

## OsmoBSC - Feature #2722

### document RACH tuning parameters more thoroughly, give explanations

12/08/2017 09:52 AM - laforge

<b>Status:</b> Resolved	<b>Start date:</b> 12/08/2017
<b>Priority:</b> High	<b>Due date:</b>
<b>Assignee:</b> daniel	<b>% Done:</b> 100%
<b>Category:</b>	
<b>Target version:</b>	
<b>Spec Reference:</b>	
<b>Description</b>	
Like any GSM network, we do have parameters such as rach max retransmission and rach tx integer that influence the RACH load (and RACH/IMM-ASS delay).	
Users on lightly loaded networks with few users need different defaults than users o highly [over]loaded cells.	
See also:	
<ul style="list-style-type: none"><li>• <a href="http://gsm-optimization.blogspot.de/2012/04/tx-integer.html">http://gsm-optimization.blogspot.de/2012/04/tx-integer.html</a> for some general recommendations + rationale</li><li>• <a href="http://lists.osmocom.org/pipermail/openbsc/2009-December/002366.html">http://lists.osmocom.org/pipermail/openbsc/2009-December/002366.html</a> for the OsmoBSC defaults + rationale</li><li>• GSM TS 04.08 section 3.3.1.1.2 and 10.5.2.29</li></ul>	
In general:	
<ul style="list-style-type: none"><li>• higher tx-integer will be better for high-load, but will increase the delay of a MS getting any channel</li><li>• higher max-retransmissions means higher rach-load on the cell as the MS will make more re-tries. However, higher chance that it will get through, even in adverse radio conditions.</li></ul>	
Let's make sure we give proper advice to our users.	
<b>Related issues:</b>	
Related to OsmoBSC - Feature #2591: ramp up cell slowly based on access contr...	<b>Resolved</b> 10/23/2017
Related to OsmoBSC - Feature #1611: be more efficient in batching IMMEDIATE A...	<b>Rejected</b> 02/23/2016
Related to OsmoBSC - Feature #2592: Use "waiting time" of IMMEDIATE ASSIGN RE...	<b>Resolved</b> 10/23/2017
Related to OsmoBSC - Feature #2893: automatic simulator for large LU load	<b>Stalled</b> 01/27/2018

### History

#### #1 - 12/08/2017 09:52 AM - laforge

- Related to Feature #2591: ramp up cell slowly based on access control class to avoid severe RACH/SDCCH overload added

#### #2 - 12/08/2017 09:52 AM - laforge

- Related to Feature #1611: be more efficient in batching IMMEDIATE ASSIGN REJECT messages added

#### #3 - 12/08/2017 09:52 AM - laforge

- Related to Feature #2592: Use "waiting time" of IMMEDIATE ASSIGN REJECT added

#### #4 - 01/27/2018 04:43 PM - laforge

- Related to Feature #2893: automatic simulator for large LU load added

#### #5 - 03/16/2018 07:52 PM - laforge

- Assignee changed from sysmocom to daniel

#### #6 - 08/02/2018 09:46 AM - daniel

- Priority changed from Normal to High

#### #7 - 01/08/2020 02:30 PM - daniel

- Status changed from New to In Progress

**#8 - 01/08/2020 03:36 PM - daniel**

- % Done changed from 0 to 60

I think this should cover it:

<https://gerrit.osmocom.org/c/osmo-gsm-manuals/+16769>

**#9 - 01/09/2020 10:11 AM - daniel**

- Status changed from In Progress to Resolved

- % Done changed from 60 to 100

Merged