(2018-09-19/20) ROC Validation Workshop

Goals

• Identify and specify the validation activities related to the ROC. (See organizsation_notes_v02 at the bottom of the page for more details).

Date

19 sept. 2018 to 20 sept. 2018

Location

CNES site, Toulouse (France)

DEMENTHON 007 (with telecon system)

Attendees

See organizsation_notes_v02 at the bottom of the page

Agenda

See organizsation_notes_v02 at the bottom of the page

Discussion items

Item	Who	Notes	Action-Items
Welcome	X. Bonnin	 roc_validation_workshop_intro_v01.pdf 	
RPW ground segment validation plan overview	S.Lion	introduction-validation.pdf	
Information from ECSS on tests	D. Bagot	Information from ECSS on tests - D.Bagot - 1.0.pdf	

Discussions on ROC validation activities: ROC fonctions validation, ROC software validation, ROC interface validation, ROC data validation	All	<list-item></list-item>	 Action Xavier: split the REQ-ROC-SSS-0152 into two requirements Interpret and the construction of th
Discussion on RPW science data validation (ROC, THR, BIAS, LFR, SCM, TDS): description, task, workflow validation, human resources / team, responsibilities, constraints, anomalies, etc.	All		• Action Milan: Send an email to Alexis Rouillard and the MADAWG concerning the qualit_flag level definition in the SOL-SGS-TN-0009_2_2 document.

- Data validation • Formal validation - How to?

 - ROC checks automatically the metadata and structure
 Can also automate the checking of val_min/val_max

 - (out of range values)? When formal validation is done global attribute "Validate = 1" (validate flag)
- Science quality?
- Idea:
 - Check if a value is lower than the sensitivity
 - Check if a value is constant
 - Check for discontinuities
 - Teams are in charge of determining the quality flag

If quality of the records is enough -> The ROC can set the validate flag to 2

ROC is responsible for the bitmask

Science quality verification procedure:

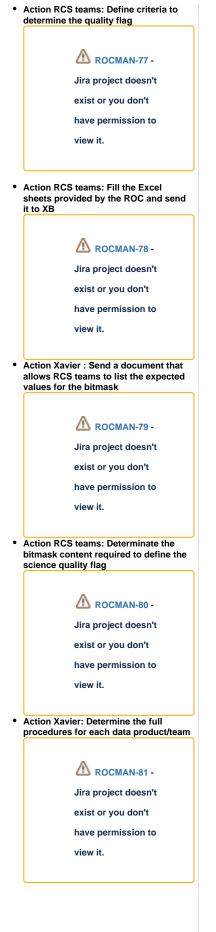
- Add a piece of software in the RCS to compute the quality flag

- in case of problem -> generate a report to be sent to the scientist in charge

- SCM

Problem : Only one quality flag for each x,y,z record (no quality flag bv axis)

- Reference frame
 - Add rotation matrix in the L1 data -> we need to process ancillary data



			• Action SCM team: See how to set the quality flag for each X,Y,Z axis records
Discussion on RPW flight validation: description, task, workflow validation, human resources / team, responsibilities, constraints, anomalies, etc.	All	 roc_validation_workshop_flight_validation_intro_v01.pdf ROC has prepared specific Excel sheets for the in-flight validation activities of RPW. The main idea is to list all the activities and related relevant information in order to prepare these tasks (to ensure nothing has been forgotter). COMMUSSIONING validation activity: The reaction wheels filtering should be added somewhere (during interference campaign or antenna rolls?) A sth RPW activity should be asked to MOC to test the nominal working of RPW before the Cruise Phase (CP). Especially, all modes should be tested and run for enough long time (-24h) and nominal modes with other IS instruments should be run. If possible the SBM_DETECTION should be activated (but quick downlink of selective data is not garantuee for now during the NECP and CP phases). What about the inter-instrument communication (IIC) validation? Done during NECP or CP? Functional part (checking TM exchanged via S20 should be possible, but it would be difficult for the detection part without event). 	 Action Xavier: Verify with MOC/SOC if IIC/S20 flight validation campaign is planned and when Image: RocMAN-83 - Jira project doesn't exist or you don't have permission to view it. Action Xavier: Prepare and submit to MOC the 8th activity for RPW Action Xavier: Prepare and submit to MOC the 8th activity for RPW RocMAN-84 - Jira project doesn't exist or you don't have permission to view it. Action teams: submit to the ROC (Xavier) a preliminary version of the "< XXXX>_flight-validation_V<yyy>.xls"</yyy> RocMAN-85 - Jira project doesn't exist or you don't have permission to view it.
Splinter session RPW flight configurations	RPW lead Col teams + Diane and Antonio	 COMMISSIONING During commissioning HK at least every second (or even higher cadence if possible) Boom deployement : In order to synchronize snapshots between LFR and TDS, TDS will increase the time between two snapshots to 11s (instead of 10s) 	

 Antenna + I-Boom + interference campaign : all sub systems antenna, I-Boom and Interference in SBM1+normal mode. Same configuration for LFR and TDS campaign before the end of next week for each campaign. • LFR : temps entre 2 snapshots 22s TDS : 1 snapshot chaque seconde + 1 triggered toutes les 11s —> un snapshot every 11s, one simultaneously with A ROCOPE-217 -LFR, one without LFR SCM agrees with LFR config
 LFR wants to add during interference campaign a configuration to test the reaction wheels effect. Jira project doesn't exist or you don't • The LFR document for interference campaign has been have permission to transfered to the Bias team for filling its own doc. view it. LOW RATE Action Antonio : Put on Git the two ° The daily 10 min. of SURVEY_BURST mode do not take too calculator sheets for the low-rate much telemetry rate (<5%) so we can let it. But the SBM1 confia. mode has significant telemetry rate. For LFR, the main goal is to have the higher cadence as possible for the BP.TDS has no specific constraint A ROCOPE-218 - 2 configs for low rate : Jira project doesn't exist or you don't have permission to 10 min of SURVEY_BURST, view it. time between two snapshots 1800s; time between two ASM : 3600s, time between BP : 8s; Action Diane : Send the calculator sheets with the two low rate config to LFR and SCM (TDS already has them). Time between 2 TSWF : 7200s ROCOPE-219 -Jira project doesn't exist or you don't SBM1 activated 10 min of SURVEY_BURST, have permission to time between two snapshots 3600s; time between two ASM : 3600s, view it. time between BP : 16s;
time between 2 products : 60s Action Antonio : Put on Confluence the page with all the nominal configs (as well as the fixed parameters) and send the url to the teams. A ROCOPE-220 -Jira project doesn't exist or you don't have permission to view it.

All team will provide word files about

LFR :

1)

- no SBM,
- time between 2 products : 40s
- TDS :
 - Time between 2 RSWF : 1800s;

2)

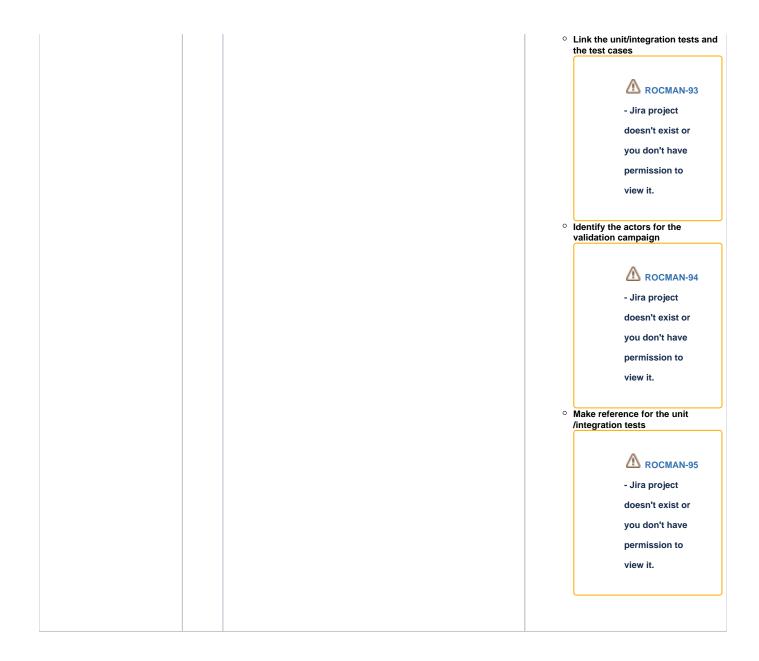
- LFR :

Update Calculator

LFR calibration : snapshots every 22 s (change in LFR software in progress). This will have a slight impact on the data rate because currently the same configuration is kept in NORMAL-DEFAULT: 1 snapshot every 300s

			 Action Diane : Add LFR calibration in the calculator sheet (because in low-rate we stay in default for the calibration) M ROCOPE-221 - Jira project doesn't exist or you don't have permission to view it.
Splinter session : ROC validation traceability	CNES + Stepha ne Papais + Sonny Lion	 1. Sonarqube - Code Analysis Actions to be carried out by LESIA (Sonny Lion) with Stéphane Papais support : Finalize metrics according to CNES specifications document Installation of Sonarqube on the ROC Dev platform => November 2018 Objective on Sonarqube: implement for the RSS3 validation campaign => End of December 2018 Tests reports perimeter : based on RSS3 => Music (Faust / Figaro), ROC-SGSE, LLVM Actions to be taken by Dominique Bagot: Realize the code analysis with Sonarqube on RSS3 => December 2018 2. Validation Plan Actions to be carried out by LESIA (Sonny) : Define the scope that will be part of the validation campaign and list the associated requirements (RSS3) Complete the validation plan with the different test procedures (test case) Complete the traceability matrix between the RSSS and the test plans => Sonny Lion with the support of Stéphane Papais Make the links between the different unit tests / integration and the test procedures (test case) => Sonny Lion Identify / distinguish the testers (technical or functional (beta test(r)) => cf. example of the Taranis project Referencing unit tests / integration 	 Action Sonny (with support of Stéphane): Finalize the metrics according the CNES Quality requirements doc. ROCMAN-86 - Jira project

• Action Dominique : Do an analysis o the ROC code with Sonarqube in prevision of the RSS3 release
\Lambda госман-89 -
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exist or you don't
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view it.
 Action Sonny: Define the perimeter for the RS: validation campaign (and associated requirements)
A ROCMAN-90
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view it.
 Complete the validation plan wi the test procedures (test cases)
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view it.
 Complete the traceability matru between RSSS and the test plan (with the support of Stéphane)
A ROCMAN-92
- Jira project
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permission to
view it.



Conclusion	1) Schedule :	
	 RSS3 campaign validation Schedule : November 2018 (to be confirmed) PTF delivery of RSS3 to CNES : mid-December 2018 	
	This delivery will contain : Software Documentation (updated documents) :	
	At least the delivered versions for the specifications and validation workshops	
	 The LESIA emphasizes that it is difficult to advance (due to the HR resources constraints / lack of a developer) to develop the tools and to write and to update documentation. 	
	2) Actions to be taken into account following the validation workshop:	
	a) Reminder of the actions/issues from specifications workshop and its deadlines to be followed (and documents identified to be updated) => see meeting note Spécifications workshop	
	b) The validation workshop allowed to define a roadmap for ROC validation activities :	
	 Each team (consortium member) have to complete validation activities in excel files. The LESIA will follow up this action => deadline : mid-December 2018. The LESIA complete the validation plan from excel files => deadline : end of december 2018 	
	c) Question : is it necessary to organize monthly teleconf with extended participants (CNES, LESIA, LeadCol, Instrument scientis) to follow up the previous point (=> <i>point b</i>) => consistency of actions / roadmaps	
	d) Question : is it necessary to organize a next validation workshop ?	
	e) For the next Consortium Meeting in Kiruna (March 2019), it is important and necessary to add the topics related to ground segment activities (requirements, development, validation, data products, sciences data and validation, tools, development progress, ESA interfaces,) : plenary sessions and splinter sessions to be added in agenda.	
	=> Xavier will discuss it with Milan	
	3) Validation plan final version : scheduled for RSS4VC (2019). The LESIA have to ensure the consistency between requirements, implementation, validation and tests.	

Action items

• Cf. https://jira-lesia.obspm.fr/secure/RapidBoard.jspa?rapidView=67

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View these issue	s in Jira						

Attached items

- roc_validation_workshop#1_organisation_notes_v02.rtf
 example of excel file for tests.xlsx
 Cluster example for data validation: cefmdd-rules.xlsx
 ROCValidationWorkshop#1_DataPack_V1.zip