COMPAQ

Software Product Description

PRODUCT: TeMIP Access Module for Siemens EWSD Wireline Switch SPD 70.52.00

DESCRIPTION

TeMIP is a family of software products for the management of telecommunications and corporate networks, including fixed wire and mobile/cellular voice and data, multi-vendor, multi-technology networks. TeMIP V3.2 provides comprehensive off-the-shelf fault and trouble management functions such as Alarm Handling, Event Logging and Trouble Ticketing for telecommunications network management.

TeMIP supports the International Standards Organization (ISO) management standards 10164-x and ISO 10165-x, and the OMNIpoint 1 standards as defined by NMF and T1M1. TeMIP and its features are applicable in the context of the International Telecommunication Union-Telecom Standard Sector (ITU-T) X.73x and Telecommunications Management Network (TMN) M.3010 and M.3100 Recommendations. TeMIP gives network operators a global view of their networks, and enables them to activate management functions and operations from single or multiple workstations.

TeMIP is built on top of the TeMIP Framework and fully benefits from the object oriented and truly distributed software architecture.

The TeMIP EWSD Access Module (AM) provides an interface to the Siemens EWSD Switching System (application system 10.0). This Access Module supports:

- Fault management capabilities: reception and processing of unsolicited alarm messages.
- Performance management capabilities: collection of performance parameters from an exchange pertaining to traffic management (this refers to the "Performance Fragment" of ITU-T Q.823).
- Traffic management capabilities: putting "Traffic Controls" into effect to manipulate the flow of calls through an exchange (this refers to the "Control Fragment" of ITU-T Q.823).

The TeMIP EWSD AM can function, depending on the license installed, as a:

- Level 1 AM addressing Fault Management only.
- Level 2 AM addressing Fault and Performance Management.
- Level 3 AM addressing Fault, Performance and Traffic Management.

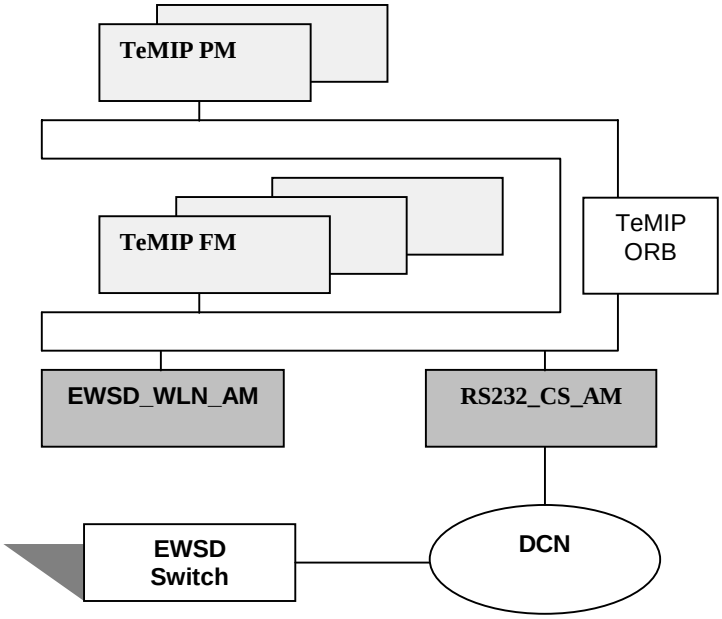
SOLUTION COMPONENTS

The EWSD wireline switch is directly interfaced to TeMIP by means of a combination of Management Modules:

- The RS232 Communication Server Access Module, responsible for establishing and maintaining the physical connection to the equipment. (As an alternative to the RS232 Communications Server, either the X.25 (SVC) or TCP (IP sockets) Communications Servers could also be used).
- The EWSD AM, responsible for the Information Model representing the management capabilities of the equipment as well as all associated semantic translations between its ASCII-based messaging interface and TeMIP data models.

The solution components are shown in Figure 1.

Figure 1: Solution Components



INFORMATION MODEL OUTLINE

When the Level 1 (Fault Management) functionality is enabled, the EWSD is represented by the information Model shown in Figure 2.

Figure 2: Information Model – Fault Management

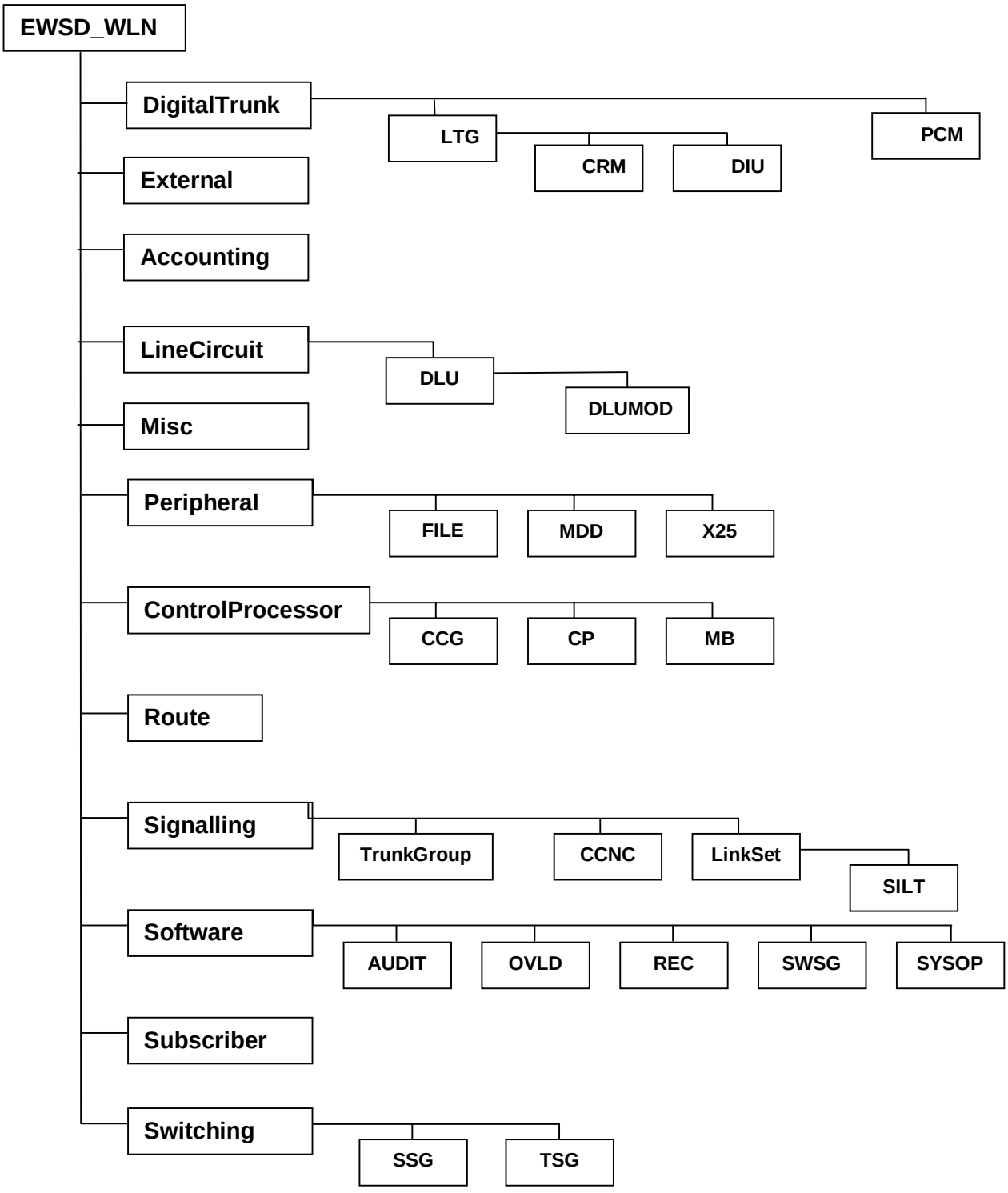
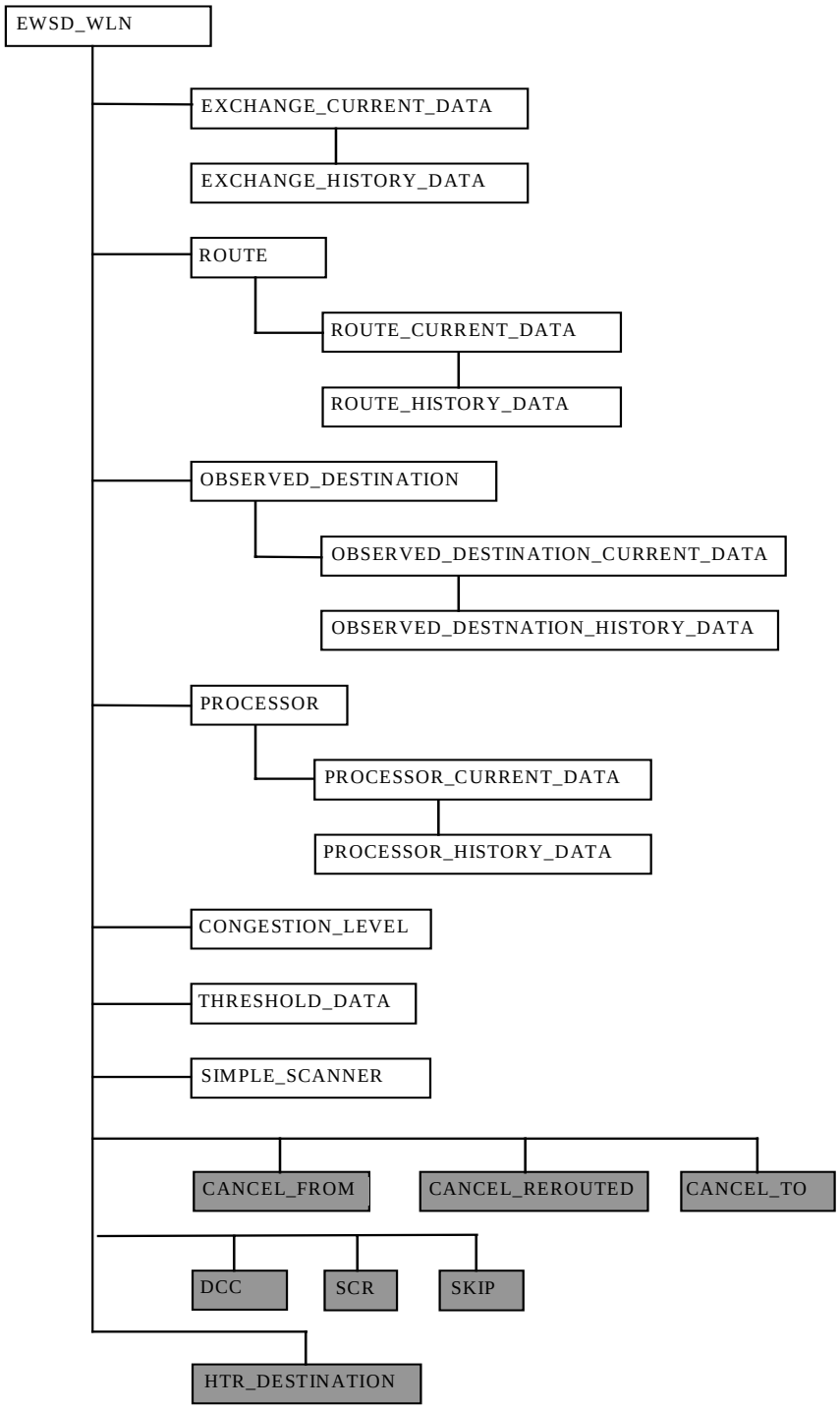


Figure 3 introduces the additional classes used to represent the EWSD switch when Level 2 (white box) and Level 3 (grey box) functionality is enabled.

Figure 3: Information Model (Performance and Traffic Management)



The switch is modelled as 12 subsystems, which present a standard view of Wireline Switches, independent of technology. The subsystems are represented by the first level of child class and have only one instance each. This allows TMN managers to have a common view of different exchanges in a multi-vendor environment. The classes that show the specific hardware/software of the EWSD are located below the subsystem level.

The switch itself is represented by the EWSD_WLN class, of which the 12 subsystem classes are children.

The meaning of each class is described in Table 1. The “AM Type” column shows for which AM level the corresponding class is supported.

Table 1: EWSD Hierarchy Class Description

Class	Child Class	Child Class	Description	Cardinality	AM Type
Accounting			Exchange accounting (billing) subsystem.	1	Level 1, 2, 3
DigitalTrunk			Hardware parts related to digital connections to other switches.	1	Level 1, 2, 3
	LTG		Line trunk group.	N	Level 1, 2, 3
		CRM	Code Receiver Module.	N	Level 1, 2, 3
		DIU	Digital Interface Unit.	N	Level 1, 2, 3
	PCM		Pulse Code Module.	N	Level 1, 2, 3
External			Related to the environment (fire, air conditioning, open door).	1	Level 1, 2, 3
LineCircuit			Hardware parts related to analog and digital subscriber connections.	1	Level 1, 2, 3
	DLU		Digital line unit.	N	Level 1, 2, 3
		DLUMOD			Level 1, 2, 3
Misc			Auxiliary hardware responsible for: MFC/DTMF signalling, tone generation, test equipment, announcement machine, etc.	1	Level 1, 2, 3
Peripheral			I/O equipment (disk, printer, terminal, tape).	1	Level 1, 2, 3
	FILE		File.	1	Level 1, 2, 3
	MDD		Disk drive.	N	Level 1, 2, 3
	X25		X25 link.	1	Level 1, 2, 3
ControlProcessor			Call processor, and all other processors, except SS7 and I/O.	1	Level 1, 2, 3
	CCG		Control clock generator.	N	Level 1, 2, 3
	CP		Coordinator processor.	1	Level 1, 2, 3
	MB		Memory buffer.	N	Level 1, 2, 3
Route			All routes logically programmed in the switch.	N	Level 1, 2, 3
Signalling			Signalling System.	1	Level 1, 2, 3
	TrunkGroup				Level 1, 2, 3
	CCNC		Signalling System #7 control (hardware/software).	1	Level 1, 2, 3

Class	Child Class	Child Class	Description	Cardinality	AM Type
	LinkSet		SS7 Linkset.	N	Level 1, 2, 3
		SILT	Signalling Link Terminal.	N	Level 1, 2, 3
Software			Software subsystems.	1	Level 1, 2, 3
	AUDIT		Auditing.	1	Level 1, 2, 3
	OVLD		Overload.	1	Level 1, 2, 3
	REC		Recovery.	1	Level 1, 2, 3
	SWSG		Software safeguarding.	1	Level 1, 2, 3
	SYSOP		System operator.	1	Level 1, 2, 3
Subscriber			Software subsystem logically related to subscribers.	1	Level 1, 2, 3
Switching			Hardware parts responsible for call switching (SN).	1	Level 1, 2, 3
	SSG		Spacial Stage Group.	N	Level 1, 2, 3
	TSG		Temporal Stage Group.	N	Level 1, 2, 3

For Performance and Traffic Management the switch information model is essentially based on the Performance and Traffic fragments of ITU-T Recommendation Q.823.

Table 2 presents the EWSD information model relevant to Performance and Traffic Management. The classes in the left-hand column are children of the switch class (EWSD_WLN).

Table 2: EWSD Hierarchy Class Description (Performance and Traffic Management)

Class	Child	Child	AM Type
Exchange_Current_Data			Level 2, 3
Exchange_History_Data			Level 2, 3
Route			Level 1, 2, 3
	Route_Current_Data		Level 2, 3
		Route_History_Data	Level 2, 3
Observed_Destination			Level 2, 3
	Observed_Destination_Current_Data		Level 2, 3
		Observed_Destination_History_Data	Level 2, 3
Processor			Level 2, 3
	Processor_Current_Data		Level 2, 3
		Processor_History_Data	Level 2, 3
Congestion_Level			Not supported in current AM
Threshold_Data			Level 2, 3
Simple_Scanner			Level 2, 3
Cancel_From			Level 3
Cancel_Rerouted			Level 3

Cancel_To			Level 3
DCC			Level 3
SCR			Level 3
SKIP			Level 3
HTR_Destination			Level 3

MANAGEMENT CAPABILITIES SUMMARY

Unsolicited Messages Support (Level 1, 2, 3)

According to the *EWSD Message Masks Manual*, unsolicited messages are classified as alarm messages, information messages, report messages, request messages and response messages. The EWSD AM can handle all message types (***mask ids***) identified in the *EWSD Message Mask Manual* as **alarm messages**, except mask ids 02149, 02164, 03054, 03056, 03057, 03062, 03063, 06923 and 06939. Some other mask ids (alarm clear and information messages) are also mapped and appear in Table 3.

The EWSD Wireline AM maps messages to the ITU-T Standards in various levels of detail. Usual messages are carefully mapped to the Standards while unusual messages are mapped to default values. The proprietary alarm message is always present in the Additional Text field for both Usual and Unusual messages. Unsolicited messages, if recognized as such, and not in the Usual or Unusual subset, can take 3 possible actions, depending on the value of the attribute *OtherMessageHandling*: *Log*, *Alarm* or *None*. At the present time, no messages are known to fall into this category. All other messages are discarded by the EWSD Wireline AM.

Alarm Clearance (Level 1, 2, 3)

Some alarm messages have a corresponding alarm clearance message. The EWSD switch does not provide a specific alarm identifier to allow the correlation of the alarm with its clearance message. Therefore, alarm clearance is performed based on specific message fields, in accordance with ITU-T standards:

- Alarm clearance is carried out, if the alarm has the severity Clear and the Managed Object, Event Type, Probable Cause and Specific Problem fields are the same as for a previous alarm.

Alarm Information (Level 1, 2, 3)

Table 3 lists the EWSD alarm messages described in the *EWSD Message Masks Manual*, that are recognized and processed by the EWSD Wireline AM.

Table 3: EWSD Alarm Table (Ordered by Alarm Mask)

Mask ID	Alarm Slogan
236	TRUNK GROUP ALARM
881	LINE LOCKOUT
883	LINE LOCKOUT
1292	SYP FAILURE WITH CONFIGURATION
1294	CCG FAILURE WITHOUT CONFIGURATION
1442	CCS7 - FAILURE MESSAGE FROM CCNC
1541	TIME IS INSECURE
1717	SYSTEM OPERATOR
1718	SYSTEM OPERATOR
1776	ALL DOUBLE FILES SYNCHRONIZED
1809	PCM FAULT / MAINTENANCE ALARM
1809	PCM FAULT / SERVICE ALARM
1809	PCM FAULT END
1815	EXTERNAL ALARM EXCHANGE END
1816	EXTERNAL ALARM EXCHANGE
1855	NUC AFTER RECOVERY NOT ACTIVATED
1917	EXTERNAL ALARM DLU
1918	EXTERNAL ALARM DLU END
1965	SYSTEM OPERATOR
2075	CENTRAL UNITS ALARM
2077	CENTRAL UNIT ALARM
2078	CENTRAL UNITS ALARM
2081	CENTRAL UNIT ALARM
2084	CENTRAL UNITS ALARM
2086	ROUTINE TEST XXXXXXXX NOT EXECUTED
2104	CENTRAL UNIT ALARM
2108	LEAVING SYSTEM OVERLOAD
2123	AUDIT ERROR DISPLAY
2154	SYSTEM OPERATOR
2155	SYSTEM OPERATOR ALARM
2156	SYSTEM OPERATOR ALARM
2289	CENTRAL UNITS ALARM
2290	CENTRAL UNITS ALARM
2291	CENTRAL UNITS ALARM
2292	CENTRAL UNITS ALARM
2293	CENTRAL UNITS ALARM
2294	CENTRAL UNITS ALARM
2434	CENTRAL UNIT ACTIVATION
2434	CENTRAL UNIT ACTIVATION
2435	PLAUSIBILITY CHECK FAILURE
2739	OVERFLOW OF ALARM FILE
2755	SYSTEM - RECOVERY
2758	LINE TRUNK GROUP ALARM
2758	SYSTEM PANEL ALARM
2758	CLOCK ALARM
2758	SYNCHRONIZATION ALARM
2758	MESSAGE BUFFER ALARM
2758	SWITCHING NETWORK ALARM

Mask ID	Alarm Slogan
2758	SWITCHING NETWORK ALARM
2773	CCG FAILURE WITHOUT CONFIGURATION
2776	SWITCHING NETWORK ALARM
2776	SWITCHING NETWORK ALARM
2779	LINE TRUNK GROUP ALARM
2779	SYSTEM PANEL ALARM
2779	CLOCK ALARM
2779	MESSAGE BUFFER ALARM
2779	SWITCHING NETWORK ALARM
2779	SWITCHING NETWORK ALARM
2780	LINE TRUNK GROUP ALARM
2780	SYSTEM PANEL ALARM
2780	CLOCK ALARM
2780	MESSAGE BUFFER ALARM
2780	SWITCHING NETWORK ALARM
2780	SWITCHING NETWORK ALARM
2781	LINE TRUNK GROUP ALARM
2781	SYSTEM PANEL ALARM
2781	CLOCK ALARM
2781	MESSAGE BUFFER ALARM
2781	SWITCHING NETWORK ALARM
2781	SWITCHING NETWORK ALARM
2783	LINE TRUNK GROUP ALARM
2783	SYSTEM PANEL ALARM
2783	CLOCK ALARM
2783	MESSAGE BUFFER ALARM
2783	SWITCHING NETWORK ALARM
2783	SWITCHING NETWORK ALARM
2784	LINE TRUNK GROUP ALARM
2784	SYSTEM PANEL ALARM
2784	CLOCK ALARM
2784	MESSAGE BUFFER ALARM
2784	SWITCHING NETWORK ALARM
2784	SWITCHING NETWORK ALARM
2785	LINE TRUNK GROUP ALARM
2785	SYSTEM PANEL ALARM
2785	CLOCK ALARM
2785	MESSAGE BUFFER ALARM
2785	SWITCHING NETWORK ALARM
2785	SWITCHING NETWORK ALARM
2786	LINE TRUNK GROUP ALARM
2786	SYSTEM PANEL ALARM
2786	CLOCK ALARM
2786	MESSAGE BUFFER ALARM
2786	SWITCHING NETWORK ALARM
2786	SWITCHING NETWORK ALARM
2787	LINE TRUNK GROUP ALARM
2787	SYSTEM PANEL ALARM
2787	CLOCK ALARM
2787	MESSAGE BUFFER ALARM
2787	SWITCHING NETWORK ALARM
2787	SWITCHING NETWORK ALARM
2788	LINE TRUNK GROUP ALARM
2788	SYSTEM PANEL ALARM
2788	CLOCK ALARM
2788	MESSAGE BUFFER ALARM
2788	SWITCHING NETWORK ALARM
2788	SWITCHING NETWORK ALARM
2789	SWITCHING NETWORK ALARM

Mask ID	Alarm Slogan
2789	SWITCHING NETWORK ALARM
2790	CENTRAL UNIT ALARM
2791	CENTRAL UNIT ALARM
2798	FILE XXXXXXXXXXXXXXXXX IS FILLED 100% CAPACITY
2799	CYCLIC - FILE ALARM
2800	FILE XXXXXXXXXXXXXXXXX IS FILLED 999% CAPACITY
2893	SYSTEM OPERATOR ALARM
2936	NOT EXECUTED ALARM CALLS
2979	CENTRAL UNIT ALARM
2980	CENTRAL UNIT ALARM
2981	CENTRAL UNIT ALARM
3140	LTG 9-99 LEAVING LOCAL OVERLOAD
3216	SYSTEM OPERATOR
3217	SYSTEM OPERATOR
3245	BAP COMMUTATION EXECUTED BY ROUTINE TEST
3263	SPOOLFILE SY.SPOOL IS FILLED TO 999% CAPACITY
3285	XXXXXX - RECOVERY INFORMATION
3286	XXXXXX - RECOVERY INFORMATION
3287	XXXXXX - RECOVERY INFORMATION
3288	XXXXXX - RECOVERY INFORMATION
3314	CCG FAILURE WITH CONFIGURATION
3316	MCH FAILURE WITH CONFIGURATION
3318	SN FAILURE WITH CONFIGURATION
3318	SN FAILURE WITH CONFIGURATION
3318	SN FAILURE WITH CONFIGURATION
3323	MB FAILURE WITH CONFIGURATION
3354	CCG FAILURE WITH CONFIGURATION
3406	LTG FAILURE WITH CONFIGURATION
3406	LTG FAILURE WITH CONFIGURATION
3406	LTG FAILURE WITH CONFIGURATION
3407	LTG FAILURE WITH CONFIGURATION
3407	LTG FAILURE WITH CONFIGURATION
3407	LTG FAILURE WITH CONFIGURATION
3408	LTG FAILURE WITHOUT CONFIGURATION
3408	LTG FAILURE WITHOUT CONFIGURATION
3408	LTG FAILURE WITHOUT CONFIGURATION
3431	DLU FAILURE WITH CONFIGURATION
3431	DLU FAILURE WITH CONFIGURATION
3432	DLU FAULT CLEARED WITH CONFIGURATION
3432	DLU FAULT CLEARED WITH CONFIGURATION
3433	DLU FAULT CLEARED WITHOUT CONFIGURATION
3433	DLU FAULT CLEARED WITHOUT CONFIGURATION
3435	DLU FAILURE WITHOUT CONFIGURATION
3435	DLU FAILURE WITHOUT CONFIGURATION
3457	INVALID MESSAGE RECEIVED BY PROCESS: XXXXX
3464	SYSTEM OPERATOR
3539	RCU LINK FAILURE
3620	XXXXXX - RECOVERY INFORMATION
3621	XXXXXX - RECOVERY INFORMATION
3644	CCS7 -- INFORMATION FROM CCNC
3699	LINE MAINTENANCE ALARM
3699	LINE MAINTENANCE ALARM END
3728	PA PCM FAULT / MAINTENANCE ALARM
3728	PA PCM FAULT / SERVICE ALARM
3728	PA PCM FAULT END
3732	CENTRAL UNIT ALARM
3741	SYSTEM OPERATOR ALARM
3816	ENTERING OVERENGINEERED SYSTEM CAPACITY
3817	ENTERING SYSTEM OVERLOAD

Mask ID	Alarm Slogan
3818	LEAVING OVERENGINEERED SYSTEM CAPACITY
3827	EXTREME CALL DURATION
3832	SYSTEM OPERATOR ALARM
3999	CCS7 - BLOCKED TRUNKS
4001	INSTAL - RECOVERY ALARM
4001	SSP -RECOVERYALARM
4001	SYSTEM - RECOVERY ALARM
4111	LTG CONFIGURATION DLU AFFECTING
4232	ADMINISTRATION FILE ALARM
4313	END OF TRUNK GROUP ALARM
4346	CCG INFORMATION
4347	LTG INFORMATION
4348	LTG INFORMATION
4349	LTG FAILURE WITHOUT CONFIGURATION
4349	LTG FAILURE WITHOUT CONFIGURATION
4349	LTG FAILURE WITHOUT CONFIGURATION
4351	MB FAILURE WITHOUT CONFIGURATION
4352	MCH FAILURE WITHOUT CONFIGURATION
4353	SN CONFIGURATION
4353	SN CONFIGURATION
4353	SN CONFIGURATION
4354	SN FAILURE WITHOUT CONFIGURATION
4354	SN FAILURE WITHOUT CONFIGURATION
4354	SN FAILURE WITHOUT CONFIGURATION
4356	SYSTEM OPERATOR ALARM
4419	ADMINISTRATION ALARM
4420	ADMINISTRATION ALARM
4421	ADMINISTRATION ALARM
4423	MDD - XX: INOPERABLE AND THEREFORE DEACTIVATED
4424	ADMINISTRATION ALARM
4425	MDD - XX: INOPERABLE AND THEREFORE DEACTIVATED
4426	ADMINISTRATION ALARM
4427	ADMINISTRATION ALARM
4429	ADMINISTRATION ALARM
4432	ADMINISTRATION ALARM
4497	MESSAGE FROM THE X25LINK - XX
4508	ADMINISTRATION ALARM
4556	LTG FAILURE WITHOUT CONFIGURATION
4556	LTG FAILURE WITHOUT CONFIGURATION
4556	LTG FAILURE WITHOUT CONFIGURATION
6028	CCS7 - PATH FAILURE IN STANDBY EQUIPMENT
6031	ORIGINAL ALARM MESSAGE WAS LOST
6033	LINE LOCKOUT
6035	CCS7 - BEGIN OF SIGNALING LINK FAILURE
6036	CCS7 - BEGIN OF SIGNALING LINK FAILURE
6037	CCS7 - BEGIN OF SIGNALING LINK SET FAILURE
6038	CCS7 -- BEGIN OF SIGNALING LINK SET FAILURE
6039	CCS7 - BEGIN OF LOCAL NODE ISOLATION
6040	CCS7 - BEGIN OF SIGNALING LINK SETS IN STATE NAC
6041	CCS7 - BEGIN OF SIGNALING LINKS IN STATE NAC
6044	CCS7 - END OF SIGNALING LINK FAILURE
6045	CCS7 - END OF SIGNALING LINK FAILURE
6046	CCS7 - END OF SIGNALING LINK SET FAILURE
6047	CCS7 - END OF SIGNALING LINK SET FAILURE
6048	CCS7 - END OF LOCAL NODE ISOLATION DUE TO LINK FAILURE
6049	CCS7 - END OF SIGNALING LINK SET IN STATE NAC
6050	CCS7 - END OF SIGNALING LINKS IN STATE NAC
6051	CCS7 - SIGNALING LINK INHIBIT STATE CHANGE
6052	CCS7 - LOCAL BLOCKING OF SIGNALING LINK

Mask ID	Alarm Slogan
6053	CCS7 - REMOTE BLOCKING OF SIGNALING LINK
6054	CCS7 - UNAVAILABILITY OF A SIGNALING LINK SET
6096	AUTOMATIC FIXPOINT COULD NOT BE GENERATED
6097	CENTRAL UNIT ALARM
6143	CENTRAL UNIT ALARM
6200	CCNC - ALARM
6201	CCNC - ALARM
6219	INSTAL - RECOVERY ALARM
6219	SSP -RECOVERYALARM
6219	SYSTEM - RECOVERY ALARM
6261	END OF TRUNK GROUP BLOCKED
6261	END OF TRUNK GROUP INDICATION TRESHOLD EXCEEDED
6261	TRUNK GROUP BLOCKED
6261	TRUNK GROUP INDICATION TRESHOLD EXCEEDED
6315	SYSTEM OPERATOR ALARM
6343	CCS7 -- NOTE BOOK DATA FROM XXXXX 999
6372	NUC MAINTENANCE REACTIVATION REPORT
6420	MALICIOUS CALL IDENTIFICATION
6508	LINE LOCKOUT
6527	LINK GROUP OUTAGE
6528	LINK GROUP OUTAGE RESET
6543	DLU FAILURE CLEARED WITHOUT CONFIGURATION
6544	DLU FAILURE WITHOUT CONFIGURATION
6545	DLU FAILURE CLEARED WITHOUT CONFIGURATION
6546	DLU FAILURE WITHOUT CONFIGURATION
6547	DLU FAILURE CLEARED WITHOUT CONFIGURATION
6548	DLU FAILURE WITHOUT CONFIGURATION
6565	CCS7 - UNAVAILABILITY OF A DESTINATION OR A SET OF DESTINATIONS
6568	CCS7 -- CONGESTION REPORT CENTRAL CONGESTION
6575	CCS7 - BEGIN OF SIGNALING LINK SETS IN STATE NAC
6576	CCS7 - END OF SIGNALING LINK SETS IN STATE NAC
6588	CCS7 - TRUNK GROUP ALARM
6592	END OF CCS7 - TRUNK GROUP ALARM
6627	ADMINISTRATION ALARM
6628	ADMINISTRATION ALARM
6632	ROUTINE CHECKSUM MDD AUDIT FOR GENERATION FILES
6854	SYSTEM OPERATOR ALARM
6877	SYSTEM OPERATOR ALARM
6903	LOGOUT: INTERN COFIP SESSION TERMINATED BY UNAUTHORIZED ACCESS
6904	LOGIN NOT SUCCESSFUL
6908	UNAUTHORIZED ATTEMPT TO XXXXXXX FILE XXXXXXXXXXXXXXXXX
6917	CALL PROCESSING BASIC OPERATION
6918	CALL PROCESSING BASIC OPERATION
6919	CALL PROCESSING BASIC OPERATION
6920	CALL PROCESSING BASIC OPERATION
6921	CALL PROCESSING BASIC OPERATION
6922	>>> CALL PROCESSING BASIC OPERATION <<<
6925	CALL PROCESSING BASIC OPERATION
6926	CALL PROCESSING BASIC OPERATION
6927	CALL PROCESSING BASIC OPERATION
6928	CALL PROCESSING BASIC OPERATION
6929	CALL PROCESSING BASIC OPERATION
6930	CALL PROCESSING BASIC OPERATION
6931	CALL PROCESSING BASIC OPERATION
6932	CALL PROCESSING BASIC OPERATION
6933	CALL PROCESSING BASIC OPERATION
6934	CALL PROCESSING BASIC OPERATION

Mask ID	Alarm Slogan
6935	CALL PROCESSING BASIC OPERATION
6936	CALL PROCESSING BASIC OPERATION
6937	CALL PROCESSING BASIC OPERATION
6938	>>> SWSG INFORMATION <<<
6988	CALL PROCESSING BASIC OPERATION
7035	CALL PROCESSING BASIC OPERATION
7051	CALL PROCESSING BASIC OPERATION
7052	CALL PROCESSING BASIC OPERATION
7053	CALL PROCESSING BASIC OPERATION
7054	CALL PROCESSING BASIC OPERATION
7055	CALL PROCESSING BASIC OPERATION
7751	END OF COMMUNICATIONS ALARM END OF ENVIRONMENTAL ALARM END OF EQUIPMENT ALARM END OF PROCESSING ERROR ALARM END OF QUALITY OF SERVICE ALARM
7756	CCS7 -- THRESHOLD OVERFLOW FOR MSUS DISCARDED DUE TO ROUTING DATA ERROR
7758	CCS7 - BEGIN OF CENTRAL CONGESTION
7759	CCS7 - END OF CENTRAL CONGESTION

Mask ID	Alarm Slogan
7927	CCS7 - NOT SUCCESSFUL RELEASE
7928	CCS7 - STATISTIC: NOT SUCCESSFUL RELEASE
7993	XXXXXXXX CHARGING SAFEGUARDING MESSAGE
7999	XXXXXXXX CHARGING SAFEGUARDING MESSAGE
8057	PCM FAULT / MAINTENANCE
8057	PCM FAULT / SERVICE
8057	PCM FAULT END
8061	COMMUNICATIONS ALARM ENVIRONMENTAL ALARM EQUIPMENT ALARM PROCESSING ERROR ALARM QUALITY OF SERVICE ALARM
8153	AUDIT ERROR DISPLAY
8173	NUC MAINTENANCE FAILURE REPORT
8240	XXXXXXXX CHARGING SAFEGUARDING MESSAGE
8369	DLU FAILURE WITHOUT CONFIGURATION
8372	SYSTEM OPERATOR ALARM
8379	LTG 9-99 ENTERING LOCAL OVERLOAD

Traffic Reports (Level 2, 3)

The EWSD Wireline AM handles the following unsolicited messages:

- TRAFFIC MEASUREMENT : TRAFLOW (mask 06198)
- TRAFFIC MEASUREMENT : TRUNK GROUP (mask 06189)
- TRAFFIC MEASUREMENT : DESTINATION (mask 06155)
- TRAFFIC MEASUREMENT : CP (mask 06154)

Traffic Controls (Level 3)

The following controls are supported by the EWSD AM:

- CANCEL_FROM: This control is created on an outgoing or two way route to prohibit traffic from overflowing into the next-in-chain routes. This control can be used to prohibit overflow of directly routed traffic, alternately routed traffic, or both.

- CANCEL_REROUTED: This control is created to prevent additional rerouting or alternate routing of calls that have already been rerouted. Rerouted calls are not allowed to overflow the route specified in the CANCEL_REROUTED control, while normal overflow traffic is not affected.

- CANCEL_TO: This control is created to cancel direct routing, alternative routing, or both types of routing to a specified route. The cancellation of direct routing controls the amount of directly routed traffic accessing a route. Cancelling alternative routing will prevent overflow traffic from accessing a route.
- DCC: This control (Destination Code Control) is created to control calls to a specific destination. The calls are controlled using one of the following methods:

  - Percentage (Code Blocking)

  - Rate (Call Gapping)

  The Code Blocking control prevents routing to a specific destination on a percentage basis. Code Blocking can be done using a country code, an area code, an exchange identification code, or an individual line number. The Code Blocking control is typically used for immediate control of focussed overloads or mass-calling situations.

  The Call Gapping control sets an upper limit on the output rate of calls to a specific destination. The upper limit is set by specifying a time period (interval) during which no more than one call should be permitted. This control ensures that the number of call attempts that are routed will never exceed the specified output rate, regardless of the call arrival rate. Call Gapping is typically used for the control of focussed overloads, particularly mass-calling to an individual line number. A detailed analysis may be required to determine the proper call-rate parameters.

  The Leaky Bucket control causes the number of call attempts to a destination to be limited to a predefined call attempt rate. All call attempts to this group that exceed this predefined limit are rejected.

- SCR: This control (Selective Circuit Reservation) is created to block outgoing traffic that has a poor chance of completion on the specified route.

- SKIP: This control is created on outgoing routes to cause traffic routing to skip the route and advance to the next in-chain route in the routing table.

This control eases congestion on routes with facility problems. The SKIP control can be used to affect directly routed traffic, alternatively routed traffic, or both.

HARDWARE REQUIREMENTS

Supported Alpha AXP Processors:

AlphaServer 8200
AlphaServer 8400
DEC/4600, DEC/4700
DEC/7600, DEC/7700
DEC/10600

AlphaServer 2000
AlphaServer 2100
AlphaServer 4000
AlphaServer 4100
AlphaStation 600
DEC/3500, DEC/3500S, DEC/3500X
DEC/3800, DEC/3800S
DEC/3900

AlphaServer 300 (Melmac)
AlphaServer 400
AlphaServer 800

AlphaServer 1000
AlphaStation 200
AlphaStation 250
AlphaStation 255
AlphaStation 400
AlphaStation 500
DEC/2300S
DEC/2500
DEC/3300, DEC/3300L,
DEC/3300X, DEC/3300LX
DEC/3400, DEC/3400S
DEC/3600, DEC/3600S
DEC/3700

PWS 433
PWS 500
PWS 600

Ultimate Workstation 533

Disk Space Requirements:

Disk space required for installation:
Subset copy: 45,000 Kbytes
Installation: /usr 136,000 Kbytes
Disk Space Required for Use (Permanent):
No specific requirement

Memory Requirements:

The minimum memory supported, due to a TeMIP Framework prerequisite, is 128 Mbytes.

However, the use of this software in conjunction with increased memory capability improves performance.

SOFTWARE REQUIREMENTS

DIGITAL UNIX Operating System V4.0D
TeMIP Framework V3.2

OPTIONAL SOFTWARE

TeMIP Graphical ASCII Toolkit V2.1P.

GROWTH CONSIDERATIONS

The minimum hardware/software requirements for any future version of this product may be different from the current version requirements.

YEAR 2000 READY

This product is Year 2000 Ready.

The testing used to confirm the Year 2000 readiness of this product included code assessment and system tests to verify transition dates.

DISTRIBUTION MEDIA

This software is available by electronic means, distributed directly by the Engineering Team in NSIS/CIS Telecom, who can be contacted through your local Compaq office, which sends an internal e-mail to vbetemipsupp@compaq.com (containing customer identification and proof of license purchase).

ORDERING INFORMATION

TeMIP Access Module for Siemens EWSD Wireline Switch (Fault Management)

Software License (Level 1 AM): QL-688A9-AA,

Software Product Services: QT-688**-** or
QR-SP688-A9

TeMIP Access Module for Siemens EWSD Wireline Switch (Performance Management)

Software License (Level 2 AM): QL-6BMA9-AA,

Software Product Services: QT-6BM**-** or
QR-SP6BM-A9

TeMIP Access Module for Siemens EWSD Wireline Switch (Traffic Management)

Software License (Level 3 AM): QL-6BNA9-AA,

Software Product Services: QT-6BN**-** or
QR-SP6BN-A9

Notes:

1. * denotes variable fields. For additional information on available services, or hardware platform tiers, refer to the appropriate price book.
2. The QL number corresponding to the TeMIP Graphical ASCII Toolkit V2.0 (Run-Time) must also be purchased (QL-5SMAM-3B).

SOFTWARE LICENSING

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