

# *Deimos 2 Ground Segment*

## *D2 GS*

### *Directory of Acronyms and Definitions*

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## 1. INTRODUCTION

This document defines the Directory of Acronyms and Definitions for the design and development of the DEIMOS-2 Ground Segment project.

## 2. DIRECTORY OF ACRONYMS AND DEFINITIONS

### 2.1. Acronyms and Abbreviations

Acronym	Description
(E) IP	(Element) Installation Package
2D	2 Dimensional
ACU	Antenna Control Unit
ADC	Analogue Digital Converter
ADD	Architecture Design Document
ADF	Auxiliary Data File
ADP	Acceptance Data Package
AES	Advanced Encryption Standard
AIT	Assembly, Integration and Test
AITP	Assembly, Integration and Test Plan
AIV	Assembly, Integration and Validation
AIVP	Assembly, Integration and Verification Plan
AJAX	Asynchronous JavaScript And XML
ANX	Ascending Node Crossing
AOCS	Attitude Orbit Control System
AOI	Area Of Interest
AOS	Appearance of Satellite Acquisition Of Signal
API	Application Programming Interface
APLs	Array Processing Language
AR	Acceptance Review
ARC	Archive
ASCII	American Standard Code for Information Interchange
AT	Acceptance Test
ATBD/DPM	Algorithm Theoretical Base Document and Detailed Processing Model
ATLM	Analogue Telemetry
ATP	Acceptance Test Plan
BER	Bit Error Rate
BNF	Backus-Naur Formalism/ Backus-Naur Form
BPEL	Business Process Execution Language
BPMN	Business Process Model Notation
CAL	Calibracion
CAL/VAL	Calibration and Validation
CALVAL	Calibration and Validation
CAT	Catalogue
CCB	Change Control Board
CCD	Charge Coupled Device
CCDB	Calibration and Characterization Database
CCSDS	Consultative Committee for Space Data Systems
CDR	Critical Design Review
CEOS	Commitee of Earth Observation satellites



Acronym	Description
CFG	Configuration
CFI	Customer Furniture Items
CI	Configuration Item
CMD (Also TC)	Telecommand
CMDC	Configuration Management Data Centre
CMP	Configuration Management Plan
CMT	Configuration Management Team
CONFIG	Configuration
COTS	Commercial Off-the-shelf
CP	Commissioning Phase / Change Proposal
CPU	Central Processing Unit
CR	Change Request
CRT	Command, Ranging and Telemetry
CSA	Configuration Status Accounting
CSS	Cascade style Sheets
CSV	Comma Separated Value
CSW	Catalogue Service Web
CSW	Catalogue Service Web
CSW4EO	Catalogue Service Web for Earth Observation
CVT	Calibration and Validation Tools
D2	DEIMOS 2
DB	Data base
DBMS	Database Management System
DC	Data Circulation
DCC	Data Collection Component
DCM	Deimos Castilla La Mancha
DCMii	DMC International Imaging Ltd.
DCN	Document Change Notice
DDC	Data Dissemination Component
DEC	Data Exchange Component
DEM	Digital Elevation Model
DET	Development Element Team
DIL	Deliverable Items List
DMC	Data management Component
DMI	Deimos Imaging
DMS	Deimos Space
DMZ	Demilitarized zone
DP	Deliveries Document Packages / Disposal Phase
DQS	Deimos Quality System
DTLM	Digital Telemetry
DTR	Digital Tracking Receiver
E SUM	Elements User's Manual
E TS	Elements Architecture & Detailed Design (one for each Element)
ECSS	European Cooperation on Space Standardization
EE	Earth Explorer
EE CFI	Earth Explorer CFI

Acronym	Description
EGSE	Electrical and Ground Support Equipment
EIDP	End Item Data Package
EIN	External Interfaces
EO	Earth Observation
ERP	Earth Rotation Parameters
ESA	European Space Agency
FAT	Factory Acceptance Test
FAT-R	Factory Acceptance Test Reports
FC SAN	Fibre Cannel Storage Area Network
FCS	Functional Configuration Verification Flight Control Software
FCT	Flight Control Team
FD	Flight Dynamics
FDDDB	Flight Dynamics Database
FDS	Flight Dynamic System
FFD	File Format Definition
FIFO	First In, First Out
FOCC	Flight Operations Control Centre
FOS	Flight Operation Segment Flight On-board Software
FTP	File transfer Protocol
FTPS	File transfer Protocol Secure
GATO	GAnt TOol
GECP	Geometry Correction Processor
GEO	Group of Earth Observation
GERSI	Geometric Errors of Remote Sensing Imaginery
GIS	Geographic Information system
GMES	Global Monitoring for Environment and Security
GML	Geographic Markup Language
GPS	Global Positioning System
GS	Ground Segment
GS M&C	Ground Segment Monitoring and Control
GSCS	Ground Station Control System
GSMC	Ground Segment Monitoring and Control
GS-MC	Ground Segment Monitoring and Control
GSMC	GS Monitoring and Control
GSN	Ground Station
GSOV	Ground Segment Overall Validation
Gsta	Ground Station
GTR	Generic Test Report
GUI	Graphical User Interface
HCI	Human Computer Interaction
HDR	High Data-rate Receiver
HK	Housekeeping
HK TM	Housekeeping Telemetry
HKTM	Housekeeping Telemetry
HMA	Heterogeneous Missions Accessibility ( <a href="http://earth.esa.int/hma/">http://earth.esa.int/hma/</a> )

Acronym	Description
HMA	Heterogeneous Missions Accessibility ( <a href="http://earth.esa.int/hma/">http://earth.esa.int/hma/</a> )
HMI	Human Machine Interface
HSM	Hardware Security Module
HTML	HyperText Makeup Language
HW	Hardware
IB	Interface Board
ICD	Interface Control Document
IF	Intermediate Frequency
IIN	Internal Interface
INST_PAR	Instrument Parameter
IOAT	In-orbit Acceptance Test Phase
IP	Internet Protocol
IPF	Instrument Processing Facility
IPR	Intellectual Property Rights
ISP	Instrument Source Packet
IT	Integration Test
ITP	Integration Test Plan
KHZ	KiloHertz
KML	Keyhole Markup Language
KO	Kick Off
KSAT	Kongsberg Satellite Services
KSAT CC	KSAT Control Centre
L0	Level 0
LAN	Local Area network
LEOP	Launch and Early Operation
LNA	Low Noise Amplifier
LOS	Loss Of Satellite Lost Of Signal Line Of Sight
LOSM	Line Of Sight Model
LRU	Line Replaceable Unit
LTA	Long Term Archive
LUT	Look-up Table
LUTs	Look-up Tables
M&C	Monitoring and Control
MAC	Mission Archive & Catalogue
MCS	Mission Control System
MMI	Man machine Interface
MP	Mission Planning
MPH	Main Product Header
MPS	Mission Planning System
MTBF	Mean Time Between Failures
MTF	Modulation Transfer Function
MUS	Mission User Services
N/A	Not Available / Applicable
NAVATT	Navigation and Attitude (Packet)
NC	Non Conformance

Acronym	Description
NCR	Non Conformance Report
NRB	Non-conformance Review Board
OASIS	Avanced Open Standards for Information Society
OBC	On-board Computer
OBCP	On-board Computer Program
OGC	Open Geospatial Consortium
OPS	Ground Segment Operations Concept
ORC	Orchestator
OS	Operative System
OSAR-R	On-site Acceptance Test Reports
OSAT	On-site Acceptance Tests
P/L	Payload
PA	Product Assurance
PA	Product Assurance
PAP	Product Assurance Plan
PBF	Performance Budget File
PCDB	Project Configuration DataBase
PCV	Physical Configuration Verification
PDGS	Payload Data Ground Segment
PDHU	Payload Data Handling Unit
PDR	Preliminary Design Review
PDS	Payload Data Segment
PM	Project Manager
PMP	Project Management Plan
POSIX	Portable Operating System Interface based on Unix
PP	Product Processors
PUS	Packet Utilization Standard
QA	Quality Assurance
RAD	Rapid Application Development
RAID	Redundant Array Inexpensive Disk
RCP	Rich Client Platform
RDBMS	Relational Database Management System
RF	Radio-Frequency
RFD	Request For Deviation
RFW	Request For Waivers
RID	Review Item Discrepancy
RO	Routine Operations
RUP	Rational Unified Process
S/C	Spacecraft
SAN	Storage Area Network
SATA	Serial ATA
SCCB	Software Configuration Control Board
SCF	Software Configuration File
SDB	Spacecraft Data Base
SFTP	Secure File Transfer Protocol
SI	Satrec Initiative
SIS	Station Interface System

Acronym	Description
SMR	Software Modification Report
SMU	Satellite Management Unit
SNR	Signal Noise Ratio
SOAP	Simple Object Access Protocol
SOC	Statement Of Compliance
SPAP	SW Product Assurance Plan
SPR	Software Problem Report
SRD	System Requirements Document
SRDB	Satellite Reference Database
SRR	System Requirement Review
SS	Satellite Simulator
SSPA	Solid State Power Amplifier
SSH	Secure Shell
ST	System Tests
STP	System Test Plan
SVN	Subversion
SVR	Software Verification Report
SVT	System Validation Tests
SW	Space Weather / Software
SWT	Standard Widget Toolkit
SYR	Sistemas y Redes
SYSREQ	System Requirement
TBC	To Be Confirmed To Be Clarified
TBD	To Be Defined
TC (Also CMD)	Telecommanding Telecommand
TC/TM	Telecommand and Telemetry
TDI	Time-Delayed Integration
TER	Test Execution Record
TLE	Two-Line Elements
TLM	Telemetry
TM	Telemetry / Technical Manager
TNOC	Tromson Operations Centre
TRR	Test Readiness Review
TS	Ground Segment Technical Specification and Architectural Design
TTC	Tracking, Telemetry & Commanding
UML	Unified Modeling Language
URD	User Requirements Document
UTR	Unit Test Reports
V&V	Verification and Validation
VMWare	Virtual Machine ware
VVP	Verification and Validation Plan
VVT	Verification and Validation Team
w.r.t.	With respect to
WOD	Whole Orbit Data
WP	Work Package
WPS	Web Processing Service
XML	eXtensible Markup Language
XSL	XMLStylesheet Language

## 2.2. Glossary of Terms

Concept	Definition
DEIMOS 2 GS break down naming	DEIMOS 2 GS => System. Next Level: PDGS, FOS and STA => Components. Next Level => MP, PP, MCS... => Elements. Next Levels => Modules.
CM/DC	DEIMOS Application oriented to take account and control for all the configuration management related items surrounding a development project: Deliveries, Meetings, Review Item Discrepancies, Documents, Non-Conformances, Risks, Requests for Changes, Requirements, Inventory...
Housekeeping Telemetry	Telemetry related to the status of the satellite provided via the S-Band downlink as opposed to the image telemetry provided via the X-Band downlink. Housekeeping telemetry includes Telemetry Information Broadcasting messages, Lifesign messages, ACK/NAK and WOD messages.
Instrument Source Packets	Organized groups of data issued along the time by the instruments toward either the PDHU or the SMU in CCSDS format, and comprising notably Observation and Ancillary data
Mission Packets	Generic term gathering the three defined packet categories (ISP, NAVATT, HKTM)
NAVATT Packets	CCSDS packets of groups of data comprising the Navigation and Attitude data, and the Time correlation data
Redmine	Flexible project management web application. Written using Ruby on Rails framework, it is cross-platform and cross-database. Redmine is open source and released under the terms of the GNU General Public License v2 (GPL).
Svalbard	Ground station located at Svalbard and operated by KSAT
Verification	Confirmation, through the provision of objective evidence, that specified requirements have been fulfilled [ISO 9000:2005] NOTE: verification process (for software) is the process to confirm that adequate specifications and inputs exist for any activity, and that the outputs of the activities are correct and consistent with the specifications and input.
Validation	Confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled [ISO 9000:2005]NOTE: The validation process (for software) is the process to confirm that the requirements baseline functions and performances are correctly and completely implemented in the final product.
Non-conformance	A non-conformance refers to the non-fulfilment of a requirement specified by the customer, in an item that has already been delivered to the customer. Thus, in the most typical case, the Customer as well as DEIMOS (regarding to its suppliers) may discover a non-conformance, and raise the corresponding NCR. Non-conformances may be raised on either HW or SW configuration items.

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