

	ROC End of Design Key Point Organization Note	Ref: ROC-GEN-DPK-NTT-00053-LES Issue: 01 Revision : 02 Date : 29/11/2017
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ROC End of Design Key Point Organization Note

Prepared by:	Function:	Signature:	Date
X.Bonnin	RPW Ground Segment Project Manager		29/11/2017

Change Record				
Issue	Rev.	Date	Authors	Modifications
01	00	17/11/17	X.Bonnin	First issue
01	01	23/11/17	X.Bonnin	Change ROC planning version to deliver (now 2.2). Fix typo errors. Add /RIDS and /Presentations folders to the datapackage
01	02	29/11/17	X.Bonnin	Update the EDKP planning

CLASSIFICATION PUBLIC RESTRICTED

1. GENERAL

1.1 Scope of the Document

This document defines the procedure for conducting the End of Design Key Point (EDKP) of the RPW Operations Centre (ROC). In particular, this note:

- Defines the context of the review,
- Defines the review objectives,
- Describes the review process, schedule and gives a preliminary agenda of the day of the review,
- Defines the RIDs creation procedure.

The EDKP will take place at the Paris Observatory on November 28, 2017.

1.2 Applicable Documents

This document responds to the requirements of the documents listed in the following table:

Mark	Reference/Iss/Rev	Title of the document	Authors	Date
AD1				
AD2				
AD3				

1.3 Reference Documents

This document is based on the documents listed in the following table:

Mark	Reference/Iss/Rev	Title of the document	Authors	Date
RD1				
RD2				
RD3				

2. CONTEXT

On January 2017, a first Preliminary Design Key Point (PDKP) of the ROC was organized, in order to perform a first review of the ROC design.

Since the PDKP conclusions, the ROC has undergone a series of modifications/corrections in the project organization and design, which must be reviewed.

3. OBJECTIVES

The EDKP shall fulfil the following objectives:

- Review the technical specifications of the ROC software system (RSS) w.r.t. to the top-level requirements baseline and interfaces requirements
- Review the RSS design and interfaces
- Review the ROC development strategy
- Review the RSS validation strategy
- Review the development planning w.r.t. project planning

4. PROCESS AND SCHEDULE

1.4 Planning

The table below gives the overall EDKP planning. The participants and group definition are given in the next section.

Event	Date	Comment
EDKP data package delivery by the project group	17/11/2017	The EDKP data package will be delivered using the ownCloud server system at LESIA (an email with the URL to downlink the data package will have to be sent by the project group leader, to all of the members of the review and invited groups). The data package content is described in the section 5.

EDKP meeting	28/11/2017	The EDKP meeting will take place in the J.F Denisse room of the Paris Observatory (Paris, France). A map of Paris Observatory site is given in the section 7.
EDKP RIDS release	<u>12/12/2017</u>	All of the RIDS have been sent to the EDKP participants, as explained in the section 1.6.
EDKP project group RIDS response release	<u>15/12/2017</u>	All of the RIDS responses have been released by the project group, as explained in the section 1.6.
EDKP questions/answers meeting	<u>21/12/2017</u> between <u>9:30</u> and <u>12:00</u> (TBC)	A dedicated visiocon may be organized between the project and review groups
EDKP review group final report	<u>To be discussed during the EDKP Q/A meeting</u>	

1.5 Participants

1.5.1 Project group

The project group has to:

- Prepare and deliver the EDKP package
- Participate to the EDKP meeting, especially it must present progresses made in the project to the reviewer, in agreement with the EDKP objectives.
- Submit RIDS responses to the reviewer group
- Participate to the EDKP questions/answers meeting

The project group is formed of the following people. The group leader is indicated in bold.

Name	Institute	Function
Aichatou Aboubacar Amadou	LESIA	RPW ground segment software engineer
Olga Alexandrova	LESIA	RPW CoI
Xavier Bonnin	LESIA	RPW ground segment project manager
Sylviane Chaintreuil	LESIA	RPW system manager
Nicolas Fuller	LESIA	RPW ground segment software engineer
Loic Gueguen	LESIA	RPW MEB GSE manager
Sonny Lion	LESIA	RPW ground segment software engineer
Milan Maksimovic	LESIA	RPW PI & TNR-HFR Lead CoI
Lee-Roy Malac Allain	LESIA	RPW flight software & command/control engineer
Lorenzo Matteini	LESIA	RPW MADAWG representative & TNR-HFR data calibration software co-responsible
Quynh Nhu	LESIA	RPW ground segment & TNR-HFR software

Nguyen		engineer
Stéphane Papais	LESIA (NEXEYA)	RPW ground segment software product assurance manager
Philippe Plasson	LESIA	RPW flight software & command/control manager
Antonio Vecchio	LESIA	RPW ground segment support scientist

The following people also belong to the project group as RPW lead CoI teams.

Name	Institute	Function
David Pisa	IAP	TDS data calibration software engineer
Jan Soucek	IAP	TDS Lead CoI

Name	Institute	Function
Erik Johansson	IRF-U	BIAS data calibration software engineer
Yuri Khotyaintsev	IRF-U	BIAS CoI / RPW data definition support
Andris Vaivads	IRF-U	BIAS Lead Co-I

Name	Institute	Function
Jean-Yves Brochot	LPC2E	SCM data calibration software engineer
Gamil .C.Chenaï	LPC2E	SCM data calibration software support engineer
M.Kretzschmar	LPC2E	SCM CoI / SCM data calibration and ground segment manager

Name	Institute	Function
Bruno Katra	LPP	LFR flight et data calibration software engineer
Thomas Chust	LPP	LFR Lead Co-I
Rodrigue Piberne	LPP	LFR calibration software support engineer

1.5.2 Review group

The review group has to:

- Read and review the EDKP data package
- Participate to the EDKP meeting as reviewers
- Emit the EDKP RIDS for the project group.
- Participate to the EDKP conclusion meeting

The review group is formed of the following people. The group leader is indicated in bold.

Name	Institute	Function
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Elise Belouard	CNES	RPW project manager
Isabelle Fratter	CNES	Solar Orbiter Project Manager (French contribution)
Emmanuel Guilhem	CNES	RPW System engineer
Eric Lorfevre	CNES	RPW System engineer
Laure Luno	CNES	INSIGHT System development manager (in replacement of Véronique Valette)
Desi Raulin	CNES	RPW ground segment development support engineer
Michel Rouzé	CNES	RPW Project exploitation Manager
Sandra Steere	CNES	ROC quality assurance engineer
Jean-Michel Travert	CNES	RPW ground segment command/control support engineer

The review group may also include the following people from the Solar Orbiter SOC and MOC.

Name	Institute	Function
Sylvain Lodirot	ESOC	Solar Orbiter mission operations manager
Andrew Walsh	ESAC	Instrument operations scientist
Christopher Watson	ESAC	Instrument operations engineer

1.5.1 Invited group

The invited group will:

- Have access to the EDKP data package content
- Can attend the EDKP meeting at Paris Observatory
- Can submit RIDS

Name	Institute	Function
Eric Buchlin	IAS	SPICE science operations centre manager
Stéphane Caminade	IAS	SPICE science operations centre project manager
Claude Mercier	IAS	SPICE science operations center software engineer

1.6 EDKP RIDS management

1.6.1 EDKP RIDS life-cycle

Every EDKP participant can emit RIDS.

A dedicated Excel template file will be delivered in the EDKP data package, in order to fill RIDS.

The naming convention of the template file is:

ROC-GEN-QAP-NTT-00050-LES_IssueXX_RevYY(ROC_RIDS_TEMPLATE_FILE).xlsx

Where XX and YY are respectively the issue and revision of the document.

The Excel files with RIDS will have to be sent to **Desi Raulin** (desi.raulin@cnes) by email - with copy to **Elise Bellouard** (elise.bellouard@cnes.fr) - after the EDKP meeting and up to one day before the EDKP RIDS release deadline.

Desi Raulin will then merge the Excel files and communicate by email the resulting file to the EDKP participants.

In the same time, the list of RIDS will be reported by Desi Raulin into the dedicated ROC-REVIEWS project of the LESIA JIRA Web site.

Then, the project group leader shall reply to RIDS using JIRA. It shall be done before the EDKP RIDS responses release deadline.

In addition to the minutes of meeting, possible updates of the RIDS on JIRA will be realized by a project group member during the EDKP questions/answers meeting, in order to keep track of the modification.

The final review group report, as well as an export file of the RIDS on JIRA will have to be sent by email to all of the EDKP participants and and in the dedicated /RIDS folder of the data package.

1.6.1 EDKP RIDS template file description

The RIDS template file shall at least contain the following columns:

- The RIDS sequence number in the file (i.e., integer number starting at 1)
- The status of the RIDS (“OPEN”, “CLOSED”)
- The level of severity (“Major” or “minor”)
- The name of the RIDS originator
- The reference and document title
- The page and section
- The discrepancy description
- The project group reply
- The originator comment (with date)

Dedicated columns for the project group replies and the originator comments will have to be let empty when the reviewers submitting RIDS.

5. EDKP DATA PACKAGE

The EDKP data package will have to be delivered as a single zip file, which the following name convention:

ROC-GEN-DPK-EID-00052-LES_IssXX_RevYY(EDKP_Datapackage).zip

, Where XX and YY are respectively the issue and the revision of the package. The first release shall be the issue 01 revision 00.

The EDKP data package shall contain the following items:

- /Submitted – contains the EDKP deliverables
- /Refs – contains the applicable/reference documents
- ROC-GEN-QAP-NTT-00050-LES_IssueXX_RevYY(ROC_RIDS_TEMPLATE_FILE).xlsx
- readme.txt
- /Presentations – will contain the EDKP meeting presentations
- RIDS/ -- will contain the RIDS export file and review group final report

The table below gives the list of documents to be found into the /Submitted directory. The “submitted” documents are considered as major and shall be read by the review group.

Document title	Document reference	Issue
ROC Concept & Implementation Requirements Document (CIRD)	ROC-GEN-SYS-PLN-00002-LES	1.4
ROC Project Management Plan (PMP)	ROC-GEN-MGT-PLN-00013-LES	1.4
ROC Software Development Plan (SDP)	ROC-GEN-SYS-PLN-00015-LES	2.3
ROC Operations Management Plan (OMP)	ROC-GEN-MGT-PLN-00041-LES	1.0
ROC Software Product Assurance Plan (SPAP)	ROC-GEN-MGT-QAD-00033-LES	1.1
ROC Software System Validation Plan (SVP)	ROC-GEN-SYS-PLN-00040-LES	1.0
ROC Software System Specification (RSSS)	ROC-GEN-SYS-SPC-00026-LES	1.1
ROC Software System Design Document (RSSDD)	ROC-GEN-SYS-SPC-00036-LES	1.0
ROC Mission Database Description Document (MDBDD)	ROC-GEN-SYS-NTT-00038-LES	1.2
RPW Low Latency Virtual Machine Design Document (LLVMDD)	ROC-OPS-LLD-SPC-00018-LES	1.0
RPW Calibration Software ICD (RCSICD)	ROC-PRO-PIP-ICD-00037-LES	1.1
BIAS operations ICD (BOICD)	ROC-OPS-OTH-ICD-00022-LES	1.0
RPW Data Products (RDP)	ROC-PRO-DAT-NTT-00006-LES	1.1
Dataset Description Document for RPW Low	ROC-OPS-LLD-NTT-00028-LES	1.0

Latency CDF Files (DDDRLLCF)		
ROC Engineering Guidelines (REG)	ROC-GEN-SYS-NTT-00008-LES	1.3
ROC Engineering Guidelines for External Users (REGU)	ROC-GEN-SYS-NTT-00019-LES	2.0
ROC Software Product Assurance Milestone Report (SPAMR)	ROC-GEN-QAP-NTT-00051-LES	1.0
ROC Software Reuse File (SRF)	ROC-GEN-SYS-NTT-00047-LES	1.0
ROC project planning – Phases D and E1	ROC-GEN-MGT-SCD-00046-LES	2.1
ROC top-level requirements traceability matrix	ROC-GEN-SYS-CVM-00049-LES	1.0

In addition, the /Refs directory shall contain all of the applicable/reference documents in the pdf format.

“*ROC-GEN-QAP-NTT-00050-LES_IssueXX_RevYY(ROC_RIDS_TEMPLATE_FILE).xlsx*” is the Excel template to be used for the RIDS (see section 1.6.1).

A “readme.txt” file shall be included to provide the description of the data package content, in order to help the readers to find a document easily.

6. EDKP MEETING AGENDA

Table below gives the agenda of the EDKP meeting. Time for questions is included in the duration of the presentations.

START TIME	DURATION	TOPIC	PRESENTER
9:30	5 min	Welcome, round table & objectives of the KP	M.Maksimovic
Context			
9:35	5 min	Status of Solar Orbiter	M.Maksimovic
9:40	5 min	Status of RPW	M.Maksimovic
ROC project overview			
9:45	30 min	ROC objectives, organization, responsibilities, interfaces, constraints and overall design	X.Bonnin
ROC as a data processing centre: use case and design			
10:15	30 min	ROC Software System - data processing tools	X.Bonnin
10:45	5 min	TDS software and data products	J.Soucek or D.Pisa
10:50	5 min	LFR software and data products	T.Chust or R.Piberne or B.katra

10:55	5 min	THR software and data products	L.Matteini (TBC)
11:00	20 min	Coffee Break	
11:20	5 min	Bias software and data products	Erik Johansson
11:25	5 min	SCM software and data products	M.Kretzschmar or J.-Y. Brochot
ROC as an operations centre: use case and design			
11:30	15 min	Operations concept overview	X.Bonnin
11:45	45 min	ROC Software System - operations tools	S.Lion
12:30	1h30	Lunch	
ROC plans and status			
14:00	30 min	ROC management/operations/development plans	X.Bonnin
14:30	30 min	ROC Software System Validation Plan	S.Lion
15:00	30 min	ROC project/development/operations planning	X.Bonnin
15:30	30 min	ROC project: review of anomalies, points of failure and open issues	X.Bonnin
Ending sessions			
16:00	1h	Review group debriefing	Review group only
17:00	30 min	Conclusion and action-items	Review group leader
17:30		End of meeting	

7. ANNEX: PARIS OBSERVATORY LOCATION AND MAP

The Paris Observatory is located at:

Observatoire de Paris

77, avenue Denfert-Rochereau

75014 Paris

Figure above gives a map of the Paris Observatory site. The meeting will take place at the **J.F Denisse room** (N° 13 on the figure).



8. DISTRIBUTION LIST

LISTS	Tech_LESIA
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See Contents lists in “Baghera Web”: Project’s informations / Project’s actors / RPW_actors.xls and tab with the name of the list or NAMES below	Tech_MEB
	Tech_RPW
	[Lead-]Cols
	Science-Cols

INTERNAL

LESIA CNRS		

LESIA CNRS		

EXTERNAL (To modify if necessary)

CNES		C. FIACHETTI
		E.GUILHEM
		C. LAFFAYE
		R.LLORCA-CEJUDO
		E.LOURME
		M-O. MARCHE
		J.PANH
		B.PONTET
IRFU		L. BYLANDER
		C.CULLY
		A.ERIKSSON
		SE.JANSSON
		A.VAIVADS
LPC2E		P. FERGEAU
		G. JANNET
		T.DUDOK de WIT
		M. KRETZSCHMAR
		V. KRASNOSELSKIKH
SSL		S.BALE

Asi/CSRC		J.BRINEK
		P.HELLINGER
		D.HERCIK
		P.TRAVNICEK
IAP		J.BASE
		J. CHUM
		I. KOLMASOVA
		O.SANTOLIK
		J. SOUCEK
IWF		L.UHLIR
		G.LAKY
		T.OSWALD
		H. OTTACHER
		H. RUCKER
		M.SAMPL
LPP		M. STELLER
		T.CHUST
		A. JEANDET
		P.LEROY
		M.MORLOT