

## OsmoBTS - Bug #4364

### osmo-bts-trx configured with 2 TRX and osmo-trx with 1 TRX -> bad behavior

01/14/2020 03:18 PM - pespin

<b>Status:</b>	New	<b>Start date:</b>	01/14/2020
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	pespin	<b>% Done:</b>	0%
<b>Category:</b>	osmo-bts-trx		
<b>Target version:</b>			
<b>Spec Reference:</b>			
<b>Description</b>			
Configure osmo-bsc + osmo-bts-trx to run with 2 TRX, and osmo-trx to run with only one TRX (chan 0).			
Current behavior: the network runs fine (of course only using TRX0) and osmo-bts is lots of times per second printing the error message:			
<pre>20200114161445605 DTRX &lt;000b&gt; trx_if.c:1110 phy0.1: send() failed on TRXD with rc=-1 (Connection refused)</pre>			
So there seems to be several flaws here:			
<ul style="list-style-type: none"><li>• If that log line is printed, it means the TRX1 is seen as ON (trx_if_powered(11h) is returning true), but it's not since osmo-trx doesn't use it, so it shouldn't be on</li><li>• Upon that failure, osmo-bts-trx should either: A) continue running but tell BSC over OML that the TRX is down, or B) stop the process (exit).</li></ul>			

#### History

##### #1 - 05/28/2020 07:05 PM - pespin

The second point on the task description has already been fixed since a while ago (bts exits now). I still need to look at what's the current status for the first point.

##### #2 - 05/28/2020 07:29 PM - fixeria

If that log line is printed, it means the TRX1 is seen as ON (trx\_if\_powered(11h) is returning true), but it's not since osmo-trx doesn't use it, so it shouldn't be on

Ah, there is an interesting detail. In a multi-trx setup *POWERON/POWEROFF* commands are **sent only to the first transceiver** (TRX0), not to all TRX1..N. That's why osmo-bts-trx thinks that your second transceiver is powered on. There's basically no way to know on the BTS side how many transceivers are actually enabled in osmo-trx. But still... osmo-bts-trx sends *RXTUNE/TXTUNE* and *SETSLOT* commands to each transceiver individually, and obviously it would not get any response for TRX1..N in your case.

##### #3 - 05/28/2020 07:35 PM - fixeria

Upon that failure, osmo-bts-trx should either: A) continue running but tell BSC over OML that the TRX is down

I think A) is the correct approach. This is what the A-bis specifications require us to do.

##### #4 - 07/06/2020 07:16 PM - pespin

I started by sanitizing the code by using an FSM. From there, we can start adding states or query state of other TRXs: <https://gerrit.osmocom.org/c/osmo-bts/+19167> bts-trx: introduce TRX provisioning FSM

We can now more easily for instance have a "trx\_if\_powered()" well implemented really per trx and not per phy\_link.