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TD**Source:** Editor G.8151/Y.1374**Title:** Draft Amendment 2 to Recommendation ITU-T G.8151/Y.1374 (2012) (for Consent, July 2013)**Introduction**

This document contains for consent the draft text of Amendment 2 to G. G.8151/Y.1374 “*Management aspects of the MPLS-TP network element*”.

This amendment specifies the requirements for managing the G.8121.1 and G.8121.2 specific equipment functions. It also contains updates to G.8151 (07/2012) for alignment with G.8121.

Document history:

Version	Date	Description
1.00	WD08r2 (1/2013 Hiroshima)	<ul style="list-style-type: none"> ▪ In 7.2.14, change "Table 7-2" to "Table 7-3" in the first sentence of the second paragraph. ▪ Add the missing MT/ETH_A_Sk_MI_GAL_Enable ▪ Add MIs as agreed drafting result of G.8121 series, See WD29 for details and this draft highlighted with Cyan ▪ To be done: <ul style="list-style-type: none"> – Check for & perform any needed alignment with G.8121 Amd.1 – Check for & perform any needed alignment with progress of G.8121.1 and G.8121.2 from the Hiroshima 1/2013 meeting

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Version	Date	Description
1.01	WD29 (4/2013 Darmstadt)	<ul style="list-style-type: none">▪ Added missing MIs found in G.8121.2 (wd06r1, Hiroshima, Jan 2013), as pointed out by wd16r1▪ Updated based on discussion on WD28:<ul style="list-style-type: none">– Clause 1 regarding ETH as server and the SLNE & MTLNE agents– Change Channel layer to Transport service layer– In Table 8-1 for MT_TT_So_MI_GAL_Enable, set to true for PW not using CW
1.02	WD07 (7/2013 Geneva)	<p>To align with and support G.8121, G.8121.1, and G.8121.2</p> <ul style="list-style-type: none">▪ Update the default value note of MI_GAL_Enable to align with G.8110.1 and G.8121.▪ Add MTDe/Di_TT_So/Sk_MI_DP_Loopback_Enable▪ Delete Sk_MI_APS_CoS▪ Add the MI signals for ODUkP-h/MT_A_So/Sk provisioning & reporting▪ For G.8121.1 specific, add MI_LMC_Enable▪ For G.8121.2 specific, move some MI signals from Sink to Source

Draft Amendment 2 to Recommendation ITU-T G.8151/Y.1374 (2012)

Management aspects of the MPLS-TP network element: Amendment 2

Summary

Amendment 2 to Recommendation ITU-T G.8151/Y.1374 (2012) specifies the requirements for managing the G.8121.1 and G.8121.2 specific equipment functions. It also contains updates to G.8151 (07/2012) for alignment with G.8121.

Draft Amendment 2 to Recommendation ITU-T G.8151/Y.1374 (2012)

Management aspects of the MPLS-TP network element: Amendment 2

1) Scope

This amendment specifies the requirements for managing the G.8121.1 and G.8121.2 specific equipment functions. It also contains updates to G.8151 (07/2012) for alignment with G.8121.

2) References

- [ITU-T G.8151] Recommendation ITU-T G.8151/Y.1374 (07/2012), *Management aspects of the MPLS-TP network element*, plus Amendment 1 (10/2012)
- [ITU-T G.8121] Recommendation ITU-T G.8121/Y.1381 (09/2012), *Characteristics of MPLS-TP equipment functional blocks*, plus Amendment 1 (12/2012)
- [ITU-T G.8121.1] Recommendation ITU-T G.8121.1/Y.1381.1 (07/2013), *Characteristics of MPLS-TP equipment functional blocks supporting G.8113.1/Y.1373.1*
- [ITU-T G.8121.2] Recommendation ITU-T G.8121.1/Y.1381.1 (07/2013), *Characteristics of MPLS-TP equipment functional blocks supporting G.8113.2/Y.1373.2*

3) Updates to G.8151

3.1) Updates to clause 1 “Scope”

Update to clause 1 “Scope” of G.8151 as follow.

1 Scope

This Recommendation addresses management aspects of the MPLS Transport Profile (MPLS-TP) capable network element containing transport functions of one or more of the layer networks of the MPLS-TP network. The management of the MPLS-TP layer networks is separable from that of its client layer networks so that the same means of management can be used regardless of the client. In this version of the Recommendation, fault management, configuration management, performance management, and security management are specified. Accounting management is for further study.

The generic requirements for managing transport network elements are specified in [ITU-T G.7710/Y.1701] and the requirements for the management of equipment used in networks supporting an MPLS Transport Profile (MPLS-TP) are specified in [b-IETF RFC 5951]. This Recommendation specifies the requirements for managing the following MPLS-TP specific equipment functional blocks, which are defined in [ITU-T G.8121/Y.1381]:

- MPLS-TP layer connection function,
- MPLS-TP layer trail termination functions,
- MPLS-TP server to MPLS-TP client adaptation functions,

- MPLS-TP server to Ethernet client adaptation functions.
- SDH server to MPLS-TP client adaptation functions,
- PDH server to MPLS-TP client adaptation functions,
- OTN sever to MPLS-TP client adaptation functions,
- ETH sever to MPLS-TP client adaptation functions.

The management of the adaptation of other clients and servers with respect to MPLS-TP is for further study.

This Recommendation also describes the management network organizational model for communication between an element management layer (EML) Operations System and the MPLS-TP equipment management function within an MPLS-TP network element.

The architecture described in this Recommendation for the management of MPLS-TP transport networks is based upon the following considerations:

- The management view of network element functional elements should be uniform whether those elements form part of an inter-domain interface or part of an intra-domain interface. Those properties necessary to form such a uniform management view are to be included in this Recommendation.
- MPLS-TP layer network entities (MTLNE) refer to trail termination, adaptation and connection functions as described in [ITU-T G.8110.1/Y.1370.1],
- a network element may only contain MPLS-TP layer network entities,
- a network element may contain both MPLS-TP layer network entities (MTLNE) and client layer network entities (CLNE),
- client layer entities are managed as part of their own logical domain (e.g. Ethernet management network),
- CLNE and MTLNE may or may not share a common message communication function (MCF) and management application function (MAF) depending on application,
- CLNE and MTLNE may or may not share the same agent,
- Server layer network entities (SLNE) and MTLNE may or may not share the same agent.

This Recommendation provides a representation of the MPLS-TP technology using the methodologies that have been used for other transport technologies (e.g. SDH, OTN and Ethernet).

3.1) Updates to clause 2 “References”

Update the list of references in clause 2 of G.8151 as follow.

[ITU-T G.805]	Recommendation ITU-T G.805 (2000), <i>Generic functional architecture of transport networks.</i>
[ITU-T G.806]	Recommendation ITU-T G.806 (20 12 09), <i>Characteristics of transport equipment – Description methodology and generic functionality</i>
[ITU-T G.7041/Y.1303]	Recommendation ITU-T G.7041/Y.1303 (2008), <i>Generic framing procedure (GFP)</i>

- [ITU-T G.7710/Y.1701] Recommendation ITU-T G.7710/Y.1701 (20~~12~~¹⁹7), *Common equipment management function requirements*, plus Corrigendum 1 (2009)
- [ITU-T G.7712/Y.1703] Recommendation ITU-T G.7712/Y.1703 (2010), *Architecture and specification of data communication network*
- [ITU-T G.8110.1/Y.1370.1] Recommendation ITU-T G.8110.1/Y.1370.1 (2011), *Architecture of MPLS Transport Profile (MPLS-TP) layer network*
- [ITU-T G.8121/Y.1381] Recommendation ITU-T G.8121/Y.1381 (201~~3~~⁴), *Characteristics of MPLS Transport Profile (MPLS-TP) equipment functional blocks*
- [ITU-T G.8121.1/Y.1381.1] Recommendation ITU-T G.8121.1/Y.1381.1 (201~~3~~⁴), *Characteristics of MPLS Transport Profile (MPLS-TP) equipment functional blocks supporting G.8113.1/Y.1372.1*
- [ITU-T G.8121.2/Y.1381.2] Recommendation ITU-T G.8121.2/Y.1381.2 (201~~3~~⁴), *Characteristics of MPLS Transport Profile (MPLS-TP) equipment functional blocks supporting G.8113.2/Y.1372.2*
- [ITU-T M.20] Recommendation ITU-T M.20 (1992), *Maintenance philosophy for telecommunication networks*.
- [ITU-T M.3010] Recommendation ITU-T M.3010 (2000) and Amendments, *Principles for a telecommunications management network*
- [ITU-T M.3013] Recommendation ITU-T M.3013 (2000), *Considerations for a telecommunications management network*.
- [ITU-T M.3100] Recommendation ITU-T M.3100 (2005), *Generic network information model*.
- [ITU-T X.700] Recommendation ITU-T X.700 (1992), *Management framework for Open Systems Interconnection (OSI) For CCITT Applications*.
- [ITU-T X.701] Recommendation ITU-T X.701 (1997), *Information technology – Open Systems Interconnection – Systems management overview*.
- [ITU-T X.733] Recommendation ITU-T X.733 (1992) and Amendments, *Information technology – Open Systems Interconnection – Systems Management: Alarm reporting function*.
- [ITU-T X.735] Recommendation ITU-T X.735 (1992) and Amendments, *Information technology – Open Systems Interconnection – Systems management: Log control function*.

3.2) Updates to clause 4 “Abbreviations and acronyms”

Update the list of abbreviations and acronyms in clause 4 of G.8151 as follow.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations:

AcSL	Accepted Signal Label
AF	Atomic Function
AIS	Alarm Indication Signal

ALM	ALarM reporting
ARC	Alarm Reporting Control
CLNE	Client Layer Network Entity
CP	Connection Point
CtrlP	Control Plane
DCN	Data Communication Network
ECC	Embedded Communication Channel
EMF	Equipment Management Function
FCAPS	Fault Management, Configuration Management, Account Management, Performance Management and Security Management
FFS	For Further Study
GNE	Gateway Network Element
IP	Internet Protocol
ITU-T	International Telecommunication Union – Telecommunication Standardization Sector
LAN	Local Area Network
LCN	Local Communication Network
LCT	Local Craft Terminal
MAF	Management Application Function
MCC	Management Communication Channel
MCF	Message Communication Function
MD	Mediation Device
MF	Mediation Function
MI	Management Information
MIB	Management Information Base
MN	Management Network
MO	Managed Object
MOC	Managed Object Class
MP	Management Point
MgmtP	Management Plane
MPLS	Multi-Protocol Label Switching
MPLS-TP	MPLS Transport Profile
MSN	Management SubNetwork
MT.C	MPLS-TP Channel layer <u>[NOTE: Equivalent to MPLS-TP Transport service layer]</u>
MT.MN	MPLS-TP MN
MT.MSN	MPLS-TP MSN

MT.NE	MPLS-TP NE
MT.P	MPLS-TP Path layer
MT.S	MPLS-TP Section layer
MTM-n	MPLS-TP Transport Module layer n
NALM	No ALaRm reporting
NALM-CD	No ALaRm reporting, Count Down
NALM-NR	No ALaRm reporting, Not Ready
NALM-QI	No ALaRm reporting, Qualified Inhibit
NALM-TI	No ALaRm reporting, Timed Inhibit
NE	Network Element
NEF	Network Element Function
NEL	Network Element Layer
OAM	Operations, Administration, Maintenance
OAM&P	Operations, Administration, Maintenance and Provisioning
OS	Operations System
OSF	Operations System Function
OSI	Open Systems Interconnection
PMC	Performance Monitoring Clock
QoS	Quality of Service
SCC	Signalling Communication Channel
<u>SLNE</u>	<u>Server Layer Network Entity</u>
RTC	Real Time Clock
TCM	Tandem Connection Monitoring
TMN	Telecommunication Management Network
WAN	Wide Area Network
WS	WorkStation
WTR	Wait To Restore

3.3) Updates to Table 7-1 “Inputs/outputs for the fault cause persistency function”

Update Table 7-1 in clause 7.2.1 of G.8151 as follow.

Table 7-1 – Inputs/outputs for the fault cause persistency function

Atomic function (ITU-T G.8121)	Input	Output
MT_TT_Sk	cSSF cLCK cLOC cMMG cUNM cUNP cUNC cDEG cRDI	fSSF fLCK fLOC fMMG fUNM fUNP fUNC fDEG fRDI
Sn/MT_A_Sk	cPLM cLFD cEXM cUPM	fPLM fLFD fEXM fUPM
Sn-X-L/MT_A_Sk	cPLM cLFD cEXM cUPM	fPLM fLFD fEXM fUPM
Sm/MT_A_Sk	cPLM cLFD cEXM cUPM	fPLM fLFD fEXM fUPM
Sm-X-L/MT_A_Sk	cPLM cLFD cEXM cUPM	fPLM fLFD fEXM fUPM
Pq/MT_A_Sk	cPLM cLFD cEXM cUPM	fPLM fLFD fEXM fUPM
Pq-X-L/MT_A_Sk	cPLM cLFD cEXM cUPM	fPLM fLFD fEXM fUPM
ODUkP/MT_A_Sk	cPLM cLFD cEXM cUPM	fPLM fLFD fEXM fUPM
ODUkP-X-L/MT_A_Sk	cVcPLM cLFD cEXM cUPM	fVcPLM fLFD fEXM fUPM

Table 7-1 – Inputs/outputs for the fault cause persistency function

Atomic function (ITU-T G.8121)	Input	Output
<u>ODUKP-h/MT A Sk</u>	<u>cPLM</u> <u>cLFD</u> <u>cEXM</u> <u>cUPM</u>	<u>fPLM</u> <u>fLFD</u> <u>fEXM</u> <u>fUPM</u>

3.4) Updates to Table 7-2 “ARC specifications for MPLS-TP”

Update Table 7-1 in clause 7.2.2 of G.8151 as follow.

Table 7-2 – ARC specifications for MPLS-TP

Atomic function	Qualified problems	QoS reporting	Default state value
MT_TT_Sk	fSSF fLCK fLOC fMMG fUNM fUNP fUNC fDEG fRDI	For further study	ALM
Sn/MT_A_Sk	fPLM fLFD fEXM fUPM	For further study	ALM
Sn-X-L/MT_A_Sk	fPLM fLFD fEXM fUPM	For further study	ALM
Sm/MT_A_Sk	fPLM fLFD fEXM fUPM	For further study	ALM
Sm-X-L/MT_A_Sk	fPLM fLFD fEXM fUPM	For further study	ALM
Pq/MT_A_Sk	fPLM fLFD fEXM fUPM	For further study	ALM
Pq-X-L/MT_A_Sk	fPLM fLFD	For further study	ALM

Table 7-2 – ARC specifications for MPLS-TP

Atomic function	Qualified problems	QoS reporting	Default state value
	fEXM fUPM		
ODUkP/MT_A_Sk	fPLM fLFD fEXM fUPM	For further study	ALM
ODUkP-X-L/MT_A_Sk	fVcPLM fLFD fEXM fUPM	For further study	ALM
<u>ODUkP-h/MT A Sk</u>	<u>fPLM</u> <u>fLFD</u> <u>fEXM</u> <u>fUPM</u>	<u>For further study</u>	<u>ALM</u>

3.5) Updates to Table 7-3 “Operational state function input and output signals for MPLS-TP”

Update Table 7-1 in clause 7.2.14 of G.8151 as follow.

Table 7-3 – Operational state function input and output signals for MPLS-TP

Atomic function	Failure input (fZZZ-value)	Operational state output (enabled/disabled)
MT_TT_Sk	fSSF fLCK fLOC fMMG fUNM fUNP fUNC fDEG fRDI	Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled
Sn/MT_A_Sk	fPLM fLFD fEXM fUPM	Enabled Enabled Enabled Enabled
Sn-X-L/MT_A_Sk	fPLM fLFD fEXM fUPM	Enabled Enabled Enabled Enabled

Table 7-3 – Operational state function input and output signals for MPLS-TP

Atomic function	Failure input (fZZZ-value)	Operational state output (enabled/disabled)
Sm/MT_A_Sk	fPLM fLFD fEXM fUPM	Enabled Enabled Enabled Enabled
Sm-X-L/MT_A_Sk	fPLM fLFD fEXM fUPM	Enabled Enabled Enabled Enabled
Pq/MT_A_Sk	fPLM fLFD fEXM fUPM	Enabled Enabled Enabled Enabled
Pq-X-L/MT_A_Sk	fPLM fLFD fEXM fUPM	Enabled Enabled Enabled Enabled
ODUKP/MT_A_Sk	fPLM fLFD fEXM fUPM	Enabled Enabled Enabled Enabled
ODUKP-X-L/MT_A_Sk	fVcPLM fLFD fEXM fUPM	Enabled Enabled Enabled Enabled
<u>ODUKP-h/MT_A_Sk</u>	<u>fPLM</u> <u>fLFD</u> <u>fEXM</u> <u>fUPM</u>	<u>Enabled</u> <u>Enabled</u> <u>Enabled</u> <u>Enabled</u>

3.6) Updates to clause 8.4 “Trail Termination”

Update clause 8.4 of G.8151 as follow.

8.4 Trail Termination

See [ITU-T G.7710/Y.1701] for a description of trail termination management.

This function allows a user to provision and monitor the operation of the MPLS-TP Trail Termination process.

The MI signals listed in the table(s) of this subclause are communicated between the EMF and the MPLS-TP Trail Termination process across the management point within the MT.NE.

For MT.NE that supports the MT_TT function specified in [ITU-T G.8121/Y.1381], the EMF shall support the following management functions for the MI listed in Table 8-1:

- Provisioning the trail termination management information
- Retrieving the trail termination management information
- Notifying the changes of the trail termination management information
- Receiving the monitored trail termination management information

Table 8-1/G.8151/Y.1374 – Provisioning and reporting for termination functions

MI Signal	Value Range	Default Value
MT_TT_So Provisioning		
MT_TT_So_MI_GAL_Enable	true, false	Note: <u>MI_GAL_Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.</u> MI_GAL_Enable must be: — set to true on ▪ PWs not using CW ▪ LSPs ▪ Sections — set to false on ▪ PWs using CW Setting it to true on PWs not using CW is for further study.
MT_TT_So_MI_TTLVALUE	0..255	255
MT_TT_So_MI_MEG_ID	String; values are OAM protocol-specific	Note-1
MT_TT_So_MI_MEP_ID	String; values are OAM protocol-specific	Note-1
MT_TT_So_MI_CC_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_So_MI_RDI_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_So_MI_CC_Enable	true, false	false
MT_TT_So_MI_CVp_Enable	true, false Note: The combination of MT_TT_So_MI_CC_Enable =false and MT_TT_So_MI_CVp_Enable=true is not allowed.	false
MT_TT_So_MI_CC_CoS	0, 1, 2, 3, 4, 5, 6, 7	7
MT_TT_So_MI_CC_Period	3.33 msec, 10 msec, 100 msec, 1sec, 10 sec, 1 min, 10 min	100 msec

MI Signal	Value Range	Default Value
MT_TT_So_MI_LMp_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_So_MI_LMp_Enable[1... M _{LMp}]	true, false	false
MT_TT_So_MI_LMp_Period[1... M _{LMp}]	100ms, 1s, 10s	100ms
MT_TT_So_MI_LMp_CoS[1... M _{LMp}]	0, 1, 2, 3, 4, 5, 6, 7	--
MT_TT_So_MI_DMp_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_So_MI_DMp_Enable[1... M _{DMp}]	true, false	false
MT_TT_So_MI_DMp_Period[1... M _{DMp}]	100ms, 1s, 10s	100ms
MT_TT_So_MI_DMp_Test_ID[1... M _{DMp}]	-- (Note 2)	--
MT_TT_So_MI_DMp_CoS[1... M _{DMp}]	0, 1, 2, 3, 4, 5, 6, 7	--
MT_TT_So_MI_DMp_Length[1... M _{DMp}]	Non-negative integer representing number of bytes for the length of the padding TLV.	0
MT_TT_So_MI_IDMp_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_So_MI_IDMp_Enable[1... M _{IDMp}]	true, false	false
MT_TT_So_MI_IDMp_Period[1... M _{IDMp}]	100ms, 1s, 10s	100ms
MT_TT_So_MI_IDMp_Test_ID[1... M _{IDMp}]	-- (Note 2)	--
MT_TT_So_MI_IDMp_CoS[1... M _{IDMp}]	0, 1, 2, 3, 4, 5, 6, 7	--
MT_TT_So_MI_IDMp_Length[1... M _{IDMp}]	Non-negative integer representing number of bytes for the length of the padding TLV.	0
MT_TT_So_MI_SLp_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_So_MI_SLp_Enable[1... M _{SLp}]	true, false	false
MT_TT_So_MI_SLp_Period[1... M _{SLp}]	100ms, 1s, 10s	100ms
MT_TT_So_MI_SLp_Test_ID[1... M _{SLp}]	-- (Note 2)	--
MT_TT_So_MI_SLp_CoS[1... M _{SLp}]	0, 1, 2, 3, 4, 5, 6, 7	--
MT_TT_So_MI_SLp_Length[1... M _{SLp}]	Non-negative integer representing number of bytes for the length of the padding TLV.	0
MT_TT_Sk Provisioning		
MT_TT_Sk_MI_GAL_Enable	true, false	Note: <u>MI_GAL_Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.</u> <u>MI_GAL_Enable must be:</u> <u>— set to true on</u> <u>— PWs not using CW</u>

MI Signal	Value Range	Default Value
		LSPs Sections set to false on PWs using CW set to true on LSPs; to false on PWs using CW, and to true on Sections. Setting it to true on PWs not using CW is for further study.
MT_TT_Sk_MI_MEG_ID	String; values are OAM protocol-specific	Note-2
MT_TT_Sk_MI_PeerMEP_ID	String; values are OAM protocol-specific	Empty list
MT_TT_Sk_MI_CC_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_Sk_MI_RDI_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_Sk_MI_CC_Enable	true, false	false
MT_TT_Sk_MI_CVp_Enable	true, false Note: The combination of MT_TT_Sk_MI_CC_Enable =false and MT_TT_Sk_MI_CVp_Enable=true is not allowed.	false
MT_TT_Sk_MI_CC_Period	3.33 msec, 10 msec, 100 msec, 1sec, 10 sec, 1 min, 10 min	100 msec
MT_TT_Sk_MI_CC_CoS	0, 1, 2, 3, 4, 5, 6, 7	7
MT_TT_Sk_MI_Get_SvdCC	Last received CC frame(s) that caused defect	--
MT_TT_Sk_MI_LMp_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_Sk_MI_LMp_Enable[1... M _{LMp}]	true, false	false
MT_TT_Sk_MI_LMp_CoS[1... M _{LMp}]	0, 1, 2, 3, 4, 5, 6, 7	--
MT_TT_Sk_MI_LM_DEGM	2-10; See Table 7-1/G.806	10
MT_TT_Sk_MI_LM_M	2-10	10
MT_TT_Sk_MI_LM_DEGTHR	0% .. 100%; See Table 7-1/G.806	30%
MT_TT_Sk_MI_LM_TFMIN	FFS	FFS
MT_TT_Sk_MI_1second	--	--
MT_TT_Sk_MI_DMp_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_Sk_MI_DMp_Enable[1... M _{DMp}]	true, false	false
MT_TT_Sk_MI_DMp_CoS[1... M _{DMp}]	0, 1, 2, 3, 4, 5, 6, 7	--

MI Signal	Value Range	Default Value
MT_TT_Sk_MI_1DMp_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_Sk_MI_1DMp_Enable[1...M _{1DMp}]	true, false	false
MT_TT_Sk_MI_1DMp_Test_ID[1...M _{1DMp}]	-- (Note 2)	--
MT_TT_Sk_MI_SLp_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_Sk_MI_SLp_Enable[1... M _{SLp}]	true, false	false
MT_TT_Sk_MI_SLp_CoS[1... M _{SLp}]	0, 1, 2, 3, 4, 5, 6, 7	--
MT_TT_Sk_MI_AIS_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_Sk_MI_LCK_OAM_Tool	G.8113.1, G.8113.2	N/A
MT_TT_Sk Reporting		
MT_TT_Sk_MI_SvdCC	Last received CC packet(s) that causes the defect	--

Note-1: A value must be provided at provisioning.

Note-2: The Test ID field is optional when this proactive measurement tool is used.

8.4.1 Trail Termination – G.8121.1 Specific

For MT.NE that supports the MT TT function specified in [ITU-T G.8121.1/Y.1381.1], the EMF shall in addition support the management of the MIs listed in Table 8-1.1:

Table 8-1.1/G.8151/Y.1374 – Provisioning and reporting for termination functions

<u>MI Signal</u>	<u>Value Range</u>	<u>Default Value</u>
<u>MT TT So Provisioning</u>		
<u>MT TT So MI LMC Enable</u>	<u>true, false</u>	<u>false</u>
<u>MT TT Sk Provisioning</u>		
<u>MT TT Sk MI LMC Enable</u>	<u>true, false</u>	<u>false</u>

8.4.2 Trail Termination – G.8121.2 Specific

For MT.NE that supports the MT TT function specified in [ITU-T G.8121.2/Y.1381.2], the EMF shall in addition support the management of the MIs listed in Table 8-1.2:

Table 8-1.2/G.8151/Y.1374 – Provisioning and reporting for termination functions

<u>MI Signal</u>	<u>Value Range</u>	<u>Default Value</u>
<u>MT TT So Provisioning</u>		
<u>MT TT So MI CCCV Mode[]</u>	<u>Coord, Src, Sink</u>	<u>Coord</u>
<u>MT TT So MI Local MEPID[]</u>	<u>See cc-ev-tdf</u>	<u>Note 1</u>
<u>MT TT So MI Local Discr[]</u>	<u>32-bit value</u>	<u>0</u>
<u>MT TT So MI CCCV CoS[]</u>	<u>0, 1, 2, 3, 4, 5, 6, 7</u>	<u>--</u>

MI Signal	Value Range	Default Value
MT TT So Reporting		
MT TT So MI DMp_PeriodChange[d]1..MDMp]	true, false	false
MT TT So MI LMp_PeriodChange[d]1..MLMp]	true, false	false
MT TT Sk Provisioning		
MT TT Sk MI CCCV_Enable[d]	true, false	false
MT TT Sk MI CCCV_Mode[d]	Coord, Src, Sink	Coord
MT TT Sk MI Local MEPID[d]	See ec-ev-rd1	Note-1
MT TT Sk MI Remote_Discr[d]	32-bit value	0
MT TT Sk MI CCCV_CoSt[d]	0, 1, 2, 3, 4, 5, 6, 7	0
MT TT Sk MI Local_Discr[d]	32-bit value	0
MT TT Sk MI PeerMEPID[d]		
MT TT Sk MI DMp_CopyPad[d]1..MDMp]	0, 128	0
MT TT Sk MI LMp_LMType[d]1..MLMp]	ILM, DLM	
MT TT Sk MI LMp_CountBytes[d]1..MLMp]	64-bit	
MT TT Sk MI PM_ClearError	true, false	false
MT TT Sk MI PM_Responder_Enable	true, false	false
MT TT Sk MI SSP_Reported	true, false	false
MT TT Sk MI RDI_Reported	true, false	false
MT TT Sk Reporting		
MT TT Sk MI DMp_ReportError(Error)[d]1..MDMp]	true, false	false
MT TT Sk MI LMp_ReportError(Error)[d]1..MLMp]	true, false	false

Note-1: A value must be provided at provisioning.

3.7) Updates to clause 8.5 “Adaptation”

Update clause 8.5 of G.8151 as follow.

8.5 Adaptation

See section 8.5 of [ITU-T G.7710/Y.1701] for a description of adaptation management.

An Access Point that has multiple adaptation functions connected to it, thereby allowing different clients to be transported via the server signal, requires a mechanism for the selection of the active client.

This function allows a user to provision and monitor the operation of the MPLS-TP Adaptation processes.

The MI signals listed in the following table are communicated between the EMF and the Adaptation processes across the management point within the MPLS-TP NE.

For MT.NE that supports the adaptation functions specified in [ITU-T G.8121/Y.1381], the EMF shall support the following management functions for the MI listed in Table 8-2 below:

- Provisioning the flow forwarding management information
- Retrieving the flow forwarding management information
- Notifying the changes of the flow forwarding management information

Table 8-2/G.8151/Y.1374 – Provisioning and reporting for adaptation functions

MI Signal	Value Range	Default Value
MT/MT_A_So Provisioning		
MT/MT_A_So_MI_Admin_State	LCK, Normal	Normal
MT/MT_A_So_MI_Label [1...M]	16 to (2**20)-1	Note-2
MT/MT_A_So_MI_LSPTType[1...M]	E-LSP, L-LSP	Note-1
MT/MT_A_So_MI_CoS[1...M]	Note-1	Note-1
MT/MT_A_So_MI_PHB2EXPMapping[1...M]	Note-1	Note-1
MT/MT_A_So_MI_QoSEncodingMode[1...M]	A, B	Note-2
<u>MT/MT_A_So_MI_Mode</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
<u>MT/MT_A_So_MI_LCK_OAM_Tool[1...M]</u>	<u>G.8113.1, G.8113.2</u>	<u>N/A</u>
MT/MT_A_So_MI_LCK_Period[1...M]	1 s, 1 min	1 s
MT/MT_A_So_MI_LCK_CoS[1...M]	0..7	7
<u>MT/MT_A_So_MI_APS_OAM_Tool[1...M]</u>	<u>FFS</u>	<u>FFS</u>
<u>MT/MT_A_So_MI_APS_CoS[1...M]</u>	<u>0..7</u>	<u>7</u>
MT/MT_A_So_MI_GAL_Enable[1...M]	true, false	Note: <u>MI_GAL_Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study. MI_GAL_Enable must be:</u> <u>— set to true on</u> <u>— PWs not using CW</u> <u>— LSPs</u> <u>— Sections</u> <u>— set to false on</u> <u>— PWs using CW</u> <u>set</u> <u>to true on LSPs,</u> <u>to false on PWs using</u> <u>CW, and</u> <u>to true on Sections.</u> <u>Setting it to true on</u> <u>PWs not using CW is</u> <u>for further study.</u>

MI Signal	Value Range	Default Value
MT/MT_A_Sk Provisioning		
MT/MT_A_Sk_MI_Admin_State	LCK, Normal	Normal
MT/MT_A_Sk_MI_Label [1...M]	16 to (2**20)-1	Note-2
MT/MT_A_Sk_MI_LSPTType[1...M]	E-LSP, L-LSP	Note-1
MT/MT_A_Sk_MI_CoS[1...M]	Note-1	Note-1
MT/MT_A_Sk_MI_TC2PHBMapping[1...M]	Note-1	Note-1
MT/MT_A_Sk_MI_QoSDecodingMode[1...M]	A, B	Note-2
<u>MT/MT_A_Sk_MI_Mode</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
<u>MT/MT_A_Sk_MI_AIS_OAM_Tool[1...M]</u>	<u>G.8113.1, G.8113.2</u>	<u>N/A</u>
MT/MT_A_Sk_MI_AIS_Period[1...M]	1 s, 1 min	1 s
MT/MT_A_Sk_MI_AIS_CoS[1...M]	0..7	7
<u>MT/MT_A_Sk_MI_LCK_OAM_Tool[1...M]</u>	<u>G.8113.1, G.8113.2</u>	<u>N/A</u>
MT/MT_A_Sk_MI_LCK_Period[1...M]	1 s, 1 min	1 s
MT/MT_A_Sk_MI_LCK_CoS[1...M]	0..7	7
<u>MT/MT_A_Sk_MI_APS_OAM_Tool[1...M]</u>	<u>FFS</u>	<u>FFS</u>
<u>MT/MT_A_Sk_MI_APS_CoS[1...M]</u>	<u>0..7</u>	<u>7</u>
MT/MT_A_Sk_MI_GAL_Enable [1...M]	true, false	Note: <u>MI_GAL_Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study. MI_GAL_Enable must be:</u> <u>— set to true on</u> <u>— PWs not using CW</u> <u>— LSPs</u> <u>— Sections</u> <u>— set to false on</u> <u>— PWs using CW</u> <u>set</u> <u>to true on LSPs,</u> <u>to false on PWs using CW, and</u> <u>to true on Sections.</u> <u>Setting it to true on PWs not using CW is for further study.</u>
MTDi/MT_A_Sk Provisioning		
MTDi/MT_A_Sk_MI_DS_MP_Type Note: This MI should be properly configured by the EMF on the basis of the MPLS-TP connection configuration within the node but not exposed to the operator as a configuration parameter in the NE/EMS	MEP, MIP	--

MI Signal	Value Range	Default Value
management interface. See G.8121 clause 9.4.2.2.2 and its Appendix I for examples of configuration of this MI.		
MT/ETH_A_So Provisioning		
MT/ETH_A_So_MI_Admin_State	LCK, Normal	Normal
MT/ETH_A_So_MI_FCSEnable	true, false	true
MT/ETH_A_So_MI_CWEnable	true, false	true
MT/ETH_A_So_MI_SQUse	true, false	false
MT/ETH_A_So_MI_PRI2CoSMapping	Note-1	Note-1
MT/ETH_A_So_MI_MEP_MAC*	6 byte Unicast MAC address	--
MT/ETH_A_So_MI_Client_MEL*	0..7	7
MT/ETH_A_So_MI_LCK_Period*	1 s, 1 min	1 s
MT/ETH_A_So_MI_LCK_Pri*	0..7	7
MT/ETH_A_So_MI_MEL*	0..7	7
MT/ETH_A_Sk Provisioning		
MT/ETH_A_Sk_MI_FCSEnable	true, false	true
MT/ETH_A_Sk_MI_CWEnable	true, false	false
MT/ETH_A_Sk_MI_SQUse	true, false	false
MT/ETH_A_Sk_MI_GAL_Enable	true, false	<p><u>Note:</u> <u>MI_GAL_Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.</u> <u>MI_GAL_Enable must be:</u></p> <hr/> <p><u>et to true on</u></p> <hr/> <p><u>Ws not using CW</u></p> <hr/> <p><u>SPs</u></p> <hr/> <p><u>ections</u></p> <hr/> <p><u>et to false on</u></p> <hr/> <p><u>Ws using CW</u> <u>set</u> <u>to true on LSPs,</u> <u>to false on PWs using</u> <u>CW, and</u> <u>to true on Sections.</u> <u>Setting it to true on</u> <u>PWs not using CW is</u> <u>for further study.</u></p>

MI Signal	Value Range	Default Value
MT/ETH_A_Sk_MI_CoS2PRIMapping	Note-1	Note-1
MT/ETH_A_Sk_MI_MEL* (Note: * ETH OAM related)	0..7	7
MT/ETH_A_Sk_MI_Admin_State	LCK, Normal	Normal
MT/ETH_A_Sk_MI_LCK_Period *	1 s, 1 min	1 s
MT/ETH_A_Sk_MI_LCK_Pri *	0..7	7
MT/ETH_A_Sk_MI_Client_MEL *	0..7	7
MT/ETH_A_Sk_MI_MEP_MAC *	6 byte Unicast MAC address	--
MT/ETH_A_Sk_MI_AIS_Pri *	0..7	7
MT/ETH_A_Sk_MI_AIS_Period *	1 s, 1 min	1 s
MT/SCC_A_So Provisioning		
MT/SCC_A_So_MI_Active	true, false	true
MT/SCC_A_So_MI_ECC_CoS	0..7	7
MT/SCC_A_So_MI_GAL_Enable	true, false	Note: <u>MI GAL Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.</u> <u>MI_GAL_Enable must be:</u> <u>— set to true on</u> <u>— PWs not using CW</u> <u>— LSPs</u> <u>— Sections</u> <u>— set to false on</u> <u>— PWs using CW</u> <u>-set</u> <u>to true on LSPs,</u> <u>to false on PWs using CW, and</u> <u>to true on Sections.</u> <u>Setting it to true on PWs not using CW is for further study.</u>
MT/SCC_A_Sk Provisioning		
MT/SCC_A_Sk_MI_Active	true, false	true
MT/SCC_A_Sk_GAL_Enable	true, false	Note: <u>MI GAL Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further</u>

MI Signal	Value Range	Default Value
		study.MI_GAL_Enable must be: — set to true on — PWs not using CW — LSPs — Sections — set to false on — PWs using CW -set to true on LSPs, to false on PWs using CW, and to true on Sections. Setting it to true on PWs not using CW is for further study.
MT/MCC_A_So Provisioning		
MT/MCC_A_So_MI_Active	true, false	true
MT/MCC_A_So_MI_ECC_CoS	0..7	7
MT/MCC_A_So_MI_GAL_enable	true, false	Note: MI GAL Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.MI_GAL_Enable must be: — set to true on — PWs not using CW — LSPs — Sections — set to false on — PWs using CW -set to true on LSPs, to false on PWs using CW, and to true on Sections. Setting it to true on PWs not using CW is for further study.
MT/MCC_A_Sk Provisioning		
MT/MCC_A_Sk_MI_Active	true, false	true
MT/MCC_A_Sk_MI_GAL_Enable	true, false	Note: MI GAL Enable must be set to true on LSPs

MI Signal	Value Range	Default Value
		<p><u>and sections and to false on PWs. Setting it to true for PWs is for further study.</u> <u>MI_GAL_Enable must be:</u> <u>— set to true on</u> <u>— PWs not using CW</u> <u>— LSPs</u> <u>— Sections</u> <u>— set to false on</u> <u>PWs using CW</u> <u>-set</u> <u>to true on LSPs;</u> <u>to false on PWs using CW, and</u> <u>to true on Sections.</u> <u>Setting it to true on</u> <u>PWs not using CW is</u> <u>for further study.</u></p>
Sn/MT_A_So Provisioning		
Sn/MT_A_So_MI_SCCType	0..255	32
Sn/MT_A_So_MI_Label[1...M]	16 to (2**20)-1	Note-2
Sn/MT_A_So_MI_LSPTType[1...M]	E-LSP, L-LSP	--
Sn/MT_A_So_MI_CoS[1...M]	0..7	--
Sn/MT_A_So_PHB2TCMapping[1...M]	Note-1	--
Sn/MT_A_So_MI_QoSEncodingMode[1...M]	A, B	--
<u>Sn/MT_A_So_MI_Mode[1...M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
Sn/MT_A_Sk Provisioning		
Sn/MT_A_Sk_MI_SCCType	0..255	32
Sn/MT_A_Sk_MI_Label[1...M]	16 to (2**20)-1	Note-2
Sn/MT_A_Sk_MI_LSPTType[1...M]	E-LSP, L-LSP	Note-1
Sn/MT_A_Sk_MI_CoS[1...M]	Note-1	Note-1
Sn/MT_A_Sk_MI_TC2PHBMapping[1...M]	Note-1	Note-1
Sn/MT_A_Sk_MI_QoSDecodingMode[1...M]	A, B	Note-1
<u>Sn/MT_A_Sk_MI_Mode[1...M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
Sn/MT_A_Sk_MI_LCK_Period[1...M]	1 s, 1 min	1 s
Sn/MT_A_Sk_MI_LCK_CoS[1...M]	0..7	--
Sn/MT_A_Sk_MI_LCK_OAM_Tool [1...M]	G.8113.1, G.8113.2	N/A
Sn/MT_A_Sk_MI_Admin_State	LCK, Normal	Normal
Sn/MT_A_Sk_MI_AIS_Period[1...M]	1 s, 1 min	1 s
Sn/MT_A_Sk_MI_AIS_CoS[1...M]	0..7	--
Sn/MT_A_Sk_MI_AIS_OAM_Tool[1...M]	G.8113.1, G.8113.2	N/A

MI Signal	Value Range	Default Value
Sn/MT_A_Sk_MI_APS_CoS[1..M]	0..7	=
Sn/MT_A_Sk_MI_APS_OAM_Tool[1..M]	FFS	FFS
Sn/MT_A_Sk_MI_GAL_enable[1..M]	true, false	Note: <u>MI GAL Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.</u> <u>MI_GAL_Enable must be:</u> <u>— set to true on</u> <u>— PWs not using CW</u> <u>— LSPs</u> <u>— Sections</u> <u>— set to false on</u> <u>— PWs using CW</u> <u>— set</u> <u>to true on LSPs,</u> <u>to false on PWs using CW, and</u> <u>to true on Sections.</u> <u>Setting it to true on PWs not using CW is for further study.</u>
Sn/MT_A_Sk Reporting		
Sn/MT_A_Sk_MI_AcSL (see Table 9-11 of G.707)	0..255	--
Sn/MT_A_Sk_MI_AcEXI (see Table 6-2 of G.7041)	0..15	--
Sn/MT_A_Sk_MI_LastValidUPI (see Table 6-3 of G.7041)	0..255	--
Sn-X-L/MT_A_So Provisioning		
Sn-X-L/MT_A_So_MI_SCCType (See Table 6-3 of G.7041)	0..255	32
Sn-X-L/MT_A_So_MI_Label[1..M]	16 to (2**20)-1	Note-2
Sn-X-L/MT_A_So_MI_LSPTType[1..M]	E-LSP, L-LSP	--
Sn-X-L/MT_A_So_MI_CoS[1..M]	0..7	Note-1
Sn-X-L/MT_A_So_PHB2TCMapping[1..M]	Note-1	Note-1
Sn-X-L/MT_A_So_MI_QoSEncodingMode[1..M]	A, B	Note-1
Sn-X-L/MT_A_So_MI_Mode[1..M]	Mode 1, Mode 2	Mode 1
Sn-X-L/MT_A_Sk Provisioning		
Sn-X-L/MT_A_Sk_MI_SCCType (See Table 6-3 of G.7041)	0..255	32
Sn-X-L/MT_A_Sk_MI_Label[1..M]	16 to (2**20)-1	Note-2
Sn-X-L/MT_A_Sk_MI_LSPTType[1..M]	E-LSP, L-LSP	--

MI Signal	Value Range	Default Value
Sn-X-L/MT_A_Sk_MI_CoS[1...M]	0..7	Note-1
Sn-X-L/MT_A_Sk_MI_TC2PHBMapping[1...M]	Note-1	Note-1
Sn-X-L/MT_A_Sk_MI_QoSDecodingMode[1...M]	A, B	Note-1
Sn-X-L/MT_A_Sk_MI_Mode[1...M]	Mode 1, Mode 2	Mode 1
Sn-X-L/MT_A_Sk_MI_LCK_Period[1...M]	1 s, 1 min	1 s
Sn-X-L/MT_A_Sk_MI_LCK_CoS[1...M]	0..7	--
Sn-X-L/MT_A_Sk_MI_LCK_OAM_Tool [1...M]	G.8113.1, G.8113.2	N/A
Sn-X-L/MT_A_Sk_MI_Admin_State	LCK, Normal	Normal
Sn-X-L/MT_A_Sk_MI_AIS_Period[1...M]	1 s, 1 min	1 s
Sn-X-L/MT_A_Sk_MI_AIS_CoS[1...M]	0..7	--
Sn-X-L/MT_A_Sk_MI_AIS_OAM_Tool [1...M]	G.8113.1, G.8113.2	N/A
Sn-X-L/MT_A_Sk_MI_APS_CoS[1...M]	0..7	--
Sn-X-L/MT_A_Sk_MI_APS_OAM_Tool[1...M]	FFS	FFS
Sn-X-L /MT_A_Sk_MI_GAL_Enable [1...M]	true, false	Note: <u>MI GAL Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.</u> <u>MI_GAL_Enable must be:</u> <u>— set to true on</u> <u>— PWs not using CW</u> <u>— LSPs</u> <u>— Sections</u> <u>— set to false on</u> <u>— PWs using CW</u> <u>— set</u> <u>to true on LSPs,</u> <u>to false on PWs using CW, and</u> <u>to true on Sections.</u> <u>Setting it to true on PWs not using CW is for further study.</u>
Sn-X-L/MT_A_Sk Reporting		
Sn-X-L/MT_A_Sk_MI_AcSL (see Table 9-11 of G.707)	0..255	--
Sn-X-L/MT_A_Sk_MI_AcEXI (see Table 6-2 of G.7041)	0..15	--
Sn-X-L/MT_A_Sk_MI_LastValidUPI (see Table 6-3 of G.7041)	0..255	--
Sm/MT_A_So Provisioning		
Sm/MT_A_So_MI_SCCType	0..255	32

MI Signal	Value Range	Default Value
Sm/MT_A_So_MI_Label[1...M]	16 to (2**20)-1	Note-2
Sm/MT_A_So_MI_LSPTType[1...M]	E-LSP, L-LSP	--
Sm/MT_A_So_MI_CoS[1...M]	0..7	--
Sm/MT_A_So_PHB2TCMapping[1...M]	Note-1	Note-1
Sm/MT_A_So_MI_QoSEncodingMode[1...M]	A, B	Note-1
<u>Sm/MT_A_So_MI_Mode[1...M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
Sm/MT_A_Sk Provisioning		
Sm/MT_A_Sk_MI_SCCType	0..255	32
Sm/MT_A_Sk_MI_Label[1...M]	16 to (2**20)-1	Note-2
Sm/MT_A_Sk_MI_LSPTType[1...M]	E-LSP, L-LSP	---
Sm/MT_A_Sk_MI_CoS[1...M]	0..7	--
Sm/MT_A_Sk_MI_TC2PHBMapping[1...M]	Note-1	Note-1
Sm/MT_A_Sk_MI_QoSDecodingMode[1...M]	A, B	Note-1
<u>Sm/MT_A_Sk_MI_Mode[1...M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
Sm/MT_A_Sk_MI_LCK_Period[1...M]	1 s, 1 min	1 s
Sm/MT_A_Sk_MI_LCK_CoS[1...M]	0..7	--
Sm/MT_A_Sk_MI_LCK_OAM_Tool [1...M]	G.8113.1, G.8113.2	N/A
Sm/MT_A_Sk_MI_Admin_State	LCK, Normal	Normal
Sm/MT_A_Sk_MI_AIS_Period[1...M]	1 s, 1 min	1 s
Sm/MT_A_Sk_MI_AIS_CoS[1...M]	0..7	--
Sm/MT_A_Sk_MI_AIS_OAM_Tool[1...M]	G.8113.1, G.8113.2	N/A
Sm/MT_A_Sk_MI_APS_CoS[1...M]	0..7	=
<u>Sm/MT_A_Sk_MI_APS_OAM_Tool[1...M]</u>	<u>FFS</u>	<u>FFS</u>
Sm/MT_A_Sk_MI_GAL_Enable[1...M]	true, false	Note: <u>MI GAL Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study. MI_GAL_Enable must be:</u> <u>— set to true on</u> <u>— PWs not using CW</u> <u>— LSPs</u> <u>— Sections</u> <u>— set to false on</u> <u>— PWs using CW</u> <u>-set</u> <u>to true on LSPs,</u> <u>to false on PWs using CW, and</u> <u>to true on Sections.</u>

MI Signal	Value Range	Default Value
		Setting it to true on PWs not using CW is for further study.
Sm/MT_A_Sk Reporting		
Sm/MT_A_Sk_MI_AcSL (see Table 9-12 and Table 9-13 of G.707)	0..255	--
Sm/MT_A_Sk_MI_AcEXI (see Table 6-2 of G.7041)	0..15	--
Sm/MT_A_Sk_MI_LastValidUPI (see Table 6-3 of G.7041)	0..255	--
Sm-X-L/MT_A_So Provisioning		
Sm-X-L/MT_A_So_MI_SCCType	0..255	32
Sm-X-L/MT_A_So_MI_Label[1...M]	16 to (2**20)-1	Note-2
Sm-X-L/MT_A_So_MI_LSPTType[1...M]	E-LSP, L-LSP	--
Sm-X-L/MT_A_So_MI_CoS[1...M]	0..7	--
Sm-X-L/MT_A_So_PHB2TCMapping[1...M]	Note-1	Note-1
Sm-X-L/MT_A_So_MI_QoSEncodingMode[1...M]	A, B	Note-1
<u>Sm-X-L/MT_A_So_MI_Mode[1...M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
Sm-X-L/MT_A_Sk Provisioning		
Sm-X-L/MT_A_Sk_MI_SCCType	0..255	32
Sm-X-L/MT_A_Sk_MI_Label[1...M]	16 to (2**20)-1	Note-2
Sm-X-L/MT_A_Sk_MI_LSPTType[1...M]	E-LSP, L-LSP	--
Sm-X-L/MT_A_Sk_MI_CoS[1...M]	0..7	--
Sm-X-L/MT_A_Sk_MI_TC2PHBMapping[1...M]	Note-1	Note-1
Sm-X-L/MT_A_Sk_MI_QoSDecodingMode[1...M]	A, B	Note-1
<u>Sm-X-L/MT_A_Sk_MI_Mode[1...M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
Sm-X-L/MT_A_Sk_MI_LCK_Period[1...M]	1 s, 1 min	1 s
Sm-X-L/MT_A_Sk_MI_LCK_CoS[1...M]	0..7	--
Sm-X-L/MT_A_Sk_MI_LCK_OAM_Tool [1...M]	G.8113.1, G.8113.2	N/A
Sm-X-L/MT_A_Sk_MI_Admin_State	LCK, Normal	Normal
Sm-X-L/MT_A_Sk_MI_AIS_Period[1...M]	1 s, 1 min	1 s
Sm-X-L/MT_A_Sk_MI_AIS_CoS[1...M]	0..7	--
Sm-X-L/MT_A_Sk_MI_AIS_OAM_Tool [1...M]	G.8113.1, G.8113.2	N/A
Sm-X-L/MT_A_Sk_MI_APS_CoS[1...M]	0..7	=
<u>Sm-X-L/MT_A_Sk_MI_APS_OAM_Tool[1...M]</u>	<u>FFS</u>	<u>FFS</u>
Sm-X-L/MT_A_Sk_MI_GAL_Enable[1...M]	true, false	Note: <u>MI GAL Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.</u> <u>MI_GAL_Enabl</u>

MI Signal	Value Range	Default Value
		e must be: — set to true on — PWs not using CW — LSPs — Sections — set to false on — PWs using CW -set to true on LSPs; to false on PWs using CW, and to true on Sections. Setting it to true on PWs not using CW is for further study.
Sm-X-L/MT_A_Sk Reporting		
Sm-X-L/MT_A_Sk_MI_AcSL	0..255	--
Sm-X-L/MT_A_Sk_MI_AcEXI	0..15	--
Sm-X-L/MT_A_Sk_MI_LastValidUPI	0..255	--
Pq/MT_A_So Provisioning		
Pq/MT_A_So_MI_SCCType	0..255	32
Pq/MT_A_So_MI_Label[1..M]	16 to (2**20)-1	Note-2
Pq/MT_A_So_MI_LSPTType[1..M]	E-LSP, L-LSP	--
Pq/MT_A_So_MI_CoS[1..M]	0..7	--
Pq/MT_A_So_PHB2TCMapping[1..M]	Note-1	Note-1
Pq/MT_A_So_MI_QoSEncodingMode[1..M]	A, B	Note-1
<u>Pq/MT_A_So_MI_Mode[1..M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
Pq/MT_A_Sk Provisioning		
Pq/MT_A_Sk_MI_SCCType	0..255	32
Pq/MT_A_Sk_MI_Label[1..M]	16 to (2**20)-1	Note-2
Pq/MT_A_Sk_MI_LSPTType[1..M]	E-LSP, L-LSP	--
Pq/MT_A_Sk_MI_CoS[1..M]	0..7	--
Pq/MT_A_Sk_MI_TC2PHBMapping[1..M]	Note-1	Note-1
Pq/MT_A_Sk_MI_QoSDecodingMode[1..M]	A, B	Note-1
<u>Pq/MT_A_Sk_MI_Mode[1..M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
Pq/MT_A_Sk_MI_LCK_Period[1..M]	1 s, 1 min	1 s
Pq/MT_A_Sk_MI_LCK_CoS[1..M]	0..7	--
Pq/MT_A_Sk_MI_LCK_Tool[1..M]	G.8113.1, G.8113.2	N/A
Pq/MT_A_Sk_MI_Admin_State	LCK, Normal	Normal
Pq/MT_A_Sk_MI_AIS_Period[1..M]	1 s, 1 min	1 s
Pq/MT_A_Sk_MI_AIS_CoS[1..M]	0..7	--
Pq/MT_A_Sk_MI_AIS_Tool[1..M]	G.8113.1, G.8113.2	N/A

MI Signal	Value Range	Default Value
Pq/MT_A_Sk_MI_APS_CoSL[1..M]	0..7	=
Pq/MT_A_Sk_MI_APS_OAM_Tool[1..M]	FFS	FFS
Pq/MT_A_Sk_MI_GAL_Enable [1..M]	true, false	Note: <u>MI GAL Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.</u> <u>MI_GAL_Enable must be:</u> <u>— set to true on</u> <u>— PWs not using CW</u> <u>— LSPs</u> <u>— Sections</u> <u>— set to false on</u> <u>— PWs using CW</u> <u>— set</u> <u>to true on LSPs,</u> <u>to false on PWs using CW, and</u> <u>to true on Sections.</u> <u>Setting it to true on PWs not using CW is for further study.</u>
Pq/MT_A_Sk Reporting		
Pq/MT_A_Sk_MI_AcSL (see Clause 2.1.2 of G.832)	0..7	--
Pq/MT_A_Sk_MI_AcEXI (see Table 6-2 of G.7041)	0..15	--
Pq/MT_A_Sk_MI_LastValidUPI (see Table 6-3 of G.7041)	0..255	--
Pq-X-L/MT_A_So Provisioning		
Pq-X-L/MT_A_So_MI_SCCType	0..255	32
Pq-X-L/MT_A_So_MI_Label[1..M]	16 to (2**20)-1	Note-2
Pq-X-L/MT_A_So_MI_LSPTType[1..M]	E-LSP, L-LSP	--
Pq-X-L/MT_A_So_MI_CoS[1..M]	0..7	--
Pq-X-L/MT_A_So_PHB2TCMapping[1..M]	Note-1	Note-1
Pq-X-L/MT_A_So_MI_QoSEncodingMode[1..M]	A, B	Note-1
<u>Pq-X-L/MT_A_So_MI_Mode[1..M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
Pq-X-L/MT_A_Sk Provisioning		
Pq-X-L/MT_A_Sk_MI_SCCType	0..255	32
Pq-X-L/MT_A_Sk_MI_Label[1..M]	16 to (2**20)-1	Note-2
Pq-X-L/MT_A_Sk_MI_LSPTType[1..M]	E-LSP, L-LSP	--
Pq-X-L/MT_A_Sk_MI_CoS[1..M]	0..7	--
Pq-X-L/MT_A_Sk_MI_TC2PHBMapping[1..M]	Note-1	Note-1

MI Signal	Value Range	Default Value
Pq-X-L/MT_A_Sk_MI_QoSDecodingMode[1...M]	A, B	Note-1
Pq-X-L/MT_A_Sk_MI_Mode[1...M]	Mode 1, Mode 2	Mode 1
Pq-X-L/MT_A_Sk_MI_LCK_Period[1...M]	1 s, 1 min	1 s
Pq-X-L/MT_A_Sk_MI_LCK_CoS[1...M]	0..7	--
Pq-X-L/MT_A_Sk_MI_LCK_Tool[1...M]	G.8113.1, G.8113.2	N/A
Pq-X-L/MT_A_Sk_MI_Admin_State	LCK, Normal	Normal
Pq-X-L/MT_A_Sk_MI_AIS_Period[1...M]	1 s, 1 min	1 s
Pq-X-L/MT_A_Sk_MI_AIS_CoS[1...M]	0..7	--
Pq-X-L/MT_A_Sk_MI_AIS_Tool[1...M]	G.8113.1, G.8113.2	N/A
Pq-X-L/MT_A_Sk_MI_APS_CoS[1...M]	0..7	--
Pq-X-L/MT_A_Sk_MI_APS_OAM_Tool[1...M]	FFS	FFS
Pq-X-L//MT_A_Sk_MI_GAL_Enable[1...M]	true, false	Note: <u>MI_GAL_Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.</u> MI_GAL_Enable must be: -set to true on LSPs; to false on PWs using CW, and to true on Sections. Setting it to true on PWs not using CW is for further study.
Pq-X-L/MT_A_Sk Reporting		
Pq-X-L/MT_A_Sk_MI_AcSL	0..7	--
Pq-X-L/MT_A_Sk_MI_AcEXI	0..15	--
Pq-X-L/MT_A_Sk_MI_LastValidUPI	0..255	--
ODUKP/MT_A_So Provisioning		
ODUKP/MT_A_So_MI_Active	true, false	false
ODUKP/MT_A_So_MI_SCCType	0..255	32
ODUKP/MT_A_So_MI_Label[1...M]	16 to (2**20)-1	Note-2
ODUKP/MT_A_So_MI_LSPTType[1...M]	E-LSP, L-LSP	--
ODUKP/MT_A_So_MI_CoS[1...M]	0..7	--
ODUKP/MT_A_So_PHB2TCMapping[1...M]	Note-1	Note-1
ODUKP/MT_A_So_MI_QoSEncodingMode[1...M]	A, B	Note-1
ODUKP/MT_A_So_MI_Mode[1...M]	Mode 1, Mode 2	Mode 1
ODUKP/MT_A_Sk Provisioning		
ODUKP/MT_A_Sk_MI_Active	true, false	false

MI Signal	Value Range	Default Value
ODUKP/MT_A_Sk_MI_SCCType	0..255	32
ODUKP/MT_A_Sk_MI_Label[1...M]	16 to (2**20)-1	Note-2
ODUKP/MT_A_Sk_MI_LSPTType[1...M]	E-LSP, L-LSP	--
ODUKP/MT_A_Sk_MI_CoS[1...M]	0..7	--
ODUKP/MT_A_Sk_MI_TC2PHBMapping[1...M]	Note-1	Note-1
ODUKP/MT_A_Sk_MI_QoSDecodingMode[1...M]	A, B	Note-1
<u>ODUKP/MT_A_Sk_MI_Mode[1...M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
ODUKP/MT_A_Sk_MI_LCK_Period[1...M]	1 s, 1 min	1 s
ODUKP/MT_A_Sk_MI_LCK_CoS[1...M]	0..7	--
ODUKP/MT_A_Sk_MI_LCK_Tool[1...M]	G.8113.1, G.8113.2	N/A
ODUKP/MT_A_Sk_MI_Admin_State	LCK, Normal	Normal
ODUKP/MT_A_Sk_MI_AIS_Period[1...M]	1 s, 1 min	1 s
ODUKP/MT_A_Sk_MI_AIS_CoS[1...M]	0..7	--
ODUKP/MT_A_Sk_MI_AIS_Tool[1...M]	G.8113.1, G.8113.2	N/A
ODUKP/MT_A_Sk_MI_APS_CoS_Tool[1...M]	0..7	=
<u>ODUKP/MT_A_Sk_MI_APS_OAM_Tool[1...M]</u>	<u>FFS</u>	<u>FFS</u>
ODUKP/MT_A_Sk_MI_GAL_Enable[1...M]	true, false	Note: <u>MI GAL Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study. MI GAL Enable must be:</u> <u>— set to true on</u> <u>— PWs not using CW</u> <u>— LSPs</u> <u>— Sections</u> <u>— set to false on</u> <u>— PWs using CW</u> <u>— set</u> <u>to true on LSPs,</u> <u>to false on PWs using CW, and</u> <u>to true on Sections.</u> <u>Setting it to true on PWs not using CW is for further study.</u>
ODUKP/MT_A_Sk Reporting		
ODUKP/MT_A_Sk_MI_AcPT (see Table 15-8 of G.709)	0..255	--
ODUKP/MT_A_Sk_MI_AcEXI (see Table 6-2 of G.7041)	0..15	--

MI Signal	Value Range	Default Value
ODUKP/MT_A_Sk_MI_LastValidUPI (see Table 6-3 of G.7041)	0..255	--
ODUKP-X-L/MT_A_So Provisioning		
ODUKP-X-L/MT_A_So_MI_Active	true, false	false
ODUKP-X-L/MT_A_So_MI_SCCType	0..255	32
ODUKP-X-L/MT_A_So_MI_Label[1...M]	16 to (2**20)-1	Note-2
ODUKP-X-L/MT_A_So_MI_LSPTType[1...M]	E-LSP, L-LSP	--
ODUKP-X-L/MT_A_So_MI_CoS[1...M]	0..7	--
ODUKP-X-L/MT_A_So_PHB2TCMapping[1...M]	Note-1	Note-1
ODUKP-X-L/MT_A_So_MI_QoSEncodingMode[1...M]	A, B	Note-1
<u>ODUKP-X-L/MT_A_So_MI_Mode[1...M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
ODUKP-X-L/MT_A_Sk Provisioning		
ODUKP-X-L/MT_A_Sk_MI_Active	true, false	false
ODUKP-X-L/MT_A_Sk_MI_SCCType	0..255	32
ODUKP-X-L/MT_A_Sk_MI_Label[1...M]	16 to (2**20)-1	Note-2
ODUKP-X-L/MT_A_Sk_MI_LSPTType[1...M]	E-LSP, L-LSP	--
ODUKP-X-L/MT_A_Sk_MI_CoS[1...M]	0..7	--
ODUKP-X-L/MT_A_Sk_MI_TC2PHBMapping[1...M]	Note-1	Note-1
ODUKP-X-L/MT_A_Sk_MI_QoSDecodingMode[1...M]	A, B	Note-1
<u>ODUKP-X-L/MT_A_Sk_MI_Mode[1...M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
ODUKP-X-L/MT_A_Sk_MI_LCK_Period[1...M]	1 s, 1 min	1 s
ODUKP-X-L/MT_A_Sk_MI_LCK_CoS[1...M]	0..7	--
ODUKP-X-L/MT_A_Sk_MI_LCK_Tool[1...M]	G.8113.1, G.8113.2	N/A
ODUKP-X-L/MT_A_Sk_MI_Admin_State	LCK, Normal	Normal
ODUKP-X-L/MT_A_Sk_MI_AIS_Period[1...M]	1 s, 1 min	1 s
ODUKP-X-L/MT_A_Sk_MI_AIS_CoS[1...M]	0..7	--
ODUKP-X-L/MT_A_Sk_MI_AIS_Tool[1...M]	G.8113.1, G.8113.2	N/A
ODUKP-X-L/MT_A_Sk_MI_APS_CoS_Tool[1...M]	0..7	--
<u>ODUKP-X-L/MT_A_Sk_MI_APS_OAM_Tool[1...M]</u>	<u>FFS</u>	<u>FFS</u>
ODUKP-X-L/MT_A_Sk_MI_GAL_Enable[1...M]	true, false	Note: <u>MI_GAL_Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study. MI_GAL_Enable must be:</u> <u>— set to true on</u> <u>— PWs not using CW</u>

MI Signal	Value Range	Default Value
		LSPs Sections set to false on PWs using CW set to true on LSPs, to false on PWs using CW, and to true on Sections. Setting it to true on PWs not using CW is for further study.
<u>ODUKP-X-L/MT_A_Sk Reporting</u>		
ODUKP-X-L/MT_A_Sk_MI_AcVcPT (see Table 15-8 of G.709)	0..255	--
ODUKP-X-L/MT_A_Sk_MI_AcEXI (see Table 6-2 of G.7041)	0..15	--
ODUKP-X-L/MT_A_Sk_MI_LastValidUPI (see Table 6-3 of G.7041)	0..255	--
<u>ODUKP-h/MT_A_So provisioning</u>		
<u>ODUKP-h/MT_A_So_MI_Active</u>	<u>true, false</u>	<u>false</u>
<u>ODUKP-h/MT_A_So_MI_SCCType</u>	<u>0..255</u>	<u>32</u>
<u>ODUKP-h/MT_A_So_MI_Label[1...M]</u>	<u>16 to (2**20)-1</u>	<u>Note-2</u>
<u>ODUKP-h/MT_A_So_MI_LSPTType[1...M]</u>	<u>E-LSP, L-LSP</u>	<u>--</u>
<u>ODUKP-h/MT_A_So_MI_CoS[1...M]</u>	<u>0..7</u>	<u>--</u>
<u>ODUKP-h/MT_A_So_PHB2TCMapping[1...M]</u>	<u>Note-1</u>	<u>--</u>
<u>ODUKP-h/MT_A_So_MI_QoSEncodingMode[1...M]</u>	<u>A, B</u>	<u>--</u>
<u>ODUKP-h/MT_A_So_MI_Mode[1...M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
<u>ODUKP-h/MT_A_So_MI_GAL_Enable[1...M]</u>	<u>true, false</u>	<u>Note: MI GAL Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.</u>
<u>ODUKP-h/MT_A_So_MI_APS_OAM_CoS[1...M]</u>	<u>0..7</u>	<u>7</u>
<u>ODUKP-h/MT_A_So_MI_APS_OAM_Tool[1...M]</u>	<u>G.8113.1, G.8113.2</u>	<u>N/A</u>
<u>ODUKP-h/MT_A_So_MI_INCREASE</u>	<u>true, false</u>	<u>false</u>
<u>ODUKP-h/MT_A_So_MI_DECREASE</u>	<u>true, false</u>	<u>false</u>
<u>ODUKP-h/MT_A_So_MI_TSNUM</u>	<u>According to [ITU-T G.7044]</u>	<u>Not applicable</u>
<u>ODUKP-h/MT_A_So_MI_ODUflexRate</u>	<u>FlexCBR, FlexGFP</u>	<u>N/A</u>
<u>ODUKP-h/MT_A_So reporting</u>		

MI Signal	Value Range	Default Value
<u>ODUKP-h/MT A So MI ADJSTATE</u>	<u>According to [ITU-T G.7044]</u>	<u>Not applicable</u>
<u>ODUKP-h/MT A Sk provisioning</u>		
<u>ODUKP-h/MT A Sk MI Active</u>	<u>true, false</u>	<u>false</u>
<u>ODUKP-h/MT A Sk MI SCCType</u>	<u>true, false</u>	<u>false</u>
<u>ODUKP-h/MT A Sk MI Label[1...M]</u>	<u>0..255</u>	<u>32</u>
<u>ODUKP-h/MT A Sk MI LSPTType[1...M]</u>	<u>16 to (2**20)-1</u>	<u>Note-2</u>
<u>ODUKP-h/MT A Sk MI CoS[1...M]</u>	<u>E-LSP, L-LSP</u>	<u>--</u>
<u>ODUKP-h/MT A Sk MI TC2PHBMapping[1...M]</u>	<u>0..7</u>	<u>--</u>
<u>ODUKP-h/MT A Sk MI QoSDecodingMode[1...M]</u>	<u>Note-1</u>	<u>--</u>
<u>ODUKP/MT A Sk MI Mode[1...M]</u>	<u>A, B</u>	<u>--</u>
<u>ODUKP-h/MT A Sk MI LCK_Period[1...M]</u>	<u>1 s, 1 min</u>	<u>1 s</u>
<u>ODUKP-h/MT A Sk MI LCK_CoS[1...M]</u>	<u>0..7</u>	<u>7</u>
<u>ODUKP-h/MT A Sk MI LCK_Tool[1...M]</u>	<u>G.8113.1, G.8113.2</u>	<u>N/A</u>
<u>ODUKP-h/MT A Sk MI Admin State</u>	<u>LCK, Normal</u>	<u>Normal</u>
<u>ODUKP-h/MT A Sk MI AIS_Period[1...M]</u>	<u>1 s, 1 min</u>	<u>1 s</u>
<u>ODUKP-h/MT A Sk MI AIS_CoS[1...M]</u>	<u>0..7</u>	<u>7</u>
<u>ODUKP-h/MT A Sk MI AIS_Tool[1...M]</u>	<u>G.8113.1, G.8113.2</u>	<u>N/A</u>
<u>ODUKP-h/MT A Sk MI GAL_Enable[1...M]</u>	<u>true, false</u>	<u>Note: MI GAL_Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.</u>
<u>ODUKP-h/MT A Sk MI APS_OAM_Tool[1...M]</u>	<u>G.8113.1, G.8113.2</u>	<u>N/A</u>
<u>ODUKP-h/MT A Sk MI INCREASE</u>	<u>true, false</u>	<u>false</u>
<u>ODUKP-h/MT A Sk MI DECREASE</u>	<u>true, false</u>	<u>false</u>
<u>ODUKP-h/MT A Sk reporting</u>		
<u>ODUKP-h/MT A Sk MI AcPT</u>	<u>According to [ITU-T G.709]</u>	<u>Not applicable</u>
<u>ODUKP-h/MT A Sk MI AcEXI</u>	<u>According to [ITU-T G.709]</u>	<u>Not applicable</u>
<u>ODUKP-h/MT A Sk MI LastValidUPI</u>	<u>According to [ITU-T G.709]</u>	<u>Not applicable</u>
<u>ETH/MT_A_So Provisioning</u>		
<u>ETH/MT_A_So MI Label[1...M]</u>	<u>16 to (2**20)-1</u>	<u>Note-2</u>
<u>ETH/MT_A_So MI LSPTType[1...M]</u>	<u>E-LSP, L-LSP</u>	<u>Note-1</u>
<u>ETH/MT_A_So MI CoS[1...M]</u>	<u>Note-1</u>	<u>Note-1</u>
<u>ETH/MT_A_So PHB2TCMapping[1...M]</u>	<u>Note-1</u>	<u>Note-1</u>
<u>ETH/MT_A_So MI QoSEncodingMode[1...M]</u>	<u>A, B</u>	<u>Note-2</u>
<u>ETH/MT_A_So MI Mode[1...M]</u>	<u>Mode 1,</u>	<u>Mode 1</u>

MI Signal	Value Range	Default Value
	<u>Mode 2</u>	
ETH/MT_A_So_MI_Etype		
ETH/MT_A_Sk Provisioning		
<u>ETH/MT_A_Sk_MI_Label[1...M]</u>	<u>16 to (2**20)-1</u>	<u>Note-2</u>
<u>ETH/MT_A_Sk_MI_LSPTYPE[1...M]</u>	<u>E-LSP, L-LSP</u>	<u>--</u>
<u>ETH/MT_A_Sk_MI_CoS[1...M]</u>	<u>0..7</u>	<u>--</u>
<u>ETH/MT_A_Sk_MI_TC2PHBMapping[1...M]</u>	<u>Note-1</u>	<u>Note-1</u>
<u>ETH/MT_A_Sk_MI_QoSDecodingMode[1...M]</u>	<u>A, B</u>	<u>Note-1</u>
<u>ETH/MT_A_Sk_MI_Mode[1...M]</u>	<u>Mode 1, Mode 2</u>	<u>Mode 1</u>
ETH/MT_A_Sk_MI_LCK_Enable[1...M]	true, false	true
ETH/MT_A_Sk_MI_LCK_Period[1...M]	1 s, 1 min	1 s
ETH/MT_A_Sk_MI_LCK_CoS[1...M]	0..7	7
<u>ETH/MT_A_Sk_MI_LCK_OAM_Tool[1...M]</u>	<u>G.8113.1, G.8113.2</u>	<u>N/A</u>
ETH/MT_A_Sk_MI_Admin_State	LCK, Normal	Normal
ETH/MT_A_Sk_MI_AIS_Enable[1...M]	true, false	true
ETH/MT_A_Sk_MI_AIS_Period[1...M]	1 s, 1 min	1 s
ETH/MT_A_Sk_MI_AIS_CoS[1...M]	0..7	7
<u>ETH/MT_A_Sk_MI_AIS_OAM_Tool[1...M]</u>	<u>G.8113.1, G.8113.2</u>	<u>N/A</u>
<u>ETH/MT_A_Sk_MI_APS_CoS[1...M]</u>	<u>0..7</u>	<u>7</u>
<u>ETH/MT_A_Sk_MI_APS_OAM_Tool[1...M]</u>	<u>FFS</u>	<u>FFS</u>

Note-1: According to [ITU-T G.8121/Y.1381]

Note-2: A value must be provided at provisioning.

8.5.1 Adaptation – G.8121.1 Specific

For MT.NE that supports the adaptation functions specified in [ITU-T G.8121.1/Y.1381.1], there is no additional MI to be managed beyond those listed in Table 8-2 above.

8.5.2 Adaptation – G.8121.2 Specific

For MT.NE that supports the adaptation functions specified in [ITU-T G.8121.2/Y.1381.2], there is no additional MI to be managed beyond those listed in Table 8-2 above.

3.8) Updates to clause 8.6 “Diagnostic”

Update clause 8.6 of G.8151 as follow.

8.6 Diagnostic

This section provides the requirements for the management of the MT Diagnostic Trail Termination Functions (MTDe_TT)

For MT.NE that supports the MTDe_TT function specified in [ITU-T G.8121/Y.1381], the EMF shall support the following management functions for the MIs listed in Table 8-3 below:

- Provisioning the trail termination management information
- Retrieving the trail termination management information
- Notifying the changes of the trail termination management information
- Receiving the monitored trail termination management information

Table 8-3 G.8151/Y.1374 – Provisioning and reporting for diagnostic trail termination function

MI Signal	Value Range	Default Value
MTDe_TT_So Provisioning		
MTDe_TT_So_MI_GAL_Enable	true, false	Note: <u>MI GAL Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.</u> <u>MI_GAL_Enable must be:</u> — <u>set to true on</u> — <u>PWs not using CW</u> — <u>LSPs</u> — <u>Sections</u> — <u>set to false on</u> — <u>PWs using CW</u> -set to true on LSPs, to false on PWs using CW, and to true on Sections. Setting it to true on PWs not using CW is for further study.
MTDe_TT_So_MI_TTLVALUE	0..255	255
MTDe_TT_So_MI_CV_OAM_Tool	G.8113.1, G.8113.2	N/A
MTDe_TT_So_MI_CV_Series(<u>Target_MEP/MIP_ID,TTL,CoS, N,Length,Period</u>) <i>Note: The CV Series parameters are OAM protocol specific to G.8113.</i>	<u>Target_MEP/MIP_ID:</u> <u>String: values are OAM protocol specific</u> <u>TTL: 0..255</u> <u>CoS: 0..7</u> <u>N: 1..n. Note: The value of n depends on implementation, e.g. may be 2^32.</u> <u>Length: 0..L. Note: The value of L depends on implementation, e.g. may be 2^32.</u> <u>Period: 5..10 sec.</u>	<u>Default value of N:</u> <u>3</u> <u>Default value of Length:</u> <u>0</u> <u>Default value of Period: 5</u> <u>sec.</u>

MI Signal	Value Range	Default Value
MTDe_TT_So_MI_1TH_OAM_Tool	G.8113.1, G.8113.2	N/A
MTDe_TT_So_MI_1TH_Start(CoS, Pattern , Length,Period) Note: Pattern is G.8121.1 specific	CoS: 0..7 Length: 0..L. Note: The value of L depends on implementation, e.g. may be 2^32. Patterns , Period: For further study	Default value of Length: 0
MTDe_TT_So_MI_1TH_Terminate	--	--
MTDe_TT_So_MI_LMo_OAM_Tool	G.8113.1, G.8113.2	N/A
MTDe_TT_So_MI_LMo_Start(CoS,Period) [1...M _{LMo}]	CoS: 0..7 Period: 100ms, 1s, 10s	
MTDe_TT_So_MI_LMo_Terminate[1...M _{LMo}]	--	--
MTDe_TT_So_MI_DMo_OAM_Tool	G.8113.1, G.8113.2	N/A
MTDe_TT_So_MI_DMo_Start(CoS,Test_ID, Length,Period)[1...M _{DMo}]	CoS: 0..7 Test_ID: (Note 2) Length: 0..L. Note: The value of L depends on implementation, e.g. may be 2^32. Period: 1s, 10 s, 1 min	Default value of Length: 0 Default value of Period: 1 min
MTDe_TT_So_MI_DMo_Terminate[1...M _{DMo}]	--	--
MTDe_TT_So_MI_1DMo_OAM_Tool	G.8113.1, G.8113.2	N/A
MTDe_TT_So_MI_1DMo_Start(CoS,Test_ID,Length,Period)[1...M _{1DMo}]	CoS: 0..7 Test_ID: (Note 2) Length: 0..L. Note: The value of L depends on implementation, e.g. may be 2^32. Period: 100ms, 1s, 10s	Default value of Length: 0
MTDe_TT_So_MI_1DMo_Terminate[1...M _{1DMo}]	--	--
MTDe_TT_So_MI_SLo_OAM_Tool	G.8113.1, G.8113.2	N/A
MTDe_TT_So_MI_SLo_Start(CoS,Test_ID,Length,Period)[1...M _{SLo}]	CoS: 0..7 Test_ID: (Note 2) Length: 0..L. Note: The value of L depends on implementation, e.g. may be 2^32. Period: 0.1 ms, 0.5 ms, 1 ms, 3.3 ms, 10 ms, 100 ms	Default value of Length: 0 Default value of Period: 10 ms
MTDe_TT_So_MI_SLo_Terminate[1...M _{SLo}]	--	
MTDe_TT_So_MI_Admin_State	LCK, Normal	Normal
MTDe_TT_So_MI_Lock_Intsruct_Enable	true, false	true
MTDe TT So MI DP Loopback Enable	true, false	false
MTDe_TT_So Reporting		
MTDe_TT_So_MI_CV_Series_Result(REC,ERR , R,OO)(REC,ERR,OO)	FFS	--

MI Signal	Value Range	Default Value
<i>Note: The CV Series Result parameters are OAM protocol-specific to G.8121.1</i>		
MTDe_TT_So_MI_1TH_Result(Sent)	--	--
MTDe_TT_So_MI_LMo_Result(N_TF,N_LF,F_TF,F_LF)[1...M _{LMo}]	--	--
MTDe_TT_So_MI_DMo_Result(count,B_FD[],F_FD[],N_FD[])[1...M _{DMo}]	--	--
MTDe_TT_So_MI_SLo_Result(N_TF,N_LF,F_TF,F_LF)[1...M _{SLo}]	--	--
MTDe_TT_Sk Provisioning		
MTDe_TT_Sk_MI_GAL_Enable	true, false	<p>Note: <u>MI_GAL_Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study.:</u> <u>MI_GAL_Enable must be:</u> — <u>set to true on</u> — <u>PWs not using CW</u> — <u>LSPs</u> — <u>Sections</u> — <u>set to false on</u> — <u>PWs using CW</u> -<u>set</u> <u>to true on LSPs,</u> <u>to false on PWs using</u> <u>CW, and</u> <u>to true on Sections.</u> <u>Setting it to true on PWs</u> <u>not using CW is for</u> <u>further study.</u></p>
MTDe_TT_Sk_MI_MEG_ID	String; values are OAM protocol specific	Note 1
MTDe_TT_Sk_MI_PeerMEP_ID	String; values are OAM protocol specific	Note 1
MTDe_TT_Sk_MI_CV_OAM_Tool	G.8113.1, G.8113.2	N/A
	G.8113.1, G.8113.2	N/A
	G.8113.1, G.8113.2	N/A
MTDe_TT_Sk_MI_1TH_OAM_Tool	G.8113.1, G.8113.2	N/A
MTDe_TT_Sk_MI_1TH_Start(<u>Pattern,</u> <u>Length, Period</u>)	<u>FFS</u>	
<u>Note: Pattern, Length, and Period are G.8121.1</u>		

MI Signal	Value Range	Default Value
specific		
MTDe_TT_Sk_MI_1TH_Terminate	--	--
MTDe_TT_Sk_MI_LMo_OAM_Tool	G.8113.1, G.8113.2	N/A
MTDe_TT_Sk_MI_DMo_OAM_Tool	G.8113.1, G.8113.2	N/A
MTDe_TT_Sk_MI_1DMo_OAM_Tool	G.8113.1, G.8113.2	N/A
MTDe_TT_Sk_MI_1DMo_Start(Test_ID)[1...M _{1DMo}]	-- (Note 2)	--
MTDe_TT_Sk_MI_1DMo_Terminate[1...M _{1DMo}]	--	--
MTDe_TT_Sk_MI_SLo_OAM_Tool	G.8113.1, G.8113.2	N/A
MTDe_TT_Sk_MI_DP_Loopback_Enable	true, false	false
MTDe_TT_Sk Reporting		
MTDe_TT_Sk_MI_1TH_Result(REC,CRC, BER,OO)	--	--
MTDe_TT_Sk_MI_1DMo_Result(count,N_FD[])[1...M _{DMo}]	--	--
MTDe_TT_Sk_MI_Admin_State_Request	Trigger to LCK, Trigger to Normal	--
MTDi_TT_So Provisioning		
MTDi_TT_So_MI_GAL_Enable	true, false	Note: MI_GAL_Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study. MI_GAL_Enable must be: <ul style="list-style-type: none"> — set to true on — PWs not using CW — LSPs — Sections — set to false on — PWs using CW -set to true on LSPs, to false on PWs using CW, and to true on Sections. Setting it to true on PWs not using CW is for further study.
MTDi_TT_So_MI_TTLVALUE	0..255	255
MTDe_TT_So_MI_MIP_ID	String; values are OAM protocol-specific	Note 1

MI Signal	Value Range	Default Value
MTDi_TT_So_MI_CV_OAM_Tool	G.8113.1, G.8113.2	N/A
<u>MTDi TT So MI DP Loopback Enable</u>	<u>true, false</u>	<u>false</u>
MTDi_TT_Sk Provisioning		
MTDi_TT_Sk_MI_GAL_Enable	true, false	Note: <u>MI GAL Enable must be set to true on LSPs and sections and to false on PWs. Setting it to true for PWs is for further study. MI_GAL_Enable must be:</u> <u>— set to true on</u> <u>— PWs not using CW</u> <u>— LSPs</u> <u>— Sections</u> <u>— set to false on</u> <u>— PWs using CW</u> <u>-set</u> <u>to true on LSPs,</u> <u>to false on PWs using CW, and</u> <u>to true on Sections.</u> <u>Setting it to true on PWs not using CW is for further study.</u>
MTDe_TT_Sk_MI_MIP_ID	String; values are OAM protocol-specific	Note 1
MTDi_TT_Sk_MI_CV_OAM_Tool	G.8113.1, G.8113.2	N/A
<u>MTDi TT Sk MI DP Loopback Enable</u>	<u>true, false</u>	<u>false</u>

Note-1: A value must be provided at provisioning.

Note-2: The Test ID field is optional when this proactive measurement tool is used.

8.6.1 Diagnostic – G.8121.1 Specific

For MT,NE that supports the MTDe_TT function specified in [ITU-T G.8121.1/Y.1381.1], there is no additional MIs to be managed beyond those the EMF shall in addition support the management of the MIs listed in Table 8-3.1 below

Table 8-3.1/G.8151/Y.1374 – Provisioning and reporting for termination functions

MI Signal	Value Range	Default Value
<u>MTDe TT So Provisioning</u>		
<u>MTDe TT So MI CV Test(CoS, Pattern, Length, Period)</u>	<u>See on-demand-CV</u>	

MI Signal	Value Range	Default Value
MTDe TT So Reporting		
MTDe TT So MI CV Test Result(Sent, REC, REC,ERR,OO)	See on-demand-CV	
MTDe TT Sk Provisioning		
MTDe TT Sk MI MEP ID	See on-demand-CV	

8.6.2 Diagnostic – G.8121.2 Specific

For MT.NE that supports the MT TT function specified in [ITU-T G.8121.2/Y.1381.2], the EMF shall in addition support the management of the MIs listed in Table 8-3.2 below:

Table 8-3.2/G.8151/Y.1374 – Provisioning and reporting for termination functions

MI Signal	Value Range	Default Value
MTDe TT So Provisioning		
<u>MTDe TT So MI Target FEC</u>	See on-demand-ev	—
<u>MTDe TT So MI Ifnum</u>	See on-demand-ev	—
<u>MTDe TT So MI MTU</u>	See on-demand-ev	—
<u>MTDe TT So MI CV Series</u>		
<u>MTDe TT So MI ODCV Trace</u>	true, false	true
<u>MTDe TT So MI FEC Checking</u>	true, false	true
<u>MTDe TT Sk MI DMo Start(CoS, Test ID, Length, Period, CopyPad)[1...M_{DMo}]</u> [Note 1]	CoS: 0..7 Length: 0..L. Note: The value of L depends on implementation, e.g. may be 2 ³² . Period: 1s, 10 s, 1 min CopyPad: true, false	
<u>MTDe TT Sk MI LMo Start(CoS, Test ID, Period, LMType, CountBytes)[1...MLMo]</u> [Note 1]	CoS: 0..7 Period: 1s, 10 s, 1 min LMType: ILM, DLM CountBytes: true, false	
<u>MTDe TT Sk MI LMDMo Start(CoS, Test ID, Length, Period, LMType, CountBytes, CopyPad)[1...MLMDMo]</u>	CoS: 0..7 Length: 0..L. Period: 1s, 10 s, 1 min LMType: ILM, DLM CountBytes: true, false CopyPad: true, false	
<u>MTDe TT Sk MI DMo Terminate</u> —[1...M _{DMo}] [Note 1][YTH]		
<u>MTDe TT Sk MI LMo Terminate</u> [1...M _L Mo] [Note 1]		
<u>MTDe TT Sk MI LMDMo Terminate</u> [1...M _{LMDMo}]	--	
<u>MTDe TT So MI LL Period</u>	1..255	1
<u>MTDe TT So MI LL MEPID</u>	0..255	255
<u>MTDe TT So MI LL CoS</u>	0..1..2..3..4..5..6..7	7
MTDe TT Sk Provisioning		
<u>MTDe TT Sk MI ODCV Ping</u>	See on-demand-ev	—
<u>MTDe TT Sk MI ODCV Trace</u>	See on-demand-ev	—
<u>MTDe TT Sk MI Ifnum</u>	See on-demand-ev	—

MI Signal	Value Range	Default Value
MTDe TT Sk MI MTU	See on-demand-cv	--
MTDe TT Sk MI DMo Start(CoS, Test ID, Length, Period, CopyPad) [1...M _{DMo}] [Note 1]	CoS: 0..7 Length: 0..L. Note: The value of L depends on implementation, e.g. may be 2 ^{Δ32} Period: 1s, 10 s, 1 min CopyPad: true, false	
MTDe TT Sk MI LMo Start(CoS, Test ID, Period, LMType, CountBytes) [1...M _{LMo}] [Note 1]	CoS: 0..7 Period: 1s, 10 s, 1 min LMType: ILM, DLM CountBytes: true, false	
MTDe TT Sk MI LMDMo Start(CoS, Test ID, Length, Period, LMType, CountBytes, CopyPad) [1...M _{LMDMo}]	CoS: 0..7 Length: 0..L Period: 1s, 10 s, 1 min LMType: ILM, DLM CountBytes: true, false CopyPad: true, false	
MTDe TT Sk MI DMo Terminate [1...M _{DMo}] [Note 1] [YT2]		
MTDe TT Sk MI LMo Terminate [1...M _{LMo}] [Note 1]		
MTDe TT Sk MI LMDMo Terminate [1...M _{LMDMo}]	--	
MTDe TT Sk MI PM Responder Enable	true, false	False
MTDe TT Sk Reporting		
MTDe TT Sk MI ODCV Ping Result	See on-demand-cv	--
MTDe TT Sk MI ODCV Trace Result	See on-demand-cv	--
MTDe TT Sk MI ODCV FWErr	See on-demand-cv	--
MTDe TT Sk MI ODCV BWErr	See on-demand-cv	--
MTDe TT Sk MI DMo ReportError(Error) [1...M _{DMo}]	true, false	false
MTDe TT Sk MI DMo PeriodChanged [1...M _{DMo}]	true, false	false
MTDe TT Sk MI LMo ReportError(Error) [1...M _{LMo}]	true, false	false
MTDe TT Sk MI LMo PeriodChanged	true, false	false

MI Signal	Value Range	Default Value
ged[1...M _{EM}]		
MTDe_TT_Sk_MI_DMo_Result(count B_FD[], F_FD[], N_FD[])[1...M _{DMo}] [Note 1]		
MTDe_TT_Sk_MI_LMo_Result(N_TF N_LF, F_TF, F_LF)[1...M _{EMo}] [Note 1]		
MTDi_TT_So Provisioning		
MTDi_TT_So_MI_Target_FEC	See on-demand-cv	--
MTDi_TT_So_MI_Iidnum	See on-demand-cv	--
MTDi_TT_So_MI_MTU	See on-demand-cv	--
MTDi_TT_Sk Provisioning		
MTDi_TT_Sk_MI_FEC_Checking	See on-demand-cv	--

[Note 1] These MI signals are defined in MTDe_TT_So in G.8121 and G.8121.2 does not use These MI signals as defined in Table 8-3 in this Recommendation.

3.9) Updates to clause 8.7 “Connection”

Update clause 8.7 of G.8151 as follow.

8.7 Connection

See section 8.6 of [ITU-T G.7710/Y.1701] for a description of connection management.

This function allows a user to provision the operation of a MPLS-TP Connection process.

The MI signals listed in this subclause are communicated from the EMF to the Connection process through the management point.

For MT.NE that supports the MT_C function specified in [ITU-T G.8121/Y.1381], the EMF shall support the following management functions for the MIs listed in Table 8-4 below:

- Provisioning the trail termination management information
- Retrieving the trail termination management information

Notifying the changes of the trail termination management information **Table 8-4/G.8151/Y.1374 – Provisioning and reporting for connection functions**

MI Signal	Value Range	Default Value
MT_C Provisioning (Per matrix connection)		
MT_C_MI_ConnectionType	Protected, unprotected	unprotected
MT_C_MI_Return_CP_ID	NULL (for unidirectional), or the Connection point (CP) identifier (for bidirectional)	--
MT_C_MI_ConnectionPortIds	Set of connection point identifiers	--

Note-1: According to [ITU-T G.8121/Y.1381]

8.7.1 Connection – G.8121.1 Specific

For MT.NE that supports the MT_C functions specified in [ITU-T G.8121.1/Y.1381.1], there is no additional MI to be managed beyond those listed in Table 8-4 above.

8.7.2 Connection – G.8121.2 Specific

For MT.NE that supports the MT_C functions specified in [ITU-T G.8121.2/Y.1381.2], there is no additional MI to be managed beyond those listed in Table 8-2 above.
