OsmoBTS - Feature #1902

unify/refactor dynamic timeslot code

01/05/2017 01:38 PM - neels

Status:	New	**Start date:**	01/05/2017
Priority:	Low	**Due date:**	
Assignee:		**% Done:**	0%
Category:			
Target version:			
Spec Reference:			

Description

The two kinds of dynamic timeslots could use the same data structures.

The IPAC style TCH/F_PDCH was implemented first, using ts->flags.
The Osmo style TCH/F_TCH/H_PDCH needed more detailed state, so ts->dyn was added.

The TCH/F_PDCH could also use ts->dyn.

Also, we had neverending bugs of places that forgot to check for dyn ts.
The code would be less fragile if we kept the actual current mode the
timeslot is in in the actual ts->pchan field, where all the code expects it.
Currently we keep "TCH_F_TCH_H_PDCH" in pchan and store the current real
mode in dyn->pchan_is. So all code needs to be aware of dynamic channels
and has to add checks to find out the current mode.

I assume it would be nicer if the fact that a channel is dynamic is kept
in ts->dyn, and the ts->pchan can be evaluated like with static channels.
ts->pchan should probably also reflect switchover as an invalid pchan.
This way all code can just directly use ts->pchan, and the places that
are concerned with switchover can look it up in ts->dyn.*.

Related issues:

Related to OsmoBTS - Bug #3131: dynamic timeslots not tested by BTS_Tests.ttcn	**Resolved**	**04/04/2018**
Related to OsmoBSC - Bug #3099: dynamic timeslots not tested by BSC_Tests.ttcn	**Resolved**	**03/22/2018**

History

#1 - 01/05/2017 01:46 PM - neels

- Description updated

- Priority changed from Normal to Low

(accidentally hit enter when there was no description yet, adding description now)

#2 - 01/05/2017 01:48 PM - neels

- Assignee set to Osmocom CNI Developers

#3 - 12/10/2017 07:59 PM - laforge

- Project changed from OpenBSC to OsmoBSC

#4 - 01/04/2018 10:54 AM - laforge

- Assignee changed from Osmocom CNI Developers to sysmocom

- Priority changed from Low to Normal

I think this should be done together with the introduction of osmo_fsm for handling a lchan, i.e. one FSM per lchan whihc then tracks all of it's activation/deactivation state.

#5 - 04/04/2018 09:50 AM - laforge

- Related to Bug #3131: dynamic timeslots not tested by BTS_Tests.ttcn added

#6 - 04/04/2018 09:54 AM - laforge

- Related to Bug #3099: dynamic timeslots not tested by BSC_Tests.ttcn added

#7 - 04/04/2018 09:54 AM - laforge

I think this should wait until we have proper test cases, e.g. #3099

#8 - 04/06/2018 08:00 AM - laforge

- Category set to A-bis RSL

#9 - 08/22/2018 10:53 AM - neels

- Status changed from New to Resolved

In the course introducing the new timeslot FSM in osmo-bsc, the dynamic timeslot handling has been overhauled, and both dyn ts kinds now use the same data structures, namely

- ts.pchan_from_config = vty config setting,
- .pchan_on_init = same as pchan_from_config but is not affected by telnet vty changes, and
- .pchan_is = the current actual pchan.

- For static timeslots, pchan_is = pchan_on_init,
- for dynamic ones,
  - pchan_on_init = {TCH_F_TCH_H_PDCH, TCH_F_PDCH}
  - pchan_is = {TCH_F, TCH_H, PDCH, NONE}

However, the osmo-bts code base still employs the old separate data structures to track the dynamic timeslot status.

#10 - 08/22/2018 10:54 AM - neels

- Project changed from OsmoBSC to OsmoBTS

- Category deleted (A-bis RSL)

- Status changed from Resolved to New

ok, let me just re-open this in the OsmoBTS project, then.

#11 - 07/18/2019 06:08 AM - laforge

- Priority changed from Normal to Low

#12 - 01/08/2020 10:56 PM - laforge

- Assignee deleted (sysmocom)