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GUIDE TO IASI L1 PPF V6-0 ACCEPTANCE AND TEST REPORT

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BORDEREAU D'INDEXATION

CONFIDENTIALITE : NC

MOTS CLES : IASI, OPS, recette

TITRE : Guide to IASI L1 PPF V6-0 acceptance and test report

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RESUME :

Ce document a été rédigé à l'occasion de la livraison de la version V6-0 de l'OPS du CNES vers EUMETSAT. Il décrit le contenu de la livraison, la liste des essais réalisés, les jeux de référence et le plan d'essais associés.

VOLUME : 1	PAGES : 14	PLANCHES :	FIGURES :	LANGUES : Anglais
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CONTRAT :

SYSTEME HOTE : Word XP

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MODIFICATION DU DOCUMENT

ISSUE	REV	DATE	Total pages	DESCRIPTION DES MODIFICATIONS
1	0	20/04/2011	14	Création

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GLOSSAIRE

[AC]	A Confirmer
[AD]	A Définir
CGS	Core Ground Segment
CNES	Centre National d'Etudes Spatiales
DA	Document applicable
EPS	EUMETSAT Polar System
EUMETCast	EUMETSat terminal broadCAST (diffusion)
EUMETSAT	European organisation for exploitation of METeorological SATellites
FTP	File transfer protocol
IASI	Infrared Atmospheric Sounding Interferometer
METOP	METeorological OPERational satellite
N/A	Non Applicable
PDU	Product Data Unit (appelé Granule en Français)
PFS	Product Format Specification
PGE	Product Generation Environment
PPF	Product Processing Facility of the EPS CGS
SGC	Service de Gestion de Configuration
TEC	Technical Centre of Expertise (located at CNES Toulouse)
UMARF	Unified Meteorological Archive and Retrieval Facility

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1. INTRODUCTION

1.1. PURPOSE OF THE DOCUMENT

This document has been written for the acceptance testing of IASI L1 PPF version V6-0.

The aim of these tests is to ensure that the PPF is giving the same results at Thales as at CNES, where the scientific content of the data has been validated.

1.2. DESCRIPTION OF THE DELIVERY

1.2.1. SOURCE

Delivered on CD-ROM; as described in the transfer manual

1.2.2. TEST DATA SET

The test datasets for the V6-0 acceptance are installed on pge-ibm and pge-linux.

1.3. PREREQUISITIES

The required amount of disk space is about 60 GB.

1.4. UPDATE/ADAPTATION OF THE DELIVERY

1.4.1. BEFORE COMPILATION

1.4.1.1. LIBXERCES

Compilation of XERCES library V1-7-0 under AIX6.1 using XLC V8.

1.4.1.2. UPDATE OF METOP LIBRARY

Install METOP library built for AIX6-1 and Linux provided by EUMETSAT.

1.4.2. BEFORE EXECUTION (AFTER COMPILATION/INSTALLATION)

1.4.2.1. MLA (NOT APPLICABLE UNDER LINUX)

♦ CHN_OPS_INSTALL_MODE: to use MLA developed by ALCATEL.

Edit the file \$WORK_DIR/OPS/config/OPS.env

Replace 'export CHN_OPS_INSTALL_TYPE="STANDALONE"' by
'export CHN_OPS_INSTALL_TYPE="CGS"' as described in installation manual.

- ♦ The LA_API_MODE environment variable shall be updated to the correct value if it is required to work in mode CONNECT or STAND-ALONE.
- ♦ The METOP_ENV environment variable specifies the kind of parameters used with the Metop Libraries: TEST or NORMAL

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- ◆ The SPACECRAFT_ID allows specifying the spacecraft identification: M01, M02 or M03.
- ◆ The DATEMARGE_LIGNE_AVHRR is the required precision for AVHRR. It is set to 3ms in the delivery.

1.4.2.2. LIB_PATH TO XERCES

The LIB_PATH environment variable shall contain a directory that contains the xerces library.

1.4.2.3. DIRECTORY DATA IN <WORK-DIR>/TMP

A directory called data shall be created in the \$WORK_DIR/tmp directory before executing the PPF.

1.4.2.4. UPDATE OF THE ENV_TEST.SH SCRIPT

The script \$WORK_DIR/OPS/tools/OPStools/env_test.sh shall be updated (mainly the variable WORK_DIR shall be updated to the working_root_directory location).

1.5. APPLICABLE AND REFERENCE DOCUMENT

Document title	Identifier	Internal reference
Release-Delivery Note	IA-DD-2100-3576-CNE	DA1
Bilan Technique d'entrée en Recette	IA-BT-2100-9885 -THA	DA2
CRE de la recette de la version V6-0	IA-CRE-2100-3594-THA	DA3
Liste des Documents	IA-LD-2100-9550-THA	DA4
Plan d'essais	IA-PE-2100-9550 -THA	DA5

The issue of the applicable documents can be found in DA1 and DA4.

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2. LIMITATIONS AND SCOPE OF THE VERSION V6-0

2.1. TECHNICAL SCOPE

OBJECTIVES OF THE NEW DELIVERY

V6-0 contains all the modifications that have been implemented in IASI L1/PPF in the period covering 22/10/2010 (V5-1 delivery) to the present delivery.

2.1.1.1. SCOPE OF THE SOFTWARE

The software is complete. All algorithms have been coded and validated.

The output of the software is compliant with issue 6.6 of the GPFS and issue 9 of the IASI L1 PFS and issue 7B of AVHRR L1 PFS.

The L0 input is compliant with issue 6.6 of GPFS, and to version 3.0 of the IMVD.

2.2. STATUS OF THE ANOMALY REPORTS (NON CONFORMITY REPORTS)

No anomaly corrected in this version which is exclusively dedicated to the porting to Linux

2.3. STATUS OF THE CHANGE REQUESTS

CNES ref	EUMETSAT ref	Description	Comment	status
DM 2765	EPS_CRCNES_EUM_25	IASI L1/PPF porting to linux		Corrected in V6-0
DM 2766	EPS_CRCNES_EUM_25	OPS2TEC porting to linux	Not validated during the acceptance test	Not part of the delivery to EUMETSAT, specific to IASI-TEC environment

THALES V5-1 TESTS

Test	Description	Objective
ALGO_OPS_N_08_J0	1 full dump, cut into 41 granules : nominal data	Non regression test, historical OPS performance (processing time), synthetic data
ALGO_OPS_N_16_J9	The 6 first granules aimed at testing the external calibration modes and mode transitions	Non regression test, synthetic data Run with 8 threads
o14571	NoP=>Ext. Cal. multiple transitions +	Non regression test on real data (full orbits in dump mode)

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	cold context	Check BBT filtering problem
o14572	NoP=>Ext. Cal. multiple transitions	Non regression test on real data (full orbits in dump mode)

2.4. CNES V5-1 TESTS

Test	Description	Objective
o3236	Orbit 3236, ext.cal. BB (SP32) and nadir (SP15)	Non regression test on real data (full orbits in dump mode)
o3237	Orbit 3237, ext.cal. BB (SP32) and nadir (SP15)	Non regression test on real data (full orbits in dump mode)
o3638	Orbit 3638, ext.cal. CS1, CS2, BB, SM	Non regression test on real data (full orbits in dump mode)
o3704	Orbit 3704, normal op.	Non regression test on real data (full orbits in dump mode)

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3. OPS V6-0 TEST PLAN

3.1. INTRODUCTION TO THE TEST

The general approach is to consider V5-1 as the reference, as it has been thoroughly used in operation, and verify non regression and expected evolutions between V5-1 and V6-0.

THALES and CNES tests are respectively listed in section 2.4 and 2.5. These tests are standards tests based on data that cover a wide range of instrument modes and cases.

The CNES hardware setup has changed with the integration of a new IBM power 7 server under AIX6-1, and a Linux computer provided by EUMETSAT. The IASI L1/PPF V5-1 reference data sets will be generated under the new AIX server.

During the test, a perfect non-regression is expected under IBM between V6-0 and V5-1.

Then, "V6-0 Linux products" will be compared to "V6-0 IBM products". All observed differences will be analysed and quantified.

3.2. COMPILATION / INSTALLATION OF THE IASI L1 PPF

The compilation and installation tests will not be played during acceptance, as the generation of the software has been performed by the SGC service in advance. The SGC installation report is included in the appendix (section 4).

3.3. INSTALLATION AND RUN OF THE TEST DATASETS

The Thales test datasets have been installed on the PGE Framework. They are available on DVD or LT02, or via network upon request. To play a test, it is necessary to change directory to the TV directory via the tv command. This directory contains a series of directories which names are the test names. these directories all contain a lancetest.ksh script that launches the test, and the comparison wrt the reference. After execution of the script, everything is moved to the output directory of the corresponding test.

Any tests in DUMP mode are launched through the OPS2TEC interface. The test data are available on LTO2 tape upon request.

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4. APPENDIX: SGC INSTALLATION REPORT

***** AVIS D'ENVOI D'UN CRT *****

Le CRT numéro 16014 a été envoyé par FERRERO V, le 14/04/2011 à 17:33

Ce CRT fait suite à la DT émise le 13/04/2011 par LONJOU V

Pour consulter le CRT cliquez sur le lien: <http://cst-sgc-001.cst.cnes.fr/dtcrt/CRTResult.asp?NoChrono=16014>

----- Projet/Composante ----- Projet : MULTIQI-OPS
 Composante : IASI-OPS Version traitée : 6.0 Imputation budgétaire :
 05T_0852 Industriel : THALES

----- Intervention du SGC ----- Intervenant SGC :
 FERRERO V Temps opérateur : 5.5h Nombre de déplacements au CNES : 1 Date
 de livraison du résultat au projet : 14/04/2011

----- Travail effectué ----- Type de travail :
 Contrôles , Mise en configuration et gel de version , Extraction ,
 Génération , Envoi DDC Description du travail : 1- Récupération de la
 livraison via Crypt&Share et transfert de son contenu sur la machine du
 SGC.

2- Réalisation des contrôles.

- Contrôle des fichiers parasites, caractères interdits OK
- Contrôle des cartouches OK
- Contrôle du checksum OK

3- Mise en configuration.

*** <iasi-ops> version 6.0 (totale)

 2030 fichiers, 370 répertoires, 274524 Ko

Contrôle du delta par rapport à la version 5.1 OK

 Nombre de fichiers ajoutés : 1061
 Nombre de fichiers modifiés (contenu) : 405 Nombre de fichiers modifiés
 (droits) : 0
 Nombre de fichiers supprimés : 489

4- Vérification des moyens nécessaires à la génération OK

5- Génération selon la procédure fournie.

-> Dépôt de l'arborescence extraite de configuration sur la machine pge-
 linux dans le répertoire /raid7/ops/iasi/Recette_V6-
 0/OPS/Generation/OPS_V6-0.

-> Vérification et positionnement des variables d'environnement OK

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-> Lancement des scripts de génération OK Vérification des traces OK
-> Vérification des fichiers générés OK

-> Dépôt de l'arborescence extraite de configuration sur la machine pge-ibm dans le répertoire /home/iasi_1/iasi/Recette_V6-0/OPS/Generation/OPS_V6-0.
-> Vérification et positionnement des variables d'environnement OK
-> Lancement des scripts de génération OK Vérification des traces OK
-> Vérification des fichiers générés OK

6- Livraison du SGC

Livraison des fichiers sur la machine pge-linux dans le répertoire
/raid7/ops/iasi/Recette_V6-0/OPS/Generation/OPS_V6-0/target

```
-----
-rw-r--r-- iasi iasi      42 avr 14 09:57 CKsumOPS_V6-0
-rwxr--r-- iasi iasi     3503 avr 14 09:58 install OPS.sh
-rw-r--r-- iasi iasi 27792815 avr 14 09:59 OPS_Install_V6-0.tar.Z
```

Livraison des fichiers sur la machine pge-ibm dans le répertoire
/home/iasi_1/iasi/Recette_V6-0/OPS/Generation/OPS_V6-0/target

```
-----
-rw-r--r-- iasi iasi      43 avr 14 10:25 CKsumOPS_V6-0
-rwxr--r-- iasi iasi     3503 avr 14 10:26 install OPS.sh
-rw-r--r-- iasi iasi 52893287 avr 14 10:28 OPS_Install_V6-0.tar.Z
-----
```

7- Bilan des FA précédentes Pas de FA antérieures.

----- Unités d'oeuvres ----- Nb UOA: 1 Nb UOG: 2
Tps UOA (h): 2 Tps UOG (h): 3,5 Tps sur site: 4 Nb déplacements théorique:
1 Nb média récupérés-Nb média livrés: 0-0

----- Environnement de travail ----- Nom Machine
1: PGE-LINUX Nom Machine 2: PGE-IBM Nom OS 1: LINUX REDHAT 5 Nom OS 2:
AIX-5.3