

OsmoBTS - Bug #4465

Incorrect number of SUB measurements detected

03/20/2020 09:16 PM - laforge

Status: Resolved	Start date: 03/20/2020
Priority: Normal	Due date:
Assignee: dexter	% Done: 100%
Category: osmo-bts-trx	
Target version:	
Spec Reference:	
Description	
When running current osmo-trx + osmo-bts-trx I every so often get:	
<pre>ERROR <0004> measurement.c:645 (bts=0,trx=0,ts=1,ss=0) Incorrect number of SUB measurements detected! (4 vs exp 3) ERROR <0004> measurement.c:645 (bts=0,trx=0,ts=1,ss=0) Incorrect number of SUB measurements detected! (4 vs exp 3) ERROR <0004> measurement.c:645 (bts=0,trx=0,ts=2,ss=0) Incorrect number of SUB measurements detected! (4 vs exp 3)</pre>	
I was under the impression that after a lot of related effort we meanwhile do everything correctly in terms of measurement processing? The message doesn't make me very confident.	
Related issues:	
Related to OsmoBTS - Bug #4467: bad voice quality in current osmo-bts-trx master	In Progress 03/20/2020

Associated revisions

Revision 59e77730 - 05/16/2020 08:22 PM - dexter

measurement: expect at least 1 SUB frame for AMR

The amount of SUB frames that may occur in AMR is not fixed, nor can it be determined by some formula or lookup table. The reason for this is that the DTX period may be negotiated dynamically. This means that the lower layers must make the decision if an AMR sub frame is a SUB frame early and tag the respective measurement / frame they hand up to the upper layers accordingly. However, regardless of the occurrence of DTX periods the amount of SUB frames in AMR must be always 1 or more because SACCH frames always count as SUB frames as well. Let's make sure that this is respected in the debug log as well as in the logic that tries to substitute missing SUB frame measurements.

Change-Id: I1fd91b576ff7274caa6d4356bcd7a4fa4311219d

Related: OS#4465

History

#1 - 03/20/2020 09:43 PM - laforge

- Related to Bug #4467: bad voice quality in current osmo-bts-trx master added

#2 - 04/22/2020 03:00 PM - dexter

- % Done changed from 0 to 80

I have checked the problem with current master. The checks of the sub frames for AMR were indeed problematic. There we would expect at least 1 SUB frame (SACCH), the remaining frames would be the result of DTX periods, which are negotiated dynamically.

However, what confuses me a bit is that the error says "(4 vs exp 3)". At least for AMR the current master currently does not implement the SUB frame tagging, so I would expect (1 vs exp 0) as error here. It would be good to know with which codec the problem occurs and if DTX was used or not.

See also:

<https://gerrit.osmocom.org/c/osmo-bts/+17928> measurement: remove unnecessary is_amr_sid_update parameter

<https://gerrit.osmocom.org/c/osmo-bts/+17929> measurement: expect at least 1 SUB frame for AMR

#3 - 04/22/2020 03:00 PM - dexter

- Status changed from New to In Progress

#4 - 04/23/2020 09:38 AM - dexter

- % Done changed from 80 to 90

I have now checked this more thoroughly, the SUB frames that are coming in when AMR-DTX is enabled are counted correctly. The number matches up, number of SID-FRAMES + 1 SACCH.

#5 - 05/04/2020 07:00 PM - dexter

The patch 17929 is still in review. However, there were also problems with the RSSI, which are now fixed, see also [#2978](#)

#6 - 05/25/2020 06:05 PM - dexter

- Status changed from In Progress to Resolved

- % Done changed from 90 to 100

17929 got merged, so the number of sub frames should now be correct.