NOKIA

BSC

A-interface Parameters (MTP/SCCP)

Technical Note
No. 807

TN Version	Edited by	Approved by
No. 1.0	8. November 2004 Jussi Kivikoski	11. November 2004 Susanna Tarvainen

TN807: A-Interface Parameters (MTP/SCCP)

Validity:

Software	ETSI environment	ANSI environment
[X] S9	[X] GSM 900	[ ] GSM 800
[X] S10.5	[X] GSM 1800	[ ] GSM 1900
[X] S10.5 ED		
[X] S11		

Keywords:
A-Interface, MTP, SCCP, parameter set

Summary:
This Technical Note provides information on how to set up A-interface parameters.

Description:
This technical note gives instructions how to setup A interface parameters so that it can more easily adapt to changes in the MSC signalling software. It is recommended to use White Book Management in the A-interface.

These parameter values should be adjusted in both ends (BSC and MSC) to ensure the optimum functionality.

Instructions:

MTP:

Check that **parameter set 1 (A-interface)** and **Restriction Status is A-Interface** is used.

```
ZNRI:NA0;

LOADING PROGRAM VERSION 8.7-0

DX 200    OLOS                      2004-10-11  09:37:51

INTERROGATING SIGNALLING POINT DATA

NET  SP CODE H/D         NAME   RS STATE  PAR SET
---  ------------------  -----  --------  -------
NA0    0200/00512        MSCBS    AV        1     A INTERFACE
LOAD SHARING BETWEEN SIGNALLING ROUTES DENIED

ROUTES: SP CODE H/D         NAME   STATE   PRIO
        ------------------  -----  ------  ----
          0200/00512        MSCBS  AV-EX     0


                                          SS7    SUBFIELD INFO
NET  SP CODE H/D         SP NAME  SP TYPE  STAND  COUNT  BIT LENGTHS
---  ------------------  -------  -------  -----  -----  -----------
NA0    1571/05489        OLOS     STP      ITU-T  1      14   OWN SP


COMMAND EXECUTED
```

Change the used parameter set to A-interface if needed.

```
ZNRB:NA0,:PARA=1;
```

Change the Restriction Status to A-Interface if needed.

```
ZNRB:NA0,:REST=R;
```

Check the timer values with command:

```
ZNMI:C;

LOADING PROGRAM VERSION 8.10-0

DX 200    OLOS                      2004-10-11  09:38:40

INTERROGATING CCS7 LEVEL 3 PARAMETERS

   GROUP C: TIMER PARAMETERS FOR OWN SIGNALLING POINT
   ================================================
   INDEX  NAME                                VALUE     UNIT
   -----  ----                                -----     ----
   C0     LINK_TEST_PERIOD                     4000   0.01 S
   C1     Q704_T18_LINK_AVAIL_WAIT             2000   0.01 S
   C2     Q704_T19_TRA_WAIT                     400   0.01 S
   C3     Q704_T20_TRAF_RESTARTING_TIME         199   0.01 S
   C4     T111_T26                             1500   0.01 S
   C5     Q714_T_GUARD                         6000   0.1  S
   C6     T111_T27                              300   0.01 S


COMMAND EXECUTED
```

The parameter Q704_T20_TRAF_RESTARTING_TIME (199) prevents the transmission brakes under 2s reported to MTP3 level. **This parameter should be changed only in BSC.**

The parameter T111_T27 (300) extends the transmission brake over 128ms to 3s on MTP2 level.

If needed change the values with commands:

```
ZNMM:C:C3=199;
ZNMM:C:C6=300;
```

Check the parameters **TRM_DENIED** and **TRM_EXPECTED** with command:

```
ZNNI:1,C;

LOADING PROGRAM VERSION 8.7-0

DX 200    OLOS                      2004-10-11  09:39:00

INTERROGATING SIGNALLING ROUTE SET PARAMETER SETS

PARAMETER SET: 00001  A INTERFACE
==================================

GROUP C: ADJACENT SIGNALLING POINT PARAMETERS
=============================================
INDEX  NAME                                  VALUE
-----  ----                                  -----
C0     TRM_DENIED                              YES
C1     TRM_EXPECTED                             NO
C2     SP_RESTART_TYPE                        NONE
C3     INDIRECT_ROUTES_DEFAULT           AVAILABLE
C4     TFM_CONTROL                      ALL DENIED
C5     RESP_TFM_CONTROL                 TFM DENIED
C6     TFR_DENIED                              YES
```



```
COMMAND EXECUTED
```

The parameter values should be as in example above. Change the values if needed.

```
ZNNM:1,A INTERFACE,C:C0=Y:;
ZNNM:1,A INTERFACE,C:C1=N:;
```

SCCP:

Check that **parameter set 1 (A-interface)** is used instead of 0 (Blue book) as mentioned in BSS Integration manual.

```
ZNFI:NA0,:A;

LOADING PROGRAM VERSION 8.3-0

DX 200    OLOS                      2004-10-11  09:39:19

SCCP STATES

DESTINATION:           SP          ROUTING:               SP            PAR
NET SP CODE H/D        NAME  ST RM NET SP CODE H/D        NAME  STATE   SET
--- ------------------ ----- -- -- --- ------------------ ----- ------- ---
NA0   0200/00512       MSCBS AV -  NA0   0200/00512       MSCBS AV-EX     2

                                                                     PAR
                                   SUBSYSTEMS:  NO H/D  SS NAME STATE   SET SST
                                   ===========  ------- ------- ------- --- ---
                                                01/001  SCMG    AV-EX       N
                                                FE/254  BSSAP   AV-EX     1 Y

DESTINATION:           SP          ROUTING:               SP            PAR
NET SP CODE H/D        NAME  ST RM NET SP CODE H/D        NAME  STATE   SET
--- ------------------ ----- -- -- --- ------------------ ----- ------- ---
NA0   1571/05489       OLOS  OWN SP                                     2

                                                                     PAR
                                   SUBSYSTEMS:  NO H/D  SS NAME STATE   SET SST
                                   ===========  ------- ------- ------- --- ---
                                                01/001  SCMG    AV-EX       N
                                                FE/254  BSSAP   AV-EX     1 Y


COMMAND EXECUTED
```

Change the used parameter set if needed:
Note that traffic is disturbed during this step!

ZNHC:NA0,<sp_msc>:FE:INA;	Change subsystem state
ZNHC:NA0,<sp_bsc>:FE:INA;	Change subsystem state
ZNGC:NA0,<sp_msc>:INA;	Change SCCP state
ZNFL:NA0,:1;	Modify used parameter set SCCP
ZNFM:NA0,:FE:1:;	Modify used parameter set for subsystems
ZNHC:NA0,<sp_bsc>:FE:ACT;	Change subsystem state
ZNGC:NA0,<sp_msc>:ACT;	Change SCCP state
ZNHC:NA0,<sp_msc>:FE:ACT;	Change subsystem state

Change the value of the timer **SSP_FILTER_TIMER** from 10 to 110 (11s) with command:

```
ZOCM:1:25,110;
```

Change the value of the timer **Q714_T_STAT_1ST** from 600 to 50 (5s) with command:

```
ZOCM:1:8,50;
```


Check the SCCP counter values with command:

```
ZOCI:1;

DX 200    OLOS                      2004-10-11  09:40:01

INTERROGATING SCCP SIGNALLING POINT PARAMETER SETS

SET NUMBER: 00002       SET NAME: WHITE
=============================================================================
NO:  NAME                                          VALUE     UNIT
---  ----                                 ----------------------   ------
  1  Q714_T_CONN_EST                                   90   1   S
  2  Q714_T_IAS                                        90   1   S
  3  Q714_T_IAR                                       270   1   S
  4  Q714_T_REL                                       150   0.1 S
  5  Q714_T_INT                                        60   1   S
  6  Q714_T_RES                                        15   1   S
  7  Q714_T_REP_REL                                   100   0.1 S
  8  Q714_T_STAT_1ST                                  100   0.1 S
  9  Q714_T_STAT_INC                                  300   0.1 S
 10  Q714_T_STAT_MAX                                 9000   0.1 S
 11  A_INTERFACE                                       NO      -
 12  WHITE_BOOK_MGMT_USED                              YES     -
 13  SS_MANAGEMENT_USED                                YES     -
 14  XUDT_USED                                         NO      -
 15  UDT_DENIED                                        NO      -
 16  SEG_X_THRES                                      272   OCTETS
 17  SEG_Y_THRES                                      272   OCTETS
 18  TCAP_LOAD_SHARING_USED                            NO      -
 19  ADD_DPC_IF_RI_SSN                                 NO      -
 20  ADD_GT_IF_RI_SSN                                  NO      -
 21  ADD_DPC_IF_RI_GT                                  NO      -
 22  ANALYSE_ROOT_OF_CALLING_GT                        NO      -
 23  ALLOWED_GTI_VALUES                1-4,5,6,7,8,9,10,11,    -
                                       12,13,14,15             -
 24  SSA_FILTER_TIMER                                  10   0.1 S
 25  SSP_FILTER_TIMER                                  10   0.1 S
 26  LUDT_USED                                         NO      -
 27  CO_SEGM_USED                                      NO      -


COMMAND EXECUTED
```

Note:

The parameter Q704_T20_TRAF_RESTARTING_TIME should be modified only in BSC.
This TN replaces the earlier TN GEN721.

Reference:

Technical Note Revision History

Date	Version	Editor	Summary of changes
08.11.2004	1.0	J.Kivikoski	The first official version

List of Active Technical Notes

Set	Nbr	Title	TN Vers	S9	S10	S10.5	S10.5 ED	S11	S11.5	S12
	806	EGPRS UL Throughput after S11 CD3.0	1.0					x		
	804	Cell Global Identity usage in S11	1.0					x		
	803	BCSU reset required after modifying EXT_UTBF_USAGE parameter	1.0					x		
	802	Plug-in unit addresses with 256 MB RAM memory in OMU	1.0			x	x	x	x	
	801	Incorrect Transmission Unit indicated in MML for Ultrasite	1.0			x	x			
	800	Availability of Nokia S9 and S10 Releases	1.0	x	x					
	799	GSM800/GSM1900 Common BCCH and MULTI BCF	1.0				x	x	x	x
	798	AMR usage in SEGMENT	1.0			x	x	x		
	797	Usage of G40 segment with CP4x CPUs equipped	1.0					x	x	
	796	SW Support for Nokia BSCE, TCSME, BSC2E and BSC2A Products	1.0						x	x
	795	System Level Trace Reporting	1.0				x			
	794	Transmission delay impact to LapD throughput	1.0	x	x	x	x	X		
	793	Installing S11 compatible ET2 plug-in unit SW	1.0			x	x	x		
	792	Activating data filtering for FER measurement in UL and DL direction and changing filtering threshold	1.0				x			
	791	Removing semipermanent Trunk- to-Trunk circuits after S9	1.0			x	x			
	790	Guidelines for (E)GPRS radionetwork planning to get full benefit of improved intra PCU cell re-selection in S10.5(ED)	1.0			X	x			
	789	Dynamic Abis configuration	1.0				x			
	788	Instructions to use child cells when segment usage is activated	1.0				x			
	787	GSM900/GSM1800 Common BCCH (ETSI)	1.0				x			
	786	GSM800/GSM1900 Common BCCH (ANSI)	1.0				x			
	785	Load based TCH handover in Common BCCH	1.0				x			
	784	Using frequency hopping in segment with several BTS	2.0			x	x			
	783	Defining a maximum transmission power of GSM 800 frequency band BTS in segment environment	1.0			x	x			
	781	New traffic measurement counter for calculating network accessibility	1.0	x	x	x	x			
	780	Change Delivery requirement for S9-S10.5 upgrade	1.0	x		x	x			
	779	New traffic measurement counter for dropped calls	1.0	x		x	x			
	778	Message Bus fault investigation after SUPPROGX 7.12-4 correction	1.0	x	x	x	x			
	777	1GB Winchester disks with S10.5 software	1.0			x	x			
	776	Accessing PCU service terminal	1.0	x	x	x	x			
	775	Logical file connections of GALARM in MCMU	1.0	x	x	x	x			
	774	FACCH call set-up and handovers with AMR	1.0		x	x	x			
	773	Delaying call set-up to ensure MS measurement report availability in a segment environment	1.0			x	x			
	772	Clarifications to GPRS territory handling and allocation	1.0	x	x					
	769	AMR Codec mode settings	1.0		x					
	768	Pool Switch Indicator for AMR circuit pool	1.0		x	X	X			
	767	TCSM2 SW in S10 package	1.0		x					
	766	Illegal initialisation value for DRX_TIMER_MAX	1.0		x	X	X			
	765	BTS synchronisation	1.0		x					
	764	BSC IP- Address in High Capacity upgrade	1.0	x						
	763	Adding a TRX to a GPRS enabled cell	1.3	x	x	X	X			
	762	SPLIT_PG_CYCLE support deactivation / activation	1.1	x	x	X	X			
	761	CS TCH allocation with GPRS, Half Rate and BB-hopping	2.0			X	X			
	761	CS TCH allocation with GPRS, Half Rate and BB-hopping	1.0	x	x	X	X			
	760	Interaction between HSCSD and GPRS after BSC S9 SW CD 4.0 GEN	1.0	x	x	X	X			
	759	Defining directory sizes when extracting files from a ZIP archive	1.1	x	x	X	X			
	757	Supervision of Transmission Equipment in Q1 Bus	1.1	x	x	X	X			

	756	TCSM2E/A recovery problem after a power break with TRCO eprom version 5.7-0	1.1	x						
	755	SCCP Broadcast status settings in BSC	1.0	x						
	754	Gb interface loss due to MCMU switchover	1.0	x						
	753	Instructions to replace ET2E/ET2E-C with ET2E-S/ET2E-SC	1.1	x	x	X	X			
	752	Modifying Parameter "Bad Quality Experience Guard Time"	1.0	x	x	x	x			
	751	PCU Improvements	1.0	x						
	750	Corrupted S9 TCSM2 software on floppy	1.0	x						
	749	New software modules add on fallback	1.0	x						
	748	PCU Configuration Instructions	1.4	x						
	747	Patching BTS LOAD INFO TIMER with BSC feature AMH	1.0	x	x	x	x			
	746	BSC Remote SW Upgrade	1.1	x	x	X	X			
	745	BCSU Recovery and Alarms 690, 691 and 1001	1.1	x	x	X	X			
	744	TCSM2 SW floppy disk is corrupted	1.0	x						
	743	PCU boot SW updating and BSC Change Deliveries 0.2 and 0.3 installation recommendations	1.1	x						
	742	PCU boot SW compatibility	1.1	x						
	740	Installing BSC SW without conversions	1.3	x	x	X	X			
	739	MMI Password Encryption Based on Public Algorithms and S9 Release Upgrade	1.0	x						
	738	GPRS enabling and BTS SW support	1.1	x	x	X	X			
	737	BSC Q3 interface compatibility with different NMS SW releases	1.1	x	x	X	X			
0002	734	Parameters in MML command groups E0 and EM	1.2	x	x	X	X			
0001	732	BTS identifier 0 in BSDATA		x						
9921	729	Correction for GEN 637: File size of BSC measurements		x						
9920	728	Handover Adjacent Cell Measurement Counters		x	x	x	x			
9911	712	TCSM2 Routine Testing Notes	1.1	x	x	X	X			
9911	711	HSCSD Power Control parameters after S7 upgrade Validity		x						
9907	703	DSP Software Update of TR Plug-In Unit		x						
9907	702	Optimised Abis and not_in_use channels / Improvement for GEN 579	1.2	x	x	X	X			
9901	683	Unreliable activation of TCSM SMHW 02E correction		x						
9901	680	Unequal MNC values cause failures in location update	1.2	x	x	X	X			
9824	671	BTS alarms blocked after the SW upgrade	1.2	x	X	x	x			
9821	657	Functionality of the online call tracing observation	1.2	x	x	X	X			
9818	648	Implementation of BSS7210, Dual band MS access to IUO-lay	1.1	x	x	X	X			
9816	641	Information about Fallback usage	1.1	x	x	X	X			
9816	640	Actions before a system restart	1.2	x	x	X	X			
9813	635	Effects of BCSU working state change from W0 to TE	1.3	x	x	X	X			
9813	632	Correction for GEN 547:BSC parameter DISABLE INTERNAL H0 is highly recommended to have value N0	1.3	x	x	X	X			
9813	631	Correction for GEN 546: CCS7 30 Minutes freezing done	1.3	x	x	X	X			
9803	605	Dimensioning capacity of SS#7 links	1.2	x	X	x	x			
9719	595	Super-reuse TRX in BL-US state increases handover failure counter values in statistics	1.1	x	x	X	X			
9718	590	PCM failure alarm missing in PCM break in ISDN Abis		x						
9712	574	Using Satellite Abis and Landline Abis in the same BSC	1.2	x	x	X	X			
9709	565	Command Calendar output destination	1.1	x	x	x	x			
9707	558	Problems with synchronized handovers in PrimeSite	1.1	x	x	x	x			
9618	531	Availability of Nokia BSCE and TCSME Equipment	1.2	x	x	x	x			
9613	514	Removing TRCO PIU from the TC1C cartridge	1.1	x	x	x	x			
9613	509	SCCP broadcast status settings in BSC		x						
9519	34	Remove proms from the plug-in unit when sending them to repairing	1.2	x	x	x	x			
9512	15	Potential overload problem, Transcoder/MSC interaction	1.1	x	x	x	x			
9510	13	Different interpretation of DL DTX setting in MSCs	1.2	x	x	x	x			

