

OsmoMSC - Feature #2931

USSD test cases in TTCN-3

02/11/2018 05:41 PM - laforge

Status: In Progress	Start date: 02/11/2018
Priority: Low	Due date:
Assignee: fixeria	% Done: 90%
Category: SS/USSD	
Target version:	
Resolution:	
Description We're not yet testing USSD from MSC_Tests in TTCN-3	
Related issues: Related to OsmoMSC - Feature #1597: External interface for USSD Stalled 02/23/2016	

History

#1 - 04/08/2018 08:03 AM - laforge

- Related to Feature #1597: External interface for USSD added

#2 - 04/08/2018 11:06 AM - fixeria

- Tracker changed from Bug to Feature

- Assignee set to fixeria

I'll try to implement some basic test coverage.

As I understand, we need to emulate the following:

- subscribers, sending and receiving USSDs at the same time (according to 3GPP TS 04.80);
- TTCN-3 based external USSD gateway (as soon as I finish the GSUP interface);
 - network initiated USSD-sessions;
 - subscriber initiated USSD-sessions;
 - error cases during USSD-sessions (e.g. losing connection with USSD gateway);
 - multiple USSD-sessions with a single subscriber (on both MM and transaction levels);

#3 - 05/29/2018 05:51 PM - fixeria

- Status changed from New to In Progress

- % Done changed from 0 to 10

The current plan of this work is:

1. (DONE) Implement abstract functions for GSM 04.80 coding
2. (DONE) TC: single request with known code (^*#100#)
3. (DONE) TC: single request with unknown code (^*#999#)
4. (DONE) TC: USSD request during an active call
5. TC: invalid initial request with DCS != 0x0f
6. TC: network originated USSD notification
7. Multiple requests within a session:
 - 7.1. Emulate the USSD GW on the HLR side
 - 7.2. TC: REQ_MS, REQ_NET, RSP_MS, RSP_NET
 - 7.3. TC: MS initiated RELEASE_COMPLETE

Patches for both 1. and 2. have been sent to review:

<https://gerrit.osmocom.org/#/q/status:open+project:osmo-ttcn3-hacks+topic:ussd>

<https://gerrit.osmocom.org/#/c/osmo-ttcn3-hacks/+9372/>

#4 - 05/30/2018 02:17 PM - laforge

- Tags set to TTCN3

#5 - 06/10/2018 01:54 PM - fixeria

Two new testcases have been submitted:

TC: single request with unknown code (*#999#)
<https://gerrit.osmocom.org/9470/>

TC: USSD request during an active call:
<https://gerrit.osmocom.org/9471/>

#6 - 06/19/2018 03:36 PM - fixeria

- % Done changed from 10 to 60

As we are about to finish the GSM 09.11 implementation, i.e. 'SS/USSD over GSUP' in our case, the existing test cases were updated in order to expect and reply GSUP messages:

<https://gerrit.osmocom.org/9685/>

Also, a new tests cases for network-initiated transactions have been sent to review:

<https://gerrit.osmocom.org/9686/>

Finally, the test case, which was intended to check the reaction on unknown USSD-code, is going to be dropped:

<https://gerrit.osmocom.org/9683/>

#7 - 06/19/2018 03:45 PM - fixeria

Future plans:

- Test case for MS-initiated RELEASE * Test case for a few concurrent SS/USSD transactions * Test cases for abnormal cases, e.g. ** referencing a non-existing transaction ** interrupting an active transaction ** no response to Paging Request

#8 - 08/03/2018 05:45 PM - fixeria

- Category set to SS/USSD

- Status changed from In Progress to Stalled

- % Done changed from 60 to 80

#9 - 11/27/2018 09:34 PM - fixeria

- Checklist item [x] Test case for MS-initiated RELEASE added
Checklist item [] Test case for a few concurrent SS/USSD transactions added
Checklist item [] Abnormal: referencing a non-existing transaction added
Checklist item [] Abnormal: interrupting an active transaction added
Checklist item [] Abnormal: no response to Paging Request added
Checklist item [] Abnormal: timeout waiting for any activity added

#10 - 01/11/2019 11:07 PM - fixeria

- Checklist item [x] Abnormal: timeout waiting for any activity set to Done

- Priority changed from Normal to Low

Regarding the inactivity timeout, please see <https://gerrit.osmocom.org/#/c/osmo-ttcn3-hacks/+/11985/>

#11 - 06/14/2019 05:51 PM - fixeria

- Checklist item [] Abnormal: MT transaction to an unknown subscriber added

- Status changed from Stalled to In Progress

#12 - 06/14/2019 06:07 PM - fixeria

- Checklist item [x] Abnormal: MT transaction to an unknown subscriber set to Done

<https://gerrit.osmocom.org/c/osmo-ttcn3-hacks/+/14450> MSC_Tests.ttcn: introduce TC_mt_ussd_for_unknown_subscr

#13 - 06/15/2019 08:02 AM - fixeria

- Checklist item [x] Abnormal: referencing a non-existing transaction set to Done

<https://gerrit.osmocom.org/c/osmo-ttcn3-hacks/+/14460> MSC_Tests.ttcn: introduce TC_proc_ss_for_unknown_session

<https://gerrit.osmocom.org/c/osmo-ttcn3-hacks/+/14503> MSC_Tests.ttcn: introduce TC_mo_uspd_for_unknown_trans

#14 - 06/15/2019 07:41 PM - fixeria

- Checklist item [x] Abnormal: no response to Paging Request set to Done

<https://gerrit.osmocom.org/c/osmo-ttcn3-hacks/+/14474> MSC_Tests.ttcn: introduce TC_proc_ss_paging_fail

<https://gerrit.osmocom.org/c/osmo-msc/+/14475> libmsc/gsm_09_11.c: inform HLR/EUSE if Paging has failed

#15 - 06/16/2019 08:33 AM - fixeria

- Checklist item [x] Abnormal: interrupting an active transaction set to Done

- % Done changed from 80 to 90

<https://gerrit.osmocom.org/c/osmo-ttcn3-hacks/+/14476> MSC_Tests.ttcn: introduce TC_proc_ss_abort