Technical Document

ENHANCED OPERATOR NAME SERVICE

TEST SPECIFICATION

EONS

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Important Notice

Change History

Date	Changed by	Approved by	Version	Status	Notes
	Morten Nyrup Christensen		0.1		1
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Notes:

1. Initial version

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[ISO 9000:2000] International Organization for Standardization. Quality management systems - Fundamentals and vocabulary. December 2000

1.1 Terms

Entity:	Program which executes the functions of a layer
Message:	A message is a data unit which is transferred between the entities of the same layer (peer-to-peer) of the mobile and infrastructure side. Message is used as a synonym to protocol data unit (PDU). A message may contain several information elements.
Primitive:	A primitive is a data unit which is transferred between layers on one component (mobile station or infrastructure). The primitive has an operation code which identifies the primitive and its parameters.
Service Access Point:	A Service Access Point is a data interface between two layers on one component (mobile station or infrastructure).

2 Overview

3 Parameters

DECLARATION (S_PLMN_262_01)
DECLARATION (DATA_PNN_LONG_SHORT)
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DECLARATION (MCC_1)
DECLARATION (MNC_1)
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DECLARATION(RXL_PLMN_LST)

```
DECLARATION(GPRS_STATUS_LST)
DECLARATION(PLMN_LST)
DECLARATION(LAC_LIST)
DECLARATION(IMSI_FIELD_DATA)
DECLARATION(IMSI_E_PLUS)
/*Command:    +CFUN
              set phone functionality*/
STRING(C_PLUS_CFUN_FULL, "AT+CFUN=1 " )
STRING(C_PLUS_COPS_QUE, "AT+COPS? " )
STRING(M_PLUS_COPS_AUT_LNG_26201, "+COPS: 0,0,\"T-Mobile D\"" )
STRING(C_PLUS_COPS_REG, "AT+COPS=0,0 " )
STRING(C_COPS_0, "AT+COPS=0\r")
STRING(M_OK, "OK" )
STRING(C_PLUS_COPS_TST, "AT+COPS=?" )
STRING(M_PLUS_CREG_SET, "AT+CREG=1" )
STRING(M_PLUS_CREG_REGISTERED_ROAM, "+CREG: 5")
STRING(C_PLUS_COPS_MAN, "AT+COPS=1,0,\"howdy\"" )

LONG                                    VAL_T3314                       44000
LONG VAL_T3312 3240000

SHORT NUM_4800 4800
SHORT NUM_2400 2400
SHORT NUM_1000 1000

/* TML – to match PCM */
SHORT LAC_256 256
SHORT CELL_ID_256 256

SHORT    FL_MODE_211_NR          8
SHORT    FL_MODE_EONS_NR         1

BYTE NUM_0 0
BYTE NUM_1 1
BYTE NUM_2 2
BYTE NUM_4 4
BYTE NUM_3 3
BYTE NUM_9 9
BYTE NUM_12 12

BYTE MAX_DATAS 0xFF

BYTE LDATA_SDN 34
BYTE LDATA_PNN 21
BYTE LDATA_OPL 8

BEGINARRAY (RXL_PLMN_LST, 7)
        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY

BEGINARRAY (GPRS_STATUS_LST, GMMREG_MAX_PLMN_ID)
        GMMREG_GPRS_GSM,
        GMMREG_GPRS_GSM,
        GMMREG_GPRS_GSM,
        GMMREG_GPRS_GSM,
        GMMREG_GPRS_GSM,
```

```
        GMMREG_GPRS_GSM,
        GMMREG_GPRS_GSM,
        GMMREG_GPRS_GSM,
        GMMREG_GPRS_GSM,
        GMMREG_GPRS_GSM,
        GMMREG_GPRS_GSM,
        GMMREG_GPRS_GSM
ENDARRAY

BEGIN_PSTRUCT_ARRAY (PLMN_LST, GMMREG_MAX_PLMN_ID)
            PLMN_LST_1, PLMN_LST_2, PLMN_LST_3, PLMN_LST_1, PLMN_LST_2,
            PLMN_LST_3, PLMN_LST_1, PLMN_LST_2,
            PLMN_LST_3, PLMN_LST_1, PLMN_LST_2, PLMN_LST_4
ENDARRAY

BEGINARRAY (FRB_PLMN_LST, 7)
            0x00, 0x00, 0x00, 0x01, 0x00, 0x00, 0x00
ENDARRAY


BEGIN_PSTRUCT ("plmn", S_PLMN_262_01)
            SET_COMP ("v_plmn",             NUM_1)
            SET_COMP ("mcc",                F_MCC_262)
            SET_COMP ("mnc",                F_MNC_01F)
ENDSTRUCT

SHORT LAC1 0x0100
SHORT LAC2 0x0100
SHORT LAC3 0x0100
SHORT LAC4 0x0100
SHORT LAC5 0x0100
SHORT LAC6 0x0100
SHORT LAC7 0x0100
SHORT LAC8 0x0100
SHORT LAC9 0x0100
SHORT LAC10 0x0100
SHORT LAC11 0x0100
SHORT LAC12 0x0100

BEGINARRAY (LAC_LIST, 24)
        0x00,0x01,
      0x00,0x01,
        0x00,0x01,
        0x00,0x01,
        0x00,0x01,
        0x00,0x01,
        0x00,0x01,
        0x00,0x01,
        0x00,0x01,
        0x00,0x01,
        0x00,0x01,
        0x00,0x01
ENDARRAY

BEGINARRAY(DATA_SDN000, 34) 0x48, 0x65, 0x69, 0x65, 0x72, 0x2C, 0x20, 0x4D, 0x61, 0x78,
        0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF,0xFF,
        0x08,
        0x81,
        0x00, 0xF0, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF,0xFF,0xFF
```

```
ENDARRAY

/* IEI for long name used (0x43) – name: "howdy"*/
BEGINARRAY(DATA_PNN_LONG, 10) 0x43, 0x06, 0x00, 0x68, 0x6F, 0x77, 0x64, 0x79, 0x4D, 0x61,
0x78
ENDARRAY

/* IEI for long name (0x43) – name: "howdy" ; short name (0x45): "howdy1"*/
BEGINARRAY(DATA_PNN_LONG_SHORT, 21) 0x43, 0x06, 0x00, 0x68, 0x6F, 0x77, 0x64, 0x79,
        0x45, 0x07, 0x00, 0x68, 0x6F, 0x77, 0x64, 0x79, 0x31
ENDARRAY

/* Init to PCM startup values (LAC) */
BEGINARRAY(OPL_DATA1, 8) 0x62, 0xF2, 0x10, 0x01, 0x00, 0x01, 0x00, 0x01 ENDARRAY

/* Init to PCM startup values (LAC) */
BEGINARRAY(OPL_DATA2, 8) 0x62, 0xF2, 0x10, 0x01, 0x00, 0x01, 0x00, 0x01 ENDARRAY

/* Init to PCM startup values (LAC) */
BEGINARRAY(OPL_DATA3, 8) 0x62, 0xF2, 0x10, 0x01, 0x00, 0x01, 0x00, 0x01 ENDARRAY

BEGINARRAY (F_MCC_262, 3) 0x02, 0x06, 0x02 ENDARRAY

BEGINARRAY (F_MNC_01F, 3) 0x00, 0x01, 0x0F ENDARRAY

BEGINARRAY (SIM_SERV_ABSDN_NOSTK, 13)   //ADN BDN SDN no STK CCcheck
            0xCF,                   //          1100 1111
            0x3C,                   //          0011 1100
            0x3C,                   //          0011 1100
            0x03,                   //          0000 0011
            0xFF,                   //          1111 1111
            0x00,                   //          0000 0000
            0x00,                   //          0000 0000
            0x30,                   //          0011 0000
            0x00,                   //          0000 0000
            0x00,                   //          0000 0000
            0x00,                   //          0000 0000
            0x00,                   //          0000 0000
            0xF0                    //          1111 0000 PNN and OPL
ENDARRAY

BEGINARRAY (ONLY_PNN, 13)   //
            0xCF,                   //          1100 1111
            0x3C,                   //          0011 1100
            0x3C,                   //          0011 1100
            0x03,                   //          0000 0011
            0xFF,                   //          1111 1111
            0x00,                   //          0000 0000
            0x00,                   //          0000 0000
            0x30,                   //          0011 0000
            0x00,                   //          0000 0000
            0x00,                   //          0000 0000
            0x00,                   //          0000 0000
            0x00,                   //          0000 0000
            0x30                    //          0011 0000 only PNN
ENDARRAY
```

```
/* EF AD field array , disable CI */
BEGINARRAY_PART (A_AD_FIELD_CI_DISABLED,4) 0x00, 0x00, 0x00, 0x02 ENDARRAY

/* EF AD field array , enable CI */
BEGINARRAY_PART (A_AD_FIELD_CI_ENABLED,4) 0x00, 0x00, 0x01, 0x02 ENDARRAY

BEGIN_PSTRUCT_ARRAY (F_PLMN_LST, 12)
        PLMN_LST_1, PLMN_LST_2, PLMN_LST_3, PLMN_LST_4, PLMN_LST_5,
        EMPTY_PLMN_LST, EMPTY_PLMN_LST, EMPTY_PLMN_LST,
        EMPTY_PLMN_LST, EMPTY_PLMN_LST, EMPTY_PLMN_LST,
        EMPTY_PLMN_LST
ENDARRAY

BEGIN_PSTRUCT ("plmn", PLMN_LST_1)
    SET_COMP ("v_plmn", 0x01)
    SET_COMP ("mcc", MCC_PLMN_LST_1)
    SET_COMP ("mnc", MNC_PLMN_LST_1)
ENDSTRUCT

BEGINARRAY (MCC_PLMN_LST_1, 3) 0x02, 0x06, 0x02 ENDARRAY


BEGINARRAY (MNC_PLMN_LST_1, 3) 0x00, 0x01, 0x0F ENDARRAY

BEGIN_PSTRUCT ("plmn", PLMN_LST_2)
    SET_COMP ("v_plmn", 0x01)
    SET_COMP ("mcc", MCC_PLMN_LST_2)
    SET_COMP ("mnc", MNC_PLMN_LST_2)
ENDSTRUCT

BEGINARRAY (MCC_PLMN_LST_2, 3) 0x02, 0x06, 0x02 ENDARRAY
BEGINARRAY (MNC_PLMN_LST_2, 3) 0x00, 0x02, 0x0F ENDARRAY


BEGIN_PSTRUCT ("plmn", PLMN_LST_3)
        SET_COMP ("v_plmn", 0x01)
        SET_COMP ("mcc", MCC_PLMN_LST_3)
        SET_COMP ("mnc", MNC_PLMN_LST_3)
ENDSTRUCT

BEGINARRAY (MCC_PLMN_LST_3, 3) 0x02, 0x06, 0x02 ENDARRAY

BEGINARRAY (MNC_PLMN_LST_3, 3) 0x00, 0x03, 0x0F ENDARRAY

BEGIN_PSTRUCT ("plmn", PLMN_LST_4)
        SET_COMP ("v_plmn", 0xFF)
        SET_COMP ("mcc", MCC_PLMN_LST_4)
        SET_COMP ("mnc", MNC_PLMN_LST_4)
ENDSTRUCT

BEGINARRAY (MCC_PLMN_LST_4, 3) 0x00, 0x00, 0x00 ENDARRAY

BEGINARRAY (MNC_PLMN_LST_4, 2) 0x00, 0x00 ENDARRAY

BEGIN_PSTRUCT ("plmn", PLMN_LST_5)
        SET_COMP ("v_plmn", 0xFF)
        SET_COMP ("mcc", MCC_PLMN_LST_5)
        SET_COMP ("mnc", MNC_PLMN_LST_5)
ENDSTRUCT
```

```
BEGIN_PSTRUCT ("plmn", EMPTY_PLMN_LST)
        SET_COMP ("v_plmn", 0xFF)
        SKIP_COMP ("mcc")
        SKIP_COMP ("mnc")
ENDSTRUCT

BEGINARRAY_PART (FILE_LIST_MODE_211, 14)
        0x05, 0x2F, 0x3A, 0x6F, 0x4A, 0x6F, 0xAD, 0x6F,
        0x3C, 0x6F, 0x40, 0x6F, 0x48, 0x6F, 0x05, 0x6F
ENDARRAY

BEGINARRAY(DATA_SDN119, 34) 0x48, 0x65, 0x69, 0x65, 0x72, 0x2C, 0x20, 0x4D, 0x61, 0x78,
    0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF,0xFF,
    0x08,
    0x81,
    0x11, 0xF9, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF,0xFF,0xFF
ENDARRAY


BEGINARRAY(DATA_SDN911, 34) 0x48, 0x65, 0x69, 0x65, 0x72, 0x2C, 0x20, 0x4D, 0x61, 0x78,
    0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF,0xFF,
    0x08,
    0x81,
    0x19, 0xF1, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF,0xFF,0xFF
ENDARRAY

BEGINARRAY_PART (FILE_LIST_MODE_OPL, 2)
        0xC6, 0x6F
ENDARRAY

BEGINARRAY_PART (FILE_LIST_MODE_PNN, 2)
        0xC5, 0x6F
ENDARRAY

BEGIN_PSTRUCT("plmn", PLMN_1)
        SET_COMP("v_plmn", V_PLMN_PRES)
        SET_COMP("mcc", MCC_1)
        SET_COMP("mnc", MNC_1)
ENDSTRUCT

/* --- international mobil subscriber identity --- */
BEGINARRAY (IMSI_FIELD_DATA, 6)
    0x02,0x06, 0x02,
    0x00,0x01, 0x0F
ENDARRAY

/* --- IMSI --- */
BEGIN_PSTRUCT ("imsi_field", IMSI_E_PLUS)
    SET_COMP ("c_field",  0x06)
    SET_COMP ("field",    IMSI_FIELD_DATA)
ENDSTRUCT
```

4 TEST CASES

4.1 Routing

4.1.1 ACI_EONS001: Setup the Routing and the PCO view for the ACI test, and set ACI to transparent mode

Description:

Routings for the ACI tests are set.

Preamble:

None

```
     APL                          ACI                          PS
      |                            |                           |
COMMAND (TAP RESET)
COMMAND (CC RESET)
COMMAND (MM RESET)
COMMAND (GMM RESET)
COMMAND (SIM RESET)
COMMAND (SS RESET)
COMMAND (MMI RESET)
COMMAND (SMS RESET)
COMMAND (RR RESET)

COMMAND (PL RESET)
      |                            |                           |
COMMAND (TAP REDIRECT CLEAR)
COMMAND (CC REDIRECT CLEAR)
COMMAND (MM REDIRECT CLEAR)
COMMAND (GMM REDIRECT CLEAR)
COMMAND (SIM REDIRECT CLEAR)
COMMAND (SS REDIRECT CLEAR)
COMMAND (MMI REDIRECT CLEAR)
COMMAND (SMS REDIRECT CLEAR)
COMMAND (RR REDIRECT CLEAR)

COMMAND (PL REDIRECT CLEAR)
      |                            |                           |
COMMAND (MMI REDIRECT CC TAP)
COMMAND (MMI REDIRECT MM TAP)
COMMAND (MMI REDIRECT GMM TAP)
COMMAND (MMI REDIRECT SIM TAP)
COMMAND (MMI REDIRECT SS TAP)
COMMAND (MMI REDIRECT MMI TAP)
COMMAND (MMI REDIRECT SMS TAP)
COMMAND (MMI REDIRECT T30 TAP)
COMMAND (MMI REDIRECT L2R TAP)
COMMAND (MMI REDIRECT RA TAP)
COMMAND (MMI REDIRECT RR TAP)

COMMAND (PL REDIRECT MMI NULL)
      |                            |                           |
COMMAND (TAP REDIRECT TAP MMI)
      |                            |                           |
      |                            |                           |
```

Parametrization:

Primitive	Parameter	Value

History: 14.12.98 AK Initial

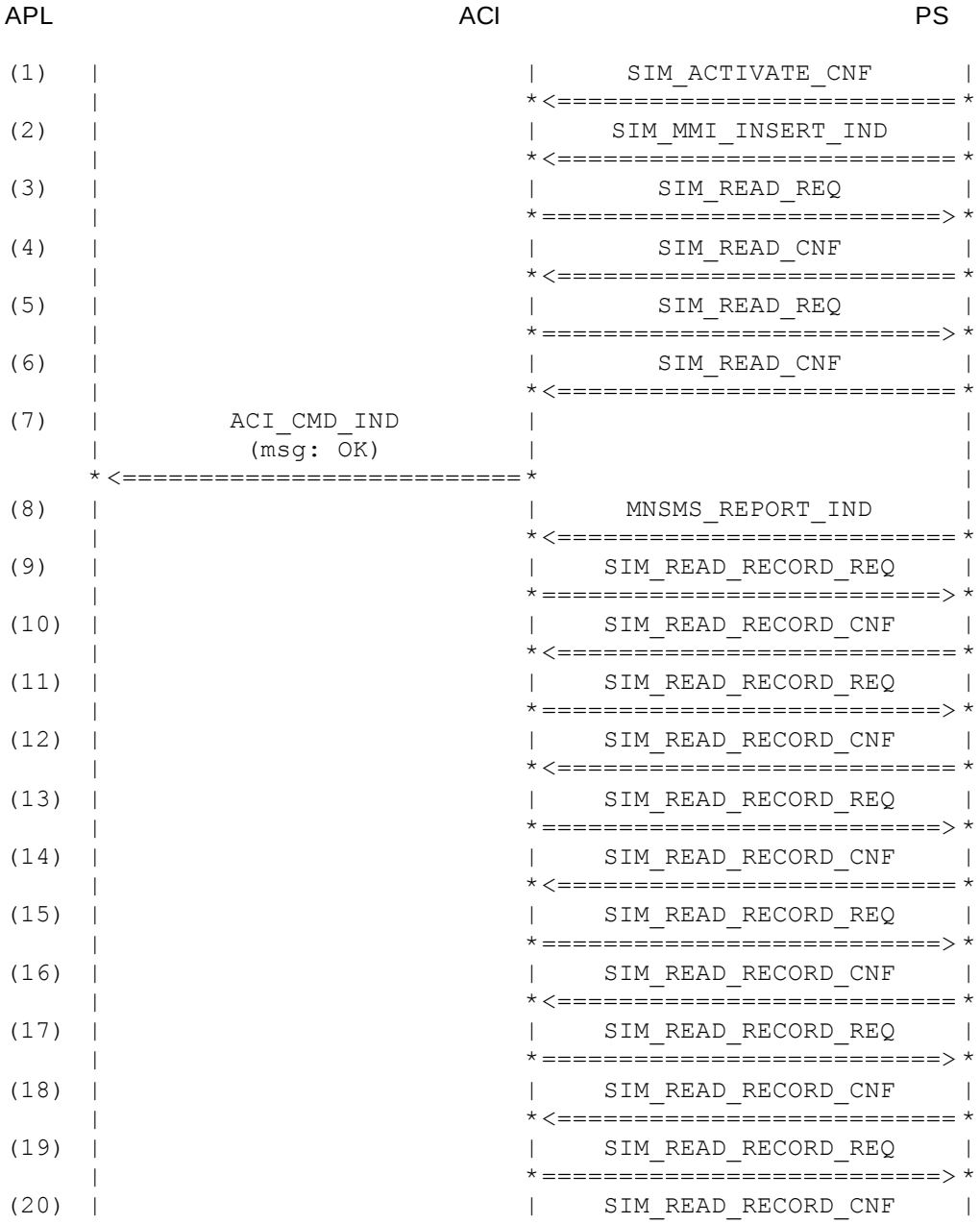
4.1.2 ACI_EONS002: MS_START_UP

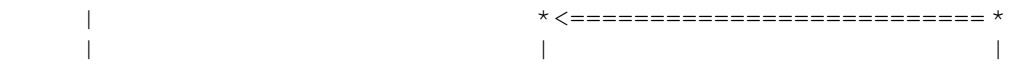
Description:

After ACI has received MNSMS_REPORT_IND ACI will read some parameters from SIM concerning SMS and after that it will call the function cmhSMS_ready

Preamble: ACI_EONS011

Variants: <A>....<B>





Parametrization:

	Primitive	Parameter	Value
(1)	SIM_ACTIVATE_CNF		
		cause	SIM_NO_ERROR
		pin_cnt	NUM_3
		puk_cnt	NUM_9
		pin2_cnt	NUM_3
		puk2_cnt	NUM_9
		ec_code	NOT_USED
		pref_lang	NOT_USED
(2)	SIM_MMI_INSERT_IND		
		func	SIM_ADN_BDN_ENABLED
		sim_serv	SIM_SERV_ABSDN_NOSTK
		imsi_field	NOT_USED
		pref_plmn	NOT_USED
		phase	PHASE_2_SIM
		access_acm	NOT_USED
		access_acmmax	NOT_USED
		access_puct	NOT_USED
(3)	SIM_READ_REQ		
		source	SRC_MMI
		offset	NUM_0
		datafield	SIM_ECC
		length	NOT_PRESENT_8BIT
		max_length	NUM_0
(4)	SIM_READ_CNF		
		datafield	SIM_ECC
		cause	SIM_CAUSE_EF_INVALID
		length	NUM_0
		trans_data	NOT_USED
(5)	SIM_READ_REQ		
		source	SRC_MMI
		offset	NUM_0
		datafield	SIM_AD
		length	NOT_PRESENT_8BIT
		max_length	NUM_0
(6)	SIM_READ_CNF		
		datafield	SIM_AD
		cause	SIM_NO_ERROR
		length	NUM_4
<A>		trans_data	A_AD_FIELD_CI_DISABLED
<B>		trans_data	A_AD_FIELD_CI_ENABLED
(7)	ACI_CMD_IND		
		cmd_len	NUM_ELEMENTS(M_OK)
		cmd_seq	M_OK
(7)	MNSMS_REPORT_IND		
		state	SMS_STATE_READY
(8)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_OPL

		record	NUM_1
		length	MAX_DATAS
(9)	SIM_READ_RECORD_CNF		
		datafield	SIM_OPL
		cause	SIM_NO_ERROR
		record	NUM_1
		max_record	NUM_1
		length	LDATA_OPL
		linear_data	OPL_DATA1
(10)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_ADN
		record	NUM_1
		length	MAX_DATAS
(11)	SIM_READ_RECORD_CNF		
		datafield	SIM_ADN
		cause	SIM_NO_ERROR
		record	NUM_1
		max_record	NUM_1
		length	LDATA_SDN
		linear_data	DATA_SDN000
(12)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_BDN
		record	NUM_1
		length	MAX_DATAS
(13)	SIM_READ_RECORD_CNF		
		datafield	SIM_BDN
		cause	SIM_NO_ERROR
		record	NUM_1
		max_record	NUM_1
		length	LDATA_SDN
		linear_data	DATA_SDN000
(14)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_SDN
		record	NUM_1
		length	MAX_DATAS
(15)	SIM_READ_RECORD_CNF		
		datafield	SIM_SDN
		cause	SIM_NO_ERROR
		record	NUM_1
		max_record	NUM_3
		length	LDATA_SDN
		linear_data	DATA_SDN000
(16)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_SDN
		record	NUM_2
		length	LDATA_SDN
(17)	SIM_READ_RECORD_CNF		
		datafield	SIM_SDN
		cause	SIM_NO_ERROR
		record	NUM_2
		max_record	NUM_3

		length	LDATA_SDN
		linear_data	DATA_SDN119
(18)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_SDN
		record	NUM_3
		length	LDATA_SDN
(19)	SIM_READ_RECORD_CNF		
		datafield	SIM_SDN
		cause	SIM_NO_ERROR
		record	NUM_3
		max_record	NUM_3
		length	LDATA_SDN
		linear_data	DATA_SDN911

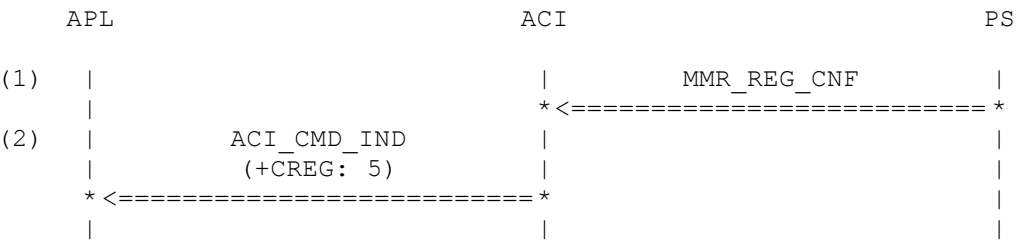
History: 13.01.2003 MNC Initial

4.1.3 ACI_EONS003: Location update, lac unchanged (GSM)

Description:

The MS starts up, the location area has not been changed.

Preamble: ACI_EONS012



Parametrization:

Primitive		Parameter	Value
(1)	MMR_REG_CNF		
		plmn	S_PLMN_262_01
		lac	NUM_4800
		cid	NUM_1000
(2)	ACI_CMD_IND		
		cmd_len	8
		cmd_seq	
	M_PLUS_CREG_REGISTERED_ROAM		

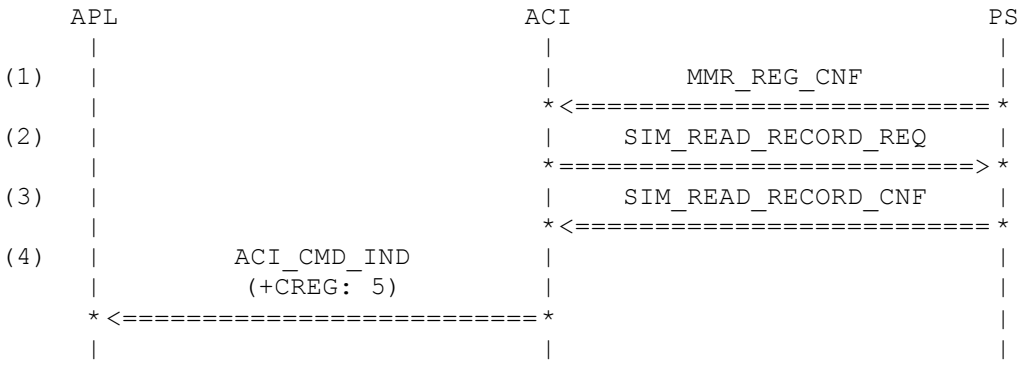
History: 13.01.2003 MNC Initial

4.1.4 ACI_EONS004: GSM Location Update, lac changed

Description:

The Ms starts up, the location has been changed.

Preamble: ACI_EONS008



Parametrization:

Primitive	Parameter	Value
(1) MMR_REG_CNF		
	plmn	S_PLMN_262_01
	lac	NUM_2400
	cid	NUM_1000
(2) SIM_READ_RECORD_REQ		
	source	SRC_MMI
	datafield	SIM_PNN
	record	NUM_1
	length	MAX_DATAS
(3) SIM_READ_RECORD_CNF		
	datafield	SIM_PNN
	cause	SIM_NO_ERROR
	record	NUM_1
	max_record	NUM_1
	length	LDATA_PNN
	linear_data	DATA_PNN_LONG
(4) ACI_CMD_IND		
	cmd_len	8
	cmd_seq	M_PLUS_CREG_REGISTERED_ROAM

History: 13.01.2003 MNC Initial

4.1.5 ACI_EONS005:Manual network selection (GPRS)

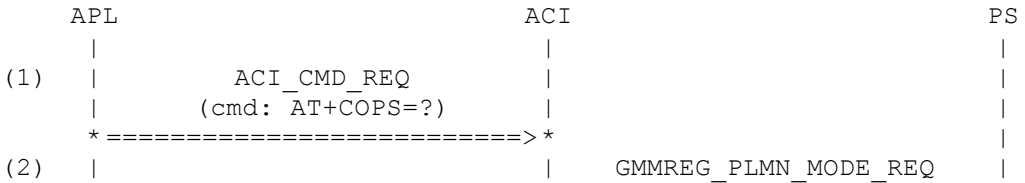
Description:

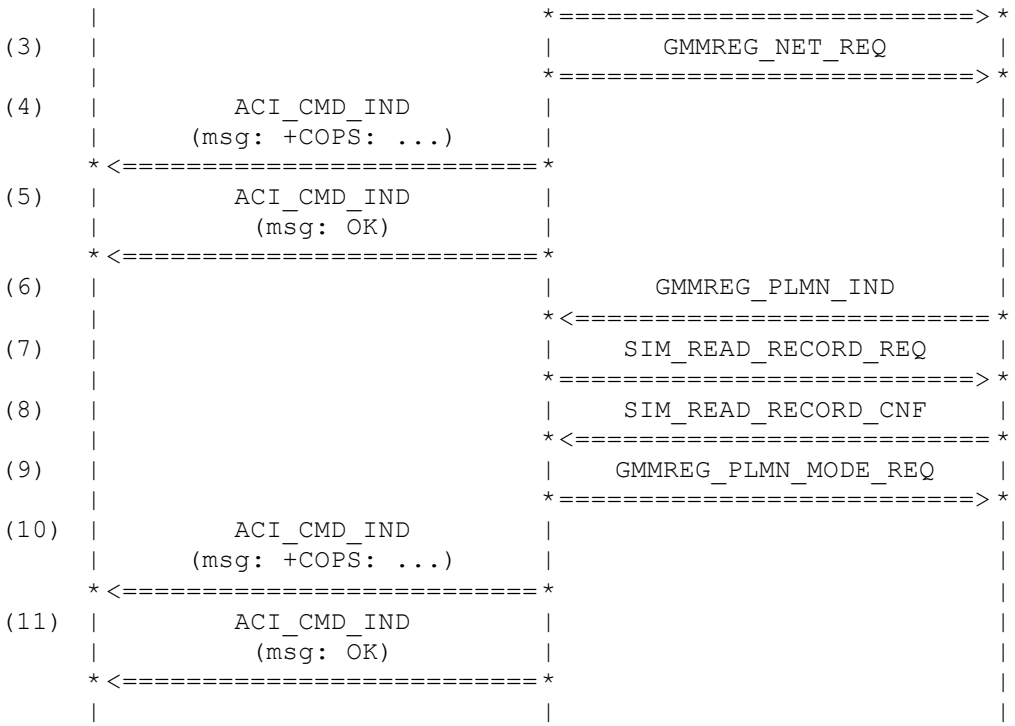
ACI reguest for a PLMN search towards RR. Scans all frequencies and sends a list with found PLMN's to MM. The PLMN list is then send to ACI.

Preamble:

ACI_EONS015

Variants: <A>....<B>





Parametrization:

Primitive	Parameter	Value
(1) ACI_CMD_REQ		
	cmd_src	CMD_SRC_EXT
	cmd_len	NUM_ELEMENTS(C_PLUS_COPS_TST)
	cmd_seq	C_PLUS_COPS_TST
(2) GMMREG_PLMN_MODE_REQ		
	net_selection_mode	1
(3) GMMREG_NET_REQ		
(4) ACI_CMD_IND		
	cmd_len	NOT_USED
	cmd_seq	NOT_USED
(5) ACI_CMD_IND		
	cmd_len	NOT_USED
	cmd_seq	NOT_USED
(6) GMMREG_PLMN_IND		
	cause	MMCS_SUCCESS
	plmn	PLMN_LST
	forb_ind	FRB_PLMN_LST
	lac_list	LAC_LIST
	rxlevel	RXL_PLMN_LST
	gprs_status	GPRS_STATUS_LST
(7) SIM_READ_RECORD_REQ		
	source	SRC_MMI
	datafield	SIM_PNN
	record	NUM_1
	length	MAX_DATAS

(8)	SIM_READ_RECORD_CNF		
		datafield	SIM_PNN
		cause	SIM_NO_ERROR
		record	NUM_1
		max_record	NUM_1
		length	LDATA_PNN
	<A>	linear_data	DATA_PNN_LONG
	<B>	linear_data	DATA_PNN_LONG_SHORT
(9)	GMMREG_PLMN_MODE_REQ		
		net_selection_mode	MODE_AUTO
(10)		ACI_CMD_IND	
		cmd_len	NOT_USED
		cmd_seq	NOT_USED
(11)		ACI_CMD_IND	
		cmd_len	NOT_USED
		cmd_seq	NOT_USED

History: 14.01.2003 MNC Initial

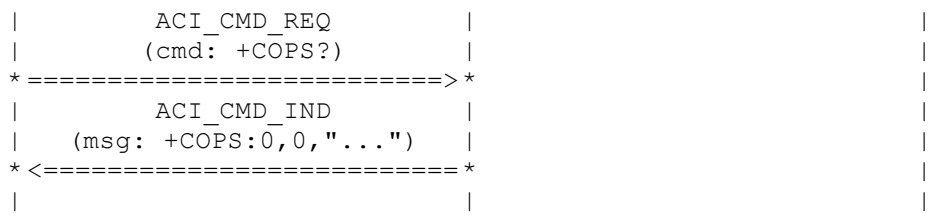
4.1.6 ACI_EONS007: Operator_Name_query

Description:

Aci source invokes a query on operator name currently selected

Preamble:

ACI_EONS011



Parametrization:

Primitive	Parameter	Value
(2) ACI_CMD_REQ		
cmd_src		CMD_SRC_EXT
cmd_len		NUM_ELEMENTS(C_PLUS_COPS_QUE)
cmd_seq		C_PLUS_COPS_QUE
(3) ACI_CMD_IND		
cmd_len		NOT_USED
cmd_seq		NOT_USED

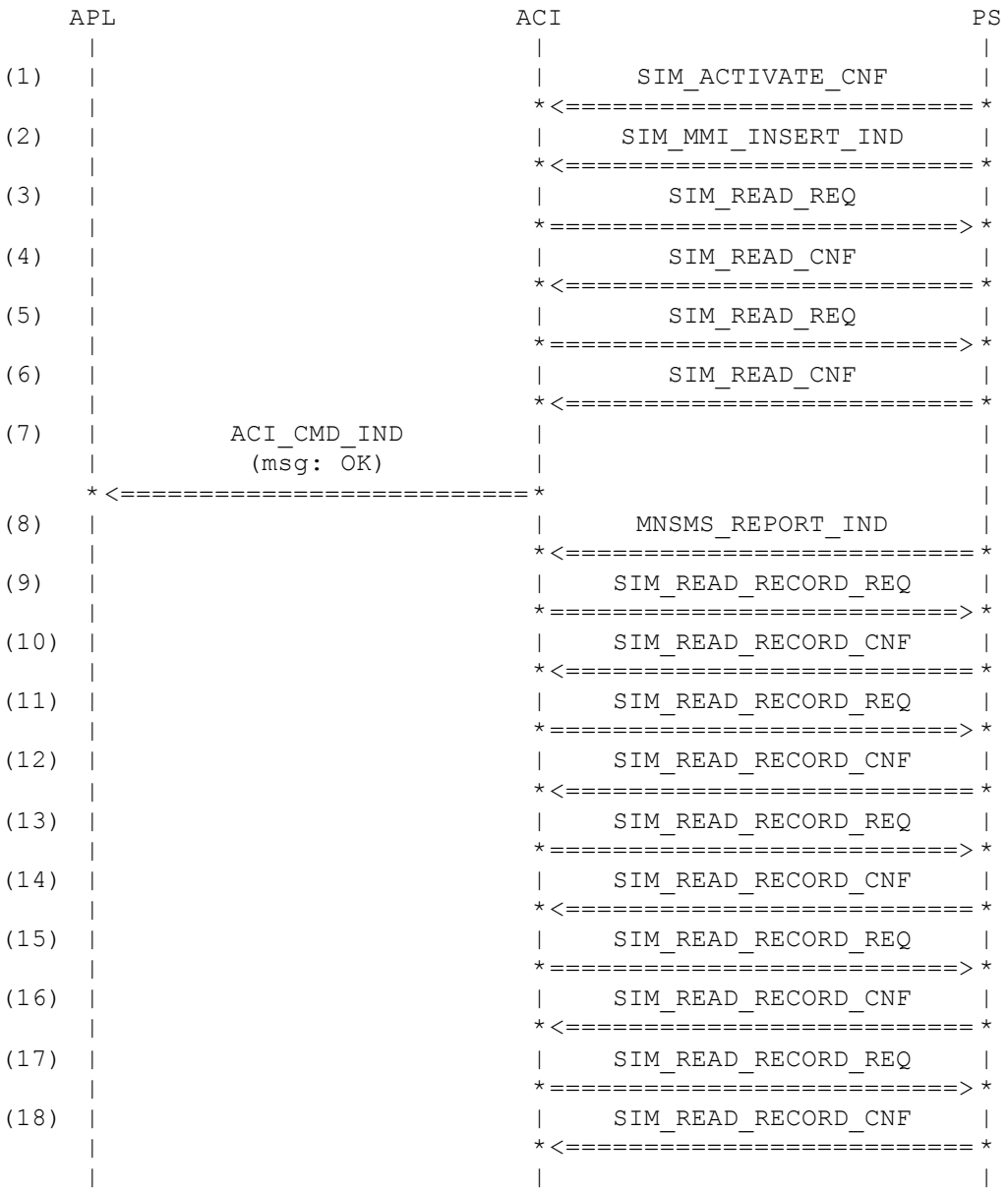
History: 13.01.2003 MNC Initial

4.1.7 ACI_EONS008: ONLY PNN

Description:

MS starts up no OPL only PNN is active

Preamble: ACI_EONS011



Parametrization:

	Primitive	Parameter	Value
(5)	SIM_ACTIVATE_CNF		
		cause	SIM_NO_ERROR
		pin_cnt	NUM_3
		puk_cnt	NUM_9

		pin2_cnt	NUM_3
		puk2_cnt	NUM_9
		ec_code	NOT_USED
		pref_lang	NOT_USED
(6)	SIM_MMI_INSERT_IND		
		func	SIM_ADN_BDN_ENABLED
		sim_serv	ONLY_PNN
		imsi_field	IMSI_E_PLUS
		pref_plmn	NOT_USED
		phase	PHASE_2_SIM
		access_acm	NOT_USED
		access_acmmax	NOT_USED
		access_puct	NOT_USED
(7)	SIM_READ_REQ		
		source	SRC_MMI
		offset	NUM_0
		datafield	SIM_ECC
		length	NOT_PRESENT_8BIT
		max_length	NUM_0
(8)	SIM_READ_CNF		
		datafield	SIM_ECC
		cause	SIM_CAUSE_EF_INVALID
		length	NUM_0
		trans_data	NOT_USED
(9)	SIM_READ_REQ		
		source	SRC_MMI
		offset	NUM_0
		datafield	SIM_AD
		length	NOT_PRESENT_8BIT
		max_length	NUM_0
(10)	SIM_READ_CNF		
		datafield	SIM_AD
		cause	SIM_NO_ERROR
		length	NUM_4
		trans_data	A_AD_FIELD_CI_DISABLED
(11)	ACI_CMD_IND		
		cmd_len	NUM_ELEMENTS(M_OK)
		cmd_seq	M_OK
(12)	MNSMS_REPORT_IND		
		state	SMS_STATE_READY
(13)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_ADN
		record	NUM_1
		length	MAX_DATAS
(14)	SIM_READ_RECORD_CNF		
		datafield	SIM_ADN
		cause	SIM_NO_ERROR
		record	NUM_1
		max_record	NUM_1
		length	LDATA_SDN
		linear_data	DATA_SDN000

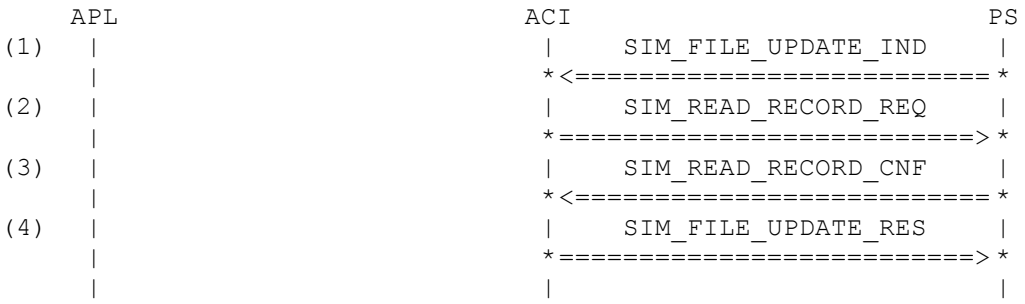
(15)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_BDN
		record	NUM_1
		length	MAX_DATAS
(16)	SIM_READ_RECORD_CNF		
		datafield	SIM_BDN
		cause	SIM_NO_ERROR
		record	NUM_1
		max_record	NUM_1
		length	LDATA_SDN
		linear_data	DATA_SDN000
(17)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_SDN
		record	NUM_1
		length	MAX_DATAS
(18)	SIM_READ_RECORD_CNF		
		datafield	SIM_SDN
		cause	SIM_NO_ERROR
		record	NUM_1
		max_record	NUM_3
		length	LDATA_SDN
		linear_data	DATA_SDN000
(19)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_SDN
		record	NUM_2
		length	LDATA_SDN
(20)	SIM_READ_RECORD_CNF		
		datafield	SIM_SDN
		cause	SIM_NO_ERROR
		record	NUM_2
		max_record	NUM_3
		length	LDATA_SDN
		linear_data	DATA_SDN119
(21)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_SDN
		record	NUM_3
		length	LDATA_SDN
(22)	SIM_READ_RECORD_CNF		
		datafield	SIM_SDN
		cause	SIM_NO_ERROR
		record	NUM_3
		max_record	NUM_3
		length	LDATA_SDN
		linear_data	DATA_SDN911

History: 13.01.2003 MNC Initial

4.1.8 ACI_EONS009: Files Update PNN

Description:
Sim sends a SIM_FILE_UPDATE_IND to ACI to tell that the PNN file has been updated.

Preamble: ACI_EONS013



Parametrization:

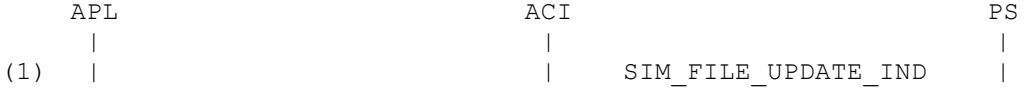
Primitive	Parameter	Value
(1) SIM_FILE_UPDATE_IND		
	val_nr	FL_MODE_EONS_NR
	file_id	FILE_LIST_MODE_PNN
(2) SIM_READ_RECORD_REQ		
	source	SRC_MMI
	datafield	SIM_PNN
	record	NUM_1
	length	MAX_DATAS
(3) SIM_READ_RECORD_CNF		
	datafield	SIM_PNN
	cause	SIM_NO_ERROR
	record	NUM_1
	max_record	NUM_1
	length	LDATA_PNN
	linear_data	DATA_PNN_LONG
(4) SIM_FILE_UPDATE_RES		
	source	SRC_MMI
	fu_rsc	SIM_FU_SUCCESS

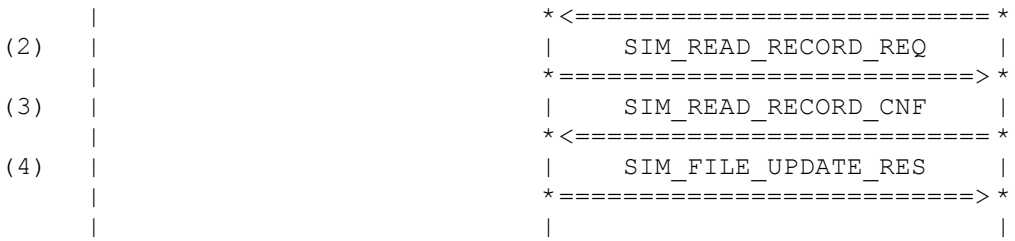
History: 14.01.2003 MNC Initial

4.1.9 ACI_EONS010: Files Update OPL

Description:
Sim sends a SIM_FILE_UPDATE_IND to ACI to tell that the OPL file has been updated.

Preamble: ACI_EONS013





Parametrization:

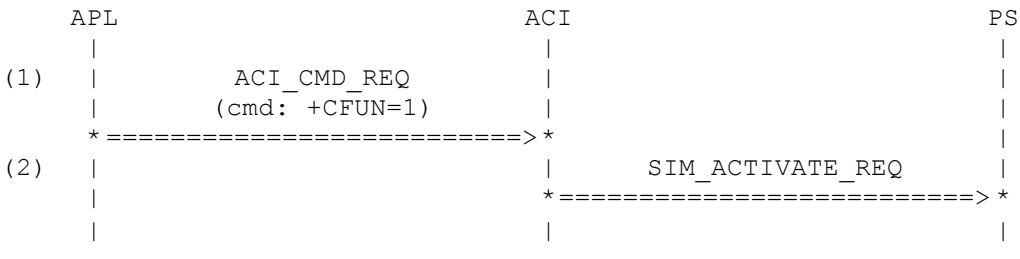
	Primitive	Parameter	Value
(2)	SIM_FILE_UPDATE_IND		
		val_nr	FL_MODE_EONS_NR
		file_id	FILE_LIST_MODE_OPL
(3)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_OPL
		record	NUM_1
		length	MAX_DATAS
(4)	SIM_READ_RECORD_CNF		
		datafield	SIM_OPL
		cause	SIM_NO_ERROR
		record	NUM_1
		max_record	NUM_1
		length	LDATA_SDN
		linear_data	DATA_SDN000
(5)	SIM_FILE_UPDATE_RES		
		source	SRC_MMI
		fu_rsc	SIM_FU_SUCCESS

History: 14.01.2003 MNC Initial

4.1.10 ACI_EONS011: Power On

Description:
activate SIM card at power on

Preamble: ACI_EONS012



Parametrization:

	Primitive	Parameter	Value
(1)	ACI_CMD_REQ		
		cmd_src	1
		cmd_len	NUM_ELEMENTS(C_PLUS_CFUN_FULL)
		cmd_seq	C_PLUS_CFUN_FULL

(2) SIM_ACTIVATE_REQ

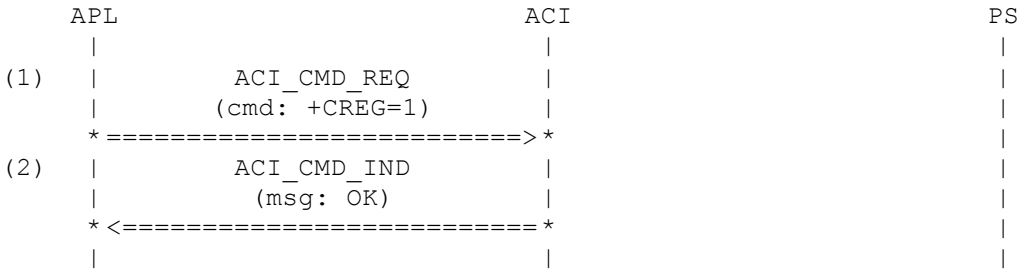
proc	NOT_USED
mmi_pro_file	NOT_USED
stk_pro_file	NOT_USED

History: 10.08.98 ACI Initial

4.1.11 ACI_EONS012: Enable COPS registration status

Description:
re

Preamble:
ACI_EONS001



Parametrization:

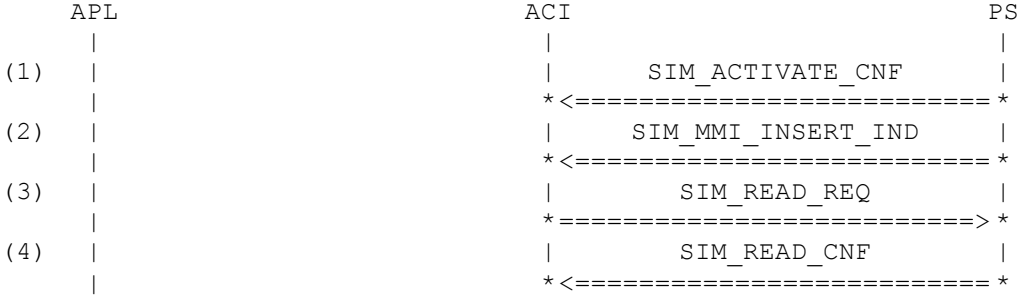
Primitive	Parameter	Value
(1) ACI_CMD_REQ		
	cmd_src	CMD_SRC_EXT
	cmd_len	NUM_ELEMENTS(M_PLUS_CREG_SET)
	cmd_seq	M_PLUS_CREG_SET
(2) ACI_CMD_IND		
	cmd_len	NUM_ELEMENTS(M_OK)
	cmd_seq	M_OK

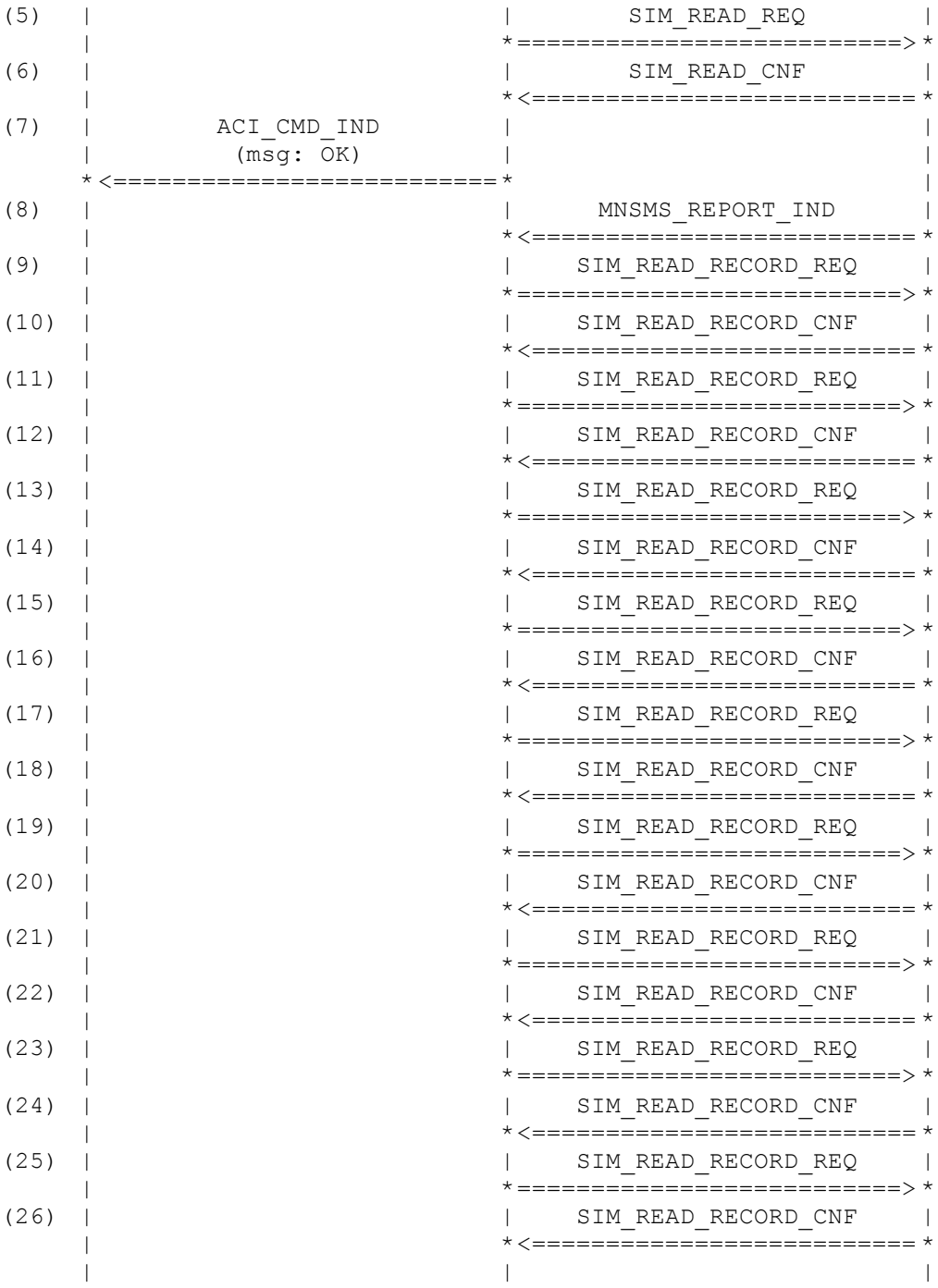
History: 15.01.03 MNC Initial

4.1.12 ACI_EONS013: MS_START_UP1

Description:

Preamble: ACI_EONS011





Parametrization:

	Primitive	Parameter	Value
(23)	SIM_ACTIVATE_CNF		
		cause	SIM_NO_ERROR
		pin_cnt	NUM_3
		puk_cnt	NUM_9
		pin2_cnt	NUM_3
		puk2_cnt	NUM_9
		ec_code	NOT_USED
		pref_lang	NOT_USED

(24)	SIM_MMI_INSERT_IND		
		func	SIM_ADN_BDN_ENABLED
		sim_serv	SIM_SERV_ABSDN_NOSTK
		imsi_field	NOT_USED
		pref_plmn	NOT_USED
		phase	PHASE_2_SIM
		access_acm	NOT_USED
		access_acmmax	NOT_USED
		access_puct	NOT_USED
(25)	SIM_READ_REQ		
		source	SRC_MMI
		offset	NUM_0
		datafield	SIM_ECC
		length	NOT_PRESENT_8BIT
		max_length	NUM_0
(26)	SIM_READ_CNF		
		datafield	SIM_ECC
		cause	SIM_CAUSE_EF_INVALID
		length	NUM_0
		trans_data	NOT_USED
(27)	SIM_READ_REQ		
		source	SRC_MMI
		offset	NUM_0
		datafield	SIM_AD
		length	NOT_PRESENT_8BIT
		max_length	NUM_0
(28)	SIM_READ_CNF		
		datafield	SIM_AD
		cause	SIM_NO_ERROR
		length	NUM_4
		trans_data	A_AD_FIELD_CI_ENABLED
(29)	ACI_CMD_IND		
		cmd_len	NUM_ELEMENTS(M_OK)
		cmd_seq	M_OK
(30)	MNSMS_REPORT_IND		
		state	SMS_STATE_READY
(31)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_OPL
		record	NUM_1
		length	MAX_DATAS
(32)	SIM_READ_RECORD_CNF		
		datafield	SIM_OPL
		cause	SIM_NO_ERROR
		record	NUM_1
		max_record	NUM_4
		length	LDATA_OPL
		linear_data	OPL_DATA1
(33)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_ADN
		record	NUM_1
		length	MAX_DATAS

(34) SIM_READ_RECORD_CNF

datafield	SIM_ADN
cause	SIM_NO_ERROR
record	NUM_1
max_record	NUM_1
length	LDATA_SDN
linear_data	DATA_SDN000

(35) SIM_READ_RECORD_REQ

source	SRC_MMI
datafield	SIM_OPL
record	NUM_2
length	MAX_DATAS

(36) SIM_READ_RECORD_CNF

datafield	SIM_OPL
cause	SIM_NO_ERROR
record	NUM_2
max_record	NUM_4
length	LDATA_OPL
linear_data	OPL_DATA2

(37) SIM_READ_RECORD_REQ

source	SRC_MMI
datafield	SIM_BDN
record	NUM_1
length	MAX_DATAS

(38) SIM_READ_RECORD_CNF

datafield	SIM_BDN
cause	SIM_NO_ERROR
record	NUM_1
max_record	NUM_1
length	LDATA_SDN
linear_data	DATA_SDN000

(39) SIM_READ_RECORD_REQ

source	SRC_MMI
datafield	SIM_OPL
record	NUM_3
length	MAX_DATAS

(40) SIM_READ_RECORD_CNF

datafield	SIM_OPL
cause	SIM_NO_ERROR
record	NUM_3
max_record	NUM_4
length	LDATA_OPL
linear_data	OPL_DATA3

(41) SIM_READ_RECORD_REQ

source	SRC_MMI
datafield	SIM_SDN
record	NUM_1
length	MAX_DATAS

(42) SIM_READ_RECORD_CNF

datafield	SIM_SDN
cause	SIM_NO_ERROR
record	NUM_1
max_record	NUM_3
length	LDATA_SDN
linear_data	DATA_SDN000

(43)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_OPL
		record	NUM_4
		length	MAX_DATAS
(44)	SIM_READ_RECORD_CNF		
		datafield	SIM_OPL
		cause	SIM_NO_ERROR
		record	NUM_4
		max_record	NUM_4
		length	LDATA_OPL
		linear_data	OPL_DATA1
(45)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_SDN
		record	NUM_2
		length	LDATA_SDN
(46)	SIM_READ_RECORD_CNF		
		datafield	SIM_SDN
		cause	SIM_NO_ERROR
		record	NUM_2
		max_record	NUM_3
		length	LDATA_SDN
		linear_data	DATA_SDN119
(47)	SIM_READ_RECORD_REQ		
		source	SRC_MMI
		datafield	SIM_SDN
		record	NUM_3
		length	LDATA_SDN
(48)	SIM_READ_RECORD_CNF		
		datafield	SIM_SDN
		cause	SIM_NO_ERROR
		record	NUM_3
		max_record	NUM_3
		length	LDATA_SDN
		linear_data	DATA_SDN119

History: 13.01.2003 MNC Initial

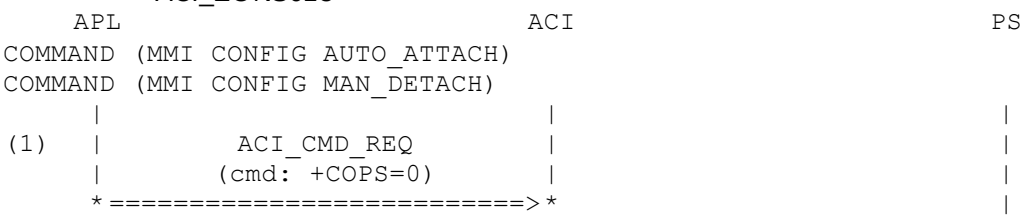
4.1.13 ACI_EONS015: Automatic registration (GPRS automatic attach)

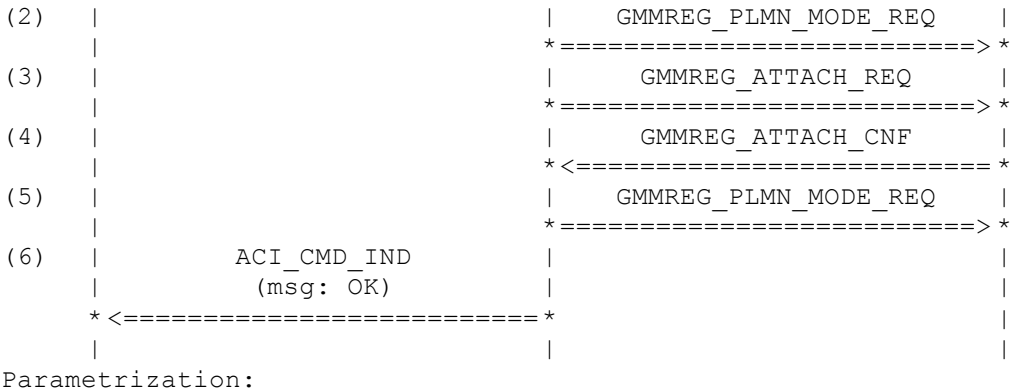
Description:

ME is in full functionality state.

Preamble:

ACI_EONS013





Parametrization:

Primitive	Parameter	Value
(1) ACI_CMD_REQ		
	cmd_src	CMD_SRC_EXT
	cmd_len	10
	cmd_seq	C_COPS_0
(2) GMMREG_PLMN_MODE_REQ		
	net_selection_mode	GMMREG_NET_SEL_MODE_AUTO
(3) GMMREG_ATTACH_REQ		
	mobile_class	GMMREG_CLASS_BG
	attach_type	GMMREG_AT_COMB
	service_mode	SERVICE_MODE_FULL
	t3314_ready_val	VAL_T3314
	t3312_standby_rau_val	VAL_T3312
(4) GMMREG_ATTACH_CNF		
	attach_type	GMMREG_AT_COMB
	plmn	PLMN_1
	lac	NUM_1
	rac	NUM_1
	cid	NUM_1
	gprs_indicator	GMM_GPRS_SUPP_YES
	search_running	GMMREG_SEARCH_NOT_RUNNING
(5) GMMREG_PLMN_MODE_REQ		
	net_selection_mode	GMMREG_NET_SEL_MODE_AUTO
(6) ACI_CMD_IND		
	cmd_len	2
	cmd_seq	M_OK

History:

27-01-03	MNC	Initial

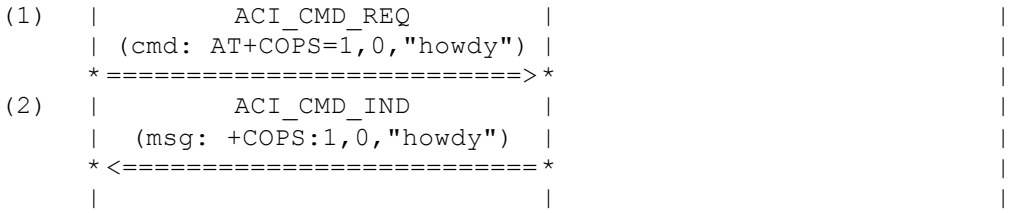
4.1.14 ACI_EONS016: Manual network selection

Description:

Aci source selects network

Preamble:

ACI_EONS005A



Parametrization:

Primitive	Parameter	Value
(2) ACI_CMD_REQ		
	cmd_src	CMD_SRC_EXT
	cmd_len	NOT_USED
	cmd_seq	C_PLUS_COPS_MAN
(3) ACI_CMD_IND		
	cmd_len	17
	cmd_seq	NOT_USED

History: 13.01.2003 MNC Initial

Appendices

A. Acronyms

DS-WCDMA	Direct Sequence/Spread Wideband Code Division Multiple Access

B. Glossary

International Mobile Telecommunication 2000 (IMT-2000/ITU-2000)	Formerly referred to as FPLMTS (Future Public Land-Mobile Telephone System), this is the ITU's specification/family of standards for 3G. This initiative provides a global infrastructure through both satellite and terrestrial systems, for fixed and mobile phone users. The family of standards is a framework comprising a mix/blend of systems providing global roaming. <URL: http://www.imt-2000.org/>