

### THALES INFORMATION SYSTEMS

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## MANUEL D'EXPLOITATION (ET D'OPÉRATIONS) OPS IASI LEVEL1 SOFTWARE OPERATIONAL MANUAL

<b>Written by :</b> BRUNEL Samuel THALES SERVICES	Date : 11/04/2011	
<b>Approved by :</b> BOTELLA Christine TOUJAS Chantal THALES SERVICES THALES SERVICES	Date : 11/04/2011	
<b>For application :</b> LONJOU Vincent DCT/ME/EI	Date : 29/04/2011	

## INDEX SHEET

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### TITLE :

**MANUEL D'EXPLOITATION (ET D'OPÉRATIONS)**  
**OPS IASI LEVEL1 SOFTWARE OPERATIONAL MANUAL**

**AUTHOR(S) :** BRUNEL Samuel **THALES SERVICES**

**SUMMARY :** This document presents the operational procedure to manage the OPS facility.

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## GLOSSARY AND LIST OF TBC AND TBD ITEMS

CGS	Core Ground Segment : segment-sol développé par ALCATEL sous contrat d'EUMETSAT, et dans lequel l'OPS ira s'insérer
IASI	Infrared Atmospheric Sounding Interferometer : interféromètre de sondage atmosphérique dans l'infrarouge. L'objet de ce document est de spécifier le logiciel opérationnel du traitement sol des données IASI.
JDBS	JdB server
MCS	Monitoring and Control Segment
MP	Main Process
MSGs	Message Server
OPS	Logiciel Opérationnel (Operational Software) : correspond au IASI level 1 PPS dans les glossaires d'EUMETSAT. PPS=Product Processing Software
PGF	Product Generation Facility
PPF	Product Processing Facility
TES	Time Event Server
WOM	Work Order Manager

**List of TBC items :**

**List of TBD items :**

## 1.OVERVIEW

### 1.1.REFERENCE DOCUMENTS

The contractual applicable and reference documents are listed in the « Liste Unique » document IA-LD-2100-9550-THA.

### 1.2.OBJECTIVES

The current document is the OPS Software Operational Manual [DA113] which depicts the operational procedure to monitor the OPS subsystem.

The intended readers are the CGS operator who are in charge to operate the OPS subsystem.  
This operator has to be familiar with the operating system AIX and Linux.

### 1.3.USING DOCUMENT

Section 1 presents an overview of the document.

Section 2 presents an OPS technical overview.

Section 3 describes the OPS operational procedures.

## 2. TECHNICAL OVERVIEW

### 2.1. OPS FUNCTIONS

The main OPS role is to generate IASI L1 products from IASI L0 data under the PGF control.

The Production processus is split into 3 steps :

- the processing initialisation : configuration parameters loading,
- the products computation,
- the IASI level 1 products generation.

The OPS subsystem has to implement following functions in order to be compliant with the monitoring and control requirements :

- OPS sub system monitoring and control,
- work order retrieving and processing,
- log and trace event management,
- anomalies management.

### 2.2. ARCHITECTURE

The OPS software architecture is compound of five permanent UNIX processus :

- the MP processus (Main Process) is in charge of monitoring and control the OPS subsystem : start/stop the facility, collect and execute the PGF commands, collect and generate the HKTM status,
- the TES processus (Time Event Server) is in charge to inform a subscriber process when a scheduled event timer occurs (periodic timer or punctual date).
- the MSGS processus (Message Server) is in charge to collect and dispatch the inter-processus messages. This processus provides a centralized and generic mechanism to exchange applicative messages between software processus.
- the JDBS processus (JDB Server) is in charge to collect log events and log traces messages generated by the OPS processus and send them to the MCS.
- the WOM processus (Work Order Manager) is in charge to manage the data processing commands (STEP/SUSPEND/RESUME/BREAK) provided by the PGF and to control the data processing executed by the SD processus.



- the SD processus (Data Server) is in charge to process IASI L0 input data in order to generate IASI L1 data according to the processing description provided by the WOM.

The following figure shows the OPS software architecture.

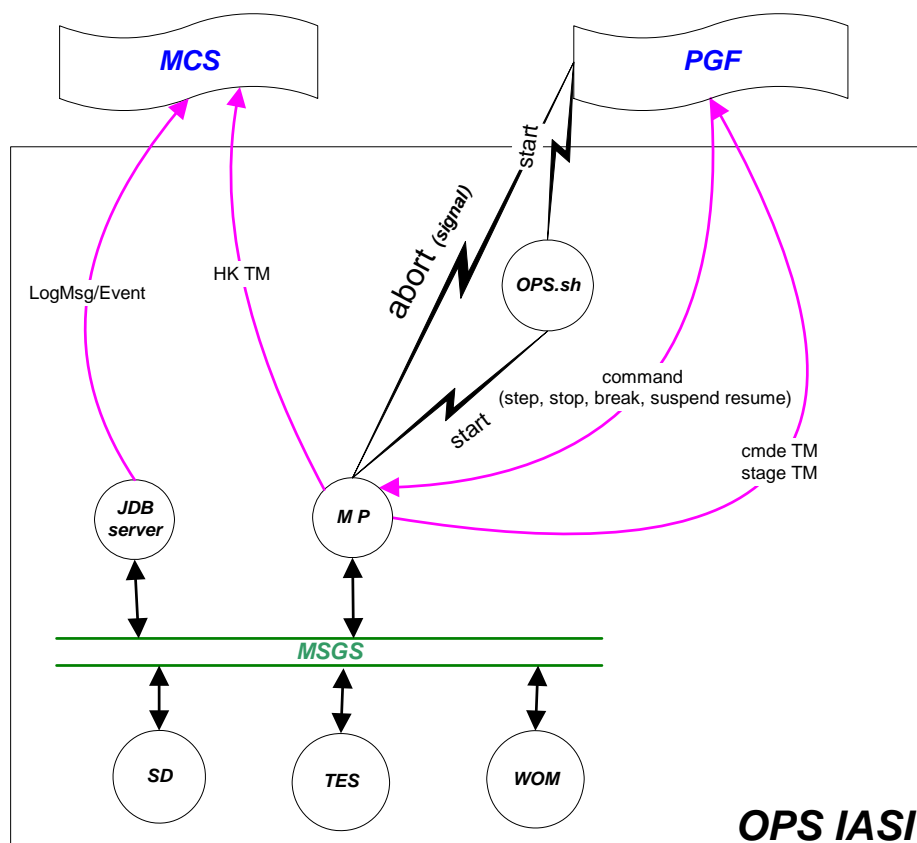


Figure 1 : OPS software architecture

## 3. OPERATIONAL INSTRUCTIONS

### 3.1. HARDWARE AND SOFTWARE CONFIGURATION REQUISITE

The hardware and software requisites are listed in the Installation Manual [DA114].

### 3.2. OPS CONFIGURATION PROCEDURES

The configuration procedures are described in the Installation Manual [DA114].

### 3.3. OPERATIONAL PROCEDURES IN NOMINAL MODE

#### 3.3.1. Start-Up

In nominal mode called CGS mode, the OPS software is launched remotely by the MCS. Moreover, the OPS provides another launching mode : the standalone mode. In this mode, the OPS is running without any external interface (MCS or PGF); so the external interfaces are simulated.

Temporary data are generated by the OPS software in the product processing. These data are stored in intermediate files in the **<WORKING\_ROOT\_DIR>/tmp** directory. This directory is purged at OPS start up.

#### 3.3.2. Stop

The OPS subsystem is stopped when one of the two following events occurs:

- the end of the current dump processing : whatever the execution mode (CGS or standalone), the OPS subsystem stops by itself when the last granule of the current dump is processed.
- the receipt of a Stop command : when a Stop command is received by a PPF subsystem, it has to stop immediately the current data processing and shut down.

### 3.4.OPERATIONAL PROCEDURES IN INVESTIGATION MODE

In investigation mode, intermediate data are produced by the OPS subsystem in dedicated files. The name and path of these files are defined in environment variables. These data are used either to validate the IASI level 1 algorithms in comparison with reference data, or to investigate abnormal results thank to the validation tools.

The CGS operator is in charge to manage (move, delete, ...) these data files.

### 3.5.OPERATIONAL PROCEDURES IN CASE OF ABNORMAL TERMINAISON

The OPS subsystem is automatically shut down, if one of the following processes TES, JDBS, WOM, SD is aborted. In case of abnormal terminaison of MP or MSGS process, the CGS operator has to launch the following shut down script <WORKING\_ROOT\_DIR>/tools/OPStools/ko.sh before OPS re start. The script shuts down all the OPS processus still alive.