Specification of probableCause strings

The following probableCause strings (in capital letters) are pre-defined.

Probable Causes that have been added in Version 4.2 are in blue.

probableCause	Description	source standard	object
"UNIDENTIFIED"	For alarms that do not match any other string below. EMS shall in this case fill out the additional text field as much as possible.		
"AIS"	alarm indication signal	G.783 G.775 Y.1731 M.3100 G.8113.1	
"AMS"	Alternate modulation signal		
"ATPC_FAIL"	This indication should report the internal failures of the Automatic Transmitted Power Control function.		
"AU-AIS"	AU alarm indication signal		
"BER"	Bit Error Ratio (TCA)	ITU-T G.806	CPTP
"BER_SD"	signal degrade (includes receiver degrade)		
"BER_SF"	signal fail (includes receiver failure and excessive BER)		
"BLOCKED_FE"	When the FE reports that it is blocked. Note: Used in IMA Group FTP on LR_Fragment's adaptation function.		
"CFG_ABORT"	When the FE tries to use unacceptable configuration parameters. Note: Used in IMA Group FTP on LR_Fragment's adaptation function.		
"CFG_ABORT_FE"	When the FE reports unacceptable configuration parameters. Note: Used in IMA Group FTP on LR_Fragment's adaptation function.		
"DCC_FAILURE"	Data Communication Channel Failure		
"DEMODULATION_FAIL"	This indication shall report the internal failures of the demodulation function affecting the demodulated signal.		
"EMS"	EMS system alarm		
"EMS_ALM_LOSS"	The 1st notification that the EMS may supply after 1 or more notifications for protection switch, TCA, alarm, or file transfer status have been discarded by the EMS while other events have not been discarded.		
"EMS_LIFECYCLE_LOSS"	The 1st notification that an EMS may supply after 1 or more events of type OC/OD/AVC/SC/RC have been discarded by the EMS.		
"EMS_ALM_AND_ LIFECYCLE_LOSS"	The 1st notification that an EMS may supply after 1 or more notifications for protection switch, TCA, alarm, or file transfer status, and 1 or more events of type OC/OD/AVC/SC/RC have been discarded by the EMS.		
"EQPT"	equipment alarm		

probableCause	Description	source standard	object
"ENV"	Environmental/external cause This value can be used for telemetry interfaces, in cases where an EMS controls some devices which are able to monitor raw electrical contacts, e.g. properties of door contacts, fire detectors, batteries etc. Although these devices are not transmission related they report their states via particular (so called telemetry) interfaces of MEs to the EMS. To provide maximum information, a particular telemetry interface alarm may (optionally) be represented by an NT_ALARM notification with objectName = (("EMS",<EMSName>),("ME",<MEName>),("AID",<TIFName>)) probableCause = "ENV" probableCauseQualifier = <DeviceAlarm> where <MEName> is the ME with the telemetry interface, <TIFName> is the telemetry interface within that ME and <DeviceAlarm> is the ID of a single alarm which that interface may report.		
"FF"	fragmentation fail		
"FOP_APS"	failure of APS protocol		
"INSUFF_LINKS"	When less than PTx transmit or PRx receive links are Active (see "MinNumTxLinks" and "MinNumRxLinks"). Note: Used in IMA Group FTP on LR_Fragment's adaptation function.		
"INSUFF_LINKS_FE"	When the FE reports that less than PTx transmit or less than PRx receive links are Active. Note: Used in IMA Group FTP on LR_Fragment's adaptation function.		
"LCD"	loss of cell delineation (from TC Adapter part of ATM NI)	I.751 / I.761 G.798	
"LIF"	Persistence of a LIF (Loss of IMA Frame) defect at the NE. Note: Used in IMA Link CTP on physical layer (e.g., E1, DS1, VC-12, SHDSL).		
"LINK_DOWN"	LAG Link Down		CPTP
"LOA"	loss of alignment	G.806 / G.783 / G.798	
"LOC"	loss of carrier	G.8021 G.8121	
"LODS"	Persistence of a LODS (Link Out of Delay Synchronization) defect at the NE. Note: Used in IMA Link CTP on physical layer (e.g., E1, DS1, VC-12, SHDSL).		
"LOF"	loss of frame (when distinguished from LOS)	G.783 G.798	

probableCause	Description	source standard	object
"LOM"	loss of multiframe (SDH only, since not an alarm in GR-253)	G.783 G.798 G.705 G.781	
"LOP"	loss of pointer	G.783	
"LOPC"	loss of partial capacity		
"LOS"	loss of signal	IEEE 802.3 G.783 G.798 G.8021 G.775	PTP
"LOTC"	loss of total capacity		
"MODULATION_FAIL"	This indication shall report the internal failures of the modulation function affecting the modulated signal, and the loss of incoming data to the modulation function.		
"MS-AIS"	MS alarm indication signal		
"OS"	OS system alarm		
"OS_ALM_LOSS"	The 1st notification that the OS may supply after 1 or more notifications for protection switch, TCA, alarm, or file transfer status have been discarded by the OS while other events have not been discarded.		
"OS_LIFECYCLE_LOSS"	The 1st notification that an OS may supply after 1 or more events of type OC/OD/AVC/SC/RC have been discarded by the OS.		
"OS_ALM_AND_ LIFECYCLE_LOSS"	The 1st notification that an OS may supply after 1 or more notifications for protection switch, TCA, alarm, or file transfer status, and 1 or more events of type OC/OD/AVC/SC/RC have been discarded by the OS.		
"OSC-AIS"	Optical Supervisory Channel alarm indication signal		
"OSC_BER_SF"	Optical Supervisory Channel signal fail/RX fail/excessive BER		
"OSC_FERF"	Optical Supervisory Channel Far End Receive Failure		
"OSC_LOF"	Optical Supervisory Channel Loss of Frame		
"OSC_LOS"	Optical Supervisory Channel Loss of Signal		
"OSC_SD"	Optical Supervisiory Channel signal degrade		
"PARTIAL_LINK_DOWN"	LAG Partial Link Down		CPTP
"PLM"	payload label mismatch (when reported as an alarm)	G.806 G.798	
"RAI"	remote alarm indication (also used to report RDI or RFI) RDI (Remote Defect Indication) used in IMA Link CTP on physical layer (e.g., E1, DS1, VC-12, SHDSL). RFI-IMA (Remote Failure Indication via IMA reported inside ICP cells) used in IMA Link CTP on LR_Fragment's termination function.		

probableCause	Description	source standard	object
"RX_FAIL"	This indication should report the internal failures of the RX-function affecting the received signal. Input Fail Detect	IEEE 802.3	PTP
"RX_MIS_CONNECT" (conditional)	When the Rx link is detected as mis-connected. This is reported when the IMA unit has determined that the Rx link is not connected to the same FE IMA unit as the other Rx links in the group. The detection is implementation-specific. Note: Used in IMA Link CTP on LR_Fragment's termination function.		
"RX_UNUSABLE_FE"	When the FE reports Rx-Unusable. Note: Used in IMA Link CTP on LR_Fragment's termination function.		
"SECURITY_VIOLATION"	security violation		
"SQL"	loss of sequence		
"SSF"	server signal fail	G.806 G.8021 G.8121	
"STARTUP_FE"	When the FE is starting-up (the declaration of this failure alarm may be delayed to ensure the FE remains in Start-up). Note: Used in IMA Group FTP on LR_Fragment's adaptation function.		
"TCF"	transport connection (e.g. subnetworkConnection or topologicalLink) failure of unknown origin		
"TCFE"	external transport connection (e.g. subnetworkConnection or topologicalLink) failure		
"TCFI"	internal transport connection (e.g. subnetworkConnection or topologicalLink) failure		
"TCM-AIS"	Tandem Connection Sink - Incoming Alarm Indication Signal		
"TCM-LOS"	Tandem Connection Sink - Loss of Tandem Connection Signal		
"TCM-OAI"	Tandem Connection Sink - Outgoing Defect Indication (same / similar to Alarm Indication)		
"TCM-RAI"	Tandem Connection Sink - Remote Defect Indication (same / similar to Alarm Indication)		
"TCM-SD"	Tandem Connection Sink - Signal Degrade		
"TCM-SSF"	Tandem Connection Sink - Server Signal Fail		
"TCM-TIM"	Tandem Connection Sink - Trace Identifier Mismatch		
"TCM-UNEQ"	Tandem Connection Sink - Unequipped		
"TCM_LEVEL<n>_LCK"	Tandem Connection Level <n> - Locked		
"TCM_LEVEL<n>_LOS"	Tandem Connection Level <n> - Loss of Tandem Connection		
"TCM_LEVEL<n>_OCI"	Tandem Connection Level <n> - Open Connection Indication		
"TCM_LEVEL<n>_RAI"	Tandem Connection Level <n> - Backward Defect Indication (Remote Alarm Indication)		
"TCM_LEVEL<n>_SD"	Tandem Connection Level <n> - Signal Degrade		

probableCause	Description	source standard	object
"TCM_LEVEL<n>_SSF"	Tandem Connection Level <n> - Server Signal Fail		
"TCM_LEVEL<n>_TIM"	Tandem Connection Level <n> - Trace Identifier Mismatch		
"TIM"	trace identifier mismatch (when reported as an alarm)	G.806 G.798	
"TIMING_SYNCH"	When the FE transmit clock mode is different than the NE transmit clock mode. Note: Used in IMA Group FTP on LR_Fragment's adaptation function.		
"TSD"	trail signal degrade	ITU-T G.806	TP
"TSF"	trail signal fail	ITU-T G.806	TP
"TU-AIS"	TU alarm indication signal		
"TX_DEGRADE"	transmitter degrade, including laser degrade		
"TX_FAIL"	transmitter failure, including laser failure		
"TX_MIS_CONNECT" (conditional)	When the Tx link is detected as mis-connected. This is reported when the IMA unit has determined that the Tx link is not connected to the same FE IMA unit as the other Tx links in the group. The detection is implementation-specific. Note: Used in IMA Link CTP on LR_Fragment's termination function.		
"TX_UNUSABLE_FE"	When the FE reports Tx-Unusable. Note: Used in IMA Link CTP on LR_Fragment's termination function.		
"UAT"	Unavailable Time		
"UNEQ"	payload unequipped	G.806	
"VC-AIS"	VCL/VCC TP Alarm Indication Signal		
"VC-RDI"	VCL/VCC TP Remote Defect Indication		
"VP-AIS"	VPL/VPC TP Alarm Indication Signal		
"VP-RDI"	VPL/VPC TP Remote Defect Indication		
"XPIC_FAIL"	This indication should report the internal failures of the Cross Polar Interference Canceller function.		
"backPlaneFailure"	backplane in Equipment Failure	M.3100	
"BDI"	Backward defect indication	G.798	
"BDI-P"	Backward defect indication - Payload	G.798	
"configurationorCustomizingError"	A system or device generation or customization parameter has been specified incorrectly, or is inconsistent with the actual configuration	X.7xx M.3100	
"CPU Cycles Limit Exceeded"	A Central Processing Unit has issued an unacceptable number of instructions to accomplish a task;	X.7xx	

probableCause	Description	source standard	object
"CSF"	Client Signal Failure	G.7041 G.798 G.8021	
"databaseInconsistency"	Database Inconsistency	M.3100 3GPP	
"diskFailure"	Disk Problem	M.3100	
"Dying Gasp"	An unrecoverable local failure condition has occurred.	802.3ah	
"enclosureDoorOpen"	Enclosure Door Open	X.7xx M.3100	
"Excessive transmitter output power"	The output power is too high. Also applicable for optical power	3GPP	
"EXM"	Extension header mismatch	G.8021 G.8121	
"FDI"	Forward Defect Indication	G.8021	
"FOP"	The FOP defect indicates a failure in the automatic protection switching protocol. This condition is determined by the sink function at the arrival of an unexpected (i.e., out of sequence) protocol message, after which the sink function declares a failure of protocol (FOP) defect.	G.783	
"FOP-NR"	Failure Of Protocol No Response	G.798	
"FOP-PM"	Failure of Protocol Provisioning Mismatch	G.798	
"highTemperature"	High Temperature	M.3100 3GPP	
"IncAIS"	Incoming AIS	G.783	
"LCK"	Locked	G.798 G.8021 G.8121	
"LFD"	Loss of Frame Delineation	G.8021 G.8121	
"Link Fault"	The PHY has determined a fault has occurred in the receive direction of the local DTE.	802.3ah	
"LOFLOM"	Loss Of Frame and Loss Of Multiframe	G.798	
"LOL"	Loss of Lane Alignment	G.783 Amd 2 G.798	
"LOOMFI"	Loss Of OPU Multiframe Indicator	G.798	
"LOS-P"	Loss Of Signal – Payload	G.798	
"lowTemperature"	Low Temperature	M.3100 3GPP	
"LSS"	Loss of Pseudo-Random Bit Sequence lock	G.798	

probableCause	Description	source standard	object
"LTC"	Loss of Tandem Connection	G.783 G.798	
"LTI"	Loss of Timing	G.781	
"mACStatusDefect"	Remote MEP is reporting a failure in the MAC Port Status or Interface Status	IEEE 802.1Q	
"mEPConnectivityDown"	Inability of a MEP to receive three consecutive CCMs from any one of the other MEPs in its MA, indicating either a MEP failure or a network failure;	IEEE 802.1Q	
"MMG"	Mismerge	G.8021 G.8121	
"MND"	Member Not Deskewable	G.783 G.798	
"MSIM"	Multiplex Structure Identifier Mismatch	G.798	
"OCI"	Open Connection Indication	G.798	
"ODI"	Outgoing Defect Indication	G.783 G.806	
"outOfMemory"	Out of Memory	X.7xx M.3100	
"PLCR"	The Partial Loss of Capacity Receive in an LCAS-enabled VCG sink. Applies to LCAS-enabled virtual concatenated path . In case of OTN technology this fault condition applies to LCAS-capable virtual concatenated ODUk Path layer functions ODUkP-Xv-L (k = 1, 2, 3; X >=1)	G.806 G.798	
"PLL"	Partial Link Loss	G.8021	
"powerProblem"	Power Problem	X.7xx M.3100	
"RCOHM"	Resize Control Overhead Mismatch	G.798 Amd 2	
"RDI"	Remote defect Indication	G.806 G.8021 G.8121 G.775	
"receiveFailure"	Receive Failure	X.7xx M.3100	
"Reduced transmitter output power"	The output power is too low. Also applicable for optical power.	3GPP	
"remoteCCMDefect"	At least one Remote MEP is not receiving valid CCM Messages from its remote MEP.	IEEE 802.1Q	
"SQM"	Sequence indicator Mismatch	G.783 G.806	
"SSF-O"	Server Signal Fail - Overhead	G.798	
"SSF-P"	Server Signal Fail - Payload	G.798	

probableCause	Description	source standard	object
"storageCapacityProblem"	Storage Capacity Problem	X.7xx M.3100	
"Threshold Crossed"	A limit (configurable or not) has been exceeded	X.7xx	
"TLCR"	Total Loss of Capacity Receive in LCAS-enabled virtual concatenated path . With OTN technology this fault condition applies to LCAS-capable virtual concatenated ODUk Path layer functions ODUkP-Xv-L (k = 1, 2, 3; X >=1)	G.806 G.798	
"TLL"	Total Link Loss	G.8021	
"UNL"	Unexpected Maintenance Entity Group Level	G.8021	
"UNM"	Unexpected Maintenance Entity Group End Point	G.8021 G.8121	
"UNP"	Unexpected Period	G.8021 G.8121	
"UNPr"	Unexpected Priority	G.8021	
"UPM"	User Payload Mismatch	G.8021 G.8121	
"VcPLM"	Virtual concatenation Payload Mismatch	G.798 G.798	
"versionMismatch"	Version Mismatch	X.7xx M.3100	
"Remote Alarm Interface"	Remote Alarm Interface	M.3100	
“moduleUnitProblem”	Unit failure or module failure (hardware level)		
“protectionGroupAbnormalFunction”	Protection group function abnormal, such as internal communication failure of protection group. Software problem, not an equipment problem.		
“databaseCapabilityExceeded”	Database size exceeds the threshold. The number of records in the database table has reached the threshold. The Disk usage is too high.		
“databaseException”	Database lock problem.		
“EquipmentCapabilityExceeded”	The capacity the equipment can provide exceeds the threshold. Not applicable for CPU, memory and database.		
“licenceProblem”	All types of licence problem: capacity exceeded, mis-configuration, expiration. Ex: the license for all cross-connections exceeds the limit.The license for the cross-connections on a subrack on an NE is configured incorrectly.The OMC license expired or beyond limitation.		
“Excessive transmitter input power”	The input power is too high. Also applicable for optical power		
“Reduced transmitter input power”	The input power is too low. Also applicable for optical power.		

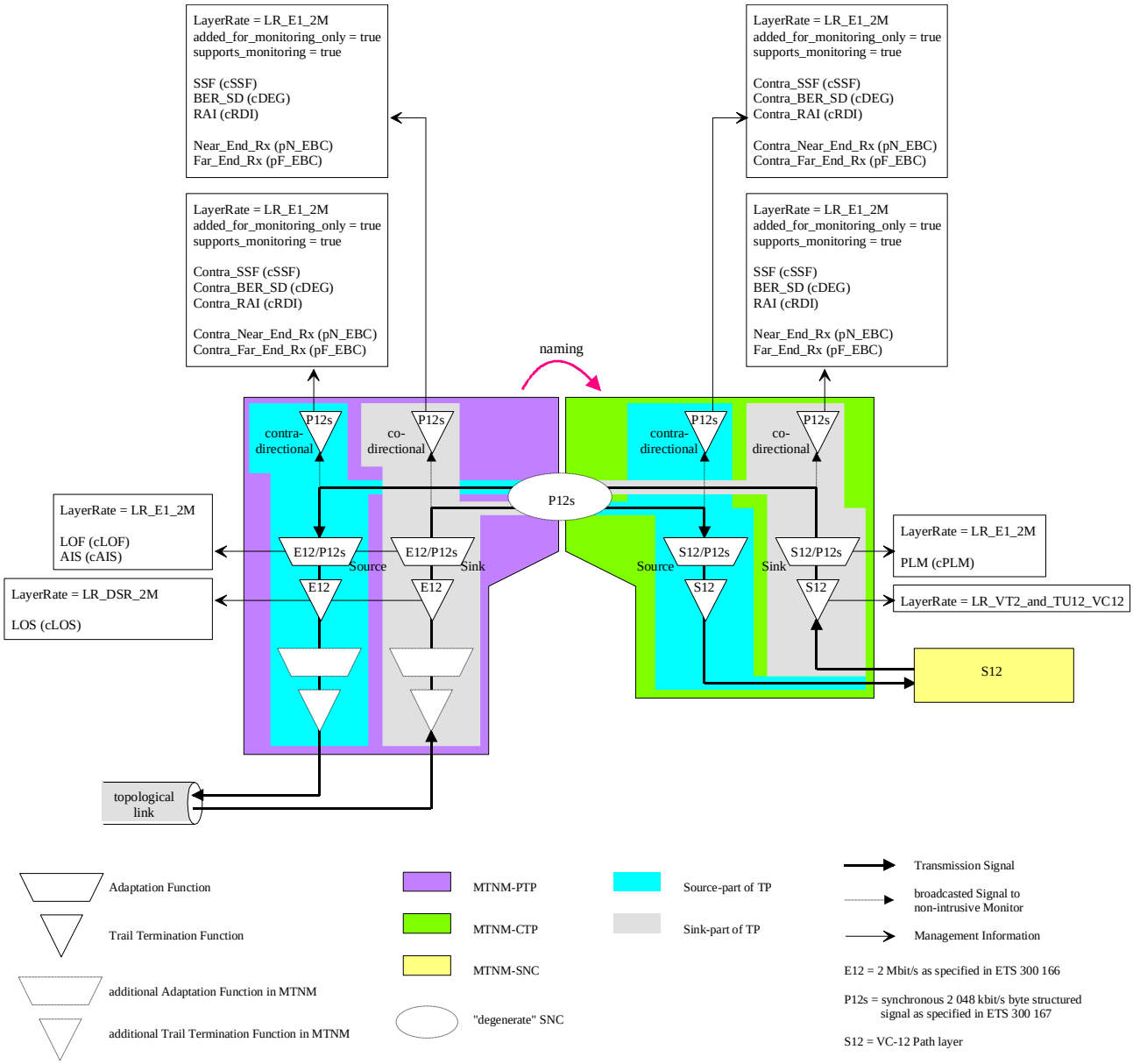
<n> = 1 | 2 | 3 | 4 | 5 | 6

Any extension to the list defined here will be agreed upon through a formal process.

Note:
All probable causes defined in the table above identify alarms detected on the signal which is related to the **sink** atomic function. For alarms detected on the signal which is related to the **source** atomic function, the prefix "Contra_" has to be used in the Name of the probable cause.

e.g. SSF → **Contra_**SSF or TCM_AIS → **Contra_**TCM_AIS

See following diagram depicting a 2 Mbit/s port as an example:



In addition it is also possible, that **one** Termination Point is physically located in **two** distinct located network elements (refer to DSL modelling as an example). This TP may detect the same probable cause in the local and in the remote network element.

In order to differentiate these two probable causes, an additional prefix "RU_" (RU for Remote Unit) has to be used in the Name of the probable cause.

e.g. SSF → **RU_**SSF or Contra_TCM_AIS → **RU_**Contra_TCM_AIS

Revision History

Version	Date	Description of Change
4.0	April 2005	OS related Probable Causes added.
4.1	October 2006	▪ Columns "source standard" and "object" added. ▪ Ethernet and LAG related Probable Causes added.
4.2	April 2014	▪ Add OTN/PTN related Probable Causes that already defined in TMF 063 ▪ update "**source standard**" for exist Probable Cause

Acknowledgements

<FirstName>	<LastName>	<Company>

How to comment on the document

Comments and requests for information must be in written form and addressed to the contact identified below:

Keith	Dorking	CIENA
Phone:	+1 678 867 5007	
Fax:	+1 678 867 5010	
e-mail:	Kdorking@ciena.com	

Please be specific, since your comments will be dealt with by the team evaluating numerous inputs and trying to produce a single text. Thus we appreciate significant specific input. We are looking for more input than wordsmith" items, however editing and structural help are greatly appreciated where better clarity is the result.

