

## LFR-FSW - Bug #172

### Perte SEQUENCE\_CNT dans APID=0xccc

16/06/2014 06:12 PM - Veronique bouzid

<b>Status:</b>	Closed	<b>Start date:</b>	16/06/2014
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	Veronique bouzid	<b>% Done:</b>	0%
<b>Category:</b>		<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>		<b>Spent time:</b>	0.00 hour
<b>revision:</b>	r0		
<b>Description</b>			
Sur le test SVS-0019 (tous les produits sont utilisés excepté CWF_F3_LONG).			
j ai observé 2 pertes de TM (j en ai trouvé d'autres que j'ai réussi à expliquer, chgt de mode par exemple)			
1- le SEQUENCE_CNT passe de 17 à 19			
<b>15:18:54.859535, TM_LFR_SCIENCE_NORMAL_BP1_F1</b> , CCSDS_VERSION_NUMBER = 0, PACKET_TYPE: TM_PACKET = 0, DATA_FIELD_HEADER_FLAG: WITH_HEADER = 1, PROCESS_ID: RPW_PID_2 = 76, PACKET_CATEGORY: PRIVATE_SCIENCE_OR_TELECOMMAND = 12, (PACKET_ID=0xccc), SEGMENTATION_GROUPING_FLAG: STANDALONE_PACKET = 3, <b>SEQUENCE_CNT=17</b> , (PACKET_SEQUENCE_CONTROL=0xc011), PACKET_LENGTH=137, SPARE_1=0, PUS_VERSION = 1, SPARE_2=0, SERVICE_TYPE: SCIENCE_DATA_TRANSFER = 21, SERVICE_SUBTYPE: SCIENCE_REPORT = 3, DESTINATION_ID: GROUND = 0, TIME=0x80000061f589, PA_LFR_SID_PKT: SC_N_BP1_F1 = 15, PA_BIA_MODE_MUX_SET: SET_0 = 0, PA_BIA_MODE_HV_ENABLED: DISABLED = 0, PA_BIA_MODE_BIAS1_ENABLED: DISABLED = 0, PA_BIA_MODE_BIAS2_ENABLED: DISABLED = 0, PA_BIA_MODE_BIAS3_ENABLED: DISABLED = 0, PA_BIA_ON_OFF: OFF = 0, <b>PA_LFR_ACQUISITION_TIME=0x80000061f589</b> , SPARE=0x0, PA_LFR_N_BP1_BLK_NR_F1=13			
<b>15:18:54.90454, TM_LFR_SCIENCE_NORMAL_BP1_F2</b> , CCSDS_VERSION_NUMBER = 0, PACKET_TYPE: TM_PACKET = 0, DATA_FIELD_HEADER_FLAG: WITH_HEADER = 1, PROCESS_ID: RPW_PID_2 = 76, PACKET_CATEGORY: PRIVATE_SCIENCE_OR_TELECOMMAND = 12, (PACKET_ID=0xccc), SEGMENTATION_GROUPING_FLAG: STANDALONE_PACKET = 3, <b>SEQUENCE_CNT=19</b> , (PACKET_SEQUENCE_CONTROL=0xc013), PACKET_LENGTH=127, SPARE_1=0, PUS_VERSION = 1, SPARE_2=0, SERVICE_TYPE: SCIENCE_DATA_TRANSFER = 21, SERVICE_SUBTYPE: SCIENCE_REPORT = 3, DESTINATION_ID: GROUND = 0, TIME=0x80000061fbfb, PA_LFR_SID_PKT: SC_N_BP1_F2 = 16, PA_BIA_MODE_MUX_SET: SET_0 = 0, PA_BIA_MODE_HV_ENABLED: DISABLED = 0, PA_BIA_MODE_BIAS1_ENABLED: DISABLED = 0, PA_BIA_MODE_BIAS2_ENABLED: DISABLED = 0, PA_BIA_MODE_BIAS3_ENABLED: DISABLED = 0, PA_BIA_ON_OFF: OFF = 0, <b>PA_LFR_ACQUISITION_TIME=0x80000061fbfb</b> , PA_LFR_N_BP1_BLK_NR_F2=12			
Je n ai pas trouvé d 'explication.			
2- Dans cette perte, les sequences_cnt passent de 4647 à 4649 à 4647 à 4649 ....; donc pas de trous juste une chronologie modifiée.			
<b>15:41:12.292998, TM_LFR_SCIENCE_NORMAL_ASM_F1</b> , CCSDS_VERSION_NUMBER = 0, PACKET_TYPE: TM_PACKET = 0, DATA_FIELD_HEADER_FLAG: WITH_HEADER = 1, PROCESS_ID: RPW_PID_2 = 76, PACKET_CATEGORY: PRIVATE_SCIENCE_OR_TELECOMMAND = 12, (PACKET_ID=0xccc), SEGMENTATION_GROUPING_FLAG: STANDALONE_PACKET = 3, <b>SEQUENCE_CNT=4646</b> , (PACKET_SEQUENCE_CONTROL=0xd226), PACKET_LENGTH=2621, SPARE_1=0, PUS_VERSION = 1, SPARE_2=0, SERVICE_TYPE: SCIENCE_DATA_TRANSFER = 21, SERVICE_SUBTYPE: SCIENCE_REPORT = 3, DESTINATION_ID: GROUND = 0, TIME=0x8000059b67cb, PA_LFR_SID_PKT: SC_N_ASM_F1 = 12, PA_BIA_MODE_MUX_SET: SET_0 = 0, PA_BIA_MODE_HV_ENABLED: DISABLED = 0, PA_BIA_MODE_BIAS1_ENABLED: DISABLED = 0, PA_BIA_MODE_BIAS2_ENABLED: DISABLED = 0, PA_BIA_MODE_BIAS3_ENABLED: DISABLED = 0, PA_BIA_ON_OFF: OFF = 0, <b>PA_LFR_PKT_CNT_ASM=2, PA_LFR_PKT_NR_ASM=1, PA_LFR_ACQUISITION_TIME=0x8000059b67cb</b> , PA_LFR_ASM_F1_BLK_NR=52			
<b>15:41:12.297887, TM_LFR_SCIENCE_NORMAL_SWF_F0</b> , CCSDS_VERSION_NUMBER = 0, PACKET_TYPE: TM_PACKET = 0, DATA_FIELD_HEADER_FLAG: WITH_HEADER = 1, PROCESS_ID: RPW_PID_2 = 76, PACKET_CATEGORY: PRIVATE_SCIENCE_OR_TELECOMMAND = 12, (PACKET_ID=0xccc), SEGMENTATION_GROUPING_FLAG: STANDALONE_PACKET = 3, SEQUENCE_CNT=4648, (PACKET_SEQUENCE_CONTROL=0xd228), PACKET_LENGTH=3669, SPARE_1=0, PUS_VERSION = 1, SPARE_2=0, SERVICE_TYPE: SCIENCE_DATA_TRANSFER = 21, SERVICE_SUBTYPE: SCIENCE_REPORT = 3, DESTINATION_ID: GROUND = 0, TIME=0x800005937f4c, PA_LFR_SID_PKT: SC_N_SWF_F0 = 3, PA_BIA_MODE_MUX_SET: SET_0 = 0, PA_BIA_MODE_HV_ENABLED: ENABLED = 1, PA_BIA_MODE_BIAS1_ENABLED: ENABLED = 1, PA_BIA_MODE_BIAS2_ENABLED: ENABLED = 1, PA_BIA_MODE_BIAS3_ENABLED: ENABLED = 1, PA_BIA_ON_OFF: OFF = 0, <b>PA_LFR_PKT_CNT=7, PA_LFR_PKT_NR=4, PA_LFR_ACQUISITION_TIME=0x800005937f4c</b> ,			

PA\_LFR\_SWF\_BLK\_NR=304

**15:41:12.301316, TM\_LFR\_SCIENCE\_NORMAL\_ASM\_F1**, CCSDS\_VERSION\_NUMBER = 0, PACKET\_TYPE: TM\_PACKET = 0, DATA\_FIELD\_HEADER\_FLAG: WITH\_HEADER = 1, PROCESS\_ID: RPW\_PID\_2 = 76, PACKET\_CATEGORY: PRIVATE\_SCIENCE\_OR\_TELECOMMAND = 12, (PACKET\_ID=0xccc), SEGMENTATION\_GROUPING\_FLAG: STANDALONE\_PACKET = 3, **SEQUENCE\_CNT=4647**, (PACKET\_SEQUENCE\_CONTROL=0xd227), PACKET\_LENGTH=2621, SPARE\_1=0, PUS\_VERSION = 1, SPARE\_2=0, SERVICE\_TYPE: SCIENCE\_DATA\_TRANSFER = 21, SERVICE\_SUBTYPE: SCIENCE\_REPORT = 3, DESTINATION\_ID: GROUND = 0, TIME=0x8000059b68dc, PA\_LFR\_SID\_PKT: SC\_N\_ASM\_F1 = 12, PA\_BIA\_MODE\_MUX\_SET: SET\_0 = 0, PA\_BIA\_MODE\_HV\_ENABLED: DISABLED = 0, PA\_BIA\_MODE\_BIAS1\_ENABLED: DISABLED = 0, PA\_BIA\_MODE\_BIAS2\_ENABLED: DISABLED = 0, PA\_BIA\_MODE\_BIAS3\_ENABLED: DISABLED = 0, PA\_BIA\_ON\_OFF: OFF = 0, **PA\_LFR\_PKT\_CNT\_ASM=2, PA\_LFR\_PKT\_NR\_ASM=2, PA\_LFR\_ACQUISITION\_TIME=0x8000059b68dc**, PA\_LFR\_ASM\_F1\_BLK\_NR=52

On voit bien que les 2 TM ASM sont bien retrouvées (4646 et 4647) avec un bloc SWF enchevêtré mais cohérent avec la séquence des SWF

**15:41:11.999557, TM\_LFR\_SCIENCE\_NORMAL\_SWF\_F0**, CCSDS\_VERSION\_NUMBER = 0, PACKET\_TYPE: TM\_PACKET = 0, DATA\_FIELD\_HEADER\_FLAG: WITH\_HEADER = 1, PROCESS\_ID: RPW\_PID\_2 = 76, PACKET\_CATEGORY: PRIVATE\_SCIENCE\_OR\_TELECOMMAND = 12, (PACKET\_ID=0xccc), SEGMENTATION\_GROUPING\_FLAG: STANDALONE\_PACKET = 3, **SEQUENCE\_CNT=4641**, (PACKET\_SEQUENCE\_CONTROL=0xd221), PACKET\_LENGTH=3669, SPARE\_1=0, PUS\_VERSION = 1, SPARE\_2=0, SERVICE\_TYPE: SCIENCE\_DATA\_TRANSFER = 21, SERVICE\_SUBTYPE: SCIENCE\_REPORT = 3, DESTINATION\_ID: GROUND = 0, TIME=0x800005937c21, PA\_LFR\_SID\_PKT: SC\_N\_SWF\_F0 = 3, PA\_BIA\_MODE\_MUX\_SET: SET\_0 = 0, PA\_BIA\_MODE\_HV\_ENABLED: ENABLED = 1, PA\_BIA\_MODE\_BIAS1\_ENABLED: ENABLED = 1, PA\_BIA\_MODE\_BIAS2\_ENABLED: ENABLED = 1, PA\_BIA\_MODE\_BIAS3\_ENABLED: ENABLED = 1, PA\_BIA\_ON\_OFF: OFF = 0, **PA\_LFR\_PKT\_CNT=7, PA\_LFR\_PKT\_NR=3, PA\_LFR\_ACQUISITION\_TIME=0x800005937c21**, PA\_LFR\_SWF\_BLK\_NR=304

et

**15:41:12.59045, TM\_LFR\_SCIENCE\_NORMAL\_SWF\_F0**, CCSDS\_VERSION\_NUMBER = 0, PACKET\_TYPE: TM\_PACKET = 0, DATA\_FIELD\_HEADER\_FLAG: WITH\_HEADER = 1, PROCESS\_ID: RPW\_PID\_2 = 76, PACKET\_CATEGORY: PRIVATE\_SCIENCE\_OR\_TELECOMMAND = 12, (PACKET\_ID=0xccc), SEGMENTATION\_GROUPING\_FLAG: STANDALONE\_PACKET = 3, **SEQUENCE\_CNT=4652**, (PACKET\_SEQUENCE\_CONTROL=0xd22c), PACKET\_LENGTH=3669, SPARE\_1=0, PUS\_VERSION = 1, SPARE\_2=0, SERVICE\_TYPE: SCIENCE\_DATA\_TRANSFER = 21, SERVICE\_SUBTYPE: SCIENCE\_REPORT = 3, DESTINATION\_ID: GROUND = 0, TIME=0x800005938276, PA\_LFR\_SID\_PKT: SC\_N\_SWF\_F0 = 3, PA\_BIA\_MODE\_MUX\_SET: SET\_0 = 0, PA\_BIA\_MODE\_HV\_ENABLED: ENABLED = 1, PA\_BIA\_MODE\_BIAS1\_ENABLED: ENABLED = 1, PA\_BIA\_MODE\_BIAS2\_ENABLED: ENABLED = 1, PA\_BIA\_MODE\_BIAS3\_ENABLED: ENABLED = 1, PA\_BIA\_ON\_OFF: OFF = 0, **PA\_LFR\_PKT\_CNT=7, PA\_LFR\_PKT\_NR=5, PA\_LFR\_ACQUISITION\_TIME=0x800005938276**, PA\_LFR\_SWF\_BLK\_NR=304

Je ne pense pas que c'est une erreur.

Paul dis-nous ce que tu en penses pour ces 2 cas.

Peut-être relancer le test pour voir si reproductible.

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Contexte

Contexte:

LPPMON: Version=0.2.2 Branch=default Changeset=835955994d5f

Carte mini-LFR: LFR-172200 dev V1.0; No série III (sans connecteurs sub-click)

Vhdl: mini-lfr\_0.1.16

Brique Star-Dundee S/N 46120065

Soft:1.0.0.9b (variante sur carte finale)

TEST CASE = SVS-0019

RPW-SYS-IDB-00067-LES\_Issue2\_Rev2

RPW-SYS-MEB-LFR-ICD-00097\_Issue3\_Rev0

RPW-SYS-SSS-00013-LES + Annex\_Release\_Definition\_Issue2\_rev2

## History

#1 - 17/06/2014 07:46 AM - paul leroy

- Status changed from New to Feedback

- Assignee changed from paul leroy to Veronique bouzid

1-

Si le packet avec sequence\_cnt = 18 n'est pas dans les traces, un peu avant ou un peu après (cf point 2 pour l'explication), la brique a perdu un

packet ou LFR n'a pas émis le packet. Cette deuxième possibilité n'ayant jamais été constatée, je penche pour une arrivée du packet 18 avant les BP

2-

La différence au niveau temporalité s'explique par la priorité des tâches temps réel affectées aux différents produits scientifiques. Les tâches waveform sont prioritaires sur les tâches de calcul des basic parameters, le sequence\_cnt reflète le moment où sequence\_cnt a été affecté au packet, pas la transmission du packet. Je peux essayer de changer le fonctionnement si c'est perturbant pour les analyses, par exemple en jouant sur les possibilités de préemption des tâches

**#2 - 17/06/2014 01:44 PM - Veronique bouzid**

- *Status changed from Feedback to Closed*

Test rejoué sur 1.0.0.10

Le fichier 2014\_06\_17-11\_32\_21-Detail.txt contient le test SVS-0019

1- Cette fois pas de perte de packets.

En fait c'était le TM\_LFR\_SCIENCE\_NORMAL\_BP2\_F1 qui n'avait pas été perdu (associé au SEQUENCE\_CNT=18).

Sur le test total, on n'a aucune perte de paquet TM\_LFR\_SCIENCE

11:02:09.296766, TM\_LFR\_SCIENCE\_NORMAL\_BP1\_F0, PACKET\_ID=0xccc, DESTINATION\_ID: GROUND = 0, SEQUENCE\_CNT=16

11:02:09.299828, TM\_LFR\_SCIENCE\_NORMAL\_BP2\_F0, PACKET\_ID=0xccc, DESTINATION\_ID: GROUND = 0, SEQUENCE\_CNT=17

11:02:09.889498, TM\_LFR\_SCIENCE\_NORMAL\_BP1\_F1, PACKET\_ID=0xccc, DESTINATION\_ID: GROUND = 0, SEQUENCE\_CNT=18

11:02:09.89243, TM\_LFR\_SCIENCE\_NORMAL\_BP2\_F1, PACKET\_ID=0xccc, DESTINATION\_ID: GROUND = 0, SEQUENCE\_CNT=19

11:02:13.307623, TM\_LFR\_SCIENCE\_NORMAL\_BP1\_F0, PACKET\_ID=0xccc, DESTINATION\_ID: GROUND = 0, SEQUENCE\_CNT=20