Service

HiPath 4000
Troubleshooting

Service Manual

A31003-H3130-S100-4-7620

SIEMENS

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F5000
XCNL
PROM ERROR

Type: Service-specific (Format 1E/22)
Short text: PROM error
Cause:

Format 1E: PROM error. Cross channel has detected an internal error, but has booted and has reported this error / if error is repeated, replace board CCH.

Format 22: Error was reported by the routine test organization.

Action: If error occurs repeatedly (Format 1E), replace CCH board.

F5001
XCNL
RAM ERROR

Type: Service-specific (Format 1E/22)
Short text: RAM error
Cause:

Format 1E: RAM error in cross channel (CCH). CCH has detected an internal error, but has booted and has reported this error / if error is repeated, replace board CCH.

Format 22: Error was reported by the routine test organization.
Action: If error occurs repeatedly, replace CCH board.

F5002
XCNL
TIMER ERROR

Type: Service-specific (Format 1E/22)
Short text: Timer error
Cause:

Format 1E: Timeout in cross channel (CCH). Cross channel has detected an internal error, but has booted and has reported this error / if error is repeated, replace board CCH.

Format 22: Error was reported by the routine test organization.

Action: Replace CCH BP.

F5003
XCNL
FW ERROR

Type: Service-specific (several formats apply)
Short text: Firmware error
Cause: Firmware error in cross channel (CCH). Formats 1E and 22 are relevant
for this message. For the sake of differentiation, byte 1 contains HEX value 'EE in format 22.

Format 1E: cross channel has detected an internal error, but has booted and has reported this error.

Format 22: cross channel has not reacted to a status query. Error was reported by the routine test organization.

Action: Replace CCH BP if error is repeated.

F5004
XCNL
DEF

Type: Service-specific (Format 18/22)
Short text: Cross channel defective
Cause:

Format 18: Cross channel (CCH) defective / replace board CCH.

Format 22: Error was reported by the routine test organization. CCH has not answered the status query.

Action: Replace CCH board.

F5019
XCNL
BACK ON-LINE

Type:	Diagnosis-specific (Format 00)
Short text:	Cross channel reports back
Cause:	Cross channel board reports back again.
Action:	If error occurs repeatedly, save the error message data and contact your

next level of support.

F5020
XCNL
XCNL OR IEC DOWN

Type: Diagnosis-specific (Format 22)
Short text: No response from CCH board
Cause: No response from remote (partner) cross channel board. Cross channel
board or IEC bus defective.
Action: Replace CCH board.

F5021
XCNL
EC DOWN

Type: Diagnosis-specific (Format 18/22)

Short text: IEC bus defective

Cause: Connection setup possible, but traffic not correct, IEC bus possibly
defective.

Action: Check the hardware (e.g. cables and shelves). If this does not work, save
the error message data and contact your next level of support.

F5030
DCL
PROM ERROR

Type: Service-specific (several formats apply)

Short text: PROM error

Cause: PROM error. DCL detects an internal error and reports it either in its own error message or in a status acknowledgment to error analysis. Format 1E and format 22 may be relevant for this message. If the first two HEX items contain '01EE, this message is a status acknowledgment. If the contents are anything else, this message will be sent as an error message and interpreted according to the format.

Format 22: Error reported by the routine test organization.

Action: Start test with TSU AMO. If test completes with negative results, check the hardware (e.g. cables and shelves) and replace DCL if all else fails.

F5031
DCL
RAM ERROR

Type: Service-specific (several formats apply)

Short text: RAM error

Cause: RAM error. DCL detects an internal error and reports it either in its own error message or in a status acknowledgment to error analysis. If the error is repeated, replace the DCL board.

- Format 1E and format 22 may be relevant for this message. If the first two HEX items contain '01EE, this message is a status acknowledgment. If they contain anything else, this message will be sent as an error message and interpreted according to format.

- Format 22: Error reported by the routine test organization.

Action: Start test with TSU AMO. If test completes with negative results, replace DCL.

F5032
DCL
TIMER ERROR

Type: Service-specific (several formats apply)
Short text: Timer error
Cause: Timeout. DCL detects an internal error and reports it either in its own
error message or in a status acknowledgment to error analysis. If the error is repeated, replace
the DCL.

- Format 1E and format 22 may be relevant for this message. If the first two HEX items
  contain '01EE, this message is a status acknowledgment. If they contain anything else,
  this message will be sent as an error message and interpreted according to format.

- Format 22: Error reported by the routine test organization.

Action: Start test with TSU AMO. If test completes with negative results, replace
DCL.

F5033
DCL
FW ERROR

Type: Service-specific (several formats apply)
Short text: Firmware error
Cause: DCL detects an internal error and reports it either in its own error
message or in a status acknowledgment to error analysis. If the error is repeated, replace DCL.

- Format 1E and format 22 may be relevant for this message. If the first two HEX items contain '01EE, this message is a status acknowledgment. If they contain anything else, this message will be sent as an error message and must be interpreted according to format.

- Format 22: Error reported by the routine test organization.

Action: Start test with TSU AMO. If test completes with negative results, replace DCL.

Interpretation of auxiliary data:

For Hicom 3X3:

If a manual soft restart is initiated via DCL, two F5033 messages are output in addition to F2019. These will have format 22 and contain the following auxiliary data:
first F5033 Byte 7 and 8: 00FE
second F5033 Byte 7 and 8: 0040

F5034
DCL
NO POLLING

Type: Service-specific (Format 18)

Short text: DCL is not polling

Cause: DCL does not poll the peripherals. This may be because there are not enough free containers (<5) for transporting messages. This message is output after a soft DCL restart.

Action: If the error is repeated, start test with TSU AMO. If test completes with negative results, check the hardware (e.g. cables and shelves) and replace DCL if all else fails.

F5035
DCL
POLLING AGAIN

Type:	Service-specific (Format 18)
Short text:	DCL is polling again
Cause:	DCL is polling the peripherals again.
Action:	Positive acknowledgment without action.

F5036
DCL
MSG NOT PLAUS

Type:		Diagnosis-specific (Format 18)
Short text:		Implausible message (SW error)
Cause:		The DCL has received a message it cannot interpret from the peripherals

or group processor. This message is packed in an array of 50 bytes and forwarded transparently to DEP-S.

Action: The sender and, hence, the cause can be ascertained from the implausible message. Save error message data and contact your next level of support.

Interpretation of auxiliary data:

Byte 7   =   Error code

01   Invalid message length (CMDQ1)

02   Invalid SHELF_NO

03   Invalid PBC_ADDR

04   Invalid message length (CMDQ0)

05   Invalid EVENT_CODE

06   Invalid SUB_EVT_CODE

07   not used

08   Invalid SHELF_NO or RESET_TYP

09   Invalid SHELF_NO in 'send_al'

10   Invalid SHELF_NO and PBC_ADDR in 'part_poll'

11   Invalid SHELF_NO in 'start_poll_shelf'

12   Invalid SHELF_NO in 'stop_poll_shelf'

13   Invalid BYTE_CNT in 'Uplink Signaling Data'

14   Invalid BYTE_CNT in 'LP Result Control'

Values 01 to 03 relate to CMDQ1, values 04 to 12 relate to CMDQ, values 13 and 14 are internal QDCL values.

Byte 8-45   =   Internal dual port RAM data (DPR)

Byte 48-95   =   Implausible message which led to error

F5037
DCL
DATA OVERFLOW

Type: Diagnosis-specific (Format 18)
Short text: Data overflow in DCL
Cause: Data overflow in the DCL, i.e. the DCL does not acknowledge the
initialization message. Message after a soft DCL restart.
Action: Save error message data and contact your next level of support.

F5038
DCL
DMA ERROR

Type: Diagnosis-specific (Format 18)
Short text: DMA controller of DCL defective
Cause: DCL's DMA (Direct Memory Access) controller is defective. Message after a soft DCL restart. If the error is repeated, look for the cause in the DCL. Replace DCL board if necessary.
Action: If the error is repeated, start test with TSU AMO. If test completes with negative results, replace DCL.

F5039
DCL
DEF

Type: Service-specific (Format 18/22)
Short text: DCL board defective
Cause:

- Format 18: DCL defective. Message after a soft DCL restart. If the error is repeated, look for the cause in the DCL. Replace DCL board if necessary.
  This error message can also be output together with F5100 and possibly F5042, and then indicates a clock generator failure.

- Format 22: Error reported by the routine test organization. The DCL has not acknowledged the status query.

Action: If the error is repeated, start test with TSU AMO. If test completes with negative results, replace DCL.

F5041
DCL
PBC DEF

Type:	Service-specific (Format 1F)
Short text:	DCL soft restart
Cause:	Message indicating defective PBCs of the DCL.
Action:	If the error is repeated, start test with TSU AMO. If test completes with

negative results, replace DCL.

Interpretation of auxiliary data:

Message indicating defective PBCs after booting:

Byte 0   =   Length of relevant bytes

Byte 1   =   H'EE

Byte 2-n   =   Interpretation acc. to DB_M_QF_LTG_SPERR_ELEM_STR

Message indicating defective PBCs in normal operation:

Byte 0   =   DCL status byte

Bit 0 = 1   then PBC 0 defective

Bit 1 = 1   then PBC 1 defective

Bit 2 = 1   then PBC 2 defective

Bit 3 = 1   then PBC 3 defective

Bit 4 = 1   then DMA defective

Bit 5 = 1   then polling disabled

Byte 1   =   Currently defective PBC of the DCL.

Message after a soft DCL restart. If the error is repeated, look for the cause in the DCL. Replace DCL board if necessary.

F5042
DCL
HDLC DEFECT

Type: Service-specific (Format 22)
Short text: HDLC link defective
Cause: This LTUC/DCL error is reported by the error analysis system if a number of boards on the same shelf report out-of-service within a short period of time.
This error is also reported (together with F5100 and F5039) if the clock generator fails or if, as a result of an interrupted HDLC connection (cable), call processing switches to the better standby CC half
Action: See also F5044, F5045 and F5046. Check hardware (shelf, LTUC and DCL boards).

F5043
DCL
DCL RELOAD REQUEST

Type: Service-specific (Format 18)
Short text: Error in DCL loadware
Cause: DCL reloaded due to an error in the DCL loadware.
Action: The DCL triggered an interrupt that resulted in a hard restart with a
reload of the DCL loadware via the interrupt handler (INTH), fault analysis (FA) and SYSLOAD.
Save error message data and contact your next level of support.

F5044
DCL
HDLC LAYER1 NPR
Type: Service-specific (Format 22)
Short text: HDLC link interrupt
Cause: After a restart CC it was determined that at least one HDLC path to a configured LTU has been interrupted. This results in a 'HW Partially Defective' in FA (active CC changeover to standby CC, or restart in the standby half).
Action: To clear this error, either the faulty HDLC connections (cables) must be restored, or the corresponding LTU(s) must be blocked via AMO. See also F5042, F5045, and F5046. Check hardware (shelf, LTUC and DCL boards).

F5045
DCL
HDLC LAYER1 LEFT

Type: Service-specific (Format 22)
Short text: HDLC link lost
Cause: The DCL in the standby CC signals a lost HDLC connection to an LTU (cable interruption).
Action: See also F5042, F5044, and F5046. Check hardware (shelf, LTUC and DCL boards).

F5046
DCL
NEW HDLC LAYER1

Type:	Service-specific (Format 22)
Short text:	HDLC link restored
Cause:	The DCL in the standby CC signals a restored HDLC connection to an LTU.
Action:	See also F5042, F5044, and F5045.

F5047
DCL
SPOR ERROR

Type:		Service-specific (Format 22)
Short text:		Sporadic error in QDCL
Cause:		A status check of the QDCL showed a sporadic error (QDCL background

test).

Action: The type of error is shown in the status byte. Save error message data
and contact your next level of support.

Interpretation of auxiliary data:

Byte 0   =   5F (95 dec.) Length of the suppl. data

Byte 35   =   Status byte

           01   Checksum error in the code storage area

           02   Read/write error in the data storage area

           04   Error during WD expiry test

F5050
MBU
PROM ERROR

Type:	Service-specific (Format 22)
Short text:	PROM error
Cause:	Error reported by the RTO, or error message is output in conjunction with

F5053 as additional information.

Action: If error F5050 is <u>not</u> output in conjunction with error F5053 (within 2 seconds), the message indicates that the RTO has detected a defective MBU. Replace MBU. If errors F5050 and F5053 are output simultaneously (within 2 seconds), the message contains additional auxiliary data which is important for the development department. In this case, save the error message data and contact your next level of support.

F5051
MBU
RAM ERROR

Type:	Service-specific (Format 22)
Short text:	RAM error
Cause:	Error reported by the RTO or MBU firmware.
Action:	Replace MBU.

F5052
MBU
TIMER ERROR

Type:	Service-specific (Format 22)
Short text:	Timer error
Cause:	Error reported by the RTO or MBU firmware.
Action:	If error F5052 does not occur in conjunction with F5053 (# 2 seconds),

the message indicates that the RTO has detected a defective MBU. Replace MBU.

If errors F5052 and F5053 are output simultaneously (within 2 seconds), this indicates a connection loss between the CC and the LTG. The two error messages will also contain additional auxiliary data which is important for the development department, if the cause of the connection loss lies in the MBU or in one of its associated system units. In this case, save the error message data and contact your next level of support.

The data is not significant if the cause of the connection loss lies in an error of the CC or LTG.

F5053
MBU
FW ERROR

Type:	Service-specific (Format 1E/22)
Short text:	Firmware error in MBU
Cause:	See also F5050 and F5052.

MBU has detected an internal error, but was able to complete booting and then report the error.

Action: If error is repeated, check firmware status against firmware list and upgrade FW if necessary. If this does not work, replace MBU board. If error persists, save error message data and contact your next level of support.

F5054
MBU
HW ERROR

Type:	Service-specific (Format 22)
Short text:	MBU hardware error
Cause:	Error reported by the RTO or MBU firmware.
Action:	Check firmware status against firmware list and upgrade FW if necessary.

If this does not work, replace MBU board. If error persists, save error message data and contact your next level of support.

F5055
MBU
MBU OR HDLC DOWN

Type: Service-specific (Format 22)
Short text: MBU or HDLC link defective
Cause: Message buffer unit (MBU) or HDLC links defective. Message can also occur in conjunction with an LTG block.
Action: Check MBU, message distributor (MD) or cabling, replace if necessary.

F5056
MBU
IOCC DOWN

Type: Service-specific (Format 22)
Short text: IOCC not responding
Cause: IOCC no longer responding to a request. Either the central switching network (CSN) is defective or deactivated, or the HDLC highway to the CSN is defective.
Action: Check CSN and cabling, replace if necessary.

F5057
MBU
IOCG DOWN

Type:	Service-specific (Format 22)
Short text:	IOCG not responding
Cause:	IOCG no longer responding to a request. Either the LTG is deactivated, or the HDLC highway to the IOCG is defective, or the IOCG itself is defective.
Action:	Check LTG/IOCG and cabling, replace if necessary.

F5058
MBU
IOCC BACK ON-LINE

Type:	Service-specific (Format 22)
Short text:	IOCC respüonding again
Cause:	IOCC answers again. Positive acknowledgment of error message F5056.
Action:	Positive acknowledgment without action.

F5059
MBU
IOCG BACK ON-LINE

Type:	Service-specific (Format 22)
Short text:	IOCG responding again
Cause:	IOCG answers again. Positive acknowledgment of error message F5057.
Action:	Positive acknowledgment without action.

F5060
IOCC
MTS OR CR DEF

Type:	Service-specific (Format 18)
Short text:	Failure of all MTS boards or CR on IOCC
Cause:	Failure of all MTS boards or clock repeater (CR) on the IOCC board
Action:	Check appropriate board, replace if necessary.

F5061
IOCC
MTS DEF

Type:	Service-specific (Format 18)
Short text:	Timeslot or MTS defective
Cause:	Timeslot or MTS board has failed
Action:	Check MTS board and replace if necessary.

F5062
IOCC
WATCHDOG TIMEOUT

Type:	Diagnosis-specific (Format 29)
Short text:	Watchdog timeout
Cause:	Watchdog timeout on the IOCC board.
Action:	Error analysis (FA) keeps statistics to this effect. Save error message data

and contact your next level of support.

F5063
IOCC
SUM POWER FAIL

Type: Service-specific (Format 29)

Short text: Feed power failure

Cause: Summation counter (for voltage fluctuations) signals failure of a feed voltage in the system (inverter or charging rectifier output).

Action: Check power supply and appropriate voltages. Old hardware versions: check that the Faston connectors on the backplane are locked in correctly.

F5064
IOCC
RESOURCES

Type: Service-specific (Format 29)
Short text: IOCC resource shortage
Cause: IOCC short of resources.
Action: Save error message data and contact your next level of support. Note related error messages.

F5065
IOCC
NEW ACTIVE

Type: Service-specific (Format 29)
Short text: IOCC active
Cause: IOCC has assumed the activity.
Action: If error occurs repeatedly, save the error message data and contact your next level of support.

F5066
IOCC
BOTH CSN ACT

Type:	Service-specific (Format 19)
Short text:	IOCC partner active
Cause:	An IOCC signals that both partners are active.
Action:	If error occurs repeatedly, save the error message data and contact your

next level of support

F5067
IOCC
HDLC CC SBY DEF

Type:	Service-specific (Format 29)
Short text:	HDLC link to standby CC interrupted
Cause:	HDLC connection to standby common control (standby CC) is interrupted.
Action:	Check HDLC connection. Also check rest of hardware (shelf and cables).

F5068
IOCC
DEF

Type: Service-specific (several formats apply)

Short text: CCG reference clock failed

Cause:

- Format 18: failure of clock reference signal from CCG.

- Format 22: Error in status word query. The error is reported by the routine test organization. For the sake of differentiation, the HEX data contains H'EE in byte 1, then a series of items describing the disabled and defective CSN elements, and the CSN status.

Action: Replace defective element when located.

Interpretation of auxiliary data:

Byte 0 = Length of relevant bytes

Byte 1 = EE (Interpret bytes 4 to 7 only if byte 1 = H'EE)

Byte 2 = 00 CSN half is active and okay

      01 CSN half is active and partially defective

      02 CSN half is active and defective

      03 CSN half is passive and okay

      04 CSN half is passive and partially defective

      05 CSN half is passive and defective

The following bytes are relevant for standard cabinet systems:

Byte 6-9 = Status of MTS boards

      00 okay

      01 defective

Byte 6 = Status of MTS 0, board 0 (SLOT 85 or 91)

Byte 7 = Status of MTS 0, board 1 (SLOT 79 or 97)

Byte 8 = Status of MTS 1, board 0 (SLOT 73 or 103)

Byte 9 = Status of MTS 1, board 1 (SLOT 67 or 109)

The following bytes are relevant for modular cabinet systems:

Byte 10-16 = Status of the MTS boards

      00 okay

      01 defective

Byte 10 = Status of MTS64 board 1 (SLOT 118)

Byte 11 = Status of MTS64 board 2 (SLOT 111)

Byte 12   =   Status of MTS64 board 3 (SLOT 104)

Byte 13   =   Status of MTS64 board 4 (SLOT 97)

Byte 14   =   Status of MTS64 board 5 (SLOT 90)

Byte 15   =   Status of MTS64 board 6 (SLOT 83)

Byte 16   =   Status of MTS64 board 7 (SLOT 76)

F5069
IOCC
IOCG DEF

Type:	Service-specific (Format 18)
Short text:	IOCG defective
Cause:	IOCG board is defective or cannot supply a clock.
Action:	Replace IOCG board.

F5070
IOCC
CCG DEF

Type: Service-specific (several formats apply)

Short text: CCG defective

Cause:

- Format 18: clock repeater (CR) of the central clock generator (CCG) is defective.

- Format 22: byte 1 contains H'EE for differentiation. Status of IOCC is bad.

Action: Action depends on the evaluation of the HEX data. Save the error message data and contact your next level of support. Check CCG board and replace if necessary.

Interpretation of auxiliary data:

Interpretation of bytes 2 to 3 only if contents of byte are 1 H'EE.

Byte 0   =   Length of relevant byte

Byte 1   =   EE (Interpret bytes 2 and 3 only if byte 1 = H'EE)

Byte 2   =   CCG-A Status (DB_M_QF_PROC_STATE_SET)

           00   CCG-A active, hardware okay

           01   CCG-A active, hardware partially defective

           02   CCG-A active, hardware defective

           03   CCG-A is not active, hardware okay

           04   CCG-A is not active, hardware partially defective

           05   CCG-A is not active, hardware defective

Byte 3   =   CCG-B status (DB_M_QF_PROC_STATE_SET)

           00   CCG-B active, hardware okay

           01   CCG-B active, hardware partially defective

           02   CCG-B active, hardware defective

           03   CCG-B is not active, hardware okay

           04   CCG-B is not active, hardware partially defective

           05   CCG-B is not active, hardware defective

F5071
IOCC
CCG FAIL

Type: Service-specific
Short text: Error on CCG
Cause: Central clock generator (CCG) has identified an error in the reference input.
Action: Check CCG board and replace if necessary.

F5072
IOCC
CCG NO CLOCK

Type:	Service-specific (Format 18)
Short text:	No clock signal from CCG
Cause:	Central clock generator (CCG) can no longer send clock signal.
Action:	Check CCG board and replace if necessary.

F5073
IOCC
CCG ON-LINE

Type:	Service-specific (Format 29)
Short text:	CCG okay again
Cause:	Defective central clock generator (CCG) is okay again.
Action:	Positive acknowledgment without action.

F5074
IOCC
CCG REF LOSS

Type:	Service-specific (Format 29)
Short text:	Loss of external reference clock
Cause:	Central clock generator (CCG) has lost external clock reference signal.
Action:	Check external clock source.

F5075
IOCC
CCG REF OK

Type:	Service-specific (Format 29)
Short text:	Synchronized to external reference clock
Cause:	Central clock generator (CCG) has been synchronized with an external

clock reference signal.

Action: If error occurs repeatedly, save the error message data and contact your next level of support.

F5076
IOCC
IMPLAUSIBLE MSG

Type: Service-specific (Format 22)
Short text: Implausible message to IOCC
Cause: IOCC has received an implausible message. The container with the
implausible message is reflected in the HEX data (F1-F2-F3).
Action: Save error message data and contact your next level of support.

F5100
CLOCK
NOT READY

Type:	Service-specific (Format 1A)
Short text:	PCG not in order
Cause:	Error in internal communication with clock generator.
System reaction:	system automatically carries out a hard restart.
Action:	Replace clock generator board if error is signaled again after restart.

F5101
CLOCK
DEFECT

Type:	Service-specific (Format 1A/22)
Short text:	Clock signal detection error
Cause:	

Format 1A: This message is output on duplex systems., if

- active clock generator has detected a clock frequency, but the standby clock generator has not (false clock)

- active clock generator fails to detect clock signal for synchronization which has been detected by the standby clock generator.

System reaction: System automatically carries out a hard restart.

Format 22: This message is only output in systems with CCG clock generator boards, if

- switch to CCG slave was not successful.

- CCG master and CCG slave identify different clock signals (i.e., CCG master or slave defective, or CCG MUX not properly adjusted).

System reaction: system switches over to AUTONOMOUS CLOCK (see also F5556).

Action:

- Format 1A: Replace clock generator board if error is signaled again after restart.

- Format 22: Initiate system restart to test whether error can be eliminated. If the error is signaled again after the restart, replace the clock generator.

F5103
CLOCK
PROM ERROR

Type:	Service-specific (Format 1A)
Short text:	Clock generator PROM error
Cause:	Clock generator has detected a PROM error.
System reaction:	This is treated as a system hardware error. Duplex systems: system carries out a hard restart, if standby CC half has better HW status.
Action:	Replace clock generator board.

F5104
CLOCK
RAM ERROR

Type: Service-specific (Format 1A)

Short text: Clock generator RAM error

Cause: Clock generator has detected a RAM error.

System reaction: this is treated as a system hardware error. Duplex systems: system carries out a hard restart, if standby CC half has better HW status.

Action: Initiate system restart to test whether error can be eliminated. If the error is signaled again after the restart, replace the clock generator

F5105
CLOCK
PROC ERROR

Type: Service-specific (Format 1A)

Short text: Clock generator processor error

Cause: Clock generator has detected a processor error.

System reaction: this is treated as a system hardware error. Duplex systems: system carries out a hard restart, if standby CC half has better HW status.

Action: Initiate system restart to test whether error can be eliminated. If the error is signaled again after the restart, replace the clock generator

F5106
CLOCK
MASTER/SLAVE ERROR

Type: Service-specific (Format 1A)
Short text: Master/slave error
Cause: Clock generator has detected a master/slave switchover error.
System reaction: no automatic response.
Action: Initiate system restart to test whether error can be eliminated. If the error is signaled again after the restart, replace the clock generator

F5107
CLOCK
CKA ERROR

Type:	Service-specific (Format 1A)
Short text:	System clock error
Cause:	Clock generator has detected a system clock failure.
System reaction:	system automatically carries out a hard restart.
Action:	Replace clock generator board if error is signaled again after restart.

F5112
CLOCK
CLOCK NOT RECOGNIZED

Type: Service-specific (Format 22)

Short text: Reference clock missing

Cause: Clock generator cannot identify external reference clock despite valid source.

System reaction: error counter of clock source is incremented, and search for new circuit is carried out.

Action: If the error occurs frequently on a particular circuit, check the clock source.

F5130
SM/UNIT
ON-LINE

Type: Service-specific (Format 29)

Short text: Server restart end

Cause: End-of-restart of a service module. Either the TCS or the VMS (not the ADS) has executed an independent restart.

Action: If error occurs repeatedly, save the error message data and contact your next level of support.

F5133
SM/UNIT
CDC DISABLE

Type:	Service-specific (Format 29)
Short text:	Server disabled via AMO.
Cause:	Server disabled via AMO.
Action:	Determine why server was disabled and enable server again via AMO.

F5134
SM/UNIT
RESTART BEG

Type:	Service-specific (Format 29)
Short text:	Server restart
Cause:	Beginning of independent restart of either the TCS or the VMS (not the ADS).
Action:	Save error message data and contact your next level of support.

F5135
SM/UNIT
RESTART DUE TO SERVER

Type: Diagnosis-specific (Format 22)
Short text: SWU restart
Cause: SWU has carried out a restart at the request of a server.
Action: Save error message data and contact your next level of support.

F5136
SM/UNIT
STATISTIC

Type:	Diagnosis-specific (Format 22)
Short text:	Counter overflow
Cause:	Counter overflow for server restarts.
Action:	Determine the cause of the frequent restarts. Save error message data

and contact your next level of support.

F5140
POW SUPL
POWER SUPPLY DEF

Type: Service-specific (Format 00)
Short text: Inverter failure
Cause: Inverter failure on the LTU shelf, CC shelf or in the server. An LTU failure,
CC partner failure or server failure occurs simultaneously.
Action: Check power supply. End of inverter failure signaled with F5141.

F5141
POW SUPL
POWER SUPPLY OK

Type:	Service-specific (Format 00)
Short text:	Inverter okay
Cause:	Inverter in order again.
Action:	Positive acknowledgment of F5140.

F5160
IOCG
PROM ERROR

Type: Service-specific (Format 1E/22)

Short text: PROM error.

Cause: Error reported by the RTO or board FW. This message is output after booting and contains the errors that led to the IOCG restart. The error code and the error address of the operating system on the IOCG boards are output in the HEX data.

Action: If the error is repeated, check the IOCG board and replace if necessary..

F5161
IOCG
RAM ERROR

Type:	Service-specific (Format 1E/22)
Short text:	RAM error
Cause:	Error reported by the RTO or board FW. This message is output after booting and contains the errors that led to the IOCG restart. The error code and the error address of the operating system on the IOCG boards are output in the HEX data.
Action:	If the error is repeated, check the IOCG board and replace if necessary.

F5162
IOCG
TIMER ERROR

Type: Service-specific (Format 1E/22)
Short text: Timer error
Cause: Error reported by the RTO or board FW. This message is output after booting and contains the errors that led to the IOCG restart. The error code and the error address of the operating system on the IOCG boards are output in the HEX data.
Action: If error is repeated, check firmware status against firmware list and upgrade FW if necessary. If this does not work, replace IOCG board.
If error persists, save error message data and contact your next level of support.

F5163
IOCG
SW ERROR

Type: Service-specific (Format 1E/22)
Short text: Software error
Cause: Error reported by the RTO or board FW. This message is output after booting and indicates the error that led to the IOCG restart.
Action: If error is repeated, check firmware status against firmware list and upgrade FW if necessary. If this does not work, replace IOCG board.
If error persists, save error message data and contact your next level of support.

F5164
IOCG
HW ERROR

Type: Service-specific (Format 1E/22)

Short text: Hardware error

Cause: Error reported by the RTO or board FW (clock problems). This message is output after booting and contains the error that has led to the IOCG restart. The error code and the error address of the operating system on the IOCG boards are output in the HEX data.

Action: If error is repeated, check firmware status against firmware list and upgrade FW if necessary. If several IOCG boards report this error at the same time, this can indicate a problem with the central clock source (NCG).

F5165
IOCG
MBU OR HDLC DOWN

Type: Service-specific (Format 22)
Short text: MBU or HDLC defective
Cause: Message buffer unit (MBU) or HDLC path defective. This message can also indicate that the SWU is undergoing a restart or is deactivated.
Action: If all IOCG and IOCC boards report this error at the same time, check the MBU board and replace if necessary.

If this error is reported by several IOCG boards, but is not reported by an IOCC at the same time, this indicates a defective message distribution board. Check the MD board and replace if necessary.

If error is limited to one single IOCG, check cabling or IOCG board and replace if necessary.

F5166
IOCG
DEF

Type: Service-specific (Format 22)

Short text: Status query not acknowledged

Cause: IOCG can no longer be initialized. Error reported by the routine test organization. The IOCG has not acknowledged the status query.

Action: Check the IOCG board and replace if necessary.

F5167
IOCG
MBU ON-LINE

Type:	Service-specific (Format 22)
Short text:	IOCG on-line again
Cause:	IOCG has contact again with the common control (CC).
Action:	Positive acknowledgment without action.

F5168
IOCG
CLOCK REPEATER DEF

Type:　　　　　　　Service-specific (Format 18)
Short text:　　　　　Clock repeater defective
Cause:　　　　　　　IOCG's clock repeater (CR) defective.
Action:　　　　　　Check IOCG board and replace if necessary.

F5169
IOCG
PARTNER DOWN

Type:	Service-specific (Format 18)
Short text:	IOCG defective
Cause:	IOCG power failure or defect detected in the partner half of the LTG.
Action:	Check power supply and replace IOCG if necessary.

F5170
IOCG
LOGIC ACTIVE

Type: Service-specific (Format 22)
Short text: IOCG output active
Cause: Status of active logic changed. The remote partner of the reporting IOCG
has driven its output inactive, LTG half of reporting IOCG is active.
Action: Check reason for status change in partner half.

F5171
IOCG
LOGIC NOT ACTIVE

Type: Service-specific (Format 22)

Short text: IOCG output inactive

Cause: Status of active logic changed. The remote partner of the reporting IOCG has driven its output active.

Action: No action necessary.

F5173
IOCG
END OF FAIL

Type:	Service-specific (Format 22)
Short text:	IOCG clock repeater okay again
Cause:	Errors reported by the clock repeater no longer exist.
Action:	Byte 0 of the HEX data indicates the IOCG state.
Interpretation of auxiliary data:	

The IOCG state is indicated by whichever bit is set (1)

Byte 0 = IOCG status byte (convert to binary)

Bit 0 Clock repeater alarm A, CKA missing.

Bit 1 Clock repeater alarm B, FMB missing.

Bit 2 Clock repeater alarm C, voltage outside the proper range.

Bit 3 Clock repeater alarm D, no feedback.

Bit 4 Clock repeater alarm E, no alarm signal to CKA or FMB.

Bit 5 Clock repeater alarm F, summation of alarms C, D and E.

Bit 6 Power alarm of partner board.

F5180
HWY
DEF

Type: Diagnosis-specific (Format 21/22)
Short text: Highway failure
Cause: The RTO reports a highway failure, after several tests (RTO test only if activated via AMO FUNSU / LTUAHWYA, CSNHWYA).
Format 21 is output with action = OUT_SERV. This is followed by format 22 with the RTO trace message. The RTO trace message is not further explained here.
Action: Remember that a defective highway ("DEF" status) can only be restored to READY state by a hard restart of the LTG (3000 systems) or CC half (all other systems) concerned, i.e., highways cannot be switched (activated/deactivated) via AMO.

Since a highway failure in a 3000/600 system can be caused by HW errors of the MTS, the LTUC or the connecting cable between these boards, the impact of the error must first be defined. In each case, use the SDSU AMO to display how many HWYs and quarter shelves are defective per board. Use the HWY assignment tables (see Highways) to determine which highway belongs to which board or quarter-shelf. This can be used to determine whether the available highway resources will suffice at least for a limited period.

The following actions are recommended for localizing the error. The urgency of these measures depends on the remaining HWY resources per board or quarter-shelf.

In **duplex** systems, the highways can be initially restored by initiating a switchover to the standby LTG half (3000 systems) or standby CC half (all other systems), provided the LTUC and the connecting cable to the MTS of the standby half are okay.
To eliminate the LTUC as the source of the error in a **duplex** system, proceed as follows:

1. Initiate an LTG switchover (3000 systems) or CC switchover (other systems) and test the status of each affected highway with the TSU AMO

2. Repeat step 1, switching back to the original LTG or CC half.

3. If the TSU tests in both halves indicate defunct highways in the LTU, the LTUC is the most probable source of the error. Replace the LTUC.
    If the TSU tests indicate defunct highways in one system half only, initiate a switchover to the good system half and continue with the error localization procedures in the bad system half, as follows:
    1. Check cables and replace as necessary
    2. Replace MTS board
    The system half concerned must be switched to standby first !

In **simplex** systems, the actions depend on the system type (600 systems or 80 systems)

●   600 systems: proceed according to error probability, i.e., replace cables first, replace MTS if this does not work and replace LTUC only if all else fails.

- 80 systems: if only LTU1 is affected, replace SCC board. If LTU2 is affected, follow the procedure for 600 systems.

Interpretation of auxiliary data:

If action is OUT_SERV (Format 21):

Byte 0   =   LTG (0-31)

Byte 1   =   LTU (1-xx)

Byte 2   =   HWY (1-xx)

Byte 3   =   TSL (0-xx)

For an explanation of highway assignment, see Highways.

F5181
HWY
TSL DEF

Type: Diagnosis-specific (Format 21/22)
Short text: Timeslot failure
Cause: The RTO reports a timeslot failure (RTO test only if activated via AMO FUNSU / LTUAHWYA, CSNHWYA).
Format 21 is output with action = OUT_SERV. This is followed by format 22 with the RTO trace message.
Action: See F5180.

---

1. This error can also be caused by boards which do not have the restart capability provided by the V3.1 loadware. In these loadware versions, timeslots can remain out of service after the restart. The following boards are affected:
   SLMA (Q2041, Q2057),
   SLMB8,
   TMBM (Q2052), TMX21, (Q2027). This error cannot be corrected via loadware update. Instead, a workaround solution exists in the form of a deactivation of the HWY test using the FUNSU AMO.

2. This error message is also displayed if a faulty TSL was found during the analysis of a trunk error signaled by the RTO (reference test with a different trunk on another module with the original HWY / TSL identified an error). The name of the module with the trunk originally tested, which is normally not defective, appears in the message header.

F5182
HWY
TSL SPORAD

Type:	Diagnosis-specific (Format 21/22)
Short text:	Sporadic timeslot failure
Cause:	The RTO reports a sporadic timeslot failure (RTO test only if activated via

AMO FUNSU / LTUAHWYA, CSNHWYA).

Format 21 is output with action = OUT_SERV. This is followed by format 22 with the RTO trace message.

Action:	See F5180.

F5183
HWY
TESTTR TIMEOUT

Type: Diagnosis-specific (Format 21)
Short text: Timeout on highway test
Cause: The RTO reports a highway test timeout (RTO test only if activated via AMO FUNSU / LTUAHWYA, CSNHWYA).
Action: If hard restart is unsuccessful, replace SIU board. If this does not work, replace connecting cable between MTS and LTUC or replace LTUC board.

F5200
MTS
BOARD DEFECTIVE

Type:	Service-specific (Format 21)
Short text:	MTS board defective
Cause:	MTS defective. Event signal came from the MTS handler.
Action:	Replace MTS board.
Interpretation of auxiliary data:	

Byte 0   =   LTG (0-31)

Byte 1   =   LTU (00-07)

Byte 2   =   HWY

Byte 3   =   Timeslot

F5201
HWYS DEFECT (as of SP300E V2.0 / R6.5)
PART DEFECT (to SP300E V1.0 / R6.4)

Type:　　　　　　　Service-relevant (Format 22)
Short text:　　　　　LTU highways defective
Cause:　　　　　　Defective highways were detected by RTO test in one or more LTUs on an MTS/SICOE module. State set to DEF.
Total defects of relevant LTUC unavailable.
Action:

Replace highway cable on relevant LTUC. Perform hard restart on active processor

Replace the MTS or SICOE module when the highways are reset to DEF.

● MTS: if defective highways (see supplementary data) in LTU shelf 1 - 7,

● SICOE: if LTU shelves 8 - 15 are effected.

Explanation of highway/LTU assignment see Highways.
Interpretation of auxiliary data:

Representation of the defective highways as a hexadecimal value of an 8 bit strip:

Example:

● highways 0 and 7 are defective

● 1st and 8th bit in byte 1 are set

● hexadecimal represented as 81

Byte 0　　=　　10 (16dec) length of supplementary data

Byte 1　　=　　HWY 0 - 7

Byte 2　　=　　HWY 8 - 15

Byte 3　　=　　HWY 16 - 23

....

Byte 16　=　　HWY 120 - 127

F5220
SIU
DEF

Type: Service-relevant   (Format 20/22/43)

Short text: SIU defect

Cause:

Format 20: SIU boards defective. All terminals are powered (but no dial tone).

Format 22: SIU micro processor error reported by the RTO.

Format 43: (since HiPath 4000 V1.0): SIU part on NCUI board defective.

System reaction:

Format 43: (since HiPath 4000 V1.0) The AP is locked. (

Format 43: (since HiPath 4000 V2.0) TDS TEST FAILED: The AP is locked and put back into service.

Action:

Format 20/22: Replace SIU board.

Format 43: NCUI board has to be replaced.

Format 43 (as of HiPath 4000 V2.0) TDS TEST FAILED: If the error occurs again, replace NCUI board.

F5222
SIU
SPORAD

Type:	Service-specific (Format 20/22)
Short text:	Sporadic error
Cause:	Format 20: Sporadic error. Only for statistics.

Format 22: Sporadic SIU microprocessor error reported by the routine test organization.

Action:	Format 22: Check board and replace if necessary.

F5225
SIU
PER DEF

Type:	Service-specific (Format 20)
Short text:	SIU peripherals defective
Cause:	SIU peripherals defective.
Action:	Replace board.

F5227
SIU
INIT ERROR

Type:	Service-specific (Format 20)
Short text:	Initialization error
Cause:	SIU board initialization error.
Action:	Evaluate auxiliary data.

Interpretation of auxiliary data:

Byte 2 Initialization error (DB_M_QC_ERROR_SET)
- 39 Board in service (can occur if byte 3 = H´0B)
- 3A Wrong board or board incorrectly configured (see F5242)
- 3B Board not present
- 3C Board defective
- 3D Board correctly configured (see F5243)
- 3E SIU NOT LOADED, SIU portion on RTM (DSCXL) could not be loaded (see Byte 3 LOAD_RESULT 2A, 2B, 2C)

Byte 3 Error loading the loadware (DB_M_LC_LOAD_RESULT_SET)
- 00 Defective board, board self text negative
- 01 Board not loaded (error on the board)
- 02 Error loading the loadware to the board, checksum verification negative, hardware error on the board or loadware error on the HD.
- 03 Board OK (can also occur if byte 0 = H'3A)
- 04 Loadware loaded
- 05 Loadware not found on HD
- 06 Loadware on HD faulty or corrupt
- 07 Board not available (NPR)
- 0B Loadware not found or board not in PIT load table
- 0C Negative PGL load result
- 0D Negative PGL286 load result, PGL286 timer expired
- 0F Board is configured but not inserted
- 10 Board available, but load operation not yet acknowledged by board
- 11 LW is loaded, now load the data
- 18 Cancel the load operation
- 19 Board sent no load acknowledgement
- 1A Wrong board (see F5242)
- 1B No response from ADS
- 1C Retrieval of a buffered load task
- 1D Cancel a load operation due to insufficient resources
- 1E Message could not be sent or received
- F1 Board not loaded (in the case of individual commissioning with USSU: Wrong board or load interruption or missing load acknowledgement)
- 2A MISSING HD FILES, File on HD not found (e.g., Loadware file for tones)

2B UNPL FILE CONTEND, Contents of file on HD is not plausible
2C FTP LOGON PROBLEM

F5228
SIU
CON RESP

Type: Service-specific (Format 20)
Short text: Transmission error
Cause: Transmission error on the HDLC link.
Action: Check the appropriate hardware, depending on the system type (shelf
and HDLC link).

F5229
SIU
TEST DEF

Type: Service-specific (Format 20/22)
Short text: Test transmitter/receiver defective
Cause:

- Format 20: Test transmitter/receiver defective.

- Format 22: Reported by the RTO.

Action: Format 20: replace board

F5230
SIU
BAD DIALTONE

Type: Service-specific (Format 20/22)
Short text: Bad external dial tone
Cause:

- Format 20: Bad external dial tone.

- Format 22: Reported by the RTO.

Action: Format 20: replace board

F5232
SIU
BAD PULSED TONE

Type:	Service-specific (Format 20/22)
Short text:	Bad cadenced tone (internal dial tone)
Cause:	

- Format 20: Bad cadenced tone (internal dial tone)

- Format 22: Reported by the RTO.

Action:	Format 20: replace board

F5233
SIU
DTR DEF

Type: Service-specific (Format 20/22)
Short text: Dial tone receiver defective
Cause:

- Format 20: Dial tone receiver of SIU defective. No exchange dial tone.

- Format 22: Reported by the RTO.

Action: Format 20: replace board

F5234
SIU
OUT (ATTENDANCE LIST)

Type:	Service-specific (Format 20)
Short text:	Board not plugged
Cause:	Board pulled out, i.e. the board is no longer on the DCL's attendance list.
Action:	Replug board.

F5235
SIU
IN (ATTENDANCE LIST)

Type:	Service-specific (Format 20)
Short text:	Board replugged
Cause:	Board back on DCL attendance list.
Action:	Positive acknowledgment without action.

F5236
SIU
PER EVT ERROR

Type: Service-specific (Format 20)
Short text: Implausible message from SIU
Cause: Peripheral processing has received an implausible message from the SIU
firmware.
Action: Check SIU board and replace if necessary.

F5237
SIU
MP EVT ERROR

Type:	Service-specific (Format 20)
Short text:	SIU cannot interpret message
Cause:	SIU firmware cannot interpret an incoming message.
Action:	Check SIU board and replace if necessary.

F5238
SIU
FUNCT DEF (FUNCT. DEF.)

Type: Service-specific (Format 20/22)
Short text: SIU defective
Cause:

- Format 20: SIU function bad.

- Format 22: Reported by the routine test organization.

Action: Format 20: replace board.
Interpretation of auxiliary data:

Additional HEX data is signaled with the following interpretation for the 80CMX-DSC:

Byte 0-4   :   Insignifcant data.

Byte 5   :   Length of subsequent auxiliary data:

Byte 6   :   Bit 0: LRC error for announcements

                Bit 6:   LRC error for MOH:

                Bit 7:   HW error: replace DSC80

Byte 7-37 :   Only to be interpreted by the loadware developers.

F5240
SIU
CS DEF

Type: Service-specific (Format 22)
Short text: Code transmitter defective
Cause: Code transmitter of SIU board defective. No dialing possible for DTMF
telephones.
Action: Replace SIU board.

F5241
SIU
CR DEF

Type:	Service-specific (Format 22)
Short text:	Code receiver defective
Cause:	Code transmitter of SIU board defective. No dialing possible for DTMF

telephones.

Action:	Replace SIU board.

F5242
SIU
CONFIG ERROR

Type: Service-relevant (Format 20)
Short text: SIU incorrectly configured
Cause: The central SIU board was incorrectly configured or an incorrect board
type was connected. The boot operation was not completed.
Action: A hard restart is performed if the error is not rectified within a specific
period of time (20 min.).
Interpretation of auxiliary data: SICOE special case:
There is a model with and without MTS extension.

Byte 2	Initialization error (DB_M_QC_ERROR_SET)	
	3A	Incorrect board or board incorrectly configured
	3B	Board not present
	3C	Board defective
	3D	Board correctly configured (see F5243)
Byte 3	Error loading the loadware (DB_M_LC_LOAD_RESULT_SET)	
	00	Defective board, board self text negative
	01	Board not loaded (error on the board)
	02	Error loading the loadware to the board, checksum verification negative, hardware error on the board or loadware error on the HD.
	03	Board OK (can also occur if byte 0 = H'3A)
	04	Loadware loaded
	05	Loadware not found on HD
	06	Loadware on HD faulty or corrupt
	07	Board not available (NPR)
	0B	Loadware was not found or board not in PIT load table
	0C	Negative PGL load result
	0D	Negative PGL286 load result, PGL286 timer expired
	0F	Board is configured but not inserted
	10	Board available, but load operation not yet acknowledged by board
	11	LW is loaded, now load the data
	18	Cancel the load operation
	19	Board sent no load acknowledgement
	1A	Wrong board
	1B	No response from ADS
	1C	Retrieval of a buffered load task
	1D	Cancel a load operation due to insufficient resources
	1E	Message could not be sent or received
	1F	Board not loaded (in the case of individual commissioning with USSU: Wrong board or load interruption or missing load acknowledgement)

F5243
SIU
CONFIG OK

Type:	Service-specific (Format 20)
Short text:	Board configuration corrected
Cause:	The configuration error on the central SIU board was corrected. Startup

was completed.

Action:	Positive acknowledgment without action.

Interpretation of auxiliary data:

Byte 2 = Initialization error (DB_M_QC_ERROR_SET)
       3A Wrong board or board incorrectly configured (F5242)
       3B Board not inserted
       3C Board defective
       3D Board configuration corrected (F5243)

Byte 3 = Error during LW initialization (DB_M_LC_LOAD_RESULT_SET)
       00 Defective board, board self-test negative
       01 Board not loaded (fault on board)
       02 Error during loadware initialization on board, checksum verification negative, hardware fault on board or loadware error on hard disk.
       03 Board okay (can also occur if byte 0 = H'3A)
       04 Loadware loaded
       05 Loadware not found on hard disk
       06 Loadware on hard disk defective or corrupted
       07 Board not present (NPR)

F5250
DCL
COP READY

Type: Diagnosis-specific (Format H'42)

Short text: DSC80: message Co-processor (CoP) ready

Cause: Information on the last restart of the DSC80 co-processor is displayed if
a co-processor error (see F5251, F5252, F5255, F5257) is followed by a restart. This message
is always output in conjunction with the message relating to the cause of the error and is only
required for interpretation by loadware developers.

Action: No action necessary.

F5251
DCL
COP HARD ERROR

Type:	Diagnosis-specific (Format H'42)
Short text:	DSC80: critical error in co-processor (CoP)
Cause:	A critical error has occurred on the co-processor (P68340) of the DSC80.

This error always results in a hard restart, since the co-processor cannot run. If the same error recurs during the subsequent restart, the restart is delayed for one hour.

Other possible messages are available in the HW-DPR contents or a COP ready message (F5250) for interpretation by the loadware developers and/or a message indicating a delayed restart.

Action: Save the error message and contact your next level of support.

In certain circumstances, the problem may be solved by replacing the DSC80 board and/or the loadware on the hard disk.

F5252
DCL
COP EXCEPTION

Type: Diagnosis-specific (Format H'42)

Short text: DSC80: Co-processor (CoP) program conflict

Cause: A program conflict (exception situation) has occurred on the co-processor (P68340) of the DSC80. This error is treated statistically. In the event of a statistics overflow, a soft restart is initiated.

Other possible messages are available in the HW-DPR contents or a COP ready message (F5250) for interpretation by the loadware developers.

Action: Save the error message and contact your next level of support.

F5253
DCL
MP ERROR

Type: Diagnosis-specific (Format H'42)
Short text: DSC80: error in process of the micro-processor (MP)
Cause: The MP has come across an internal error, e.g. DPR invalid, OS Call Fault or an earlier QDLC-CMP exception. Up to two (logically associated) messages may be sent. The system's response varies according to the gravity of the error: it performs a soft restart, increments the statistics, or does not respond at all.
Action: Save error message and contact your next level of support.

F5254
DCL
MP PGL ERROR

Type: Diagnosis-specific (Format H′42)
Short text: DSC80: micro-processor program loader error (PGL)
Cause: The micro-processor (MP) has come across a program loader error. Up to two (logically associated) messages may be sent.
The error causes a hard restart.
Action: Save error message and contact your next level of support.
In certain circumstances the problem may be solved by replacing the loadware on the hard disk.

F5255
DCL
MP COP FATAL ERROR

Type: Diagnosis-specific (Format 42)
Short text: DSC80: micro-processor (MP) detects a fatal co-processor error (CoP).
Cause: The MP has come across a time overflow error in the co-processor of the DSC80. This error indicates that the co-processor has previously responded to the MP. Up to two (logically associated) messages may be sent.
System reaction: The error causes a hard restart.
Action: Save error message and contact your next level of support.

F5256
DCL
MP COP UNEXP RESULT

Type:	Diagnosis-specific (Format H'42)
Short text:	DSC80: micro-processor (MP) receives an unexpected result code from

the co-processor (CoP).

Cause:　　　　　An unexpected result code was returned by the co-processor (LP). Up to two (logically associated) messages may be sent.

Cause:　　　　　This error causes a soft restart.

Action:　　　　　Save error message and contact your next level of support.

F5257
DCL
MP COP STARTUP ERROR

Type: Diagnosis-specific (Format H'42)
Short text: DSC80: co-processor (CoP) time overflow during startup.
Cause: The micro-processor (MP) returns a co-processor error (time overflow)
before the co-processor reaches normal operational status. Up to two (logically associated)
messages may be sent.
System reaction: The error causes a hard restart and the co-processor loadware may be
reloaded under certain conditions.
Action: Save message and contact your next level of support verständigen.

F5258
DCL
HSR ADVISORY

Type: Service-relevant (format 42)
Short text: Advisory message from the HiPath Signaling Router (HSR) SW complex
Cause: The HiPath Signaling Router outputs an advisory message when a
problem with the IP signaling connection to an AP is detected.
System reaction: The HSR requests one of two possible reactions:
Minor errors are signaled only.
Fatal errors are signaled and additionally a hard restart is executed.
Action: Depends on the error code in line 2. If the error cannot be resolved, save
the error message data and contact a product specialist.
Interpretation of auxiliary data:
The auxiliary data comprises diagnosis data entered by the HSR for the product specialist.
In HiPath 4000 V2.0 and later, the error code in line 2 is output additionally as text.

Examples:

H'0C280 - Wrong NCUI-LW on HD:

The LW/cryptlib version on the hard disk is incorrect. It cannot be used to encrypt messages to NCUI.

H'0C281 - Cryptlib call fault:

cryptlib is a program library for decrypting or encrypting signaling messages during active signaling encryption (`CHANGE-SIPCO:TYPE=SECURITY,IPDAENCR=YES;`)
This error may be due to: HW and/or SW error in the BP. This error may be due to faulty SW (faulty or incorrectly copied APS), faulty patches, HW errors in the BP or errors when loading the SW.
Solution: Check the system history and monitor for further implausible error messages in order to isolate the error.
If the error occurs without warning and without any changes to or reconfiguration of the software, it is likely that the BP (or power supply) is defective (bit flip/read error in the RAM or CPU cache). Other implausible error messages can then also be expected. In the case of bit flips in the RAM, the error may not disappear until a reload is performed.
If the error still remains even after the BP is reloaded (reload following escalation), this may be due to the APS on the HD or a patch installed on the HD.
An error may also repeatedly occur when loading the SW. Other implausible error messages can then also be expected here. If the HSR SW detects this error, you can expect that it will no longer be possible to encrypt or decrypt messages. The SW attempts to correct this by way of reinitialization via restart. The error is recognized by the fact that central cryptlib data is no longer plausible.
In individual cases, it may also happen that "only" connection-specific data is no longer plausible. In such cases, the SW attempts connection-specific repairs. If this is not suc-

cessful, it can be assumed that the problem is not just occurring sporadically, but globally. This is determined by statistical analysis in the HSR. 9 errors only are reported during a specific unit of time, the 10th error then leads to a repair attempt via a hard restart, with the aim of repairing the cryptlib again.

In most cases, the following applies: save the error message data and contact a product specialist.

H'0C282 - AP security inconsistent:

The switches for signaling and voice encryption were modified using the AMO SIPCO. As a result, new TCP/IP connections to the AP shelves were established with the new values while the previous values remain valid for the previous connections.

Repair: renew all TCP/IP connections, e.g. by performing a soft restart of the active BP.

Repair: Check the file ":PDS:apsp/ltg/lga0/pzknci40" on the HHD and replace with the newest version.

F5259
DCL
AP CONNECTION NEW

Type:	Diagnosis-relevant (Format 40)
Short text:	Connection to Access Point restored.
Cause:	After the loss of connection or a restart/reload, an attempt was made to set up a connection to the access point again.
System reaction:	None.
Action:	No action required.

F5260
CONF
CONTR RESP ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5260 = F5340

F5262
CONF
DATA OVERFLOW

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5262 = F5342

F5263
CONF
HDLC ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5263 = F5343

F5264
CONF
HW ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5264 = F5344

F5265
CONF
INIT ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5265 = F5345

F5266
CONF
LOOP DATA ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5266 = F5346

F5267
CONF
MP EC ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5267 = F5347

F5268
CONF
MP LW ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5268 = F5348

F5269
CONF
MSG NOT TRANSMITTABLE

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5269 = F5349

F5270
CONF
SECONDARY IN ATTEND L

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5270 = F5350

F5271
CONF
PER ADDR ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5271 = F5351

F5272
CONF
PER EVT ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5272 = F5352

F5273
CONF
REGISTER ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5273 = F5353

F5274
CONF
SECONDARY OUT ATTEND L

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5274 = F5354

F5275
CONF
SPOR ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5275 = F5355

F5276
CONF
STATUS WORD ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5276 = F5356

F5278
CONF
TIME ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5278 = F5358

F5279
CONF
PIT ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5279 = F5359

F5291
CONF
STAT OVERFLOW

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5291 = F5371

F5293
CONF
STOP NEW SEIZURES

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5293 = F5373

F5294
CONF
START NEW SEIZURES

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5294 = F5374

F5296
CONF
DFE ERROR

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5296 = F5376

F5297
CONF
RMS LEFT

Note: The description of this error message corresponds to the description of the following error message from the BOARD area:
F5297 = F5377

F5300
LTUC
CLOCK INPUT OFF

Type: Service-specific (Format 18)

Short text: Input clock for LTUC missing (FMB, CKA)

Cause: Clock supply line, LTUC board or clock generator defective. Event signal came from peripheral processing (PP).

System reaction: locks the LTUC and attempts to start up.

Action: Check clock lines, if necessary, replace clock generator or LTUC board.

Remark: not in use since V3.1.

F5304
LTUC
CONTR RESP

Type: Service-specific (Format 22)

Short text: Control response error.

Cause: Control response error from LTUC board. PP performs a routine PBC control response check. PP received an errored control response byte from the PBC of the LTUC. The PBC may be defective since the FW and the MP are not affected.
The PBC command of the job message is reflected in the HEX data and the contents of the PBC control response register are output.

System reaction: resets shelf on DCL, blocks the LTUC and attempts to start up.

Action:

- Switch LTU off/on with USSU AMO,

- Check LTUC with routine test order,

- Switch LTU power off/on (= reset LTUC)

- Replace LTUC board if necessary.

Interpretation of auxiliary data:

Byte 0 = 02 Length of the subsequent related data

Byte 1 = PBC job message command

Byte 2 = PBC control response register

F5305
LTUC
HW ERROR

Type:	Service relevant	(Format 22, Format 43)

Short text: Error in the LTUC hardware.

Cause: The trigger is recognized by the LTUC firmware. A defective LTU power supply may be the cause of this error.

System reaction: The system attempts to put the LTUC board back into service after one minute.

The LTUC board is blocked and an attempt to put it back into service is initiated.

Action: Disconnect the LTU power supply and replace the LTUC board if it did not start up. Check the LTU power supply.

Interpretation of auxiliary data:

SP300E-V3.1 and earlier

Byte 0 01 Length of the following relevant data

Byte 1   Status byte

          00 Microprocessor Error

          01 EPROM Error

          02 RAM Error

          03 PBC Error

HiPath 4000 V1.0 and higher
Format 22: interpretation is done like till now.
Format 43 (since Hipath 4000 V1.0):
In HiPath 4000 V1.0 and later the auxiliary data bytes in hexadecimal value are replaced by a more meaningful text message.EXTmessages ersetzt. Je to Ursache (Reason) gibt VZANL verschiedene Erläuterungsfelder:

Reason: 00H MICROPROCESSOR ERROR
Reason: 01H EPROM ERROR
Reason: 02H RAM ERROR
Reason: 03H PBC ERROR
Reason: 04H MUSAC1 DEFECTIVE
Reason: 05H MUSAC2 DEFECTIVE
Reason: 06H NO ACTIVE SIGNAL
Reason: 07H MUSAC1 AND 2 DEFECTIVE
Reason: 08Hnot used
Reason: 09H PLL1 DEFECTIVE
Reason: 0AHPLL2 DEFECTIVE
Reason: 0BH BOTH PLL DEFECTIVE
Reason: 0CH BUFFER OVERFLOW

Reason: 0DH MUSAC3 DEFECTIVE
Reason: 0EH MUSAC4 DEFECTIVE
Reason: 0FH ALL MUSACS DEFECTIVE

No more information on these information texts is available at present.

Reason: 10H WRONG CBM PARAMETER

Type: Service relevant
Short text: Error in the configuration of CBM parameters.
Cause: The configuration of CBM parameters does not match the number or type of the available CBM modules on the board (LTUCC, NCUI). After startup of the board, the LW is able to recognize wrong configured CBM parameters. This can happen although the parameters will be checked on plausibility by the AMOs.
System reaction: The affected CBM module on the board is locked and an alarm is generated.
Action: The wrong parameters have to be corrected by the service and the board has to be loaded again.
Interpretation of auxiliary data:

CBM module:	00H-07H	Number of affected CBM module on the board
Wrong parameter:	00H	A/U-LAW CONVERSION
	01H	ECHO CANCELLATION
	02H	VOICE COMPRESSION
	03H	TOO LESS MODULES

text string:		Error description text filled in by board LW.
auxiliary data:		Diagnosis data filled in by board LW for product specialist.

Reason: 11H CBM MODULE DEFECTIVE (LW)
Reason: 12H CBM MODULE DEFECTIVE (RTO)

Type: Service relevant
Short text: Defective CBM module on the board.
Cause: During operation the board LW recognizes a defective CBM module (e.g. SIDEC chip) during routine monitoring. The defective CBM module may also be detected by RTO.
System reaction: An alarm is generated.
LTUCC board: The CBM module is locked. All existing calls with a/μ-conversion and/or echo cancellation are rerouted to normal HWYs. No switching to another CBM module with free CBM resources is intended.
NCUI board: The CBM module is locked. No CBM functionality is available any longer. No call from the AP shelf to the IP network are possible any longer.
Action: The whole board has to be replaced.

Interpretation of auxiliary data:

CBM module:	00H-07H	Number of affected CBM module on the board
HWY/TSL table:		All HWY/TSLs of the defective CBM module (32 x 3Bytes: 1Byte TSL and 2Bytes HWY); This table is only valid for LTUCC, not for NCUI.
text string:		Error description text filled in by board LW.
auxiliary data:		Diagnosis data filled in by board LW for product specialist.

Reason: 13H NO CBM RESOURCES
Reason: 14H WRONG CBM CONNECTION DATA

Type: Service relevant

Short text: No CBM resources available on the board.

Cause: A CP switching order arrives at LTUC after the defect of a CBM module has been recognized by LW, but the resources have not been corrected in the SWU database yet.
This situation can occur also when the CBM resources (counters etc.) diverges in LTUC and SWU database.

System reaction: The CBM resources in SWU and LTUC will be synchronized for this shelf. From this time on CP has to reject calls for a/μ-conversion because of lack of CBM resources or use the normal HWYs without CBM when only echo cancellation is required.

Action: The complete LTUCC board has to be replaced.

Interpretation of auxiliary data:

CBM Path:		HWY/TSL of failed call
CBM Type:	xxxxxxx1	a/μ-conversion has to be applied to this TSL
	xxxxxx1x	Echo Cancellation has to be applied to this TSL
	xxxxx1xx	a/μ-conversion and/or echo cancellation are performed on the channel of a SIDEC that is configured for 32 ms echo cancellation.
	xxxx1xxx	a/μ-conversion and/or echo cancellation are performed on the channel of a SIDEC that is configured for 64 ms echo cancellation.
	xxx1xxxx	a/μ-conversion and/or echo cancellation are performed on the channel of a SIDEC that is configured for 128 ms echo cancellation.
	xx1xxxxx	The channel for the byte manipulation of this TSL is located on a SIDEC that is defective. It is assumed that no more byte manipulation is performed, the byte manipulation describing bits above are kept for testing purposes.

x1xxxxxx	The VECO flag will be set at any time that CP changes the kind of byte manipulation by setting or resetting one of the byte manipulation describing bits above. Changing the SIDEC-defect-bit (previous bit) will not influence the VECO flag.
e.g.: 0000101 0	Echo cancellation on, SIDEC configured for 64 ms echo cancellation.
CBM LW counters:	Actual CBM counters of LW. (Only for error 13H No CBM resources).
CBM CC counters:	Actual CBM counters in CC. (Only for error 13H No CBM resources).
text string:	Error text as ASCII string, delivered by LW.
auxiliary data:	Auxiliary data delivered by LW, displayed as HEX values.

Reason: 15H 19 INCH EXPANSION BOX EXISTS

Type: Service relevant.
Short text: The expansion box for 19inch NBCS AP does not exist.
Cause: This message should never be signaled because it describes the normal working operation.
System reaction: An alarm is generated.
Action: No action necessary.
Interpretation of auxiliary data: No auxiliary data available.

Reason: 16H 19 INCH EXPANSION BOX NOT EXIST

Type: Service relevant.
Short text: The expansion box for 19inch NBCS AP does not exist.
Cause: The expansion box of a 19inch NBCS AP does not exist or is not connected to the 19inch base box or is not powered on. This error message is only signaled if peripheral boards are configured in the expansion box. It is not signaled if there are no peripheral boards configured and therefore the expansion box is not necessary at all.
System reaction: An alarm is generated.
Action: It has to be checked if the expansion box is not connected to the base box or if it is not powered on or if it is missing at all. The expansion box has to be installed.
Interpretation of auxiliary data: No auxiliary data available.

Reason: 17H POWER SUPPLY ERROR
Reason: 18H POWER SUPPLY OK

Type: Service relevant.
Short text: Power supply error/ok
Cause:

17H: A power supply module in a peripheral shelf is defective. This error message indicates a problem with the power supply module for a standard LTU shelf (DC or AC signal from a power supply unit) as well as for a 19inch LTU (power supply signal of the base box or the expansion box).fault messages weist ASC on Problem WITH dem Power supply module für one STANDARD LTUboardtype (DC oder AC-Signal einer Stromversorgungseinheit) and auch für one 19 Zoll LTU (Stromversorgungssignal der Basisbox oder der Erweiterungsbox) hin.

18H: The power supply module is ok. This message is not sent during normal startup because then this is the normal operation mode. Starts gesendet, weil VZANL sich DANS um VERB normalen Betriebsmodus handelt. It is only sent after the power supply error has been signaled and the power supply module has been replaced.It is only sent after the power supply error has been signaled and the power supply module has been replaced. ersetzt wurde.

System reaction: An alarm is generated.

Action: The affected defective power supply module has to be replaced immediately to avoid further damages.

Interpretation of auxiliary data:

Power supply module   00H DC POWER SUPPLY

                         01H AC POWER SUPPLY

                         02H 19 INCH BASE BOX POWER SUPPLY

                         03H 19 INCH EXPANSION BOX POWER SUPPLY

Reason: 19H FAN ERROR
Reason: 1AH FAN OK

Type: Service relevant.
Short text: Fan error/ok.
Cause:

19H: A fan module in the 19inch LTU is defective.

1AH: The fan module is ok. This message is only sent for a fan module which has been defective before. defekt war. The message is not sent after normal startup because this is the normal operation mode.Betriebsmodus CURR.

System reaction: An alarm is generated.

Action: The affected defective fan module has to be replaced immediately to avoid further damages

Interpretation of auxiliary data:

FAN mod-   00H 19 INCH BASE BOX FAN 1
ule:

             01H 19 INCH BASE BOX FAN 2

02H 19 INCH EXPANSION BOX FAN 1

　　03H 19 INCH EXPANSION BOX FAN 2

Reason: 1BH RESET REASON

Type:	Service relevant.
Short text:	LTU control board reset reason (NCUI)
Cause:	There exist some resets of the LTUC control board which are initiated by

the control board itself. The system software does not know these resets. With this message, the LTU control board signals the reason for the reset after the board is coming up again.

System reaction:	Only signaling.
Action:	No special action necessary.

Interpretation of auxiliary data:

Reset type:	00H	BOARD HARD RESET
	01H	BOARD SOFT RESET
Reset reason:	00H	WATCHDOG EXPIRED
	01H	PUSH BUTTON
	02H	PROCESSOR INTERRUPT LW
text string	Error text as ASCII string, delivered by LW.	
auxiliary data	Auxiliary data delivered by LW, displayed as HEX values.	

Reason: 1CHCBM MOULE DEFECTIVE (SELFTEST)

Type:	Service relevant
Short text:	Defective CBM module on the board.
Cause:	After startup the selftest recognizes a defective CBM module (e.g. SIDEC

chip).

System reaction:　An alarm is generated.

NCUI board: The CBM module is locked. No CBM functionality is available any longer. No call from the AP shelf to the IP network are possible any longer.

Action:　　　　　The whole board has to be replaced.

Interpretation of auxiliary data:

CBM module:	00H-07H Number of affected CBM module on the board
HWY/TSL table:	All HWY/TSLs of the defective CBM module (32 x 3Bytes: 1Byte TSL and 2Bytes HWY); This table is only valid for LTUCC, not for NCUI.
text string:	Error description text filled in by board LW.
auxiliary data:	Diagnosis data filled in by board LW for product specialist.

Reason: 1DH NO CP PATH RESOURCES IN PERIPHERY

Type: Service relevant

Short text: No CP path resources in periphery

Cause: The loadware of the LTU control board has detect that there were not enough CP resources on the board to establish a requested call. The resource management between loadware and system software diverges.

The path resource type addresses the exact resource which is different.

System reaction: VECO checks the differences in resource management and releases call attempts which are not properly seized.

Action: No special action necessary.

Interpretation of auxiliary data:

Path resource type:	00H	A/U-LAW CONVERSION
	01H	ECHO CANCELLATION
	02H	VOICE COMPRESSION
	03H	ATM EXTERNAL NETWORK PATH
	04H	IP EXTERNAL NETWORK PATH

text string: Error description text filled in by board LW.

auxiliary data: Diagnosis data filled in by board LW for product specialist.

Reason: 1EH MUSAC_A ERROR (LW)

Type: Service relevant

Short text: MUSAC_A device defective.

Cause: The loadware of the LTU control board (NCUI) has detected a defective MUSAC_A device during normal operation. Calls can no longer be properly established.

System reaction: The whole LTU control board is locked and set to DEF. This affects also the whole LTU shelf. The LTU control board is added to the 'in service task' to try starting up the board after some minutes.

Action: If the board and the LTU comes up properly after the 'in service task', the MUSAC_A error was a result of a driver access and is now solved.

If the board does not come up properly, an INIT ERROR is sent. The board has to be replaced.

Interpretation of auxiliary data:

text string: Error description text filled in by board LW.

auxiliary da-   Diagnosis data filled in by board LW for product specialist.
ta:

Reason: 1FH RG/WG ACTIVE
Reason: 20H RG/WG INACTIVE

Type: Service relevant
Short text: RG/WG active/inactive
Cause:

1FH: The LTU control board loadware has detected the signal of a RG/WG board or modul (In a 19inch shelf only a RG module is possible). eines RG/WG-Moduls (ANKE einer 19"boardtype CURR nur on RG-Modul möglich) erkannt. This message should never be displayed, because it describes the normal operation mode.This message should never be displayed, because it describes the normal operation mode.

20H: The control board loadware has not detected the signal of a RG/WG board or modul (In a 19inch shelf only a RG module is possible). eines RG/WG-Moduls (ANKE einer 19"boardtype CURR nur on RG-Modul möglich) erkannt. This message is only displayed, if the affected signal is really needed. This message is only displayed, if the affected signal is really needed. The RG signal is needed if a SLMA board is configured, the WG signal is needed if a TMLBL/TMBCT board is configured. wird benötigt, wenn one SLMA-Baugruppe konfiguriert wird, RKOABS WG-Signal wird benötigt, wenn one TMLBL/TMBCT-Baugruppe konfiguriert wird.

System reaction:
1FH: DC status of appropriate SYN signal is set.
20H: DC status of appropriate SYN signal is set. An alarm is generated.
Action:
1FH:No special action necessary.
20H:Check if the necessary RG/WG board or RG module is mounted. boot-ix is installed Replace the defective RG/ WG board or RG module.
Interpretation of auxiliary data:

RG/WG device:	00H	RG STANDARD BOARD
	01H	WG STANDARD BOARD
	02H	RG IN 19 INCH BASE BOX
	03H	RG IN 19 INCH EXPANSION BOX

Reason: 21H TOO MANY RG/WG INSERTED

Type: Service relevant
Short text: Too many RG/WG devices mounted
Cause: The LTU control board loadware in a standard LTU shelf has detected, that too many RG/WG devices are mounted. It is physically possible in a standard LTU shelf to mount a RG/WG module on the backplane additionally to a inserted RG/WG board. But this would lead to damaging one or both devices and therefore is not allowed.
System reaction: The LTU control board loadware does not initialise the RG/WG board. An alarm is generated.
Action: Unmount the RG/WG board to avoid damaging.

Interpretation of auxiliary data:

RG/WG de-vice:	00H	RG STANDARD BOARD
	01H	WG STANDARD BOARD

Reason: 22H AP SIU ERROR (LW)
Reason: 23H AP CG EROR (LW)
Reason: 24H AP DCL ERROR (LW)

Type: Service relevant
Short text:

    22H: AP SIU error (detected during normal operation by LW)
    23H: AP CG error (detected during normal operation by LW)
    24H: AP DCL error (detected during normal operation by LW)

Cause: The loadware of the LTU control board (NCUI) in a NBCS AP shelf has detected a defective SIU/CG/DCL part on the board during normal operation.
A proper operation of the LTU is no longer possible.

System reaction: The whole LTU control board is locked and set to DEF. This affects also the whole LTU shelf. The LTU control board is added to the 'in service task' to try starting up the board after some minutes.

Action: If the board and the LTU comes up properly after the 'in service task', the SIU/CG/DCL error was a result of a driver access and is now solved.
If the board does not come up properly, an INIT ERROR is sent. The board has to be replaced.

Interpretation of auxiliary data:

text string:	Error description text filled in by board LW.
auxiliary data:	Diagnosis data filled in by board LW for product specialist.

Reason: 25H AP V24 ERROR (LW)
Reason: 26H AP ETHERNET ERROR (LW)
Reason: 27H AP V24 ERROR (SELFTEST)
Reason: 28H AP ETHERNET ERROR (SELFTEST)

Type: Service relevant
Short text:

    25H: AP V24 interface error (detected during normal operation by LW)auxiliary data:
    26H: AP Ethernet interface error (detected during normal operation by LW)durch auxiliary data)
    27H: AP V24 interface error (detected during startup by board

selftest)Eigentest erkannt)

28H: AP Ethernet interface error (detected during startup by board selftest) The board is added to the 'in service task'.

Cause: The loadware or the selftest of the LTU control board (NCUI) in a NBCS AP shelf has detected an error on the V24/Ethernet interface on the board.

If a V24 interface error occurs, the survivability path for NBCS can not be set up properly and/or the direct service access is impossible.

If an Ethernet interface error occurs, the connection of an NBCS AP shelf to the IP network is no longer possible. If survivability is configured, the AP can still establish internal calls.

System reaction: An alarm is generated.

Action: Sometimes a reset of the AP shelf solves the problem. The reset is not automatically started, because the shelf is able to operate partially with the error. Therefore the reset should be done manually when no calls are affected.

If the reset of the AP shelf does not solve the problem, the LTU control board is really defective and has to be replaced.

Interpretation of auxiliary data:

text string: Error description text filled in by board LW.

auxiliary data: Diagnosis data filled in by board LW for product specialist.

Reason: 29H ETHERNET INTERFACE ERROR

Type: Service-relevant (HiPath 4000 V4.0 and later)
Short text: 29H Ethernet interface error (LAN connection no longer available)
Cause: The LW detected an interruption on the Ethernet interface. If a connection to the IP network is set up over the second Ethernet interface, the board switches over to this second interface. Ethernet-Schnittstelle one Connection Private or IP-Netzwerk besteht, wird ASC der boardtype ASC diese 2. interface umgeschaltet.
System reaction: The error is signaled and an alarm is generated.
Action: Find out the cause of the Ethernet connection failure and correct it.
Interpretation of auxiliary data:
text string: Error description text filled in by board LW.

F5306
LTUC
IN (ATTENDANCE LIST)

Type: Service-specific (Format 22)

Short text: LTUC is back on the attendance list

Cause: LTUC is in service once more and is back on the attendance list. Event
signal came from DCL firmware.

System reaction: starts up the LTUC

Action: Positive acknowledgment without action.

Interpretation of auxiliary data: can only be interpreted by your system specialist.

F5307
LTUC
INIT ERROR

Type:　　　　　　　　Service relevant　　　　　　　　　　　　　　　　　(Format 23)
Short text:　　　　　　Initialization error
Cause:　　　　　　　　LTUC board initialization error. LTUs that are not put into service are signaled with this message during the LTG boot operation.
System reaction:　　LTUC already set as defective by DC.
Action:　　　　　　　　Deactivate LTU and replace LTUC if load error is linked to the LTUC defect. Otherwise, perform procedure for tracing errors on the basis of the causes in byte 0 and byte 1 supplementary data.

Interpretation of auxiliary data:

SP300E-V3.1 and earlier:

Byte 0   Initialization error (DB_M_QC_ERROR_SET)

    3A   Wrong board

    3B   Board not present

    3C   Board defective

Byte 1   Error loading the loadware (DB_M_LC_LOAD_RESULT_SET)

    00   Defective board, board self-test negative

    01   Board not loaded (error on the board)

    02   Transmission error when loading the loadware to the board (checksum verification negative, hardware error on the board or loadware error on the HD)

    03   Board OK (can also occur if byte 0 = H'3A)

    04   Loadware loaded

    05   Loadware not found on HD

    06   Loadware on HD faulty or corrupt

    07   Board not available (NPR)

    08   Data not loaded

    09   Copy operation terminated by RAM in the Flash.

    0A   Loadware container loaded

    0B   Loadware not found or board not in PIT load table

    0C   Negative PGL load result

    0D   Negative PGL load result, PGL timer expired

    0E   LW container greater than block

    0F   Board is configured but not inserted

    10   Board available, but load operation not yet acknowledged by board

    11   Per. SIU: LW is loaded, now load the data

Tabelle 1:

SP300H-V1.0 and later:

Byte 1	Error loading the loadware (DB_M_LC_LOAD_RESULT_SET)

Tabelle 2:

...	See SP300E-V3.1 above	
24	attend list not valid (The NCUI has not returned the attendant list about	
25	wrong LTU type (Configuration of NCUI does not match the NBCS AP shelf type where it is plugged in; 19inch <-> standard shelf)	
27	missing ID acknowledge (The NCUI in NBCS AP does not respond to a PIT ID check)	

Tabelle 2:

F5308
LTUC
OUT OF ATTENDANCE LIST

Type: Service-specific (Format 22)

Short text: LTUC is no longer on attendance list

Cause: LTUC board has been pulled out, i.e. it is no longer on the attendance list. Alternatively, the LTUC board may be defective or the LTU power supply has failed. Event signal came from DCL firmware.

System reaction: locks the LTUC

Action: Re-plug LTUC board or replace, if necessary.

Check LTU power supply

Interpretation of auxiliary data: can only be interpreted by your system specialist.

F5309
LTUC
LOOP DATA ERROR

Type: Service-specific (Format 18/22)
Short text: RTO: Test loop insertion error
Cause: Format 18: Test loop insertion error.
Format 22: The RTO error message is entered in the HEX data.
Action: Format 18: Replace board.
Format 22: The LTUC and, hence, the shelf are automatically disabled.
Interpretation of auxiliary data: Format 22:
Byte 0 = Length of the auxiliary data
Byte 1 = Destination Task
Byte 2 = Source Task
40 FA Main Task
4D RTO Task FA Peripheral
4E RTO Task AM
4F RTO Task RA Central
50 RTO Task RA Peripheral 1
51 RTO Task RA Peripheral 2
52 RTO Task RA Peripheral 3
Byte 3 = Processor Number
Byte 4 = Counter
Byte 5 = FA Event
2D RTO
Byte 6 = FA Subevent Code
00 RTO EP
01 ZD LTU-HWY
02 ZD CSN-HWY
03 ZD SIU-DTO
04 ZD SIU-PTO
05 ZD SIU-CS/CR
06 ZD CIR
07 ZD SIUP-CS/CR
08 ZD SIU-TST
10 LTG Start
14 ZD TERM
Byte 7-8 = LTG-LINE
Byte 19 = LTG
Byte 20 = LTU
Byte 21 = PBC
Byte 22 = CIR
Byte 23 = B-Channel
Byte 24 = Loop Back
Byte 25 = Highway

Byte 26 = Timeslot
Byte 27 = First RTO Event
Byte 30 = Curr RTO Event
Byte 31 = User
00 FA
01 RA
02 AM
03 TDS
04 EEA
Byte 32 = Response Event
2D RTO
Byte 33 = Test Result
05 Test O.K.
09 Loop Data Error
0A Status Word Error
0D Time Error (Time Out)
0E Tone Error
0F No Change Error

F5310
LTUC
MP EC ERROR

Type: Diagnosis-specific (Format 22)

Short text: Implausible event code received by LTUC

Cause: The LTUC firmware has received a message from peripheral processing (PP) with an invalid event code (EC). The event signal came from the LTUC firmware.

System reaction: signaling only.

Action: Possible software error in system or firmware. Immediate action not possible; contact your next level of support.

Interpretation of auxiliary data: for LTUC:

Byte 0 = 01 Length of the subsequent related data

Byte 1 = Implausible event code

Interpretation of auxiliary data for LTUCE:

Byte 0 = Length of the subsequent related data (max. 32 bytes)

Byte 1 = Implausible event code

Byte 2-32 = Implausible message from PP to the LTUC MP.

Can only be interpreted by your system specialist.

F5311
LTUC
PER EC ERROR

Type: Diagnosis-specific (Format 22)

Short text: Implausible event code from LTUC

Cause: Peripheral processing (PP) received a message from the peripheral firmware with an implausible event code EC. The event signal came from peripheral processing in the LTUC.

System reaction: signaling only.

Action: Immediate action not possible; contact your next level of support.

Interpretation of auxiliary data: for LTUC

Byte 0 = 01 Length of the subsequent related data

Byte 1 = Implausible event code

Interpretation of auxiliary data for LTUCE:

Byte 0 = Length of the subsequent related data (max. 32 bytes)

Byte 1 = Implausible event code

Byte 2-32 = Invalid message from PP to the LTUC MP.

Can only be interpreted by your system specialist.

F5312
LTUC
REGISTER ERROR

Type: Service-specific (Format 18/22)
Short text: RTO: peripheral board controller (PBC) error
Cause: Format 18: Error in the code check register of the peripheral board controller (PBC). Replace appropriate board.
Format 22: The entire error message sent by the RTO is entered in the HEX data.
Action: Format 18: Replace appropriate board.
Format 22: The board is automatically disabled.
Interpretation of auxiliary data: Format 22: see F5309.

F5313
LTUC
SPOR ERROR

Type: Service-specific (Format 22)

Short text: RTO: Sporadic error

Cause: ACTION=NO ACT; sporadic error (advisory). ACTION=OUT SERV;
sporadic error in conjunction with disable message generated due to peripheral error counter
overflow. The RTO message is entered in the HEX data.

Action: LTUC is disabled temporarily and subsequently reloaded. Replace board.
If this does not work, save the error message data and contact your next level of support.

Interpretation of auxiliary data: for format 22, see F5309

F5314
LTUC
STATUS WORD ERROR

Type: Service-specific (Format 22)
Short text: RTO: RAM/PROM error.
Cause: The LTUC and, as a result, the shelf are locked away. The entire message
sent by the RTO is entered in the HEX data.
Action: Replace appropriate board.
Interpretation of auxiliary data: Format 22: see F5309.

F5315
LTUC
TEST OK

Type: Service-specific (Format 22)

Short text: RTO: LTUC okay again.

Cause: LTUC startup was interrupted by soft restart, startup repeated by CDC.

Action: If error occurs repeatedly, save the error message data and contact your next level of support.

Interpretation of auxiliary data: Format 22: see F5309.

F5316
LTUC
TIME ERROR

Type: Service-specific (Format 18/22)

Short text: RTO: Timeout error

Cause: Format 18: Timeout error. No response to routine test. System places the shelf out of service. Can sometimes be caused by LTU power failure.

Alternatively, an LTUC or SLMB failure may have been caused by adjacent TMBD or TMOM boards. The TMBD or TMOM boards must not be installed directly adjacent to an LTUC or SLMB. Another possibility is that the functional earth of the shelf does not correspond to the required values.

Format 22: The RTO message is entered in the HEX data.

Action: Switch shelf off and then on again, check shelf power supply.

Interpretation of auxiliary data: Format 22: see F5309.

F5325
LTUC
RGEN/ACGEN INSERTED

Type: Service-specific (Format 18)
Short text: Ringing generator or AC generator board plugged
Cause: Peripheral ringing/ac power generator board has been plugged in. Event
signal came from LTUC firmware.
System reaction: the RGEN or WGEN is released.
Action: Positive acknowledgment without subsequent action.

F5326
LTUC
RGEN/ACGEN REMOVED

Type: Service-specific (Format 18)
Short text: RGEN or WGEN (ACGEN) have been unplugged
Cause: Peripheral ringing/ac power generator board has been pulled out. Event signal came from LTUC firmware.
System reaction: blocks the RGEN or WGEN. The boards programmed by RGEN (WGEN) are UNACH.
Action: Replug board, replace if necessary.

F5327
LTUC
LTUC SYN1 OFF (up to EV1.0)
RGEN SYN OFF (EV2.0 and later, supported by text)

Type: Service-specific (Format 18)
Short text: SYN1 clock of RGEN missing
Cause: No LTUC SYN1 clock (ringing current synchronization clock) from RGEN.
Event signal came from LTUC firmware. Positive acknowledgment with **F5334**.
System reaction: blocks the RGEN
Action: Replug RGEN board, replace if necessary. Check clock supply line. The
error may be in the clock input of the LTUC; check LTUC.

F5328
LTUC
LTUC SYN2 OFF (up to EV1.0)
ACGEN SYN OFF (EV2.0 and later, supported by text)

Type: Service-specific (Format 18)
Short text: SYN2 clock of ACGEN missing
Cause: No LTUC SYN2 clock (AC synchronization clock) from ACGEN. Event signal came from LTUC firmware. Positive acknowledgment with **F5335**.
System reaction: locks the WGEN.
Action: Plug in ACGEN board, replace if necessary. Check clock supply line. The error may be in the clock input of the LTUC; check LTUC.

F5329
LTUC
RGEN OVERLOAD

Type: Service-specific (Format 23)
Short text: Ringing current generator overloaded
Cause: The ringing current generator is temporarily overloaded. If the overload
does not end within 30 seconds, this will be interpreted as a board failure.
System reaction: only signals overload.
Action: - If these error messages frequently recur in a particular system, you
should first replace the
RGEN board.

- Also check RG outputs during replacement for short-circuit connections.

- If board failures persist, the system configuration must be revised (relocate some of the
analog stations to other shelves).

F5330
LTUC
AC GEN OVERLOAD

Type: Service-specific (Format 23)

Short text: Alternating current generator overloaded

Cause: The alternating current generator is temporarily overloaded. If the overload does not end within 30 seconds, this will be interpreted as a board failure.

System reaction: only signals overloads.

Action: - If these error messages frequently recur in a particular system, you should first replace the ACGEN board.

- Also check ACGEN outputs during replacement for short-circuit connections.

- If board failures persist, the system configuration must be revised (relocate some of the AC dialing circuits to other shelves).

F5331
LTUC
DEF

Type:　　　　　　Service-specific (Format 18)
Short text:　　　　LTUC board defective.
Cause:　　　　　　Analysis of overall clock supervision reveals that the LTUC board is defective. (Input clock, output clock, MUX or shelf distribution)
System reaction:　locks the LTUC and attempts to start up.
Action:

- Check LTUC clock signals.
- Switch LTUC board off and back on via shelf rectifier (power-on reset).
- Switch off LTU power and replace LTUC board. See also F5333.

F5332
LTUC
STBY CLOCK DEF

Type: Service-specific (Format 18)
Short text: Standby clock supply defective for all LTUCs
Cause: Analysis of overall clock supervision reveals that the standby clock supply
for all LTUCs is defective.
System reaction: signals only.
Action: Check clock supply of entire standby half of shelf.

F5333
LTUC
STBY DEF

Type: Service-specific (Format 18)
Short text: Standby part of the LTUC board defective.
Cause: Analysis of overall clock supervision concludes that the standby input level of the LTUC board is defective, but also that this error did not adversely affect system operation until after switchover.
System reaction: locks the LTUC after switchover.
Action:

- Check LTUC board clocks

- Switch LTUC board on/off via shelf rectifier (power-on reset)

- Initiate system restart and check whether error is repeated

- Switch off LTU power and replace LTUC board.

F5334
LTUC
LTUC SYN1 ON (up to EV1.0)
RGEN SYN ON (EV2.0 and later, supported by text)

Type: Service-specific (Format 18)
Short text: SYN1 clock from RGEN okay again.
Cause: LTUC SYN1 clock (ringing current generator synchronization clock) is available again. Event signal came from LTUC firmware.
System reaction: starts up the RGEN
Action: Positive acknowledgment of F5327.

F5335
LTUC
LTUC SYN2 ON (up to EV1.0)
ACGEN SYN ON (EV2.0 and later supported by text)

Type: Service-specific (Format 18)
Short text: SYN2 clock from ACGEN okay again.
Cause: LTUC SYN2 clock (AC generator synchronization clock) is available again.
Event signal came from LTUC firmware.
Action: Positive acknowledgment of F5328.

F5336
LTUC
RMS

Type:	Service-specific (several formats apply)
Short text:	RMS2 remote switch error
Cause:	Remote switch error (RMS2), reported by DIUR.

Format 18: (entire RMS)

ACTION=IN SERV means that the entire RMS is back in service.

ACTION=OUT SERV means that the entire RMS is out-of-service. In both cases, further messages may come from the connected PCM highways (see below).

System reaction: signals only.

Format 38 and 39: Layer 1 error of the PCM highway.

ACTION=NO ACT. The reason for the error (Byte 3) is output in plain text.

System reaction: locks the circuit and the time slot when a frame is lost, no signal, AIS alarm, remote alarm and bit error rate too high.

Format 22: Layer 2 error and all other errors.

ACTION=NO ACT.

Action: Remedial measures depend on the evaluation of the HEX data.

Interpretation of auxiliary data: **Format 38 and 39**:

Byte 0 = Message length (max. 100 bytes)
Byte 1 = Error location (01 = PCM highway)
Byte 2 = Error type (01 = Layer 1 protocol)
Byte 3 = Detailed layer 1 error type
01 Pulse frame loss (LOST FRAME)
02 No signal (NO SIGNAL)
03 A/S alarm report signal (A/S ALARM)
04 Remote alarm (REMOTE ALARM)
05 Bit error rate too high (MAX ERROR)
06 PCM highway OK (L1 READY)
Byte 4-12 = Remaining error codes in hexadecimals
Byte 13? = Individual auxiliary data

Interpretation of auxiliary data: **Format 22**:
Byte 0 = Message length (max. 100 bytes)
Byte 1 = Error location (see following table)
Byte 2 = Error type (see following table)
Byte 3 = Detailed error type (see following table)
Byte 4-12 = Remaining error codes in hexadecimals
Byte 13? = Individual auxiliary data

Byte 1	Byte 2	Byte 3
[01] PCM Highway	[02] Layer 2 error	[01] No partner

		[02] Partner restored
		[03] Message cannot be sent
[02]RMS Shelf or [03] Main system	[03] Message from RG	[01] Clock error
		[02] Clock restored
	[04] Message from PCG	[01] Bad reference clock
		[02] No reference clock
		[03] Other message from PCG
		[04] PCG synchronized
		[05] Hardware error
	[05] Message from power supply	[01] Power failure
		[02] Battery operation
		[03] Mains power opera-tion
	[06] Message from DIUR	[01] FW error
		[02] Message cannot be sent
		[03] HW error
		[04] DIUR reset
		[05] DIUR port error(RS232)
		[06] DIUR Port okay (RS232)

		[07] man. intervention (RS232)
		[08] FW error
		[09] POD error
		[0A] DIUR Vers./Country info.
		[0B] Acknowledgment
		[0C] Partner incompatible
	[07] Message to main system	[00 - 07] Internal messages from RMS
	[08] Message from main sys. to NMC	[00] No response from DIUR

Table 3 Evaluation of F5336 for Format 22 of RMS2

F5337
LTUC
MUSAC DEFECT

Type: Service-relevant (Format 22)

Short text: MUSAC chip defective

Cause: A MUSAC chip in the LTUCE / LTUCX is defective. Traffic restriction in proportion to the number of failed speech highways.

The trigger is recognized by the firmware / loadware of the LTUCE / LTUCX or the SCC and reported by the loadware to the system.

1. 80CM/80CMX special case: There is only <u>one</u> MUSAC chip on the SCC board. A MUSAC failure means total shelf failure. If the 2nd shelf is not available, total system failure!

2. 80CXE system special case

The DSCX board contains two MUSAC chips. The highways are distributed evenly on these chips.

Failure of one of the two MUSAC chips reduces the potential traffic volume by 50%.

Failure of both MUSAC chips means total base shelf failure. Total system failure occurs if there are no expansion shelves available.

System reaction:

- • In the case of partial traffic restriction: Information only

- • In the case of total failure: Hard restart

Action: Deactivate LTU and replace board.

Interpretation of auxiliary data:

Byte 0	05 Length of the following relevant data
Byte 1	Status byte
	0D Third MUSAC chip is defective (LTUCX only)
	0E Fourth MUSAC chip is defective (LTUCX only)
	0F All MUSAC chips are defective (in 80CXE: both MUSAC chips in the DSCX are defective)
	04 First MUSAC chip defective
	05 Second MUSAC chip is defective
Byte 2-5	4 defective highways
	Special case in the case of LTUCE in 600C or 600EC:
Byte 4-5	FF FF missing highways:
	System 600C Only half of the highways are in the 4th shelf.
	System 600EC Only half of the highways are in the 7th and 8th shelf.

In the case of an LTUCX, the failure of the third or fourth MUSAC chip (0D, 0E) is reported even if the highways assigned are currently not in use. This is the case if there is no 'overlay' LTU configured for the relevant basic LTU.

The reported MUSAC is also defective in this case and has to be replaced in order to avoid problems with later configurations of the 'overlay' LTU. FF FF FF FF in byte 2-5 signals that at present, no highways are assigned to the relevant MUSAC.

F5338
LTUC
MTSC DEFECT

Type: Service-specific (Format 22)
Short text: MTSC component defective
Cause: An MTSC component on the LTUC is defective. The highways on one LTU half have failed. Event signal came from the LTUC firmware.
System reaction: locks the relevant highways.
Action: Switch off LTU and replace board
Interpretation of auxiliary data:

Byte 0 = 05 Length of the subsequent related data
Byte 1 = Status byte
04 1st MUSAC component defective
05 2nd MUSAC component defective
Byte 2 - 5 = 4 Defective highways
Special case for LTUCE in 600C or 600EC:
Byte 4-5 = FF FF Lost highways
System 600C: The 4th shelf contains only half the highways.
System 600EC: The 7th and 8th shelves contain only half the highways

F5339
LTUC
PLL REDUNDANCE LOSS

Type:	Service-specific (Format 22)
Short text:	PLL component of LTUCE defective
Cause:	A redundant PLL component is defective. Event signal came from the LTUCE firmware.
System reaction:	board has been changed over to the other PLL circuit.
Action:	Replace board at next opportunity.

Interpretation of auxiliary data:

Byte 0 = 01 Length of the subsequent related data

Byte 1 = Status byte

09 1st PLL component defective

0A 2nd PLL component defective

F5340
BOARD
CONTR RESP ERROR

Type:	Service-specific (Format 22)
Short text:	Control response error.
Cause:	Control response error from a peripheral board. PP has received an

errored control response byte from the PBC of the board during a routine PBC control response check. This indicates a defective PBC, since the FW and the MP are not affected. The PBC command of the job message is reflected in the HEX data and the contents of the PBC control response register are output.

System reaction: locks the board and attempts to start up. If the board is currently loading, this procedure is aborted.

Action: - Deactivate/activate board with BSSU AMO
- Check board with routine test order
- Unplug/replug board (power-on reset)
- Replace board if error persists.

Interpretation of auxiliary data:

Byte 0 = 02 Length of the subsequent related data
Byte 1 = PBC job message command
Byte 2 = PBC control response register

F5342
BOARD
DATA OVERFLOW

Type:	Service-specific (Format 18)
Short text:	Message data overflow of connected terminal
Cause:	Message data overflow of terminal connected to SLMB8 board. Available

buffers for terminal in question in buffer pool are full. Event signal came from SLMB8 firmware.

System reaction:	resets the terminal.
Action:	Save error message data and contact your next level of support.

As of V3.3, this message has been replaced with F5687 TERM DATA OVERFLOW, since the error concerns a connected terminal and not the board by which it is reported.

F5343
BOARD
HDLC ERROR

Type: Service-specific (Format 22)

Short text: HDLC link error.

Cause: Message is output if the HDLC link of a peripheral board is defective. Errors on the HDLC shelf highway are detected by the data communication link (DCL) and reported to the error analysis system (FA).

Action: Check backplane connectors of peripheral board for proper fit and function. Replace board if necessary. Check the HDLC shelf highway for errors.

Interpretation of auxiliary data:

Byte 0 = 64H maximum length 100 Bytes

Byte 1-22 = Message from DCL to FA is printed.

Error types: HDLC error:

Byte 13 = 00H Error in HDLC path

Byte 14 = 01-06 Polling error detected

CR2X error (special case):

Byte 13 = C2H Control response error. Message was not acknowledged or acknowledgment not transmitted by peripheral, due to overload or line (path) error.

F5344
BOARD
HW ERROR

Type: service relevant (Format 22 and 43)

Short text: Hardware fault on a peripheral board

Cause: A hardware fault on a board was detected by the board self-test. This message can also appear as a result of an overflow of the SLMB16 board central queue. The cause of the error can be read in the status text. The status text is no longer relevant for analog boards. The RLI ROLM board (USA) uses a different status text.

System reaction: The board is blocked and an attempt to put it back into service is initiated.

Action: Plug in/plug out the board; replace the board if the error re-occurs.

Interpretation of auxiliary data:

SP300E-V3.1 and earlier (Format 22):

1. Analog boards: not relevant

2. Digital boards

Byte 0 = 1 Length of the following data

Byte 1 =   Status byte (MP_DIG_STATUSBYTE)

FF	Normal State
FE	RAM Error
FD	HDLC Error Channel 0
FB	HDLC Error Channel 1
F7	HDLC Error Channel 2
EF	HDLC Error Channel 3
DF	PBC Error: CI Channel Information
BF	PBC Error: Undefined State
F7	SLMB16 Board Queue Overflow

3. Digital RLI ROLM board

Byte 0 = 1 Length of the following data

Byte 1 = Status byte (MP_DIG_STATUSBYTE)

FF	Normal State
FE	Microprocessor Error
FD	Checksum Error
FB	BIC-Failure
F7	Watchdog Error

EF   Card_ID Error

DF   RAM Error

BF   TDM Buffer Overflow

F7   FW Error

SP300H-V1.0 and later (Format 43):

HiPath 4000 V1.0 also features this error message, even in format 43, and new fault scenarios described by a more meaningful REASON text. Depending on the REASON there are additional description fields:

Reason: 00H WRONG CBM PARAMETER

Type: Service relevant
Short text: Error in the configuration of CBM parameters.
Cause: The configuration of CBM parameters does not match the number or type of the available CBM modules on the board (STMI). After startup of the board, the LW is able to recognize wrong configured CBM parameters. This can happen although the parameters will be checked on plausibility by the AMOs.
System reaction: The affected CBM module on the board is locked and an alarm is generated.
Action: The wrong parameters have to be corrected by the service and the board has to be loaded again.
Interpretation of auxiliary data:

CBM module:	00H-07H	Number of affected CBM module on the board
Wrong parameter:	00H	A/U-LAW CONVERSION
	01H	ECHO CANCELLATION
	02H	VOICE COMPRESSION
	03H	TOO LESS MODULES
text string:		Error description text filled in by board LW.
auxiliary data:		Diagnosis data filled in by board LW for product specialist.

Reason: 01H CBM MOULE DEFECTIVE (SELFTEST)
Reason: 02H CBM MODULE DEFECTIVE (LW)

Type: Service relevant
Short text: Defective CBM module on the board.
Cause: After startup or during operation the board selftest or the board LW recognizes a defective CBM module (e.g. SIDEC chip) by routine monitoring.SIDEC chip).
System reaction: An alarm is generated.
STMI board: The whole board is locked because no functionality is available any longer.

Action:	The whole board has to be replaced.	

Interpretation of auxiliary data:

CBM module:	00H-07H	Number of affected CBM module on the board
HWY/TSL table:		All HWY/TSLs of the defective CBM module
		(32 x 3Bytes: 1Byte TSL and 2Bytes HWY);
		This table is only valid for LTUCC, not for STMI.
text string:		Error description text filled in by board LW.
auxiliary data:		Diagnosis data filled in by board LW for product specialist

Reason: 03H NO CP PATH RESOURCES IN PERIPHERY

Type:	Service relevant
Short text:	No CP path resources in periphery
Cause:	The loadware of the board has detect that there were not enough CP resources on the board to establish a requested call. The resource management between loadware and system software diverges.

The path resource type addresses the exact resource which is different.

System reaction: VECO checks the differences in resource management and releases call attempts which are not properly seized.

Action:	No special action necessary.

Interpretation of auxiliary data:

Path resource type:	00H	A/U-LAW CONVERSION
	01H	ECHO CANCELLATION
	02H	VOICE COMPRESSION
	03H	ATM EXTERNAL NETWORK PATH
	04H	IP EXTERNAL NETWORK PATH
text string:		Error description text filled in by board LW.
auxiliary data:		Diagnosis data filled in by board LW for product specialist.

Reason: 04 H AP ETHERNET ERROR (SELFTEST)
Reason: 05 H AP ETHERNET ERROR (LW)

Type: Service relevant
Short text: **04H**: Ethernet interface error (detected during startup by board selftest)
     05H: Ethernet interface error (detected during normal operation by LW)
Cause: The loadware or the selftest of the board (STMI) has detected an error on the Ethernet interface on the board.
If an Ethernet interface error occurs the connection of the board with the IP network is no longer possible. Therefore the board does no longer function. The board is added to the 'in service task' and a new board startup is tried after some minutes.
System reaction: The whole board is locked. An alarm is generated. The board is added to the 'in service task'.
Action: If the board does not come up with the 'in service task', the board has to be replaced.
Interpretation of auxiliary data:

text string: Error description text filled in by board LW.

auxiliary data: Diagnosis data filled in by board LW for product specialist.

Reason: 06H ETHERNET INTERFACE ERROR

Type: Service-relevant (HiPath 4000 V4.0 and later)
Short text: 06H: Ethernet interface error (LAN connection no longer available)
Cause: The LW detected an interruption on the Ethernet interface. If a connection to the IP network is set up over the second Ethernet interface, the board switches over to this second interface.Ethernet interface one Connection Private or IP Network besteht, wird ASC der boardtype ASC diese 2. interface umgeschaltet.
System reaction: The error is signaled and an alarm is generated.
Action: Find out the cause of the Ethernet connection failure and correct it.
Interpretation of auxiliary data:
text string: Error description text filled in by board LW.

F5345
BOARD
INIT ERROR

Type: Service-specific (Format 23)

Short text: Peripheral board initialization error

Cause: A peripheral board cannot be loaded. The causes may be traced to the board, but it may also be found to be the transmission of the LW from the hard disk to the board.

The board is not necessarily a special board if the HW ID H'999 (HW-ID of the special board) is signaled. It can also be a normal board that was inserted in the slot of the ring generator/ alternative current generator.

Since HiPath 4000 V2.0 and later and with message text DEF ON REQUEST (Byte 1): Restart of originally active HFA board in the DEFECT state after reconfiguration of the affected stations to the standby board.

System reaction: Board already blocked by DC and in service trial if HW ID is correct.

Since HiPath 4000 V2.0 and later and with message text DEF ON REQUEST (Byte 1): The board is started up in the DEFECT state.

Action: Check the slot of the connected board. If required, regenerate slot with AMO BCSU.

Replace board if load error is linked to board error.

Otherwise, perform procedure for tracing errors on account of the causes in byte 0 and byte 1 supplementary data.

Since HiPath 4000 V2.0 and later and with message text DEF ON REQUEST (Byte 1): Replace board.

In SP300E-V1.0/R6.4 and later, byte 0 and byte 1 are output by means of text support.

Interpretation of auxiliary data:

Table for the values of byte 0 = initialization error (

Hex-value	Output text in SP300E-V1.0/R6.4 and later	Interpretation
3A	WRONG BOARD TYPE	Wrong board
3B	BOARD NOT PRESENT	Board not present
3C	BOARD DEFECTIVE	Board defective

Table for values of byte 1 = loadware loading error (DB_M_LC_LOAD_RESULT_SET)

Hex value	Output text from SP300E-V1.0/R6.4 to SP300E-V2.0/R6.5	Output text since SP300E-V3.0/R6.6	Interpretation
00	BOARD HW ERROR	BOARD HW ERROR	Defective board, board self text negative
01	BOARD NOT LOAD-ED	NEGATIVE LOAD ACK	Board not loaded (error on the board)
02	TRANSMISSION ER-ROR	TRANSMISSION ERROR	Transmission error when loading the loadware to the board (checksum verification negative, hardware error on the board or loadware error at the hard disk)
03	OK	LOAD ACK OK	Board OK (can also occur if byte 0 = H'3A)
04	-	-	Loadware loaded
05	-	-	Loadware not found on the HD
06	-	-	Loadware on HD faulty or corrupt
07	-	-	Board not available (NPR)
08	BOARD DATA NOT LOADED	BOARD DATA NOT LOADED	Board data not loaded
09	COPY ENDED	COPY ENDED	Copy operation terminated by RAM in the Flash
0A	RECORD LOADED	RECORD LOADED	Loadware container loaded
0B	LW NOT FOUND	LW NOT FOUND	Loadware not found or board not in PIT load table
0C	LW NOT READABLE	LW NOT READABLE	Negative PGL load result
0D	PGL TIMER	PGL TIMER	Negative PGL load result, PGL timer ex-pired
0E	CONT GREATER BLOCK	CONT GREATER BLOCK	LW container greater than block
F0	BOARD NOT PRESENT	BOARD NOT PRESENT	Board is configured but not inserted
10	LOADING	LOADING	Board available, but load operation not yet acknowledged by board

11	OK_NO_DATA	DATA TO BE LOAD-ED	Per. SIU: LW is loaded, now load the data
12	DATA NOT READ-ABLE	DATA NOT READ-ABLE	Invalid data container reference
13	EXT LOADING	EXT LOADING	Preliminary load acknowledgement for an external board to be loaded
14	EXT LOAD OK	EXT LOAD ACK OK	permanent positive load acknowledgement from an external loaded board
15	EXT NOT LOADED	EXT NEGATIVE LOAD OK	External board to be loaded not loaded (Error on the board)
16	BOARD ALIVE	BOARD ALIVE	External board to be loaded provides information about an on-going load operation
17	-	EXT MISSING LOAD ACK	External board to be loaded did not send load acknowledgement
18	-	TRANSM BREAK ERROR	Cancel the load operation
19	-	MISSING LOAD ACK	Board sent no load acknowledgement
1A	-	ID COMPARISON FAILED	Wrong board
1B	-	NO ADS RESPONSE	No response from ADS
1C	-	QUEUED ORDER CANCELLED	Retrieval of a buffered load task
1D	-	ORDER REJECTED Q OVFL	Cancel a load operation due to insufficient resources
1E	-	INTERNAL MSG PROBLEM	Message could not be sent or received
F1	-	BOARD NOT LOAD-ED	Board not loaded (in the case of individual commissioning: wrong board or load interruption or missing load acknowledgement)

| 31 | DEF ON REQUEST | Restart of originally active HFA board in the DEFECT state after reconfiguration of the affected stations to the standby board; see also F5880 (since HiPath 4000 V2.0). Replace board. |

F5346
BOARD
LOOP DATA ERROR

Type: Service-specific (Format 18/22)
Short text: RTO: Test loop insertion error
Cause: Format 18: Test loop insertion error. The board is automatically disabled.
Format 22: The message from the RTO to FA is output in the HEX data.
Action: Replace board specified in slot information (LTG:).
Interpretation of auxiliary data: Format 22: see **F5309**.

F5347
BOARD
MP EC ERROR

Type: Diagnosis-specific (Format 22)
Short text: Implausible event code received by peripheral board.
Cause: The firmware of the peripheral board concerned has received a message
from peripheral processing (PP) with an invalid event code (EC). The event signal came from
the board firmware.
System reaction: statistics, signaling.
Action: Possible software error in system or firmware. No immediate action
possible; contact your next level of support.
Interpretation of auxiliary data:

Byte 0 = Length of the subsequent related data (max. 32 bytes)
Byte 1 = Implausible event code
Byte 2-32 = Implausible message from PP to the MP of the board.
Can only be interpreted by your system specialist.

F5348
BOARD
MP LW ERROR

Type: Diagnosis-specific (Format 22)

Short text: Error in microprocessor loadware.

Cause: A loadware or hardware error has been detected in an analog or digital peripheral board. This error message can also be caused by a line error. Event signal came from the firmware of the board concerned.

System reaction: statistics and signaling. All messages with error numbers other than **F5348** are described separately. See deviating numbers in the section 'Interpretation of auxiliary data'.

Action: - Deactivate/activate board, unplug/replug board (power-on reset) and check whether error recurs.
- If error recurs, check line. Replace board if no other error found.
- If error persists, contact your next level of support.

Interpretation of auxiliary data:

Byte 0 = Length of relevant bytes to follow
Byte 1 = Error type (DB_M_EE_LW_ERR_CODE_SET)
00 Invalid function
01 Invalid event code (**F5631**)
02 Invalid OF branch
03 Timeout
04 List overflow (**F5731**)
05 Scan overflow (**F5401**)
06 PBC error following test
07 No procedure
08 Watchdog timeout (**F5732**)
09 Invalid parameter (also: line error)(**F5409**)
0a Checksum error (**F5733**)
0B DB_EE_MP_DUMMY_1
0C TMCL: SIP processor failure
0D TMCL: SIP processor incorrectly plugged (loose)
0E DB_EE_MP_DUMMY_4
0F DB_EE_MP_DUMMY_5
10 Pulse extended by HICOM
11 Code extended by HICOM
12 Pulse extended by exchange
13 Code extended by exchange
14 HDB3 code error
15 Bit error
16 Bit slip
17 AIS alarm from exchange
18 LTC board not found
19 Write protection error

1A End of line alarm (**F5624**)
1B Line alarm idling (**F5625**)
1C Line alarm for outgoing connections (**F5626**)
1D Line alarm for incoming connections (**F5627**)
1E No release acknowledgment (**F5628**)
1F ASIC error of microprocessor (**F5735**)
20 No microprocessor resources (**F5734**)
21 Logic error
Byte 2 - 14 = Loadware information from microprocessor

Can only be interpreted by your system specialist.

F5349
BOARD
MSG NOT TRANSMITTABLE

Type: Service-specific (Format 22)

Short text: Message cannot be transmitted to peripheral board.

Cause: The data communication link (DCL) has made repeated, unsuccessful attempts to dispatch a message to a peripheral board (includes LTUC, SIU, CONF, PSIO). This error can also occur if the board is out of service, i.e., if it has only just been removed from the attendance list. The board concerned is blocked, and a restart attempt is initiated after 1 minute.

Possible error causes include a protocol error or a HW error on the board (e.g. PBC defective). The error message can also be caused by a drastic overload of the board loadware.

System reaction: the board concerned is locked and a restart attempt is initiated after 1 minute.

Action: Unplug/replug board (power-on reset). If error recurs, replace board. If error persists, save the error message data and contact your next level of support.

Note: This message may also refer to a board in a remote shelf that cannot be contacted (in error message see PEN address line for RMS instead of LTU). The auxiliary data should then be interpreted as in the case of format 38/39 in F5336.

F5350
BOARD
SECONDARY IN ATTEND L

Type: Service-specific (Format 22)
Short text: Board is back on attendance list
Cause: The peripheral board concerned is back on the attendance list of the DCL.
This message is output when a board is plugged into the correct slot or when the LTU power
is turned back on. The event signal came from the firmware of the data communication link
(DCL).
System reaction: restarts the peripheral board.
Action: Positive acknowledgment of F5354

F5351
BOARD
PER ADDR ERROR

Type: Diagnosis-specific (Format 22)

Short text: Message corrupted

Cause: a) Peripheral processing (PP) has received a message with an invalid source address (wrong PBC address). This is noticed by the TOP (task organization program) if no board is found or the wrong board type is detected at the address, or if the address is out of range. Event signal came from PP.

b) The QDCL detects an invalid LTU number or an invalid PBC number in a direct message from one SLMC board to another SLMC board. This message was incorporated into EV1.0 later on so that the QDCL loadware can send this message in the same way as in EV2.0. From EV2.0 **F5873** is signaled with BOARD DEST ADDR NOT PLAUS.

System reaction: statistics.

Action: Possible loadware error. Save the error message data and contact your next level of support.

Interpretation of auxiliary data:

Special case for cause b): message from QDCL

Byte 00 = Message length

Byte 01 = 40 Destination task FA

Byte 02 = AE Source task QDCL

... ...

Byte 05 = 1A BOARD

Byte 06 = 04 DB_QF_E_BOARD_DEST_ADDR_NPL (in EV2.0)

... ...

Byte 11 = LTU_NO of the sender

Byte 12 = PBC_NO of the sender

... ...

Byte 18= FF Code for direct message from SLMC to SLMC via DCL

Byte 19 = LTU_NO of the destination board (possible error in address)

Byte 20 = PBC_NO of the destination board (possible error in address)

F5352
BOARD
PER EVT ERROR

Type: Diagnosis-specific (Format 22)
Short text: Implausible message from peripheral board to PP
Cause: Implausible message received by peripheral processing (PP) from the
microprocessor of a peripheral board. Event signal came from PP.
System reaction: statistics.
Action: Possible FW error. No immediate action possible. Save the error message
data and contact your next level of support.
Interpretation of auxiliary data:

Byte 0 = Length of relevant data to follow (max. 32 bytes)
Byte 1-32 = Implausible message from board MP to PP.
Can only be interpreted by your system specialist.

F5353
BOARD
REGISTER ERROR

Type: Service-specific (Format 18/22)

Short text: RTO: Error in code check register

Cause: Format 18: Error in the code check register of the peripheral board controller (PBC). The board is automatically disabled.

Format 22: The message from the RTO to FA is output in the HEX data.

Action: Replace board concerned.

Interpretation of auxiliary data: Format 22: see F5309.

F5354
BOARD
SECONDARY OUT ATTEND L

Type: Service-specific (Format 22)
Short text: Board not plugged
Cause: Board has been unplugged or has been placed out of service due to a
board error, and is therefore no longer on the attendance list of the DCL. Positive
acknowledgment with **F5350**.
Up to EV1.0: if this message is simultaneously output for all boards on a shelf, this can indicate
an HDLC shelf highway path error, an LTUC error or an LTU power failure.
From EV2.0: Only error message **F5308** LTUC OUT OF ATTENDANCE LIST is reported, in all
cases (i.e., no individual message per board).
System reaction: locks the board after NPR
Action: - Insert board in slot specified in slot information (LTG:).
- If a board already exists, replug board if loose or replace if defective.

F5355
BOARD
SPOR ERROR

Type: Service-specific (Format 22)

Short text: RTO: Sporadic error

Cause: ACTION=NO ACT: sporadic error (advisory). ACTION=OUT OF SERV: sporadic error in conjunction with disable message generated due to peripheral error counter overflow. Board is entered in the IBP (startup procedure task) list and RTO message is output in the HEX data.

Action: Note related error messages. Save the error message data and contact your next level of support.

Interpretation of auxiliary data: Format 22: see F5309.

F5356
BOARD
STATUS WORD ERROR

Type: Service-specific (Format 22)
Short text: RTO: RAM/PROM error.
Cause: The board is automatically disabled due to a RAM/PROM error. The RTO
message is entered in the HEX data.
Action: Replace board.
Interpretation of auxiliary data: Format 22: see F5309.

F5358
BOARD
TIME ERROR

Type: Service-specific (Format 18/22)

Short text: RTO: Timeout

Cause: Format 18: Timeout, no response to routine test order. ACTION=RESET
indicates the board was automatically reset. The functional earth of the shelf may not
correspond to the required values.

Format 22: Board is entered in the IBP (startup procedure task) list and RTO message is output
in the HEX data.

Action: Check functional earth.

Interpretation of auxiliary data: Format 22: see F5309.

F5359
BOARD
PIT ERROR

Type: Service-specific (Format 23)

Short text: PIT load error

Cause: Load error of the peripheral initialization task. Connection between PIT and DCL or peripheral processing lost while loading the peripherals.

System reaction: message output about the fatal error on level 2 of the FA with the relevant response.

Action: Action depends on the evaluation of the HEX data. Save error message data and contact your next level of support.

Interpretation of auxiliary data:

Byte 0 = Length of data to follow

Byte 1 = Error type (DB_M_QF_SEV_PIT_SET)

00 PIT received no acknowledgment from PP

01 DCL was not polling

02 DCL failed to transmit attendance list

03 DCL failed to acknowledge shelf reset of LTG

04 DCL failed to transmit polling acknowledgment for shelf

05 DCL transmitted wrong polling acknowledgment for shelf
type

Byte 2 = Load task (DB_M_LC_PER_INIT_EVT_SET)

Byte 3 = HDLC path

Byte 4 = PCB number

Special scenario

Byte 1 = 00: PIT received no acknowledgment from PP, followed by
further data

Byte 0 = 59 Length of data to follow

Byte 1 = 00 PIT received no acknowledgment from PP

Byte 2 = Load task (DB_M_LC_PER_INIT_EVT_SET)

Byte 3 = HDLC path

Byte 4 = PCB number

Byte 5 = Type of data

Byte 6-7 = Board_ID

Byte 8 = PP_Board_Type

Byte 9-58 = Message from PIT to PP

F5371
BOARD
STAT OVERFLOW

Type: Service-specific (Format 22)

Short text: Statistics counter overflow (threshold value overstepped)

Cause: Statistics counters monitor the alarms on this board. The board has been placed out of service due to too many alarms.

Counter sequence: each alarm increments the error counter by 1. Alarm pairs (alarm set and alarm reset message) also increment a specific alarm pair counter by 1, even if the alarm is reset correctly. One of the statistics counters has reached its threshold, and the board has been placed out of service by dependability (status: DEF). As a rule, the counter level is reset after overflow, so that the board is not immediately blocked again when re-activated via AMO or when replaced. In addition, the counter level is decremented at set intervals (minutes).

System reaction: locks the board in the DEF status.

Action: Unplug/re-plug board concerned (power-on reset). If one of the statistics counters overflow again, replace the board.

Interpretation of auxiliary data:

Byte 0 = Counter level of alarm pair counter (standard)

Byte 1 = Counter level of single alarm counter (standard)

Byte 2 = Counter level of single alarm counter (optional)

Byte 3 = Counter level of single alarm counter (optional)

Byte 4 = Statistics class 0 - 20. Different threshold values exist depending on the board type.

Byte 5 = Number of counter which has overflowed

00 Alarm pair counter (standard)

01 Single alarm counter (standard)

02 Single alarm counter (optional)

03 Single alarm counter (optional)

Byte 6-7 = Threshold value of overflowed counter (MAX_COUNT)

Byte 8-9 = Reset value of overflowed counter (COUNT_ACTION)

Byte 10 = Type of threshold value reached

00 Alarm pair (standard)

01 Single alarm (standard)

02 Single alarm (optional)

03 Single alarm (optional)

Byte 11-12 = Decrementing time interval, in minutes (MAX_TIME_COUNT)

Byte 13-14 = Decrementing value (DECREMENT)

Byte 15-80 = Message to FA which led to statistics overflow

F5372
BOARD
BACK IN SERVICE

- SP300E V2.0 / R 6.5 and earlier
- SP300E-V3.0/R6.6 and later

SP300E V2.0 / R 6.5 and earlier

Type: Service-relevant (Format 22)
Short text: Blocking time expired
Cause: The dependability system offers an "in service trial " feature: If an error that may only be sporadic occurs in the system, the element is first put out of service and remains blocked for a preset period of time. After this timeout, the unit is put back into service with a monitoring period. The element remains blocked if the error recurs during the monitoring period. This message is generated with ACTION = IN SERV when putting into service.
System reaction: Delayed board commissioning
Action: Check that the board was put into service.
If not, evaluate the board's previous failure message.

SP300E-V3.0/R6.6 and later

Type: Service-relevant (Format 18/43)
Short text: Board back in service
Cause: Following a defect, the board was put back into service after multiple attempts and a preset block timeout. The board is then monitored in case any further failures occur. If a new defect occurs during this monitoring time, it is put back into service on a trial basis after a longer block time.
In ACTION = INSTRIAL (in service trial) putting into service on a trial basis (Format 43)
In ACTION = IN SERV (in service), putting into service is permanent, the monitoring period is over. (Format 18)
System reaction: Board goes from DEF to READY
Action: Positive message, no action required.
Interpretation of auxiliary data: Text only for format 43:
TRIAL NO: 1 = current number of attempts to put the system into service (max. 8)

F5373
BOARD
STOP NEW SEIZURES

Type: Service-specific (Format 18)
Short text: No outgoing calls possible on peripheral board
Cause: Overload situation on the board. Outgoing calls are no longer possible;
existing connections are preserved.
At the end of the overload the system outputs message **F5374** if no data is lost; otherwise,
the board is automatically reset.
System reaction: new seizures not possible
Action: If this error recurs frequently, save the error message data and contact
your next level of support.

F5374
BOARD
START NEW SEIZURES

Type:	Service-specific (Format 18)
Short text:	Overload end
Cause:	End of board overload since no new lines have been seized.
System reaction:	outgoing calls are possible once more.
Action:	Positive acknowledgment of F5373, no action necessary.

F5376
BOARD
DFE ERROR

Type:	Service-specific (Format 22)
Short text:	DFE error (Data Front End)
Cause:	The SLMR (Rolm board) has a DFE error.
System reaction:	statistics
Action:	No specific action. If the error persists contact your next level of support..

Interpretation of auxiliary data:

Byte 0 = Total length of data (3 bytes plus DFE auxiliary data)

Byte 1 = DFE error

Byte 2 = Length of DFE auxiliary data

Byte 3 = DFE channel number

Byte 4-91 = DFE auxiliary data

F5377
BOARD
RMS LEFT

Type:	Service-specific (Format 22)
Short text:	Board removed from the attendance list
Cause:	- Board of RMS shelf is not plugged or not correctly plugged.

- Board error on a remote RMS shelf caused board to be removed from attendance list.

System reaction:	blocks the board in NPR status.
Action:	- Replug board if it has been unplugged.

- Unplug/replug board, test, replace board if necessary.

F5380
CIRCUIT
TCOM WRONG PULSE PAUSE

Type: Service-specific (Format 22)
Short text: Wrong pulse spacing on TCOM
Cause: The TCOM a/b wires may be wrongly connected. Event signal came from
the device handler (DH) of the TCOM.
System reaction: locks the circuit and delays startup.
Action: Check TCOM and verify the TCOM parameters via administration and
maintenance order (AMO).

Note: From V3.3 on, the error message **F5691** is output instead.

See also Chapter , "Device names".

Interpretation of auxiliary data:

00	=	TYP_NULL	....	01	=	TYP_CTE
02	=	TYP_ANATE		03	=	TYP_HKZ
04	=	TYP_IKZ		05	=	TYP_HAS_SCH
06	=	TYP_HAS_WTK		07	=	TYP_VPL
08	=	TYP_DIGITE		09	=	TYP_QS_SIM
0A	=	TYP_QS_WES		0B	=	TYP_QS_SCH
0C	=	TYP_QS_TF		0D	=	TYP_QS_EM
0E	=	TYP_CTE_AB		0F	=	TYP_SM_VM
10	=	TYP_SM_FAX		11	=	TYP_SM_TTX
12	=	TYP_SM_FAXTTX		13	=	TYP_CTE_X21
14	=	TYP_CTE_X21_PPH		15	=	TYP_X21_NC
16	=	TYP_TMX21		17	=	TYP_TMX21_PPH
18	=	TYP_T3510		19	=	TYP_S3510
1A	=	TYP_HAUSPOST		1B	=	TYP_APSE_PSE
1C	=	TYP_APSE_PSM		1D	=	TYP_APSE_TE
1E	=	TYP_APSE_ELA		1F	=	TYP_APSE_DE

20	=	TYP_APSE_ANSE_M	21	=	TYP_APSE_ANSE_A
22	=	TYP_APSE_WKE	23	=	TYP_TMAU_LW
24	=	TYP_TMAG	25	=	TYP_TMAU_ABZ
26	=	TYP_TMAU_LW_QV	27	=	TYP_TMAU_UEF
28	=	TYP_MOPO_DIG	29	=	TYP_DIG_M
2A	=	TYP_U_STERN_CLC	2B	=	TYP_DCI_U200
2C	=	TYP_TMD_QUER_CH	2D	=	TYP_ISDN_BA
2E	=	TYP_ISDN_PA	2F	=	TYP_TMFS_AMT
30	=	TYP_TMFS_QV	31	=	TYP_TMGSR_GS
32	=	TYP_TMGSR_SR	33	=	TYP_TMLS
34	=	TYP_TMCL_HA	35	=	TYP_TMCL_UA
36	=	TYP_NW_ANALOG	37	=	TYP_NW_DIGITAL_B
38	=	TYP_NW_DIGITAL_P	39	=	TYP_KEYSYSTEM
3A	=	TYP_PHANTOM	3B	=	TYP_OPS
3C	=	TYP_DMI	3D	=	TYP_DMI_D
3E	=	TYP_DIGITE_DYAD	3F	=	TYP_NW_S1
40	=	TYP_NW_S1_D	41	=	TYP_CRNT_VOICE
42	=	TYP_CRNT_DATA	43	=	TYP_CRNT_KEYSYS
44	=	TYP_REFTA	45	=	TYP_SB_ALLG
46	=	TYP_SB_FKT_EG	47	=	TYP_MULT_LINE_8
48	=	TYP_MULT_LINE_30	49	=	TYP_DMI_NO_D
4A	=	TYP_ACD_ROUTING	4B	=	TYP_ACD_ACL
4C	=	TYP_MSN_DEVICE	4D	=	TYP_TDS_PORT
4E	=	TYP_SYMPHONY	4F	=	TYP_SYM_CMI_BASE
50	=	TYP_SYM_CMI_OPTI	51	=	TYP_SYM_CMI_ADMI

F5381
CIRCUIT
TCOM NO SEIZURE ACK

Type: Service-specific (Format 22)

Short text: No seizure acknowledgment from TCOM

Cause: The TCOM a/b wires may be wrongly connected. Event signal came from the device handler (DH) of the TCOM.

System reaction: locks the circuit and delays startup.

Action: Check TCOM and verify the TCOM parameters via administration and maintenance order (AMO).

Note: From V3.3 on, the error message **F5692** is output instead.

Interpretation of auxiliary data:

Byte 1 of the HEX data outputs type of device according to structure DB_M_DH_GERAETE_TYP_SET (see **F5380**).

See also Chapter , "Device names".

F5382
CIRCUIT
TCOM NO START DIA

Type: Service-specific (Format 22)
Short text: No start-of-dialing
Cause: No proceed-to-send signal from TCOM terminal. The TCOM a/b wires may be wrongly connected. Event signal came from the device handler (DH) of the TCOM.
System reaction: locks the circuit and delays startup.
Action: Check TCOM and verify the TCOM parameters via administration and maintenance order (AMO).

Note: From V3.3 on, the error message **F5693** is output instead.

Interpretation of auxiliary data:

Byte 1 of the HEX data outputs type of device according to structure DB_M_DH_GERAETE_TYP_SET (see **F5380**).

(i)	See also Chapter , "Device names".

F5383
CIRCUIT
TCOM NO END OF DIAL

Type: Service-specific (Format 22)

Short text: No end-of-dialing

Cause: No end-of-dialing signal for the code calling system. The TCOM a/b wires may be wrongly connected. Event signal came from the device handler (DH) of the TCOM.

System reaction: locks the circuit and delays startup.

Action: Check TCOM and verify the TCOM parameters via administration and maintenance order (AMO).

Note: From V3.3 on, the error message **F5694** is output instead.

Interpretation of auxiliary data:

Byte 1 of the HEX data outputs type of device according to structure DB_M_DH_GERAETE_TYP_SET (see **F5380**).

> See also Chapter , "Device names".

F5385
CIRCUIT
ASYNC

Type:	Service-specific (Format 18)
Short text:	Circuit asynchronous.
Cause:	Error usually caused by terminal. Either the connecting lead has been

pulled out, or a reset has been initiated via the terminal. Event signal came from the DIGITE device handler or from attendant console device handler. Note: If the contents of Bytes 1 + 2 are H'DEDE, then the error message is simply caused by an echo of the RMS error message traffic.

System reaction:	line alarm for the circuit.
Action:	Check line and terminal if the action field is "OUT OF SERVICE".

Note: from V3.3, the message **F5420** TERM ASYNC is output instead.

> See also Chapter , "Device names".

F5388
CIRCUIT
EARTH BEGIN

Type: Service-specific (Format 18)

Short text: Start of ground leakage on main station line.

Cause: Ground leakage on a-wire or b-wire of a main PABX loop circuit (main station line). Event signal came from the DH. Positive acknowledgment with **F5389**.

System reaction: line alarm for the HAS circuit.

Action: Test line to satellite PABX. Alternatively, the board providing the main station interface in the main PABX or the satellite PABX may be defective.

> See also Chapter , "Device names".

F5389
CIRCUIT
EARTH END

Type:　　　　　　　　Service-specific (Format 18)
Short text:　　　　　　End of ground leakage on main station line
Cause:　　　　　　　　End of ground leakage on main PABX loop circuit (main station line).
Event signal came from the DH. Positive acknowledgment of **F5388** with automatic startup.
System reaction:　　end of the line alarm for the HAS circuit.
Action:　　　　　　　Positive acknowledgment, no action necessary.

> See also Chapter , "Device names".

F5390
CIRCUIT
END SHORT CIRCUIT

Type: Service-specific (Format 18)
Short text: End of short-circuit on station line
Cause: Board has detected end of ground short on user circuit, and has switched feed signal back to active low. Positive acknowledgment of **F5403** with automatic startup.
System reaction: end of lock on circuit.
Action: Positive acknowledgment, no action necessary.

> See also Chapter , "Device names".

F5391
CIRCUIT
EXT DIALTONE ERROR

Type: Service-specific (Format 18)
Short text: No external dial tone
Cause: No external dial tone (i.e. no outward dialing to exchange). Exchange or tie line may have a breakage or is otherwise interrupted. Event signal came from device handler.
System reaction: signals only.
Action: Check line, user circuit and remote system; check configuration if no other error found.

ⓘ	See also Chapter , "Device names".

F5392
CIRCUIT
REMOTE BLOCK I/C SEIZ

Type: Service-specific (Format 22)
Short text: Start of remote block
Cause: Start of remote block of analog circuit by remote system (incoming
seizure). Event signal came from DH.
System reaction: remote block for incoming calls
Action: This is not necessarily an error; remote system may be protecting against
undesired calls during maintenance or testing. Check remote system.

Note: From V3.3, error message **F5695** is output for TCOM circuits instead.

> See also Chapter , "Device names".

F5393
CIRCUIT
REMOTE BLOCK I/C END

Type: Service-specific (Format 22)
Short text: End of remote block
Cause: End of remote block of analog circuit by remote system. Event signal
came from DH.
System reaction: end of remote block for incoming calls
Action: Positive acknowledgment, no action necessary.

Note: From V3.3, error message **F5696** is output for TCOM circuits instead.

See also Chapter , "Device names".

F5395
CIRCUIT
START UP ERROR

Type: Service-specific (Format 22)

Short text: Attendant console self-test error.

Cause: Error found by attendant console self-test while booting. Event signal came from the ATND device handler.

System reaction: locks the attendant console and delays startup.

Action: Reset ATND, replace if necessary.

Interpretation of auxiliary data:

Byte 0 = Length of data to follow (always 1)

Byte 1 = REASON_AC (error cause)

80 Master

81 Master

82 Keyboard

83 External error

See also Chapter , "Device names".

F5396
CIRCUIT
IDLE LOOP ERROR

Type: Service-specific (Format 22)
Short text: Attendant console self-test error.
Cause: Error found by attendant console self-test. Event signal came from the
ATND device handler.
System reaction: locks the attendant console and delays startup.
Action: Check the attendant console. Action: reset ATND, replace if necessary.
Interpretation of auxiliary data:

Byte 0 = Length of data to follow (always 1)
Byte 1 = REASON_AC (error cause)
84 Master
85 Master
86 Keyboard
87 External error

> See also Chapter , "Device names".

F5397
CIRCUIT
INIT ERROR

Type:	Service-specific (Format 22)
Short text:	Initialization error
Cause:	Initialization error of a board circuit.
Action:	Action depends on the evaluation of the HEX data.
System reaction:	circuit already locked by DC.

Interpretation of auxiliary data: In byte 1 of the hexadecimal output, the error is displayed according to the structure DB_M_LC_LOAD_RESULT_SET. Interpretation as for **F5307**, only byte 1 relevant.

> See also Chapter , "Device names".

F5398
CIRCUIT
LINE DISCONNECTED

Type: Service-specific (Format 22)

Short text: U* line switched off

Cause: Line switched off by SLMD firmware. If the SLMD board is unable to receive messages from the CTE, e.g. because the terminal has been switched off or disconnected, the CTE will release any terminal connections and deactivate the U* interface on the system side. The U* interface is re-activated either by the CTE or by the call processing system (CP). Positive acknowledgment is output with message **F5404**.

System reaction: the board switches off the subscriber line.

Action: Check line and terminal.

Interpretation of auxiliary data:

Byte 0 = Length of data to follow (always 2)

Byte 1 = REASON_L1 (error cause)

Byte 2 = REASON_L2 (error cause)

> ⓘ   See also Chapter , "Device names".

F5399
CIRCUIT
LINE ALARM BEG

- SP300E V2.0 / R 6.5 and earlier
- SP300E-V3.0/R6.6 and later

SP300E V2.0 / R 6.5 and earlier

Type: Service-relevant (Format 18)
Short text: Start of line alarm.
Cause: Start of line alarm for an analog trunk or tie circuit. The trunk/tie line may have been interrupted. The error message F5400 is issued if the port is back in service. System reaction: Line alarm.
Action: Check line for interruption and incorrect connection. If necessary, arrange for the partner to be checked (CO / tie).

Note: SP300-V3.3/R6.2 and later: the message F5697 is generated for this APSE.

> See also Chapter , "Device names".

SP300E-V3.0/R6.6 and later

Type: Service-relevant (Format 43)
Short text: Start of line alarm.
Cause: Start of line alarm for a trunk or tie circuit. The trunk/tie line may have been interrupted. The error message F5400 is issued if the port is back in service.
Special case ADASE: The messages with reason 01H and reason 02H are only sent in the case of ADASE.
System reaction: Line alarm.
Action: Check line for interruption and incorrect connection.
If necessary, arrange for the partner to be checked (CO / tie).
Special case ADASE: If necessary, activate the 1200 Hz permanent test tone on the Hicom side (ADASE signaling feature) and in cooperation with personnel at the partner, search for/measure or observe the reaction of the partner's 1200 Hz recipient.
Interpretation of auxiliary data: (text-driven)
REASON: 00H GENERAL LINE ALARM BEGIN
General line alarm
REASON: 01H LINE ALARM BEGIN, NO SIGNAL
Start of line alarm, no test impulse signal received.
REASON: 02H LINE ALARM BEGIN, F2 SIGNAL
Line alarm start, F2 test signals received.

F5400
CIRCUIT
LINE ALARM END

Type: Service-specific (Format 18)
Short text: End of line alarm.
Cause: Line alarm reset for analog exchange or tie-line circuit.
System reaction: end of line alarm.
Action: Positive acknowledgment that the bad line/port is back in operation.

Note: From V3.3, error message **F5698** is output for TCOM circuits instead.

See also Chapter , "Device names".

F5401
CIRCUIT
MP SCAN OVERFLOW

Type: Service-specific (Format 22)

Short text: Too many scan events

Cause: Too many scan events for a circuit within a certain time unit.

In the case of SLMA and SLMA1 boards, the second, associated circuit is also disabled (DUAL-SLIC). The second circuit on the board is calculated on the basis of the circuit number output in the HEX data, as follows:

circuit number plus 8, or

circuit number minus 8.

System reaction: locks the circuit and delays startup.

Action: Check circuit and terminal. Check line for breakage or interruption, short-circuit connections or extraneous voltages.

Interpretation of auxiliary data: see **F5348**.

ⓘ	See also Chapter , "Device names".

F5402
CIRCUIT
TERMINAL SYNC

Type: Service-specific (Format 18)

Short text: Terminal / ATND circuit synchronous again

Cause: Terminal may have been plugged back in. Event signal came from DIGITE
device handler or attendant console device handler.

System reaction: end of the line alarm.

Action: Positive acknowledgment of **F5385**, no action necessary.

Note: From V3.3, error message **F5688** TERM TERMINAL SYNC is output instead.

> See also Chapter , "Device names".

F5403
CIRCUIT
SHORT CIRCUIT

Type: Service-specific (Format 18)
Short text: Short-circuit on user port
Cause: Board has detected overcurrent on user port and has switched feed to active high.
Positive acknowledgment with **F5390**.
System reaction: lock for the circuit.
Action: Check circuit, terminal and board.

> See also Chapter , "Device names".

F5404
CIRCUIT
LINE ACTIVATED

Type: Service-specific (Format 18)

Short text: U* line active again

Cause: SLMD line active again, i.e. terminal has been plugged back in. The U* interface is re-activated either by the CTE or by the call processing system (CP).

System reaction: end of the line alarm.

Action: Positive acknowledgment of **F5398**, **F5405** and **F5410**, without action.

> See also Chapter , "Device names".

F5405
CIRCUIT
LINE TIMEOUT

Type: Service-specific (Format 18)
Short text: No response from service module / U* line
Cause: SLMD receives no answer from the service module or from the U* line.
Positive acknowledgment with **F5404**.
System reaction: locks the circuit and delays startup.
Action: Check service module and U* line.

> See also Chapter , "Device names".

F5406
CIRCUIT
SPOR ERROR

Type:	Service-specific (Format up to EV1.0: 22, EV2.0 and later: 43)
Short text:	RTO: Sporadic error during routine test operation
Cause:	ACTION=NO ACT: sporadic error (advisory).

ACTION=OUT OF SERV: sporadic error in conjunction with disable message generated due to peripheral error counter overflow. Circuit is disabled and RTO message is output in the HEX data.

Note for EV2.0 and later: device names, test carried out and test result are output as plain text.

Action:	Note related, previous error messages.
Interpretation of auxiliary data:	Format 22/43: see **F5309**.

See also Chapter , "Device names".

F5407
CIRCUIT
TEST ERROR

Type: Service-specific (Format up to EV1.0: 18/22, EV2.0 and later: 18/43)
Short text: RTO: routine test error
Cause: Format 18: Error detected during routine test.
Format 43: invalid or implausible firmware parameters on an analog board. The RTO message is output in HEX data
Format 22: Invalid or implausible firmware parameters on an analog board. The RTO message is output in the HEX data.
Note for EV2.0 and later: device names, test carried out and test results are output in plain text (Format 43).
Action: Format 18: Error detected by routine test. Replace board.
Format 22/43: The circuit is automatically disabled. Check circuit parameters via AMO.
Interpretation of auxiliary data: Format 2243: see **F5309**.

> See also Chapter , "Device names".

F5409
CIRCUIT
MP INVALID PARA

Type: Service-specific (Format 22)

Short text: Invalid microprocessor parameters

Cause: Invalid or bad parameters detected by microprocessor of an analog board. LW or system software error.

System reaction: resets the circuit.

Action: Save error message data and contact your next level of support.

Bytes 1-12 of the HEX-data contain information on the microprocessor (see **F5348**).

See also Chapter , "Device names".

F5410
CIRCUIT
SYNC FAIL

Type: Service-specific (Format 18)

Short text: Loss of synchronization on U* line

Cause: SLMD detects loss of synchronization or line alarm on the U* line, e.g. because terminal has been switched off or disconnected. Slot information (LTG:) is included. Positive acknowledgment with **F5404**.

System reaction: locks the circuit. Unlocks the CI channel.

Action: Check line and terminal.

> See also Chapter , "Device names".

F5411
CIRCUIT
L1 SPOR ERROR

Type: Service-specific (Format 22)
Short text: Sporadic layer 1 error
Cause: Short line alarm. Sporadic layer 1 error in digital networking circuit (or S_0 bus circuit up to SP300-V3.3). From EV2.0 this message is also used for ATM circuits of all operating modes. It can refer to one circuit or all circuits of a board (see circuit information).
Action: Check line or localize error with protocol tester.

Interpretation of auxiliary data:

Byte 0 = Error type (DB_M_QF_CIR_L1_ERR_SET)

00 Corruption on line (bit slip)

01 Corruption on line (bit error rate > 10 E-6)

02 Corruption on line (bit error rate > 10 E-3)

03 Line interrupt (loss of frame)

04 Line interrupt (loss of signal)

05 Error signaling from partner (alarm indication)

06 Error signaling from partner (remote alarm)

07 No circuit data loaded

08 L1 of cannot be activated or is not active (only for S0 bus)

09 Message overflow (USA) (only for S0 bus)

0A Invalid message (USA) (only for S0 bus)

0B Error signaling from partner system (remote alarm CRC4)

DIU-CAS, from V.3.3: errors in 64 kbit/s signaling channel

0C Error signaling from partner system (remote alarm)

0D Line interrupt, frames corrupted

0E Error signaling from partner system (alarm indication signal)

0F Line interrupt (no signal)

T1- BOARD in USA:

10 Loss of Signal

11 Max Error Secs

12 Red Alarm LFA

13 Red Alarm LMA

14 Yellow Alarm RFA

15 Yellow Alarm RMA

16 AIS Alarm (Blue)

17 Channel Fault

ATM, from EV1.0 (for explanation of error types, see **F5412**)

1B ATM cell lost

1C Bit stuffing error

1D Transmit FIFO overflow

1E Receive FIFO overflow

1F Fault at the UTOPIA interface

20 Signal label mismatched

Byte 1,2 = Number of errors reported

Byte 3 = Length of data to follow

Byte 4-90 = Reported errors, in sequence

> See also Chapter , "Device names".

F5412
CIRCUIT
L1 ERROR

Type: Service-relevant (Format 22/36)
Short text: Layer 1 error(s) (line alarm)
Cause: There is a fault on layer 1 of the line.

● SP300 V3.2 and earlier: Networking or S0 bus circuit (Format 22).

● SP300-V3.3 and later: Networking circuit only (Format 36).

● In SP300E-V2.0/R6.5 and later, this message is also used for ATM circuits in all operating modes. It can refer to a circuit or all circuits on the board (see circuit information).

System reaction: Layers 1 to 3 blocked. Increase reference clock error counter. In the case of NO DATA LOADED, the element is put out of and put back into service with a load operation.
Action: Check line, check partner, if necessary, replace board.
Interpretation of auxiliary data:

Byte 0 = Error type (DB_M_QF_CIR_L1_ERR_SET)

> See also Chapter , "Device names".

Message texts:

REASON: 00H BIT SLIP

Cause: Bit slip (LOCAL ALARM)

REASON: 02H BIT ERR RATE -3

Cause: Bit error rate >10 E-3 (LOCAL ALARM)

REASON: 03H LOST FRAME

Cause: Frame loss (LOCAL ALARM)

REASON: 04H NO SIGNAL

Cause: No signal on the line (LOCAL ALARM)

REASON: 05H AIS

Cause: Alarm indication signal from partner (AIS ALARM)

REASON: 06H REMOTE ALARM

Cause: Remote alarm from partner (DISTANT ALARM)

REASON: 07H NO DATA LOADED

Cause: Record data not loaded (no line alarm)

REASON: 0BH REMOTE ALARM CRC4

Cause: Remote alarm CRC4 from partner (DISTANT ALARM)

Only for DIUCAS (V3.3 and later): Error in signaling channel with 64kbit/s

REASON: 0CH REMOTE ALARM 64K

Cause: Remote alarm from partner (DISTANT ALARM)

REASON: 0DH LOST FRAME 64K

Cause: Frame loss (LOCAL ALARM)

REASON: 0EH AIS 64K

Cause: Alarm indication signal from partner (AIS ALARM)

REASON: 0FH NO SIGNAL 64K

Cause: No signal on the line (LOCAL ALARM)

T1 BOARD in USA only:

Caution: The following description only applies to US-specific HW

Byte 0 = Error type (DB_M_QF_CIR_L1_ERR_SET)

REASON: 10H LOSS OF SIGNAL

Cause: Loss of signal detected for greater than the specified interval.

REASON: 11H MAX ERROR SECS

Cause: The maximum number of errored seconds has been detected for the specified interval.

REASON: 12H RED ALARM LFA

Cause: The board is in a red alarm condition (detected locally) due to loss of single frame synchronization.

REASON: 13H RED ALARM LMA

Cause: The board is in a red alarm condition (detected locally) due to loss of multi-frame synchronization.)

REASON: 14H YELLOW ALARM RFA

Cause: The board is in a yellow alarm condition (detected remotely) due to loss of single frame synchronization.

REASON: 15H YELLOW ALARM RMA

Cause: The board is in a yellow alarm condition (detected remotely) due to loss of multi-frame synchronization.

REASON: 16H AIS ALARM (BLUE)

Cause: The board is in blue alarm condition because it is receiving an AIS signal from the network.

REASON: 17H CHANNEL FAULT

Only for ATM (SP300E-V1.0/R6.4 and later):

REASON: 19H PORTSWITCHING: BOARD IN ATM-HUB MISSING

Type: Service-relevant
Cause: Board in Hicom ATM hub not connected, occurs in portswitching operating mode in the case of STMA.
Action: Check the Hicom ATM hub, verify that all necessary subscriber line boards are connected/cabled/check for HW errors.

REASON: 1BH ATM CELL LOST

Cause: ATM cell loss (LOCAL ALARM)
Action: Check line, check partner e.g.

● Reception level in permitted range?

● SONET/SDH - STM1 mode correct?

● Bit rate on the partner side correctly reserved - policing?

If OK: Replace board.

REASON: 1CH BIT STUFFING ERROR

Cause: Bit overstuffing (LOCAL ALARM)
Action: Check line, check partner (e.g. receipt level in permitted range? SONET/ SDH - STM1 mode correct?

- If both OK: Replace board

REASON: 1DH TRANSMIT FIFO OVERFLOW

Cause: FIFO overflow on send (LOCAL ALARM)
Action: Replace board

REASON: 1EH RECEIVE FIFO OVERFLOW

Cause: FIFO overflow on receipt (LOCAL ALARM)
Action: Check parameter "CELL Delay Variation time"; if necessary increase if the error occurs frequently (result: Increased delay in voice connections, possible echo problems)

- If parameter OK: Replace board

REASON: 1FH UTOPIA INTERFACE FAULT

Cause: Error at the UTOPIA interface (LOCAL ALARM)
Action: Replace board

REASON: 20H SIGNAL LABEL MISMATCHED

Cause: The partner does not operate the interface in ATM mode. (LOCAL ALARM)
Action: Check partner and arrange correct installation.

REASON: 21H SUBBOARD CONFIGURATION MISMATCH

Cause: Subboard at STMA2 board incorrectly configured. Configuration data does not correspond to subboard type.
Action: Check subboard type and associated configuration data.

F5413
CIRCUIT
L2 SPOR ERROR

Type: Service-specific (Format 22)
Short text: Sporadic layer 2 error
Cause: Sporadic layer 2 error in digital networking circuit.
System reaction: statistics
Action: Action depends on the evaluation of the HEX data. Save error message
data and contact your next level of support.

Interpretation of auxiliary data:
Byte 0 = Error type (DB_M_QF_CIR_L2_SPO_ERR_SET)
00 Level 2 is reset
01 Short-term blocking of level 2
02 Error LAPD protocol

Byte 1,2 = Number of errors reported
Byte 3 = Length of data to follow
Byte 4-90 = Reported errors, in sequence

Special case:
Byte 00-03 = PNE: (Private Network Emulator) The following information
indicates a PNE error message
Byte 04-90 = PNE error message in ASCII format.
PNE error message key listed in appendix of Service, Configuration and Maintenance
A31003-Z3400-D1-*-20 (German)
A31003-Z3400-D1-*-7620 (English).

> See also Chapter , "Device names".

F5414
CIRCUIT
L2 ERROR

Type: Service-specific (Format 22/36)
Short text: Layer 2 error
Cause: Layer 2 error (protocol), may also have been caused by remote partner.
Format 22: valid up to SP300-V3.2.
Format 36: applies from SP300-V3.3. Layer 2 error in digital networking circuit only (protocol).
Positive acknowledgment with **F5418**.
System reaction: statistics, locks layer 2-3
Action: Check partner (remote system), check line with the protocol tester.
Interpretation of auxiliary data:

REASON: 00 RELEASE ACKNOWLEDGE (layer 2 cleared down)
01 DEACTIVATED BY PEER (partner has cleared down layer 2)
02 LAYER 1 DEACTIVATED (Layer 2 was cleared down due to
layer 1 error)
03 DEFECT ON U (UP$_0$ error)
04 DEFECT ON S (S0 error)
05 PEER OUT OF ORDER (Layer 2 setup, partner not
responding)
06 PROTOCOL FAILURE
07 TIMEOUT REMOTE BUSY (remote overload)
08 FRMR, DM OR F-BIT (error status, partner deactivated)
09 RESET BY PEER (layer 2 reset by partner)
0A TEI NOT ASSIGNED (Terminal Endpoint Identifier does not exist)
0B TEI REMOVE (Terminal Endpoint Identifier is taken back)
0C POWER UP TE (terminal equipment is powered)
0D TEI INVALID
(Incorrect address or terminal does not understand address)
0E CES NOT ASSIGNED (No CES exists; no terminal for logical
link)
0F LAYER 2 NOT READY

> See also Chapter , "Device names".

F5415
CIRCUIT
L2 STOP NEW SEIZURES

Type: Service-specific (Format 18)
Short text: Overload prevention is active
Cause: STOP for re-seizures. Overload prevention for digital networking circuits (or S_0 bus circuits up to SP300-V3.3)
System reaction: locks layer 2-3
Action: Look for any associated, additional error messages. If this error occurs frequently, save the error message data and contact your next level of support.

> See also Chapter , "Device names".

F5416
CIRCUIT
L2 START NEW SEIZURES

Type: Service-specific (Format 18)
Short text: Overload end
Cause: Re-seizures possible again. Overload queue has been worked off or board has reset itself.
System reaction: ends of lock on layer 2-3
Action: Look for any associated, additional error messages. If this error occurs frequently, save the error message data and contact your next level of support.

> See also Chapter , "Device names".

F5417
CIRCUIT
L3 ERROR

Type: Service-relevant (Format 22)
Short text: Layer 3 error
Cause: Layer 3 error in digital networking record (switching technology). An L3 ERROR can occur in connection with AMO TWABE. The S2 interface requires a response from the remote system within 1.5 seconds. The AMO TWABE requires a longer CPU time, however, which can result in an L3 ERROR.
System reaction: Signalling only.
Action: The remedy depends on an analysis of the supplementary data. Save error message data and **notify product specialist**.
The COP parameter ASNM must be set in order to output errors.
Interpretation of auxiliary data:

Byte 0	=	DB_M_QF_CIR_L3_ERR_SET	Error type (DH_M_NW_QF_FA_STR available as of EV3.1)
	00	DB_QF_CIR_L3_MT_NOT_EXIST	Unknown message type (DH_M_NW_L3_ERR_ARY)
	01	DB_QF_CIR_L3_PD_NOT_EXIST	Unknown protocol (DH_M_NW_L3_ERR_ARY)
	02	DB_QF_CIR_L3_WEL_NOT_EXIST	Unknown information element/call reference (DH_M_NW_L3_ERR_BYTE_STR)
	03	DB_QF_CIR_L3_DOUBLE_WEL	Dual information element (DH_M_NW_L3_ERR_BYTE_STR)
	04	DB_QF_CIR_L3_NOT_ALLOW_WEL	Impermissible information element (DH_M_NW_L3_ERR_WEL_STR)
	05	DB_QF_CIR_L3_MISSING_WEL	Mandatory information element missing (DH_M_NW_L3_ERR_WEL_STR)
	06	DB_QF_CIR_L3_WEL_OVERFLOW	Too many information elements in the messages (no supplementary data)
	07	DB_QF_CIR_L3_LOC_PROC_ERR	Local problem in protocol handler e.g. logfile not active (AMO PRODE) or no more device memory available (AMO DIMSU) (no supplementary data)

08	DB_QF_CIR_L3_NO_BEL_Q	No seizure acknowledgement (no sup-plementary data)
09	DB_QF_CIR_L3_NO_AUSL_Q	No trigger aknowledgement (no sup-plementary data)
0A	DB_QF_CIR_L3_NO_B_CHAN	B-channel negotiation negative (no supplementary data)[BP][BP][BP]
0B	DB_QF_CIR_L3_CHAN_REST_LOC	for US Release 6.0 (no supplementary data)
0C	DB_QF_CIR_L3_SPAN_REST_LOC	for US Release 6.0 (no supplementary data)
0D	DB_QF_CIR_L3_CHAN_REST_REM	for US Release 6.0 (no supplementary data)
0E	DB_QF_CIR_L3_SPAN_REST_REM	for US Release 6.0 (no supplementary data)
0F	DB_QF_CIR_L3_REST_NO_ACK	for US Release 6.0 (no supplementary data)
10	DB_QF_CIR_L3_CHAN_MB_REM	for US Release 6.0 (no supplementary data)
11	DB_QF_CIR_L3_CHAN_OOS_REM	for US Release 6.0 (no supplementary data)
12	DB_QF_CIR_L3_SPAN_MB_REM	for US Release 6.0 (no supplementary data)
13	DB_QF_CIR_L3_SPAN_OOS_REM	for US Release 6.0 (no supplementary data)
14	DB_QF_CIR_L3_MT_UNEXPECTED	Implausible message (DH_M_NW_L3_ERR_ARY)
15-17		Reserved
18	DB_QF_CIR_L3_COMP_DISCARD	Error while decoding the facility or lack of space in DH message buffer (DH_M_NW_L3_ERR_BYTE_STR)
19	DB_QF_CIR_L3_FAC_DISCAR	Error while decoding the facility or lack of space in DH message buffer (DH_M_NW_L3_ERR_BYTE_STR)

1A	DB_QF_CIR_L3_OVERFLOW	ASN1 decoder error (DH_M_NW_L3_ERR_BYTE_STR)
1B	DB_QF_CIR_L3_TAG	ASN1 decoder error (DH_M_NW_L3_ERR_BYTE_STR)
1C	DB_QF_CIR_L3_LENGTH	ASN1 decoder error (DH_M_NW_L3_ERR_BYTE_STR)
1D	DB_QF_CIR_L3_RANGE	ASN1 decoder error (DH_M_NW_L3_ERR_BYTE_STR)
1E	DB_QF_CIR_L3_ENUMERATED	ASN1 Decoder Fehler (DH_M_NW_L3_ERR_BYTE_STR)
1F	DB_QF_CIR_L3_SIZE	ASN1 decoder error (DH_M_NW_L3_ERR_BYTE_STR)
20	DB_QF_CIR_L3_SELECT	ASN1 decoder error (DH_M_NW_L3_ERR_BYTE_STR)
21	DB_QF_CIR_L3_ANYDEFINEDBY	ASN1 decoder error (DH_M_NW_L3_ERR_BYTE_STR)
22	DB_QF_CIR_L3_CDU_OVERFLOW	ASN1 decoder error (DH_M_NW_L3_ERR_BYTE_STR)
23	DB_QF_CIR_L3_OPERATIONCODE	ASN1 decoder error (DH_M_NW_L3_ERR_BYTE_STR)
24	DB_QF_CIR_L3_ERRORCODE	ASN1 decoder error (DH_M_NW_L3_ERR_BYTE_STR)
25	DB_QF_CIR_L3_OTHER	ASN1 decoder error (DH_M_NW_L3_ERR_BYTE_STR)
26	DB_QF_CIR_L3_INVALID_CR	Wrong call reference (DH_M_NW_L3_ERR_ARY)
27	DB_QF_CIR_L3_MSG_OVERFLOW	DATA3 overflow (DH_M_NW_L3_ERR_WEL_STR)
28	DB_QF_CIR_L3_Y_OVERFLOW	ASN1 encoder error (DH_M_NW_L3_ERR_COMP_STR)
29	DB_QF_CIR_L3_Y_TAG	ASN1 encoder error (DH_M_NW_L3_ERR_COMP_STR)
2A	DB_QF_CIR_L3_Y_LENGTH	ASN1 encoder error (DH_M_NW_L3_ERR_COMP_STR)

2B	DB_QF_CIR_L3_Y_RANGE	ASN1 encoder error (DH_M_NW_L3_ERR_COMP_STR)
2C	DB_QF_CIR_L3_Y_ENUMERATED	ASN1 encoder error (DH_M_NW_L3_ERR_COMP_STR)
2D	DB_QF_CIR_L3_Y_SIZE	ASN1 encoder error (DH_M_NW_L3_ERR_COMP_STR)
2E	DB_QF_CIR_L3_Y_SELECT	ASN1 encoder error (DH_M_NW_L3_ERR_COMP_STR)
2F	DB_QF_CIR_L3_Y_ANY_DEF_BY	ASN1 encoder error (DH_M_NW_L3_ERR_COMP_STR)
30	DB_QF_CIR_L3_Y_CDU_OVERFLW	ASN1 encoder error (DH_M_NW_L3_ERR_COMP_STR)
31	DB_QF_CIR_L3_Y_OPERAT_CODE	ASN1 encoder error (DH_M_NW_L3_ERR_COMP_STR)
32	DB_QF_CIR_L3_Y_ERRORCODE	ASN1 encoder error (DH_M_NW_L3_ERR_COMP_STR)
33	DB_QF_CIR_L3_Y_OTHER	ASN1 encoder error (DH_M_NW_L3_ERR_COMP_STR)
34		Reserved

> See also Chapter , "Device names".

F5418
CIRCUIT
LX ACTIVE

Type: Service-specific (Format 36)
Short text: Layer 1, or layer 2/3 okay again
Cause: The errored protocol layer (L1, L2 or L3) of the networking circuit is intact
again.
Positive response for **F5412** and **F5414**.
From EV1.0, LX ACTIVE Layer 3 is also used as a positive response after **F5993** CIRCUIT L2
ERROR VC for voice compression
Up to SP300-V3.3, this message is also output in Format 22 (S0 bus): Layer 1 is intact once
more.
From EV2.0 this message is also used for ATM circuits of all modes of operation. It can refer to
one circuit or to all circuits in the board (see circuit information).
System reaction: starts up layer 1 in the case of 'Layer 1 active' or layer 3 in the case of
'Layer 3 active'.
System reaction: ends lock on layer 1 or 2-3.
Action: Positive acknowledgment, no action required.
Interpretation of auxiliary data:
T1-Board in USA:

REASON: 01H ACQUISITION OF SIGNAL

REASON: 02H CHANNEL FAULT OK

REASON: 03H GREEN ALARM

REASON: 04H MIN ERR SECS

REASON: 05H CHANNEL IN SERVICE

REASON: 06H SPAN IN SERVICE

Networking Europe:

REASON: 07H LAYER 1 ACTIVE

Cause: Layer 1 active for networking

REASON: 09H LAYER 3 ACTIVE

Cause: Layer 2 and 3 active for networking

REASON: 0AH LAYER 1 DELAYED

Cause: Layer 1 delayed; only for DIUC 64 in France.
The delay time for LAYER 1 DELAY can be set between 30 and 180 seconds with the STABTIM
parameter of the LWPAR AMO (reload).

See also Chapter , "Device names".

F5420
TERM
ASYNC

Type: Service-specific (Format 18)
Short text: Terminal asynchronous
Cause: Terminal asynchronous (DIGITE, DIG M86). Board attempts to
synchronize. If error repeats and DH is already asynchronous, the terminal will remain
asynchronous. The FA error analysis system deactivates the terminal after each error, although
the error message is only signaled once. End of synchronization with **F5688**.
System reaction: locks the terminal
Action: Check line and terminal.

> See also Chapter , "Device names".

F5421
TERM
NO BLOCKED ID

Type: Service-specific (Format 18)
Short text: Defective ID card reader (IDCR).
Cause: Board checks for end-of-block character. If this is missing, PP sends a
TERM_AWL_DEF message to the FA.

System reaction:

- SLMB, SLMB16: terminal is reset automatically.

- SLMD: terminal is blocked (deactivated).

Action: Replace IDCR, reset terminal.

> See also Chapter , "Device names".

F5422
TERM
DEACTIVATED

Type: Service-specific (Format 22)

Short text: Terminal deactivated

Cause: Terminal connected to SLMD (direct or via Hicom adapter CTE) has deactivated itself due to an error. Terminal sends message to SLMD.

System reaction: terminal is blocked by FA and restored to service after a delay.

Action: Check terminal and connector.

Interpretation of auxiliary data:

Byte 0 = REASON_L1

Byte 1 = REASON_L2

> See also Chapter , "Device names".

F5423
TERM
LL STAT

Type: Service-specific (Format 22)

Short text: Terminal last look error

Cause: - Sporadic transmission error, detected more than three times during terminal last look verification (DIGITE / ATND).

- DH receives 'data transfer error' or 'unknown command' message from DIGITE or attendant console.

- DCI cannot be reloaded.

System reaction: DH initiates a RESET for DIGITE, DIGITE M86 and T3510.

Action: Error message only for statistics. However, if this error recurs frequently, save the error message data and contact your next level of support.

Interpretation of auxiliary data:

Byte 0 = Maximum length of data to follow (64 Bytes)

Byte 1 - 64 = Includes the entire message of DH to FA. Last message to the DH begins at Byte 11.

See also Chapter , "Device names".

F5424
TERM
NOT READY

Type: Service-specific (Format 18)

Short text: X.21 terminal not ready

Cause: Terminal is not ready, i.e. cannot accept call, power failure at TTX terminal, or terminal adapter of CTE loose/not plugged. Terminals with S* interface: terminal is not configured. Positive acknowledgment with **F5425**.

System reaction: line alarm for the terminal

Action: Check line, terminal and terminal parameters.

> See also Chapter , "Device names".

F5425
TERM
READY

Type: Service-specific (Format 18)
Short text: X.21 terminal ready again / plugged in
Cause: X.21/T3510/S3510/CTE a/b or DCI terminal startup (restart) completed.
For terminals with an S* interface this message means terminal is installed.
System reaction: end of line alarm for the terminal
Action: Positive acknowledgment, without action.

> See also Chapter , "Device names".

F5426
TERM
REFRESH

Type:	Service-specific (Format 18)
Short text:	Refresh requested by terminal in 'asynchronous' status
Cause:	Terminal has lost call processing data and sent a refresh request to the

DH.

End of synchronization indicated by **F5688** and terminal is automatically restored to service by FA.

System reaction:

a) Digite, Digite M86, T3510: the FA locks the terminal, refresh by DH.

b) ATND: Attendant console data is refreshed by DH without deactivation by FA

Action:	Check terminal or attendant console.

If repeated refresh requests caused by user playing with chip card during call, instruct users in correct use of chip card.

> See also Chapter , "Device names".

F5427
TERM
DEV HARDWARE ERROR

Type: Service-specific (Format 22)

Short text: Hardware error of a terminal (HWER)

Cause: Terminal has detected a hardware error and has reported it to the SOMUP
handler by means of a transfer message sent via PP.

System reaction: terminal is blocked (deactivated)

Action: Check terminal.

Interpretation of auxiliary data:

Byte 0 = Length of data to follow (transfer message + 3)

Byte 1 = Routing type

Byte 2 = Length of transfer message

Byte 3 = TC

Byte 4-47 = Transfer message

> ⓘ   See also Chapter , "Device names".

F5428
TERM
DEV MSG ERROR

Type: Service-specific (Format 22)
Short text: Message error of a terminal (MSER)
Cause: Terminal has received a bad message and has reported it to the SOMUP handler by means of a transfer message sent via PP.
System reaction: signals only
Action: If error occurs repeatedly, save the error message data and contact your next level of support.
Interpretation of auxiliary data:

Byte 0 = Length of data to follow (transfer message + 3)
Byte 1 = Routing type
Byte 2 = Length of transfer message
Byte 3 = TC
Byte 4-47 = Transfer message

(i)	See also Chapter , "Device names".

F5429
TERM
TERMINAL SWITCHED OFF

Type: Service-specific (Format 18)
Short text: Terminal switch-off indication (TSOI) detected
Cause: Message from SOMUP handler to FA:
a) An adapted server has switched itself off.
b) The DCI has been unplugged or the line is asynchronous.
c) T3510 / S3510 monitor has been switched off.
Positive acknowledgment with **F5425**.
System reaction: remote lock with no signaling.
Action: Check DCI, line and server.

> (i) See also Chapter , "Device names".

F5431
TERM
TERMINAL RESET

Type: Service-specific (Format 18)
Short text: Terminal adapter reset indication (TARI) detected
Cause: a) Message TERM_SOM_TARI
- Terminal adapter reset on CTE or T3510 / S3510
b) Message TERM_DCI_DH_TARI
- Partner DCI does not respond to cleardown attempt
- DCI power-on (USA)
- DCI plugged in (USA).
System reaction: resets the terminal
Action: Positive acknowledgment without action.

> See also Chapter , "Device names".

F5432
TERM
TIMEOUT

Type: Service-specific (Format 18)

Short text: Timeout error

Cause: Terminal does not react to a request or signaling criterion from call processing (CP). Positive acknowledgment with **F5425**.

System reaction: terminal line alarm

Action: Check terminal, connector and line circuit board. Test with TSU AMO if necessary.

(i)	See also Chapter , "Device names".

F5433
TERM
DCI WRONG VERS

Type: Service-specific (Format 18)
Short text: Wrong DCI version
Cause: The DCI cannot be loaded but replies with a parameter error, e.g. due to wrong PROM version.
System reaction: the DCI is deactivated.
Action: Replace DCI. Check firmware PROM version (see hardware systems service).

> See also Chapter , "Device names".

F5434
TERM
DCI NO ANSW

Type: Service-specific (Format 22)
Short text: DCI not responding properly
Cause: DCI is not responding properly and cannot be loaded. Positive
acknowledgment with **F5425**.
System reaction: locks the DCI
Action: Action depends on the evaluation of the HEX data. Save error message
data and contact your next level of support. Replace DCI if necessary.
Interpretation of auxiliary data:

Byte 0 = Length of relevant bytes
Byte 1 = Error signaled from DCI (DB_M_QF_SEV_DCI_ERROR_SET)
00 No response
01 Transmission error
02 Data inconsistent
03 Watchdog
04 No reason

See also Chapter , "Device names".

F5439
TERM
COR-T/SET4 AK D BIT

Type:	Service-specific (Format 18)
Short text:	Set 400 downloading aborted
Cause:	The DIGITE M86 downloading process has been aborted.

Data inconsistency in downloaded data.

System reaction: terminal disabled

Action:	Check terminal.

> See also Chapter , "Device names".

F5440
TERM
COR-T/SET4 AK W BIT

Type:	Service-specific (Format 18)
Short text:	Set 400 watchdog timeout
Cause:	Watchdog timeout in DIGITE M86.
System reaction:	the terminal is disabled by the system and subsequently restored to service again after a delay.
Action:	If this error message occurs frequently, check terminal.

See also Chapter , "Device names".

F5444
TERM
TERMINAL NPR

Type: Service-specific (Format 18)
Short text: Terminal (adapter) not present
Cause: Terminal adapters, adapted servers or non-voice terminals connected to
CTE are absent (not present) or are not responding during startup. Positive acknowledgment
with **F5425**.
System reaction: line alarm.
Action: Check terminal adapter, servers, non-voice terminals, CTE and cable
connections.

> See also Chapter , "Device names".

F5445
TERM
STAT OVERFLOW

Type: Service-specific (Format 22)

Short text: Statistics counter overflow (threshold value exceeded)

Cause: Statistics counters monitor the alarms on this terminal. The terminal has been placed out of service due to too many alarms.

Counter sequence: each alarm increments the error counter by 1. Alarm pairs (alarm set and alarm reset message) also increment a specific pair counter by 1, even if the alarm is reset correctly. One of the statistics counters has reached its threshold, and the terminal has been placed out of service by dependability (status: DEF). As a rule, the counter level is reset after overflow, so that the terminal is not immediately blocked again when re-activated via AMO or when the board is replaced. In addition, the counter level is decremented at set intervals (minutes).

Action: Deactivate and re-activate terminal. Check terminal and line, and replace if necessary.

Interpretation of auxiliary data:

Byte 0 = Counter level of alarm pair counter (standard)

Byte 1 = Counter level of single alarm counter (standard)

Byte 2 = Counter level of single alarm counter (optional)

Byte 3 = Counter level of single alarm counter (optional)

Byte 4 = Statistics class 0 - 20. Different threshold values exist depending on the board type.

Byte 5 = Number of counter which has overflowed

00 Alarm pair counter (standard)

01 Single alarm counter (standard)

02 Single alarm counter (optional)

03 Single alarm counter (optional)

Byte 6-7 = Threshold value of overflowed counter (MAX_COUNT)

Byte 8-9 = Reset value of overflowed counter (COUNT_ACTION)

Byte 10 = Type of threshold value reached

00 Alarm pair (standard)

01 Single alarm (standard)

02 Single alarm (optional)

03 Single alarm (optional)

Byte 11-12 = Decrementing time interval, in minutes (MAX_TIME_COUNT)

Byte 13-14 = Decrementing value (DECREMENT)

Byte 15-80 = Message to FA which led to statistics overflow

> See also Chapter , "Device names".

F5446

- [SP300E V2.0 / R 6.5 and earlier](#)
- [SP300E-V3.0/R6.6 and later](#)

SP300E V2.0 / R 6.5 and earlier
TERM
TIMED BLOCKAGE ENDED

Type: Service-relevant (Format 22)
Short text: Blocking time expired
Cause: The dependability system offers an "in service trial" feature: If an error that may only be sporadic occurs in the system, the element is first put out of service and remains blocked for a preset period of time. After this timeout, the unit is put back into service with a monitoring period. The element remains blocked if the error recurs during the monitoring period. This message is generated with ACTION = IN SERV when putting into service.
System reaction: Putting the terminal into service
Action: - Check if the terminal goes into service.
- If not, evaluate corresponding output failure message of the
terminal.

> (i) See also [Chapter , "Device names"](#).

SP300E-V3.0/R6.6 and later

TERM

BACK IN SERVICE

Type: Service-relevant (Format 18)
Short text: Terminal back in service
Cause: Following a defect, the terminal was put back into service after multiple attempts and a preset block timeout. The terminal is monitored to see if another failure occurs. If a new defect occurs during this monitoring time, it is put back into service on a trial basis after a longer block time.
In ACTION = INSTRIAL (in service trial) putting into service on a trial basis (Format 43)
In ACTION = IN SERV (in service), putting into service is permanent, the monitoring period is over. (Format 18)
System reaction: Terminal goes from DEF to READY.
Action: Positive message, no action required.
Interpretation of auxiliary data: Text only for format 43:
TRIAL NO: 1 = current number of attempts to put the system into service (max. 8)

F5447
TERM
OVERLOAD BEG

Type: Service-specific (Format 22)
Short text: Overload of digital terminal
Cause: Station user "playing" on the Digite (e.g. indiscriminately pressing keys or "drumming" on the hook switch). The message came from call processing. The terminal is deactivated and enabled again after about one minute.
System reaction: the terminal is disabled
Action: Check terminal
Interpretation of auxiliary data:
Byte 0 = Length of following, relevant bytes
Byte 1-7 = HEX value, convert using ASCII table.
E.g.: '53544F45524552' = 'STOERER'

> See also Chapter , "Device names".

F5448
TERM
OVERLOAD END

Type:	Service-specific (Format 22)
Short text:	Terminal back in service
Cause:	Station user stopped "playing" on the Digite
System reaction:	the Digite is placed in service again.
Action:	Positive acknowledgment of **F5447**, no action.

Interpretation of auxiliary data:

Byte 0 = Length of following, relevant bytes
Byte 1-7 = HEX value, convert using ASCII table.
E.g.: '53544F45524552' = 'STOERER'

> See also Chapter , "Device names".

F5449
TERM
CORNET-T ERROR

Type: Service-specific (Format 22)
Short text: Error in CorNet-T terminal startup
Cause: Error in CorNet-T terminal during downloading, or line alarm on CorNet-T line.
System reaction: depends on the error types, see Interpretation of auxiliary data.
Action: If error recurs frequently, replace terminal.

Interpretation of auxiliary data:

Byte 0 = Max. length of data to follow (64 bytes)

Byte 1 = Error type (DB_M_QF_SEV_C_T_SET)

00 Downloading defective, multiple startup by DEP with Reset

01 Download data incomplete, multiple startup by DEP with Reset

02 Multiple startup by DEP with Reset

03 Invalid parameter received during downloading, terminal
is blocked by DEP

04 "Wrong component description" received during downloading.
The terminal is blocked by DEP

05 Reset request for terminal, blocking and startup by DEP with Reset

06 Terminal has performed restart or self reset (statistics)

07 No positive acknowledgment from terminal for partial
download (statistics)

08 CorNet-T terminal is not operational, check terminal (line alarm)

See also Chapter , "Device names".

F5450
TERM
CORNET-T MSG ERROR

Type:	Service-specific (Format 22)
Short text:	CorNet-T terminal message corrupted
Cause:	Corruption of CorNet-T messages to line peripheral (device handler).

Software error!

Action: Action depends on the evaluation of the HEX data. Save error message data and contact your next level of support.

Interpretation of auxiliary data:

Byte 0 = Max. length of data to follow (64 bytes)

Byte 1 = Error type (DB_M_QF_SEV_C_T_MSG_SET)

01 Requested service not available

02 Invalid call reference number

03 Incompatible destination

04 Invalid message (not further specified)

05 CorNet-T mandatory info element missing in message

06 CorNet-T message type not recognized

07 CorNet-T message not permissible in this device status

08 CorNet-T information element not recognized

09 CorNet-T information element with invalid contents

0A Message header incomplete

0B Unrecognized protocol discriminator

0C Information element not recognized

0D Information element not required

0E Information elements not in sequence

0F Duplicate information elements not allowed

10 No call reference available

11 Status indicator error

12 Release indicator error

13 Message not detected

14 Unexpected message

> See also Chapter , "Device names".

F5451
TERM
CORNET-T TIME ERROR

Type: Service-specific (Format 22)

Short text: Timeout while waiting for CorNet T messages

Cause: Timer exceeded (timeout) during CorNet T message exchange; detected by system software. Board possibly unplugged during operation, causing loss of message traffic.

System reaction: statistics

Action: Replug board if loose. Action depends on the evaluation of the HEX data. Save error message data and contact your next level of support.

Interpretation of auxiliary data:

Byte 1 = Error type (DB_M_QF_SEV_C_T_TIM_SET)

00 TE does not respond to test loop start

02 Dialing time watchdog triggered

03 SETUP watchdog triggered

04 Disconnect watchdog triggered

05 Watchdog for disconnect with announcement triggered

06 Release watchdog triggered

08 Watchdog for global transactions triggered

09 RESTART watchdog triggered

0A Watchdog for restart processing triggered

0B Watchdog for status requests triggered

0C No response to request for key assignment

0D Watchdog for level 2 cleardown triggered

> See also Chapter , "Device names".

F5452
TERM
FUNCT L3 ERROR

Type: Diagnosis-specific (Format 22)

Short text: Layer 3 error of functional terminal

Cause: Layer 3 error of functional terminal. Software error! Error type indicated in byte 1 of hexadecimal output.

System reaction: signals only

Action: Save error message data and contact your next level of support.

Interpretation of auxiliary data:

Byte 0 = Max. length of data to follow (5F)

Byte 1 = Error type (DB_M_QF_CIR_L3_ERR_SET)

00 Unrecognized message type

01 Unrecognized protocol

02 Unrecognized information element/call reference

03 Duplicate information element

04 Information element not allowed

05 Missing mandatory information element

06 Too many information elements in message

07 Local problem in protocol handler (e.g. protocol not active
(AMO PRODE) or no more device memory available (AMO
DIMSU))

08 No seizure acknowledgment

09 No release acknowledgment

0A B-channel handling negative

0B-13 For US Release 6.0

14 Implausible message

See also Chapter , "Device names".

F5453
TERM
L2 ERROR

Type: Service-specific (Format 22)
Short text: Layer 2 terminal error
Cause: Layer 2 error of terminals in S_0 bus or similar configurations. This is only an error, if it is not due to unplugging or manually deactivating a terminal. Positive acknowledgment with **F5455**.

System reaction:

- CorNet terminal: line alarm

- Functional terminal: statistics, in the event of an overload, all terminal functions

are blocked on the bus

Action: If this error recurs frequently, and is definitely not due to unplugging the terminal, the terminal must be exchanged.

Interpretation of auxiliary data:

Byte 0 = Max. length of data to follow (5F)
Byte 1 = Error type (DB_M_QF_CIR_L2_ERR_SET)
00 RELEASE ACKNOWLEDGE (layer 2 cleared down)
01 DEACTIVATED BY PEER (partner has cleared down layer 2)
02 LAYER 1 DEACTIVATED (Layer 2 was cleared down due
to layer 1 error)
03 DEFECT ON U (UP0 error)
04 DEFECT ON S (S0 error)
05 PEER OUT OF ORDER (Layer 2 setup, partner not
responding)
06 PROTOCOL FAILURE
07 TIMEOUT REMOTE BUSY (remote overload)
08 FRMR, DM OR F-BIT (error status, partner deactivated)
09 RESET BY PEER (layer 2 reset by partner)
0A TEI NOT ASSIGNED (Terminal Endpoint Identifier does not
exist)
0B TEI REMOVE (Terminal Endpoint Identifier is taken back)
0C POWER UP TE (terminal equipment is powered)
0D TEI INVALID
(Incorrect address or terminal does not understand address)
0E CES NOT ASSIGNED (No CES exists; no terminal for logical
link)
0F LAYER 2 NOT READY

Special case:
Error types
05 PC card or data terminal is switched off

0F Device is not connected or not responding
must not be indicated for reasons of serviceability.
These cases are indicated by TRS instead of NPR in the status memory.

> See also Chapter , "Device names".

F5454
TERM
L2 SPOR ERROR

Type:	Service-specific (Format 22)
Short text:	Sporadic layer 2 error
Cause:	Sporadic Layer 2 error of S_0 bus terminals or similar configuration..
System reaction:	statistics. It is only locked when the statistics overflow
Action:	No action currently necessary. If the error occurs repeatedly, check

terminal.

Interpretation of auxiliary data:

Byte 0 = Max. length of data to follow (5F)
Byte 1 = Error type (DB_M_QF_CIR_L2_SPO_ERR_SET)
00 Layer 2 is reset
01 Short-term blocking of layer 2
02 Error LAPD protocol
Byte 2,3 = Number of errors reported
Byte 4 = Length of data to follow
Byte 5-91 = Reported errors, in sequence

See also Chapter , "Device names".

F5455
TERM
LX ACTIVE

Type:	Service-specific (Format 22)
Short text:	Terminal layer 2 active again
Cause:	Terminal or user circuit of S_0 bus is okay again.
System reaction:	layer 2 protocol successfully established.
Action:	Positive acknowledgment of **F5453**, without action.

Interpretation of auxiliary data:

Byte 0 = Max. length of data to follow (5F)

Byte 1 = Error type (DB_M_QF_CIR_LX_AKTIV_SET)

08 Layer 2 is active

> See also Chapter , "Device names".

F5457
TERM
A ANS T OUT

Type:	Service-specific (Format 18)
Short text:	RolmPhone timeout (USA)
Cause:	RolmPhone timeout in automatic answer mode (auto answer timeout).
System reaction:	locks and delayed restart
Action:	Check device and ensure that the auto answer function is working

properly.

> See also Chapter , "Device names".

F5458
TERM
WRONG R DEV

Type:	Service-specific (Format 22)
Short text:	Wrong Rolm device
Cause:	Wrong RolmPhone connected.
System reaction:	signals only
Action:	Connect the correct RolmPhone model or reconfigure the line.

Interpretation of auxiliary data:

Byte 0 = Length of data to follow (3)

Byte 1 = CONFIGURED: (RolmPhone ID of configured device)

Byte 2 = EXISTING: (RolmPhone ID of connected device)

Byte 3 = REV_LEVEL: (FW revision level / status of connected device)

> See also Chapter , "Device names".

F5459
TERM
BAD TRUNK K

Type:	Service-specific (Format 18)
Short text:	Central office trunk connection defective (USA)
Cause:	RolmPhone user reports defective or bad central office trunk connection

by pressing "Bad Trunk" key.

System reaction:	signals only
Action:	Check central office trunk. If necessary block manually.

> See also Chapter , "Device names".

F5460
CIRCUIT
LW EXCEPTION

REASON: H00 CALLED FUNCTION DOES NOT EXIST

Type:　　　　　　　Diagnosis-specific (Format 43)
Short text:　　　　　Procedure cannot be called (identical to F5970)
Cause:　　　　　　A specific procedure cannot be called. Error (exception) in the loadware of a COSMOS-module (e.g. SLMA24, SLMA16, TMOM, TMEW2, SLMO).
Action:　　　　　A solution to the problem is determined by the interpretation of the auxiliary data. Save error message data and contact your next level of support.

Note: From SP300 E V2.0, this message replaces the error messages F5970 to F5983.

Interpretation of auxiliary data:

Byte 0 = Length of data to follow

Byte 1 = Exception Type

Byte 2 = LW_PROCESS

Byte 3 = STATE

Byte 4 = EVENT

Byte 5-8 = ADDRESS

Byte 9 = SOURCE_ID

Byte 10 = DEST_ID

Byte 11 = INTERNAL_INFO

Byte 12-15 = Reserve for additional data

Byte 16 = Length of auxiliary data

Byte 17-48 = Max. 32 bytes of any auxiliary data

REASON: H01 MESSAGE SENT TO NOT EXISTING PROCESS

Type:　　　　　　　Diagnosis-specific (Format 43)
Short text:　　　　　Message sent to non-existent process (identical to F5971)
Cause:　　　　　　A message or an event was sent to a non-existent process. Error in the loadware of a COSMOS module or in the system software.
Action:　　　　　A solution is determined by the interpretation of the auxiliary data. Save error message data and contact your next level of support.

Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H02 EVENT CODE OR PARAMETER NOT EXPECTED

Type: Diagnosis-specific (Format 43)
Short text: Event code not valid (identical to F5972)
Cause: The event code (EC) of a message was not expected in the current status and in the current process. Error in the loadware of a COSMOS module or in the external message.
Action: A solution is determined by the interpretation of the auxiliary data. Save error messages and contact your next level of support.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H03 TIMER VALUE OVERFLOW

Type: Diagnosis-specific (Format 43)
Short text: Timer outside the valid range (identical to F5973)
Cause: The value of the timer in the message is outside the valid range. Error in system software.
Action: A solution is determined by the interpretation of the auxiliary data. Save error messages and contact your next level of support.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H04 MAILBOX OR BUFFER OVERFLOW

Type: Diagnosis-specific (Format 43)
Short text: Buffer overflow in the mailbox (identical to F5974)
Cause: Error in the loadware of a COSMOS module, or too many messages are arriving at the circuit.
Action: The circuit is reset by the system and restarted immediately.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H05 EPIC DRIVER RECEIVED INVALID COMMAND

Type: Diagnosis-specific (Format 43)
Short text: Invalid command sent to EPIC driver (identical to F5975)
Cause: The EPIC driver received an invalid command. Error in the loadware of a COSMOS module.
Action: A solution is determined by the interpretation of the auxiliary data. Save error messages and contact your next level of support.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H06 COMMAND QUEUE OVERFLOW

Type: Diagnosis-specific (Format 43)
Short text: Command queue overflow (identical to F5976)
Cause: Error in the loadware of a COSMOS module.
Action: A solution is determined by the interpretation of the auxiliary data. Save error messages and contact your next level of support.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H07 COSMOS EXCEPTION

Type: Diagnosis-specific (Format 43)
Short text: COSMOS exception (identical to F5977)
Cause: An exception (error) was output by the COSMOS operating system. There is an invalid COSMOS call or an incorrect parameter. Error in the loadware of a COSMOS module.
Action: A solution is determined by the interpretation of the auxiliary data. Save error messages and contact your next level of support.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H08 IOM2 ERROR

Type: Service-specific (Format 43)
Short text: Command incorrectly processed (identical to F5978)
Cause: A command for the IOMI monitor (ISDN Oriented Modular Interface) was incorrectly processed. Error in the hardware or in the loadware of a COSMOS module.
Action: A solution is determined by the interpretation of the auxiliary data. Save error messages and contact your next level of support.
Interpretation of auxiliary data: see above.

REASON: H09 CASE NOT VALID

Type: Diagnosis-specific (Format 43)
Short text: Parameter invalid (identical to F5979)
Cause: The parameters provided are invalid for the current CASE. Error in the loadware of a COSMOS module or in the system software.
Action: The circuit does not need to be reset.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H0A PARAMETER NOT VALID

Type: Diagnosis-specific (Format 43)
Short text: Parameter invalid (identical to F5980)
Cause: The parameters provided are invalid in the current CASE. Error in the loadware of a COSMOS module or in the system software.
Action: The circuit is reset by the system and restarted immediately.

Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H0B SCAN OVERFLOW

Type: Diagnosis-specific (Format 43)
Short text: Too many hardware event signals (identical to F5981)
Cause: Too many hardware event signals within a specific time period. Error in the loadware of a COSMOS module or too many external event signals.
Action: The circuit is restarted by the system after a delay.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H0C NECESSARY HARDWARE RESPONSE FAILED

Type: Service-specific (Format 43)
Short text: Hardware function error (identical to F5982)
Cause: Hardware function error in the circuit or failed external power supply for the circuit.
Action: A solution is determined by the interpretation of the auxiliary data. Save error messages and contact your next level of support. Check the loadware if necessary.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H0D STMA DYNAMIC TRUNKING: SVC TRACEPOINT

Type: Diagnosis-specific (Format 43)
Short text: One of the "SVC connection" trace points was reached in STMA operating mode Networking2.0.
Cause: One or more STMA, Networking 2.0 specific trace points were enabled by means of the PETRA AMO in order to display information on the setting up and clearing down of switched virtual connections in the ATM network. A message is displayed to indicate that a trace point has been reached.
Action: The trace function can also be disabled by means of the PETRA AMO.
Interpretation of auxiliary data: self-explanatory

REASON: H12 LW EXCEPTION DUMMY

Type: Diagnosis-specific: (Format 43)
Short text: Error with DUMMY event (identical to F5983)
Cause: An error occurred with a DUMMY event
Action: For diagnosis purposes, this message is temporarily incorporated into the loadware code of some boards by the loadware development department. A solution is determined by the interpretation of the auxiliary data. Save error messages and contact your next level of support.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H13 LW EXCEPTION DUMMY

Type: Diagnosis-specific (Format 43)
Short text: Error with DUMMY event (identical to F5983)
Cause: An error occurred with a DUMMY event
Action: For diagnosis purposes, this message is temporarily incorporated into the loadware code of some boards by the loadware development department. A solution is determined by the interpretation of the auxiliary data. Save error messages and contact your next level of support.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H14 LW EXCEPTION DUMMY

Type: Diagnosis-specific (Format 43)
Short text: Error with DUMMY event (identical to F5983)
Cause: An error occurred with a DUMMY event
Action: For diagnosis purposes, this message is temporarily incorporated into the loadware code of some boards by the loadware development department. A solution is determined by the interpretation of the auxiliary data. Save error messages and contact your next level of support.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

REASON: H15 MESSAGE LOST

Type: Diagnosis-specific (Format 43)
Short text: Message lost
Cause: The loadware on the STMA module identified a message loss (the DH in the HCM 300 system is no longer in sync with the DH partner on the loadware).
Action: A solution is determined by the interpretation of the auxiliary data. Save error messages and contact your next level of support.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST..

REASON: H17 HW ERROR, CHIP RETURNED ERROR CODE

Type: Service-specific (Format 43)
Short text: Hardware chip returned error code
Cause: A hardware chip on the module returned an error code.
System reaction: the circuit is disabled and subsequently restarted after a delay.
Action: If the circuit is not to be restarted, there must be a fault in the hardware.
Interpretation of auxiliary data: see REASON: H00 CALLED FUNCTION DOES NOT EXIST.

F5461
CIRCUIT
LW DETECT ERROR

Cause: See REASON.

> See also Chapter , "Device names".

REASON: 04H CONFIG ERR: EXTENDED SUBSCR LOOP AND PULSE METERING BY TONES

Type: Service-specific

Short text: Incorrect configuration, extended subscriber loop and pulse metering by tones cannot be performed simultaneously.

Cause: Incorrect configuration, extended subscriber loop and pulse metering by tones cannot be performed simultaneously. The subscriber has an extended subscriber loop with increased supply voltage. In addition, the system has been configured for this subscriber in such a way that charge pulses are sent as tones to the terminal.

Action: If, in spite of extended subscriber loops, charge pulses are to be sent to the terminal (payphone), this must be carried out via a different type, e.g. polarity reversal. Caution: The terminal must be configured for the charge pulses dialed. It may be necessary to reconfigure or replace the terminal. For further information, please refer to the relevant maintenance information **F4704**

REASON: 05H DC LOOP PROBLEMS (CHECK DEVICE/LINE)

Type: Service-specific

Short text: Problems on subscriber line / in terminal

Cause: Due to an error in the hardware or the wiring, a piece of circuit hardware may overheat. The circuit hardware cuts out automatically.
- or: hardware fault on subscriber line / in terminal.

System reaction: the circuit is disabled and restarted after a delay.

Action: If it was not possible to start the circuit, check the wiring and the terminal.
Check that there are no wiring faults, short circuits or too many / incorrect or faulty terminals. If an error cannot be detected, replace the board.

F5462
CIRCUIT
NCT REJECTION (US-specific)

Type: Service-specific (Format 22)

Short text: MCI-NCT (MCI Communications Corporation - Network Call Transfer)
rejected.

Cause: The CP sends a message to indicate that it was not possible to call up a
network-wide call transfer with MCI.

Action: This message is for information purposes only. No action necessary.

F5463
CIRCUIT
NOT IN SERVICE

Type: Service-relevant (Format 18)

Short text: Circuit did not go into service.

Cause: Despite several attempts to put the unit into service (max. 8, for more information, see AMO PSTAT), the element could not be put into service correctly due to a new error.

This problem may also be caused by the line or the remote station.

System reaction: Circuit goes from READY to DEF state.

Action: Evaluate error messages that described the defect. Replace circuit or remove massive line faults. Positive acknowledgement, see F5609.

F5470
CIR
L1 PORT ERROR

Type: Service relevant   (Format 43)
Short text: A loss of layer 1 of the physical cable is detected.
Cause: This message is directly related to the physical cable which is mounted
on the board. The layer 1 has detected an error. The cable may be defective or disconnected.
System reaction:

Standard: All circuits belonging to the affected port are locked. The BRD SU status for the reference clock support is locked.

NCUI: The affected entries for the IP payload path table are set to 'BAD'. No calls are possible over this cable any longer. Reference clock is not supported over the affected cable.

STMI: The affected entries for the IP payload path table are set to 'BAD'. The BRD SU status is set to DEF. Reference clock is not supported over the affected cable.

Action: Check the connected cable for defects and connect a new cable if
necessary.
Interpretation of auxiliary data:

REASON:	00H	BIT SLIP (LOCAL ALARM)
	02H	BIT ERR RATE -3 (LOCAL ALARM)
	03H	LOST FRAME (RED) (LOCAL ALARM)
	05H	AIS (BLUE) (AIS ALARM)
	07H	NO DATA LOADED
	1AH	CIR L1 UPDATE
	1BH	ATM CELL LOST
	1DH	TRANSMIT FIFO OVERFLOW (LOCAL ALARM)
	1EH	RECEIVE FIFO OVERFLOW (LOCAL ALARM)
	20H	SIGNAL LABEL MISMATCHED (LOCAL ALARM)
SUBBOARD NUMBER:	0H-2H	0H: No subboard on this board, 1H-2H: number of subboard which contains the physical port.
PHYS PORT NUMBER:	0H-4H	0H: reserved, 1H-4H: number of the physical port/cable which is affected.
AUX DATA:		Diagnosis data filled in by board LW for product specialist.

Tabelle 3:

F5471
CIR
L1 PORT ACTIVE

Type:	Service relevant	(Format 43)
Short text:	The layer 1 of the physical cable is back again.	
Cause:	This message is directly related to the physical cable which is mounted	

on the board. The layer 1 has been detected again. The cable is connected and up again.

System reaction:

Standard: All affected circuits are activated on layer 1 level. The BRD SU status is activated to support reference clock.

NCUI: The affected entries for the IP payload path table are set to 'GOOD'. Calls are again possible over this cable. Reference clock is not supported over the affected cable.

STMI: The affected entries for the IP payload path table are set to 'GOOD'. The BRD SU status is activated again. Reference clock is not supported over the affected cable for STMI.

Action: No special action necessary.

Interpretation of auxiliary data:

REASON:	07H	LAYER 1 ACTIVE (GREEN)
SUBBOARD NUM-BER:	0H-2H	0H: No subboard on this board, 1H-2H: number of
		subboard which contains the physical port.
PHYS PORT NUM-BER:	0H-4H	0H: reserved, 1H-4H: number of the physical
		port/cable which is affected.
AUX DATA:		Diagnosis data filled in by board LW for product specialist.

Tabelle 4:

F5472
CIR
L1 SPOR PORT ERROR

Type: Diagnosis relevant   (Format 43)
Short text: A sporadical error of layer 1 of the physical cable is detected.
Cause: A sporadical error of layer 1 of the physical cable is detected.
System reaction:

Standard: The error counter for reference clock handling is incremented.
NCUI/STMI: the message is only signaled.
Action: Save error message data and call product specialist.
Interpretation of auxiliary data:

REASON:	00H	BIT SLIP (LOCAL ALARM)
	01H	BIT ERR RATE -6 (LOCAL ALARM)
	02H	BIT ERR RATE -3 (LOCAL ALARM)
	03H	LOST FRAME (RED) (LOCAL ALARM)
	04H	NO SIGNAL (RED) (LOCAL ALARM)
	05H	AIS (BLUE) (AIS ALARM)
	06H	REMOTE ALARM (YELLOW) (DISTANT ALARM)
	0BH	REMOTE ALARM CRC4 (DISTANT ALARM)
	1BH	ATM CELL LOST
	1CH	BIT STUFFING ERROR (LOCAL ALARM)
	1DH	TRANSMIT FIFO OVERFLOW (LOCAL ALARM)
	1EH	RECEIVE FIFO OVERFLOW (LOCAL ALARM)
	1FH	UTOPIA INTERFACE FAULT (LOCAL ALARM)
	20H	SIGNAL LABEL MISMATCHED (LOCAL ALARM)
SUBBOARD NUM-BER:	0H-2H	0H: No subboard on this board, 1H-2H: number of
		subboard which contains the physical port.
PHYS PORT NUM-BER:	0H-4H	0H: reserved, 1H-4H: number of the physical
		port/cable which is affected.
AUX DATA:		Diagnosis data filled in by board LW for product specialist.

Tabelle 5:

F5473
CIR
LOSS OF SIGNAL

Type:	Service relevant	(Format 22)
Short text:	Loss of signal.	
Cause:	T1 specific. Sporadic T1 layer 1 error.	

Loss of signal. Line interrupted for less than 1500 ms.

System reaction:	Set the lock bit for reference clock.
Action:	No action necessary.

Interpretation of auxiliary data:

The auxiliary data are diagnosis data filled in by board LW for product specialist.

F5474
CIR
MAX ERROR SECS

Type:	Service relevant	(Format 22)
Short text:	Max error secs.	
Cause:	T1 specific. Sporadic T1 layer 1 error.	

Max error per seconds (Bit slips). number of errors is above threshold.

System reaction:	Set the lock bit for reference clock.
Action:	No action necessary.

Interpretation of auxiliary data:

The auxiliary data are diagnosis data filled in by board LW for product specialist.

F5475
CIR
ACQUISITION OF SIGNAL

Type:	Service relevant	(Format 22)
Short text:	Acquisition of signal.	
Cause:	T1 specific. End of sporadic T1 layer 1 error.	

Acquisition of signal. Line connected again.

System reaction:	Reset of lock bit for reference clock.
Action:	No action necessary because 'good' message.

Interpretation of auxiliary data:

The auxiliary data are diagnosis data filled in by board LW for product specialist.

F5476
CIR
MIN ERROR SECS

Type:	Service relevant	(Format 22)
Short text:	Min error secs.	
Cause:	T1 specific. End of sporadic T1 layer 1 error.	

Min error per seconds (Bit slips). Number of errors is below threshold.

System reaction:	Reset of lock bit for reference clock.
Action:	No action necessary because 'good' message.

Interpretation of auxiliary data:

The auxiliary data are diagnosis data filled in by board LW for product specialist.

F5477
CIRCUIT
ENCRYPTION ERROR

Type:	Service-relevant (Format 43)
Short text:	Problem for TLS connection to the partner.
Cause:	Certificate or configuration missing.
System reaction:	Connection is set up unencrypted.
Action:	Find the cause of the encryption problem and correct the setting.
Interpretation of auxiliary data:	

Start and end of encryption problems are indicated in plain text:

00h - NO TLS CONNECTION ESTABLISHED
01h - TLS CONNECTION ESTABLISHED

If the TLS connection to the partner cannot be set up on account of encryption problems, the SPE (Signaling and Payload Encryption) alarm is set and the IP trunk is put into operation un-encrypted. The alarm is reset for this IP trunk the next time a successful TLS connection is set up to the partner CGW.

F5500
NC (up to SP300E V1.0 / R 6.4)
DISCONNECTED

Type: Service-specific (Format 22)
Short text: Nailed connection not set up.
Cause: Nailed connection could not be set up.
Action: The connection is blocked automatically and a second setup attempt is carried out via the IBP.

TERM (from SP300 E V2.0)

L2 BS LOAD ERROR

Type: Service-specific (Format 22)
Short text: Load error in the base station
Cause: Base station was not installed by the cordless module or is no longer installed. The end of the error is signaled with **F5455** TERM LX AKTIV.
System reaction: line alarm
Action: - Service Center: request installation of EXEC-DSSU in base station.
- On-site: unplug/replug line to base station, in order to force loading if necessary.
Interpretation of auxiliary data:
Byte 0 = 5F Max. length 95 bytes
Byte 1 = Error type (DB_M_QF_CIR_L2_ERR_SET)
11 Load error in base station

> See also Chapter , "Device names".

F5501
TERM
L2 BS NO RESPONSE

Type: Service-specific (Format 22)

Short text: Base station not responding

Cause: The cordless module can no longer contact the base station. The end of
the error is signaled with **F5455** TERM LX AKTIV.

System reaction: line alarm

Action: - Service Center: request installation of EXEC-DSSU in base station.
- On-site: unplug/replug line to base station, in order to force loading if necessary.

Interpretation of auxiliary data:

Byte 0 = 5F Max. length 95 bytes

Byte 1 = Error type (DB_M_QF_CIR_L2_ERR_SET)

12 Base station not responding

F5502
TERM
RESTORED

Type:	Service-specific (Format 18)
Short text:	Terminal was blocked and has been restored
Cause:	Following a restore process, an ISDN terminal remained in the NPR state.

This was detected by the DC.

System reaction:	reset command for the terminal.
Action:	No action is required as the device was restarted by the dependability

system.

Interpretation of auxiliary data: not available

> See also Chapter , "Device names".

F5503
TERM
LW DETECT ERROR

Cause: See REASON.

> See also Chapter , "Device names".

REASON: 00H PROLONGING CONNECTION: SIGNALLING DISCONNECTED

Type: Service-specific (Format 43)
Short text: Prolonging connection interrupted. (Emergency mode).
Cause: Prolonging connection (TSC) to the remote Optiset port was interrupted. Calls that have been set up by the remote subscriber are then executed via the remote node (emergency mode). The TSC connection is interrupted if a restart is carried out in one of the participating nodes (routing, transit or remote nodes). The connection is also interrupted if the logical Routing or Remote Set600 was blocked.
System reaction: signals only
Action: Check port configuration in the routing and remote nodes.

REASON: 01H PROLONGING CONNECTION: SIGNALLING CONNECTED

Type: Service-specific (Format 43)
Short text: Prolonging connection restored.
Cause: Prolonging connection (TSC) to remote Optiset port has been restored. The remote Optiset port switches from emergency mode to normal mode. After a TSC connection has been aborted, it can be restored.
System reaction: signals only
Action: None

REASON: 02H PROLONGING CONNECTION: VOICE CHANNEL NOT AVAILABLE

Type: Service-specific (Format 43)
Short text: Prolonging connection could not be set up.
Cause: Prolonging connection with voice channel (CSC) to the remote Optiset port could not be set up. This may be for one of the following reasons:
a) all B channels between the participating PABXs have already been seized, or
b) the partner call number from the logical Routing Set600 to the Remote Set600 is incorrect.
System reaction: signals only
Action: Check port configuration in the routing node; check that free B channels are still available between the participating PABXs.

REASON: 03H PROLONGING CONNECTION: L3-USER MESSAGE LOST

Type:	Service-specific (Format 43)
Short text:	User3-to-user3 message(s) have been lost.
Cause:	User3-to-user3 message(s) which are transported via the TSC prolonging

connection have been lost. User-To-User messages are numbered by the sender (log. Set600) and checked by the recipient (log. Set600) to ensure that there are no gaps in the numbering (the checks are performed in both directions). If messages were lost in the event of a lack of resources on TSC connections (i.e. contingent per time unit exceeded), this message loss is sent to the FA.

System reaction:	signals only
Action:	Save error messages and contact your next level of support.

F5504
TERM
ATTENDANT CONSOLE ERR
Cause: See Reason.

ⓘ	See also Chapter , "Device names".

Reason: H00 ATTENDANT CONSOLE STARTUP ERROR

Type: Service-specific (Format 43)
Short text: Attendant console startup error
Cause: While the attendant console was booting, it detected an error, or the cable to the attendant console has been unplugged (layer 1 error).
1 byte hexadecimal data is displayed which is not service-specific.
System reaction: the attendant console is reset and is restarted after a delay
Action: If the system cannot be restarted:
Check cable (layer 1),
Check AC and replace if necessary

Reason: H01 ATTENDANT CONSOLE IDLELOOP ERROR

Type: Service-specific (Format 43)
Short text: Attendant console idle loop error
Cause: While the attendant console was carrying out a self-test, it detected an error.
1 byte hexadecimal data is displayed which is not service-specific.
System reaction: the attendant console is reset and restarted after a delay
Action: If the system cannot be restarted: check AC and replace if necessary

Reason: H02 ATTENDANT CONSOLE IMPLAUSIBLE MESSAGE

Type: Diagnosis-specific (Format 43)
Short text: Attendant console outputs implausible message
Cause: The attendant console has received an unknown command.
The hexadecimal data is not service-specific.
Action: If this error message persists, save error message data and contact your next level of support.

Reason: H03 ATTENDANT CONSOLE REFRESH

Type: Diagnosis-specific (Format 43)
Short text: Attendant console refresh
Cause: The attendant console requested a refresh and was subsequently refreshed by the system.
Action: If this error message persists, save error message data and contact your next level of support.

F5505
NC (up to SP300E V1.0 / R 6.4)
RESET

Type:	Service-specific (Format 22)
Short text:	Nailed connection error.
Cause:	Nailed connection error.
Action:	The nailed connection is automatically reset and then reactivated.

TERM (from SP300 E V2.0)

CLIENT

Cause:	See Reason.

> See also Chapter , "Device names".

Reason: 00H TCP CONNECTION TO CLIENT DOWN

Type:	Service-specific (Format 43)
Short text:	The TCP connection from the server to the client has failed.
Cause:	There are several reasons for the loss of the connection:

-Error in the TCP/IP protocol
-Physical network error in the public network, the router or on the LAN cable for example

System reaction:	signals only.
Action:	Check the various network components and configuration data: ISDN interface, NIC card, router, cable ...
Interpretation of auxiliary data:	none

Reason: 01H TCP CONNECTION TO CLIENT ESTABLISHED

Type:	Service-specific (Format 43)
Short text:	TCP connection has been restored.
Cause:	The TCP connection between the server and the client has been restored. The server or the client has restored the previously faulty TCP connection.
System reaction:	signals only.
Action:	none
Interpretation of auxiliary data:	none

Reason: 02H SERVER INITIATED LOGOUT OF CLIENT

Type:	Service-specific (Format 43)
Short text:	The server initiates a mandatory LOGOUT from a client
Cause:	There are several reasons for this procedure:

-the server cannot regenerate a faulty TCP connection
-the maximum LOGON time of a client has been exceeded (default value: 18 hrs.)

System reaction:	signals only.
Action:	Save error message.
Interpretation of auxiliary data:	the auxiliary data can only be interpreted by a system specialist.

F5506
TERM
NOT IN SERVICE

Type: Service-relevant (Format 18)

Short text: Terminal did not go into service

Cause: Despite several attempts to put the unit into service (max. 8, for more information, see AMO PSTAT), the element could not be put into service correctly due to a new error.

System reaction: Terminal goes from READY to DEF state.

Action: Evaluate error messages that described the defect. Replace terminal or rectify massive line faults. Positive acknowledgement, see F5446.

F5510
TERM
B-CHANNEL OUT SERV FE

Type:	Service relevant	(Format 43)
Short text:	B-channel out of service far end.	
Cause:	The central office (CO) side has requested to lock a B-channel. After locking no test calls from the CO can be executed.	
System reaction:	The B-channel is locked (remote blocking state TRS).	
Action:	No special action necessary.	

Interpretation of auxiliary data:

B_CHANNEL STATE:	MAN_AMO/TRS	AMO remote blocking
	MAN_AMO/RES	AMO reserve state
	MAN_AMO	AMO
	READY	ready
	TRS	remote blocking
	RES	reserve state

Tabelle 6:

F5511
TERM
B-CHANNEL IN SERV FE

Type:	Service relevant	(Format 43)
Short text:	B-channel in service far end.	
Cause:	The central office (CO) ends the remote blocking of the B-channel.	
System reaction:	The B-channel is unlocked.	
Action:	No special action necessary.	
Interpretation of auxiliary data:		

B_CHANNEL STATE:	MAN_AMO/TRS	AMO remote blocking
	MAN_AMO/RES	AMO reserve state
	MAN_AMO	AMO
	READY	ready
	TRS	remote blocking
	RES	reserve state

Tabelle 7:

F5512
TERM
B-CHANNEL MAINTENANCE

Type:　　　　　　　Service relevant　　　　　　　　　　　　　　(Format 43)
Short text:　　　　　B-channel in maintenance state.
Cause:　　　　　　　The central office (CO) side has requested to bring a B-channel into the
maintenance state. In this state test calls from the CO can be executed.
System reaction:　　The B-channel is brought into the 'reserve state' (RES).
Action:　　　　　　　No special action necessary.
Interpretation of auxiliary data:

B_CHANNEL STATE:	MAN_AMO/TRS	AMO remote blocking
	MAN_AMO/RES	AMO reserve state
	MAN_AMO	AMO
	READY	ready
	TRS	remote blocking
	RES	reserve state

Tabelle 8:

F5520
NCUCG
CLOCK NOT SWITCHED

Type: Service-specific   (Format 22)

Short text: Connect order not executed in AP shelf.

Cause: The trunk module in the AP shelf was unable to execute the connect order.

System reaction: The error counter in the reference clock table is incremented for the concerned trunk module and a new search for a reference clock circuit in the AP shelf is started.

Action: If this error occurs frequently on a particular trunk module, check the trunk module.

Interpretation of auxiliary data: see F5553.

F5521
NCUCG
CLOCK SWITCHED OFF

Type:	Service-specific	(Format 22)

Short text: Disconnect order executed in AP shelf.

Cause: A disconnect order was executed by the trunk module. The supplementary data contains information indicating whether the disconnect order was correct or whether FA LTG has reset the trunk module.

System reaction: A new search for a reference clock circuit in the AP shelf is started.

Action: Action depends on the evaluation of the HEX data. Save error message data and notify product specialist.

Interpretation of auxiliary data: see F5553.

F5523
NCUCG
AUTONOMOUS CLOCK

Type: Service-specific   (Format 22)
Short text: Autonomous clock in AP shelf.
Cause: Unable to synchronize to external reference clock in AP shelf.
System reaction: The clock generator of the NCUI board is not synchronous to an external reference clock. Therefore the error rate of payload connections can be increased.
Action: Use AMO REFTA to display possible reference clock sources of the AP shelf.

F5524
NCUCG
CLOCK REF LOSS

Type:	Service-specific	(Format 22)
Short text:	Loss of external reference clock in AP shelf.	
Cause:	Clock generator of the NCUI board is no longer synchronous with external	

reference clock source because

a. the clock generator has stopped regulating

b. one of the following situations occurred for at least 2 seconds:

- the clock generator was unable to identify a reference clock,

- jitter, wander or drift is too great,

- the reference clock is outside the VCO latch range.

System reaction: The current reference clock circuit of the AP shelf is switched off, its error counter in the reference clock table is incremented and a new search for a reference clock circuit in the AP shelf is started.

Action: Check reference clock supplier, since error is usually to be found in line connection from source.

Use AMO "DIS-REFTA;" to query the clock status of all possible clock generators of the AP shelf. You can see from this whether certain circuits have been blocked, or whether the priority is too low or the error counter (modifiable from V2.0) is too high. In order to make it possible to automatically select a clock of a specific circuit, these values can be adjusted with CHA-REFTA. Save error message data and notify product specialist. Positive acknowledgment with F5528.

Interpretation of auxiliary data:

Byte 0-1 = Error counter (Note: byte 0 = low byte, byte 1 = high byte; interpret first high then low byte)

F5525
NCUCG
CLOCK NOT SYNC

Type: Service-specific   (Format 22)

Short text: Clock not synchronized in AP shelf.

Cause: The clock generator of the NCUI board has latched on to the external reference clock and has also begun regulating, but has failed to synchronize within 10 minutes of the synchronization order.

System reaction: The current reference clock circuit of the AP shelf is switched off, its error counter in the reference clock table is incremented and a new search for a reference clock circuit in the AP shelf is started.

Action: If the clock generator of the NCUI board cannot synchronize on any of the available circuits, replace the NCUI board. If only one possible reference clock source exists, check this one source exhaustively before replacing the clock generator, to rule out any possibility of a line error. If this does not work, save the error message data and notify product specialist.

Interpretation of auxiliary data: see F5524.

F5526
NCUCG
CLOCK RECOGNIZED

Type: Service-specific   (Format 22)

Short text: False clock detected in AP shelf.

Cause: The clock generator of the NCUI board has identified an unexpected reference frequency at the beginning of a synchronization process. Possible reasons are a HW error on one of the possible clock sources of the AP shelf or a defective clock generator.

System reaction: The system begins deactivating all the possible clock sources (boards) of the AP shelf one by one, until the false clock frequency disappears. If the false frequency cannot be switched off in this way, the AP shelf will switch over to autonomous clock (see also F5523).

Action: Unplug all the possible clock sources (boards) of the AP shelf one by one, to check whether one of these boards is causing the false clock frequency. If this is the case, the clock generator will begin synchronizing again approximately 1 minute after the defective board is unplugged, indicating that the false frequency has disappeared. If this does not work, replace the NCUI board.

F5527
NCUCG
CLOCK NOT RECOGNIZED

Type: Service-specific   (Format 22)

Short text: Reference clock not recognized in AP shelf.

Cause: The clock generator of the NCUI board was unable to identify a reference clock although one is applied in the AP shelf.

System reaction: The current reference clock circuit of the AP shelf is switched off, its error counter in the reference clock table is incremented and a new search for a reference clock circuit in the AP shelf is started.

Action: If the error occurs frequently on a particular circuit, check the clock source.

Interpretation of auxiliary data: see   F5524.

F5528
NCUCG
CLOCK SYNC

Type:	Service-specific	(Format 22)
Short text:	AP shelf synchronized with reference clock.	
Cause:	The AP shelf is synchronous with the external reference clock frequency.	
System reaction:		
Action:	Positive acknowledgment of F5524 and F5525, no action.	
Interpretation of auxiliary data:	see F5524.	

F5530
NCUCG
TIME STBY CC ACK

Type: Service-specific   (Format 22)
Short text: Tracking point of AP shelf not acknowledged by standby CC.
Cause: The standby CC did not acknowledge the information, which reference
clock circuit has been switched on in the AP shelf.
System reaction:
Action: No action necessary.

F5533
NCUCG
TIME BROAD PLL

Type:	Service-specific (Format 18)
Short text:	Broad PLL order not acknowledge by NCUI
Cause:	The NCUI has not acknowledged the Broad PLL order for the internal

clock generator.

System reaction:	The NCUI board is reset and the AP shelf is reloaded.
Action:	If the automatic reset of the NCUI does not work, replace the NCUI

board.

F5534
NCUCG
TIME NARROW PLL

Type: Service-specific   (Format 18)
Short text: Narrow PLL order not acknowledge by NCUI
Cause: The NCUI has not acknowledged the Narrow PLL order for the internal
clock generator.
System reaction: The NCUI board is reset and the AP shelf is reloaded.
Action: If the automatic reset of the NCUI does not work, replace the NCUI
board.

F5535
NCUCG
TIME SYNC REF

Type:	Service-specific	(Format 18)
Short text:	Sync order not acknowledge by NCUI	
Cause:	The NCUI has not acknowledged the Sync order for the internal clock	

generator.

System reaction:	The NCUI board is reset and the AP shelf is reloaded.
Action:	If the automatic reset of the NCUI does not work, replace the NCUI

board.

F5536
NCUCG
TIME STATE

Type:	Service-specific	(Format 18)
Short text:	State request order not acknowledge by NCUI	
Cause:	The NCUI has not acknowledged the State request order for the internal	

clock generator.

System reaction:	The NCUI board is reset and the AP shelf is reloaded.
Action:	If the automatic reset of the NCUI does not work, replace the NCUI

board.

F5537
NCUCG
TIME REGULATION REF

Type:	Service-specific	(Format 18)
Short text:	No synchronization acknowledgment from NCUI.	
Cause:	The internal clock generator on the NCUI was not synchronized within 15 minutes following a synchronization request.	
System reaction:	Reset of NCUI board. AP frame is reloaded.	
Action:	Replace the NCUI board if the automatic reset of the NCUI fails.	

F5553
CLOCK
CLOCK NOT SWITCHED

Type:	Service-specific (Format 22)
Short text:	Connection request not executed
Cause:	A connection request could not be executed from the trunk module.
Action:	If the error occurs frequently for the same trunk module, the trunk

module must be checked.

Interpretation of auxiliary data:

Byte 0-1 = Line that was selected (same as LTG-LTU-SLOT circuit in the additional line of the error message)

Byte 2-3 = Line that was switched (same as LTG-LTU-SLOT circuit in the additional line of the error message; must be identical to byte 0-1)

Byte 4 = Cause (DB_M_QF_NO_RF_SWITCH_SET)

    00 Peripheral board has acknowledged

    01 Timer is running

    02 Peripheral board was reset

Byte 5 = Cause (DB_M_QF_NO_RF_SWITCH_SET)

    00 Peripheral board has acknowledged

    01 Timer is running

    02 Peripheral board was reset

As of HiPath 4000 Version V1.0:

Byte 0-1 = Line that was selected (same as LTG-LTU-SLOT circuit in the additional line of the error message)

Byte 2 = Logical PORT_ID (not used)

Byte 3 = Physical sub-board number (not used)

Byte 4 = Physical port number (not used)

Byte 5 = Cause (DB_M_QF_NO_RF_SWITCH_SET)

    00 Peripheral board has acknowledged

    01 Timer is running

    02 Peripheral board was reset

Byte 6 = Subevent (DB_M_QF_SEV_RF_TAKT_SET)

F5554
CLOCK
CLOCK SWITCHED OFF

Type: Service-specific (Format 22)

Short text: Disconnect order executed.

Cause: A disconnect order was executed by the trunk module. The supplementary data contains information indicating whether the disconnect order was correct or whether FA LTG has reset the trunk module.

Action: Action depends on the evaluation of the HEX data. Save error message data and contact your next level of support.

Interpretation of auxiliary data: see F5553.

F5556
CLOCK
AUTONOMOUS CLOCK

Type: Service-specific (Format 22)

Short text: Autonomous clock

Cause: Unable to synchronize to external reference clock:

a. No reference clock circuit found.

b. The inhibit flags (LTG, IOCC) prevent a circuit from being selected.

c. A CCG error has been detected (see **F5101**for Hicom 390).

Action: Use AMO REFTA to display possible reference clock sources, or AMO SDSU to show whether LTGs or the IOCC are blocked.

F5557
CLOCK
CCG SWITCHED

Type: Service-specific (Format 22)
Short text: Switchover to slave CCG
Cause: An attempt is made to switch to the slave CCG because it has detected a
reference clock after synchronization which was not detected by the master CCG.
Action: If error occurs repeatedly, save the error message data and contact your
next level of support.

F5558
CLOCK
ERROR COUNTER

Type:	Service-specific (Format 22)
Short text:	Error during clock synchronization
Cause:	The circuit error counter is incremented because an error has occurred

(e.g. connection has miscarried) or clock has been lost during synchronization.

Action:	If this error occurs repeatedly, check clock source.

F5559
CLOCK
CLOCK REF LOSS

Type: Service-specific (Format 22)
Short text: Loss of external reference clock
Cause: Clock generator is no longer synchronous with external reference clock
source because
a. the clock generator has stopped regulating
b. one of the following situations occurred for at least 2 seconds:
- the clock generator was unable to identify a reference clock,
- jitter, wander or drift is too great,
- the reference clock is outside the VCO latch range.
c. the AECB (external reference clock box) has been switched on or switched off (CHA-
REFTA:AECB,68, ,or CHA-REFTA:AECB,38,)

Action: Check reference clock supplier, since error is usually to be found in line
connection from source.
Use AMO "DIS-REFTA;" to query the clock status of all possible clock generators. You can see
from this whether certain circuits have been blocked, or whether the priority is too low or the
error counter (modifiable from V2.0) is too high. In order to make it possible to automatically
select a clock of a specific circuit, these values can be adjusted with CHA-REFTA.
Save error message data and contact your next level of support. Positive acknowledgment with
F5572.

Interpretation of auxiliary data:

Byte 0-1 = Error counter (Note: byte 0 = low byte, byte 1 = high byte;
interpret first high then low byte)
Byte 33 = (up to Version V3.4) or
Byte 34 (Version Ev1.0) or
Byte 35 (from EV2.0) = Clock status (convert to binary)
Bit 0 = 0 CCG is not synchronized to partner
= 1 CCG is synchronized to partner
Bit 1 = 0 Partner does not exist
= 1 Partner does exist
Bit 2 = 0 Clock outside latch range
= 1 Clock within latch range
Bit 3 = 0 PCG output and reference clocks have incorrect phase
position
= 1 PCG output and reference clocks have correct phase
position
Bit 4 = 0 Jitter, wander, drift out of order
= 1 Jitter, wander, drift okay
Bit 5 = 0 Frequency mismatch
= 1 Frequency okay
Bit 6 = 0 Control out of order
= 1 Control okay

Bit 7 = No meaning

Byte 44 (from EV2.0) = tolerance range of the clock generator
Value: 1 = narrow tolerance range (required for STMA)
Value: 2 = broad tolerance range

Example: byte 33 or byte 34 or byte 35 = C7

Convert to binary: C   7   HEX

                    1 1 0 0 0 1 1 1 Binary

                              + -> Bit 0 = 1

F5560
CLOCK
IOCC SWITCH

Type: Service-specific (Format 00)

Short text: IOCC clock connect

Cause: An IOCC hardware redundancy check is made during clock connection.

Action: If this error occurs frequently, replace the IOCC board. If this does not work, save the error message data and contact your next level of support.

F5563
CLOCK
NO CLOCK REGULATION

Type: Service-specific (Format 22)

Short text: No CCG regulation

Cause: The clock generator has latched on to the external reference clock and has received the synchronization order. 8 seconds after the synchronization order, the clock generator status was checked and the clock generator found to be not regulating.

System reaction: the source error counter is incremented and a different circuit is selected.

Action: If the clock generator cannot synchronize on any of the available circuits, replace the CG board. If only one possible reference clock source exists, check this one source exhaustively before replacing the clock generator, to rule out any possibility of a line error. If this does not work, save the error message data and contact your next level of support.

Interpretation of auxiliary data:

Byte 0-1 = Error counter (Note: byte 0 = low byte, byte 1 = high byte; interpret first high then low byte)

F5564
CLOCK
CLOCK NOT SYNC

Type: Service-specific (Format 22)

Short text: Clock not synchronized

Cause: The clock generator has latched on to the external reference clock and has also begun regulating, but has failed to synchronize within 10 minutes of the synchronization order.

System reaction: the source error counter is incremented and a different circuit is selected.

Action: If the clock generator cannot synchronize on any of the available circuits, replace the CG board. If only one possible reference clock source exists, check this one source exhaustively before replacing the clock generator, to rule out any possibility of a line error. If this does not work, save the error message data and contact your next level of support.

Interpretation of auxiliary data: see F5563.

F5566
CLOCK
CLOCK RECOGNIZED

Type: Service-specific (Format 22)

Short text: False clock detected

Cause: The clock generator has identified a reference frequency without having received a synchronization order for an external clock source.

Possible reasons are a HW error on one of the possible clock sources or a defective clock generator.

System reaction: the system begins deactivating all the possible clock sources (boards) one by one, until the false clock frequency disappears. If the false frequency cannot be switched off in this way, the system will switch over to autonomous clock (see also **F5556**).

Action: Check whether a CG switchover has occurred, and check whether the second clock generator also detects the false clock. If so, unplug all the possible clock sources (boards) one by one, to check whether one of these boards is causing the false clock frequency. If this is the case, the clock generator will begin synchronizing again approximately 1 minute after the defective board is unplugged, indicating that the false frequency has disappeared. If this does not work, replace both clock generators.

F5567
CLOCK
CLOCK CONTROL

Type: Service-specific (several formats apply)
Short text: CCG clock detection
Cause: After a CC switchover, the master CCG is checked for a reference clock.
Action: If error occurs repeatedly, save the error message data and contact your
next level of support.

F5568
CLOCK
CLOCK NOT RECOGNIZED

Type: Service-specific (Format 22)

Short text: Reference clock not recognized

Cause: The clock generator was unable to identify a reference clock although one is applied.

System reaction: an attempt is made to switch to the CCG slave (3000 system). If this is unsuccessful, the source error counter is incremented and a different circuit is selected.

Action: If the error occurs frequently on a particular circuit, check the clock source.

Interpretation of auxiliary data: see F5559.

F5569
CLOCK
BLOCKING FLAG RESET

Type:　　　　　　　　Diagnosis-specific (Format 22)

Short text:　　　　　　New clock connection

Cause:　　　　　　　The system is set to autonomous clock and restarts the clock connection. The inhibit flags which have been withdrawn are then displayed.

Action:　　　　　　　If error occurs repeatedly, save the error message data and contact your next level of support.

F5570
CLOCK
SBR CLOCK

Type:　　　　　　　Diagnosis-specific (Format 22)

Short text:　　　　　Tracking point received

Cause:　　　　　　The active CC reports that the partner CC has received the tracking point identifying the reference clock source.

Action:　　　　　　Positive acknowledgment, no action.

F5572
CLOCK
CLOCK SYNC

Type:	Service-specific (Format 22)
Short text:	System synchronized with reference clock
Cause:	The system is synchronous with the external reference clock frequency.
Action:	Positive acknowledgment of F5559 and F5564, no action.

F5573
CLOCK
BAD REFERENCE

Type: Service-specific (Format 22)

Short text: Clock out of latch range

Cause: The frequency of the reference clock supplied has drifted outside the latch range of the PCG/CCG.

Action: A physical line check of the reference clock circuit is necessary in order to remove the cause of the error.

F5574
CLOCK
IOCC BLOCK. FLAG RESET

Type:	Diagnosis-specific (Format 22)
Short text:	IOCC inhibit flag reset
Cause:	The IOCC inhibit flag is cleared because the IOCC has been activated via

a hard restart.

Action:	Positive acknowledgment of [F5576](#), no action.

F5575
CLOCK
LTG BLOCK. FLAG RESET

Type:	Diagnosis-specific (Format 22)
Short text:	LTG inhibit flag reset
Cause:	The LTG inhibit flag is cleared because the LTG has made a hard restart.
Action:	Positive acknowledgment of F5577, no action.

F5576
CLOCK
IOCC BLOCKING FLAG SET

Type:　　　　　　　Diagnosis-specific (Format 22)

Short text:　　　　　IOCC inhibit flag set

Cause:　　　　　　During clock connection, the IOCC is marked by an inhibit flag indicating that an attempt has already been made with this HW.

Action:　　　　　　If error occurs repeatedly, save the error message data and contact your next level of support.

F5577
CLOCK
LTG BLOCKING FLAG SET

Type:	Diagnosis-specific (Format 22)
Short text:	LTG inhibit flag set
Cause:	An LTG is disabled for clock selection.
Action:	If error occurs repeatedly, save the error message data and contact your

next level of support.

F5582
CLOCK
TIME STBY CC ACK

Type:	Service-specific (Format 22)
Short text:	Tracking point not acknowledged by standby CC
Cause:	The standby CC has not acknowledged the tracking point.
Action:	No action necessary.

F5584
CLOCK
TIME TM OFF

Type: Service-specific (Format 22)

Short text: Disconnect order not acknowledged by LTG

Cause: The LTG has not acknowledged a disconnect order because it was perhaps executing a soft restart.

Action: Action depends on the evaluation of the HEX data. Determine reason for LTG soft restart. If this does not work, save the error message data and contact your next level of support.

Interpretation of auxiliary data: see F5553.

F5585
CLOCK
TIME TM ON

Type: Service-specific (Format 22)

Short text: Connect order not acknowledged by LTG

Cause: The LTG has not acknowledged a connect order because it was perhaps executing a soft restart.

Action: Action depends on the evaluation of the HEX data. Determine reason for LTG soft restart. If this does not work, save the error message data and contact your next level of support.

Interpretation of auxiliary data: see F5553.

F5586
CLOCK
SYNC TOGGLE

Type: Service-specific (Format 22)

Short text: Reference clock out of range

Cause: The central clock generator has detected a short deviation of the reference clock.

This message is intended for the statistics counter. When the counter overflows, it is reset to zero and a new reference clock supplier is selected.

Action: No action necessary.

Interpretation of auxiliary data: see F5559.

F5587
CLOCK
PLUG NCG IN EC-HW

Type:	Service-specific (Format 1A)
Short text:	PCG plugged instead of NCG
Cause:	In Hicom 382 / 392 systems: PCG plugged instead of NCG.
Action:	Replace PCG with NCG.

F5588
CLOCK

Type: Service-specific (Format 1A)

Short text: AECB is functioning

Cause: The clock generator has detected that a working AECB has been connected.

Positive acknowledgment for **F5589**

Action: Use the AMO DISP-REFTA:AECB; to check the class of the clock generator. In the case of Class 68, the AECB has been activated. In the case of Class 38, you must wait until the end of the warm-up time of the AECB before the AECB is activated with the AMO CHA-REFTA:AECB,68;. Check the class again using the AMO DISP-REFTA:AECB;

Interpretation of auxiliary data:

Byte 3 = Status of the front reference (convert to binary)

Bit 4 = 0 Jitter, Wander, Drift not functioning

1 Jitter, Wander, Drift functioning

Bit 5 = 0 Frequency not functioning

1 Frequency functioning

Byte 4 = Status of the AECB (convert to binary)

Bit 4 = 0 Jitter, Wander, Drift not functioning

1 Jitter, Wander, Drift functioning

Bit 5 = 0 Frequency not functioning

1 Frequency functioning

F5589
CLOCK
AECB DISCON OR DEFECT

Type: Service-specific (Format 1A)

Short text: AECB is not connected or is faulty

Cause: The clock generator has detected that an AECB has not been connected or that the connected AECB is faulty. Negative acknowledgment for **F5588**.

Action: You can read from byte 4 of the auxiliary data whether or not the AECB is no longer connected to the clock generator (value: 00) or whether the AECB is faulty (value: 20).

Check the connection between the clock generator and the AECB. If this does not solve the problem, check whether the second clock generator also signals a problem with the AECB in the case of a duplex system. If so, the AECB has a fault and must be replaced. If the other clock generator does not detect a fault in the AECB, you can test whether the cable is faulty or not by exchanging the two cable sets.

Interpretation of auxiliary data: see F5588.

F5590
CLOCK
FRONT READY

Type: Service-specific (Format 1A)

Short text: Front reference functioning

Cause: The clock generator has detected that a front reference has been connected and can be selected as an external clock generator. Positive acknowledgment for **F5591**.

Action: If the front reference is not selected as a clock generator, use the AMO DISP-REFTA; to check the priority, the blocking flag and the error counter for the front reference. If the priority is too low or the error counter too high, these values can be changed using the AMO CHA-REFTA:TYP=FRONT,PRIO=...,BLOCK=N,ERROR=...;.

Interpretation of auxiliary data: see F5588.

F5591
CLOCK
FRONT DISCON OR DEFECT

Type: Service-specific (Format 1A)

Short text: Front reference is not connected or is faulty

Cause: The clock generator has detected that a front reference has not been connected or that the connected front reference is faulty. This may be due to the fact that the device that generates the front reference has detected an error and has therefore switched off the front reference. Negative acknowledgment for **F5590**.

Action: You can read from byte 4 of the auxiliary data whether the front reference is no longer detected by the clock generator (value: 00) or whether the front reference is generating a clock with an invalid frequency (valid: 20)

Check the connection between the clock generator and the front reference. If this does not solve the problem, check whether the second clock generator also signals a problem with the AECB in the case of a duplex system. If so, the front reference has a fault and must be replaced. If the other clock generator does not detect a fault in the front reference, you can test whether the cable is faulty or not by exchanging the two cable sets.

Interpretation of auxiliary data: see F5588.

F5592
PCG
CGM DEFECT, USING CG81

Type: Service-specific (Format H'1A)

Short text: DSC80: optional CGM board faulty

Cause: The optional CGM board installed on the DSC80 is faulty. The board has already been disabled and the the CG81 is being used instead.

Action: Replace faulty CGM board. For interpretation of auxiliary data see F5588.

F5607
CIRCUIT
MFC MONITORING

Type:		Service-specific (Format 22)
Short text:		MFC signal exchange monitor
Cause:		The MFC signal exchange monitor has responded.
System reaction:		Signals only.
Action:		Error (if any) and error location are shown in the HEX data.

Interpretation of auxiliary data:

Byte 0	=	Length of following data
Byte 1	=	Subevent code MFC Monitoring (2CH)
Byte 2	=	Situation (DB_M_MFC_SITUATION_SET)

00	No SIU available
01	No first signal
02	No next signal
03	Signal does not switch off
04	No control frequency (SOCOTEL/IBERCOM)
05	Control frequency does not switch off (SOCOTEL/IBERCOM)
06	No answer from SIU (request of frequencies) / SIU does not respond to the message (query pending frequencies)
07	Not allowed signal (NOPO in MFCTA) / Illegal character (NIMO in MFC table)
08	Outgoing: Forward signal not answered / Outbound: forward signal not acknowledged
09	Outgoing: Missing dialing form (internal) STN / Outbound: no dialing from (internal) station
0A	Invalid COE present (line has assigned invalid or no Class of Externals. F5607 with situation 0A also exists for trunks without an MFC table!)
0B	illegal begin of MFC signal / MFC start character not plausible
0C	illegal end of MFC signal / MFC end character not plausible
0D	illegal time out / Timer not possible (not plausible)
0E	protocol of test call1 / statistics of test call 1 (only for Test)
0F	protocol of test call2 / statistics of test call 2 (only for Test)

10	other situation (not assigned)
11	protocol of test call3 / statistics of test call 3 (only for Test)
12	time out for request message / No request message of the SIU (MFRP)
13	Invalid frequencies of the SIU (MFRP)
14	illegal 1st frequency / unexpected 1. Frequency (MFRP)
15	illegal program flow (MFRP)
16	congestion (MFRP)
17	incoming: timeout of long timer
18	outgoing: timeout of long timer (MFRP)
19	Error by MF shuttle
1A	Codogram error (for ANIF: not sent; for ANIB: no receiver)
1B	Error on MFRP outgoing
1C	Error on MFRP
1D	Error on MFRP
1E	Error on MFRP
1F	Log of incoming call (end-to-end signaling)
20	Log of incoming call (link-by-Link signaling
21	Implausible pointer in dyn. memory f (as of HP4k V2.0)
22	Log of outgoing call (HP4k V2.0)

Byte 3	=	from SIU detected frequencies (see special table) / Pending frequencies at the SIU (see table)
Byte 4 - 9	=	MFC attributes (only for development)
Byte 10 - 12	=	Counters for forward signals: in counter, out counter, demand pointer
Byte 13 - 34	=	Forward signals (VWZ)
Byte 35 - 37	=	Counters for backward signals: in counter, out counter, demand pointer /

Byte 38 - 60   =   Backward signals (RWZ)

Byte 61 - 64   =   SIU device address

Byte 65   =   DH state

as of byte   =   irrelevant data
66

As of HiPath 4000 Version V2.0:

Byte 0-3 see above.

Byte 4 - 18   =   MFC attributes (only for development)

Byte 19 - 21   =   Counters for forward signals: in counter, out counter, demand pointer

Byte 22 - 48   =   Forward signals (VWZ)

Byte 49 - 51   =   Counters for backward signals: in counter, out counter demand pointer

Byte 52 - 78   =   Backward signals (RWZ)

Byte 79 - 82   =   SIU device address

Byte 83   =   DH state

as of byte   =   irrelevant data
84

F5608
CIRCUIT
STAT OVERFLOW

Type: Service-specific (Format 22)
Short text: Statistics counter overflow (threshold value overstepped)
Cause: Statistics counters monitor this circuit. The circuit has been placed out of service due to too many alarms.

Counter sequence: each alarm increments the error counter by 1. Alarm pairs (alarm set and alarm reset message) also increment a specific pair counter by 1, even if the alarm is reset correctly. One of the statistics counters has reached its threshold, and the circuit has been placed out of service by dependability (status: DEF). As a rule, the counter level is reset after overflow, so that the circuit is not immediately blocked again when re-activated via AMO or when the board is replaced. In addition, the counter level is decremented at set intervals (minutes).

System reaction: the circuit has been placed out of service due to too many alarms.
Action: Take previous error messages and line quality of circuit into account. Activate/deactivate circuit, unplug/re-plug board concerned (power-on reset). If one of the statistics counters overflows again, replace the board.

Interpretation of auxiliary data:

Byte 0 = Counter level of alarm pair counter (standard)
Byte 1 = Counter level of single alarm counter (standard)
Byte 2 = Counter level of single alarm counter (optional)
Byte 3 = Counter level of single alarm counter (optional)
Byte 4 = Statistics class 0 - 20. Different threshold values exist
depending on the board type.
Byte 5 = Number of counter which has overflowed
00 Alarm pair counter (standard)
01 Single alarm counter (standard)
02 Single alarm counter (optional)
03 Single alarm counter (optional)
Byte 6-7 = Threshold value of overflowed counter (MAX_COUNT)
Byte 8-9 = Reset value of overflowed counter (COUNT_ACTION)
Byte 10 = Type of threshold value reached
00 Alarm pair (standard)
01 Single alarm (standard)
02 Single alarm (optional)
03 Single alarm (optional)
Byte 11-12 = Decrementing time interval, in minutes (MAX_TIME_COUNT)
Byte 13-14 = Decrementing value (DECREMENT)
Byte 15-80 = Message to FA which led to statistics overflow

> See also Chapter , "Device names".

F5609
CIRCUIT
BACK IN SERVICE

- SP300E V2.0 / R 6.5 and earlier
- SP300E-V3.0/R6.6 and later

SP300E V2.0 / R 6.5 and earlier

Type: Service-relevant (Format 22)
Short text: Blocking time expired
Cause: The dependability system offers an "in service trial" feature: If an error
that may only be sporadic occurs in the system, the element is first put out of service and
remains blocked for a preset period of time. After this timeout, the unit is put back into service
with a monitoring period. The element remains blocked if the error recurs during the
monitoring period. When putting into service, this message is generated with ACTION = IN
SERV.
System reaction: Put a circuit into service.
Action: Check that the element was put back into service.
If not, evaluate the circuit's previous failure message.

See also Chapter , "Device names".

SP300E-V3.0/R6.6 and later

Type: Service-relevant (Format 18)
Short text: Trunk back in service
Cause: Following a defect, the circuit was put back into service after multiple
attempts and a preset block timeout. The circuit is then monitored to see if another failure
occurs. If a new defect occurs during this monitoring time, it is put back into service on a trial
basis after a longer block time.
In ACTION = INSTRIAL (in service trial) putting into service on a trial basis (Format 43)
In ACTION = IN SERV (in service), putting into service is permanent, the monitoring period is
over. (Format 18)
System reaction: Record goes from DEF to READY.
Action: Positive acknowledgement, therefore no action required.
Interpretation of auxiliary data: Text only for format 43:
TRIAL NO: 1 = current number of attempts to put the system into service (max. 8)

F5623
CIRCUIT
MSG OVERFLOW

Type: Service-specific (Format 22)
Short text: SLMB16 message overflow
Cause: Message data overflow of terminal connected to SLMB16 board. Available
buffers for terminal in question in buffer pool are full.
System reaction: circuit is reset automatically.
Action: The overload may have occurred for a variety of reasons, e.g. LW error,
wrong configuration, etc. Check terminals connected to circuit.

> See also Chapter , "Device names".

F5624
CIRCUIT
LINE ALARM END

Type:	Service-specific (Format 22)
Short text:	End of line alarm (only for Netherlands)
Cause:	End of line alarm of DIUC.
System reaction:	signals only.
Action:	Positive acknowledgment, no action.

Interpretation of auxiliary data: see **F5348**.

(i)	See also Chapter , "Device names".

F5625
CIRCUIT
LINE ALARM 1

Type: Service-specific (Format 22)
Short text: Line alarm in idle state (only for Netherlands)
Cause: Line-alarm of DIUC in idle state.
System reaction: signals only.
Action: If error repeats, replace board or check appropriate line and replace if
necessary.
Interpretation of auxiliary data: see **F5348**.

> ⓘ   See also Chapter , "Device names".

F5626
CIRCUIT
LINE ALARM 2

Type: Service-specific (Format 22)
Short text: Line alarm during outgoing connection (only for Netherlands)
Cause: Line-alarm of DIUC during outgoing connection.
System reaction: signals only.
Action: If error repeats, replace board or check appropriate line and replace if
necessary.

Interpretation of auxiliary data: see **F5348**.

See also Chapter , "Device names".

F5627
CIRCUIT
LINE ALARM 3

Type: Service-specific (Format 22)
Short text: Line alarm during incoming connection (only for Netherlands)
Cause: Line-alarm of DIUC during incoming connection.
System reaction: signals only
Action: If error repeats, replace board or check appropriate line and replace if
necessary.

Interpretation of auxiliary data: see **F5348**.

> See also Chapter , "Device names".

F5628
CIRCUIT
LINE ALARM 4

Type: Service-specific (Format 22)
Short text: Missing release acknowledgment (only for Netherlands)
Cause: Missing cleardown acknowledgment for DIUC.
System reaction: signals only
Action: If error repeats, replace board or check appropriate line and replace if necessary.
Interpretation of auxiliary data: see **F5348**.

See also Chapter , "Device names".

F5629
CIRCUIT
PRI MB REM

Type: Service-specific (Format 22)
Short text: T1-PRI on hold (USA, T1 Board)
Cause: Remote partner system has put one channel of a T1-PRI (primary rate
interface) on hold (Remote).
System reaction: remote maintenance status
Action: If this error occurs repeatedly, save the error message data and contact
your next level of support.

> See also Chapter , "Device names".

F5630
CIRCUIT
PRI OOS REM

Type: Service-specific (Format 22)
Short text: T1-PRI out-of-service (USA, T1 Board)
Cause: Remote partner system has put T1-PRI (primary rate interface) out-of-service (Remote).
System reaction: remote blocking
Action: If this error occurs repeatedly, save the error message data and contact your next level of support.

> See also Chapter , "Device names".

F5631
CIRCUIT
INVALID MP EC

Type: Diagnosis-specific (Format 22)

Short text: Invalid event code for analog station line module

Cause: Invalid event code detected by firmware of analog line board. Bytes 2-14 of the hexadecimal output contain information on the microprocessor (see also **F5409**, **F5348**). Error in board LW or board received invalid external message.

System reaction: statistics

Action: Check LW version and circuit parameters via AMO. If error persists, save error message data and contact your next level of support for evaluation.

> See also Chapter , "Device names".

F5632
CIRCUIT
ROLM NET SIG ERROR

Type: Service-specific (Format 22)
Short text: Network signaling error (USA, ROLM board)
Cause: A network signaling error occurred in the circuit.
System reaction: statistics generated only
Action: Replace module when convenient.

	See also Chapter , "Device names".

F5633
CIRCUIT
ROLM DIGIT ERROR

Type:	Service-specific (Format 22)
Short text:	Digit error (USA, ROLM board)
Cause:	A digit error occurred in the circuit.
System reaction:	statistics generated only
Action:	Replace module when convenient.

> See also Chapter , "Device names".

F5634
CIRCUIT
ROLM FLT FAILURE

Type: Service-specific (Format 22)
Short text: Filter error (USA, ROLM board)
Cause: A filter error occurred in the circuit.
System reaction: the circuit is automatically switched off.
Action: Replace board when convenient.

> See also Chapter , "Device names".

F5635
CIRCUIT
ROLM CIR FAILURE

Type: Service-specific (Format 22)
Short text: HW error (USA, ROLM board)
Cause: A HW error occurred in the circuit.
System reaction: the circuit is automatically switched off.
Action: Replace board when convenient.

> See also Chapter , "Device names".

F5636
CIRCUIT
ROLM UNCFG CIR

Type:	Service-specific (Format 22)
Short text:	Reconfiguration error (USA, ROLM board)
Cause:	An error occurred while reconfiguring a circuit.
System reaction:	the circuit is reloaded and if the error occurs again, the circuit is blocked.
Action:	Re-configure board correctly.

See also Chapter , "Device names".

F5637
CIRCUIT
ROLM UNCFG FILTR

Type: Service-specific (Format 22)
Short text: Reconfiguration error (USA, ROLM board)
Cause: An error occurred while reconfiguring a circuit filter.
System reaction: the circuit is reloaded and if the error occurs again, the circuit is blocked.
Action: Re-configure filter correctly.

See also Chapter , "Device names".

F5640
CIRCUIT
ROLM INV CHN EVT

Type:	Service-specific (Format 22)
Short text:	Invalid channel event (USA, ROLM board)
Cause:	An event exception (invalid channel message) occurred on the board for this circuit.
System reaction:	statistics
Action:	Possible SW error. contact your next level of support.

> See also Chapter , "Device names".

**F5642
CIRCUIT
ROLM INVHCHN CMD**

Type: Service-specific (Format 22)
Short text: Invalid Hicom channel command (USA, ROLM board)
Cause: Invalid Hicom Channel command for this circuit.
System reaction: statistics
Action: Possible SW error. contact your next level of support.

> See also Chapter , "Device names".

F5643
CIRCUIT
ROLM INVHCHN PAR

Type:	Service-specific (Format 22)
Short text:	Hicom channel parity error (USA, ROLM board)
Cause:	Parity error in a Hicom Channel command for this circuit.
System reaction:	statistics
Action:	HW error. Replace board if circuit is blocked.

See also Chapter , "Device names".

F5644
CIRCUIT
ROLM T1 DP0

Type:	Service-specific (Format 22)
Short text:	Dial pulse out of service (USA, T1 Board)
Cause:	Problems with pulse dialing on the circuit.
System reaction:	statistics.
Action:	Check line and network. Replace board if necessary.

See also Chapter , "Device names".

F5645
CIRCUIT
L1 ERROR S0

Type: Service-specific (Format 36)

Short text: Layer 1 failure

Cause: Layer 1 failure on S_0 bus; bus line interrupted or last device in sequence either unplugged or defective. Message can be initiated by an S0 board, an SLMO board, a DIUS2 board with cordless or SLMN with video PC. The SLMN-T1 board in the USA is only used for video PC, but with the interface of the T1 boards for networking!

System reaction: statistics

Action: If this error occurs frequently, check bus line and last terminal.

Interpretation of auxiliary data: (from EV2.0 supported by text)

Byte 0 = Error type (DB_M_QF_CIR_L1_ERR_SET)

REASON: 00H BIT SLIP

Cause: Bit slip (LOCAL ALARM)

REASON: 02H BIT ERR RATE -3

Cause: Bit error rate >10 E-3 (LOCAL ALARM)

REASON: 03H LOST FRAME

Cause: Loss of frame (LOCAL ALARM)

REASON: 04H NO SIGNAL

Cause: No signal on the line (LOCAL ALARM)

REASON: 05H AIS

Cause: Alarm indication signal from partner (AIS ALARM)

REASON: 06H REMOTE ALARM

Cause: Remote alarm from partner (DISTANT ALARM)

REASON: 07H NO DATA LOADED

Cause: Circuit data not loaded (line alarm)

REASON: 08H LAYER 1 NOT ACTIVE

Cause: Layer 1 is not active, cannot be activated

REASON: 09H EVENT OVERFLOW

Cause: Message overflow

REASON: 0AH BAD EVENT

Cause: Invalid event

REASON: 0BH REMOTE ALARM CRC4

Cause: Remote alarm CRC4 from partner (DISTANT ALARM)

Special scenario for video PC:

Error type 04 for line interrupt must not be indicated for reasons of serviceability

(i.e., if video PC is switched off). In this case, this error type can only be diagnosed

if status TRS is output instead of NPR.

Special scenario for SLMN-T1 in USA:

REASON: 10H LOSS OF SIGNAL

Cause: Loss of signal detected for greater than the specified interval. Suppressed for switching off the video PC.

REASON: 11H MAX ERROR SECS

Cause: The maximum number of errored seconds has been detected for the specified interval.

REASON: 12H RED ALARM LFA

Cause: The board is in a red alarm condition due to loss of single frame synchronization. Suppressed for switching off the video PC.

REASON: 13H RED ALARM LMA

Cause: The board is in a red alarm condition due to loss of multi-frame synchronization.)

REASON: 14H YELLOW ALARM RFA

Cause: The board is in a yellow alarm condition due to loss of single frame synchronization.

REASON: 15H YELLOW ALARM RMA

Cause: The board is in a yellow alarm condition due to loss of multi-frame synchronization.

REASON: 16H AIS ALARM (BLUE)

Cause: The board is in blue alarm condition because it is receiving an AIS signal from the partner.

REASON: 17H CHANNEL FAULT

> See also Chapter , "Device names".

F5646
CIRCUIT
NOT READY

Type:	Service-specific (Format 18)
Short text:	X.21 line defective
Cause:	Networked systems: X.21 line defective/unplugged, or remote partner not responding.
System reaction:	line alarm
Action:	Check line. Positive acknowledgment with **F5647**.

> See also Chapter , "Device names".

F5647
CIRCUIT
READY

Type: Service-specific (Format 18)
Short text: X.21 line ready
Cause: Networked systems: X.21 line back in service.
System reaction: end of line alarm
Action: If error occurs repeatedly, save the error message data and contact your
next level of support.

> See also Chapter , "Device names".

F5648
CIRCUIT
TIMEOUT

Type: Service-specific (Format 18)

Short text: Timeout error.

Cause: X.21 circuit of remote partner system is not responding to CP seizure request. Remote partner system may be undergoing soft restart.

System reaction: line alarm

Action: Check remote system and connecting line. Positive acknowledgment with **F5647**.

ⓘ	See also Chapter , "Device names".

F5649
CIRCUIT
L1 ERROR TOTAL

Type: Service-specific (Format 37)

Short text: Layer 1 misc. errors summation messages (France only)

Cause: Summation message for miscellaneous layer 1 errors if a threshold is exceeded within a given time. This message is implemented for the DIUCAS in France, and reduces the number of messages output for low-impact errors.

The timer can be set with the SUPPTIM parameter of the LWPAR AMO. Changes to SUPPTIM only become effective when the board is reloaded, e.g. after power-on reset (unplugging and replugging).

System reaction: signals only

Action: Check remote system and connecting line.

Interpretation of auxiliary data:

TYPE = L1 ERROR (error) or LX ACTIVE (positive acknowledgment)

QUANTITY = Number of errors counted

REASON = Hexadecimal code for the layer 1 error

TEXT = Plain text description of layer 1 error

LOCAL ALARM = Home system detected error

DISTANT ALARM = Remote system detected error

AIS = Alarm Indication Signal from remote system

> See also Chapter , "Device names".

F5650
MBU
NO HDLC CLOCK

Type:	Service-specific (Format 22)
Short text:	Error in central clock source (NCG)
Cause:	MBU has detected clock failure or excessive drift in clock frequency.
Action:	Check central clock source, replace clock generator if necessary.

F5651
MBU
INFO

Type:	Diagnosis-specific (Format 22)
Short text:	MBU Info on MBU restart
Cause:	MBU has carried out a restart.
Action:	No action necessary.
Interpretation of auxiliary data:	Can only be evaluated by FW developer.

F5680
TERM
EXT ANN NO INIT

Type: Service-specific (Format 18)
Short text: Error in Musiphone initialization (USA)
Cause: The Musiphone (recorded announcement device) has either not been assigned a key or has not been initialized correctly. Event came from call processing.
System reaction: signals only
Action: Check Musiphone configuration on SLMA.

	See also Chapter , "Device names".

F5681
TERM
EXT ANN NO RESP

Type: Service-specific (Format 18)
Short text: Musiphone not responding (USA).
Cause: Musiphone not responding. Event came from Anate device handler.
System reaction: signals only
Action: Check Musiphone connection to SLMA.

> ⓘ See also Chapter , "Device names".

F5682
TERM
TEST ERROR

Type: Service-specific (Format up to EV1.0: 22, from EV2.0: 43)
Short text: RTO: Defective terminal or cable.
Cause: The RTO message to the error analysis system (FA) is output in the HEX
data.
Note from EV2.0: device names, completed test and test result
are output in plain text.
Action: Check line and terminal.
Interpretation of auxiliary data: Format 22/43: see **F5309**.

	See also Chapter , "Device names".

F5683
TERM
SPOR ERROR

Type: Service-specific (Format up to EV1.0: 22, from EV2.0: 43)
Short text: RTO: Sporadic terminal error
Cause: Sporadic terminal error (advisory). The RTO message to the error
analysis system (FA) is output in the HEX data.
Note from EV2.0: device names, completed test and test result
are output in plain text.
Action: If this error occurs frequently, replace firmware or terminal.
Interpretation of auxiliary data: Format 22: see **F5309**.

> See also Chapter , "Device names".

F5684
TERM
NOT CONNECTED

Type: Service-specific (Format 18)

Short text: No Musiphone connection (USA)

Cause: A Musiphone recorded announcement unit connected to an SLMA cannot
be put into service.
Message from an Anate device handler.

System reaction: a second attempt at startup is made via the startup procedure task list
IBP.

Action: Check Musiphone and activate manually.

> See also Chapter , "Device names".

F5685
TERM
CONNECTED

Type: Service-specific (Format 18)
Short text: Musiphone connection OK (USA)
Cause: A recorded announcement unit has been connected to an SLMA. Message
came from Anate device handler.
System reaction: the terminal is started up.
Action: No error message: the device has been successfully put into service, no
action.

> See also Chapter , "Device names".

F5687
TERM
DATA OVERFLOW

Type: Service-specific (Format 18)

Short text: Message data overflow of connected terminal

Cause: Message data overflow of terminal connected to SLMB8 board. Available buffers for terminal in question in buffer pool are full. Event signal came from SLMB8 loadware.

System reaction: reset the terminal

Action: The overflow may have occurred for a variety of reasons, e.g. too many messages, firmware error or terminal HW error.

> See also Chapter , "Device names".

F5688
TERM
TERMINAL SYNC

Type: Service-specific (Format 18)
Short text: Terminal synchronization okay again.
Cause: Possibly terminal has been plugged back in. Message originates from
DIGITE or ATND device handler.
System reaction: the device is started up.
Action: If error occurs repeatedly, save the error message data and contact your
next level of support.

(i)	See also Chapter , "Device names".

F5689
TERM
EARTH BEGIN

Type: Service-specific (Format 18)

Short text: Ground leakage on analog telephone circuit.

Cause: Ground leakage on a or b-wire (tip/ring) of analog telephone circuit.
Message originates from ANATE device handler.

Action: Check line for ground leakage and repair. Check that the positive
acknowledgment was output with **F5690**.

> See also Chapter , "Device names".

F5690
TERM
EARTH END

Type: Service-specific (Format 18)
Short text: End of ground leakage on ANATE circuit.
Cause: End of ground leakage on a or b-wire (tip/ring) of analog telephone
circuit. Message originates from ANATE device handler.
Action: Positive acknowledgment, no action.

See also Chapter , "Device names".

F5691
TERM
TCOM WRONG PULSE PAUSE

Type: Service-specific (Format 22)

Short text: Wrong pulse spacing on TCOM

Cause: The TCOM a/b wires may be wrongly connected. The event signal originated in the device handler of the TCOM.

System reaction: blocks the terminal and restarts after a delay.

Action: Check TCOM and verify the TCOM parameters via administration and maintenance order (AMO).

Interpretation of auxiliary data: Byte 1 of the HEX data outputs type of device according to structure DB_M_DH_GERAETE_TYP_SET (see **F5380**).

> See also Chapter , "Device names".

F5692
TERM
TCOM NO SEIZURE ACK

Type: Service-specific (Format 22)
Short text: No seizure acknowledgment
Cause: The TCOM a/b wires may be wrongly connected. Event signal came from
the device handler (DH) of the TCOM.
System reaction: blocks the terminal and restarts after a delay.
Action: Check TCOM and verify the TCOM parameters via administration and
maintenance order (AMO).
Interpretation of auxiliary data: Byte 1 of the HEX data outputs type of device according
to structure
DB_M_DH_GERAETE_TYP_SET (see **F5380**).

See also Chapter , "Device names".

F5693
TERM
TCOM NO START DIAL

Type: Service-specific (Format 22)

Short text: No start-of-dialing

Cause: No proceed-to-send signal from TCOM terminal. The TCOM a/b wires may be wrongly connected. Event signal came from the device handler (DH) of the TCOM.

System reaction: blocks the terminal and restarts after a delay.

Action: Check TCOM and verify the TCOM parameters via administration and maintenance order (AMO).

Interpretation of auxiliary data: Byte 1 of the HEX data outputs type of device according to structure
DB_M_DH_GERAETE_TYP_SET (see **F5380**).

(i)	See also Chapter , "Device names".

F5694
TERM
TCOM NO END OF DIAL

Type: Service-specific (Format 22)

Short text: No end-of-dialing

Cause: No end-of-dialing signal for the code calling system. The TCOM a/b wires may be wrongly connected. Event signal came from the device handler (DH) of the TCOM.

System reaction: blocks the terminal and restarts after a delay.

Action: Check TCOM and verify the TCOM parameters via administration and maintenance order (AMO).

Interpretation of auxiliary data: Byte 1 of the HEX data outputs type of device according to structure
DB_M_DH_GERAETE_TYP_SET (see **F5380**).

> See also Chapter , "Device names".

F5695
TERM
TCOM REMOTE BLOCK BEGIN

Type: Service-specific (Format 22)

Short text: Start of remote block for TCOM

Cause: A remote block of the remote partner has been started for a
line/terminal of the TCOM circuit

System reaction: remote block for incoming seizures

Action: Check remote system.

Interpretation of auxiliary data: Byte 1 of the HEX data outputs type of device according
to structure
DB_M_DH_GERAETE_TYP_SET (see **F5380**).

	See also Chapter , "Device names".

F5696
TERM
TCOM REMOTE BLOCK END

Type: Service-specific (Format 22)

Short text: End of remote block for TCOM

Cause: The remote block has been removed by the remote system
for a line/terminal of TCOM circuit.

System reaction: end of the remote block for incoming seizures.

Action: Positive acknowledgment, no action necessary.

Interpretation of auxiliary data: Byte 1 of the HEX data outputs type of device according
to structure
DB_M_DH_GERAETE_TYP_SET (see **F5380**).

> See also Chapter , "Device names".

F5697
TERM
TCOM LINE ALARM BEG

Type: Service-specific (Format 22)

Short text: Start of line alarm for TCOM

Cause: Line alarm set for TCOM circuit. Exchange or tie line may have a breakage or is otherwise interrupted, or TCOM is wrongly connected.

System reaction: sets line alarm status

Action: Check line for breakage and TCOM connection. Check TMOM configuration parameters via AMO.

Interpretation of auxiliary data: Byte 1 of the HEX data outputs type of device according to structure
DB_M_DH_GERAETE_TYP_SET (see **F5380**).

> See also Chapter , "Device names".

F5698
TERM
TCOM LINE ALARM END

Type: Service-specific (Format 22)
Short text: End of line alarm for TCOM.
Cause: TCOM has detected end of line alarm.
System reaction: sets end of line alarm status.
Action: Positive acknowledgment, no action.
Interpretation of auxiliary data: Byte 1 of the HEX data outputs type of device according to structure
DB_M_DH_GERAETE_TYP_SET (see **F5380**).

See also Chapter , "Device names".

F5700
PM/XP
ALARM ON

Type: Service relevant (Format 22)
Short text: PhoneMail/Xpressions alarm on
Cause: A PhoneMail/Xpressions alarm on has been signaled.
System reaction: Signaling and alarm counter for PM/XP for specified group and node is increased.
Action: Depending on auxiliary data. Save error data received and inform product specialist.
Interpretation of auxiliary data:

Byte 0:	Length of valid data in HEX (100'T = 64'H)
Byte 1,2:	PhoneMail group number
Byte 3:	PhoneMail node number
Byte 4,5:	PhoneMail/Xpressions alarm type (EventCode)
Byte 6-100:	Auxiliary data containing e.g. Network-ID

Tabelle 9:

F5701
PM/XP
ALARM OFF

Type:	Service relevant	(Format 22)
Short text:	PhoneMail/Xpressions alarm off	
Cause:	A PhoneMail/Xpressions alarm off has been signaled.	

System reaction: Signaling and alarm counter for PM/XP for specified group and node is cleared.

Action: Depending on auxiliary data. Save error data received and inform product specialist.

Interpretation of auxiliary data:

Byte 0:	Length of valid data in HEX (100'T = 64'H)
Byte 1,2:	PhoneMail group number
Byte 3:	PhoneMail node number
Byte 4,5:	PhoneMail/Xpressions alarm type (EventCode)
Byte 6-100:	Auxiliary data containing e.g. Network-ID

Tabelle 10:

F5713
TERM
L1 ERROR SYMPHONY (up to EV2.0)
L1 ERR CORNET-TS (for R6.4)
L1 ERROR CORNET-TS (from EV 2.0)

Type:	Service-specific (Format 22)
Short text:	CorNet TS layer 1 error
Cause:	Layer 1 error in repeater/terminator link (master/slave).

System reaction:

- Slave asynchronous: line alarm

- Slave message lost: signals only

Action: Check line between repeater and terminator, check both terminals.

Interpretation of auxiliary data:

Byte 0 = Length of relevant bytes
Byte 1 = Error type (DB_M_QF_SYM_L1_ERR_SET)
00 Slave asynchronous
01 Message to slave lost
Byte 2-100 = Miscellaneous auxiliary data (diagnosis-specific)

> See also Chapter , "Device names".

F5714
TERM
L2 ERROR SYMPHONY (up to EV1.0)
L2 ERR CORNET-TS (for R6.4)
L2 ERROR CORNET-TS (from EV 2.0)

Type: Service-specific (Format 22)
Short text: CorNet TS layer 2 error
Cause: Error in uplink or downlink connection of CorNet TS terminals.
System reaction: signals only.
Action: Save error message data and contact your next level of support.
Interpretation of auxiliary data:

Byte 0 = Length of relevant bytes
Byte 1 = Error type (DB_M_QF_SYM_L2_ERR_SET)
00 Downlink error
01 Uplink error
Byte 2-100 = Miscellaneous auxiliary data (diagnosis-specific)

See also Chapter , "Device names".

F5715
TERM
L3 ERROR SYMPHONY (up to EV1.0)
L3 ERR CORNET-TS (for R6.4)
L3 ERROR CORNET-TS (from EV 2.0)

Type: Service-specific (Format 22)
Short text: CorNet TS layer 3 error
Cause: Downlink error of station (Phone) or add-on device (Option), or uplink error during message transmission.
System reaction: statistics, signaling.
Action: Save error message data and contact your next level of support.

F5716
TERM
PHONE ERROR SYMPHONY (until SP300E-V1.0)
PHONE ERR CORNET-TS (for SP300E-R6.4)
PHONE ERROR CORNET-TS (SP300E-V2.0/R6.5 and later)

Type: Service relevant (Format 22)
Short text: Phone error in CORNET-TS
Cause: Phone detects and report one of following errors.
System reaction:

–   Signaling in the event of power reset, layer 1 asynchronous, timeout, deactivated,
–   Otherwise: statistics and signaling.

Action: Check the terminal and the line. Save error message data and notify product specialist.

Byte 0	=	Length of the possible bytes
Byte 1	=	Error type (DB_M_QF_SYM_PHONE_ERR_SET)
	00	Resetting due to power failure
	01	Layer 1 asynchronous
	02	Layer 1 timer expired
	03	Layer 1 deactivated
	04	Watchdog run
	05	Reset received from system
	06	Internal OS queue overflowed
	07	Stack pointer test negative
	08	Undefined reset
	09	Overflow of internal send queue
	0A	Received frame too big
	0B	Message too short
	0C	Message repetition
	0D	Option bus configuration error
	0E	Message pool overflow
	0F	Monitor data received
	10	End of monitor message
	11	D-CHANNEL TRANSMIT QUEUE OVERFLOW
	13	AUDIO DRIVER REPORTS AN ERROR CONDITION
	12	AUDIO DRIVER REPORTS AN UNEXPECTED BUSY CONDITION
	14	MEMORY MANAGEMENT REPORTS USAGE OF UNDEFINED POINTER VALUES
Byte 2-100	=	Arbitrary supplementary data (diagnosis-relevant)

Tabelle 11:

> ℹ️ See also Chapter , "Device names".

Interpretation of auxiliary data:

F5717
TERM
OPT ERROR SYMPHONY (SP300E-V1.0 and earlier)
OPT ERR CORNET-TS (for SP300E-R6.4)
OPT ERROR CORNET-TS (as of SP300E-V2.0/R6.5)

Type:　　　　　　Service-specific (Format 22)
Short text:　　　　Option error in the case of CORNET-TS
Cause:　　　　　　Option recognizes and reports one of the following errors. Option refers, for example, to an add-on device, a chip card reader or else a plug-in adapter.
System reaction:　Signaling
Action:　　　　　　Save error message data and contact your next level of support
For "option not configured": please determine the station with these error messages, display the configuration (AMO SBCSU) and compare with the physical terminal. An option that is not configured in the AMO should be connected to the terminal. Configured options that are not connected do not generate error messages. These options are automatically recognized during installation.
Interpretation of auxiliary data:

Byte 0	Length of the possible bytes	
Byte 1	Error type (DB_M_QF_SYM_OPT_ERR_SET	
	00	Option not defined
	01	ROM error
	02	RAM error
	03	Option not active
	04	Option not configured
	05	Obsolete software (headset)
Byte 2	Option address	
	01-04	Add-on device connected
	05	Chip card reader
	08-0B	Plug-in adapter

As of HiPath4000 V2.0

Byte 2	Option address	
	01-04	Key module 1-4
	05-08	Key module with self-labeled keys 1-4

09	Chip card reader
0C-0F	Plug-in adapter
19	Signature Module, Smart Card Reader

Note: See also Device names.

F5718
TERM
CFG ERROR SYMPHONY (up to EV1.0)
CFG ERR CORNET-TS (for R6.4)
CFG ERROR CORNET-TS (from EV 2.0)

Type:	Service-specific (Format 22)
Short text:	CorNet TS configuration error
Cause:	CorNet TS terminals not performing as configured during startup.

System reaction:

- Remote block for terminator, repeater or both not active

- Signals only for terminator, repeater erroneously active, device ID incorrect

- Blocks if two terminators, repeaters are erroneously active

Action: Save the error message data and contact your next level of support.
Interpretation of auxiliary data:
Byte 0 = Number of relevant bytes
Byte 1 = Error type (DB_M_QF_SYM_CFG_ERR_SET)
00 Configured terminator not active
01 Configured repeater not active
02 Repeater active, only terminator configured
03 Repeater and terminator active, only terminator configured
04 2 terminators active
05 2 repeaters active
06 Repeater and terminator not active
07 Wrong device ID
Byte 2-100 = Miscellaneous auxiliary data (diagnosis-specific)

> See also Chapter , "Device names".

F5719
TERM
CMI ERROR

Type: Service-specific (Format 22)

Short text: Cordless cell phone error (CMI)

Cause: Cordless cell phone error detected by peripheral board. Message may be received from the IWU or CP component of the board ("Interworking" or "Common Part").

System reaction: Signals only.

Action: Depends on type of error, contact your next level of support if necessary.

Interpretation of auxiliary data:

CMI ERROR DATA:

Byte 0 = 5F Max. 95 bytes length

Byte 1 = Error type (DB_M_QF_CIR_L1_ERR_SET)

Byte 2,3 = 0001 Error number

Byte 4 = Length of data to follow

Byte 5-95 = Specific CMI error data;

Error types: (with text)

Note: See also Device names.

Message texts:

REASON: 00H MAJOR ERROR IN IWU (PABX) DATABASE

Incorrect values in IWU PABX database

REASON: 01H ERROR IN CP MOBILITY DATABASE

Incorrect values in mobility database

REASON: 02H ERROR REASON NOT USED

Not used

REASON: 03H INCORRECT OR DOUBLE CMI PIN

Registration error in a mobile unit

REASON: 04H PP DECT ID NOT VALID

DECT_ID in mobile unit invalid

REASON: 05H UNKNOWN EMC CODE

Unknown manufacturer code

REASON: 06H OTHER TRACER STILL ACTIVE

Another trace is still active

REASON: 07H ERROR IN IWU BOF COMPONENT

Error in IWU BOF component

REASON: 08H ERROR IN IWU SWU SEP COMPONENT

Error in IWU SWU SEP component

REASON: 09H ERROR IN IWU CP SEP COMPONENT

Error in IWU CP SEP component

REASON: 0AH ERROR IN IWU EXTENSION COMPONENT

Error in IWU extension component

REASON: 0BH ERROR IN IWU IC SERVICE COMPONENT

Error in IWU IC service component

REASON: 0CH ERROR IN IWU CALL HANDLING COMPONENT

Error in IWU call handling component

REASON: 0DH ERROR IN IWU ALARM/TRACE/TEST COMPONENT

Error in IWU alarm/test/trace component

REASON: 0EH ERROR IN IWU MESSAGE EN/DECODER COMPONENT

Error in IWU message codec component

REASON: 0FH ERROR IN IWU ADMINISTRATION COMPONENT

Error in IWU administration component

REASON: 10H ERROR IN IWU STARTUP PHASE 1

Error in IWU startup phase 1

REASON: 11H ERROR IN IWU STARTUP PHASE 2

Error in IWU startup phase 2

REASON: 12H ERROR IN PABX EXTENSION LOCKED

XXX - No info on reason available

REASON: 13H ERROR IN IWU ADMINISTRATION EXTENSION NOT INS

XXX - No info on reason available

REASON: 14H ERROR IN IWU TRACE DATABASE

XXX - No info on reason available

REASON: 15H INTERSLMC CONNECTION NOT POSSIBLE

XXX - No info on reason available

REASON: 16H ERROR IN IWU DURING UPLOAD OF A DSS KEY

XXX - No info on reason available

REASON: 17H ERROR IN IWU DURING DOWNLOAD DATABASE

XXX - No info on reason available

REASON: 18H ERROR IN PABX ADD-ON MODULE NOT EQUIPPED

XXX - No info on reason available

REASON: 19H ERROR IN IWU DEPENDABILITY COMPONENT

XXX - No info on reason available

REASON: 1AH ERROR IN IWU TIMING COMPONENT

XXX - No info on reason available

REASON: 1BH ERROR IN IWU EXTENDED ERROR COMPONENT

XXX - No info on reason available

REASON: 1CH ERROR IN IWU SYSTEM COMPONENT

XXX - No info on reason available

REASON: 1DH ERROR IN IWU SWUSIGNLINK COMPONENT

XXX - No info on reason available

REASON: 1EH ERROR IN IWU IWUMODEL COMPONENT

XXX - No info on reason available

REASON: 1FH ERROR IN IWU COMPONENT

First IWU reserve element

REASON: 29H ERROR IN IWU COMPONENT

Last IWU reserve element

REASON: 2AH ERROR IN QDCL COMPONENT

XXX - No info on reason available

REASON: 2BH ERROR IN SLMCCO COMPONENT

Error in CP SLMC coordination

REASON: 2CH ERROR IN STB COMPONENT

XXX - No info on reason available

REASON: 2DH ERROR IN CP LLME COMPONENT

XXX - No info on reason available

REASON: 2EH ERROR IN CP DECT LAYER 3

XXX - No info on reason available

REASON: 2FH ERROR IN DLCH COMPONENT

XXX - No info on reason available

REASON: 30H ERROR IN CP MOBILITY CONTROL COMPONENT

XXX - No info on reason available

REASON: 31H ERROR IN IC MUX COMPONENT

XXX - No info on reason available

REASON: 32H ERROR IN CP L3 MUX COMPONENT

XXX - No info on reason available

REASON: 33H ERROR REASON NOT USED

XXX - No info on reason available

REASON: 34H ERROR REASON NOT USED

XXX - No info on reason available

REASON: 35H ERROR REASON NOT USED

XXX - No info on reason available

REASON: 36H ERROR CP L1 COMPONENT

XXX - No info on reason available

REASON: 37H ERROR CP L2 COMPONENT

XXX - No info on reason available

REASON: 38H EVENTCODE NOT VALID

XXX - No info on reason available

REASON: 39H GENERAL ERROR IN CP COMPONENT

XXX - No info on reason available

REASON: 3AH ERROR IN HWREL COMPONENT

XXX - No info on reason available

REASON: 3BH ERROR IN CP COMPONENT

XXX - No info on reason available

REASON: 3CH ERROR IN HDLC COMPONENT

XXX - No info on reason available

REASON: 3DH ERROR IN CP COMPONENT

First CP reserve element

REASON: 4DH ERROR IN CP COMPONENT

Last CP reserve element

REASON: 4EH ERROR IN CP OR IWU COMPONENT

XXX - No info on reason available

REASON: 4FH CMI HUNTGRP LOCKED

Cause: overload on CMI board; hunt groups are locked; no new connections to the board are possible.

Auxiliary data.
Info per locked hunt group (see number of errors, byte 2-3) as of byte 5

Byte 1 Service
00 VOICE
DEE

Byte 1 RNR Length
01-06

Byte 1-6:
RNR

REASON: 50H CMI HUNTGRP UNLOCKED

Cause: end of overload on CMI board; hunt groups are released; new connections to the board are possible.

Auxiliary data.
Info per locked hunt group (see number of errors, byte 2-3) as of byte 5

Byte 1 Service
00 VOICE
DEE

Byte 1 RNR Length
01-06

Byte 1-6:
RNR

F5730
BOARD
QUALITY SIGNALING

Type: Service-specific (Format 22)
Short text: Quality statistics signaling
Cause: Peripheral board is transmitting quality statistics (line or transmission error statistics), since counter has reached threshold value (e.g. SLMC16).
The following statistics are counted:
- Line errors < 100 ms asynchronous,
- Last look errors in received bytes
System reaction: statistics
Action: contact your next level of support.
Interpretation of auxiliary data:

Byte 0 = Length of auxiliary data, max. 32 bytes
Byte 1 = Board error statistics

F5731
BOARD
MP LIST OVERFLOW

Type: Service-specific (Format 22)

Short text: List overflow of a peripheral board

Cause: Overflow of microprocessor input/output list of a peripheral board.
Messages can no longer be transferred to the system.

a) With loss of messages:

The lists are cleared when the board is reset, the processor will continue operation. All existing connections are lost.

b) No message loss (only signaling of list overflow)

System reaction: resets the board in the event of message loss.

Action: - The list overflow may have occurred for a variety of reasons, e.g.
unexpected traffic overload due to wrong board configuration, wrong LW resource dimensions or inadequate overload protection strategy.

- Save error message data and contact your next level of support.

Interpretation of auxiliary data: Bytes 2-14 contain further information for your system specialist

(see F5348)

F5732
BOARD
MP WATCHDOG

Type:	Service-specific (Format 22)
Short text:	MP watchdog timeout
Cause:	Timeout of microprocessor watchdog timer of a peripheral board. Board

is unable to run the necessary routines within programmed time base.

System reaction:	the board will be reloaded after a one-minute interval.
Action:	If watchdog timeouts persist, replace the board.

Interpretation of auxiliary data:

Bytes 2-14 contain further information for your system specialist
(see F5348)

F5733
BOARD
MP CHECKSUM

Type:	Service-specific (Format 22)
Short text:	Bit corruption in microprocessor
Cause:	Corrupted bits in microprocessor code of a peripheral board. These are

detected after loading, e.g. following a hard restart of the system.

System reaction:	board is reloaded by the system.
Action:	If error recurs, check loadware and replace board if necessary.

Interpretation of auxiliary data:

Bytes 2-14 contain further information for your system specialist
(see F5348)

F5734
BOARD
MP NO RESOURCE

Type: Service-specific (Format 22)
Short text: No more resources for peripheral board MP
Cause: The microprocessor of the peripheral board concerned has run out of
resources. This is either due to overload or a resource allocation error.
System reaction: the board is reloaded by the system.
Action: The overload situation, whether real or symptomatic, may have occurred
for a variety of reasons, e.g. wrong board configuration or wrong LW design.
Try unplugging/replugging the board (power-on reset) or replace board if this does not work.
If the error persists, contact your next level of support.
Interpretation of auxiliary data:
Bytes 2-14 contain further information for your system specialist
(see F5348)

F5735
BOARD
MP ASIC ERROR

Type: Service-specific (Format 22)
Short text: ASIC error of peripheral board MP
Cause: The microprocessor of the peripheral board concerned has detected an
ASIC error in a board logic circuit.
System reaction: the board is reloaded after a one-minute interval.
Action: If error recurs, unplug/replug the board (power-on reset) or replace
board if this does not work.
Interpretation of auxiliary data:

Bytes 2-14 contain further information for your systemspecialist
(see F5348)

F5736
BOARD
RMS-ERROR

Type: Service-specific (Format 22)
Short text: RMS1 error
Cause: Remote Switch error (RMS1) reported by DIUR.
System reaction: this error message is also output in the case of RMS failures.
Action: Remedial measures depend on the evaluation of the HEX data.
Interpretation of auxiliary data:

Byte 0 = Message length (14 Bytes)
Byte 1 = Code for DIUR
Byte 2 = PBC address of DIUR in main system
Byte 3 = Board HW status
Byte 4 = FW status of DIUR as ASCII-value
Byte 5 = Error location (see table)
Byte 6-7 = Detailed error information (see table)

Byte 5	Byte 6	Byte 7
[01] PCM Highway	[01] Layer 1 error	[01] Frame loss
		[02] No signal
		[03] Alarm signal
		[04] Remote alarm
		[05] Error on PCM highway
		[06] PCM highway restored
	[02] Layer 2 error	[01] No partner
		[02] Partner restored
		[03] Message cannot be sent
[02] RMS	[01] Message from RG	[01] Syn1 clock absent
		[02] Syn1 clock restored
	[02] Message from PCG	[01] Bad reference clock
		[02] No reference clock

		[03] Other message from PCG
		[04] PCG synchronized
		[05] Hardware error
	[03] Message from power supply	[01] Battery operation
		[02] Mains power operation
	[04] Message from DIUR	[01] FW error
		[02] Message cannot be sent
		[03] HW error
		[04] DIUR reset
[03] Main system	[01] Message from DIUR	[01] FW error
		[03] HW error
		[04] DIUR reset

Table 4 Interpretation of F5736 for RMS1

F5737
BOARD
EXC NO PROCEDURE

Type: Diagnosis-specific (Format 22)
Short text: Procedure call failed (LW exception error)
Cause: A procedure (routine) cannot be called. Exception error in the loadware
of a COSMOS board (e.g., SLMA24, SLMA16, TMOM, TMEW2, SLMO, etc.).
System reaction: statistics
Action: Action depends on the evaluation of the HEX data.
Save error message data and contact your next level of support.
Check loadware if indicated in the HEX data.
Interpretation of auxiliary data:
Byte 0 = Length of the data to follow
Byte 1 = Exception Type
Byte 2 = LW_PROCESS
Byte 3 = STATE
Byte 4 = EVENT
Byte 5-8 = ADDRESS
Byte 9 = SOURCE_ID
Byte 10 = DEST_ID
Byte 11 = INTERNAL_INFO
Byte 12-15 = Reserve for additional data
Byte 16 = Length of the auxiliary data
Byte 17-100 = max 84 bytes miscellaneous auxiliary data

F5738
BOARD
EXC NO PROCESS

Type: Diagnosis-specific (Format 22)

Short text: Message sent to non-existent process (LW exception error)

Cause: A message or an event was sent to a non-existent process. Error in the loadware of a COSMOS board or in the system software.

System reaction: statistics

Action: Action depends on the evaluation of the HEX data.

Save error message data and contact your next level of support.

Check loadware if indicated in the HEX data.

Interpretation of auxiliary data: see F5737.

F5739
BOARD
EXC EC NOT VALID

Type: Diagnosis-specific (Format 22)

Short text: Unexpected event code (LW exception error)

Cause: Event code EC of a message was not expected in the current state and current routine. Error in the loadware of a COSMOS board or in the external message.

System reaction: statistics

Action: Action depends on the evaluation of the HEX data.

Save error message data and contact your next level of support.

Check loadware if indicated in the HEX data.

Interpretation of auxiliary data: see F5737.

F5740
BOARD
EXC TIMER OVERFLOW

Type: Diagnosis-specific (Format 22)

Short text: Timer out of range (LW exception error)

Cause: The value of the timer indicated in the message was outside the valid range. Error in the system software.

System reaction: statistics

Action: Action depends on the evaluation of the HEX data.

Save error message data and contact your next level of support.

Check loadware if indicated in the HEX data.

Interpretation of auxiliary data: see F5737.

F5741
BOARD
EXC LIST OVERFLOW

Type: Diagnosis-specific (Format 22)

Short text: Buffer overflow in board mailbox (LW exception error)

Cause: Error in the loadware of a COSMOS board, or board is receiving too many messages.

System reaction:

- WAML: board is automatically reloaded.

- Other board: restart after block without loading.

Action: Action depends on the evaluation of the HEX data.

Save error message data and contact your next level of support.

Check loadware if indicated in the HEX data.

Interpretation of auxiliary data: see F5737.

F5742
BOARD
EXC CMD NOT VALID

Type: Diagnosis-specific (Format 22)

Short text: Invalid command (LW exception error)

Cause: The EPIC driver received an invalid command. Error in the loadware of a COSMOS board.

System reaction: statistics

Action: Action depends on the evaluation of the HEX data.

Save error message data and contact your next level of support.

Check loadware if indicated in the HEX data.

Interpretation of auxiliary data: see F5737.

F5743
BOARD
EXC CMD Q OVERFLOW

Type:	Diagnosis-specific (Format 22)
Type:	Command queue overflow (LW exception error)
Cause:	Error in the loadware of a COSMOS board.
System reaction:	statistics
Action:	Action depends on the evaluation of the HEX data.

Save error message data and contact your next level of support.

Check loadware if indicated in the HEX data.

Interpretation of auxiliary data: see F5737.

F5744
BOARD
EXC COSMOS EXCEPTION

Type: Diagnosis-specific (Format 22)

Short text: COSMOS OS error (LW exception error)

Cause: An exception error was reported by the COSMOS operating system.
Invalid COSMOS command or invalid parameter. Error in the loadware of a COSMOS board.

System reaction: statistics

Action: Action depends on the evaluation of the HEX data.

Save error message data and contact your next level of support.

Check loadware if indicated in the HEX data.

Interpretation of auxiliary data: see F5737.

F5745
BOARD
EXC BUFFER INTEGRITY

Type: Service-specific (Format 22)
Short text: Buffer test negative (LW exception error)
Cause: The routine buffer test completed with errors. Hardware error or address error in the loadware of a COSMOS board.
System reaction: the board is blocked and reloaded.
Action: Replace board. If error persists, save the error message data and contact your next level of support.
Interpretation of auxiliary data: see F5737.

F5746
BOARD
EXC WATCHDOG (up to SP 300 E V1.0)

Type:	Service-specific (Format 22)
Short text:	Watchdog timeout (LW exception error)
Cause:	The watchdog timer of the board has expired. Error in the hardware or

loadware of a COSMOS board.

System reaction: the board is blocked and reloaded after a period of 1 minute.

Action: Replace board. If error persists, save the error message data and contact your next level of support.

Interpretation of auxiliary data: see **F5737**.

BOARD

NO CLOCK ACK (from SP 300 E V2.0)

Type:	Diagnosis-specific (Format 00)
Short text:	No acknowledgment of the board for a reference clock command
Cause:	A board has received a command for switching on/off the reference clock

and did not respond to it. This may be due to a hardware error or to a loadware error.

System reaction: the board is reset and restarted after a delay.

Action: If the board does not restart after a blocking period, an attempt can be made to restart it using AMO BSSU. Should the errors recur, replace board.

F5747
BOARD
CONFIG ERROR

Type:	Service relevant	(Format 43)
Short text:	Board configuration error.	
Cause:	The situation is depending on the reason described below.	
System reaction:	See below.	
Action:	See below.	
Interpretation of auxiliary data:		

00H SUBBOARD CONFIGURATION MISMATCH

Type: Service relevant (Format 43)

Short text: Configuration mismatch of subboard.

Cause: There is a mismatch between the data which has been configured for the subboard (submodule on a board) and the really mounted subboard.

System reaction: An alarm is generated.

Action: The mounted subboard and/or the configuration data have to be checked. Perhaps the subboard has to be replaced by another type.

Interpretation of auxiliary data:

SUBBOARD NUMBER:	01H-02H	Number of affected subboard.
ACTUAL SUBBOARD HW ID:		HW ID of actually mounted subboard.
CONFIGURED SUBBOARD HW ID:		HW ID of configured subboard.
Auxiliary data:		Diagnosis data filled in by board LW for product specialist.

F5748
BOARD
EXC WRITE PROTECTION

Type: Diagnosis-specific (Format 22)
Short text: Write protection error (LW exception error)
Cause: Error in the loadware of a COSMOS board.
System reaction: the board is blocked and reloaded automatically.
Action: Unplug/replug board (power on reset). Check LW version. Save the error
message data and contact your next level of support.
Interpretation of auxiliary data: see F5737.

F5749
BOARD
LW REQUEST

Type: Diagnosis-relevant   (Format 43)

Short text: The board LW request an action from FA.

Cause: With this message, the loadware on a board has the possibility to request an action from FA. This might be only signaling of an text string and auxiliary data which are both filled in by loadware. This may also be a request to lock the board or LTU with or without entering it in the 'in service task' for delayed reactivation. The loadware can also request an immediate reset of the board or the LTU if it detected a severe error.

The displayed text string should always give a short description of the situation. The loadware development of the affected board is responsible for this text.

System reaction: Depending on the request reason:

00H: The message is only signaled.

01H: The message is signaled and the board or LTU is locked.

02H: The message is signaled, the board or LTU is locked and entered in the 'in service task'.

03H: The message is signaled and the board or LTU is reset immediately.

04H: The message is only signaled.

05H: The message is only signaled.

Action: Save error message data and contact your next level of support.

Interpretation of auxiliary data: The following diagnosis data can be output by the board LW as an ASCII text string:

REASON: 00H   ONLY SIGNALING

                 01H   SIGNALING AND LOCKING

                 02H   SIGNALING, LOCKING AND DELAYED REACTIVATION

                 03H   SIGNALING AND IMMEDIATE BOARD RESET

                 04H   CMI CLOCK PHASE OFFSET

                 05H   LW SIGNALING AND RESTART

F5750
BOARD
PAYLOAD CONNECTION

Type: Service-specific (Format 43)
Short text: Information on the quality of the payload connection over IP for NBCS.
Cause: This message on the BOARD level is sent from STMI NBCS.

Whenever a call is set up via an NBCS system, the NCUI or STMI loadware monitors the voice quality of the route over the IP network by checking various quality parameters (e.g., the round-trip delay).

When the quality drops below a configurable threshold value, the NCUI/STMI loadware reports "IP BAD QUALITY". When the quality exceeds a configurable threshold value, the loadware reports "IP GOOD QUALITY".

The loadware also monitors the voice quality of the route over IP after the call has been enabled using UDP pings; however, this monitoring occurs only for a defined time period. If the voice quality was bad and did not improve during this time period, the message "IP QUALITY Test Timer EXPIRED" is displayed. This limits the time during which the loadware can test the quality with UDP pings.

The message includes information on both the stations involved in the call as well as both IP addresses.

System reaction:

00H IP BAD QUALITY

The relevant entry in the IP payload path table is set to "BAD". The currently set up call is not changed, but retains the current quality. However, if a further attempt to set up a call is made for the same route and if an "alternative payload path" via ISDN has been configured in the system, the call is routed via this alternative payload path" (with the better voice quality).

01H IP GOOD QUALITY

The relevant entry in the IP payload path table is set to "GOOD". The currently set up call is not changed, but retains the current quality. New calls are again routed via the IP network.

02H IP QUALITY TEST TIMER EXPIRED

The relevant entry in the IP payload path table is set to "GOOD". New calls are again routed via the IP network even if the quality is still bad.

Action: No special actions required.

If "IP BAD QUALITY" is reported too often, this indicates that the IP network connection of the NBCS system was not designed or configured for VoIP requirements. In this case, you will need to check the IP network.

Interpretation of auxiliary data:

Cause: 00H IP BAD QUALITY

	01H IP GOOD QUALITY
	02H IP QUALITY TEST TIMER EXPIRED
STATION A (PEN):	PEN of station A. The PEN consists of 'LTG-LTU-PBC-CIR-SUBUNIT'. The SUBUNIT may be redundant in some cases if the station is a trunk group or STMI.
STATION B (PEN):	PEN of station B. The PEN consists of 'LTG-LTU-PBC-CIR-SUBUNIT'. The SUBUNIT may be redundant in some cases if the station is a trunk group or STMI.
SOURCE-IP-ADDRESS:	IP address of the source of the checked route.
DESTINATION-IP-ADDRESS:	IP address of the destination of the checked route.
Text string	ASCII text string inserted by the loadware.
Auxiliary data:	Diagnostic data of board LW added for product specialist .

Description of auxiliary data
Byte 01-04: Round trip networking delay (in ms)
Byte 05-08: Filler with FFFFFFFF
Byte 09-12: Fraction outgoing packets (in %)
Byte 12-16: Filler with FFFFFFFF
Byte 17-20: Jitter last RTCP (in ms)
Byte 21-24: Filler with FFFFFFFF
Byte 25-28: Fraction incoming packets (in %)

Example:

```
000000C4FFFFFFFF00000001FFFFFFFF
00000001FFFFFFFF00000000FFFFFFFF
```

Round trip networking delay: 196ms
Fraction outgoing packets: 01%
Jitter last RTCP: 01ms
Fraction incoming packets: 00%

If the messages is output after the connection is cleared, no auxiliary data is available. 00 or FF is displayed in this case.

```
00000000FFFFFFFF00000000FFFFFFFF
00000000FFFFFFFF00000000FFFFFFFF
```

F5751
LTUR HSB
P5V OK

Type:	Service-specific (Format 22)
Short text:	5V power supply okay
Cause:	The redundant 5V power supply is functioning correctly again.
Action:	Positive acknowledgment, no action needed.

F5752
LTUR HSB
PM15V OK

Type: Service-specific (Format 22)
Short text: +/- 15V power supply okay
Cause: The +/- 15V power supply unit is functioning correctly again. All analog
connections and CO trunks are functioning again.
Action: Positive acknowledgment, no action needed.

F5753
LTUR HSB
M48V OK

Type:	Service-specific (Format 22)
Short text:	-48V power supply okay
Cause:	The redundant -48V power supply unit is functioning again.
Action:	Positive acknowledgment, no action needed.

F5754
LTUR HSB
M48V F OK

Type: Service-specific (Format 22)
Short text: -48V power supply fuse replaced
Cause: The fuse for the -48V power supply unit has been replaced. All boards
should function again.
Action: Positive acknowledgment, no action needed.

F5755
LTUR HSB
RING OK

Type:	Service-specific (Format 22)
Short text:	Ringing voltage generator okay
Cause:	The ringing voltage generator is functioning correctly again.
Action:	Positive acknowledgment, no action needed.

F5756
LTUR HSB
RING F OK

Type: Service-specific (Format 22)

Short text: Ringing voltage generator fuse replaced

Cause: The fuse in the ringing voltage generator has been replaced; the ATI and OPS boards should be functioning again.

Action: Positive acknowledgment, no action needed.

F5757
LTUR HSB
FAN OK

Type:	Service-specific (Format 22)
Short text:	All fans okay
Cause:	All four fans are functioning again.
Action:	Positive acknowledgment, no action needed.

F5758
LTUR HSB
M10 P OK

Type:	Service-specific (Format 22)
Short text:	Power supply for Model 10 okay
Cause:	The power supply for the Model 10 is functioning again.
Action:	Positive acknowledgment, no action needed.

F5759
LTUR HSB
M10 FAN OK

Type:	Service-specific (Format 22)
Short text:	Model 10 fan okay
Cause:	The fan for the Model 10 is functioning again.
Action:	Positive acknowledgment, no action needed.

F5760
LTUR HSB
M10 OH OFF

Type:	Service-specific (Format 22)
Short text:	Model 10 overtemperature okay
Cause:	The temperature on the Model 10 has returned to the permissible range.
Action:	Positive acknowledgment, no action needed.

F5761
LTUR HSB
M10 EX1 OFF

Type:	Service-specific (Format 22)
Short text:	Alarm 1 reset
Cause:	External alarm 1 has been reset.
Action:	Positive acknowledgment, no action needed.

F5762
LTUR HSB
M10 EX2 OFF

Type:	Service-specific (Format 22)
Short text:	Alarm 2 reset
Cause:	External alarm 2 has been reset.
Action:	Positive acknowledgment, no action needed.

F5763
LTUR HSB
M10 EX3 OFF

Type:	Service-specific (Format 22)
Short text:	Alarm 3 reset
Cause:	External alarm 3 has been reset.
Action:	Positive acknowledgment, no action needed.

F5764
LTUR HSB
M10 EX4 OFF

Type: Service-specific (Format 22)
Short text: Alarm 4 reset
Cause: External alarm 4 has been reset.
Action: Positive acknowledgment, no action needed.

F5765
LTUR HSB
P5V NOK

Type:	Service-specific (Format 22)
Short text:	5V power supply failure
Cause:	The redundant 5V power supply unit has failed.
Action:	Repair or replace the defective 5V power supply unit.

F5766
LTUR HSB
PM15V NOK

Type: Service-specific (Format 22)
Short text: +/- 15V power supply failure
Cause: The +/- 15V power supply unit has failed. All analog lines and CO trunks
are no longer functioning.
Action: Replace or repair power supply unit immediately.

F5767
LTUR HSB
M48V NOK

Type:	Service-specific (Format 22)
Short text:	-48V power supply unit failure
Cause:	One of the two -48V power supply units has failed. Operation will not be affected as long as the 2nd power supply unit is functioning.
Action:	Replace or repair the defective power supply unit.

F5768
LTUR HSB
M48V F NOK

Type:	Service-specific (Format 22)
Short text:	-48V power supply fuse blown
Cause:	The fuse for the -48V power supply unit has burned out. Only the T1

board on this shelf is still functioning.

Action:	Determine cause of fuse burnout and replace fuse.

F5769
LTUR HSB
RING NOK

Type:	Service-specific (Format 22)
Short text:	Ringing voltage generator power failure
Cause:	One of the redundant ringing voltage generator power supply units has failed. The ROLM shelf will remain operational as long as only one of the power supply units has failed.
Action:	Repair or replace the ringing voltage generator power supply unit.

F5770
LTUR HSB
RING F NOK

Type: Service-specific (Format 22)
Short text: Ringing voltage generator fuse blown
Cause: The fuse for the ringing voltage generator has burned out. All ATI and OPS boards on this shelf are no longer functioning.
Action: Determine cause of fuse burnout and replace fuse.

F5771
LTUR HSB
FAN NOK

Type:	Service-specific (Format 22)
Short text:	Fan defective
Cause:	One of the four fans is defective. Shelf operation not immediately affected.
Action:	Replace or repair fan.

F5772
LTUR HSB
M10 P NOK

Type:　　　　　Service-specific (Format 22)
Short text:　　　Model 10 voltage failure
Cause:　　　　　One of the output power supply units for the Model 10 is defective.
Action:　　　　Replace or repair power supply unit immediately.

F5773
LTUR HSB
M10 FAN NOK

Type:	Service-specific (Format 22)
Short text:	Model 10 fan defective
Cause:	Model 10 system fan is no longer functioning.
Action:	Repair or replace fan immediately.

F5774
LTUR HSB
M10 OH ON

Type:	Service-specific (Format 22)
Short text:	Model 10 overtemperature
Cause:	The Model 10 temperature exceeded an upper threshold.
Action:	Immediately determine the reason for the overheating and initiate

cooling measures.

F5775
LTUR HSB
M10 EX1 ON

Type:	Service-specific (Format 22)
Short text:	Model 10 external alarm 1
Cause:	External alarm 1 was triggered on the Model 10.
Action:	Determine reason.

F5776
LTUR HSB
M10 EX2 ON

Type:	Service-specific (Format 22)
Short text:	Model 10 external alarm 2
Cause:	External alarm 2 was triggered on the Model 10.
Action:	Determine reason.

F5777
LTUR HSB
M10 EX3 ON

Type:	Service-specific (Format 22)
Short text:	Model 10 external alarm 3
Cause:	External alarm 3 was triggered on the Model 10.
Action:	Determine reason.

F5778
LTUR HSB
M10 EX4 ON

Type:	Service-specific (Format 22)
Short text:	Model 10 external alarm 4
Cause:	External alarm 4 was triggered on the Model 10.
Action:	Determine reason.

F5780
DCL
AP CONNECTION LOSS

Type:	Diagnosis-relevant (Format 43)
Short text:	Connection to Access Point lost.
Cause:	Access point was reset by the partner CC or the control of the access point is to change.
System reaction:	The connection to the Access Point is set up again.
Action:	No action required.

Interpretation of auxiliary data:

The reason for the loss of connection is shown in plain text.

NCUI RESET BY PARTNER CC	: Partner CC has reset Access Point
SWITCH CONTROL TO OWN CC	: Own CC assumes control
SWITCH CONTROL TO PTN CC	: Partner CC assumes control
SWITCH CONTROL TO NONE	: No CC has control

F5781
DCL
ENCRYPTION ERROR

Type:	Service-relevant	(Format 43)
Short text:	HSR identifies the encryption problem	
Cause:	An encrypted connection to the access point cannot be set up.	
System reaction:	Attempts to set up the connection to the access point are repeated.	
Action:	Find the cause of the encryption problem and correct the setting.	

Interpretation of auxiliary data:

The cause of the encryption problem is indicated in plain text:

00h - MASTER ENCRYPTION KEY NOT AVAILABLE
01h - ENCRYPTION ALGORITHM IS NOT SUPPORTED
02h - CHANGED MASTER ENCRYPTION KEY DOES NOT MATCH
03h - TIMEOUT FOR ENCRYPTION OF SIGNALING CONNECTION
04h - TCP CONNECTION CANNOT BE ESTABLISHED AFTER ENCRYPTION ERROR
05h - MESSAGE CANNOT BE DECRYPTED

This message sets the SPE (Signaling and Payload Encryption) alarm for the corresponding access point (if not yet set). The alarm is reset when a successful connection is set up, provided this was the only problem involving signaling and payload encryption.

F5800
LTUR
HW ERROR

Type:	Service-specific (Format 22)
Short text:	Hardware error
Cause:	An LTUR reported a HW defect. A hard restart of the LTUR is carried out.
Action:	If the same LTUR has repeated HW problems: replace LTUR board.

F5801
LTUR
UNPL EVT

Type:	Service-specific (Format 22)
Short text:	Implausible event code
Cause:	Implausible event code in the LTUR.
Action:	A soft restart is triggered automatically.

F5802
LTUR
SR REQ

Type:	Service-specific (Format 22)
Short text:	LTUR soft restart request
Cause:	LTUR has requested a soft restart.
Action:	The soft restart is carried out automatically.

F5803
LTUR
HR REQ

Type:	Service-specific (Format 22)
Short text:	LTUR hard restart request
Cause:	LTUR has requested a hard restart.
Action:	The hard restart is carried out automatically.

F5804
LTUR
RELOAD REQ

Type:	Service-specific (Format 22)
Short text:	LTUR reload request
Cause:	LTUR requested a reload.
Action:	Check that the reload is completed successfully. If this does not work,

save the error message data and contact your next level of support.

F5805
LTUR
SAVED INFO

Type:	Service-specific (Format 22)
Short text:	Restart reason
Cause:	This message contains the reason for the previous restart.
Action:	If this error occurs repeatedly, save the error message data and contact

your next level of support.

F5806
LTUR
INFO

Type: Service-specific (Format 22)
Short text: LTUR information message
Cause: LTUR information message.
Action: If this error occurs repeatedly, save the error message data and contact
your next level of support.

F5810
LTUR
ST LOAD LTUR

Type:	Service-specific (Format 22)
Short text:	Clock error on LTUR
Cause:	Clock error on the LTUR after a soft restart.
Action:	The LTUR is reloaded automatically.

F5813
LTUR
DEVICE RESET

Type: Service-specific (Format 22)
Short text: Reinitialize Rolm device
Cause: The LTUR tries to reinitialize a Rolm device. This can occur during
overload situations.
Action: Check whether the overload situation has passed or not. If not, check
Rolm device.

F5814
LTUR
BD COMM FAIL

Type: Service-specific (Format 22)

Short text: Communication problem

Cause: Communication problems between LTUR and Rolm board. There are a number of possible causes. See the supplemental data for more detailed information.

Action: The board is reset. Remedy after repeated occurrence: Replace the board, possibly the LTUR.

F5815
LTUR
STBY CLOCK DEF

Type: Service-specific (Format 18)
Short text: Standby clock defective
Cause: An analysis of the clock supervision showed that the standby clock supply
is defective.
Action: Check standby half.

F5816
LTUR
STBY DEF

Type:	Service-specific (Format 18)
Short text:	LTUR hardware error
Cause:	An analysis of the clock supervision showed that this is a HW error in the LTUR that did not take effect until the switchover to standby.
Action:	Switch off and replace LTUR.

F5817
LTUR
DEF

Type:	Service-specific (Format 22)
Short text:	LTUR clock defective
Cause:	The LTUR clock supply is defective. A hard restart will be attempted.
Action:	Replace the LTUR if the error recurs.

F5818
LTUR
IN AL

Type:	Service-specific (Format 18)
Short text:	LTUR plugged
Cause:	The LTUR has been plugged in and is present in the available list.
Action:	This is a positive acknowledgment without action.

F5819
LTUR
LEFT AL

Type:	Service-specific (Format 18)
Short text:	LTUR unplugged
Cause:	The LTUR has been pulled and is no longer present in the available list.
Action:	Plug in the LTUR, or replace if it is already plugged in.

F5821
LTUR
DFE ERROR

Type:	Service-specific (Format 22)
Short text:	LTUR DFE error
Cause:	The LTUR has a DFE defect. A hard restart of the LTUR is started.
Action:	Replace the LTUR if the error recurs.

F5826
LTUR
SPOR ERROR

Type:	Service-specific (Format 22)
Short text:	Error during microprocessor test of the RTO
Cause:	Sporadic error in the RTO microprocessor test on the LTUR.
Action:	No response from error analysis (FA). If this message occurs repeatedly,

save the error message data and contact your next level of support.

F5827
LTUR
LOOP DATA ERROR

Type:	Service-specific (Format 22)
Short text:	Error in start of RTO test loop
Cause:	Error when starting RTO test loop in the microprocessor test.
Action:	A hard restart of the LTUR is triggered. Replace LTUR if error recurs.

F5828
LTUR
STATUSWORD ERROR

Type: Service-specific (Format 22)
Short text: Self-test error
Cause: Self-test error on the LTUR board.
Action: A hard restart of this LTUR is triggered. Replace LTUR.

F5829
LTUR
TIME ERROR

Type: Service-specific (Format 22)

Short text: Timeout

Cause: Timeout during the RTO microprocessor test on the LTUR. A hard restart
of the LTUR is triggered.

Action: Check the HLDC if the LTUR does not restart. Replace LTUR if needed.

F5831
LTUR
DB INIT TIMER

Type:	Service-specific (Format 24)
Short text:	No response from DH
Cause:	No response from device handler.
Action:	A hard restart of this LTUR is triggered.

F5847
LTUR
MIC DMA1 INTERRUPT

Type:	Service-specific (Format 2F)
Short text:	MIC DMA1 generates an interrupt
Cause:	MIC DMA1 generates an interrupt.
Action:	If this error occurs repeatedly, save the error message data and contact

your next level of support.

F5848
LTUR
ACT SIGNAL LOST

Type: Service-specific (Format 22)
Short text: LTUR failed to receive active signal
Cause: The LTUR did not receive an active signal from the switching system.
Either the switching system or the cable has failed.
Action: Check hardware, cabling, and switching system.

F5849
LTUR
TWO ACT SIGNAL

Type:	Service-specific (Format 22)
Short text:	Active signal set
Cause:	The active signal was set by the SWU-A half and by the SWU-B half.
Action:	Reset SWU-A or SWU-B half.

F5850
LTUR
DTA PATH PARITY

Type: Service-specific (Format 22)
Short text: DTA path parity error
Cause: DTA path parity error on the LTUR shelf. A peripheral board is most likely
defective, but it is not possible to determine which board.
Action: Check peripheral boards.

F5851
LTUR
INV DRAM CHECKSUM

Type:	Service-specific (Format 22)
Short text:	Checksum error
Cause:	Checksum error on the LTUR. The LTUR is defective.
Action:	Replace LTUR

F5852
LTUR
OVERLOAD BEG

Type: Service-specific (Format 22)

Short text: No internal buffers

Cause: The internal buffers on the LTUR have failed. An attempt is being made to find the bad channels.

Action: If this error occurs repeatedly, the load must be redistributed to other shelves. Save the error message data and contact your next level of support.

F5853
LTUR
OVERLOAD END

Type:	Service-specific (Format 22)
Short text:	End of LTUR overload
Cause:	Overload end for the LTUR.
Action:	If this error occurs repeatedly, save the error message data and contact

your next level of support.

F5854
LTUR
INT BUF UNFL

Type: Service-specific (Format 22)
Short text: No more free buffers
Cause: HDLC does not have any more buffers. Software problem.
Action: If this error occurs repeatedly, save the error message data and contact your next level of support.

F5855
LTUR
MIC NOISE INT

Type:	Service-specific (Format 22)
Short text:	Noise interrupts
Cause:	Unidentifiable interrupts on the LTUR were caused by noise.
Action:	Check cable, NCG, and LTUR.

F5870
BOARD
LW EXCEPTION

Message texts:

Reason: 00H CALLED FUNCTION DOESN'T EXIST

Type: Diagnosis-specific (Format 43)
Short text: A procedure cannot be called up (identical to F5737)
Cause: A specific procedure cannot be called up. Error (exception) in the
loadware of a COSMOS module. (e.g. SLMA24, SLMA16, TMOM, TMEW2, SLMO etc.).
System reaction: statistics.
Action: Action depends on the evaluation of the HEX data. Save error message
data and contact your next level of support. If necessary check the loadware.
Interpretation of auxiliary data:

Byte 0 = Length of the data to follow

Byte 1 = Exception Type

Byte 2 = LW_PROCESS

Byte 3 = STATE

Byte 4 = EVENT

Byte 5-8 = ADDRESS

Byte 9 = SOURCE_ID

Byte 10 = DEST_ID

Byte 11 = INTERNAL_INFO

Byte 12-15 = Reserve for additional data

Byte 16 = Length of the auxiliary data

Byte 17-100 = max 84 bytes miscellaneous auxiliary data

Reason: 01H MESSAGE SENT TO NOT EXISTING PROCESS

Type: Diagnosis-specific (Format 43)
Short text: Message sent to non-existent process (identical to F5738)
Cause: A message or an event was sent to a non-existent process. Error in the
loadware of a COSMOS board or in the system software.
System reaction: statistics
Action: Action depends on the evaluation of the HEX data. Save the error
message data and contact your next level of support.

Interpretation of auxiliary data: see Reason: 00H.

Reason: 02H EVENT CODE OR PARAMETER NOT EXPECTED

Type: Diagnosis-specific (Format 43)
Short text: Event code or event parameter not valid (identical to F5739)
Cause: Event code EC of a message was not expected in the current state and current routine, or the event parameters are incorrect. Error in the loadware of a COSMOS board or in the external message.
System reaction: statistics
Action: Action depends on the evaluation of the HEX data. Save the error message data and contact your next level of support. Check the loadware if necessary.
Interpretation of auxiliary data: see Reason: 00H.

Reason: 03H TIMER VALUE OVERFLOW

Type: Diagnosis-specific (Format 43)
Short text: Timer out of range (identical to F5740)
Cause: The value of the timer in the message was outside the valid range. Error in the system software.
System reaction: statistics
Action: Action depends on the evaluation of the HEX data. Save the error message data and contact your next level of support.
Interpretation of auxiliary data: see Reason: 00H.

Reason: 04H MAILBOX OR BUFFER OVERFLOW

Type: Diagnosis-specific (Format 43)
Short text: Buffer overflow in the mailbox or board buffer (identical to F5741)
Cause: Error in the loadware of a COSMOS board, or board is receiving too many messages.
System reaction:

- WAML, WAML2: the board is automatically reloaded.

- Other board: restarted after blocking without loading.

Action: Action depends on the evaluation of the HEX data. Save the error message data and contact your next level of support. If necessary, check loadware.
Interpretation of auxiliary data: see Reason: 00H.

Reason: 05H EPIC DRIVER RECEIVED INVALID COMMAND

Type: Diagnosis-specific (Format 43)
Short text: Invalid command (identical to F5742)
Cause: The EPIC driver received an invalid command. Error in the loadware of a COSMOS board.
System reaction: statistics
Action: Action depends on the evaluation of the HEX data. Save the error message data and contact your next level of support. If necessary check loadware.
Interpretation of auxiliary data: see Reason: 00H.

Reason: 06H COMMAND QUEUE OVERFLOW

Type: Diagnosis-specific (Format 43)
Short text: Command queue overflow (identical to F5743)
Cause: Error in the loadware of a COSMOS board.
System reaction: statistics
Action: Action depends on the evaluation of the HEX data. Save the error message data and contact your next level of support. If necessary check loadware.
Interpretation of auxiliary data: see Reason: 00H.

Reason: 07H COSMOS EXCEPTION

Type: Diagnosis-specific (Format 43)
Short text: COSMOS OS error (identical to F5744)
Cause: An exception error was reported by the COSMOS operating system. Invalid COSMOS command or invalid parameter. Error in the loadware of a COSMOS board.
System reaction: statistics
Action: Action depends on the evaluation of the HEX data. Save the error message data and contact your next level of support. If necessary check loadware.
Interpretation of auxiliary data: see Reason: 00H.

Reason: 08H BUFFER TEST FAILED

Type: Service-specific (Format 43)
Short text: Buffer test negative(identical to F5745)
Cause: The routine buffer test failed. Error in the hardware or addressing error in the loadware of a COSMOS board.
System reaction: the board is blocked and then reloaded.
Action: If the error persists after the board has been replaced, save the error message data and contact your next level of support.
Interpretation of auxiliary data: see Reason: 00H.

Reason: 09H WATCHDOG TIMER EXPIRED

Type: Service-specific (Format 43)
Short text: Watchdog timer expired (identical to F5746)
Cause: The watchdog timer in the board has expired. Error in the hardware or addressing error in the loadware of a COSMOS board.
System reaction: the board is blocked and then reloaded after a 1 minute interval.
Action: If the error persists after the board has been replaced, save the error message data and contact your next level of support.
Interpretation of auxiliary data: see Reason: 00H.

Reason: 0AH CHECKSUM TEST FAILED

Type: Service-specific (Format 43)
Short text: Invalid checksum (identical to F5747)
Cause: The IDLE task of the loadware detected an invalid checksum. Error in the hardware or addressing error in the loadware of a COSMOS board.
System reaction: the board is blocked and then reloaded.
Action: If the error persists after the board has been replaced, save the error message data and contact your next level of support.
Interpretation of auxiliary data: see Reason: 00H.

Reason: 0BH MICROPROCESSOR WRITE ACCESS TO ROM AREA

Type: Diagnosis-specific (Format 43)
Short text: Write protection error (identical to F5748)
Cause: Error in the loadware of a COSMOS board.
System reaction: the board is blocked and then reloaded.
Action: Unplug/replug the board, check loadware version

Save the error message data and contact your next level of support.
Interpretation of auxiliary data: see Reason: 00H.

Reason: 0CH PCM FRAME SYNCHRONIZATION LOST

Type: Service-specific (Format 43)
Short text: Faulty ELIC chips detected (identical to F5749)
Cause: Error in the hardware of a COSMOS board.
System reaction: statistics.
Action: Unplug/replug the board, replace board if necessary
Interpretation of auxiliary data: see Reason: 00H.

Special board highway test:

If byte 11 INTERNAL INFO = 0DDH, this indicates that an invalid connection has been activated:

Byte 16 = 4 (length of auxiliary data)

Byte 17 = Port number, if available, otherwise FFH

Byte 18 = TSL timeslot

Byte 19 = HWY (logical highway from the message, not ELIC HW no.)

Byte 20 = B-channel

Reason: 0DH NECESSARY HARDWARE RESPONSE FAILED

Type: Service-specific (Format 43)
Short text: Hardware function fault (identical to F5950)
Cause: Hardware function fault in the board or lack of external power supply for the board (power supply, ringing current etc.).
System reaction:

- WAML, WAML2: statistics, resets the board

- Other board: statistics

Action: Check the hardware of the board or the external signals to the board. Otherwise, save the error message data and contact your next level of support.
Interpretation of auxiliary data: see Reason: 00H.

Reason: 0EH RESOURCES SHORTAGE

Type: Service-specific (Format 43)
Short text: Lack of resources (identical to F5952)
Cause: Overload, lack of buffer. The logged on board can no longer process the incoming messages as central elements are missing. New seizures are prevented by the system for the entire board.
System reaction:

- Line circuits: blocks all circuits of a board

- Subscriber circuits: only blocks the free terminals of the board

Action: Save the error message data and contact your next level of support.
Interpretation of auxiliary data: see Reason: 00H.

Reason: 0FH RESOURCES AVAILABLE

Type: Service-specific (Format 43)
Short text: End of lack of resources (identical to F5953)
Cause: End of overload. The board can now continue processing the other messages as it has processed the jam in the message queue.
System reaction:

- Line circuits: unblocks all circuits of a board

- Subscriber circuits: unblocks the terminals of the board not seized

Action: No action necessary as this is a positive acknowledgment for Reason: 0EH RESOURCES SHORTAGE

Interpretation of auxiliary data: see Reason: 00H.

Reason: 10H LOADWARE TRACE DATA

Type: Diagnosis-specific (Format 43)
Short text: Loadware trace data (identical to F5954)
Cause: The board (e.g. SLC16) can collect its own trace data and print it out.
System reaction: signals only, no statistics
Action: Interpretation of the trace data.

Reason: 13H DUMMY 1

Type: Diagnosis-specific (Format 43)
Short text: Error with DUMMY event (identical to F5951)
Cause: An error was detected with DUMMY event.
System reaction: signals only, no statistics
Action: For diagnosis purposes, this message is temporarily incorporated into the loadware code of some boards by the loadware development department. A solution is determined by the interpretation of the auxiliary data. Save the error message data and contact your next level of support.

Interpretation of auxiliary data: see Reason: 00H.

Reason: 14H DUMMY 2

Type: Diagnosis-specific (Format 43)
Short text: Error with DUMMY event (identical to F5951)
Cause: An error was detected with DUMMY event.
System reaction: signals only, no statistics
Action: For diagnosis purposes, this message is temporarily incorporated into the loadware code of some boards by the loadware development department. A solution is determined by the interpretation of the auxiliary data. Save the error message data and contact your next level of support.

Interpretation of auxiliary data: see Reason: 00H.

Reason: 15H DUMMY 3

Type: Diagnosis-specific (Format 43)
Short text: Error with DUMMY event (identical to F5951)
Cause: An error was detected with DUMMY event.
System reaction: signals only, no statistics

Action: For diagnosis purposes, this message is temporarily incorporated into the loadware code of some boards by the loadware development department. A solution is determined by the interpretation of the auxiliary data. Save the error message data and contact your next level of support.

Interpretation of auxiliary data: see Reason: 00H.

Reason: 16H ERROR BUFFER FULL

Type:	Service-specific (Format 43)
Short text:	Error buffer full (identical to F5955)
Cause:	Histo-file of the WAML/WAML2 contains errors. Implausible software functions.
System reaction:	statistics
Action:	Initiate dump output of error buffer with PETRA AMO, address and length of the dump, see auxiliary data. When the dump has been output, the error buffer must be deleted using PETRA AMO and released

Interpretation of auxiliary data:

Byte 0 - 15: not relevant

Byte 16: Number of bytes in auxiliary data

Byte 17: Offset address of the error buffer LOW byte (for PETRA AMO)

Byte 18: Offset address of error buffer HIGH byte (for PETRA AMO)

Byte 19: Segment address of error buffer LOW byte (for PETRA AMO)

Byte 20: Segment address of error buffer HIGH byte (for PETRA AMO)

Byte 21: Length of error buffer LOW byte (for PETRA AMO)

Byte 22: Length of error buffer HIGH byte (for PETRA AMO)

The dump output initiated with PETRA AMO can be interpreted by your system specialist.

Error buffer is dumped with PETRA AMO (2 KB are output respectively):

      ABFR-PETRA: DUMP, ltg, ltu, slot, 86, F000, 0, 101;

      ABFR-PETRA: DUMP, ltg, ltu, slot, 86, F000, 0, 102;

      ABFR-PETRA: DUMP, ltg, ltu, slot, 86, F000, 0, 103;

Delete and release the error buffer (no dump output):

      ABFR-PETRA: DUMP, ltg, ltu, slot, 86, F000, 0, 100;

Reason: 17H LOG BUFFER READ REQUEST

Type: Service-specific (Format 43)
Short text: LOG buffer read request (identical to F5956)
Cause: This message can only be initiated via the PETRA AMO.

ABFR-PETRA: DUMP, ltg, ltu, slot, 86, F000, 0, 23;

It is used to determine the address and length of the LOG buffer (trace buffer).

The types of trace entries are defined by the LANC AMO (table of global data, parameter TR-CLVL).

System reaction: statistics
System reaction: signals only, no statistics
Action: Initiate dump output of LOG buffer (contains trace entries of WAML) with PETRA AMO, see auxiliary data for addresses and length of dump.

Interpretation of auxiliary data:

Byte 0 - 15: not relevant

Byte 16: Number of bytes in auxiliary data

Byte 17: Offset address of the LOG buffer LOW byte (for PETRA AMO)

Byte 18: Offset address of LOG buffer HIGH byte (for PETRA AMO)

Byte 19: Segment address of LOG buffer LOW byte (for PETRA AMO)

Byte 20: Segment address of error buffer HIGH byte (for PETRA AMO)

Byte 21: Length of LOG buffer LOW byte (for PETRA AMO)

Byte 22: Length of LOG buffer HIGH byte (for PETRA AMO)

The dump output initiated with PETRA AMO can be interpreted by your system specialist.

Reason: 18H PROCESSOR INTERRUPT HARD

Type: Service-specific (Format 43)
Short text: Processor interrupt, continuation not practical (identical to F5957)
Cause: Error in loadware, an interrupt with an unexpected vector number has occurred.

System reaction: statistics and resets the board
Action: Notify product specialist.

Interpretation of auxiliary data:

Byte 0 - 15: not relevant

Byte 16: Number of bytes in auxiliary data

Byte 17: Interrupt vector number LOW byte

Byte 18: Interrupt vector number HIGH byte

Reason: 19H PROCESSOR INTERRUPT SOFT

Type: Service-specific (Format 43)
Short text: Processor interrupt, processing resumed (identical to F5958)
Cause: Error in loadware, an interrupt with an unexpected vector number has occurred.
System reaction: statistics
Action: Notify product specialist.

Interpretation of auxiliary data:

Byte 0 - 15: not relevant

Byte 16: Number of bytes in auxiliary data

Byte 17: Interrupt vector number LOW byte

Byte 18: Interrupt vector number HIGH byte

Reason: 1AH INTERNAL LAN CONTROLLER DEFECT

Type: Service-specific (Format 43)
Short text: LAN controller to 'internal' LAN of the WAML faulty (identical to F5959)
Cause: Hardware error. Smooth operation of the LAN controller in the direction of the 'internal' LAN is not guaranteed. Destinations located on this interface cannot be contacted.
System reaction: the LAN interface has been disabled by the loadware.
Action: Switch the board on/off manually. Replace the board (Action also described in the simultaneously output error message F4704).
Interpretation of auxiliary data: The auxiliary data can be interpreted by your system specialist.

Reason: 1BH EXTERNAL LAN CONTROLLER DEFECT

Type: Board type: WAML / Service-specific (Format 43)
Short text: LAN controller to 'external' LAN of the WAML faulty (identical to F5960)
Cause: Hardware error. Smooth operation of the LAN controller in the direction of the 'external' LAN is not guaranteed. It may not be possible to contact destinations located on this interface.
System reaction: the LAN interface has been disabled by the loadware.
Action: Switch the board on/off manually. Replace the board (Action also described in the simultaneously output error message F4704).

Interpretation of auxiliary data: The auxiliary data can be interpreted by your system specialist.

Type: Board type: WAML 2 / Service-specific (Format 43)
Short text: LAN controller to 'external' LAN of the WAML2 faulty
Cause: Hardware error. Smooth operation of the LAN controller in the direction of the 'external' LAN is not guaranteed. It may not be possible to contact destinations (servers) located on this interface.
System reaction: the board is blocked first. After 5 minutes, an attempt is then made to restart the board.
Action: If the board does not restart, it must be replaced.
Interpretation of auxiliary data: The auxiliary data can only be interpreted by your product specialist.

Reason: 1CH FIREWALL ALARM

Type: Service-specific (Format 43)
Short text: Firewall alarm (identical to F5961)
Cause: WAML: a LAN user who is not authorized to be 'routed' by the WAML is attempting to send data packages to the WAML.

WAML2: a LAN user who does not have access to the WAML2 is sending data packages to the WAML2.
System reaction: statistics.
Action: Review configuration (AMO LANC) to determine whether all necessary user authorizations are properly configured. If user authorizations are OK, trace unauthorized user (hacker?).
Interpretation of auxiliary data: The auxiliary data are output in plain text in the Maintenance Alarm message. See F4704 with short text: ERROR: FIREWALL ALARM.

Reason: 1DH BOARD SYNCHRONIZATION ERROR

Type: Service-specific (Format 43)
Short text: A clock for all cordless boards has failed (identical to F5964)
Cause: None of the (possibly four) cordless master boards could take over the clock.
System reaction: Major alarm to the Service Center.
Action: Interpret previous error messages.

Service Center: find master boards with AMO. Switch individual boards on and off in sequence using BSSU AMO and check responses.

On-site: unplug/replug, replace master boards. Check clock line.
Interpretation of auxiliary data: Reason: 00H.

Reason: 1EH BOARD SYNCHRON AGAIN

Type: Service-specific (Format 43)
Short text: Clock for Cordless boards back in sync (identical to F5963)
Cause: One of the (possibly four) Cordless master boards was able to recover the reference clock after replacing the board.
System reaction: End of major alarm to the Service Center.
Action: No action necessary since this is a positive acknowledgment. End of clock failure for all Cordless boards.
Interpretation of auxiliary data: Reason: 00H.

Reason: 1FH CLOCK CHANGE OF MASTER

Type: Service-specific (Format 43)
Short text: Clock taken over by other Cordless board (identical to F5965)
Cause: The synchronizing Cordless board (master) has failed.
System reaction: signaling.
Action: Evaluate preceding error messages. Trace the failure of one of the (four possible) Cordless master boards.

The clock for the Cordless boards, base stations and mobile subscribers remains in sync. Mobile users are only affected by EXC FATAL SYNCHRON ERR.
Interpretation of auxiliary data: Reason: 00H.

Reason: 20H ERROR IN CONFIGURATION DATA

Type: Service-specific (Format 43)
Short text: The configuration data of the WAML or WAML2 are inconsistent
Cause: Configuration data have not been correctly configured.
System reaction: signaling.
Action: Correct configuration data

(for WAML: AMO-LANC, for WAML2: AMO-BDAT).
Interpretation of auxiliary data:

Byte 0 - 15: not relevant

Byte 16: Number of bytes in auxiliary data

Byte 17: Not relevant

Byte 18: Type of error

bit 0 = 1 : gateway (router) not available, check IP routing table

bit 5 = 1 : Destination not available, check IP routing table

bit 3 = 1 : Problem on network interface,

Check global parameter and network interface table

Reason: 21H LOADWARE TRACE DATA WITH ASCII TEXT

Type: Diagnosis-specific (Format 43)
Short text: Trace data of the loadware
Cause: The board can collect its own trace data and print it. In addition, text can be output by the loadware.
System reaction: signaling.
Action: Evaluate the trace data and save error messages and contact your next level of support.

Reason: 22H POWER SUPPLY FAILURE

Type: Service-specific (Format 43)
Short text: SLMAR power supply failed
Cause: One of the two DC-DC converters of the SLMAR board is faulty.
System reaction: the board is disabled and restarted after a delay.
System reaction: first the board is blocked. After 5 minutes, an attempt is made to restart the board.
Action: If the system was able to restart the supply:

check whether a circuit LW detect error "HW Problem" Circuit too hot" (F5461) Service was signaled. If yes, test the cabling and terminals.

If the cabling and terminals are free from defects, or if only one "Power Supply Failure" was signaled, replace board.

F5871
BOARD
SERVER
Cause: See Reason.

Reason: 00H TCP CONNECTION BETWEEN WAML2 AND SERVER ESTABLISHED

Type: Service-specific (Format 43)
Short text: The connection between the WAML2 and the server has been re-established.
Cause: There are several reasons for the re-establishment of the connection:

- Following a hard or soft restart of the Hicom system

- Following activation of the WAML2 (plug in using the AMO)

- Server logs on again after a breakdown on the LAN interface

- Server logs on again after failure

- Re-establishment due to a change in the WAML2 configuration data which affect the interface to the server (AMO-BDAT, e.g. change in the IP address or the port number of the server or the WAML2 etc.)

System reaction: activation of all circuits.
Action: None.
Interpretation of auxiliary data: none

Reason: 01H TCP CONNECTION BETWEEN WAML2 AND SERVER DOWN

Type: Service-specific (Format 43)
Short text: The connection between the WAML2 and the server is down.
Cause: There are several reasons for the connection being cleared down:

- Following a hard or soft restart of the Hicom system

- Fault on the LAN interface (LAN cable, HUB)

- Server logs on again after a breakdown on the LAN interface

- Server failure

- A change in the WAML2 configuration data which affect the interface to the server (AMO-BDAT, e.g. change in the IP address or the port number of the server or the WAML2 etc.)
  Note:
  When the connection fails, the WAML2 attempts to re-establish the connection (cyclically in seconds)

System reaction: all circuits on the WAML2 are blocked.

Action: If the connection cannot be re-established again, check the following (depending on the auxiliary data:

- LAN cable or HUB

- Configuration data of the WAML2 (AMO-BDAT) and servers

- Server status.

Interpretation of auxiliary data:

1st byte in the auxiliary data indicates the cause:
1 = hard or soft restart of the Hicom system
2 = change in the WAML2 configuration data
3 = fault on the LAN interface or server failure
Should other values occur, please contact your next level of support.

Reason: 02H STATISTIC OVERFLOW ON SERVER

Type: Service-specific (Format 43)
Short text: A statistics threshold has been reached in the server.
Cause: Too many messages of a specific error type have arrived on the server within a predefined period.
System reaction: signals only.
Action: Check the TCP/IP configuration parameter, network configuration and components (NIC card, cable).
Interpretation of auxiliary data:

1st byte in the auxiliary data indicates the cause:
1 = error in the TCP/IP signaling interface to the WAML2, signaled by the operating system
2 = error in the TCP/IP signaling interface to the client, signaled by the operating system
3 = error in the TCP/IP signaling interface to the OMC, signaled by the operating system.

Reason: 03H TOO MANY INVALID LOGONS OF A CLIENT

Type: Service-specific (Format 43)
Short text: The server has received too many invalid LOGON attempts from a client.
Cause: There are several causes for this error:

- the LOGON identification parameter is invalid

- the telephone number specified at each LOGON attempt is not registered in the configuration database of the server.

System reaction: signals only.
Action: Check the configuration database of the server.
Interpretation of auxiliary data: none.

F5872
BOARD
ROUTER
Cause: See Reason.

Reason: 00H TCP CONNECTION TO ROUTER DOWN

Type: Service-specific (Format 43)
Short text: The TCP/IP connection from the server to the router is down.
Cause: This error can occur if a router is being implemented that can be polled
by the server. If the router supports this functionality, the server checks the connection to the
router at regular intervals.
System reaction: all circuits on the WAML2 are blocked.
Action: Check router and/or network components.
Interpretation of auxiliary data: none

Reason: 01H TCP CONNECTION TO ROUTER ESTABLISHED

Type: Service-specific (Format 43)
Short text: The TCP/IP connection between the server and router has been re-
established
Cause: The server signals re-establishment of the connection after a previous
loss of connection to the router.
System reaction: all circuits are restarted.
Action: None.
Interpretation of auxiliary data: none

F5873
BOARD
DEST ADDR NOT PLAUS

Type: Diagnosis-specific (Format 43)

Short text: Destination address of a Cordless board is not plausible

Cause: The DCL has detected that either the shelf number or the PBC number of the destination address for a Cordless board is not within the valid range of the system configuration.

System reaction: signaling with output of the LTU, the PBC and the relevant message of the LW to the DCL.

Action: Save error messages and contact your next level of support.

Interpretation of auxiliary data: (supported by text)

DESTINATION LTU: decimal shelf number

DESTINATION PBC: decimal PBC number

MESSAGE FROM DCL:

Byte 5 = FF Indication for DCL that the message goes directly to another Cordless board

Byte 6 = Shelf number of the destination board (hexadecimal)

Byte 7 = PBC number of the destination board (hexadecimal)

F5874
BOARD
FLOW CTRL OVERLOAD BEG

Type: Service-specific (Format 43)

Short text: Message overflow of a peripheral board

Cause: The periphery system measures the number of messages from the system to the peripheral board. When the short-term or long-term threshold is reached or exceeded, this overload message is sent to the error analysis system.

System reaction: soft block for the board and its terminals.

Action: Check that the board has been configured correctly as otherwise an overload may occur.

Interpretation of auxiliary data: (supported by text)

   a)   OVERFLOW SHORT TERM RATE: overflow for short-term measurement (1 min)
        FLOW CONTROL DATA: other current measurement values in last period
        LONG TERM RATE: current value of long-term measurement (10 min)
        LONG TERM THRESH: threshold of long-term measurement

   b)   OVERFLOW LONG TERM RATE: overflow for long-term measurement (1 min)
        FLOW CONTROL DATA: other current measurement values in last period
        SHORT TERM RATE: current value of long-term measurement (10 min)
        SHORT TERM THRESH: threshold of long-term measurement

F5875
BOARD
FLOW CTRL OVERLOAD END

Type: Service-specific (Format)

Short text: End of message overflow of a peripheral board

Cause: The periphery system measures the number of messages from the system to the peripheral board. When the threshold for permanent message flow is exceeded, this message is sent to the error analysis system.

System reaction: end of soft block for the board and its terminals.

Action: Positive acknowledgment for F5874. Check the configuration of the board.

Interpretation of auxiliary data: (supported by text)

UNDERFLOW RATE: permanent measure is not reached (10 min)

FLOW CONTROL DATA: other current measurement values in last period.

F5876
BOARD
NOT IN SERVICE

Type:　　　　　　　Service-relevant (Format 18)

Short text:　　　　　Board did not go into service

Cause:　　　　　　Despite several attempts to put the unit into service (max. 8, for more information, see AMO PSTAT), the element could not be put into service correctly due to a new error.

System reaction:　Board goes from READY to DEF state.

Action:　　　　　　Evaluate error messages that described the defect. Rectify the error, if necessary, replace the board. Positive acknowledgement, see F5372.

F5877
BOARD
TSL SWITCH ERR

Type: Diagnosis-relevant (Format 43)

Short text: Error detected when switching RTO timeslots.

Cause: Timeslots were not enabled in the case of call processing activities.

System reaction: The error was detected by RTO and rectified. The timeslot specified in the plaintext was enabled.

Action: If this error occurs frequently, run a search for the PEN-related error message, inform Product Support and forward to Development for further data analysis.

F5878
BOARD
ATTENUATION ER

Type: Diagnosis-relevant (Format 43)
Short text: Error detected when resetting the RTO attenuation.
Cause: The attenuation was not reset.
System reaction: The error was detected by RTO and rectified. The attenuation was reset.
Action: If this error occurs frequently, run a search for the PEN-related (see header) error message (Highway/Timeslot, see plaintext), inform Product Support and forward to Development for further data analysis.

F5879
BOARD
TSL DISTORT ER

Type: Diagnosis-relevant (Format 43)

Short text: Error detected when switching RTO timeslots.

Cause: Timeslots were not enabled in the case of call processing activities or a hardware error occurred on the LTUCE board.

System reaction: No reaction was possible as the frozen timeslot is being used by an "old" board which does not support the board HWY check. Consequently, the error could not be removed by RTO and could result in halfpaths. In other words, the timeslot with tone locking at a board in the relevant shelf quarter could not be localised.

⚠ CAUTION: The board data (PEN) in the error message header is not relevant as the specified board only detected the error. It is not the cause of the frozen timeslot. The timeslot/highway is specified in plain text, however, in the body of the error message.

ⓘ Note: This error is probably caused by the software (switching technology/loadware). However, the error may be reported for all timeslots in one or more highways in a shelf. In this case, the error is probably caused by the hardware on the relevant LTUCE board.

Action: If this error occurs frequently, run a search for the PEN-related error message, inform your next level of support and forward to Development for further data analysis.

In the case of a LTUCE error, this board must be replaced by another LTUCE.

F5880
BOARD
RECONFIGURATION

Type:	Service-specific	(Format 43)
Short text:	Reconfigure station to HFA standby BG	
Cause:	A board/port error or statistics overflow has resulted in the failure of an	

HFA board. The affected IP stations are reconfigured to an HFA standby board. The defective HFA board is placed in the defective state with INIT ERROR, DEF ON REQUST (see also F5345).

System reaction: Signaling, decommissioning of defective board.

Action: Check the status of the affected station with the AMO SDSU after start-up of the HFA standby board. Replace the defective HFA board

Interpretation of auxiliary data:

REASON:00H BOARD RECONFIGURATION OK

Reconfiguration of the station to the HFA standby board was successful.
!! Attention: This message only means that the configuration was successful. The proper startup of the new board must be verified!!

REASON:01H BOARD RECONFIGURATION ERROR

Software error on reconfiguring the station. Save error message data and contact your next level of support.

F5881
BOARD
ENCRYPTION ERROR

Type: Service-relevant (Format 43)
Short text: CGW identifies the encryption problem
Cause: No or invalid or expired certificates available.
System reaction: Connections are set up unencrypted or not at all.
Action: Find the cause of the encryption problem and correct the setting.
Interpretation of auxiliary data:

The cause of the encryption problem is indicated in plain text:

00h - NO PKI CERTIFICATE AVAILABLE
01h - PKI CERTIFICATE AVAILABLE
02h - CERTIFICATE EXPIRED
03h - CERTIFICATE OK
04h - CERTIFICATE REVOCATION LIST EXPIRED
05h - CERTIFICATE REVOCATION LIST OK
06h - LARGE ENTERPRISE GATEKEEPER REGISTRATION FAILED
07h - SIP REGISTRATION FAILED
08h - SIP MIKEY CERTIFICATE VERIFICATION FAILED
09h - H.323 MIKEY CERTIFICATE VERIFICATION FAILED
0Ah - SIP MIKEY CERTIFICATE VERIFICATION OK
0Bh - H.323 MIKEY CERTIFICATE VERIFICATION OK

Error messages set the SPE (Signaling and Payload Encryption) alarm (if not already set) and the corresponding integrity messages reset the alarm.
Exception: A TLS connection is set up with a temporary key to register a CGW board at an LEGK/SIP registrar. An appropriate fault message is signaled (06h or 07h) if this connection cannot be set up for any reason, and this IP trunk is put into operation unencrypted. The SPE alarms remains. The CGW only has to be manually reset by the service after the problem has been corrected (for example, LEGK configuration was modified). The SPE alarm for this trunk is reset at the same time.

F5882
BOARD
SECURE TRACE

Type: Diagnosis-relevant (Format 43)
Short text: Secure Trace switchover
Cause: Secure Trace was enabled or disabled for this CGW.
System reaction: None.
Action: None.
Interpretation of auxiliary data:

Activation and deactivation are indicated in plain text:

00h - SECURE TRACE SWITCHED ON
01h - SECURE TRACE SWITCHED OFF

F5900
LTUC
BOTH PLL DEFECT

Type: Service-specific (Format)
Short text: PLL chips on the LTUCE are faulty
Cause: Both PLL chips are faulty. Attempt to restore LTUCE 1 minute after failure was unsuccessful. The event signal came from the LTUCE firmware.
System reaction: Blocks the LTUC and attempts to restart.
Action: Switch off LTU and replace board.
Interpretation of auxiliary data:

Byte 0 = 01 Length of the subsequent related data
Byte 1 = 0B both PLL chips are faulty.

F5901
LTUC
BOTH PLL DEFECT

Type: Service-specific (Format)
Short text: No ACTIVE signal from DP
Cause: No ACTIVE signal present. Attempt to restore LTUC and LTUCE 1 minute
after failure was unsuccessful. The event signal came from the LTUC or LTUCE firmware.
System reaction: Blocks the LTUC and attempts to restart.
Action:

- Trace ACTIVE signal to find cause of signal loss.

- If signal can be measured at LTUC input, switch LTUC board off and back on (power-on reset). If this does not work, replace board.

Interpretation of auxiliary data:

Byte 0 = 01 Length of the subsequent related data
Byte 1 = 06 No ACTIVE signal.

F5902
LTUC
BUFFER OVERFLOW

Type:		Service-specific (Format 22)
Short text:		Buffer overflow on LTUC(E)
Cause:		Buffer overflow on the LTUC or LTUCE board. The LTU is reset and

immediately reloaded.

System reaction:	resets the LTUC board.
Action:		If the error recurs contact your next level of support.

Interpretation of auxiliary data:

Byte 0   =   01 Length of the subsequent related data

Byte 1   =   Status byte

　　　　　80   Buffer overflow on the LTUC

　　　　　0C   Buffer overflow on the LTUCE

F5903
LTUC
TIME SWITCH ERROR

Type: Service-specific (Format 22)

Short text: RTO: Blocked highways

Cause: Blocked highways (status: UNACA) were detected that indicate an LTUC error. Same highways blocked in both CC halves.

Action: Replace the board LTUC. Evaluate previous LTUC error messages.

Interpretation of auxiliary data:

Byte 0   =   10 Length of the subsequent related data (16dec)

Byte 1   =   HWY 0 - 7

Byte 2   =   HWY 8 - 15

Byte 3   =   HWY 16 - 23

.....

Byte 16   =   HWY 120 - 127

F5904
LTUC
WRONG RGEN/ACGEN INSRT

Type: Service-specific (Format 18)
Short text: Wrong board type plugged
Cause: Wrong board type plugged in slot reserved for ringing generator or AC generator.
System reaction: restarts the board to generate the INIT error.
Action: Unplug wrong board type and plug in correct board type.
Interpretation of auxiliary data: no data available

F5905
LTUC
WRONG RGEN/ACGEN RMVD

Type: Service-specific (Format 18)
Short text: Wrong board type removed
Cause: Wrong board type plugged in slot reserved for ringing generator or AC generator has been removed.
System reaction: blocks the board in accordance with NPR.
Action: Plug in correct board type.
Interpretation of auxiliary data: no data available

F5906
LTUC
STBY CABLE DEF

Type:	Service-relevant (Format 43)
Short text:	Cable to the standby computer defective.
Cause:	Standby line not connected or defective.
System reaction:	None
Action:	Connect or replace cable (highway/timeslot, see plaintext).

F5907
LTUC
BACK IN SERVICE

Type: Service-relevant (Format 18/43)

Short text: LTUC back in service

Cause: Following a defect, the LTUC was put back into service after multiple attempts and a preset block timeout. The LTUC is then monitored for further failure. If a new defect occurs during this monitoring time, it is put back into service on a trial basis after a longer block time.

In ACTION = INSTRIAL (in service trial) putting into service on a trial basis (Format 43)

In ACTION = IN SERV (in service), putting into service is permanent, the monitoring period is over. (Format 18)

System reaction: LTUC goes from DEF to READY.

Action: Positive message, no action required.

Interpretation of auxiliary data: Text only for format 43:

TRIAL NO: 1 = current number of attempts to put the system into service (max. 8, for more information, see AMO PSTAT)

F5908
LTUC
NOT IN SERVICE

Type: Service-relevant (Format 18)

Short text: LTUC did not go into service

Cause: Despite several attempts to put the unit into service (max. 8, for more information, see AMO PSTAT), the element could not be put into service correctly due to a new error.

System reaction: LTUC goes from READY to DEF state.

Action: Evaluate the error messages that referred to the defect. Rectify the error, if necessary, replace the board.

Positive acknowledgement, see F5907.

F5909
LTUC
BOARDS LEFT LTU SHELF

Type: Service-relevant (Format 22)
Short text: Several boards leave the shelf
Cause: Since at least two boards leave the shelf simultaneously, a central error must also be incorporated in the shelf.
System reaction: The relevant boards switch to NPR state, individual boards signaling is performed with the message F5354.
Action: Activate/deactivate relevant boards. In necessary, disconnect and then reconnect to see if it goes back into service. This error can also be caused if two adjacent boards, for example, are causing mutual interference.
Test LTUC and, if necessary, replace it. The cause error could also be the power supply to the shelf, clocks or backplane.
Interpretation of auxiliary data:

The same data as for the message F5354 BOARD SECONDARY OUT ATTEND L is output. This message can only be interpreted fully by a system specialist. Notify the next level of support.

F5915
LTUC
PAYLOAD CONNECTION

Type: Service-specific   (Format 43)

Short text: Information on the quality of the payload connection over IP for NBCS.

Cause: This message on the LTUC level is sent from NCUI NBCS.

Whenever a call is set up via an NBCS system, the NCUI or STMI loadware monitors the voice quality of the route over the IP network by checking various quality parameters (e.g., the round-trip delay).

When the quality drops below a configurable threshold value, the NCUI/STMI loadware reports "IP BAD QUALITY". When the quality exceeds a configurable threshold value, the loadware reports "IP GOOD QUALITY".

The loadware also monitors the voice quality of the route over IP after the call has been enabled using UDP pings; however, this monitoring occurs only for a defined time period. If the voice quality was bad and did not improve during this time period, the message "IP QUALITY Test Timer EXPIRED" is displayed. This limits the time during which the loadware can test the quality with UDP pings.

The message includes information on both the stations involved in the call as well as both IP addresses.

System reaction:

00H IP BAD QUALITY

The relevant entry in the IP payload path table is set to "BAD". The currently set up call is not changed, but retains the current quality. However, if a further attempt to set up a call is made for the same route and if an "alternative payload path" via ISDN has been configured in the system, the call is routed via this alternative payload path" (with the better voice quality).

01H IP GOOD QUALITY

The relevant entry in the IP payload path table is set to "GOOD". The currently set up call is not changed, but retains the current quality. New calls are again routed via the IP network.

02H IP QUALITY TEST TIMER EXPIRED

The relevant entry in the IP payload path table is set to "GOOD". New calls are again routed via the IP network even if the quality is still bad.

Action: No special actions required.

If "IP BAD QUALITY" is reported too often, this indicates that the IP network connection of the NBCS system was not designed or configured for VoIP requirements. In this case, you will need to check the IP network.

Interpretation of auxiliary data:

Cause: 00H IP BAD QUALITY

	01H IP GOOD QUALITY
	02H IP QUALITY TEST TIMER EXPIRED
STATION A (PEN)	PEN of station A. The PEN consists of 'LTG-LTU-PBC-CIR-SUBUNIT'. The SUBUNIT may be redundant in some cases if the station is a trunk group or STMI.
STATION B (PEN)	PEN of station B. The PEN consists of 'LTG-LTU-PBC-CIR-SUBUNIT'. The SUBUNIT may be redundant in some cases if the station is a trunk group or STMI.
Source IP address	IP address of the source of the checked route.
Destination IP address	IP address of the destination of the checked route.
Text string	ASCII text string inserted by the loadware.
Auxiliary data:	Diagnostic data of board LW added for product specialist.

Description of auxiliary data
Byte 01-04: Round trip networking delay (in ms)
Byte 05-08: Filler with FFFFFFFF
Byte 09-12: Fraction outgoing packets (in %)
Byte 12-16: Filler with FFFFFFFF
Byte 17-20: Jitter last RTCP (in ms)
Byte 21-24: Filler with FFFFFFFF
Byte 25-28: Fraction incoming packets (in %)

Example:

```
000000C4FFFFFFFF00000001FFFFFFFF
00000001FFFFFFFF00000000FFFFFFFF
```

Round trip networking delay: 196ms
Fraction outgoing packets: 01%
Jitter last RTCP: 01ms
Fraction incoming packets: 00%

If the messages is output after the connection is cleared, no auxiliary data is available. 00 or FF is displayed in this case.

```
00000000FFFFFFFF00000000FFFFFFFF
00000000FFFFFFFF00000000FFFFFFFF
```

F5916
LTUC
SURV PATH ERROR

Type: Service relevant   (Format 43)

Short text: Survivability path test failed to AP shelf

Cause: The survivability path is defect. The path was tested by RTO with test result DB_QR_RE_SURV_PATH_ERR or DB_QR_RE_TIME_ERR. A reference test of the survivability modem by FA-RTO shows that the modem works.

Possible reasons:

Configuration of AP or router wrong

Router defective or no resources available

ISDN cable to modem defective or unpluged

System reaction: Only signaling

Action: The configuration of the AP has to be checked.

All parts of the connection such as WAML, S0/S2 board, cables, ISDN cable to the modem and their configuration has to be checked.

F5917
LTUC
SURV MODEM ERROR

Type: Service relevant   (Format 43

Short text: Survivability modem test failed

Cause: The test of the survivability modem by RTO failed.

Possible reasons:

Modem cable defective or unpluged.

Modem defective.

Modem not switched on.

System reaction: Only signaling.

Action: Modem and modem cable has to be checked.

F5918
LTUC
SUPERVISION

Short text: See below.

Reason: 00H 19 INCH EXPANSION BOX SUPERVISION NEEDED, BOX DOES NOT EXIST

Type: Service relevant   (Format 43)
Short text: The expansion box for 19inch NBCS AP does not exist.
Cause: This message is generated by AMO after configuring the first peripheral board in a 19inch NBCS AP. The message is only signaled, if then the expansion box of a 19inch NBCS AP does not exist or is not connected to the 19inch base box or is not powered on although it is necessary for the peripheral board. It is not signaled if the expansion box of a 19inch NBCS AP is available.
System reaction: An alarm is generated.
Action: It has to be checked if the expansion box is not connected to the base box or if it is not powered on or if it is missing at all. The expansion box has to be installed.
Interpretation of auxiliary data: No auxiliary data available.

Reason: 01H 19 INCH EXPANSION BOX SUPERVISION NOT NEEDED

Type: Service relevant   (Format 43)
Short text: The expansion box for 19inch NBCS AP does not exist.
Cause: This message is generated by AMO after deleting the last peripheral board in a 19inch NBCS AP. This message is never signaled.
System reaction: An alarm is generated.
Action: No action necessary.
Interpretation of auxiliary data: No auxiliary data available.

Reason: 02H RG/WG SUPERVISION NEEDED, DEVICE IS INACTIVE

Type: Service relevant   (Format 43)
Short text: RG/WG is inactive /active
Cause: This message is generated by AMO after configuring the first SLMA board (for RG) or TMLBL/TMBCT board (for WG) in a NBCS AP.
If the signal of a RG/WG board or module (In a 19inch shelf only a RG module is possible) has not been detected by the LTU control board loadware, this error message is signaled.
If the signal of a RG/WG board or module is available, no error message is signaled because this is the normal operation mode.
System reaction: An alarm is generated.
Action: Check if the necessary RG/WG board or RG module is mounted. Replace the defective RG/WG board or RG module.
Interpretation of auxiliary data:

RG/WG DEVICE: 00H   RG STANDARD BOARD

                  01H   WG STANDARD BOARD

                  02H   RG IN 19 INCH BASE BOX

03H   RG IN 19 INCH EXPANSION BOX

Reason: 03H RG/WG SUPERVISION NOT NEEDED

Type: Service relevant   (Format 43)
Short text: RG/WG is inactive /active.
Cause: This message is generated by AMO after deleting the last SLMA or
TMLBL/TMBCT board in a NBCS AP. This message is never signaled.
System reaction: An alarm is generated.
Action: No action necessary.
Interpretation of auxiliary data:

RG/WG DEVICE: 00H   RG STANDARD BOARD

01H   WG STANDARD BOARD

02H   RG IN 19 INCH BASE BOX

03H   RG IN 19 INCH EXPANSION BOX

F5919
LTUC
EMERGENCY BEGIN

Type: Diagnosis-relevant (Format 42)

Short text: Start of Access Point Emergency Mode

Cause: One or more access points that can be controlled by the reporting CC-AP were switched to emergency mode manually (using AMO APESU) or the conditions for an automatic switchover to emergency mode were fulfilled.

System reaction: CC-AP controls the relevant access points until a manual reset or until the conditions for an automatic reset are fulfilled.

Action: In case of an automatic switch to emergency mode, check the connections from the host system to the appropriate access points.

Interpretation of auxiliary data:

No supplementary data present.

F5920
LTUC
EMERGENCY END

Type: Diagnosis-relevant (format 42)

Short text: End of Access Point Emergency Mode

Cause: The reporting CC-AP has given up control for the last access point
controlled by it. The switchover occurred manually (using the AMO APESU) or the conditions
for an automatic reset were fulfilled.

System reaction: CC-AP no longer controls any Access Points.

Action: No action required.

Interpretation of auxiliary data:

No supplementary data present.

F5921
LTUC
EMERGENCY SHELVES

Type: Diagnosis-relevant (format 49)

Short text: List of access points controlled by the CC-AP

Cause: After the CC-AP is restarted/reloaded, all access points controlled by the reporting CC-AP are listed. The message only appears if at least one access point is controlled by the CC-AP.

System reaction: CC-AP controls the displayed Access Points.

Action: No action required.

Interpretation of auxiliary data:

ACCESS POINTS: numbers of the access points controlled by the CC-AP.

F5922
LTUC
CC AP UNAVAILABLE

Type: Diagnosis-relevant (format 42)
Short text: CC-AP cannot be reached from the host system
Cause: The host system cannot reach the CC-AP due to a connection problem.
System reaction: One or more access points that could be controlled by the displayed CC-AP can no longer be switched to emergency mode manually (using the AMO APESU).
Action: Check the connections from CC-AP to the access points which could be controlled by the displayed CC-AP.
Interpretation of auxiliary data:

CC-AP: number of the unreachable CC-AP.

F5923
LTUC
CC AP AVAILABLE

Type:	Diagnosis-relevant (format 42)
Short text:	CC-AP can be reached again from the host system
Cause:	The host system can reach the CC-AP again.
System reaction:	None.
Action:	No action required.
Interpretation of auxiliary data:	

CC-AP: number of the CC-AP which can be reached again.

F5924
LTUC
ENCRYPTION ERROR

Type: Diagnosis-relevant/service-relevant   (Format 43)

Short text: NCUI identifies the encryption problem

Cause: An unexpected (encrypted or unencrypted) message was received or an encrypted message cannot be decrypted.

System reaction: Connection to the sending host is cleared down (by NCUI) and an attempt is made to set a connection to the access point.

Action: Find the cause of the encryption problem and correct the setting.

Interpretation of auxiliary data:

The cause of the encryption problem is indicated in plain text:

00h - PASSIVE CONNECTION IS NOT ENCRYPTED
01h - UNEXPECTED ENCRYPTED MESSAGE RECEIVED FROM HOST-CC
02h - UNEXPECTED ENCRYPTED MESSAGE RECEIVED FROM CC-AP
03h - UNEXPECTED UNENCRYPTED MESSAGE RECEIVED FROM HOST-CC
04h - UNEXPECTED UNENCRYPTED MESSAGE RECEIVED FROM CC-AP
05h - CANNOT DECRYPT MESSAGE FROM HOST-CC
06h - CANNOT DECRYPT MESSAGE FROM CC-AP

F5950
LTUC
EXC NO HW FUNCTION

Type: Service-specific (Format 22)

Short text: Hardware function error (LW exception error)

Cause: Functional error of the board hardware or missing external feed (power supply, ringing current, etc.).

System reaction:

- WAML: statistics, resets board

- Other board: statistics

Action: Check board hardware and external signal sources. If no error is found, save the error message data and contact your next level of support.

Interpretation of auxiliary data: see F5737

F5951
LTUC
EXC LW DUMMY

Type: Diagnosis-specific (Format 22)
Short text: Error with DUMMY event (LW exception error)
Cause: An error occurred with a DUMMY event.
System reaction: signals only, no statistics
Action: For diagnosis purposes, this message is temporarily incorporated into the loadware code of some boards by the loadware development department. Action depends on the evaluation of the HEX data.

Save error message data and contact your next level of support.

Interpretation of auxiliary data: see F5737.

F5952
LTUC
EXC RESOURCE SHORTAGE

Type: Service-specific (Format 22)

Short text: Resource shortage (LW exception error)

Cause: Overload, shortage of buffer memory. The board concerned can no longer process incoming messages since these are missing vital information elements. Reseizures/re-assignments are prevented by the system for all board circuits.

System reaction:

- Line circuits: blocks all board circuits

- Subscriber circuits: only blocks the free terminals of the board.

Action: Save error message data and contact your next level of support.

Interpretation of auxiliary data: see F5737.

F5953
LTUC
EXC RESOURCE AVAILABLE

Type:	Service-specific (Format 22)
Short text:	End of resource shortage (LW exception error)
Cause:	End of overload. The board concerned can process incoming messages

again since the message queue has been processed.

System reaction:

- Line circuits: unblocks all circuits of a board

- Subscriber circuits: unblocks any terminals of the board not seized.

Action: Positive acknowledgment of F5952, no action.

Interpretation of auxiliary data: see F5737.

F5954
LTUC
EXC LW TRACE DATA

Type: Service-specific (Format 22)
Short text: Loadware trace data (LW exception error)
Cause: The SLC16 board (Cordless) can store its own trace results and output to
printer.
System reaction: signals only, no statistics.
Action: Evaluate trace results.

F5955
BOARD
EXC ERROR DUMP REQUEST

Type:	Service-specific (Format 22)
Short text:	Error buffer full (LW exception error)
Cause:	Histo file of WAML has errors. Implausible SW functions.
System reaction:	statistics
Action:	Initiate dump output of error buffer with PETRA AMO, see auxiliary data

(HEX data) for addresses and length of dump.

Interpretation of auxiliary data:

Byte 0 - 15: not relevant
Byte 16: Number of bytes in auxiliary data
Byte 17: Offset address of error buffer LOW byte (for PETRA AMO)
Byte 18: Offset address of error buffer HIGH byte (for PETRA AMO)
Byte 19: Segment address of error buffer LOW byte (for PETRA AMO)
Byte 20: Segment address of error buffer HIGH byte (for PETRA AMO)
Byte 21: Length of error buffer LOW byte (for PETRA AMO)
Byte 22: Length of error buffer HIGH byte (for PETRA AMO)

The dump output initiated with PETRA can be interpreted by your system specialist.
Error buffer is dumped with PETRA AMO (2 KB output respectively):

```
ABFR-PETRA: DUMP, ltg, ltu, slot, 86, F000, 0, 101;

ABFR-PETRA: DUMP, ltg, ltu, slot, 86, F000, 0, 102;

ABFR-PETRA: DUMP, ltg, ltu, slot, 86, F000, 0, 103;
```

Deletes and releases error buffer (no dump output):

```
ABFR-PETRA: DUMP, ltg, ltu, slot, 86, F000, 0, 100;
```

F5956
BOARD
EXC LOG DUMP REQUEST

Type:　　　　　　　Service-specific (Format 22)

Short text:　　　　　LOG dump request (LW exception error)

Cause:　　　　　　This message can only be initiated via the PETRA AMO:

ABFR-PETRA: DUMP, ltg, ltu, slot, 86, F000, 0, 23;

It is used to ascertain the address and length of the LOG buffer (trace buffer).

The types of the trace inputs are defined by the LANC AMO (table of global data, parameter TRCLVL).

System reaction:　　statistics

Action:　　　　　　Initiate dump output of LOG buffer (contains trace entries of WAML) with PETRA AMO, see auxiliary data (HEX data) for addresses and length of dump.

Interpretation of auxiliary data:

Byte 0 - 15: not relevant

Byte 16: Number of bytes in auxiliary data

Byte 17: Offset address of LOG buffer LOW byte (for PETRA AMO)

Byte 18: Offset address of LOG buffer HIGH byte (for PETRA AMO)

Byte 19: Segment address of LOG buffer LOW byte (for PETRA AMO)

Byte 20: Segment address of LOG buffer HIGH byte (for PETRA AMO)

Byte 21: Length of LOG buffer LOW byte (for PETRA AMO)

Byte 22: Length of LOG buffer HIGH byte (for PETRA AMO)

The dump output initiated with PETRA can be interpreted by your system specialist.

F5957
BOARD
EXC PROC INTRPT HARD

Type:	Service-specific (Format 22)
Short text:	Processor hard interrupt, processing not resumed (LW exception error)
Cause:	Error in LW. An interrupt with an unexpected vector number has

occurred.

System reaction:	statistics and resets the board.
Action:	contact your next level of support.

Interpretation of auxiliary data:

Byte 0 - 15: not relevant
Byte 16: Number of bytes in auxiliary data
Byte 17: Interrupt vector number LOW byte
Byte 18: Interrupt vector number HIGH byte

F5958
BOARD
EXC PROC INTRPT SOFT

Type:　　　　　　　　Service-specific (Format 22)
Short text:　　　　　Processor soft interrupt, processing resumed (LW exception error)
Cause:　　　　　　　Error in LW. An interrupt with an unexpected vector number has
occurred.
System reaction:　statistics
Action:　　　　　　　contact your next level of support.
Interpretation of auxiliary data:

Byte 0 - 15: not relevant
Byte 16: Number of bytes in auxiliary data
Byte 17: Interrupt vector number LOW byte
Byte 18: Interrupt vector number HIGH byte

F5959
BOARD
EXC HW LAN CONTR INTRN

Type: Service-specific (Format 22)

Short text: LAN controller to 'internal' LAN of the WAML faulty (LW exception error)

Cause: HW error. Smooth operation of the LAN controller in the direction of the 'internal' LAN is no longer guaranteed. Destinations on this interface are no longer available.

System reaction: the LAN interface is disabled by the LW.

Action: "Manual" deactivation and re-activation of board (i.e. via AMO). If this does not work, replace board (action also described in simultaneously signaled error message F4704).

Interpretation of auxiliary data: can only be interpreted by a system specialist.

F5960
BOARD
EXC HW LAN CONTR EXTRN

Type: Service-specific (Format 22)

Short text: LAN controller to 'external LAN of the WAML faulty (LW exception error)

Cause: HW error. Smooth operation of the LAN controller in the direction of the 'external' LAN is no longer guaranteed. Destinations at this interface may no longer be available.

System reaction: the LAN interface has been deactivated.

Action: "Manual" deactivation and re-activation of board (i.e. via AMO). If this does not work, replace board (action also described in the simultaneously signaled error message F4704).

Interpretation of auxiliary data: can only be interpreted by a system specialist.

F5961
BOARD
EXC FIREWALL ALARM

Type: Service-specific (Format 22)

Short text: Firewall alarm (LW exception error)

Cause: An unauthorized LAN user is attempting to send data packets via the WAML.

System reaction: statistics

Action: Review configuration (AMO LANC) to determine whether all necessary user authorizations are properly configured. If user authorizations are OK, trace unauthorized user (hacker?).

Interpretation of auxiliary data: The auxiliary data is output in plain text in the maintenance alarm message; see description under F4704 with short text: ERROR: FIREWALL ALARM.

F5962
BOARD
PER HW MESSAGE

Type: Service-specific (Format 22)

Short text: Message for hardware periphery of peripheral board (LW exception error)

Cause: Dependability has received request from peripheral board for HW periphery reload (e.g. for cordless base stations).

System reaction: statistics and load commands to DC.

Action: If error recurs repeatedly, check base station concerned and replace if necessary.

Interpretation of auxiliary data:

Byte 0 = 01 Number of bytes to follow

Byte 1 = Error type (DB_M_QF_BOARD_PER_HW_SET)

      00 Load code and data

      01 Load data only

      02 Match LW-ID and Data-ID

F5963
BOARD
EXC SYNCHRON AGAIN

Type: Service-specific (Format 22)

Short text: Reference clock for Cordless boards back in synch. (LW exception error)

Cause: One of the (four possible) Cordless master boards was able to recover the reference clock, e.g. after replacing a board.

System reaction: end of major alarm to the Service Center.

Action: No action necessary, since this is a positive acknowledgment. End of clock failure for all cordless line boards.

Interpretation of auxiliary data: see F5737

F5964
BOARD
EXC FATAL SYNCHRON ERR

Type: Service-specific (Format 22)
Short text: Clock failure for all cordless line boards (LW exception error)
Cause: None of the (four possible) Cordless master boards was able to recover the reference clock.
System reaction: major alarm to the Service Center
Action: Evaluate preceding error messages.

Remote access: display master boards via AMO. Use BSSU to deactivate and re-activate all these boards in sequence. Check response.

Local access: unplug and replug all master boards, replace boards on a trial-and-error basis if necessary, check clock supplier

Interpretation of auxiliary data: see F5737

F5965
BOARD
EXC SYNCHRON TAKE OVER

Type: Service-specific (Format 22)

Short text: Clock recovery taken over by other cordless board (LW exception error)

Cause: Cordless master board failure. At startup, the message only signals that the system is defining the clock for the first time.

From CMI V2.2: the message is also generated by the first clock master when the system starts up. If two boards are in clock master mode, two messages from different boards in the node must be observed.

System reaction: signaling

Action: Evaluate preceding error messages. Determine cause of board failure. Since master board is only one of four possible masters, the reference clock is maintained for all (other) cordless line boards, base stations and cellular phones. User services are only affected by clock errors of the type EXC FATAL SYNCHRON ERR.

Interpretation of auxiliary data: see F5737

F5970
CIRCUIT
EXC NO PROCEDURE

Type:	Diagnosis-specific (Format 22)
Short text:	Procedure call failed (LW exception error)
Cause:	A procedure (routine) cannot be called. Exception error in the loadware

of a COSMOS board (e.g., SLMA24, SLMA16, TMOM, TMEW2, SLMO, etc.).

System reaction:	statistics
Action:	Action depends on the evaluation of the auxiliary data.

Save error message data and contact your next level of support.

Interpretation of auxiliary data:

Byte 0	=	Length of the data to follow
Byte 1	=	Exception Type
Byte 2	=	LW_PROCESS
Byte 3	=	STATE
Byte 4	=	EVENT
Byte 5-8	=	ADDRESS
Byte 9	=	SOURCE_ID
Byte 10	=	DEST_ID
Byte 11	=	INTERNAL_INFO
Byte 12-15	=	Reserve for additional data
Byte 16	=	Length of the auxiliary data
Byte 17-48	=	max 32 bytes miscellaneous auxiliary data

> See also Chapter , "Device names".

F5971
CIRCUIT
EXC NO PROCESS

Type: Diagnosis-specific (Format 22)

Short text: Message sent to non-existent process (LW exception error)

Cause: A message or an event was sent to a non-existent process. Error in the loadware of a COSMOS board or in the system software.

System reaction: statistics

Action: Action depends on the evaluation of the auxiliary data. Save the error message data and contact your next level of support.

Interpretation of auxiliary data: see F5970

> See also Chapter , "Device names".

F5972
CIRCUIT
EXC EC NOT VALID

Type: Diagnosis-specific (Format 22)
Short text: Unexpected event code (LW exception error)
Cause: Event code EC of a message was not expected in the current state and
current routine. Error in the loadware of a COSMOS board or in the external message
System reaction: statistics
Action: Action depends on the evaluation of the auxiliary data. Save the error
message data
and contact your next level of support.
Interpretation of auxiliary data: see F5970.

See also Chapter , "Device names".

F5973
CIRCUIT
EXC TIMER OVERFLOW

Type: Diagnosis-specific (Format 22)
Short text: Timer out of range (LW exception error)
Cause: The value of the timer in the message was outside the valid range. Error
in the system software.
System reaction: statistics
Action: Action depends on the evaluation of the auxiliary data. Save the error
message data and
contact your next level of support.
Interpretation of auxiliary data: see F5970.

> See also Chapter , "Device names".

F5974
CIRCUIT
EXC LIST OVERFLOW

Type: Diagnosis-specific (Format 22)

Short text: Buffer overflow in the mailbox (LW exception error)

Cause: Error in the loadware of a COSMOS board, or board is receiving too many messages.

System reaction: board is automatically reset and restored to service.

System reaction: the circuit is reset by the system and immediately activated.

Action: Action depends on the evaluation of the auxiliary data. Save the error message data and contact your next level of support.

Interpretation of auxiliary data: see F5970.

> See also Chapter , "Device names".

F5975
CIRCUIT
EXC CMD NOT VALID

Type:　　　　　　　Diagnosis-specific (Format 22)

Short text:　　　　　Invalid command for EPIC driver (LW exception error)

Cause:　　　　　　The EPIC driver received an invalid command. Error in the loadware of a
COSMOS board.

System reaction:　statistics

Action:　　　　　　Action depends on the evaluation of the auxiliary data. Save the error
message data and
contact your next level of support.

Interpretation of auxiliary data: see F5970.

See also Chapter , "Device names".

F5976
CIRCUIT
EXC CMD Q OVERFLOW

Type:	Diagnosis-specific (Format 22)
Short text:	Command queue overflow (LW exception error)
Cause:	Error in the loadware of a COSMOS board.
System reaction:	statistics
Action:	Action depends on the evaluation of the auxiliary data. Save the error

message data and
contact your next level of support.

Interpretation of auxiliary data: see F5970.

See also Chapter , "Device names".

F5977
CIRCUIT
EXC COSMOS EXCEPTION

Type: Diagnosis-specific (Format 22)

Short text: COSMOS OS error (LW exception error)

Cause: An exception error was reported by the COSMOS operating system. Invalid COSMOS command or invalid parameter. Error in the loadware of a COSMOS board.

System reaction: statistics

Action: Action depends on the evaluation of the auxiliary data. Save the error message data and contact your next level of support.

Interpretation of auxiliary data: see F5970.

> See also Chapter , "Device names".

F5978
CIRCUIT
EXC IOM2 ERROR

Type:	Service-specific (Format 22)
Short text:	IOM2 command not processed (LW exception error)
Cause:	A command for the IOM2 monitor was not processed correctly. Error in

the hardware or loadware of a COSMOS board.

System reaction:	statistics
Action:	Action depends on the evaluation of the auxiliary data. Save the error

message data and

contact your next level of support.

Interpretation of auxiliary data: see F5970.

See also Chapter , "Device names".

F5979
CIRCUIT
EXC CASE NOT VALID

Type: Diagnosis-specific (Format 22)

Short text: Invalid parameter (LW exception error)

Cause: The supplied parameters are not valid in the current CASE. Error in the loadware of a COSMOS board or in the system software.

System reaction: no automatic circuit reset necessary.

Action: Action depends on the evaluation of the HEX data. Save the error message data and contact your next level of support.

Interpretation of auxiliary data: see F5970.

> See also Chapter , "Device names".

F5980
CIRCUIT
EXC PARA NOT VALID

Type: Diagnosis-specific (Format 22)
Short text: Invalid parameter (LW exception error)
Cause: The supplied parameters are not valid in the current CASE. Error in the loadware of a COSMOS board or in the system software.
System reaction: board is automatically reset and restored to service.
Action: Action depends on the evaluation of the HEX data. Save the error message data and contact your next level of support.
Interpretation of auxiliary data: see F5970.

> See also Chapter , "Device names".

F5981
CIRCUIT
EXC SCAN OVERFLOW

Type: Diagnosis-specific (Format 22)

Short text: Too many HW events (LW exception error)

Cause: Too many HW events during a defined time period. Error in the loadware of a COSMOS board or too many external events.

System reaction: board is automatically reset and restored to service after a time delay.

Action: Action depends on the evaluation of the HEX data. Save the error message data and contact your next level of support.

Interpretation of auxiliary data: see F5970.

See also Chapter , "Device names".

F5982
CIRCUIT
EXC NO HW FUNCTION

Type: Service-specific (Format 22)

Short text: Hardware function error (LW exception error)

Cause: Functional error of the circuit hardware or missing external feed (power supply, ringing current, etc.).

System reaction: statistics

Action: Check board hardware and external signal sources. If no error is found, save the error message data and contact your next level of support.

Interpretation of auxiliary data: see F5970.

> See also Chapter , "Device names".

F5983
CIRCUIT
EXC LW EXCEPTION
EXC LW DUMMY (up to SP300-V3.4)

Type: Diagnosis-specific (Format 22)
Short text: Error with DUMMY event (LW exception error)/Message loss (ATM only)
Cause: An error occurred with a DUMMY event, or the STMA loadware detected
a loss of message traffic (DH of Hicom system no longer synchronous with DH partner in
loadware).
System reaction: signals only, no statistics
Action: DUMMY event:
For diagnosis purposes, this message is temporarily incorporated into the loadware code of
some boards by the loadware development department. Action depends on the evaluation of
the HEX data.
Loss of message traffic:
Action depends on the evaluation of the HEX data. Save the error message data and contact
your next level of support.
Interpretation of auxiliary data: see F5970.

(i)	See also Chapter , "Device names".

F5984
CIRCUIT
CONTACT ALARM ON

Type: Service-specific (Format 2F)

Short text: Contact alarm set (US - specific)

Cause: An external contact alarm was detected by the board. The alarm will remain set until the alarm reset message (contact alarm off) is signaled.

System reaction: signals only.

Action: This message is signaled as soon as the board detects the external contact alarm.

ⓘ	See also Chapter , "Device names".

F5985
CIRCUIT
CONTACT ALARM OFF

Type: Service-specific (Format 2F)
Short text: Contact alarm reset (US - specific)
Cause: External contact alarm reset message (alarm has been cleared).
System reaction: signals only
Action: This message is signaled as soon as the board detects the absence of the external contact alarm.

> See also Chapter , "Device names".

F5986
CIRCUIT
TSC REJECTION

Type: Service-specific (Format 2F)

Short text: TSC information rejected (US - specific)

Cause: User-user signaling: temporary signaling connection information (TSC) is rejected by AT&T's SDN, as reported by the CorNet VN Gateway loadware. This message is always output with the first rejection. Subsequent rejections are reported at intervals of 1 to 15 minutes at most.

System reaction: signals only

Action: Action depends on the evaluation of the HEX data. Save the error message data and contact your next level of support.

Interpretation of auxiliary data:

The first byte contains the number of rejections over the previous 15 minutes.

> See also Chapter , "Device names".

F5987
CIRCUIT
FEA REJECTION

Type: Service-specific (Format 2F)

Short text: FEA information rejected (US - specific)

Cause: User-user signaling: congestion feature information (FEA) is rejected by AT&T's SDN, as reported by the CorNet VN Gateway loadware. This message is always output with the first rejection. Subsequent rejections are reported at intervals of 1 to 15 minutes at most.

System reaction: signals only

Action: Action depends on the evaluation of the HEX data. Save the error message data and contact your next level of support.

Interpretation of auxiliary data:

The first byte contains the number of rejections over the previous 15 minutes.

> See also Chapter , "Device names".

F5988
CIRCUIT
L1 SPOR ERR S0

Type: Service-specific (Format 22)

Short text: Sporadic layer 1 failure

Cause: Sporadic layer 1 failure on S_0 bus due to line error or brief failure of an S0 bus terminal. Message can be initiated by S0 board, SLMO board, DIUS2 board with cordless or SLMN with video PC.

System reaction: statistics, signaling.

Action: If this error occurs frequently, check S0 bus .

Interpretation of auxiliary data:

Byte 0   =   Error type (DB_M_QF_CIR_L1_ERR_SET)

00   Corruption on the line (bit slip)

01   Corruption on the line (bit error rate > 10 E-6)

02   Corruption on the line (bit error rate > 10 E-3)

03   Line interruption (frame loss)

04   Line interruption (no signal)

05   Error signaling from the remote computer (alarm display signal)

06   Error signaling from the remote computer (remote alarm)

07   No circuit data loaded

08   L1 cannot be activated, or is not active

09   Message overflow (USA)

0A   Invalid message (USA)

0B   Error signaling from the remote computer (remote alarm CRC4)

Special case for SLMN-T1 in USA:

10   Loss of Signal

11   Max Error Secs

12   Red Alarm LFA

13   Red Alarm LMA

14   Yellow Alarm RFA

15   Yellow Alarm RMA

16   AIS Alarm (Blue)

17   Channel Fault

See also Chapter , "Device names".

F5989
CIRCUIT
L2 SPOR ERR S0

Type: Service-specific (Format 22)
Short text: Sporadic layer 2 error
Cause: Sporadic Layer 2 error on S_0 bus. This error can only be reported by a functional terminal connected to a DIUS2 board or a video PC connected to an SLMN in an S2 point-to-point configuration. Terminals on the S0 bus will output the error message F5454 instead.
System reaction: statistics
Action: Save error message data and contact your next level of support.
Interpretation of auxiliary data: see F5454.
Byte 0 = Error type (DB_M_QF_CIR_L2_SPO_ERR_SET)

See also Chapter , "Device names".

F5990
CIRCUIT
L2 STOP NEW SEIZURE S0

Type: Service-specific (Format 18)

Short text: STOP for re-assignments/reseizures

Cause: Overload, shortage of buffer memory on S_0 bus. Reseizures/re-assignments are prevented by the system for the circuit concerned. Message can also be initiated by S0 board, DIUS2 board with cordless or SLMN with video PC.

System reaction: blocks the terminal that has not been seized. In the case of DIUS2 Cordless or Video PC, the circuit is blocked.

Action: Save error message data and contact your next level of support.

> See also Chapter , "Device names".

F5991
CIRCUIT
L2 START NEW SEIZUR S0

Type: Service-specific (Format 18)

Short text: Re-assignments/reseizures possible again

Cause: Overload end. The board concerned can process incoming messages again since the message queue has been processed. Message can also be initiated by S0 board, DIUS2 board with cordless or SLMN with video PC.

System reaction: releases the board that has not been seized. In the case of DIUS2 Cordless or Video PC, releases the circuit.

Action: Positive acknowledgment of F5990, no action.

> See also Chapter , "Device names".

F5992
CIRCUIT
LX ACTIVE S0

Type: Service-specific (Format 36)

Short text: Layer 1 or 3 on S_0 bus active

Cause: The errored layer 1 of the S_0 bus is intact again. Layer 2 will be re-established as soon as required by the terminal at TERM level. Message can also be initiated by S0 board, DIUS2 board with cordless or SLMN with video PC. In this regard the message 'Layer 3 active' may also be displayed for the SLMN board.

The SLMN-T1 board in the USA is used for video PC, but with the interface of the T1-boards for networking!

System reaction: layer 1 or layer 3 is activated.

Action: No action necessary as this is a positive acknowledgment.

Interpretation of auxiliary data: (supported by text from EV2.0)

Special case for SLMN-T1 in USA:

    REASON: 01H ACQUISITION OF SIGNAL

    REASON: 02H CHANNEL FAULT OK

    REASON: 03H GREEN ALARM

    REASON: 04H MIN ERR SECS

    REASON: 05H CHANNEL IN SERVICE

    REASON: 06H SPAN IN SERVICE

S0 bus and subsequent board:

    REASON: 07H LAYER 1 ACTIVE

        Layer 1 active for S0 bus, SLMO, DIUS2, SLMN-E1

    REASON: 09H LAYER 3 ACTIVE

        Layer 2/3 active for SLMN-E1

> See also Chapter , "Device names".

F5993
CIRCUIT
L2 ERROR VC

Type: Service-specific (Format 43)

Short text: D-channel of Voice Compression connection not active (Layer 2 error)

Cause: The D-channel may be interrupted anywhere along the connection path of the established VC tie-line connection and the error is only reported by a VCM board. The cause of the error may lie with the VCM board, in the MTS (nailed connection), the DIUS2 or STMD, the external connection path or the (symmetrical) partner configuration in the destination PABX.

System reaction: the D channel and all B channels are blocked. Positive message with F5418 CIRCUIT LX ACTIVE (layer 1 and layer 3).

Action: Evaluate any previous error messages initiated by the partner VCM boards. One of the boards may simply have been unplugged, or the external connection path may be physically interrupted.

The TSU AMO allows you to start an explicit RTO routine test for the VCM boards, which tests the D-channel and all the configured B-channels of a board. The results will eliminate or confirm a defective VCM board as the cause (note that the error is reported in both partner systems!).

If both the VCM boards are in order, the DIUS2 or STMD boards must be eliminated next as the possible cause on a trial-and-error basis.

If all four boards of the partner configurations are in order, the error must lie in an interruption of the external connection path (tie-lines, transit node), or in the MTS (nailed connections).

Restrictions: A routine test order or explicit test of the B-channels of a DIUS2 is not possible if VC channels are configured on the board, (this affects user services).

Routine test orders cannot be explicitly started for STMD boards.

The nailed connection timeslots cannot be tested with an explicit RTO job either, since this also affects user services.

Interpretation of auxiliary data: (supported by text)

STATUSBYTE 1: 00000001 Bit 0 = D channel (faulty)
Bit 1-7 = B channel 1-7
STATUSBYTE 2: 00000000 Bit 8-15 = B channels 8-15

The appropriate status bit is set high (1) for faulty channels; for active or unconfigured channels, the status bit is set low (0).

POSSIBLE OTHER DEFECTIVE UNITS: possible other defective units
PARTNER-CIRCUIT: Circuit address of the partner (DIUS2, STMD etc.)
VCM-PATH: Nailed connection of the VCM circuits
PARTNER-PATH: Nailed connection of the VCM partner (DIUS2, STMD etc.)
PARTNER-SYSTEM

See also Chapter , "Device names".

F5994
CIRCUIT
B CHANNEL VC DEF

Type: Service-specific (Format 43)
Short text: B-channel (channels) of a Voice Compression connection not active.
Cause: a) Individual B-channel of VCM board is defective.
If only <u>one</u> B-channel of the VCM is reported, you can assume that the cause of the error lies with the VCM board concerned (e.g. defective signaling processor).
The error is reported by one or both of the partner VCM boards, i.e., a defective B-channel may be detected and reported by a receiving board but the error can still lie with the transmitting board. In some cases, a transmitting board may not detect any errors to report!
b) All four B-channels of a VCSU defective
This indicates an error on the DIUS2/STMD or in the MTS (nailed connection). One B-channel on a DIUS2 or STMD corresponds to one VCSU of a VCM board (i.e. <u>four</u> compressed channels).
System reaction: the defective channels are blocked. Positive message with F5995 B CHANNEL VC OK
Action: The TSU AMO allows you to start an explicit RTO routine test for the VCM boards, which tests the D-channel and all the configured B-channels of a board. The results will eliminate or confirm a defective VCM board as the cause (note that the error is not necessarily reported by the partner system in which it occurs!).
The overnight routine test of the RTO will localize the defective B-channel and block it by setting it to DEF status.
Next step: Eliminate one of the partner DIUS2/STMD boards as the cause of the error (on a trial-and-error basis!).

Restrictions: A routine test order or explicit test of the B-channels of a DIUS2 is not possible if VC channels are configured on the board, (this affects user services).
Routine test orders cannot be explicitly started for STMD boards.
The nailed connection timeslots cannot be tested with an explicit RTO job either, since this also affects user services.
Interpretation of auxiliary data:

Example:

Bit 4-7 in 1st status byte defective
STATUSBYTE 1: 11110000 Bit 0 = D channel (in order)
Bit 1-7 = B channel 1-7
STATUSBYTE 2: 00000000 Bit 8-15 = B channel 8-15
In the case of defective channels, the respective bit is set to 1. In the case of active or unconfigured channels the relevant bit is set to 0.
In the case of 'underequipped' VCM boards (VCM-B7) the second status byte always has the binary value 00000000.
POSSIBLE OTHER DEFECTIVE UNITS: possible other defective units
PARTNER-CIRCUIT: circuit address of the partner (DIUS2, STMD etc.)

VCM-PATH: nailed connection of the VCM circuit
PARTNER-PATH: nailed connection of the VCM partner (DIUS2, STMD etc.)
PARTNER-SYSTEM: partner system

> See also Chapter , "Device names".

F5995
CIRCUIT
B CHANNEL VC OK

Type: Service-specific (Format 43)

Short text: All B channels of a Voice Compression connection are active again.

Cause: B-channel (channels) was defective and is working again. Positive acknowledgment for F5994 B CHANNEL VC DEF.

System reaction: the blocked B channel (channels) are re-activated.

Action: Evaluate previous and subsequent error messages: search for other B-channel failure messages of the VCM board. If the VCM board has repeated problems with B-channel failures, replace the board and check for new error messages.

Interpretation of auxiliary data: text mask not required.

> See also Chapter , "Device names".

F5996
CIRCUIT
L2 ERROR S0

Type: Service-specific (Format 22)

Short text: Layer 2 failure in S0 bus circuit

Cause: Various causes are possible, depending on the type of error reported, as shown in Byte 0 of the auxiliary data.

Message is only initiated by video PC connected to SLMN board.

System reaction: blocks layer 2 of the circuit.

Action: Check line (e.g. with protocol tester); check terminal.

Interpretation of auxiliary data: see F5414 (Layer 2 error in digital networking circuit)

See also Chapter , "Device names".

F5997
CIRCUIT
L3 ERROR S0

Type: Service-specific (Format 22)
Short text: Layer 3 failure in S0 bus circuit
Cause: Call processing detects a layer 3 error, e.g. while verifying message
elements.
Message is only initiated by video PC connected to SLMN board.
System reaction: Signals only.
Action: Save error message data and contact your next level of support.
Interpretation of auxiliary data: see F5417 (Layer 3 error in digital networking circuit)

> See also Chapter , "Device names".

F5998
CIRCUIT
NETWORK LOOP ON

Type: Service-specific (Format 22)
Short text: Exchange test loop on (US-specific message)
Cause: Test loop activation is received from the exchange side. The D-channel
and B-channels of the PCM highway concerned are not available for call processing for the
duration of the test.
System reaction: signaling, sets DC status to remote block.
Action: No action necessary.

> See also Chapter , "Device names".

F5999
CIRCUIT
NETWORK LOOP OFF

Type: Service-specific (Format 22)
Short text: Exchange test loop off (US-specific message)
Cause: Test loop deactivation is received from the exchange side, following test
loop activation (see F5998). The D-channel and B-channels of the PCM highway concerned are
available for call processing once more.
System reaction: signaling, resets DC status to ready.
Action: No action necessary.

See also Chapter , "Device names".