

libosmo-abis - Bug #2718

ipaccess_bts_handle_ccm() gets ID_REQ/ID_RESP/ID_ACK wrong

12/06/2017 05:56 PM - laforge

Status: Resolved	Start date: 12/06/2017
Priority: Normal	Due date:
Assignee: laforge	% Done: 100%
Category:	
Target version:	
Spec Reference:	
Description	
We've never had any documentation for the IPA CCM sub-protocol, but logic dictates [tm] that the sequence is as follows: <ol style="list-style-type: none">1. BTS-<BSC IPA_IDENTITY_REQ (requesting unit-id etc.)2. BTS->BSC IPA_IDENTITY_RESP (responding with unit-id etc.)3. BTS-<BSC IPA_IDENTITY_ACK (acknowledging that the identity is known/welcome)4. BTS->BSC IPA_IDENTITY_ACK (another ack to ack the ack?) Now the code in libosmo-abis/src/input/ipaccess.c, specifically in ipaccess_bts_handle_ccm() does the following: <ol style="list-style-type: none">1. wait for any IPA_IDENTITY_REQ2. respond with IPA_IDENTITY_RESP3. immediately send an IPA_IDENTITY_ACK, no matter if the BSC/server sends an ACK first And this code is used in our OsmoBTS code base :/	
Related issues:	
Related to OsmoBSC - Bug #2719: OsmoBSC doesn't send BCCH filling after RSL c...	Resolved 12/06/2017

History

#1 - 12/06/2017 06:42 PM - laforge

- Related to Bug #2719: OsmoBSC doesn't send BCCH filling after RSL connection unless BTS sends unsolicited message added

#2 - 02/06/2018 10:52 AM - msuraev

Could it be due to some quirk with nanoBTS?

#3 - 04/17/2018 07:41 AM - laforge

actually, looking at my very first pcap files between nanoBTS and BSC from 2010, it looks more like:

1. BTS -> BSC TCP connection from BTS -> BSC
2. BTS -> BSC: IPA_IDENTITY_ACK
3. BTS -< BSC: IPA_IDENTITY_REQ
4. BTS -> BSC: IPA_IDENTITY_RESP
5. BTS -< BSC: IPA_IDENTITY_ACK

So the first ack from client (BTS) to server (BSC) is basically something like "I don't care about your identity, we are good to go, I as the client accept any identity you may have".

In the opposite direction, the BSC then asks for the BTS identity, to which the BTS responds, and only after that, the BSC indicates ACK to the BTS (and hence the BTS may proceed).

#4 - 04/17/2018 07:48 PM - laforge

- Status changed from New to In Progress

#5 - 04/17/2018 07:51 PM - laforge

So actually libosmo-abis is right and the TTCN IPA_Emulation code was wrong. Fixed in <https://gerrit.osmocom.org/7861>

#6 - 04/17/2018 07:56 PM - laforge

- *Status changed from In Progress to Resolved*

- *% Done changed from 0 to 100*

patch merged.