

## OsmoBSC - Bug #3190

### RSL DELETE INDication not implemented

04/20/2018 10:21 AM - pespin

<b>Status:</b>	Resolved	<b>Start date:</b>	04/20/2018
<b>Priority:</b>	Low	<b>Due date:</b>	
<b>Assignee:</b>	laforge	<b>% Done:</b>	100%
<b>Category:</b>			
<b>Target version:</b>			
<b>Spec Reference:</b>			

#### Description

Today I saw the following trace:

```
<0004> abis_rsl.c:1871 BTS 0 CHAN RQD: no resources for SDCCH 0xf
<0004> abis_rsl.c:1848 BTS 0 CHAN RQD: reason: Location updating (ra=0x09, neci=0x01, chreq_reason=0x03)
<0000> chan_alloc.c:366 Failed to allocate SDCCH channel
<0004> abis_rsl.c:1871 BTS 0 CHAN RQD: no resources for SDCCH 0x9
<0004> abis_rsl.c:1721 (bts=0,trx=0,ts=1,ss=2) T3101 expired: no response to IMMEDIATE ASSIGN
<0004> abis_rsl.c:1848 BTS 1 CHAN RQD: reason: Location updating (ra=0x0d, neci=0x01, chreq_reason=0x03)

<0004> abis_rsl.c:2026 Unimplemented Abis RSL TRX message type 0x14

<0004> abis_rsl.c:1848 BTS 0 CHAN RQD: reason: Location updating (ra=0x0a, neci=0x01, chreq_reason=0x03)
<0000> chan_alloc.c:366 Failed to allocate SDCCH channel
<0004> abis_rsl.c:1871 BTS 0 CHAN RQD: no resources for SDCCH 0xa
e<0004> abis_rsl.c:1721 (bts=0,trx=0,ts=1,ss=4) T3101 expired: no response to IMMEDIATE ASSIGN
<0004> abis_rsl.c:1848 BTS 0 CHAN RQD: reason: Location updating (ra=0x09, neci=0x01, chreq_reason=0x03)
<0000> chan_alloc.c:366 Failed to allocate SDCCH channel
<0004> abis_rsl.c:1871 BTS 0 CHAN RQD: no resources for SDCCH 0x
```

RSL message type 0x14 is "DELETE INDication". It can be found in spec 08.58, section "5.3 Delete indication" and "8.5.4 DELETE INDICATION"

This procedure is used by BTS to indicate that due to overload on the downlink CCCH, an IMMEDIATE ASSIGN

COMMAND has been deleted.

For that purpose BTS sends a DELETE INDication message to BSC.

Handling is (not) done in abis\_rsl\_rx\_cchan:

```
case RSL_MT_DELETE_IND:
    /* CCCH overloaded, IMM_ASSIGN was dropped */
case RSL_MT_CBCH_LOAD_IND:
    /* current load on the CBCH */
    LOGP(DRSL, LOGL_NOTICE, "Unimplemented Abis RSL TRX message "
        "type 0x%02x\n", rslh->c.msg_type);
    break;
```

Not sure what should we do when we receive this message. Release the channel and schedule it for later instad of waiting for timeout T3101 (t3101\_expired)?

#### History

##### #1 - 04/20/2018 03:37 PM - laforge

On Fri, Apr 20, 2018 at 10:21:45AM +0000, pespin [REDMINE] wrote:

Not sure what should we do when we receive this message. Release the channel and schedule it for later instad of waiting for timeout T3101 (t3101\_expired)?

The IMM.ASS is send on the downlink CCCH, which is not a dedicated channel that can be released.

Basically the network has the following options:

- send less downlink CCCH messages (PCH + AGCH) by
  - reducing the paging load by smaller LACs (network planning)
  - change AGCH/PCH split
- increase the downlink CCCH capacity, e.g. by
  - switching from combined CCCH (with SDCCH4) to non-combined CCCH

**#2 - 06/01/2018 01:55 PM - laforge**

- Assignee set to stsp

**#3 - 09/30/2018 10:38 AM - laforge**

so the correct procedure here is to:

- log DELETE IND not as "UNimplemented Abis" but as "DELETE IND" (notice?)
- add a per-BTS rate\_ctr for the number of DELETE IND we receive from this BTS, as this is what the operator needs to monitor in order to optimize the network as needed.

**#4 - 07/18/2019 05:42 AM - laforge**

- Assignee changed from stsp to osmith

**#5 - 06/21/2020 01:57 PM - laforge**

- Status changed from New to In Progress

- Assignee changed from osmith to laforge

- Priority changed from Normal to Low

**#6 - 06/21/2020 02:08 PM - laforge**

- % Done changed from 0 to 80

<https://gerrit.osmocom.org/c/osmo-bsc/+18939>

**#7 - 06/21/2020 04:07 PM - laforge**

- Status changed from In Progress to Resolved

- % Done changed from 80 to 100

patch merged