE RECORDS

ISSUE	DATE	§ : DESCRIPTION DES EVOLUTIONS § : CHANGE RECORD	REDACTEUR AUTHOR
01/00	01/02/02	Issue 01 - Revision 00	F. Chatte
01/01	15/03/02	Issue 01 - revision 01 General . All examples modified to separate the different fields (separator = "/") . Element direct definition modified to support subsystem or system pseudo identifiers : use of "subsystem pseudo type of system element" and "subsystem pseudo position" in case of "direct definition" limited to a subsystem else, in case of "direct definition" not limited to a subsystem, then use of "pseudo subsystem", "system pseudo type of system element" and "system pseudo position". This is to be compliant with remarks from PACS and to potential other similar needs. ➢ NMCVT-4075-C Deleted (Element) ➢ NMCVT-4111-C deleted (Model) ➢ NMCVT-4440-C Modified (TM) ➢ NMCVT-4450-C Modified " ➢ NMCVT-4455-C Modified " ➢ NMCVT-4640-C Modified (TC) ➢ NMCVT-4650-C Modified " ➢ NMCVT-4655-C Modified " ➢ NMCVT-4840-C Modified (1553) ➢ NMCVT-4850-C Modified " ➢ NMCVT-4860-C Modified " ➢ NMCVT-5060-C Modified (OBDH) ➢ NMCVT-5080-C Modified " ➢ NMCVT-5150-C Modified (Parameter) ➢ NMCVT-5175-C Modified " ➢ NMCVT-5380-C Modified (Curves) ➢ NMCVT-7510-C Modified (Pseudo TOSE allocation) ➢ NMCVT-7520-C Modified (Pseudo position allocation) ➢ Summary updated accordingly . Real definition and direct definition of "logical data" to be unique for "system element model" instead of "real element" ➢ NMCVT-4380-C Modified (TM) ➢ NMCVT-4400-C Modified " ➢ NMCVT-4420-C Modified " ➢ NMCVT-4440-C Modified " ➢ NMCVT-4450-C Modified " ➢ NMCVT-4455-C Modified " ➢ NMCVT-4580-C Modified (TC) ➢ NMCVT-4600-C Modified "	

ISSUE	DATE	§ : DESCRIPTION DES EVOLUTIONS § : CHANGE RECORD	REDACTEUR AUTHOR
		➢ NMCVT-4620-C Modified " ➢ NMCVT-4640-C Modified " ➢ NMCVT-4650-C Modified " ➢ NMCVT-4655-C Modified " ➢ NMCVT-4780-C Modified (1553) ➢ NMCVT-4800-C Modified " ➢ NMCVT-4820-C Modified " ➢ NMCVT-4840-C Modified " ➢ NMCVT-4850-C Modified " ➢ NMCVT-4860- C Modified " ➢ NMCVT-5020-C Modified (OBDH) ➢ NMCVT-5044-C Modified " ➢ NMCVT-5060-C Modified " ➢ NMCVT-5080-C Modified " ➢ NMCVT-5130-C Modified (Parameters) ➢ NMCVT-5150-C Modified " ➢ NMCVT-5160-C Modified " ➢ NMCVT-5175-C Modified " ➢ NMCVT-4450-C Modified " ➢ NMCVT-4455-C Modified " Introduction (chapter 1) . Adding introduction (§1.1) Documents (Chapter 2) . HPSDB specification change from applicable document to reference document . Adding of acronyms . Adding of definition General requirements (Chapter 3) . Clarification on parameter function code . definition of pseudo subsystem, type of system element, position, … ➢ NMCVT-0110-C Modified ➢ NMCVT-0200-C New ➢ NMCVT-0300-C New ➢ NMCVT-0400-C New Modification of TM packet identifier (IDIN09F instead of IDIN10F) ➢ NMCVT-4114-C New ➢ NMCVT-4340-C Modified ➢ NMCVT-4380-C Modified ➢ NMCVT-7500-C Modified Modification of PSICD templates ➢ NMCVT-4320-C Modified (TM) ➢ NMCVT-4520-C Modified (TC) Creation of theoretical command sequences ➢ NMCVT-4657-C New ➢ NMCVT-4660-C Deleted	

ISSUE	DATE	§ : DESCRIPTION DES EVOLUTIONS § : CHANGE RECORD	REDACTEUR AUTHOR
		➢ NMCVT-4670-C New ➢ NMCVT-4672-C New ➢ NMCVT-4674-C New ➢ NMCVT-4675-C New ➢ NMCVT-4676-C New 1553 template replace by 1553 command word ➢ NMCVT-4705-C Modified Parameters : . Suppression of groups type (acquisition / command) . Adding of parameter set definition . Adding of parameter set value definition . Adding of parameter range set definition ➢ NMCVT-5126-C Modified ➢ NMCVT-5210-C New ➢ NMCVT-5215-C New ➢ NMCVT-5217-C New ➢ NMCVT-5220-C New ➢ NMCVT-5225-C New ➢ NMCVT-5227-C New ➢ NMCVT-5250-C New ➢ NMCVT-5255-C New ➢ NMCVT-5257-C New ➢ NMCVT-4690-C Deleted ➢ NMCVT-4695-C Deleted Curves ➢ NMCVT-5120-C New ➢ NMCVT-5355-C New ➢ NMCVT-5360-C Modified ➢ NMCVT-5365-C New ➢ NMCVT-5370-C Modified ➢ NMCVT-5375-C New ➢ NMCVT-5380-C Deleted Displays . Adding of theoretical display / suppression of mimic displays ➢ NMCVT-6050-C New ➢ NMCVT-6100-C Deleted ➢ NMCVT-6105-C New ➢ NMCVT-6110-C Deleted ➢ NMCVT-6120-C Deleted ➢ NMCVT-6125-C Deleted ➢ NMCVT-6128-C New ➢ NMCVT-6130-C Deleted Modification of real display requirement ➢ NMCVT-6150-C New Adding of display direct definition ➢ NMCVT-6160-C New ➢ NMCVT-6170-C New ➢ NMCVT-6200-C New	

ISSUE	DATE	§ : DESCRIPTION DES EVOLUTIONS § : CHANGE RECORD	REDACTEUR AUTHOR
		Requirement numbering correction ➢ NMCVT-7520-C instead of NMCVT-7510-C "Type of system element" changed by "theoretical element" "System element model" changed by "theoretical model" "… direct definition" change in "model … definition" ➢ all requirements previously titled "… direct definition".	
01/02	15/10/02	Update according to HPSDB specification H-P-1-ASPI-SP-0082 issue 2.2. Due to the large number of changes and to Word crash, the change record has not been activated. All the existing requirements have been modified, but in a such a way that they are still compatible with previous issue of this document. This is mainly due to the addition of the subsystem level between the element and model levels. New requirements have been added mainly in what concerns : 1. Subsystem level between element and model levels, 2. TM packet SCOS archiving (refer to SPID of SCOS), 3. Modification of TC template (to be compliant with SCOS), 4. Formal parameter identifier unique for a command sequence, 5. Addition of command verification stage, 6. 1553 status word being no more a generic data, 7. Generic parameters, 8. Constants. The allocation tables (subsystem, element number, position, …) have been modified in order to remain compatible with previous version but taking into account the subsystem level. Addition of instantiation of short description. Requirement NMCVT-100 change according to ESA remark ([+], [-] and [.] no more allowed in identifier name.	F. Chatte

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1. SCOPE

The scope of this document is to provide the naming convention to apply for the identifiers attached to all items which will be manipulated all among the Herschel / Planck project from engineering up to operation and which will be defined in the Herschel /Planck System DataBase (HPSDB).

This naming convention is aimed mainly to prevent identifier duplication at spacecraft real model level.

In addition, this naming convention shall support commonality between Herschel and Planck (for instance common subsystem (RF, …), common boxes (QRS, CCS, …)) and between the different models of a same spacecraft (AVM, SVM, PFM, …), this will allow to have common items allowing common development for AIT (TM and TC identifiers, test sequences, synoptics, …) or operation (TM and TC identifiers, displays, …) or software (TM and TC identifiers, …).

As last aim, this naming convention shall make the identifiers as readable as possible.

Chapter 2 provides the applicable and reference documents. Annex 4 of RD1 document provides a provisional naming convention limited to one spacecraft model (PFM) definition and not supporting all the spacecraft model definitions used during development phases.

Chapter 3 provides the general identifier requirements : possible subtypes, authorised characters, …

Chapter 4 provides the detail identifier requirements, each requirement is linked with an RD4 requirement.

Chapter 5 provides the detailed allocation requirements (per element, subsystem, model : subsystem, element, position, …).

Chapter 6 provides some additional requirements to be applied on some attributes (APID, labels, …).

The requirements have the following format :

- Requirement identifier :
  - 5 characters set to "NMCVT" to identify requirements applicable to NaMing ConVenTion,
  - 4 decimal digits to uniquely identified NMCVT requirements,
  - One character set to "C" to identify requirements applying to both Herschel and Planck,
- Requirement title,
- Verification method : one character set to "I" to indicate that the validation method will be done by inspection (mainly via HPSDB checks or automatic generation).
- Text of the requirement.

1.1 HPSDB data model presentation

HPSDB use principle consists in defining (refer to figure 1.1) :

"Theoretical elements"

- Who : equipment engineering.
- How : Inputs.
- Functional identifier : PTI.

- Typical data : theoretical mass, theoretical curves, theoretical packets, theoretical parameters, … .
- Example : Star tracker associated to theoretical element number "025" with :
  - Theoretical polynomial curve "025566" : 3x + 2.5,
  - Theoretical parameter "M012" with limit set (6,10).

"Real elements"

- Who : equipment fabrication.
- How : "physical instantiation" of "theoretical element" with "real element" number (this generates instantiation of all physical data) + inputs (to overwrite theoretical data with real data).
- Functional identifier : Serial number.
- Typical data : real mass, real curve, … .
- Example : real star tracker associated to real element number 998 with
  - Real polynomial curve "M01201" : 3x+2.6.

"Theoretical subsystem"

- Who : subsystem engineering.
- How : by associating to each position of the "theoretical subsystem" a "theoretical element" and a "subsystem identifier" (this generates "logical instantiation" of logical data) and by entering specific "theoretical subsystem" data (for instance to define a TM packet which contains parameters associated to different "theoretical elements" but belonging to " theoretical subsystem").
- Functional identifier : theoretical subsystem name.
- Typical data : subsystem type, theoretical packets, theoretical parameters, theoretical 1553 bus address, … .
- Example : "A001" subsystem including nominal star tracker in position "023" and part of subsystem "A" with
  - Theoretical parameter identifier instantiated in "AM012023" and limit set updated to (5,10).

"Real subsystem"

- Who : subsystem fabrication.
- How : by associating to each "theoretical element" part of corresponding "theoretical subsystem" a "real element".
- Identifier : "real subsystem" identifier (instantiation of the "theoretical subsystem" identifier with the "real subsystem" number).
- Typical data : triplet ("theoretical subsystem" identifier, position identifier, "real element" identifier), satellite identifier, … .
  - Example : The "real subsystem" "A001002" is derived from "theoretical subsystem" "A001" and nominal (position "023") star tracker of subsystem "A001" is the STR number 998 with serial number : xxxx, the calibration curve will be "AM01202300".

"Theoretical model"

- Who : system engineering,
- How : by allocating a set of theoretical subsystem to the "theoretical model" and by entering specific theoretical model data (for instance to define a TM packet which contains parameters associated to different "theoretical subsystems").
- Functional identifier : theoretical model name.
- Typical data : theoretical packets, theoretical parameters, theoretical 1553 bus address, … .
- Example : "Herschel PFM" including subsystem " A001" with
  - Real parameter identifier instantiated in "AM012023" and limit set updated to (5,10).

"Real model"

- Who : AIT.
- How : by associating to each theoretical subsystem part of corresponding "theoretical model" a "real subsystem".
- Identifier : real model identifier (instantiation of the "theoretical model identifier with the real model number).
- Typical data : triplet (theoretical model identifier, position identifier, real subsystem identifier), satellite identifier, … .
- Example : The "real subsystem" A001002 is associated to nominal (position "023") star tracker of "Herschel PFM 01" is the STR number 998 with serial number : xxxx, the calibration curve will be "AM0120230"

Note :

At "real element" level it is possible to enter attributes without correspondence at "theoretical element" level. At "real model" level it is possible to enter attributes without correspondence at "theoretical model" level. This facility is known as "direct definition".

In order to emulate the different instantiations made in normal definitions, pseudo "theoretical elements", "pseudo position" and "pseudo subsystem" are defined at element level, subsystem level or system level depending if the item is limited to an element or a subsystem or not. This last facility allows for instance to associate a theoretical calibration curve at "theoretical model" level to a set of derived parameters which are depending of parameters belonging to different elements, this curve will then be instantiated at "real model" level in several instances.

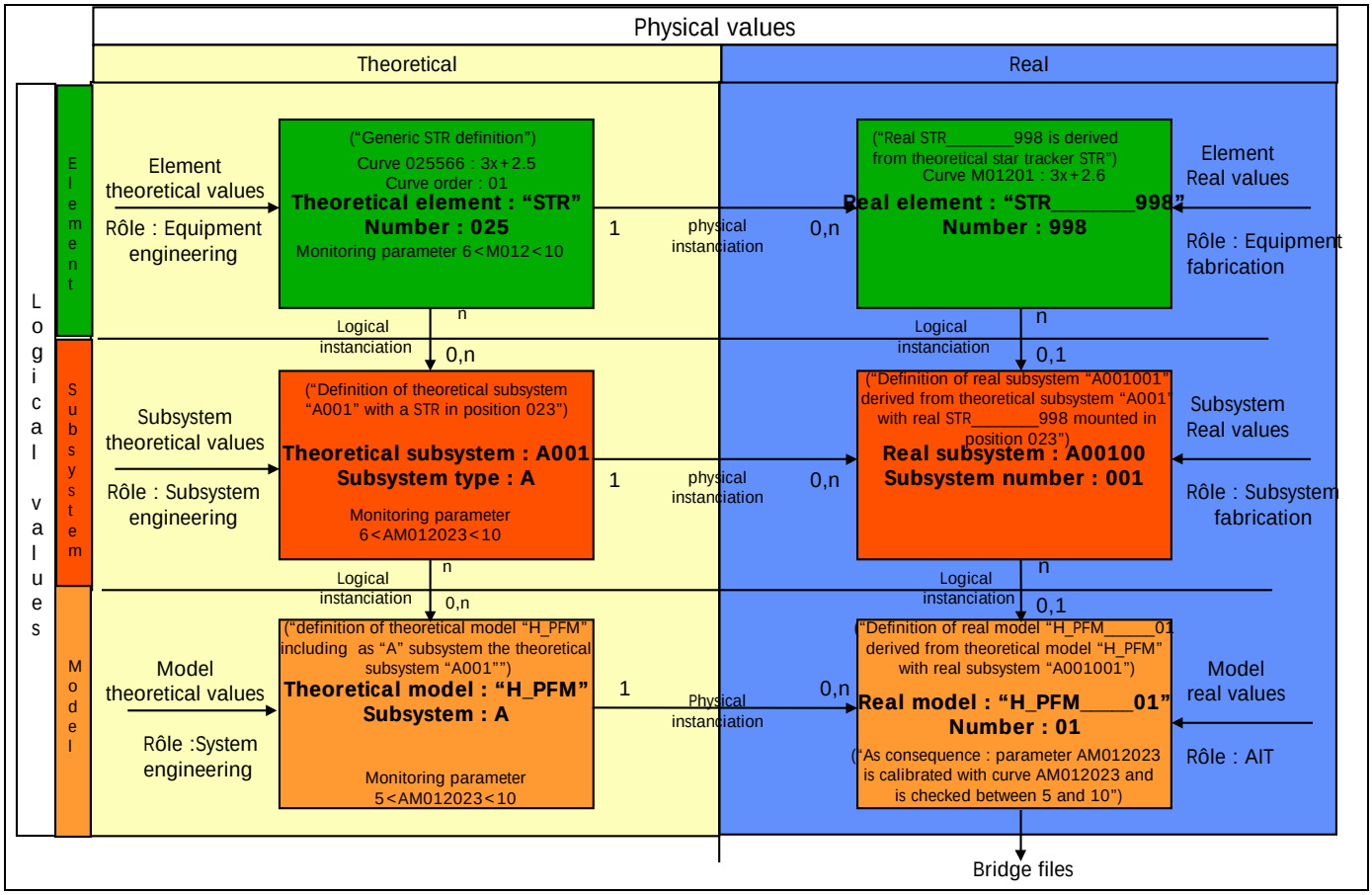

Figure 1-1 - Higher level data model

2. DOCUMENTS

In case of conflict between this document and other document (mainly RD1), this document has precedence.

2.1 Applicable documents

None

2.2 Reference documents

RD1	SCI-PT-RS-07360	Operations Interface Requirement Document (Annex 4)
RD2	S2K-MCS-ICD-0001-TOS-GCI	SCOS-2000 database import ICD
RD3	SCI-PT-ICD-07527	Packet structure interface control document (PSICD)
RD4	H-P-1-ASPI-SP-0082	Herschel / Planck System database specification

2.3 Acronyms

ACC	Attitude Control Computer
ACMS	Attitude Control and Measurement System
AD	Applicable Document
AIT	Assembly Integration Test
ASCII	American Standard …
ASPI	Alcatel Space
AVM	Avionics Validation Model
BC	Bus Controller (1553)
CCS	Central Checkout System
CDMS	Command and Data Management System
CDMU	Command and Data Management Unit
CLCW	Command Link control Word
CQM	Cryogenic Qualification Model
CT	Central Terminal (OBDH)
EGSE	Electrical Ground Support Equipment
EQM	Electrical Qualification Model
FDDB	Flight Dynamics Data Base
FE	Front End
FM	Flight Model

GSE	Ground Support Equipment
HPSDB	Herschel/Planck System DataBase
HTTP	HyperText Transfer Protocol
HTTPS	HyperText Transfert Protocol Secure
H/W	HardWare
H-xxx	Herschel-xxx
IE	Internet Explorer
I/O	Input/Output
MAP	Multiplexed Access Point
MCS	Mission Control System
MMI	Man Machine Interface
N/A	Not Applicable
OBCP	On Board Control Procedure
OBSW	On Board SoftWare
PAC	Packet Assembly Controller
PFM	Proto Flight Model
PLM	PayLoad Module
PSICD	Packet Structure Interface Control Document
PTI	Product Tree Identifier
P-xxx	Planck-xxx
RD	Reference Document
RT	Remote Terminal
SCOE	Specific CheckOut Equipment
SDB	System DataBase
SDE	Software Development Environment
SID	Structure IDentifier
SQL	Structured Query Language
SSL	Secure Socket Layer
SVF	Software Validation Facility
SVM	SerVice Module
S/W	SoftWare
TBC	To Be confirmed
TBD	To Be Defined
TBW	To Be Written

TC	TeleCommand
TM	TeleMetry
TWTA	Travelling Wave Tube Amplifier

2.4 Definition

"Acquisition parameter"

Parameter which is part of the "acquisition chain", so it is included in TM packet, 1553 acquisition message, or acquisition parameter.

"Archive area"

An "archive area" is an "area" where are archived the validated items which have been superseded. The items are not unique, they are differentiated by their validation date and per site.

"Area"

An "area" is a logical subset of the database. Three areas are defined per site : "working", "reference" and "archive".

"Attributes" (often called "data" in requirements)

"Attributes" are the different characteristics associated to a "granule" (for instance : attributes of a curve granule can be the short description, one point, …)

"Box"

A "box" is one of the following : "theoretical element", "real element", "theoretical subsystem", "real subsystem", "theoretical model" or "real model".

"Box object"

A "box object" is one "element" or "subsystem" or "model" of one "box".

"Category"

A category is a flag associated to each granule or element in a list which allows to allocate each granule or element in the list to one or several client (On-board software, AIT, operations). By default granules are allocated to all clients.

"Central site"

A "central site" is a unique site which is the one to be delivered to the customer for spacecraft's operation and which is used to load, via the "export / import" activity, the different mirror sites during spacecraft's development and tests.

"Command parameter"

Parameter which is part of the "command chain", so it is included in TC packet, 1553 command message, OBDH interrogation, or command parameter.

"Data"

Refer to "attributes".

"Derived parameter"

A "derived parameter" is a parameter which is defined as a mathematical expression which can include any other type of parameter.

"Direct definition"

Even if HPSDB is build in a way that the "real data" are generated from "theoretical data" by physical instantiation, it is still possible to enter directly "real data" via "direct definition" tool. This facility is kept to be sure to be able to enter any "real" data which cannot be linked with a "theoretical" one, however it is recommended to use this facility with moderation.

"Element"

An "element" is the smallest equipment which can be integrated on a spacecraft model, it can be a spacecraft box , a thermistance, a software, … (For instance : TWTA, CDMU software), and it can be "theoretical" or "real".

"Element definition"

An "element definition" is the activity consisting to enter data at “theoretical element” level or, in case of “direct definition” at “real element level”.

"Environment"

An "environment" is a set of consistent data relevant for a project.

"Export / Import"

"Export / Import" is the activity to transfer consistent subset of data from "reference area" of the "central site" to "reference area" of a "mirror site".

"External identifier"

"External identifier" is an identifier which is generated by an external (to HPSDB) tool. For some "internal identifiers" the tool provides an "external identifier" which is imported in HPSDB. The correspondence between the "internal identifier" and the “external identifier” is a "one to one correspondence". Typical example : parameter on-board software identifier. (opposite is "internal identifier").

"Generic items"

"Generic" items are the ones which are not attached to an element, subsystem or model but which can be referenced by an element, subsystem or model. Those items are not instanciated.

"Granule"

A “granule” is the smallest set of data manipulated (to be seen as a table record) internally by HPSDB. A granule can contain one or several attributes and is a subset of a user view. As soon as one attribute of a “granule” is created / modified / deleted / instantiated all its attributes are created / modified (considered as) / deleted / instantiated. For instance if a granule of a real element refer to a granule of the corresponding theoretical element and if an attribute of this granule is modified at real element level, then the full granule is considered to have been modified (a copy will be done at real element).

"Group"

A group is a set of items or box objects each one being identified by its own identifier. The "box object" groups are used to define a list of "box object" on which the user role applies.

"Identifier"

Each item, theoretical or real, has an unique "identifier". The “theoretical element” identifiers are input by the user. Except for curves identifiers, the “real element” identifiers are the same as the “theoretical element” identifiers. The “theoretical subsystem” identifiers are instantiated from the “theoretical element” identifiers with the subsystem identifier and the element position within the subsystem. Except

for curves identifiers, the “real subsystem” identifier are the same as the “theoretical subsystem” identifiers. The “theoretical model” identifiers are the same as the “theoretical subsystem” identifiers. Except for curves identifiers, the “real model” identifiers are the same as the “theoretical model” identifiers. For curve identifiers, the “real” (element or subsystem or model) identifiers are the same than the parameters they refer to associated with a calibration set order.

"Instantiation"

"Physical instantiation" (refer to "physical data") : when an item (element or model) is instantiated from a theoretical item to a real item then :

By default, the attributes of the real item are the same as the ones of the theoretical item,

Some attributes of the real item can be generated by concatenation of the ones of the theoretical item with a dedicated real item attribute (for instance : item identifier, …). The real item dedicated attribute used to perform the concatenation is the item number (real element number or real subsystem number or real model number).

Some attributes of the real item can supersede the corresponding attributes of the theoretical item (Curves identifier, curves contents, …).

"Logical instantiation" (refer to "logical data") when an element (theoretical or real) is allocated to a subsystem (theoretical or real) or when a subsystem (theoretical or real) is allocated to a model (theoretical or real) then :

By default, the attributes of the element / subsystem inside the subsystem /model are the same as the ones of the source element / subsystem (example : mass, …),

Some attributes of the element / subsystem inside the subsystem / model can be generated by concatenation of the ones of the source element / subsystem with a dedicated attribute associated to the subsystem / model (for instance : parameter identifier, short description, …). The dedicated attribute associated to the subsystem / model used to performed the concatenation is composed of the subsystem type to which is allocated the element and the element "position" inside the model / is composed of "null".

Some attributes of the element inside the subsystem / model can supersede the attributes of the source element / subsystem (limits, …).

"Intelligent equipment's"

An equipment is said intelligent if he can receive (send) TM (TC) packets via 1553 lower level protocol.

"Item" (Up to issue 01/00 was called "record")

An "item" is a set of granules and all their associated attributes (for ORACLE expert it can be seen as a view record) (for instance : parameter, TM packet, …). They are also called "user views".

"Internal identifier"

"Internal identifier" is an identifier managed by HPSDB (opposite is "external identifier").

"Log / Log download"

"Log / Log download" is the activity to send back to the "working area" of the "central site" items which have been validated at any "mirror site" level.

“Logical data”

“Logical data” are the attributes of “a theoretical element” or of a “real element” which are instantiated respectively at “theoretical subsystem” generation (TM packet identifier, TC packet

identifier, command sequence identifier, 1553 message identifier, OBDH interrogation identifier, parameter identifier, …) or at “real subsystem” generation (TM packet identifier, TC packet identifier, command sequence identifier, 1553 message identifier, OBDH interrogation identifier, parameter identifier, curve identifier …). “Logical data” are also the attributes of “a theoretical subsystem” or of a “real subsystem” which are instantiated respectively at “theoretical model” generation (TM packet identifier, TC packet identifier, command sequence identifier, 1553 message identifier, OBDH interrogation identifier, parameter identifier, …) or at “real model” generation (TM packet identifier, TC packet identifier, command sequence identifier, 1553 message identifier, OBDH interrogation identifier, parameter identifier, curve identifier …).

"Mirror site"

A "mirror site" is a "site" dedicated to a specific user, it is loaded from the "reference area" of the "central site", the "user" is free to performed modification on its "mirror site" but each validation is automatically reported to the "working area" of the "central site" via the "log / log download" activity.

"Model"

A "model" is a spacecraft model. It can be Herschel PFM, Planck SVM PFM, AVM, … . It can be "theoretical" or "real". It is built from a collection of elements and dedicated items.

"Model definition"

A "model definition" is the activity consisting to enter data at “theoretical model” level or, in case of “direct definition”, at “real model” level. Those model data are not associated to subsystem data, this concern the items which cannot be associated to a subsystem, for instance derived parameter calculated from parameters issued from different subsystems.

"Non-Intelligent equipment's"

An equipment is said non-intelligent if he cannot receive (send) TM (TC) packets via 1553 lower level protocol, in this case it exchanges its data with the bus controller via the 1553 messages.

“Owner”

An “owner” of an element /subsystem / model is the user or user group who has created the element / subsystem / model and who is allowed to modify / delete it.

“Physical data”

“Physical data” are the attributes of a “theoretical box” which are instantiated respectively at “real box” generation (Mass, calibration curve, …) or at “real model” generation (Calibration curve, …)

"Real"

The word "real" is used to represent an instantiation of corresponding theoretical element or model. Before Issue 2.2 of HPSDB specification, the word “real” was also used for attributes of "theoretical model" (Parameter, message 1553, …) or "real element" (curves, …) which have been "instantiated". (opposite is "theoretical").

"Real element"

A "real element" is a “physical instantiation” of a "theoretical element" (for instance : TWTA with serial number = 1234, CDMU software with version 2.0). By default it inherits of all items, granules and attributes of the theoretical element. However it can contain some granules ("real") which can supersede corresponding granules of the corresponding "theoretical element" (for instance : calibration curve). In addition it can also contain items without any correspondence at theoretical element level ("direct definition").

"Real model"

A "real model" is a “physical instantiation” of a "theoretical model" by associating part or all of the "theoretical subsystem" included in the corresponding (corresponding to "real model") "theoretical model" with one of the "real subsystem" (of same type of course) (for instance : Herschel PFM is built from ACMS with number 123 and with CDMS with number 124. By default it inherits of all items, granules and attributes of the theoretical model. However it can contain some granules ("real") which can supersede corresponding granules of the corresponding "theoretical model" (for instance : calibration curve). In addition it can also contain items without any correspondence at theoretical model level ("direct definition").

"Real subsystem"

A "real subsystem" is a “physical instantiation” of a "theoretical subsystem" by associating part or all of the "theoretical element" included in the corresponding (corresponding to "real subsystem") subsystem of the "theoretical subsystem" with one of the "real element" (of same type of course) (for instance : Herschel PFM is built from TWTA with serial number 1234 and with CDMU software version 2.0). By default it inherits of all items, granules and attributes of the theoretical subsystem. However it can contain some granules ("real") which can supersede corresponding granules of the corresponding "theoretical subsystem" (for instance : calibration curve). In addition it can also contain items without any correspondence at theoretical subsystem level ("direct definition").

"Reference area"

A "reference area" is an "area" which contains the current valid data. Each item inside the reference area is unique.

"Role"

Depending of its HPSDB login, a "role" will be allocated to each user, this "role" defines the rights access of the user to a one or several "box object" defined in a "group".

"Selector" (up to issue 1.2 was equivalent to "unique")

A "selector" is a parameter or location (TBC) which allows, in function of its value, to determine the contents of a part of an associated packet, message or structure.

"Subsystem"

A "subsystem" is a part of theoretical model in charge of a function (ACMS, CDMS, Power distribution, one experiment, …). It is composed of a list, possibly dependant of the theoretical model it belongs to (for instance : ACMS), of "theoretical elements" and associated real physical attributes (X, Y, Z, …) and logical attributes (bus addresses, …) allowing to instantiate some attributes of "theoretical element" (parameter identifier, command identifier, …). EGSE is considered as a subsystem.

"Subsystem definition"

A "subsystem definition" is the activity consisting to enter data at “theoretical subsystem” level or, in case of “direct definition”, at “real subsystem” level. Those subsystem data are not associated to element data, this concerns the items which cannot be associated to an element, for instance derived parameter calculated from parameters issued from different elements.

"System parameter"

A "system parameter" is a "parameter" which is set automatically by the test environment (CCS, …) and can be monitored or used as any other "parameter".

"Theoretical"

The word "theoretical" is used for items (Parameter, message 1553, curves, …) of “theoretical element” or “theoretical model” which have not been instantiated via “physical instantiation” (opposite is "real").

"Theoretical element" (From issue 01/01 up to issue 02/00 was called "Type of system element")

A "theoretical element" is a generic definition (list of generic or default attributes) of an element (for instance : TWTA, CDMU software).

"Theoretical model" (From issue 01/01 up to issue 02/00 was called system element model")

A "theoretical model" is a generic definition of a spacecraft model (for instance : Herschel PFM, AVM). A "theoretical model" contains a list of subsystems.

"Theoretical subsystem"

A "theoretical subsystem" is a generic definition of a spacecraft subsystem (for instance : Herschel ACMS, AVM PCS) in charge of a function. A "theoretical subsystem" contains a list of theoretical elements.

"User"

The word "user" is used to group all the users of HPDB : engineering team, tests team, operation teams, …

"User parameter"

A "user parameter" is a "parameter" which is set by the user (CCS user, MCS user, …) (for instance : test environment. This parameter can be used to calculate "derived parameter", which can be part of limits selection condition set).

"User view"

“User views” are identical to "items".

"Validation date"

Date and time at which the data base manager has validated an item from the archive area to the reference area.

"Working area"

A "working area" is an "area" where the user enters all its items. In this area the user items are not traced except for downloaded items.

3. GENERAL IDENTIFIER REQUIREMENTS

The identifiers are coded using the identifier subtypes defined in the following requirements.

NMCVT-0100-C - Identifier type - I

The identifier type shall be defined as any character string able to include one or several occurrences of the following identifier characters :

– [0-9] (decimal digits),

– [A-H] (characters from "A" to "H", but only upper case),

– [J-N] (characters from "J" to "N", but only upper case),

– [P] (character "P", but only upper case),

– [R-Z] (characters from "R" to "Z", but only upper case),

– [_] (underscore).

Note :

1 Characters "I", "O" and "Q" by default are excluded in order to minimise the likelihood of transcription errors when these are typed manually, however they can be used if specifically authorised.

NMCVT-0110-C - Identifier subtype - I

The identifier subtypes are identifier type with length and other potential limitations and shall be :

– IDCHnn[F/M] with

- "ID" for identifier type,
- "CH" for any authorised character,
- "nn" for the identifier length (01-99),
- "F" for fixed length
- “M” for maximum length

– IDE201F (function specifier for parameter - refer to RD1-A4.3) :

- Length = 1,
- Enumerated data :

. "B" Spare (at function level),

. "D" for synthetic (derived) parameters,

. "E" Spare (at function level),

. "F" Spare (at function level)

. "J" Spare (at function level),

. "M" for TM parameters,

. "N" Spare (at function level),

. "P" for command parameter,

. "U" for user parameter,

. "W" Spare (at function level),

. "Z" for system parameter.

– IDINnnF with

- "ID" for identifier type,
- "IN" for any decimal digit string,
- "nn" for the identifier length (01-99),
- "F" for fixed length

Note :

1 Some other limitations can be added in the corresponding requirements.

2 For IDE201F, the other allowed letter are for other items than parameter :

. A for alphanumeric display (refer NMCVT-6050-C),

. C for telecommand packet (refer to NMCVT-4540-C),

. G for graphical display (refer to NMCVT-6105-C),

. H for generic curve (refer to NMCVT-5355-C)

. I for…bidden,

. K for constant (refer to NMCVT-6310-C)

. L for scrolling display (refer to NMCVT-6128-C),

. O for…bidden,

. Q for…bidden,

. R for range set (refer to NMCVT-5250-C),

. S for sequence (refer to NMCVT-4657-C),

. T for parameter set (refer to NMCVT-5210-C),

. V for parameter value set (refer to NMCVT-5220-C),

. X for TC packet header (not supported),

. Y for TC packet header parameter (not supported).

NMCVT-0300-C - Subsystem pseudo definition - I

In case of "direct definition" at real subsystem level or in case of definition at theoretical subsystem level, then the reference to the "theoretical element" number and to the "position" number shall respectively be forced to the "subsystem pseudo theoretical element" number associated to the subsystem and to the "subsystem pseudo position" number associated to the subsystem (refer to NMCVT-7510-C for the "subsystem pseudo theoretical element" number allocation per subsystem and to NMCVT-7520-C for the "subsystem pseudo position" number allocated per subsystem).

Note :

1 *The "subsystem pseudo theoretical element" is referenced as "<subsystem identifier>_PSEUDO " in NMCVT-7510-C.*

2 *The "subsystem pseudo position" is referenced as "<subsystem identifier>_PSEUDO " in NMCVT-7520-C.*

NMCVT-0400-C - System pseudo definition - I

In case of "direct definition" at real model level or in case of definition at theoretical model level, then the reference to the "subsystem", the "theoretical element" number and to the "position" number shall respectively be forced to the "pseudo subsystem", the "system pseudo theoretical element" number and to the "system pseudo position" number (refer to NMCVT-7510-C for the "pseudo theoretical element number allocation) and to NMCVT-7520-C for the "pseudo position" number allocated).

Note :

1 *The "pseudo subsystem" is referenced as "PSEUDO " in NMCVT-7500-C.*

2 *The "system pseudo theoretical element" is referenced as "PSEUDO" in NMCVT-7510-C.*

3 *The "system pseudo position" is referenced as "PSEUDO" in NMCVT-7520-C.*

4. IDENTIFIER REQUIREMENTS

The following requirements are directly linked to RD4 requirements. In order to insure the traceability with [RD4] document, the NMCVT requirements numbering is the one of the HPSDB requirements (for instance NMCVT-1234-C requirement refer to HPSDB-1234-C requirement in RD4). In case several identifiers are defined inside the same HPSDB requirements, then NMVCVT requirement will be such that a letter will be added to the four decimal digits (for instance NMCVT-1234a-C and NMCVT-1234b-C refer both to HPSDB-1234-C requirement in RD4).

To facilitate the understanding of the examples, separator is used to separate the different fields, the separator is the character "/" and so it is not part of the identifier.

4.1 Configuration

NMCVT-4030-C - Theoretical element - I

"Theoretical element" identifier shall :

– Be of IDCH11M subtype,

– Be unique.

For instance :"01234567890", "CDMU", "CDMU_SW_h", "TWTA", "CCS"

Note : Letters "I", "O" and "Q" are allowed

NMCVT-4040-C - Theoretical element number - I

"Theoretical element" number identifier shall :

– Be of IDIN03F subtype (refer to NMCVT-7510-C),

– Be unique.

For instance :"012", "001", "987"

note : Used in some identifiers (when there is no length constraint) as three first characters (structure, …).

NMCVT-4050-C - Real element - I

"Real element" identifier shall :

– Be of IDCH14F subtype with the following limitations :

- From first up to eleventh character is "theoretical element" identifier (IDCH11F - refer to NMCVT-4030-C),
- From twelfth up to fourteenth character is "real element" number (IDIN03F - refer to NMCVT-4060-C),

– Be unique.

For instance :"01234567890/012", "CDMU_____/999", "CDMU_SW_H__/001", "TWTA_____/002", "CCS_____/003"

NMCVT-4060-C - Real element number - I

"Real element" number shall :

– Be of IDIN03F,

– Be unique for a "theoretical element".

For instance : "012", "999", "250"

Note : used for instantiation at real element generation (real element identifier, …)

NMCVT-4075-C - Deleted

NMCVT-4080-C - Theoretical Subsystem - I

"Theoretical subsystem" identifier shall :

– Be of IDCH04F subtype with the following limitations :

- First character is "type of subsystem" (IDCH01F - refer to NMCVT-4081a-C),
- From second up to fourth character is IDIN03F,

– Be unique.

For instance : "A001", "C002", "Y001", "H999"

NMCVT-4081a-C - Subsystem type - I

"Subsystem" type shall :

– Be of IDCH01F subtype (refer to NMCVT-7500-C).

For instance : "A", "C", "Y", "H"

Note : used for instantiation at subsystem level generation (parameter identifier, telecommand packet identifier, …) and to insure of subsystem type uniqueness at model level.

NMCVT-4081b-C - Subsystem type number - I

"Subsystem type number" shall :

– Be of IDIN02F subtype (refer to NMCVT-7500-C).

For instance : "01", "03", "25", "08"

NMCVT-4081c-C - Position - I

"Position" identifier shall :

– Be of IDIN03F subtype (refer to NMCVT-7520-C),

– Be unique for a " subsystem".

For instance : "001", "987", "012"

Notes :

1 used for instantiation at theoretical subsystem generation (parameter identifier, Telecommand packet identifier, …),

2 Due to SCOS limitation this position is also unique at model level (refer allocation in NMCVT-7520-C).

NMCVT-4081d-C - Position Code - I

"Position code" identifier shall :

– Be of IDCH01M subtype (refer to NMCVT-7520-C).

For instance : "N", "R", "1", "2", "3", "4"

Notes :

1 Used to instantiate the short description (refer NMCVT-7610-C)

NMCVT-4085-C - Real subsystem - I

"Real subsystem" identifier shall :

– Be of IDCH07F subtype with the following limitations :

- From first up to fourth character is "theoretical subsystem" identifier (IDCH04F - refer to NMCVT-4080-C),
- From fifth up to seventh character is "real subsystem" number (IDIN03F - refer to NMCVT-4086-C),

– Be unique.

For instance :"A001/001", " C002/999", "Y001/025", "H999/026"

NMCVT-4086-C - Real subsystem number - I

"Real subsystem" number shall :

– Be of IDIN03F

– Be unique for a "theoretical subsystem".

For instance : "001", "999", "025", "026"

Note : used for instantiation at real subsystem generation (real subsystem identifier, …)

NMCVT-4100-C - Theoretical model - I

"Theoretical model" identifier shall :

– Be of IDCH10M subtype

– Be unique.

For instance : "H_01234567", "P_PLM", "H_PFM", "X_AVM1"

Note : Characters "I", "O" and "Q" are allowed.

NMCVT-4111-C - Deleted

NMCVT-4113-C - Deleted

NMCVT-4114-C - Deleted

NMCVT-4117-C - Deleted

NMCVT-4120-C - Real model - I

"Real model" identifier shall :

– Be of IDCH12F subtype with the following limitations :

- From first up to tenth character is "theoretical model" identifier (IDCH10F - refer to NMCVT-4100-C),
- From eleventh up to twelfth character is "real model" number (IDIN02F - refer to NMCVT-4130-C),

– Be unique.

For instance : "H_01234567/01", "P_PLM_____/02", "H_PFM_____/99", "X_AVM1____/25"

NMCVT-4130-C - Real model number - I

"Real model" number shall :

– Be of IDIN02F subtype

– Be unique for a "theoretical model".

For instance : "01", "99", "25"

Note : could be used (it is not in the current status of HPSDB) for any instantiation at "real model" generation.

4.2 Telemetry packets

NMCVT-4305-C - TM packet standard template - I

"TM packet standard template" identifier shall :

– be of IDCH10F subtype with the following limitations :

- First character is "generic subsystem" type (IDCH01F- refer to NMVCT-4081a-C),
- Second character is "X",
- From third up to sixth character is "TMSD" (to refer to TM packet standard template),
- From seventh up to tenth character is IDIN04F,

– Be unique.

For instance : "G/X/TMSD/0123", "G/X/TMSD/9999", "G/X/TMSD/0250"

NMCVT-4320-C - TM packet PSICD template - I

"TM packet PSICD template" identifier shall :

– Be of IDCH12F subtype with the following limitations :

- First character is "generic subsystem" type (IDCH01F- refer to NMVCT-4081a-C),
- Second character is "X",
- From third up to sixth character is "TMPS" (to refer to TM packet PSICD template),
- From seventh up to ninth character is IDIN03F (Type),
- From tenth up to twelfth character is IDIN03F (Subtype),

– Be unique.

For instance : "G/X/TMPS/001/001", "G/X/TMPS/021/004", "G/X/TMPS/012/009"

NMCVT-4334-C - Generic TM packet SCOS archiving - I

"Generic TM packet SCOS archiving" identifier shall :

– Be of IDIN09F subtype with the following limitations :

- From first character up to second character is "generic subsystem" number (IDIN02F- refer to NMVCT-4081b-C),
- From third up to sixth character is IDIN04F,
- From seventh up to ninth character is "generic position" (IDIN03F - refer to NMCVT-4081c-C),

– Be unique.

For instance : "07/0001/000", "07/9999/000"

NMCVT-4336-C - Generic TPCF - I

"Generic TPCF" identifier shall :

– Be of IDCH12F subtype with the following limitations :

- First character is "generic subsystem" type (IDCH01F- refer to NMVCT-4081a-C),
- From second up to ninth character is IDCH08F,
- From tenth up to twelfth character is "generic position" (IDIN03F - refer to NMCVT-4081c-C),

– Be unique.

For instance : "G/01234567/000", "G/ABCDEFGH/000"

NMCVT-4337-C - Generic TM structure - I

"Generic TM structure" identifier shall :

– Be of IDCH14F subtype with the following limitations :

- From first character up to third character is "generic element" number (IDIN03F- refer to NMVCT-4040-C),
- From fourth up to seventh character is "TMST",
- From eighth up to eleventh character is IDIN04F,
- From eleventh up to fourteenth character is "generic position" (IDIN03F - refer to NMCVT-4081c-C),

– Be unique.

For instance : "000/TMST/0000/000", "000/TMST/9999/000", "

NMCVT-4340-C - Element TM packet - I

"Element TM packet" identifier shall :

– Be of IDCH11F subtype with the following limitations :

- From first up to third character is "element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "PKTM",
- Eighth character is "A",
- From ninth up to eleventh character is " IDIN03F,

– Be unique for an "element".

For instance : "001/PKTM/A/001", "987/PKTM/A/987", "025/PKTM/A/026"

NMCVT-4352-C - Element TM packet SCOS archiving - I

"element TM packet SCOS archiving" identifier shall :

– Be of IDIN04F subtype,

– Be unique for an "element".

For instance : "0123", "9999", "0250"

NMCVT-4353-C - Element TPCF - I

"Element TPCF" identifier shall :

– Be of IDCH08M subtype,

– Be unique for an "element".

For instance : "01234567", "ABCDEFGH", "A"

NMCVT-4360-C - Element TM structure - I

"Element TM structure" identifier shall :

– Be of IDCH11F subtype with the following limitations :

- From first up to third character is "element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "TMST" (to refer to TM structure),
- From eighth up to eleventh character is IDIN04F,

– Be unique for an "element".

For instance : "012/TMST/0123", "987/TMST/9999", "025/TMST/0250"

NMCVT-4374-C - Element TM packet group - I

"Element TM packet group" identifier shall :

– Be of IDCH11F subtype with the following limitations :

- From first up to third character is "element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "TMGR" (to refer to TM group),
- From eighth up to eleventh character is IDIN04F,

– Be unique for an "element".

For instance : "012/TMGR/0123", "987/TMGR/9999", "025/TMGR/0250"

NMCVT-4380-C - Subsystem TM packet - I

"Subsystem TM packet" identifier shall :

– Be of IDCH14F subtype with the following limitations :

- From first up to eleventh character is “element TM packet” identifier (IDCH11F - refer to NMCVT-4340-C),
- From twelfth up to fourteenth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "001PKTMA000/001", "987PKTMA999/987", "025PKTMA026/925"

NMCVT-4392-C - Subsystem TM packet SCOS archiving - I

"Subsystem TM packet SCOS archiving" identifier shall :

– Be of IDIN09F subtype with the following limitations :

- From first up to second character is "subsystem" number (IDIN02F - refer to NMCVT-4081b-C)
- From third up to sixth character is “element TM packet SCOS archiving” identifier (IDIN04F - refer to NMCVT-4352-C),
- From seventh up to ninth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "01/0123/001", "25/9999/987", "01/0250/025"

NMCVT-4400-C - Subsystem TM structure - I

"Subsystem TM structure" identifier shall :

– Be of IDCH14F subtype with the following limitations :

- From first up to eleventh character is "element TM structure" identifier (IDCH11F - refer to NMCVT-4360-C),
- From twelfth up to fourteenth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "012TMST0123/012", "987TMST9999/987", "025TMST0250/025"

NMCVT-4420-C - Subsystem TM packet group - I

"Subsystem TM packet group" identifier shall :

– Be of IDCH14F subtype with the following limitation :

- From first up to eleventh character is "element TM packet group" identifier (IDCH11F - refer to NMCVT-4374-C),
- From twelfth up to fourteenth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "012TMGR0123/012", "987TMGR9999/987", "025TMGR0250/025"

NMCVT-4438-C - Model TM item - I

"Model TM item" identifier shall :

– Be identical to corresponding "subsystem TM item" identifier.

For instance : "001PKTMA000/001", "01/0123/001", "012TMST0123/012", "012TMGR0123/012"

notes :

1. TM item can be :
   1.1. TM packet,
   1.2. TM packet SCOS archiving,
   1.3. TM structure,

1.4. TM packet group.

NMCVT-4440-C - Subsystem TM packet definition - I

"Subsystem TM packet definition" identifier shall :

– Be of IDCH14F subtype with the following limitations :

- From first to third character is "subsystem pseudo element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "TMPK",
- Eighth character is "A",
- from ninth up to eleventh character is IDIN03F,
- From twelfth up to fourteenth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "109/TMPK/A/000/109", "989/TMPK/A/999/989", "289/TMPK/A/026/289"

NMCVT-4445-C - Subsystem TM packet SCOS archiving definition - I

"Subsystem TM packet SCOS archiving definition" identifier shall :

– Be of IDIN09F subtype with the following limitations :

- From first up to second character is "subsystem" number (IDIN02F - refer to NMCVT-4081b-C)
- From third up to sixth character is IDIN04F,
- From seventh up to ninth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "01/0123/109", "25/9999/988", "01/0250/108"

NMCVT-4450-C - Subsystem TM structure definition - I

"Subsystem TM structure definition" identifier shall :

– Be of IDCH14F subtype with the following limitations :

- From first up to third character is "subsystem pseudo element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "TMST" (to refer to TM structure),
- From eighth up to eleventh character is IDIN04F,
- From twelfth up to fourteenth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "108/TMST/0123/108", "989/TMST/9999/989", "109/TMST/0250/109"

NMCVT-4455-C - Subsystem TM packet group definition - I

"Subsystem TM packet group definition" identifier shall :

– Be of IDCH14F subtype with the following limitations :

- From first up to third character is "subsystem pseudo element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "TMGR" (to refer to TM group),
- From eighth up to eleventh character is IDIN04F,
- From twelfth up to fourteenth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "108/TMGR/0123/108", "989/TMGR/9999/989", "109/TMGR/0250/109"

NMCVT-4461-C - Model TM item definition - I

"Model TM item definition" identifier shall :

– Be identical to corresponding "subsystem TM item definition" identifier replacing "subsystem pseudo element / position" by "system pseudo element / position" and "subsystem number" by "pseudo subsystem number,

– Be unique for a "model".

For instance : "990/PKTM/A/000/991", "26/0123/999", "999/TMST/9999/999", "995/TMGR/0250/996"

Notes :

1. TM item can be :
   1.1. TM packet,
   1.2. TM packet SCOS archiving,
   1.3. TM structure,
   1.4. TM packet group.

4.3 Telecommand packets

NMCVT-4505-C - TC packet header template - I

"TC packet header template" identifier shall :

– be of IDCH10F subtype with the following limitations :

- First character is "generic subsystem" identifier (IDCH01F- refer to NMVCT-4081a-C),
- Second character is "X" ,
- From third up to sixth character is "TCHD" (to refer to TC packet header template),
- From seventh up to tenth character is IDIN04F,

– Be unique.

For instance : "G/X/TCSD/0123", "G/X/TCSD/9999", "G/X/TCSD/0250"

NMCVT-4520-C - Deleted

NMCVT-4540-C - Element TC packet - I

"Element TC packet" identifier shall :

– Be of IDCH04F subtype with the following limitations :

- First character is "C",
- From second up to fourth character is IDCH03F,

– Be unique for an "element".

For instance : "C012", "CABC", "C999", "C025"

NMCVT-4560-C - Element TC structure - I

"Element TC structure" identifier shall :

– Be of IDCH11F subtype with the following limitations :

- From first up to third character is "element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "TCST" (to refer to TC structure),
- From eighth up to eleventh is IDIN04F,

– Be unique for an "element".

For instance : "012/TCST/0123", "987/TCST/9999", "025/TCST/0250"

NMCVT-4574-C - Element TC packet group - I

"Element TC packet group" identifier shall :

– Be of IDCH11F subtype with the following limitations :

- From first up to third character is "element" number" (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "TCGR" (to refer to TC group),
- From eighth up to eleventh character is IDIN04F,

– Be unique for an "element".

For instance : "012/TCGR/0123", "987/TCGR/9999", "025/TCGR/0250"

NMCVT-4580-C - Subsystem TC packet - I

"Subsystem TC packet" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is "subsystem" type (IDCH01F - refer to NMCVT-4081a-C),
- From second up to fifth character is "element TC packet" identifier (IDCH04F - refer to NMCVT-4540-C),
- From sixth up to eighth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/C012/012", "A/CABC/012", "Y/C999/987", "H/C025/190"

NMCVT-4600-C - Subsystem TC structure - I

"Subsystem TC structure" identifier shall :

– Be of IDCH14F subtype with the following limitations :

- From first up to eleventh character is "element TC structure" identifier (IDCH11F - refer to NMCVT-4560-C),
- From twelfth up to fourteenth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "012TCST0123/012", "987TCST9999/987", "025TCST0250/025"

NMCVT-4620-C - Subsystem TC packet group - I

"Subsystem TC packet group" identifier shall :

– Be of IDCH14F subtype with the following limitation :

- From first up to eleventh character is "element TC packet group" identifier (IDCH11F - refer to NMCVT-4574-C),
- From twelfth up to fourteenth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "012TCGR0123/012", "987TCGR9999/987", "025TCGR0250/025"

NMCVT-4638-C - Model TC item - I

"Model TC item" identifier shall :

– Be identical to corresponding "subsystem TC item" identifier.

For instance : "A/C012/012", "012TCST0123/012", "012TCGR0123/012"

Notes :

1. TC item can be :
   1.1. TC packet,
   1.2. TC structure,
   1.3. TC packet group.

NMCVT-4640-C - Subsystem TC packet definition - I

"Subsystem TC packet definition" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is "subsystem" type (IDCH01F - refer to NMCVT-4081a-C),
- Second character is "C",
- From third up to fifth character is IDCH03F,
- From sixth up to eighth character is subsystem "pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/C/012/109", "A/C/ABC/108", "Y/C/999/989", "H/C/025/238"

NMCVT-4650-C - Subsystem TC structure definition - I

"Subsystem TC structure definition" identifier shall :

– Be of IDCH14F subtype with the following limitations :

- From first up to third character is "subsystem pseudo element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "TCST" (to refer to TC structure),
- From eighth up to eleventh is IDIN04F,
- From twelfth character up to fourteenth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "108/TCST/0123/108", "988/TCST/9999/989", "238/TCST/0250/289"

NMCVT-4655-C - Subsystem TC packet group definition - I

"Subsystem TC packet group definition" identifier shall :

– Be of IDCH14F subtype with the following limitation :

- From first up to third character is "subsystem pseudo element" number" (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "TCGR" (to refer to TC group),
- From eighth up to eleventh character is IDIN04F,
- From twelfth up to fourteenth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "108/TCGR/0123/108", "988/TCGR/9999/989", "238/TCGR/0250/289"

NMCVT-4656-C - Model TC item definition - I

"Model TC item definition" identifier shall :

– Be identical to corresponding "subsystem item definition" identifier replacing "subsystem pseudo position / element" by "system pseudo position / element" and "subsystem identifier" by "pseudo subsystem identifier",

– Be unique for a "model".

For instance : "Z/C/012/990", "991/TCST/0123/992", "999/TCGR/0123/998"

Notes :

1. TC item can be :
   1.1. TC packet,
   1.2. TC structure,
   1.3. TC packet group.

4.4 Command sequences

NMCVT-4657-C - Element command sequence - I

"Element command sequence" identifier shall :

– Be of IDCH04F subtype with the following limitations :

- First character is "S",
- From second to fourth character is IDCH03F,

– Be unique for an "element".

For instance : "S/012", "S/ABC", S/999", "S/025"

NMCVT-4660-C - Deleted

NMCVT-4672-C - Subsystem command sequence - I

"Subsystem command sequence" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is "subsystem" type (IDCH01F- refer to NMVCT-4081a-C),
- From second up to fifth character is "element command sequence" identifier (IDCH04F- refer to NMCVT-4657-C),
- From sixth up to eighth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/S012/012", "A/SABC/012", "Y/S999/987", "H/S025/190"

NMCVT-4674-C - Model command sequence - I

"Model command sequence" identifier shall :

– Be identical to corresponding "subsystem command sequence" identifier.

For instance : "A/S012/012", "A/SABC/012", "Y/S999/987", "H/S025/190"

NMCVT-4675-C - Subsystem command sequence definition - I

" Subsystem command sequence definition" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is "subsystem" type (IDCH01F- refer to NMVCT-4081a-C),
- second character is "S",
- From third to sixth character is IDCH03F,
- From sixth up to eighth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/S/012/108", "A/S/ABC/109", "Y/S/999/987", "H/S/025/238"

NMCVT-4476-C - Model command sequence definition - I

"Model command sequence definition" identifier shall :

– Be identical to corresponding "subsystem command sequence definition" identifier replacing "subsystem pseudo position" by "system pseudo position" and "subsystem identifier" by "pseudo subsystem identifier",

– Be unique for a "model".

For instance : "Z/S012/990", "Z/SABC/999", "Z/S999/999", "Z/S025/995"

4.5 Command verification

HPSDB-4677-C - Element command verification stage - I

"Element command verification stage " identifier shall :

– Be of IDIN04F subtype,

Be unique for an "element".

For instance : “0000”, “0123”, 9999”, “0025”

NMCVT-4680-C - Deleted

HPSDB-4682-C - Subsystem command verification stage - I

"Subsystem command verification stage " identifier shall :

– Be of IDIN09F subtype with the following limitations :

- From first up to second character is “subsystem" number (IDIN02F - refer to NMCVT-4081b-C),
- From third up to sixth character is “element command verification stage ” identifier (IDIN04F- refer to NMCVT-4677-C),
- From seventh up to ninth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

Be unique for a " subsystem".

For instance : "01/0000/001”, “01/0123/012”, "26/9999/987”, “08/0025/190”

NMCVT-4684-C - Model command verification stage - I

"Model command verification stage" identifier shall :

– Be identical to corresponding "subsystem command verification stage" identifier.

For instance : "01/0000/001”, “01/0123/012”, "26/9999/987”, “08/0025/190”

NMCVT-4685-C - Deleted

HPSDB-4687-C - Subsystem command verification stage definition - I

" Subsystem command verification stage definition" identifier shall :

– Be of IDIN08F subtype with the following limitations :

- From first up to second character is “subsystem number” (IDIN02F - refer to NMCVT-4081b-C),
- From third up to sixth character is IDIN04F,
- From seventh up to ninth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "01/0000/108”, “01/0123/109”, "25/9999/989”, “08/0025/238”

NMCVT-4688-C - Model command verification stage definition - I

"Model command verification stage definition" identifier shall :

– Be identical to corresponding "subsystem command verification stage definition" identifier replacing "subsystem pseudo position" by "system pseudo position" and "subsystem number" by "pseudo subsystem number",

– Be unique for a "model".

For instance : "26/0000/990”, “26/0123/999”, "26/9999/998”, “26/0025/995”

NMCVT-4690-C - Deleted

4.6 1553 messages

NMCVT-4705-C - 1553 command word - I

"1553 message command word" identifier shall

– be of IDCH10F subtype with the following limitations :

- First character is " generic subsystem" identifier (IDCH01F- refer to NMVCT-4081a-C),
- Second character is "X",
- From third up to sixth character is "BUCW" (to refer to 1553 command word),
- From seventh up to eighth character is IDIN02F (RT address),
- From ninth up to tenth character is IDIN02F (Sub address),

– Be unique.

For instance : "G/X/BUCW/01/01", "G/X/BUCW/31/31", "G/X/BUCW/25/25"

NMCVT-4720-C - Element 1553 status word - I

"Element 1553 status word" identifier shall

– be of IDCH10F subtype with the following limitations :

- From first up to third character is "element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "BUSW" (to refer to 1553 status word),
- Eighth character is "1" for CDMU 1553 bus, "2" for ACC 1553 bus,
- From ninth up to tenth character is IDIN02F (sub address),

– Be unique for an "element".

For instance : "012/BUSW/1/01", "987/BUSW/2/31", "025/BUSW/2/25"

NMCVT-4725-C - Deleted

NMCVT-4730-C - Element 1553 message - I

"Element 1553 message" identifier shall :

– Be of IDCH11F subtype with the following limitations :

- From first up to third character is "element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "BUMG" (to refer to 1553 message),
- Eighth character is IDCH01F ("A" for Acquisition, "C" for Command),
- From ninth up to eleventh is IDIN03F,

– Be unique for an "element".

For instance : "012/BUMG/A/012", "987/BUMG/C/999", "025/BUMG/C/025"

NMCVT-4760-C - Element 1553 structure - I

"Element 1553 structure" identifier shall :

– Be of IDCH11F subtype with the following limitations :

- From first up to third character is "element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "BUST" (to refer to 1553 structure),
- Eighth character is IDCH01F ("A" for Acquisition, "C" for Command),
- From ninth up to eleventh is IDIN03F,

– Be unique for an "element".

For instance : "012/BUST/A/012", "987/BUST/C/999", "025/BUST/C/025"

NMCVT-4774-C - Element 1553 message group - I

"Element 1553 message group" identifier shall :

– Be of IDCH11F subtype with the following limitations :

- From first up to third character is "element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "BUGR" (to refer to 1553 group),
- Eighth character is IDCH01F ("A" for Acquisition, "C" for command),
- From ninth up to eleventh character is IDIN03F,

– Be unique for an "element".

For instance : "012/BUGR/A/012", "987/BUGR/C/999", "025/BUGR/C/025"

NMCVT-4777-C - Subsystem 1553 status word - I

"Subsystem 1553 status word" identifier shall :

– Be of IDCH13F subtype with the following limitations :

- From first up to tenth character is "element 1553 status word" identifier (IDCH10F - refer to NMCVT-4720-C)
- From eleventh up to thirteenth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "012BUSW101/012", "987BUSW231/987", "025BUSW225/025"

NMCVT-4780-C - Subsystem 1553 message - I

"Subsystem 1553 message" identifier shall :

– Be of IDCH14F subtype with the following limitations :

- From first up to eleventh character is "element 1553 message" identifier (IDCH11F - refer to NMCVT-4730-C)
- From twelfth up to fourteenth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "012BUMGA012/012", "987BUMGC999/987", "025MUMGC025/025"

NMCVT-4800-C - Subsystem 1553 structure - I

"Subsystem 1553 structure" identifier shall :

– Be of IDCH14F subtype with the following limitations :

- From first up to eleventh character is "element 1553 structure" identifier (IDCH11F - refer to NMCVT-4760-C),
- From twelfth character up to fourteenth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "012BUSTA012/012", "987BUSTC999/987", "025BUMGC025/025"

NMCVT-4820-C - Subsystem 1553 message group - I

"Subsystem 1553 message group" identifier shall :

– Be of IDCH14F subtype with the following limitation :

- From first up to eleventh character is "element 1553 message group" identifier (IDCH11F - refer to NMCVT-4774-C),
- From twelfth up to fourteenth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "012BUGRA012/012", "987BUGRC999/987", "025BUGRC025/025"

NMCVT-4838-C - Model 1553 message item - I

"Model 1553 message item" identifier shall :

– Be identical to corresponding "subsystem 1553 message item" identifier.

For instance : "012BUSW101/012", "012/BUMGA012/012", "012BUSTA012/012", "012BUGRA012/012"

Notes :

1. 1553 message item can be :
   1.1. 1553 status word,
   1.2. 1553 message,
   1.3. 1553 structure,
   1.4. 1553 message group.

NMCVT-4839-C - Subsystem 1553 status word definition - I

"Subsystem 1553 status word definition" identifier shall :

– Be of IDCH13F subtype with the following limitations :

- From first up to third character is "subsystem pseudo element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "BUSW" (to refer to 1553 status word),
- Eighth character is "1" for CDMU 1553 bus, "2" for ACC 1553 bus,
- From ninth up to tenth character is IDIN02F (sub address),
- From eleventh up to thirteenth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "108/BUSW/1/01/109", "988/BUSW/2/31/989", "238/BUSW/2/25/289"

NMCVT-4840-C - Subsystem 1553 message definition - I

"Subsystem 1553 message definition" identifier shall :

– Be of IDCH14F subtype with the following limitations :

- From first up to third character is "subsystem pseudo element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "BUMG" (to refer to 1553 message),
- Eighth character is IDCH01F ("A" for Acquisition, "C" for Command),
- From ninth up to eleventh is IDIN03F,
- From twelfth up to fourteenth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "108/BUMG/A/012/109", "988/BUMG/C/999/989", "238/BUMG/C/025/289"

NMCVT-4850-C - Subsystem 1553 structure definition - I

"Subsystem 1553 message structure definition" identifier shall :

– Be of IDCH14F subtype with the following limitations :

- From first up to third character is "subsystem pseudo element" number (IDIN03F - refer to NMCVT-4040-C),

- From fourth up to seventh character is "BUST" (to refer to 1553 structure),
- Eighth character is IDCH01F ("A" for Acquisition, "C" for Command),
- From ninth up to eleventh is IDIN03F,
- From twelfth up to fourteenth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "108/BUST/A/012/109", "988/BUST/C/999/989", "238/BUST/C/025/289"

NMCVT-4855-C - Subsystem 1553 message group definition - I

"Subsystem 1553 message group definition" identifier shall :

– Be of IDCH14F subtype with the following limitation :

- From first up to third character is "subsystem pseudo element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "BUGR" (to refer to 1553 group),
- Eighth character is IDCH01F ("A" for Acquisition, "C" for command),
- From ninth up to eleventh character is IDIN03F,
- From twelfth up to fourteenth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a " subsystem".

For instance : "108/BUGR/A/012/109", "988/BUGR/C/999/989", "238/BUGR/C/025/289"

NMCVT-4865-C - Model 1553 message item definition - I

"Model 1553 message item definition" identifier shall :

– Be identical to corresponding "subsystem 1553 message item definition" identifier replacing "subsystem pseudo position / element" by "system pseudo position / element",

– Be unique for a "model".

For instance : "990/BUSW/1/01/990", "999/BUMG/A/012/998", "997/BUST/C/012/996", "995/BUGR/C/012/994"

Notes :

1. 1553 message item can be :
   1.1. 1553 status word,
   1.2. 1553 message,
   1.3. 1553 structure,
   1.4. 1553 message group.

4.7 OBDH interfaces

NMCVT-4974-C - Element OBDH interrogation - I

"Element OBDH interrogation" identifier shall :

– Be of IDCH11F subtype with the following limitations :

- From first up to third character is "element" number (IDIN03F - refer to NMCVT-4040-C),
- from fourth up to seventh character is "DHIN" (to refer to OBDH interrogation),
- Eighth character is IDCH01F ("C" for Command),
- From ninth up to eleventh character IDIN03F,

– Be unique for an "element".

For instance : "012/DHIN/C/012", "987/DHIN/C/999", "025/DHIN/C/025"

NMCVT-4990-C - Element OBDH interrogation group - I

"Element OBDH interrogation group" identifier shall :

– Be of IDCH11F subtype with the following limitations :

- From first up to third character is "element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "DHGR" (to refer to OBDH group),
- Eighth character is IDCH01F ("C" for command),
- From ninth up to eleventh character is IDIN03F,

– Be unique for an "element".

For instance : "012/DHGR/C/012", "987/DHGR/C/999", "025/DHGR/C/025"

NMCVT-5020-C - Subsystem OBDH interrogation - I

"Subsystem OBDH interrogation" identifier shall :

– Be of IDIN14F subtype with the following limitations :

- From first up to eleventh character is "element OBDH interrogation" identifier (IDCH11F - refer to NMCVT-4974-C),
- From twelfth up to fourteenth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "012DHINC012/012", "987DHINC999/987", "025DHINC025/025"

NMCVT-5044-C - Subsystem OBDH interrogation group - I

"subsystem OBDH interrogation group" identifier shall :

– Be of IDCH14F subtype with the following limitation :

- From first up to eleventh character is "element OBDH interrogation group" identifier (IDCH11F - refer to NMCVT-4990-C),
- From twelfth up to fourteenth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C"),

– Be unique for a "subsystem".

For instance : "012DHGRC012/012", "987DHGRC999/987", "025DHGRC025/025"

NMCVT-5048-C - Model OBDH interrogation item - I

"Model OBDH interrogation item" identifier shall :

– Be identical to corresponding "subsystem OBDH interrogation item" identifier.

For instance : "012DHINC012/012", "012DHGRC012/012"

Notes :

1. OBDH interrogation item can be :
   1.1. OBDH interrogation,
   1.2. OBDH interrogation group.

NMCVT-5060-C - subsystem OBDH interrogation definition - I

"Subsystem OBDH interrogation definition" identifier shall :

– Be of IDIN14F subtype with the following limitations :

- From first up to third character is "subsystem pseudo element" number (IDIN03F - refer to NMCVT-4040-C),
- from fourth up to seventh character is "DHIN" (to refer to OBDH interrogation),
- Eighth character is IDCH01F ("C" for Command),
- From ninth up to eleventh character IDIN03F,
- From eighth up to tenth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "108/DHIN/C/012/109", "988/DHIN/C/999/989", "238/DHIN/C/025/289"

NMCVT-5080-C - Subsystem OBDH interrogation group definition - I

"Subsystem OBDH interrogation group definition" identifier shall :

– Be of IDCH14F subtype with the following limitation :

- From first up to third character is "subsystem pseudo element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "DHGR" (to refer to OBDH group),
- Eighth character is IDCH01F ("C" for command),
- From ninth up to eleventh character is IDIN03F,
- From twelfth up to fourteenth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "108/DHGR/C/012/109", "988/DHGR/C/999/989", "238/DHGR/C/025/289"

NMCVT-5088-C - Model OBDH interrogation item definition - I

"Model OBDH interrogation item definition" identifier shall :

– Be identical to corresponding "subsystem OBDH interrogation item definition" identifier replacing "subsystem pseudo position / element" by "system pseudo position / element",

– Be unique for a "model".

For instance : "990/DHIN/C/012/999", "991/DHGR/C/012/998"

Notes :

1. OBDH interrogation item can be :
   1.1. OBDH interrogation,
   1.2. OBDH interrogation group.

4.8 Parameters

Notes : formal parameters are not concerned by the following requirements as far as they are unique for a command sequence.

NMCVT-5104-C - Generic parameter - I

"Generic parameter" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is "generic subsystem" identifier (IDCH01F - refer NMCVT-4081a-C),
- Second character is IDE201F,
- From third up to fifth character is IDCH03F,
- From sixth up to eighth character is "generic position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique.

For instance : "G/M/012/000", "G/P/ABC/000", "G/D/999/000", "G/U/025/000"

Note : Due to SCOS-2000 limitations, "VAR" and "GVAR" as first 3 or four characters of parameters are prohibited

NMCVT-5110-C - Element parameter - I

"Element parameter" identifier shall :

– Be of IDCH04F subtype with the following limitations :

- First character is IDE201F,
- From second up to fourth character is IDCH03F,

– Be unique for an "element".

For instance : "M/012", "P/ABC", "D/999", "U/025"

Note : Due to SCOS-2000 limitations, "VAR" and "GVAR" as first 3 or four characters of parameters are prohibited

NMCVT-5120-C - Calibration set order - I

"Calibration set order" shall :

- Be of IDIN02F subtype,

– Be unique for a "parameter".

For instance : "01", "99", "25"

Notes :

Used to instantiate real curve identifier.

NMCVT-5126-C - Element parameter group - I

"Element parameter group" identifier shall :

– Be of IDCH11F subtype with the following limitations :

- From first up to third character is "element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "PAGR" (to refer to parameter group),
- From eighth up to eleventh character is IDIN04F,

– Be unique for an "element".

For instance : "012/PAGR/0012", "987/PAGR/9999", "025/PAGR/0025"

NMCVT-5130-C - Subsystem parameter - I

"Subsystem parameter" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is subsystem identifier (IDCH01F - refer to NMCVT-4081a-C),
- From second up to fifth character is "element parameter" identifier (IDCH04F - refer to NMCVT-5110-C),

- From sixth character up to eighth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/M012/012", "A/PABC/012", "Y/D999/987", "H/U025/190"

Note : Due to SCOS-2000 limitations, "VAR" and "GVAR" as first 3 or four characters of parameters are prohibited

NMCVT-5150-C - Subsystem parameter definition - I

"Subsystem parameter definition" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is "subsystem" type (IDCH01F - refer to NMCVT-4081a-C),
- Second character is IDE201F,
- From third up to fifth character is IDCH03F,
- From sixth up to eighth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/M/012/109", "A/P/ABC/108", "Y/D/999/989", "Y/U/025/988"

Note : Due to SCOS2000, "VAR" and "GVAR" as first 3 or four characters of real parameters are prohibited

NMCVT-5160-C - Subsystem parameter group - I

"Subsystem parameter group" identifier shall :

– Be of IDCH14F subtype with the following limitation :

- From first up to eleventh character is "element parameter group" identifier (IDCH11F - refer to NMCVT-5126-C),
- From twelfth up to fourteenth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "012PAGR0012/012", "987PAGR9999/987", "025PAGR0025/025"

NMCVT-5175-C - Subsystem parameter group definition - I

"Subsystem parameter group definition" identifier shall :

– Be of IDCH14F subtype with the following limitation :

- From first up to third character is "subsystem pseudo element" number (IDIN03F - refer to NMCVT-4040-C),
- From fourth up to seventh character is "PAGR" (to refer to parameter group),

- From eighth up to eleventh character is IDIN04F,
- From twelfth up to fourteenth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "109/PAGR/0123/109", "989/PAGR/9999/989", "238/PAGR/0025/289"

NMCVT-5210-C - Element parameter set - I

"Element parameter set" identifier shall :

– Be of IDCH04F subtype with the following limitations :

- First character is "T",
- From second up to fourth character is IDCH03F,

– Be unique for an "element".

For instance : "T/012", "T/ABC", "T/999", "T/025"

NMCVT-5215-C - Subsystem parameter set - I

"Subsystem parameter set" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is "subsystem" type (IDCH01F - refer to NMCVT-4081a-C),
- From second up to fifth character is "element parameter set" identifier (IDCH04F - refer to NMCVT-5210-C),
- From sixth character up to eighth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/T012/012", "Y/TABC/987", "Y/T999/987", "H/T025/190"

NMCVT-5217-C - Subsystem parameter set definition - I

"Subsystem parameter set definition" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is "subsystem" type (IDCH01F - refer to NMCVT-4081a-C),
- Second character is "T",
- From third up to fifth character is IDCH03F,
- From sixth up to eighth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/T/012/109", "A/T/ABC/108", "Y/T/999/989", "Y/T/025/988"

NMCVT-5220-C - Element parameter value set - I

"Element parameter value set" identifier shall :

– Be of IDCH04F subtype with the following limitations :

- First character is "V",
- From second up to fourth character is IDCH03F,

– Be unique for an "element".

For instance : "V/012", "V/ABC", "V/999", "V/025"

NMCVT-5225-C - Subsystem parameter value set - I

"Subsystem parameter value set" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is subsystem identifier (IDCH01F - refer to NMCVT-4081a-C),
- From second up to fifth character is "element parameter value set" identifier (IDCH04F - refer to NMCVT-5220-C),
- From sixth character up to eighth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/V012/012", "Y/VABC/987", "Y/V999/987", "H/V025/190"

NMCVT-5227-C - Subsystem parameter value set definition - I

"Subsystem parameter value set definition" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is "subsystem" type (IDCH01F - refer to NMCVT-4081a-C),
- Second character is "V",
- From third up to fifth character is IDCH03F,
- From sixth up to eighth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/V/012/109", "A/V/ABC/108", "Y/V/999/989", "Y/V/025/988"

NMCVT-5250-C - Element parameter range set - I

"Element parameter range set" identifier shall :

– Be of IDCH04F subtype with the following limitations :

- First character is "R",

- From second up to fourth character is IDCH03F,

– Be unique for an "element".

For instance : "R/012", "R/ABC", "R/999", "R/025"

NMCVT-5255-C - Subsystem parameter range set - I

"Subsystem parameter range set" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is subsystem identifier (IDCH01F - refer to NMCVT-4081a-C),
- From second up to fifth character is "element parameter range set" identifier (IDCH04F - refer to NMCVT-5250-C),
- From sixth character up to eighth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/R012/012", "Y/RABC/987", "Y/R999/987", "H/R025/190"

NMCVT-5257-C - Subsystem parameter range set definition - I

"Subsystem parameter set definition" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is "subsystem" type (IDCH01F - refer to NMCVT-4081a-C),
- Second character is "R",
- From third up to fifth character is IDCH03F,
- From sixth up to eighth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/R/012/109", "A/R/ABC/108", "Y/R/999/989", "Y/R/025/988

NMCVT-5270-C - Model parameter item - I

"Model parameter item" identifier shall :

– Be identical to corresponding "subsystem parameter item" identifier.

For instance : "A/M012/012", "012PAGR0012/012", "A/T012/012", "A/V012/012", "A/R012/012"

Notes :

1. Parameter item can be :
   1.1. Parameter,
   1.2. Parameter group,
   1.3. Parameter set,
   1.4. Parameter value set,

1.5. Parameter range set.

NMCVT-5280-C - Model parameter item definition - I
"Model parameter item definition" identifier shall : – Be identical to corresponding "subsystem parameter item definition" identifier replacing "subsystem pseudo position / element" by "system pseudo position / element" and "subsystem identifier" by "pseudo subsystem identifier", – Be unique for a "model".

For instance : "Z/M012/990", "990PAGR0012/999", "Z/T012/995", "Z/V012/994", "Z/R012/993"

Notes :

1. Parameter item can be :
   1.1. Parameter,
   1.2. Parameter group,
   1.3. Parameter set,
   1.4. Parameter value set,
   1.5. Parameter range set.

4.9 Curves

NMCVT-5355-C - Generic curve - I
"Generic curve" identifier shall : – Be of IDCH08F subtype with the following limitations : ▪ First character is "generic subsystem" identifier (IDCH01F - refer to NMCVT-4081a-C), ▪ Second character is "H", ▪ From third up to fifth character is IDCH03F, ▪ From sixth up to eighth character is "generic position identifier" (IDIN03F - refer to NMCVT-4081c-C), – Be unique.

For instance : "G/H/012/000", "G/H/ABC/000", "G/H/999/0000", "G/H/025/000"

NMCVT-5360-C - Theoretical element curve - I
"Theoretical element curve" identifier shall : – Be of IDIN06F subtype with the following limitations : ▪ From first up to third character is "theoretical element" number (IDIN03F - refer to requirement NMCVT-4040-C), ▪ From fourth to sixth character is IDIN03F,

– Be unique for a "theoretical element".

For instance : "012/012", "998/998", "025/025", "107/863", "108/762", "109/453", "999/326"

NMCVT-5365-C - Real element curve - I

"Real element curve" identifier shall :

– Be of IDCH06F subtype with the following limitations :

- From first up to fourth character is "element parameter" identifier (IDCH04F - refer to requirement NMCVT-5110-C),
- From fifth to sixth character is calibration set order (IDIN02F - refer to NMCVT-5120-C),

– Be unique for a "real element".

For instance : "M012/01", "PABC/50", "D999/99", "U025/25"

Notes :

In case of "default calibration curve" the "real element curve" identifier is IDCH04F (equals to element parameter identifier)

NMCVT-5367-C - Theoretical subsystem curve - I

"Theoretical subsystem curve" identifier shall :

– Be of IDIN06F subtype with the following limitations :

- From first up to third character is "subsystem pseudo element" number (IDIN03F - refer to requirement NMCVT-4040-C),
- From fourth to sixth character is IDIN03F,

– Be unique for a "theoretical subsystem".

For instance : "109/012", "989/999", "988/500"

NMCVT-5368-C - Real subsystem curve - I

"Real subsystem curve" identifier shall :

– Be of IDCH10F subtype with the following limitations :

- From first up to eighth character is "subsystem parameter" identifier (IDCH08F - refer to requirement NMCVT-5130-C),
- From ninth to tenth character is calibration set order (IDIN02F - refer to NMCVT-5120-C),

– Be unique for a "real subsystem".

For instance : "AM012012/01", "APABC012/50", "YD999987/99", "HU025190/25"

Notes :

In case of "default calibration curve" the "real subsystem curve" identifier is IDCH08F (equals to subsystem parameter identifier)

NMCVT-5370-C - Theoretical model curve - I

"Theoretical model curve" identifier shall :

– Be of IDIN06F subtype with the following limitations :

- From first up to third character is "system pseudo element" number (IDIN03F - refer to requirement NMCVT-4040-C),
- From fourth to sixth character is IDIN03F,

– Be unique for a "theoretical model".

For instance : "990/012", "999/999", "995/500"

NMCVT-5375-C - Real model curve - I

"Real model curve" identifier shall :

– Be of IDCH10F subtype with the following limitations :

- From first up to eighth character is "model parameter" identifier (IDCH08F - refer to requirement NMCVT-5130-C),
- From ninth to tenth character is calibration set order (IDIN02F - refer to NMCVT-5120-C),

– Be unique for a "real model".

For instance : "AM012012/01", "APABC012/50", "YD999987/99", "HU025190/25

Notes :

In case of "default calibration curve" the "real model curve" identifier is IDCH08F (equals to model parameter identifier)

4.10 Displays

NMCVT-6050-C - Element alphanumeric display - I

" Element alphanumeric display" identifier shall :

Be of IDCH04F subtype with the following limitations :

- First character is "A",
- From second up to fourth character is IDCH03F,

– Be unique for an "element ".

For instance : "A/012", "A/ABC", "A/999", "A/025"

NMCVT-6100-C - deleted

NMCVT-6105-C - Element Graphic display - I

" Element graphic display" identifier shall :

– Be of IDCH04F subtype with the following limitations :

- First character is "G",
- From second up to fourth character is IDCH03F,

– Be unique for an "element ".

For instance : "G/012", "G/ABC", "G/999", "G/025"

NMCVT-6110-C - deleted

NMCVT-6120-C - deleted

NMCVT-6125-C - deleted

NMCVT-6128-C - Element scrolling display - I

" Element scrolling display" identifier shall :

– Be of IDCH04F subtype with the following limitations :

- First character is "L",
- From second up to fourth character is IDCH03F,

– Be unique for an "element ".

For instance : "L/012", "L/ABC", "L/999", "L/025"

NMCVT-6130-C - deleted

NMCVT-6150-C - Subsystem display - I

"Subsystem display" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is “subsystem” identifier (IDCH01F- refer to NMVCT-4081a-C),
- From second to fifth character is element display identifier (IDCH04F - refer to NMCVT-6050-C / NMCVT-6105-C / NMCVT-6128-C),
- From sixth up to eighth character is "position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/A012/012", "A/AABC/012", "Y/G999/987", "H/L025/190"

NMCVT-6156-C - Model display - I

"Model display" identifier shall :

– Be identical to corresponding "subsystem display" identifier.

For instance : "A/A012/012", "A/AABC/012", "Y/G999/987", "H/L025/190"

NMCVT-6160-C - Subsystem alphanumeric display definition - I

"Subsystem alphanumeric display definition" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is subsystem identifier (IDCH01F- refer to NMVCT-4081a-C),
- Second character is "A",
- From third up to fifth character is IDCH03F,
- From sixth up to eighth character is "subsystem pseudo position" number (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/A/012/109", "A/A/ABC/108", "Y/A/999/989", "Y/A/025/988"

NMCVT-6170-C - Subsystem graphic display definition - I

"Subsystem graphic display definition " identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is subsystem identifier (IDCH01F- refer to NMVCT-4081a-C),
- Second character is "G",
- From third up to fifth character is IDCH03F,
- From sixth up to eighth character is "subsystem pseudo position" number (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/G/012/109", "A/G/ABC/108", "Y/G/999/989", "Y/G/025/988"

NMCVT-6200-C - Subsystem scrolling display definition - I

"Subsystem scrolling display definition " identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is subsystem identifier (IDCH01F- refer to NMVCT-4081a-C),
- Second character is "L",
- From third up to fifth character is IDCH03F,

- From sixth up to eighth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

– Be unique for a "subsystem".

For instance : "A/L/012/109", "A/L/ABC/108", "Y/L/999/989", "Y/L/025/988"

NMCVT-6210-C - Model display item definition - I

"Model display item definition " identifier shall :

– Be identical to corresponding "subsystem display item definition" identifier replacing "subsystem pseudo position" by "system pseudo position and "subsystem identifier" by "pseudo subsystem identifier",

– Be unique for a "model".

For instance : "Z/A/012/990", "Z/G/ABC/999", "Z/L/999/995"

Notes :

1. *Display item can be :*
   - *1.1. Alphanumeric display,*
   - *1.2. Graphic display,*
   - *1.3. Scrolling display.*

4.11 Constants

NMCVT-6305-C - Generic constant - I

" Generic constant " identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is "generic subsystem" identifier (IDCH01F - refer NMCVT-4081a-C),
- Second character is "K",
- From third up to fifth character is IDCH03F,
- From Sixth up to eighth character is "generic position" identifier,

– Be unique.

For instance : "G/K/012/000", "G/K/999/000"

NMCVT-6310-C - Element constant - I

" Element constant" identifier shall :

– Be of IDCH04F subtype with the following limitations :

- First character is "K",
- From second up to third character is IDCH03F,

– Be unique for an "element".

For instance : "K/012", "K/ABC", "K/999"

NMCVT-6330-C - Subsystem constant - I

" Subsystem constant " identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is subsystem identifier (IDCH01F- refer to NMVCT-4081a-C),
- From second up to fifth character is "element constant" identifier (IDCH04F - refer to NMCVT-6310-C),
- From sixth up to eighth character is "position" identifier (IDIN03F- refer to NMCVT-4081c-C),

– Be unique for a " subsystem ".

For instance : "A/K012/012", "Y/KABC/988", "H/K999/190"

NMCVT-6341-C - Model constant - I

" Model constant " identifier shall :

– Be identical to corresponding "subsystem constant" identifier.

For instance : "A/K012/012", "Y/KABC/988", "H/K999/190"

NMCVT-6350-C - Subsystem constant definition - I

" Subsystem constant definition" identifier shall :

– Be of IDCH08F subtype with the following limitations :

- First character is "subsystem" type (IDCH01F- refer to NMVCT-4081a-C),
- Second character is "K",
- From third up to fifth character is IDCH03F,
- From sixth up to eighth character is "subsystem pseudo position" identifier (IDIN03F - refer to NMCVT-4081c-C),

Be unique for a "subsystem".

For instance : "A/K/012/109", "Y/K/ABC/989", "H/K/999/238"

NMCVT-6360-C - Model constant definition - I

" Model constant definition" identifier shall :

– Be identical to corresponding "subsystem constant definition" identifier replacing "subsystem pseudo position" by "system pseudo position" and "subsystem identifier" by "pseudo subsystem identifier",

Be unique for a "model".

For instance : "Z/K/012/990", "Z/K/ABC/999", "Z/K/999/995"

5. DETAIL ALLOCATION REQUIREMENTS

5.1 Models

NMCVT-7500-C - Model identifiers allocation - I

The model identifiers allocation shall be as follows :

TBW

5.2 Subsystems

NMCVT-7500-C - Subsystem identifiers allocation - I

The subsystem identifiers allocation shall be as follows :

Subsystem type	Subsystem number	Herschel	Planck
– "A"	01	ACMS	ACMS
– "B"	02	ACC software	ACC software
– "C"	03	RCS	RCS
– "D"	04	CDMS	CDMS
– "E"	05	CDMS software	CDMS software
– "F"	06	Frame structure	Frame structure
– "G"	07	Generic	Generic
– "H"	08	HIFI	HFI
– "J"	10	System	System
– "K"	11	Kryo	Spare
– "L"	12	Spare	LFI
– "M"	13	Radiation monitor	Radiation monitor
– "N"	14	Spare	Spare
– "P"	16	PACS	Spare
– "R"	18	Radio frequency (TT&C)	Radio frequency (TT&C)
– "S"	19	SPIRE	Sorption cooler
– "T"	20	Thermal control	Thermal control
– "U"	21	Spare	Spare
– "V"	22	Visual monitor camera	Visual monitor camera
– "W"	23	Electrical power	Electrical power

–	"X"	24	STR software	Spare
–	"Y"	25	EGSE	EGSE
–	"Z"	26	Pseudo	Pseudo

5.3 Theoretical elements

The following list has to be completed.

NMCVT-7510-C - Theoretical element allocation - I

The theoretical element identifier and corresponding theoretical element number allocation shall be as follows (As far as it is not sure that the element described hereafter will be in fact composed of several theoretical elements (mainly for instruments) the allocated number are given as range - in addition, for information, is provided the number of real corresponding equipment per spacecraft model and the associated subsystem) :

Theoretical element identifier	Theoretical element number	Number of elements Herschel	Planck	Subsystem
– Generic	[000]			G
– "ACC"	[001-009]	1	1	A
– "GYRO"	[010-019]	1	0	A
– "STR"	[020-029]	2	0	A
– "RWE"	[030-039]	1	0	A
– "RW"	[040-049]	4	0	A
– "SAS-H"	[050-059]	2	0	A
– "FSS"	[060-069]	2	0	A
– "QRS"	[070-079]	2	2	A
– "STR_MAPPER"	[080-089]	0	1	A
– "AAD"	[090-099]	0	1	A
– "SAS-P"	[100-107]	0	3	A
– "A_PSEUDO"	[108,109]	1	1	A
– "ACC_SW_H"	[110-117]	1	0	B
– "ACC-SW_P"	[120-127]	0	1	B
– "B_PSEUDO"	[118, 119]U [128,129]	1	1	B
– "RCS_H"	[130-137]	1	0	C

–	"RCS_P"	[140-147]	0	1	C
–	"C_PSEUDO"	[138, 139] U [148, 149]	1	1	C
–	"CDMU"	[150-157]	1	1	D
–	"D_PSEUDO"	[158, 159]	1	1	D
–	"CDMU_SW_H"	[160-167]	1	0	E
–	"CDMU_SW_P"	[170-177]	0	1	E
–	"E_PSEUDO"	[168, 169] U [178, 179]	1	1	E
–	"FRAME_STR"	[180-187]	TBD	TBD	F
–	"F_PSEUDO"	[188, 189]	1	1	F
–	"HIFI"	[190-237]	1	0	H
–	"HFI"	[240-287]	0	1	H
–	"H_PSEUDO"	[238, 239] U [288, 289]	1	1	H
–	"SYSTEM"	[290-297]	TBD	TBD	J
–	"J_PSEUDO"	[298, 299]	1	1	J
–	"CRYO_ELEC"	[300-309]	1	0	K
–	"CRYOSTAT"	[310-317]	1	0	K
–	"K_PSEUDO"	[318, 319]	1	1	K
–	"LFI"	[320-367]	0	1	L
–	"L_PSEUDO"	[368, 369]	1	1	L
–	"RAD_MON"	[370-377]	TBD	TBD	M
–	"M_PSEUDO"	[378, 379]	1	1	M
–	"PACS"	[380-427]	1	0	P
–	"P_PSEUDO"	[428, 429]	1	1	P
–	"LGA"	[430-439]	2	3	R
–	"MGA"	[440-449]	1	1	R
–	"RFDN"	[450-459]	1	1	R
–	"TWTA"	[460-469]	2	2	R
–	"TRSP"	[470-477]	2	2	R
–	"R_PSEUDO"	[478, 479]	1	1	R
–	"SPIRE"	[480-527]	1	0	S

– "SRP_COOLER"	[530-557]	0	1	S	
– "S_PSEUDO"	[528, 529] U [558, 559]	1	1	S	
– "THERMAL_H"	[600-747]	1	0	T	
– "THERMAL_P"	[750-897]	0	1	T	
– "T_PSEUDO"	[748, 749] [898, 899]	1	1	T	
– "VISUAL_MON"	[560-562]	TBD	TBD	V	
– "V_PSEUDO"	[563, 564]	1	1	V	
– "PCDU"	[565-569]	1	1	W	
– "BATTERY"	[570-574]	1	1	W	
– "SOLAR_AR_H"	[575-579]	1	1	W	
– "SOLAR_AR_P"	[580-582]	0	1	W	
– "W_PSEUDO"	[583, 584]	1	1	W	
– "STR_SW"	[585-587]	1	0	X	
– "X_PSEUDO"	[588, 589]	1	1	X	
– EGSE	[900-987]	1	1	Y	
– "Y_PSEUDO"	[988, 989]	1	1	R	
– "PSEUDO"	[990-999]	1	1	Z	

5.4 Position

NMCVT-7520-C - Position allocation - I

The "position" identifier of different "theoretical elements" belonging to a "theoretical model" shall be allocated as follows (A range, closed to the one provided for "theoretical element" number is provided for each element and for the same reason - In addition, this table provides the 1553 bus and OBDH address) :

Theoretical element identifier	Position Number	Position Code	CDMS Bus 1553 address	CDMS Bus OBDH address	ACC Bus 1553 address	ACC Bus OBD address
– "Generic"	[000-000]					
– "ACC"	[001-009]					
– "GYRO"	[010-019]					

–	"STR1"	[020-029]	N
–	"STR2"	[020-029]	R
–	"RWE"	[030-039]	
–	"RW1"	[040-049]	1
–	"RW2"	[040-049]	2
–	"RW3"	[040-049]	3
–	"RW4"	[040-049]	4
–	"SAS-H1"	[050-059]	N
–	"SAS-H2"	[050-059]	R
–	"FSS1"	[060-069]	N
–	"FSS2"	[060-069]	R
–	"QRS1"	[070-079]	N
–	"QRS2"	[070-079]	R
–	"STR_MAPPER"	[080-089]	
–	"AAD"	[090-099]	
–	"SAS-P1"	[100-107]	1
–	"SAS-P2"	[100-107]	2
–	"SAS-P3"	[100-107]	3
–	"A_PSEUDO"	[108, 109]	
–	"ACC_SW "	[110-117]	U
		[120-127]	
–	"B_PSEUDO_P"	[118, 119]	U
		[128, 129]	
–	"RCS"	[130-137]	U
		[140-147]	
–	"C_PSEUDO"	[138, 139]	U
		[148, 149]	
–	"CDMU"	[150-157]	
–	"D_PSEUDO"	[158, 159]	
–	"CDMU_SW"	[160-167]	U
		[170-177]	
–	"E_PSEUDO"	[168, 169]	U
		[178, 179]	
–	"FRAME_STR"	[180-187]	

–	"F_PSEUDO"	[188, 189]	
–	"HIFI"	[190-237]	
–	"HFI"	[240-287]	
–	"H_PSEUDO"	[238, 239] U	
		[288, 289]	
–	"SYSTEM"	[290-297]	
–	"J_PSEUDO"	[298, 299]	
–	"CRYO_ELEC"	[300-309]	
–	"CRYOSTAT"	[310-317]	
–	"K_PSEUDO "	[318, 319]	
–	"LFI"	[320-367]	
–	"L_PSEUDO"	[368, 369]	
–	"RAD_MON"	[370-377]	
–	"M_PSEUDO"	[378, 379]	
–	"PACS"	[380-427]	
–	"P_PSEUDO"	[428, 429]	
–	"LGA1"	[430-439]	1
–	"LGA2"	[430-439]	2
–	"LGA3"	[430-439]	3
–	"MGA"	[440-449]	
–	"RFDN"	[450-459]	
–	"TWTA1"	[460-469]	N
–	"TWTA2"	[460-469]	R
–	"TRSP1"	[470-477]	N
–	"TRSP2"	[470-477]	R
–	"R_PSEUDO"	[478, 479]	
–	"SPIRE"	[480-527]	
–	"SRP_COOLER"	[530-557]	
–	"S_PSEUDO"	[528, 529] U	
		[558, 559]	
–	"THERMAL"	[600-747] U	
		[750-897]	
–	"T_PSEUDO"	[748, 749] U	
		[898, 899]	

- "VISUAL_MON" [560-562]
- "V_PSEUDO [563, 564]
- "PCDU" [565-569]
- "BATTERY" [570-574]
- "SOLAR_AR" [575-582]
- "W_PSEUDO" [583, 584]
- "STR_SW" [585-587]
- "X_PSEUDO" [588, 589]
- "EGSE" [900-987]
- "Y_PSEUDO" [988, 989]
- "PSEUDO" [990-999]

6. ATTRIBUTES REQUIREMENTS

6.1 Application ID

NMCVT-7500-C - Application identifier allocation - I
The application identifiers allocation shall be as follows per subsystem : According to RD3 annexe 3.

Notes :

Warning : Problem with nominal and redundant equipment ON in parallel

NMCVT-7600-C - Description - I
The descriptions (long and short) shall : – Consist of 26 letters of upper and lower case english alphabet A-Z, digits 0-9, 'space', plus and minus signs, – Not contain a quote, double quote, accent, comma, colon, full-stop, and semi-colon, – Not contain any special or non-printing character and in particular the under score unless it is absolutely necessary to define the data item, – Be as readable as possible, – Have an understandable abbreviations and acronyms, – Not be left empty for short description.

6.1.1 Short description

NMCVT-7610-C - Short description - I
At subsystem level the short description shall be instantiated with the position code (IDCH01F - refer NMCVT-4081d-C)

6.1.2 Long description

NMCVT-7620-C - Long description - I
TBW

6.2 Software parameter identifier

NMCVT-7800-C - Software parameter identifier - I
"Software parameter" identifier shall : – Be of IDIN05F (limited to 65535) subtype with the following limitations :

- Generated by software SDE and reloaded inside HPSDB.
- Be unique for a "software (CDMU or ACC) and real model".

7. ANNEX 1 : COMPLIANCE MATRIX WITH RD1

RD1	Naming convention	Compliance	Remarks
General Conventions There shall be logically distinct databases for Herschel and Planck – this implies that the same naming conventions may be may be used for both Herschel and Planck. The naming convention will not provide the means for the logical distinction.		C	Supported by RD4
A4.1 Field width constraints See AD-8.		PC	To be detailed during HPSDB development
A4.2 Descriptions Many tables in AD-8 include a descriptive field. This should be human-readable and gives further information on the record. The description provided for any data item should: • Consist of 26 letters of upper and lower case English alphabet A-Z, digits 0-9 and 'space',and the plus and minus signs; • Not contain a quote, double-quote, accent, comma, colon, full-stop or semi-colon; • Not contain any special or non-printing character and in particular the under score unless it is absolutely necessary to define the data item; • Be as readable as possible; • Have understandable abbreviations and acronyms;	NMCVT-7600-C	C	

RD1	Naming convention	Compliance	Remarks
• Not be left empty.			
A4.3 Subsystem identifiers Subsystem identifiers are used to uniquely identify the relevant spacecraft subsystem for the data item in question. For the Herschel-Planck project the following identifiers have been defined (TBC when system definition complete):	NMCVT-4081a-C	C	The following subsystems have been added : "C" for RCS "K" for Herschel CRYO "Y" for EGSE "Z" for pseudo (due to HPSDB)
A + B for Attitude and Orbit Control Subsystem (AOCS)	NMCVT-7500-C	PC	A : compliant B : not compliant
D + E for On-Board Data Handling Subsystem (CDMS)	NMCVT-7500-C	PC	D : compliant E : Not compliant
J for system	NMCVT-7500-C	C	To be clarified
W for Electrical Power Subsystem (PS or EPSS)	NMCVT-7500-C	C	
R for Radio Frequency Subsystem (TT&C)	NMCVT-7500-C	C	
T for Thermal Control Subsystem (TCS)	NMCVT-7500-C	C	
M for Radiation Monitor	NMCVT-7500-C	C	To be clarified
V for Visual Monitor Camera	NMCVT-7500-C	C	
F for Frame- structure etc.	NMCVT-7500-C	C	To be clarified
A for ACC Software Parameters	NMCVT-7500-C	NC	Set to B instead of A
C for CDMS Software Parameters	NMCVT-7500-C	NC	Set to E instead of C

RD1	Naming convention	Compliance	Remarks
X for Star Tracker Software Parameters	NMCVT-7500-C	C	
H for HIFI	NMCVT-7500-C	C	
P for PACS	NMCVT-7500-C	C	
S for SPIRE	NMCVT-7500-C	C	
H for HFI	NMCVT-7500-C	C	
L for LFI	NMCVT-7500-C	C	
S for Sorption Cooler Subsystem	NMCVT-7500-C	C	
The Char 8 fields shall have the following format: The first character shall be a sub-system identifier selected from the above list as appropriate. The second character shall be a function specifier, as indicated in the following table. The remaining characters shall consist of the digits 0-9 inclusive and the 23 uppercase letters of the English alphabet (A-Z without the letters O, Q, or I, to minimise the likelihood of transcription errors when these are typed manually).		PC	The plus, minus, underscore, dash and dot characters are also allowed (NMCVT-0100-C) according to RD2 chapter 3.3 third bullet.
Parameter identifier (ground) : PCF_NAME Char 8 M, C,D (C for Constants D for Synthetic Parameters)	NMCVT-5130-C	PC	➢ Other function specifier have been added (NMCVT-0110-C - Subtype IDE201F) : ➢ "Z" for system parameters ➢ "U" for user parameters ➢ The "type of data" is the sixth character instead of

RD1	Naming convention	Compliance	Remarks
			eighth.
Parameter identifier (on-board) PCF_PID N10	NMCVT-7800-C	C	Warning : in RD3 (PSICD) the software parameter is coded on 16 bits so cannot be grater than 65535 (N5).
Monitoring numerical curve identifier CAF_NUMBR N4	NMCVT-5370-C	NC	CHR(10) instead of N4 Change request : H-P-ASPI-CR-0199
monitoring texte curve identifier TXF_NUMBR N4	NMCVT-5370-C	NC	CHR(10) instead of N4 Change request : H-P-ASPI-CR-0199
monitor plynomial curve identifier MCF_IDENT N4	NMCVT-5370-C	NC	CHR(10) instead of N4 Change request : H-P-ASPI-CR-0199
Monitor packet identifier (fixed length) PID_SPID N10	NMCVT-4380-C	C	
Monitor packet identifier (variable length) PID_TPSD N10	NMCVT-4380-C	C	To be checked
Alphanumeric display DPF_NUMBE Char8 A (AM - *Displays created to feed data for a Mimic shall use Function Specifier AM)*	NMCVT-6100-C	C	
Grphic display identifier GPF_NUMBE Char8 G	NMCVT-6110-C	C	
Scrolling display identifier SCF_NUMBE Char8 L	NMCVT-6130-C	C	

RD1	Naming convention	Compliance	Remarks
TC packet header TCP_ID Char8 X	NMCVT-4505-C	C	To be confirmed
TC packet header parameter PCPC_PNAME Char8 Y	NMCVT-5130-C	PC	Defined as generic parameters
TC packet identifier CCF_CNAME Char8 C	NMCVT-4580-C	C	
Command parameter CPC_PNAME Char8 P	NMCVT-5130-C	C	
Command sequence CSF_NAME Char8 S	NMCVT-4660-C	C	
Command sequence formal parameter CSP_FPNAME Char8 F		NC	Formal parameter identifier is IDCH08F unique at command sequence level.
Verification stage identifier CVS_ID N5		NC	N(9) instead of N(4) Change request : H-P-ASPI-CR-0201
Command parameter set PST_NAME Char8 T		C	
Command parameter set value PSV_PVSID		C	

RD1	Naming convention	Compliance	Remarks
Char8 V			
Command numerical curve CCA_NUMBR N4	NMCVT-5370-C	NC	CHR(10) instead of N4 Change request : H-P-ASPI-CR-0199
Command textual curve PAF_NUMBR N4	NMCVT-5370-C	NC	CHR(10) instead of N4 Change request : H-P-ASPI-CR-0199
Command sequence parameter range check PRF_NUMBR N4		NC	CHR(8) instead of N4 Change request : H-P-ASPI-CR-0200
N10 => Ten digit number N such that 0 < N < 2^{32} -1		NC	Non-duplication guaranty by HPSDB instantiations
N5 => Five digit number 00000 - 32767		NC	Non-duplication guaranty by HPSDB instantiations
N4 => Four digit number 0001 - 9999		NC	Non-duplication guaranty by HPSDB instantiations
Char8 => Eight Character alphanumeric identifier intended for Human use.	NMCVT-0110-C	C	
N4 : 1 000 - 1 999 HIFI HFI		NC	Non-duplication guaranty by HPSDB instantiations
N4 : 2 000 - 2 999 PACS LFI		NC	Non-duplication guaranty by HPSDB instantiations
N4 : 3 000 - 3 999 SPIRE Sorption Cooler Subsystem		NC	Non-duplication guaranty by HPSDB instantiations

RD1	Naming convention	Compliance	Remarks
N4 : 4 000 - 8 999 Alcatel		NC	Non-duplication guaranty by HPSDB instantiations
N4 : 9 000 - 9 999 ESOC		NC	Non-duplication guaranty by HPSDB instantiations
N5 : 00 001- 02 999 HIFI HFI		NC	Non-duplication guaranty by HPSDB instantiations
N5 : 03 000- 05 999 PACS LFI		NC	Non-duplication guaranty by HPSDB instantiations
N5 : 06 000 - 08 999 SPIRE Sorption Cooler Subsystem		NC	Non-duplication guaranty by HPSDB instantiations
N5 : 09 000 - 19 999 Alcatel		NC	Non-duplication guaranty by HPSDB instantiations
N5 : 20 000 - 29 999 ESOC		NC	Non-duplication guaranty by HPSDB instantiations
N10 : 10 000 000 -19 999 999 HIFI HFI		NC	Non-duplication guaranty by HPSDB instantiations
N10 : 20 000 000 -29 999 999 PACS LFI		NC	Non-duplication guaranty by HPSDB instantiations
N10 : 30 000 000 -39 999 999 SPIRE Sorption Cooler Subsystem		NC	Non-duplication guaranty by HPSDB instantiations
40 000 000 - 79 999 999 Alcatel		NC	Non-duplication guaranty by HPSDB instantiations
80 000 000 - 99 999 999 ESOC		NC	Non-duplication guaranty by HPSDB instantiations

RD1	Naming convention	Compliance	Remarks
Experience indicates that it can also be very useful to indicate the type of data being communicated by a telemetry item or the destination of a command. For example T for a temperature, V for a voltage, C for a current, D for a discrete hardware measurement, W for a software parameter if a separate identifier has not been made available. This type information should be the final character of the Designator, when supplied.	NMCVT-0110-C	NC	Impossible to comply with this request (not mandatory) and some identifier length too short (TC packet, Parameters, …)
A4.4 Telemetry Packet Packet identifiers shall be allocated on the basis of the source of the packet. Example 10000003 could be defined by HIFI	NMCVT-4380-C	NC	Non-duplication guaranty by HPSDB instantiations
A4.5 Command Master Function Number: Example: AC0001 (Command number for the AOCS subsystem)	NMCVT-4580-C	C	Warning : the example looks wrong : 6 characters.
A4.5.1 Command Parameter Reference Number, (PREF): Example: AP0001 (Command parameter for the AOCS subsystem) Please note that the command parameter name is not used to link it to any given command packet because they can be used in many different packets and therefore are not unique across them. They are unique within their own table and therefore no two-command parameters can share the same name.	NMCVT-5130-C	C	Warning : the example looks wrong : 6 characters and no "type of parameter".
A4.5.2 Command Sequences: Command sequences shall be identified the subsystem identifier and the letter S for sequence. For example AS123 is a sequence for the AOCS subsystem. Example: AS001svt	NMCVT-4660-C	C	Warning : the example looks wrong : 6 characters.
A4.6 Telemetry Parameters A telemetry parameter shall be the relevant subsystem code letter and followed by the data type.	NMCVT-5130-C	C	Warning : the example looks wrong : 6 characters.

RD1	Naming convention	Compliance	Remarks
Example: AM1234			
A4.6.1 Derived or Synthetic Parameters: Derived parameters shall be identified by the subsystem identifier followed by the letter D (Derived or Synthetic) followed by a four-digit unique number derived parameter type designator T and a four-digit unique number and.) Where T can be: S – Saved (Supported by the system) H - Hard coded (Needs C++ complier.) D – Dynamic (Most common. Supported directly by the editor application) Example: ADD0004 (Leading zeros are required) ADS1234 All synthetic parameters must be defined in the telemetry database.	NMCVT-5130-C	PC	Warning : requirement unclear, but potential modification of naming convention for "T" code" ??? Warning : the example looks wrong : 6 characters.
A4.6.3 Constant Parameters: Constant parameters shall be identified by the subsystem identifier followed by the letter C (Constant) followed by a four-digit unique number. (i.e. AC1234)	NMCVT-5130-C	C	Warning : the example looks wrong : 6 characters.
A4.7.1 Alphanumeric Displays (AND): AND naming shall use the subsystem identifier followed by the letter A (e.g. AA1234)	NMCVT-6100-C	C	Warning : the example looks wrong : 6 characters.
A4.7.2 Graphical Displays (GRD): GRD naming shall use the subsystem identifier followed by the letter G (e.g. AG1234)	NMCVT-6110-C	C	Warning : the example looks wrong : 6 characters.
A4.7.3 Mimic Alphanumeric Displays: Mimic alphanumeric displays (One Mimic alphanumeric display must be defined for each Mimic Diagram created) use the subsystem identifier followed by AM (e.g. AAM1234).	NMCVT-6120-C	C	Warning : the example looks wrong : 6 characters.
A4.7.4 Mimic Display Diagrams (MDD): MDD naming shall use the subsystem identifier followed by the	NMCVT-6125-C	C	Warning : the example looks

RD1	Naming convention	Compliance	Remarks
function specifier AD (i.e. AAD1234)			wrong : 6 characters.
A4.7.5 Scrolling Log Displays (SLD): SLD naming shall use the subsystem identifier followed by the function specifier L followed by a four-digit number (i.e. AL1234)	NMCVT-6130-C	C	Warning : the example looks wrong : 6 characters.
A4.8 Convention to be used for Procedures: Subsystem Identifier TBC:. AOC for AOCS DHS for CDMS EPS for Power TCS for TCS TTC for RF part of command, telemetry and tracking RM for Radiation Monitor VMC for Visual Monitoring Camera OBS for On-Board Software procedures SYS for Systems Procedures MPP for Mission Planning Procedures PAC for PACS HIF for HIFI SPI for SPIRE HFI for HFI LFI for LFI SOR for Sorption Cooler System		NC	Not covered by HPSDB tool
A4.8.1 Flight Control Procedures, FCP: FCP's shall be referenced using a four-digit number preceded by **FCP**_ and the relevant subsystem identifier followed by 'underscore' (i.e. **FCP_AOC_123**4) Note: leading zeros are required (i.e. **FCP_AOC_000**1)		NC	Not covered by HPSDB tool
A4.8.2 Contingency Recovery Procedures: CRP's shall be referenced using four digit number preceded by CRP_		NC	Not covered by HPSDB tool

RD1	Naming convention	Compliance	Remarks
and the relevant subsystem identifier followed by underscore' (i.e. CRP_AOC_1234) Note: leading zeros are required (i.e. CRP_AOC_0001)			
A4.8.3 Timelines: The character string TDoyFfNn shall identify Timelines as follows: Where: T = Timeline Doy = Day of Year Ff = File number Nn = Version number		NC	Not covered by HPSDB tool To be clarified.

8. SUMMARY

8.1 Configuration

NMVCT-4030-C

Theoretical element															
IDCH11M															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4040-C

Theoretical element number															
IDIN03F															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4050-C

real element															
Theoretical element											Real element number				
IDCH11F											IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4060-C

Real element number															
IDIN03F															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4080-C

Theoretical subsystem															
S/S type															
IDCH01F	IDIN03F														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4081a-C

S/S type															
IDCH01F															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4081b-C

S/S type number															
IDIN02F															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4081c-C

Position															
IDIN03F															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4081d-C

Pos code															
IDCH01M															

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4085-C

Real subsystem															
Theoretical subsystem				Real subsystem number											
IDCH01F	IDIN03F			IDIN03F											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4086-C

Real subsystem number															
IDIN03F															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4100-C

Theoretical model															
IDCH10M															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4120-C

real model															
Theoretical model										real model number					
IDCH10F										IDIN02F					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4130-C

Real model nb.															
IDIN02F															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

8.2 Telemetry packets

NMVCT-4305-C

TM packet standard template															
Gen. S/S															
G	X	T	M	S	D	IDIN04F									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4320-C

TM packet PSICD template															
Gen. S/S						type			subtype						
G	X	T	M	P	S	IDIN03F			IDIN03F						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4334-C

Generic TM packet SCOS archiving															
Generic s/s number						Generic position									
0	7	IDIN04F				0	0	0							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4336-C

Generic TPCF															
Gen. s/s									Generic position						
G	IDCH08F								0	0	0				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4337-C

Generic TM structure															
Generic element number											Generic position				
0	0	0	T	M	S	T	IDIN04F				0	0	0		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4340-C

Element TM packet															
Element number															
IDIN03F			P	K	T	M	A	IDIN03F							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4352-C

Element TM packet SCOS archiving															
IDIN04F															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4353-C

Element TPCF
IDCH08M

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4360-C

Element TM structure															
Element number															
IDIN03F			T	M	S	T	IDIN04F								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4374-C

Element TM packet group															
Element number															
IDIN03F			T	M	G	R	IDIN04F								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4380-C

Subsystem TM packet															
Element TM packet											Position				
Element number															
IDIN03F			P	K	T	M	A	IDIN03F			IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4392-C

Subsystem TM packet SCOS archiving									
Subsystem number	Element TM packet SCOS archiving	Position							
IDIN02F	IDIN04F	IDIN03F							

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4400-C

Subsystem TM structure															
Element TM structure											Position				
Element number															
IDIN03F			T	M	S	T	IDIN04F				IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4420-C

Subsystem TM packet group															
Element TM packet group											Position				
Element number															
IDIN03F			T	M	G	R	IDIN04F				IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4438-C

Model TM item

As corresponding subsystem TM item.

NMVCT-4440-C

Subsystem TM packet definition															
S/S pseudo element number											Subsystem pseudo position				
IDIN03F			T	M	P	K	A	IDIN03F			IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4445-C

Subsystem TM packet SCOS archiving definition															
Subsystem number						subsystem pseudo position									
IDIN02F			IDIN04F			IDIN03F									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4450-C

Subsystem TM structure definition															
S/S pseudo element number											Subsystem pseudo position				
IDIN03F			T	M	S	T	IDIN04F				IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4455-C

Subsystem TM packet group definition															
S/S pseudo element number											Subsystem pseudo position				
IDIN03F			T	M	G	R	IDIN04F				IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4461-C

Model TM item definition

As corresponding subsystem TM item definition replacing :

. "subsystem pseudo " per "system pseudo "

. "subsystem" per "pseudo subsystem"

8.3 Telecommand packets

NMVCT-4505-C

TC packet header template															
Gen. S/S															
G	X	T	C	H	D	IDIN04F									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4540-C

Element TC packet															
Function															
C	IDCH03F														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4560-C

Element TC structure															
Element number															
IDIN03F			T	C	S	T	IDIN04F								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4574-C

Element TC packet group															
Element number															
IDIN03F			T	C	G	R	IDIN04F								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4580-C

Subsystem TC packet															
S/S	Element TC packet				Position										
	Function														
IDCH01F	C	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4600-C

Subsystem TC structure															
Element TC structure											Position				
Element number															
IDIN03F			T	C	S	T	IDIN04F				IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4620-C

Subsystem TC packet group															
Element TC packet group											Position				
Element number															
IDIN03F			T	C	G	R	IDIN04F				IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4638-C

Model TC item

As corresponding subsystem TC item.

NMVCT-4640-C

Subsystem TC packet definition															
S/S	Function				S/S pseudo position										
IDCH01F	C	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4650-C

Subsystem TC structure definition															
S/S pseudo element number							S/S pseudo position								
IDIN03F			T	C	S	T	IDIN04F				IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4655-C

Model TC packet group definition															
S/S pseudo element number							S/S pseudo position								
IDIN03F			T	C	G	R	IDIN04F				IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4656-C

Model TC item definition

As corresponding subsystem TC item definition replacing :

. "subsystem pseudo " per "system pseudo "

. "subsystem" per "pseudo subsystem"

8.4 Command sequences

NMVCT-4657-C

Element command sequence															
Function															
S	IDCH03F														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4672-C

Subsystem command sequence															
S/S	Element command sequence				Position										
	Function														
IDCH01F	S	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4674-C

Model command sequence

As corresponding subsystem command sequence.

NMVCT-4675-C

Subsystem command sequence definition															
S/S	Function				S/S pseudo position										
IDCH01F	S	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4676-C

Model command sequence definition

As corresponding subsystem command sequence definition replacing :

. "subsystem pseudo " per "system pseudo "

. "subsystem" per "pseudo subsystem"

8.5 Command verification

NMVCT-4677-C

Element command verification stage															
IDIN04F															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4682-C

Subsystem command verification stage															
Subsystem number		Element command verification stage				position									
IDIN02F		IDIN04F				IDIN03F									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4684-C

Model command verification stage

As corresponding subsystem command verification stage.

NMVCT-4687-C

Subsystem command verification stage definition															
Subsystem number						S/S pseudo position									

IDIN02F		IDIN04F				IDIN03F									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4688-C

Model command verification stage definition

As corresponding subsystem command verification stage definition replacing :

. "subsystem pseudo " per "system pseudo "

. "subsystem" per "pseudo subsystem"

8.6 1553 messages

NMVCT-4705-C

1553 comand word															
Gen. S/S						RT address		Sub-address							
G	X	B	U	C	W	IDIN02F		IDIN02F							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4720-C

Element 1553 status word															
Element number						1/2	Sub-address								
IDIN03F			B	U	S	W	IDIN01F	IDIN02F							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4730-C

Element 1553 message					

Element number							A/C								
IDIN03F			B	U	M	G	IDCH01F	IDIN03F							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4760-C

Element 1553 structure															
Element number							A/C								
IDIN03F			B	U	S	T	IDCH01F	IDIN03F							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4774-C

Element 1553 message group															
Element number							A/C								
IDIN03F			B	U	G	R	IDCH01F	IDIN03F							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4777-C

Subsystem 1553 status word															
Element 1553 status word										Position					
Element number							1/2	Sub-address							
IDIN03F			B	U	S	W	IDIN01F	IDIN02F		IDIN03F					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4780-C

Subsystem 1553 message															

Element 1553 message											Position				
Element number							A/C								
IDIN03F			B	U	M	G	IDCH01F	IDIN03F			IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4800-C

Subsystem 1553 structure															
Element 1553 structure											Position				
Element number							A/C								
IDIN03F			B	U	S	T	IDCH01F	IDIN03F			IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4820-C

Subsystem 1553 message group															
Element 1553 message group											Position				
Element number							A/C								
IDIN03F			B	U	G	R	IDCH01F	IDIN03F			IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4838-C

Model 1553 message item

As corresponding subsystem 1553 message item.

NMVCT-4839-C

Subsystem 1553 status word definition			

S/S pseudo element number							1/2	Sub-address		Subsystem pseudo position					
IDIN03F			B	U	S	W	IDIN01F	IDIN02F		IDIN03F					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4840-C

Subsystem 1553 message definition															
S/S pseudo element number							A/C				Subsystem pseudo position				
IDIN03F			B	U	M	G	IDCH01F	IDIN03F			IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4850-C

Subsystem 1553 structure definition															
S/S pseudo element number							A/C				Subsystem pseudo position				
IDIN03F			B	U	S	T	IDCH01F	IDIN03F			IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4855-C

Subsystem 1553 message group definition															
S/S pseudo element number							A/C				Subsystem pseudo position				
IDIN03F			B	U	G	R	IDCH01F	IDIN03F			IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4865-C

Model 1553 message item definition

As corresponding subsystem 1553 message item definition replacing :

. "subsystem pseudo " per "system pseudo "

. "subsystem" per "pseudo subsystem"

8.7 OBDH interfaces

NMVCT-4974-C

Element OBDH interrogation															
Element number							A/C								
IDIN03F			D	H	I	N	C	IDIN03F							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-4990-C

Element OBDH interrogation group															
theoretical element number							A/C								
IDIN03F			D	H	G	R	C	IDIN03F							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5020-C

Subsystem OBDH interrogation															
Element OBDH interrogation											Position				
Element number							A/C								
IDIN03F			D	H	I	N	C	IDIN03F			IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5044-C

Subsystem OBDH interrogation group															
Element OBDH interrogation group											Position				
Element number						A/C									
IDIN03F			D	H	G	R	C	IDIN03F			IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5048-C

Model OBDH interrogation item

As corresponding subsystem OBDH interrogation item.

NMVCT-5060-C

Subsystem OBDH interrogation definition															
S/S pseudo element number						A/C					Subsystem pseudo position				
IDIN03F			D	H	I	N	C	IDIN03F			IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5080-C

Subsystem OBDH interrogation group definition															
S/S pseudo element number						A/C					Subsystem pseudo position				
IDIN03F			D	H	G	R	C	IDIN03F			IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5088-C

Model OBDH interrogation item definition

As corresponding subsystem OBDH interrogation item definition replacing :

. "subsystem pseudo " per "system pseudo "

. "subsystem" per "pseudo subsystem"

8.8 Parameters (except formal parameters)

NMVCT-5104-C

Generic parameter															
Gen. S/S	Function				Generic position										
G	IDE201F	IDCH03F			0	0	0								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5110-C

Element parameter															
Function															
IDE201F	IDCH03F														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5120C

Calibr. set order															
IDINO2F															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5126-C

Element parameter group						
Element number						

IDIN03F			P	A	G	R	IDIN04F								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5130-C

Subsystem parameter															
S/S	Element parameter				Position										
	Function														
IDCH01F	IDE201F	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5150-C

Subsystem parameter definition															
S/S	Function				Subsystem pseudo position										
IDCH01F	IDE201F	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5160-C

Subsystem parameter group															
element parameter group											Position				
Element number															
IDIN03F			P	A	G	R	IDIN04F				IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5175-C

Subsystem parameter group definition

S/S pseudo element number											Subsystem pseudo position				
IDIN03F			P	A	G	R	IDIN04F				IDIN03F				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5210-C

Element parameter set															
Function															
T	IDCH03F														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5215-C

Subsystem parameter set															
S/S	Element parameter set				Position										
	Function														
IDCH01F	T	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5217-C

Subsystem parameter set definition															
S/S	Function				Subsystem pseudo position										
IDCH01F	T	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5220-C

Element parameter value set															

Function															
V	IDCH03F														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5225-C

Subsystem parameter value set															
S/S.	Element parameter value set				Position										
	Function														
IDCH01F	V	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5227-C

Subsystem parameter value set definition															
S/S	Function				Subsystem pseudo position										
IDCH01F	V	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5250-C

Element parameter range set															
Function															
R	IDCH03F														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-5255-C

Subsystem parameter range set															

S/S	Element parameter range set				Position											
	Function															
IDCH01F	R	IDCH03F			IDIN03F											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	

NMVCT-5257-C

Subsystem parameter range set definition																
S/S	Function				Subsystem pseudo position											
IDCH01F	R	IDCH03F			IDIN03F											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	

NMVCT-5270-C

Model parameter item

As corresponding subsystem parameter item.

NMVCT-5280-C

Model parameter item definition

As corresponding subsystem parameter item definition replacing :

. "subsystem pseudo " per "system pseudo "

. "subsystem" per "pseudo subsystem"

8.9 Curves (for default curve refer to requirements and notes)

NMVCT-5355C

Generic curve								

Gen. S/S					Generic position											
	Function															
G	H	IDCH03F			0	0	0									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	

NMVCT—5360C

Theoretical element curve															
Element number															
IDIN03F			IDIN03F												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT—5365C

Real element curve															
Element parameter				Calibration set order											
IDCH04F				IDIN02F											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT—5367C

Theoretical subsystem curve															
S/S pseudo element number															
IDIN03F			IDIN03F												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT—5368C

Real subsystem curve						

Subsystem parameter								Calibration set order							
IDCH08F								IDIN02F							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT—5370C

Theoretical model curve															
System pseudo element number			IDIN03F												
IDIN03F															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT—5375C

Real model curve															
Model parameter								Calibration curve set							
IDCH08F								IDIN02F							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

8.10 Displays

NMVCT-6050-C

Element alphanumeric display															
Function															
A	IDCH03F														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-6105-C

Element graphic display															
Function															
G	IDCH03F														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-6128-C

Element scrolling display															
Function															
L	IDCH03F														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-6150-C

Subsystem display															
S/S	element display identifier				Position										
IDCH01F	IDCH04F				IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-6156-C

Model display item

As corresponding subsystem display item.

NMVCT-6160-C

Subsystem alphanumeric display definition															
S/S	Function		Subsystem pseudo position												
IDCH01F	A	IDCH03F	IDIN03F												

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-6170-C

Subsystem graphic display definition															
S/S	Function				Subsystem pseudo position										
IDCH01F	G	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-6200-C

Subsystem scrolling display definition															
S/S	Function				Subsystem pseudo position										
IDCH01F	L	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-6210-C

Model display item definition

As corresponding subsystem display item definition replacing :

. "subsystem pseudo " per "system pseudo "

. "subsystem" per "pseudo subsystem"

8.11 Constants

NMVCT-6305-C

Generic constant															
Gen. S/S	Function		Generic position												

G	K	IDCH03F			0	0	0								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-6310-C

Element constant															
Function															
K	IDCH03F														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-6330-C

Subsystem constant															
S/S	Element parameter				Position										
	Function														
IDCH01F	K	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-6341-C

Model constant

As corresponding subsystem constant.

NMVCT-6350-C

Subsystem constant definition															
S/S	Function				Subsystem pseudo position										
IDCH01F	K	IDCH03F			IDIN03F										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

NMVCT-6360-C

Model constant definition

As corresponding subsystem constant definition replacing :

. "subsystem pseudo " per "system pseudo "

. "subsystem" per "pseudo subsystem"

End of the document