eCall Plugtests;
Nuneaton, UK;
22 - 24 May 2012

ETSI

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Contents

1 Executive Summary

The 1st eCall Plugtests event was held from 22 to 24 May 2012 in Nuneaton (UK).

This event was co-organized by ETSI and ERTICO and hosted by InnovITS Advance.

It aimed to test the interoperability of Pan-European eCall equipments from all key vendors.

8 companies participated in this event testing 14 devices (9 IVS and 5 PSAP).

546 interoperability tests have been executed with a success rate of 88.8% which is excellent, considering it is a first interoperability event and given the fact that prototype and mature implementations attended.

2 Introduction

This Plugtests event aimed to verify the interoperability between different manufacturers of solutions for eCall IVS devices and PSAPs from different countries.

The implementations were connected using a private GSM network provided by InnovITS Advance.

A Plugtests guide was produced by CTI, containing 28 interoperability tests, including 7 mandatory test cases and 21 optional ones.

ETSI provided the interoperability tool suite of wiki, scheduling and test reporting tool.

Each day test sessions for IOP assessment were conducted. A wrap-up meeting was held each day to discuss main interoperability points and other remarkable behaviours concerning special points within the used standards.

The goal of interoperability test is to check that devices resulting from protocol implementations are able to work together and provide the functionalities provided by the protocols. As necessary, one message may be checked during a test, when a successful functional verification may result from an incorrect behaviour for instance. Detailed protocol checks are part of the conformance testing process and are thus avoided during the interoperability tests.

The test sessions have been mainly executed between 2 devices (IVS and PSAP eCall modem-server) from different vendors.

In addition to the 7 mandatory interoperability tests, 21 other 'optional' tests have been specified, and these may be used to help diagnose basic call set-up problems and high level application protocol (HLAP) timing issues that may be encountered during the interoperability testing phase.

For some of the optional tests it was necessary to use a mobile phone instead of the IVS and in other tests to replace the PSAP eCall modem-server with a telephone.

3 Abbreviations

EUT	Equipment Under Test
MAC	Media Access Control layer of the access layers
PHY	The Physical layer of the access layers
NO	Test is recorded as NOT successfully passed.
NA	Test is not applicable.
OK	Test is recorded as successfully passed.
OT	Test is recorded as not being executed due to lack of time.
Test Session	A paring of vendors that test together during a given time slot.
TRT	Test Reporting Tool.
GPS	Global Positioning System
GPRS	General Packet Radio System
GSM	Global System of Mobile telecommunications
HLAP	High Level Application Protocol
IVS	In Vehicle System (eCall terminal and associated sub-systems in vehicle)
MSD	Minimum Set of Data
MSISDN	Mobile Subscriber Integrated Services Digital Network Number
PLMN	Public Land Mobile Network
PSAP	Public Service Answering Point
SIM	Subscriber Identity Module
VIN	Vehicle Identification Number

4 Acknowledgement

This is to acknowledge the effort of

- John WATSON (Celmatic Consulting), Djelal RAOUF (SagemCom), Stefan GOETTE and Martin GRZEBELLUS (NavCert) for their contribution to the development of the Plugtests test guide.
- InnovITS Advance , and especially Catherine FERRIS, Phil PETTITTS, Peter VEERMAT and Mandeep PANESAR for having hosted the event and for their support conducting the testing.
- Francois FISCHER and Sébastien MURE from ERTICO for their assistance in preparing and conducting the event.

5 Participants

The companies which attended the Plugtests are listed in the table below.

Table 1: List of companies

#	Company Name	IVS	PSAP
1	Cinterion Wireless Modules	2	
2	CIVITRONIC	1	
3	OECON Products & Services GmbH		1
4	PicoSoft S.r.l.		1
5	Qualcomm CDMA Technologies GmbH	1	1
6	Sagemcom SAS	1	1
7	SIMCom Wireless Solutions	2	1
8	Telit Communications S.p.A.	2	
		9	5

6 Technical and Project Management

All the information presented in this chapter is an extract of the ETSI event wiki https://services.plugtests.net/wiki/ecall/index.php/Main_Page (Access for registered people only).

6.1 Test Plan

The test plan containing 28 interoperability tests was developed by ETSI CTI together with a team of 3 experts.

The test plan has been distributed to participants some weeks before the event, proposing them to contribute or comment the test cases, or proposing additional tests. The tests were grouped in mandatory and optional tests.

The testing is split into two categories: the mandatory test cases and the optional tests cases. The optional ones have been specified, as these may be used to help diagnose basic call set-up problems and high level application protocol (HLAP) timing issues that may be encountered during the interoperability testing phase.

Table 2: Mandatory Tests

1	TD_MAN_PUSH_01_EUT	MSD transmission / reception /acknowledgement
2	TD_MAN_PUSH_02_EUT	Voice communication after receipt of AL-ACK
3	TD_MAN_PUSH_03_EUT	Retransmission of MSD on request from PSAP
4	TD_MAN_PUSH_04_EUT	Voice communication after retransmission of MSD
5	TD_MAN_PUSH_05_EUT	Clear down / PSAP initiated network clear down
6	TD_MAN_PUSH_06_EUT	Clear down / PSAP initiated application layer AL-ACK Clear-down
7	TD_MAN_PUSH_07_EUT	Call Back / PSAP initiated call back to IVS

NOTE: The mandatory tests are used to verify the interoperability between the IVS, PLMN and PSAP.

Table 3: Optional Tests – Push Mode

1	TD_OPT_PUSH_01_IVS	Emergency call set-up with eCall identifier (flag) set to 'Automatically Initiated' in Service Category message
2	TD_OPT_PUSH_02_IVS	Emergency call set-up with eCall identifier (flag) set to 'Manually Initiated' in Service Category message
3	TD_OPT_PUSH_03_IVS	MSD call type indicator set to 'Automatically Initiated'
4	TD_OPT_PUSH_04_IVS	MSD call type indicator set to 'Manually Initiated'
5	TD_OPT_PUSH_05_IVS	MSD call type indicator set to 'Test Call'
6	TD_OPT_PUSH_06_IVS	Duration of Initiation Signal does not exceed 2 seconds from when call is answered
7	TD_OPT_PUSH_07_PSAP	PSAP does not send 'SEND MSD' request if valid Initiation Signal is not received within 2 seconds from answering call
8	TD_OPT_PUSH_08_IVS	Mute IVS audio during MSD transmission and un-mute after application layer acknowledgement
9	TD_OPT_PUSH_09_PSAP	Mute PSAP audio during MSD request / MSD transfer and un-mute after application layer acknowledgement
10	TD_OPT_PUSH_10_IVS	Auto redial following busy / no-answer during call set-up
11	TD_OPT_PUSH_11_IVS	Auto redial if call drops before MSD acknowledged and does not redial if MSD has been acknowledged (LL)
12	TD_OPT_PUSH_12_PSAP	Un-mute PSAP audio when Initiation Signal not received (T4 expired)
13	TD_OPT_PUSH_13_IVS	Un-mute IVS audio when SEND MSD not received (T5 expired)
14	TD_OPT_PUSH_14_IVS	Un-mute IVS audio when AL-ACK not received (T6 expired)
15	TD_OPT_PUSH_15_IVS	Un-mute IVS audio when LL-ACK not received (T7 expired)
16	TD_OPT_PUSH_16_PSAP	Un-mute PSAP audio when MSD not received within (T8 expired)
17	TD_OPT_PUSH_17_IVS	Format of encoded and decoded MSD in accordance with EN 15722
18	TD_OPT_PUSH_18_IVS	IVS configured for eCall 'only' service (restricted)
19	TD_OPT_PUSH_19_IVS	IVS maintains register of recent calls
20	TD_OPT_PUSH_20_PSAP	PSAP handling of more than 1 eCall simultaneously

Table 4: Optional Tests – Pull Mode

01	TD_OPT_PULL_01_PSAP	MSD transmission / reception /acknowledgement (Use of Pull mode is not currently permitted within the EU)

6.2 Test Scheduling

The test schedule allows each company to test against all other companies which led to 41 test session pairings. All possible pairing combinations were performed without any unscheduled sessions, which was appreciated by the participants. Every test slot had a duration of 3 hours. The day was organized in a morning test session from 9.00 to 12.00 and in afternoon test sessions from 13.00 to 16.00 and 16:00 to 19:00. Up to 5 different pairings in parallel were planned.

The figure below shows the latest version of the test schedule.

		Area 1	Area 2	Area 3	Area 4	Area 5
Tue 22	9:00-12:00	Qualcomm IVS_Qualcomm Simcom PSAP_Simcom_SIM5320E	Oecon PSAP_Oecon Telit IVS2_Telit_HE920	Picosoft PSAP_Picosoft Cinterion IVS_Cinterion_2		
	13:00-16:00	Oecon PSAP_Oecon Simcom IVS_Simcom_SIM5320E	Qualcomm PSAP_Qualcomm Simcom IVS_Simcom_SIM900	Telit IVS1_Telit_GE864 Simcom PSAP_Simcom_SIM5320E	Cinterion IVS_Cinterion_1 Picosoft PSAP_Picosoft	Qualcomm IVS_Qualcomm Sagemcom PSAP_Sagemcom
	16:00-19:00	Simcom PSAP_Simcom_SIM5320E Telit IVS2_Telit_HE920	Civitronic IVS_Civitronic Qualcomm PSAP_Qualcomm	Picosoft PSAP_Picosoft Simcom IVS_Simcom_SIM5320E	Oecon PSAP_Oecon Sagemcom IVS_Sagemcom	Sagemcom PSAP_Sagemcom Simcom IVS_Simcom_SIM900
Wed 23	9:00-12:00	Civitronic IVS_Civitronic Simcom PSAP_Simcom_SIM5320E	Oecon PSAP_Oecon Cinterion IVS_Cinterion_2	Cinterion IVS_Cinterion_1 Qualcomm PSAP_Qualcomm	Picosoft PSAP_Picosoft Simcom IVS_Simcom_SIM900	Sagemcom PSAP_Sagemcom Telit IVS1_Telit_GE864
	13:00-16:00	Civitronic IVS_Civitronic Oecon PSAP_Oecon	Picosoft PSAP_Picosoft Telit IVS1_Telit_GE864	Sagemcom IVS_Sagemcom Simcom PSAP_Simcom_SIM5320E	Qualcomm PSAP_Qualcomm Cinterion IVS_Cinterion_2	Sagemcom PSAP_Sagemcom Telit IVS2_Telit_HE920
	16:00-19:00	Cinterion IVS_Cinterion_1 Simcom PSAP_Simcom_SIM5320E	Oecon PSAP_Oecon Simcom IVS_Simcom_SIM900	Qualcomm PSAP_Qualcomm Simcom IVS_Simcom_SIM5320E	Picosoft PSAP_Picosoft Qualcomm IVS_Qualcomm	Civitronic IVS_Civitronic Sagemcom PSAP_Sagemcom
Thu 24	9:00-12:00	Qualcomm PSAP_Qualcomm Telit IVS2_Telit_HE920	Civitronic IVS_Civitronic Picosoft PSAP_Picosoft	Oecon PSAP_Oecon Telit IVS1_Telit_GE864	Simcom PSAP_Simcom_SIM5320E Cinterion IVS_Cinterion_2	Cinterion IVS_Cinterion_1 Sagemcom PSAP_Sagemcom
	13:00-16:00	Qualcomm PSAP_Qualcomm Telit IVS1_Telit_GE864	Cinterion IVS_Cinterion_1 Oecon PSAP_Oecon	Picosoft PSAP_Picosoft Sagemcom IVS_Sagemcom	Sagemcom PSAP_Sagemcom Cinterion IVS_Cinterion_2	
	16:00-19:00	Oecon PSAP_Oecon Qualcomm IVS_Qualcomm	Picosoft PSAP_Picosoft Telit IVS2_Telit_HE920	Sagemcom PSAP_Sagemcom Simcom IVS_Simcom_SIM5320E	Qualcomm PSAP_Qualcomm Sagemcom IVS_Sagemcom	

Figure 1: Latest Test Schedule

6.3 Test Configuration

The test site architecture comprises a private GSM network and MSC. A SIP (VoIP) trunk from the MSC gateway connects to a SIP – ISDN media gateway providing 8 VoIP channels and 4 x E1 / ISDN (PRI) interfaces.

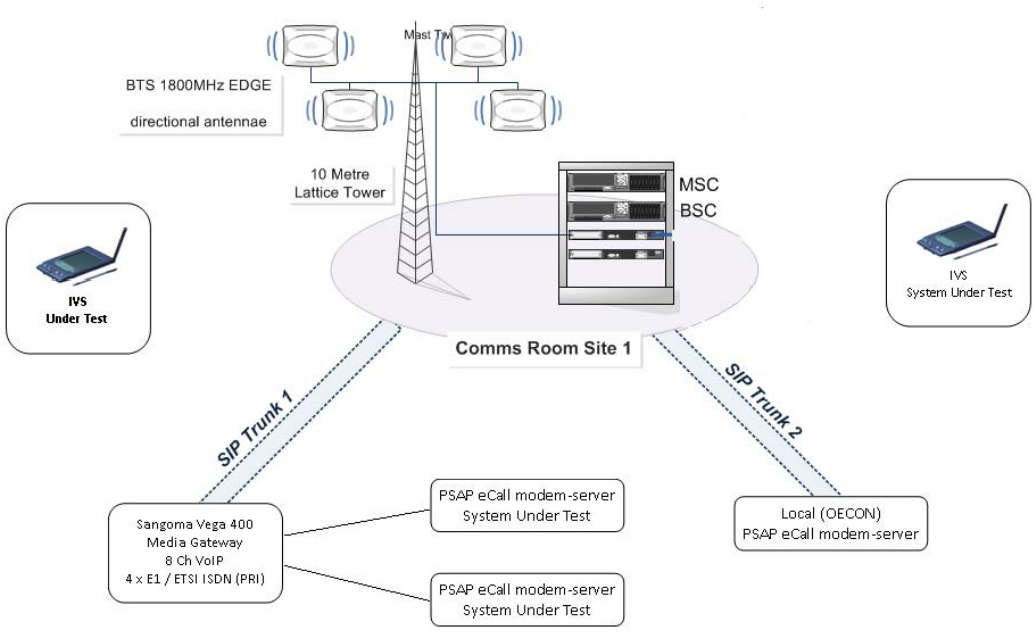

Figure 2: InnovITS ADVANCE simplified test site layout

The interop testing was held in a marquee close to the GSM network infrastructure (BSC+MSC) in order to get the best radio coverage needed for the testing.

6.3.1 Interoperability Testing Configuration

Interoperability tests will be performed using the set-up shown in figure 3 eCall_CFG_01. Ancillary measurement and message logging equipment is not shown but may be used, with the agreement of the participants, to help identify the likely cause of any interoperability test failures that may arise.

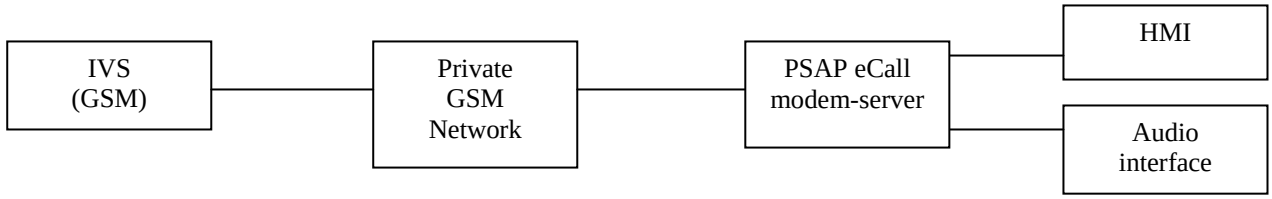

Figure 3: eCall_CFG_01 – Mandatory interoperability testing configuration

6.3.2 Optional (conformance based) Test Configurations

Optional conformance based testing may be performed using any of the 3 test configurations, specified in each of the optional eCall Scenario test cases, and shown in figures 3, 4 and 5.

eCall_CFG_01	IVS	PLMN	PSAP (Modem-server / HMI / Audio interface)
eCall_CFG_02	IVS	PLMN	TELEPHONE
eCall_CFG_03	MOBILE PHONE	PLMN	PSAP (Modem-server / HMI / Audio interface)

Interoperability test configuration 2 (eCall_CFG_02), a TELEPHONE (only) is used to simulate a PSAP that is either not equipped with a PSAP eCall modem-server or a PSAP eCall modem server that fails to respond to the incoming Initiation Signal from the IVS for any reason.

Figure 4: eCall_CFG_02 – Optional interoperability / diagnostic testing configuration

Interoperability test configuration 3 (eCall_CFG_03), a mobile phone is used instead of an IVS to simulate an emergency call from an IVS that fails to transmit an eCall Initiation Signal, or transmits an invalid Initiation Signal, or from a miss-routed mobile phone originated emergency call. In all such cases the PSAP modem-server must not respond with a request to 'SEND MSD' (START message) but is required, after the specified time, to transfer the emergency call to a PSAP operator so that 2-way speech can be established.

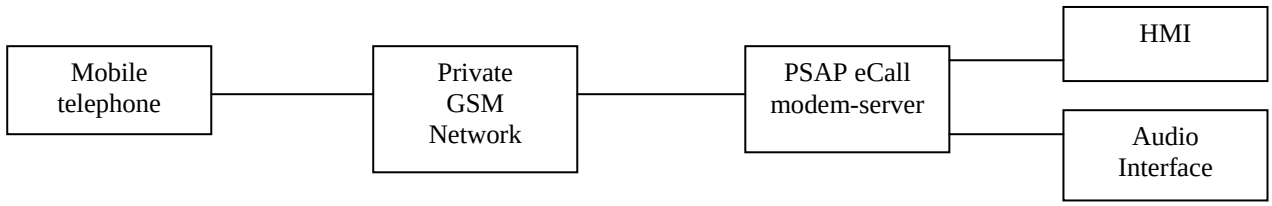

Figure 5: eCall_CFG_03 – Optional interoperability / diagnostic testing configuration

6.3.3 Interoperability Test Procedure

Each test was executed in the same manner as listed below:

1) Connect devices from different vendors

2) Check connectivity between devices

3) Perform tests according to Plugtests Guide

4) Check if devices can send/receive frames from each other

5) Check if data is handled correctly in the network and facility layers

6) Result determination and reporting

7) Result OK: run next test

8) Result NOK: check monitor tools to identify source of error

9) Report results in ETSI Test Reporting Tool

6.4 Results reporting

The results of each interoperability test session have been recorded in a dedicated web application software: the ETSI Test Report Tool (TRT). After each test execution the interoperability result is agreed among all participants and then recorded. After each test session the report is submitted to ETSI.

Vendors can edit their products as well as create, edit, and withdraw test session reports only of sessions that they have participated in.

7 Achieved Results

The achieved results show that all implementations have been compatible on a basic level, i.e. sent data could be decoded and interpreted properly by receivers.

7.1 Overview of tests executed

There were 7 mandatory tests defined in the test plan and 21 optional ones. In a total 546 tests were executed and the figure below shows the results of all tests.

On the 546 test cases performed, 485 have been OK, which represents a success rate of **88.8%**. This is an excellent result especially as it was the first interoperability event and given the fact that prototype and mature implementations attended.

7.1.1 Overall results

Interoperability		Totals
OK	NO	Run
485 (88.8%)	61 (11.2%)	546

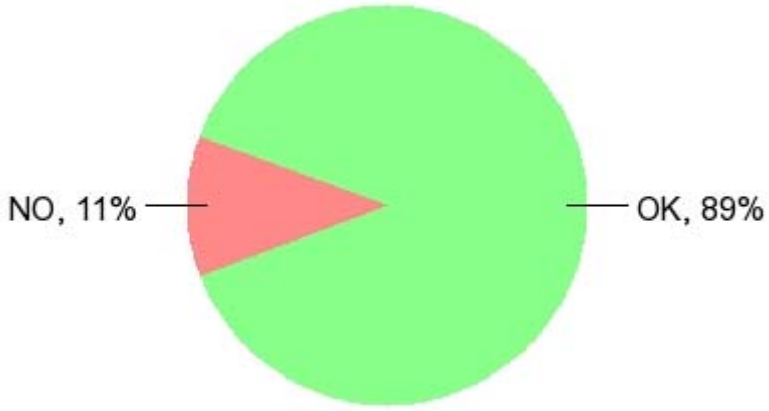

Figure 6: Overall Results of the tests

7.1.2 Mandatory test cases results

Interoperability			Not Executed			Totals	
OK	NO		NA	OT		Run	Results
184 (89.3%)	22 (10.7%)		18 (8.8%)	0 (0%)		206 (92.0%)	224

Legend: OK: Test successfully performed

NO: Test NOT successfully performed

NA: Test not applicable

OT: Test not performed

On the 224 mandatory test cases planned, 206 have been executed and 18 not executed.

On the 206 Mandatory TC performed, 184 have been OK, which represents a success rate of 89.3%.

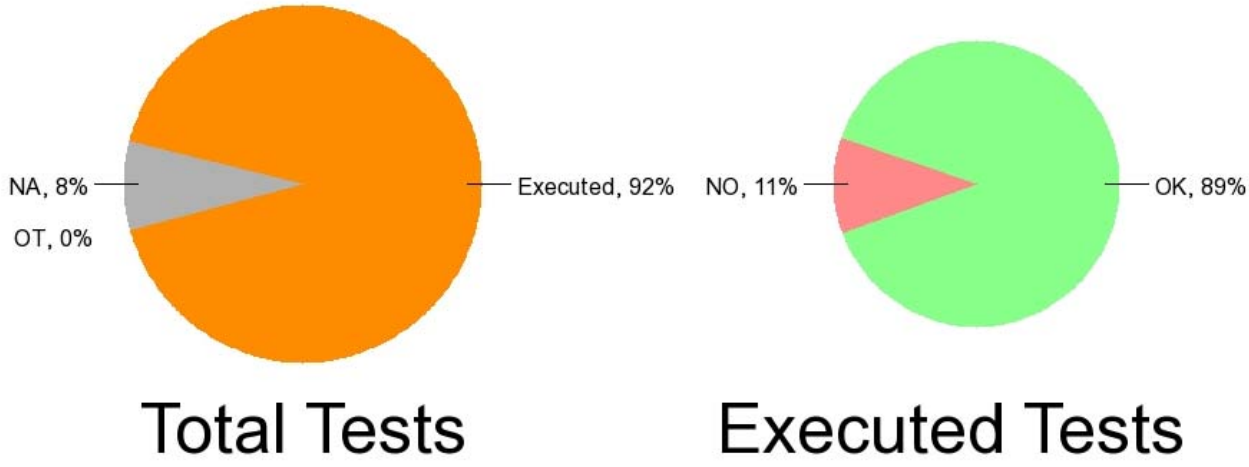

Figure 7: Results of the Mandatory tests

7.1.3 Optional test cases results

Interoperability			Not Executed			Totals	
OK	NO		NA	OT		Run	Results
301 (88.5%)	39 (11.5%)		215 (32.0%)	117 (17.4%)		340 (50.6%)	672

Legend: OK: Test successfully performed

NO: Test NOT successfully performed

NA: Test not applicable

OT: Test not performed

On the 672 optional test cases planned, 340 have been executed and 332 not executed.

On the 340 optional TC performed, 301 have been OK, which represents a success rate of 88.5%.

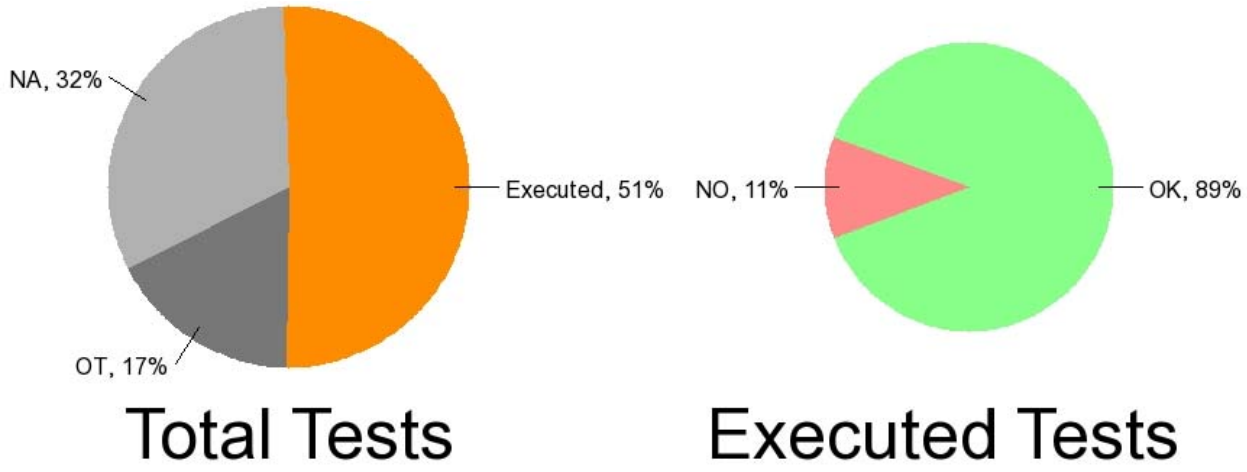

Figure 8: Results of the Optional tests

7.2 List of tests results per test case

The table below provides results per test:

		Interoperability		Not Executed		Totals	
Group	**Test Id**	**OK**	**NO**	**NA**	**OT**	**Run**	**Results**
Mandatory	TD_MAN_PUSH_01	31 (96.9%)	1 (3.1%)	0 (0.0%)	0 (0.0%)	32 (100.0%)	32
	TD_MAN_PUSH_02	29 (90.6%)	3 (9.4%)	0 (0.0%)	0 (0.0%)	32 (100.0%)	32
	TD_MAN_PUSH_03	31 (96.9%)	1 (3.1%)	0 (0.0%)	0 (0.0%)	32 (100.0%)	32
	TD_MAN_PUSH_04	28 (90.3%)	3 (9.7%)	1 (3.1%)	0 (0.0%)	31 (96.9%)	32
	TD_MAN_PUSH_05	32 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	32 (100.0%)	32
	TD_MAN_PUSH_06	19 (67.9%)	9 (32.1%)	4 (12.5%)	0 (0.0%)	28 (87.5%)	32
	TD_MAN_PUSH_07	14 (73.7%)	5 (26.3%)	13 (40.6%)	0 (0.0%)	19 (59.4%)	32
Optional	TD_OPT_PUSH_01_IVS	18 (69.2%)	8 (30.8%)	2 (6.3%)	4 (12.5%)	26 (81.3%)	32
	TD_OPT_PUSH_02_IVS	23 (85.2%)	4 (14.8%)	1 (3.1%)	4 (12.5%)	27 (84.4%)	32
	TD_OPT_PUSH_03_IVS	12 (85.7%)	2 (14.3%)	14 (43.8%)	4 (12.5%)	14 (43.8%)	32
	TD_OPT_PUSH_04_IVS	13 (92.9%)	1 (7.1%)	14 (43.8%)	4 (12.5%)	14 (43.8%)	32
	TD_OPT_PUSH_05_IVS	16 (100.0%)	0 (0.0%)	12 (37.5%)	4 (12.5%)	16 (50.0%)	32
	TD_OPT_PUSH_06_IVS	20 (90.9%)	2 (9.1%)	5 (15.6%)	5 (15.6%)	22 (68.8%)	32
	TD_OPT_PUSH_07_PSAP	18 (90.0%)	2 (10.0%)	7 (21.9%)	5 (15.6%)	20 (62.5%)	32
	TD_OPT_PUSH_08_IVS	27 (96.4%)	1 (3.6%)	0 (0.0%)	4 (12.5%)	28 (87.5%)	32
	TD_OPT_PUSH_09_PSAP	22 (95.7%)	1 (4.3%)	4 (12.5%)	5 (15.6%)	23 (71.9%)	32
	TD_OPT_PUSH_10_IVS	5 (62.5%)	3 (37.5%)	20 (62.5%)	4 (12.5%)	8 (25.0%)	32
	TD_OPT_PUSH_11_IVS	9 (75.0%)	3 (25.0%)	16 (50.0%)	4 (12.5%)	12 (37.5%)	32
	TD_OPT_PUSH_12_PSAP	20 (100.0%)	0 (0.0%)	6 (18.8%)	6 (18.8%)	20 (62.5%)	32
	TD_OPT_PUSH_13_IVS	17 (89.5%)	2 (10.5%)	7 (21.9%)	6 (18.8%)	19 (59.4%)	32
	TD_OPT_PUSH_14_IVS	18 (94.7%)	1 (5.3%)	7 (21.9%)	6 (18.8%)	19 (59.4%)	32
	TD_OPT_PUSH_15_IVS	15 (93.8%)	1 (6.3%)	10 (31.3%)	6 (18.8%)	16 (50.0%)	32

	TD_OPT_PUSH_16_PSAP	13 (100.0%)	0 (0.0%)	12 (37.5%)	7 (21.9%)	13 (40.6%)	32
	TD_OPT_PUSH_17_IVS	7 (77.8%)	2 (22.2%)	16 (50.0%)	7 (21.9%)	9 (28.1%)	32
	TD_OPT_PUSH_18_IVS	10 (100.0%)	0 (0.0%)	14 (43.8%)	8 (25.0%)	10 (31.3%)	32
	TD_OPT_PUSH_19_IVS	7 (100.0%)	0 (0.0%)	18 (56.3%)	7 (21.9%)	7 (21.9%)	32
	TD_OPT_PUSH_20_PSAP	0 (0.0%)	3 (100.0%)	20 (62.5%)	9 (28.1%)	3 (9.4%)	32
	TD_OPT_PULL_01_PSAP	11 (78.6%)	3 (21.4%)	10 (31.3%)	8 (25.0%)	14 (43.8%)	32

Table 5: Results per tests

8 Summary of Wrap Up Sessions

8.1 Interoperability Testing Issues

- The test infrastructure worked well except for one base station controller (BSC) problem at the beginning of the interoperability event. The support team resolved this issue and the testing schedule was not adversely affected.
- The interoperability testing ran smoothly and there appeared to be an excellent, cooperative and mutually beneficial, rapport between the participating companies' engineers.
- Most interoperability failures occurred due to:
  - IVS or PSAP function not having been implemented correctly in accordance with the CEN and ETSI specifications;
  - IVS or PSAP function missing from the implementation.
- Due to the specialized set up of the infrastructure, the test case "PSAP recalls IVS after hang-up" could not be performed as the test site installation redirected all outgoing calls immediately to the PSAP. This only affected the ISDN PRI connected PSAP and other PSAP initiated call-backs to the IVS were successfully performed using other means. It is recommended that innovITS ADVANCE address this call-back limitation so that, in the future, all applicable eCall interoperability tests can be performed.
- PSAPs located outside of the InnovITS GSM system could not dial-in (test TD_MAN_PUSH_07_EUT "Call Back / PSAP initiated call back to IVS").

8.2 Base Specification Issues

- The CEN and ETSI eCall specifications appeared to be sound (with one exception) and the majority of the participants had a good working knowledge of the eCall technical requirements. The Plugtest team provided guidance to those that were, perhaps, less familiar with the CEN and ETSI specifications. The difficulty in obtaining copies of the most up to date (CEN) specifications was mentioned and it was explained that copies of the CEN ENs can normally be purchased from National Standards Organisations e.g. from the British Standards Institute in the UK. The latest ETSI specifications can also be downloaded from the ETSI and/ or 3GPP websites.

- The mapping of the application layer clear-down message (AL-ACK_Cleardown) to the link layer (LL) messages was discussed and it was explained that a proposed draft change to EN16062 (HLAP) had been drafted and agreed by ETSI MSG, during the London meeting, in March (2012). The proposed mapping, when adopted, would further reduce the risk of IVS – PSAP interoperability failures.

- During the very productive daily wash-up discussions, several potential improvements to the CEN and ETSI eCall specifications were proposed. These include:

  - Mapping of AL-ACK_Cleardown bits to the Link Layer messages, as described above;

  - Adding the (optional) 2.1kHz echo canceller disabling tone procedure to the ETSI / CEN specifications;

  - Changing the eCall Initiation Signal duration and timeout (T5) value from 2 seconds to 5 seconds to allow a (short) 2.1kHz echo canceller (EC) tone to be sent by the PSAP modem-server on the downlink channel.

  Note: This would improve the reliability and success rate of MSD transmissions when echo canceller / audio conditioning devices, in a limited number of networks, are found to be causing problems. It would also ensure that e.g. the IVS audio is not un-muted whilst the 2.1kHz EC canceller tone is being transmitted by the PSAP, and during the subsequent transmission of the Send MSD (START) message. Extending the eCall Initiation Signal timeout to 5 seconds would, in some circumstances, increase the MSD transfer time by 3 seconds. But this should be offset by the beneficial effect of disabling the ECs. Also, when the (optional) 2.1kHz tone is not sent, the PSAP modem-server will send, and the IVS will continue to respond to, the Send MSD (START) message within 2 seconds from receipt of the eCall Initiation Signal.

  - Add PULL mode (beside PUSH) as option for the PSAP to start the transmission.

  Note: This would not require changes to the IVS because the PSAP modem-server would, on answering a call, transmit an immediate Send MSD (START) message, without listening for or validating an eCall Initiation Signal. Provided that the eCall ‘flag’ routing is implemented in all national mobile networks, and ‘normal’ e.g. 112, 999 emergency calls are not routed to the PSAP eCall modem-server, then there would be minimal risk of audio interference, and unwanted delay, to ordinary mobile originated emergency calls.

8.3 Test Plan Issues

There were no significant test plan issues, other than the need to cater for different ISDN PRI, ISDN BRI, SIP-VoIP trunk and wireless access options for the PSAP eCall modem-server systems under test. This was very challenging and innovITS ADVANCE technical support staff did an excellent job resolving these network access issues.

The availability of the innovITS ADVANCE private GSM, with eCall identifier ‘flag’ support in the MSC, was extremely useful and enabled ‘real’ eCall emergency calls to be made without the risk of interfering with the UK emergency service.

Annex A Interoperability Test specification

The interoperability test specification, which forms parts of the present technical report, is contained in the file eCall_Plugtest_Test_Descriptions 1.0.pdf which accompanies the present document.

eCall Plugtests guide.pdf

History

Document history		
V1.0.0	June 2012	Final version
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