Technical Specification

MEF 36.1

Service OAM SNMP MIB for Performance Monitoring

April 2015

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1. List of Contributing Members

The following members of the MEF participated in the development of this document and have requested to be included in this list.

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2. Abstract

This document specifies the Performance Monitoring (PM) Management Information Base (MIB) necessary to manage Service Operations, Administration, and Maintenance (SOAM) implementations that satisfy the Service OAM requirements and framework specified by MEF 17 [10], the Service OAM Performance Monitoring requirements as specified by MEF 35.1 [14], and the Service OAM management objects as specified by MEF 7.2 [6] which are applicable to Performance Monitoring functions. Two non-MEF documents serve as the baseline documents for this work: ITU-T G.8013/Y.1731 [22] and IEEE 802.1Q [24].

3. Terminology and Acronyms

Term	Definition	Source
1DM	One-way Delay Measurement Message	ITU-T Y.1731 [22]
1SL	One-way Synthetic Loss Measurement Message	ITU-T Y.1731 [22]
Availability Performance	A measure of the percentage of time within a specified time interval during which the frame loss is small	MEF 10.3 [7]
Backward	The direction of performance measurements from the Responder MEP towards the Controller MEP, when One-way measurements are taken using a Single-Ended PM Function. Note: this term is not applicable when Dual-Ended PM Functions are used.	MEF 35.1 [14]
BSS	Business Support System	
CCM	Continuity Check Message	IEEE Std 802.1Q [24]
CEN	Carrier Ethernet Network	MEF 12.2 [8]
CFM	Connectivity Fault Management	IEEE Std 802.1Q [24]
CHLI	Consecutive High Loss Interval	MEF 10.3 [7]
Controller MEP	The MEP that initiates SOAM PDUs. Term is applicable to both Dual-Ended and Single-Ended PM Functions. In a Single-Ended PM Function, the Controller MEP also receives responses from the Responder MEP.	MEF 35.1 [14]
CoS	Class of Service	MEF 23.1[11]
CoS ID	Class of Service Identifier	MEF 23.1[11]
CoS Frame Set	Class of Service Frame Set A set of Service or ENNI Frames that have a commitment from the Operator or Service Provider subject to a particular set of performance objectives.	MEF 23.1[11]
DEI	Discard Eligible Indicator	IEEE Std 802.1Q [24]
DM	Delay Measurement	MEF 35.1 [14]
Dual-Ended	A process whereby a Controller MEP sends measurement information to a peer Sink MEP that will perform the calculations. Dual-Ended processes can only be used to make One-way measurements.	MEF 35.1 [14]
EMS	Element Management System	MEF 7.2 [6]
ETH-DM	Ethernet Delay Measurement function (term is only used to reference the ITU-T definition)	ITU-T Y.1731 [22]
ETH-LM	Ethernet Loss Measurement function (term is only used to reference the ITU-T definition)	ITU-T Y.1731 [22]
ETH-SLM	Ethernet Synthetic Frame Loss Measurement function (term is only used to reference the ITU-T definition)	ITU-T Y.1731 [22]
EVC	Ethernet Virtual Connection An association of two or more UNIs that limits the exchange of Service Frames to UNIs in the Ethernet Virtual Connection.	MEF 10.3 [7]

Term	Definition	Source
FD	Frame Delay	MEF 10.3 [7]
FDR	Frame Delay Range	MEF 10.3 [7]
FLR	Frame Loss Ratio	MEF 10.3 [7]
FM	Fault Management	MEF 17 [10]
Forward	The direction of performance measurements from the Controller MEP towards the Responder or Sink MEP, when One-way measurements are taken using a Single-Ended or Dual-Ended PM Function.	MEF 35.1 [14]
HLI	High Loss Interval	MEF 10.3 [7]
IEEE	Institute of Electrical and Electronics Engineers	
IETF	Internet Engineering Task Force	
IFDV	Inter-Frame Delay Variation	MEF 10.3 [7]
ITU-T	International Telecommunication Union - Telecommunication Standardization Bureau	
LM	Loss Measurement	MEF 35.1 [14]
MAC	Media Access Control	IEEE Std 802.3 [25]
MA	Maintenance Association This term is equivalent to a Maintenance Entity Group, or MEG, as defined by ITU-T G.8013/Y.1731.	IEEE Std 802.1Q [24]
MD	Maintenance Domain (equivalent to a OAM Domain in MEF 17)	IEEE Std 802.1Q [24]
MD Level	Maintenance Domain Level The network or the part of the network for which faults in connectivity can be managed. This term is equivalent to MEG Level (defined in ITU-T G.8013/Y.1731	IEEE Std 802.1Q [24]
ME	Maintenance Entity. A point-to-point relationship between two MEPs. This term is used by both IEEE and ITU-T.	IEEE Std 802.1Q [24]
Measurement Bin	A counter that stores the number of FD, IFDV or FDR measurements falling within a specified range, during a Measurement Interval.	MEF 35.1 [14]
Measurement Interval	A period of time during which measurements are taken. Measurements initiated during one Measurement Interval are kept separate from measurements taken during other Measurement Intervals. It is important to note that this is different from T.	MEF 35.1 [14]
MEF	Metro Ethernet Forum	

Term	Definition	Source
MEG	Maintenance Entity Group A set of MEPs, each configured with the same MEG ID and MEG Level, established to verify the integrity of a single service instance. A MEG can also be thought of as a full mesh of Maintenance Entities among a set of MEPs so configured. This term is equivalent to a Maintenance Association, or MA, as defined by IEEE 802.1Q-2011.	ITU-T Y.1731 [22]
MEG Level	Maintenance Entity Group Level A small integer in a field in a SOAM PDU that is used, along with the VID in the VLAN tag, to identify to which MEG among those associated with the SOAM Frame's VID, and thus to which ME, a SOAM PDU belongs. The MEG Level determines the MPs a) that are interested in the contents of a SOAM PDU, and b) through which the frame carrying that SOAM PDU is allowed to pass.	ITU-T Y.1731 [22]
MEP	Maintenance association End Point (IEEE 802.1Q-2011), or equivalently MEG End Point (ITU-T G.8013/Y.1731 or MEF 17). An actively managed SOAM entity associated with a specific service instance that can generate and receive SOAM PDUs and track any responses. It is an end point of a single MEG, and is an end point of a separate Maintenance Entity for each of the other MEPs in the same MEG.	IEEE Std 802.1Q [24], ITU-T Y.1731 [22]
MFD	Mean Frame Delay	MEF 10.3 [7]
MIB	Management Information Base	RFC 2578 [2]
MP	Maintenance Point. One of either a MEP or a MIP.	IEEE Std 802.1Q [24]
NE	Network Element	MEF 4 [5]
NMS	Network Management System	MEF 7.2 [6]
OAM	Operations, Administration, and Maintenance	MEF 17 [10]
On-Demand	OAM actions that are initiated via manual intervention for a limited time to carry out diagnostics. On-Demand OAM can result in singular or periodic OAM actions during the diagnostic time interval	RFC 5951 [27]
One-way	A measurement performed in the Forward or Backward direction, for example from MEP A to MEP B or from MEP B to MEP A. One-way measurements can be performed using either Single-Ended or Dual-Ended PM Functions.	MEF 35.1 [14]
OSS	Operations Support System	ITU-T Y.1731 [22]
PCP	Priority Code Point	IEEE Std 802.1Q [24]
PDU	Protocol Data Unit	IEEE Std 802.1Q [24]

Term	Definition	Source
PM	Performance Monitoring The collection of data concerning the performance of the network.	MEF 35.1 [14]
PM Function	A MEP capability specified for performance monitoring purposes (e.g., Single-Ended Delay, Single-Ended Synthetic Loss)	MEF 35.1 [14]
PM Session	The application of a given PM Function between a given pair of MEPs on a given SOAM PM CoS ID over some (possibly indefinite) period of time.	MEF 35.1 [14]
Proactive	OAM actions that are carried on continuously to permit timely reporting of fault and/or performance status.	RFC 5951 [27]
Resiliency Performance	The number of High Loss Intervals and Consecutive High Loss Intervals in T	MEF 10.3 [7]
Responder MEP	In a Single-Ended PM Session, the MEP that receives SOAM PM PDUs from the Controller MEP, and transmits responses to the Controller MEP.	MEF 35.1 [14]
RFC	Request for Comment	
Service Frame	An Ethernet frame transmitted across the UNI toward the Service Provider or an Ethernet frame transmitted across the UNI toward the Subscriber	MEF 10.3 [7]
Single-Ended	A process whereby a Controller MEP sends a measurement request and a peer Responder MEP replies with the requested information so that the originating MEP can calculate the measurement. Single-Ended processes can be used to make One-way and Two-way measurements.	MEF 35.1 [14]
Sink MEP	In a Dual-Ended PM Session, the MEP that receives SOAM PM PDUs from the Controller MEP and performs the performance calculations.	MEF 35.1 [14]
SLM	Synthetic Loss Message	ITU-T Y.1731 [22]
SLR	Synthetic Loss Reply	ITU-T Y.1731 [22]
SLS	Service Level Specification	MEF 10.3 [7]
SNMP	Simple Network Management Protocol	RFC 1157
SNMP Agent	An SNMP entity containing one or more command responder and/or notification originator applications (along with their associated SNMP engine). Typically implemented in an NE.	RFC 3411 [3]
SNMP Manager	An SNMP entity containing one or more command generator and/or notification receiver applications (along with their associated SNMP engine). Typically implemented in an EMS or NMS.	RFC 3411 [3]
SOAM	Service Operations, Administration, and Maintenance	MEF 17 [10]

Term	Definition	Source
SOAM PDU	Service OAM Protocol Data Unit. Specifically, those PDUs defined in IEEE 802.1Q-2011, ITU-T G.8013/Y.1731, or MEF specifications. In ITU-T documents the equivalent term OAM PDU is used.	MEF 35.1 [14]
SOAM PM PDU	Service OAM Protocol Data Unit specifically for Performance Measurement. Examples are LMM/LMR, DMM/DMR/1DM, SLM/SLR/1SL.	MEF 35.1 [14]
Synthetic Frame	An Ethernet frame created to emulate service traffic, carry additional information necessary to support calculating performance metrics (e.g. delay or loss) and that is treated the same way as a Service Frame.	MEF 35.1 [14]
T	Time Interval for SLS Metrics. The time over which a performance metric is defined. It is important to note that this is different from Measurement Interval. *T* is at least as large as the Measurement Interval, and generally consists of multiple Measurement Intervals. Also note that *T* can have different values for different performance metrics.	MEF 10.3 [7]
TC	Textual Conventions	RFC 4181 [4]
TCA	Threshold Crossing Alert	GR-253 [28]
TLV	Type Length Value, a method of encoding Objects	
Two-way	A measurement of the performance of frames that flow from the Controller MEP to Responder MEP and back again. Two-way measurements can only be performed using Single-Ended PM Functions.	MEF 35.1 [14]
UBC(k)	Upper Bin Count (k)	MEF 35.1 [14]
Upper Bin Count (k)	The total count of Measurement Bin k and above, i.e., Count of Bin(k) + Count of Bin(k+1) +...+ Count of Bin(n)	MEF 35.1 [14]
UML	Unified Modeling Language	Object Management Group (OMG)
UTC	Coordinated Universal Time	MEF 35.1 [14]
UNI	User-to-Network Interface	MEF 4 [5]
VID	Virtual Local Area Network Identifier	IEEE Std 802.1Q [24]
VLAN	Virtual Local Area Network	IEEE Std 802.1Q [24]

Table 1 – Terminology and Acronyms

4. Scope

The scope of this document is to provide the SNMP PM MIB that supports the Service OAM (SOAM) Performance Monitoring functions that have been defined in MEF 17 [10], the *Service OAM Requirements & Framework – Phase 1*, MEF 35.1 [14], the *Service OAM Performance Monitoring Implementation Agreement*, and MEF 7.2 [6], the *Carrier Ethernet Management Information Model*.

This document includes the MIB necessary to support the MEF SOAM Performance Monitoring (SOAM PM) functionality: the **MEF-SOAM-PM-MIB** that includes the SOAM PM MIB objects necessary to implement the SOAM PM functionality found in MEF 35.1 [14] and the SOAM PM concepts as presented in ITU-T G.8013/Y.1731 [22].

The primary purpose of this document is to provide a mechanism to enhance interoperability between equipment/software vendors and between Service Providers and/or Operators. This document provides the Metro Ethernet Forum (MEF) SOAM PM functionality within the Carrier Ethernet Networks (CEN) via SNMP MIBs.

5. Compliance Levels

The key words "**MUST**", "**MUST NOT**", "**REQUIRED**", "**SHALL**", "**SHALL NOT**", "**SHOULD**", "**SHOULD NOT**", "**RECOMMENDED**", "**MAY**", and "**OPTIONAL**" in this document are to be interpreted as described in RFC 2119 [1]. All key words must be in upper case, bold text.

Items that are **REQUIRED** (contain the words **MUST** or **MUST NOT**) are labeled as **[Rx]** for required. Items that are **RECOMMENDED** (contain the words **SHOULD** or **SHOULD NOT**) are labeled as **[Dx]** for desirable. Items that are **OPTIONAL** (contain the words **MAY** or **OPTIONAL**) are labeled as **[Ox]** for optional**.**

A paragraph preceded by **[CR*a*]<** specifies a conditional mandatory requirement that **MUST** be followed if the condition(s) following the "<" have been met. For example, "**[CR1]<[D38]**" indicates that Conditional Mandatory Requirement 1 must be followed if Desirable Requirement 38 has been met. A paragraph preceded by **[CD*b*]<** specifies a Conditional Desirable Requirement that **SHOULD** be followed if the condition(s) following the "<" have been met. A paragraph preceded by **[CO*c*]<** specifies a Conditional Optional Requirement that **MAY** be followed if the condition(s) following the "<" have been met.

6. Introduction

6.1 The Basic Need

One of the aspects of defining Carrier Ethernet Networks (CEN) is the need to ensure the compatibility between network equipment vendors, software vendors, Service Providers, and Access Providers in order to facilitate interoperability in local, metro, national, and international networks. One of the common ways to do this is through a common management interface using publically available or enterprise specific SNMP MIBs.

The value of standard MIBs lies in a combination of (a) allowing an Operator to manage multiple types of equipment with a common MIB, (b) allowing equipment vendors to build one MIB that will work with multiple Operators, and (c) to some extent the common MIB helps make the managed objects more uniform, which can in fact help networks interoperability.

A MIB is a collection of managed objects that can be used for functions such as to provision an entity, query an entity for status information, or define notifications that are sent to a Network Management System (NMS) or an Element Management System (EMS). Collections of related objects are defined in MIB modules which are written using an adapted subset of OSI's Abstract Syntax One, or ASN.1 [26]. Standards for MIB modules are set by IETF and documented in various RFCs, primary of which are RFC 2578 *Structure of Management Information Version 2 (SMIv2)* [2] and RFC 4181 *Guidelines for Authors and Reviewers of MIB Documents* [4].

6.2 The General Structure

A generalized system model is shown by Figure 1 that illustrates the relationship between the OSS/BSS, NMS, EMS, and Network Elements (NE). The primary focus of this specification defines the interaction between the EMS and the NE via SNMP using the MIB module defined in this specification. Object names in the figure are for example only.

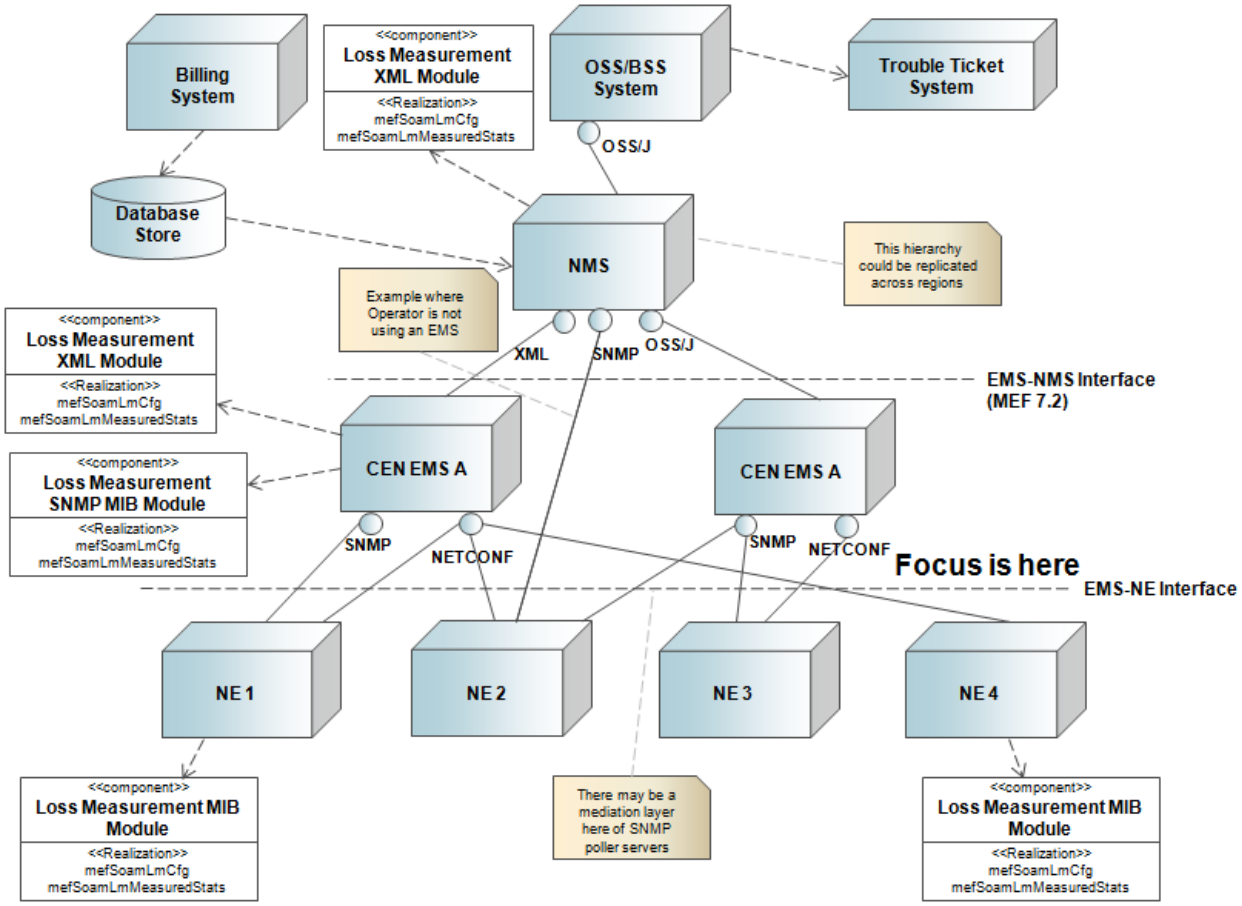

Figure 1 – Generalized OSS/BSS-NMS-EMS-NE Model

6.3 The Foundational Elements

MEF 7.2 defines the general Carrier Ethernet Management Information Model that can be used to create interoperable management systems for CEN and draws heavily upon the models defined in ITU-T Q.840 [21].

MEF 10.3 [7] defines the Ethernet Service Attributes at the UNI reference point including the performance attributes of Frame Delay (FD), Mean Frame Delay (MFD), Frame Delay Range (FDR), Inter-Frame Delay Variation (IFDV), Frame Loss Ratio (FLR), Availability Performance, and Resiliency Performance High Loss Intervals (HLI) and Consecutive High Loss Intervals (CHLI) and Group Availability.

MEF 17 [10] provides a high level overview of the Service OAM requirements and framework. It defines the OAM components and Service OAM requirements.

MEF 26.1 [12] describes the External Network Network Interface (ENNI) to support the extension of Ethernet services across multiple Operator CENs.

MEF 30.1 [13] further defines the aspects of Service OAM requirements that deal with Fault Management (FM) and their extensions as needed to support MEF SOAM FM requirements.

MEF 30.1 builds upon two existing documents: Connectivity Fault Management as defined in IEEE 802.1Q [24] and extended in ITU-T G.8013/Y.1731 [22].

Service OAM Fault Management objects that provide the baseline for MIB objects defined in this specification are found in MEF 7.2 [6].

MEF 35.1 [14] further defines the aspects of Service OAM requirements that focus on Performance Monitoring (PM) and their extensions as needed to support MEF SOAM PM requirements.

MEF 35.1 builds upon two existing documents the ITU-T G.8013/Y.1731 and ITU-T G.8021/Y.1341 [19].

The MEF-SOAM-TC MIB [16] defines the necessary global MEF SOAM Textual Conventions used in this MIB.

The relationship between the various documents and the SOAM PM MIB presented in this specification is illustrated by Figure 2. The UML models found in MEF 7.2 and G.8052 provide a baseline for the SOAM MIBs. A number of the tables/objects in the MIB extend the IEEE CFM MIB objects as well as providing new objects from ITU-T G.8013/Y.1731 and the SOAM PM IA documents.

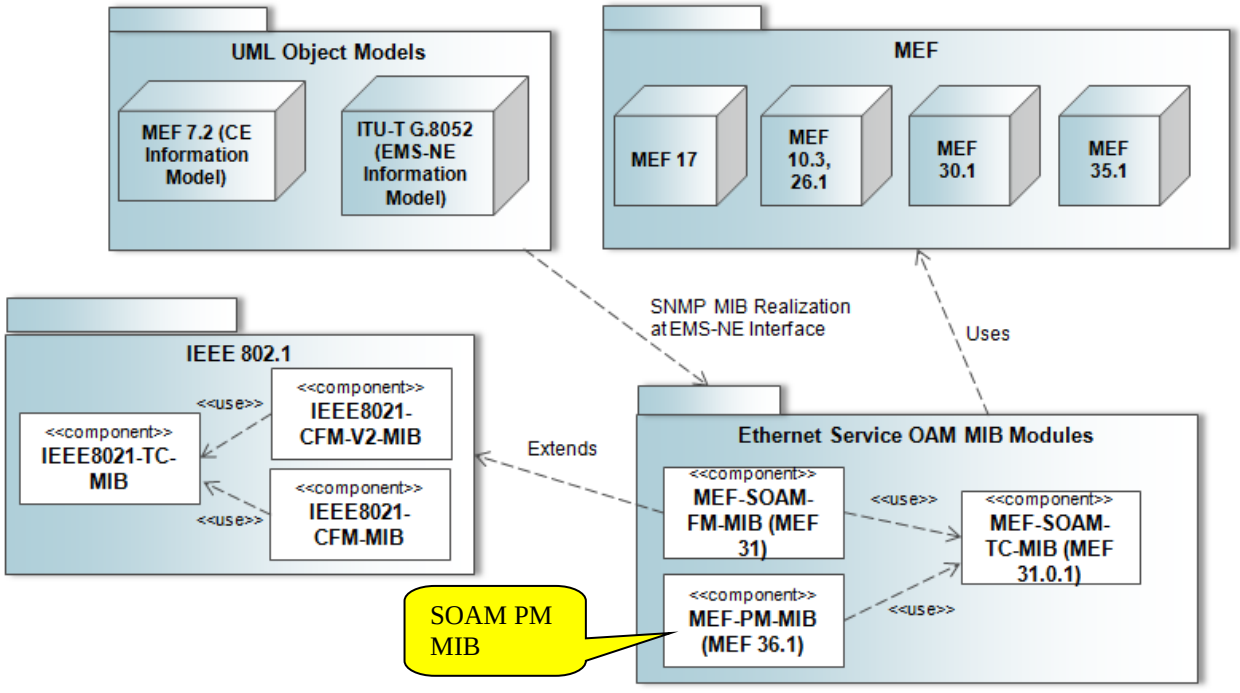

Figure 2 – Relationship between 802.1 CFM MIBs, UML Models, and SOAM MIBs

6.4 Overview of the Performance Monitoring Process

The Performance Monitoring process is made up of a number of Performance Monitoring instances, known as PM Sessions. A PM Session can be initiated between two MEPs in a MEG and be defined as either a Loss Measurement (LM) PM Session or Delay Measurement (DM) PM Session.

The LM Session can be used to determine the performance metrics FLR, Availability, and Resiliency. The DM session can be used to determine the performance metrics FD, IFDV, FDR, and MFD.

The PM Session is defined by the specific PM Function being run, Start Time, Stop Time, Message Period, Measurement Interval, and Repetition Time. The relationship of these different items are depicted in Figure 3 and Figure 4 (Refer to section 9.1 in SOAM PM [14]).

- The Start Time is the time that the PM Session begins and is applicable to On-Demand PM sessions. For Proactive PM Sessions the start time is not applicable as the PM Session begins as soon as the PM session is configured and enabled.
- The Stop Time is the time that the PM Session ends and is applicable to On-Demand PM Sessions. For Proactive PM Sessions the stop time is not applicable as the PM Session stops only when the PM Session is disabled or deleted.
- The Message Period is the SOAM PM Frame transmission frequency (the time between SOAM PM Frame transmissions).
- The Measurement Intervals are discrete, non-overlapping periods of time during which the PM Session measurements are performed and results are gathered. The Measurement Interval can align with the PM Session duration, but it doesn't need to. SOAM PM PDUs during a PM Session are only transmitted during a Measurement Interval.
- The Repetition Time is the time between the start times of the Measurement Intervals.

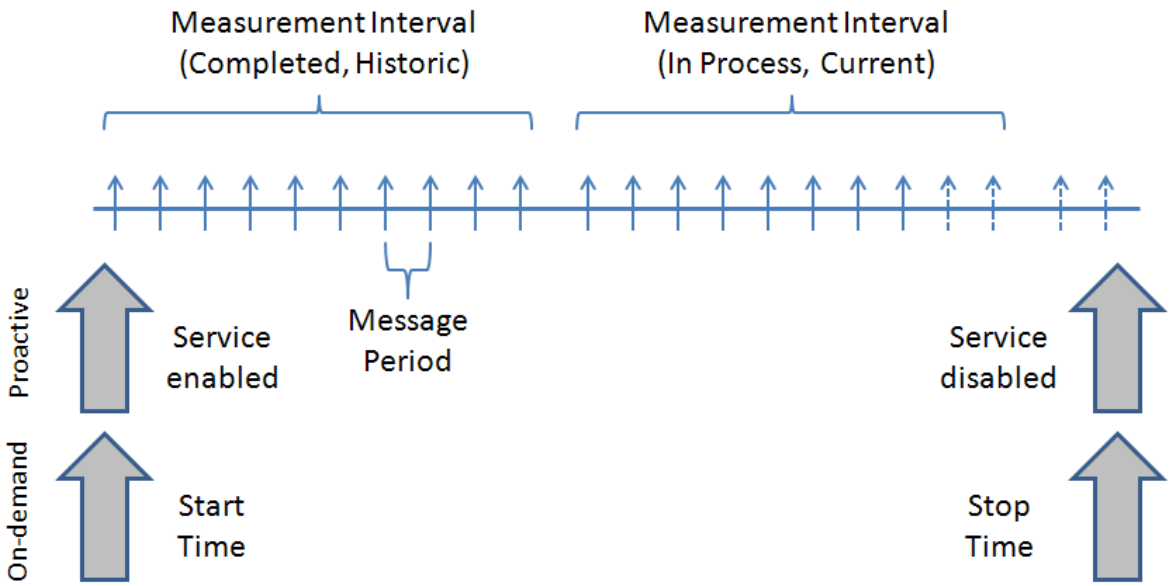

Figure 3 - Relationship Between Different Timing Parameters

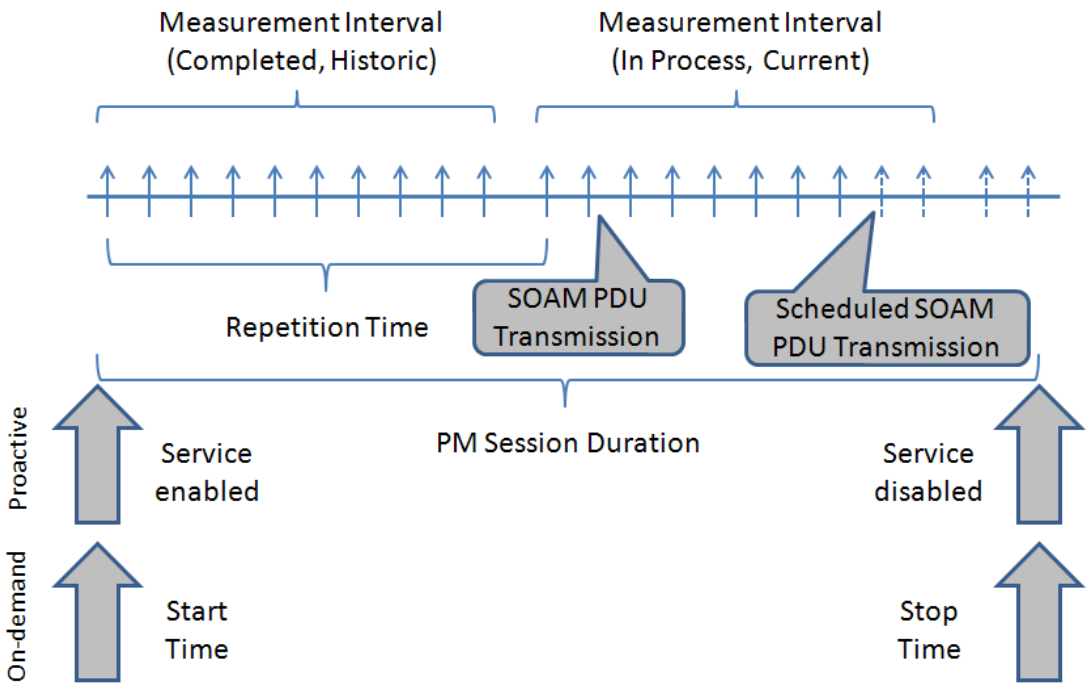

Figure 4 - Relationship Between Measurement Interval and Repetion Time

To execute performance measurements, a PM Session is created through the use of the configuration items in either the LM or DM tables.

The PM Session can be configured to run forever (Proactive/On-Demand) or for a period of time (On-Demand). On-Demand types have a definitive start and stop time that can be relative or absolute or can have a stop time of "forever". Proactive types begin immediately when a PM Session is configured and enabled and end when the PM Session is deleted or disabled.

When a PM Session is completed, either through the PM Session being disabled or the Stop Time being reached, the current Measurement Interval is stopped, if it in process at the time, and all the in process calculations are finalized.

A PM Session can be dual-ended or single-ended. In a single-ended session a Controller MEP sends SOAM PM PDUs towards a Responder MEP. The Responder MEP sends SOAM PM PDUs towards the Controller MEP in response to receiving SOAM PM PDUs from the Controller MEP. Results from the Controller MEP to the Responder MEP are known as "forward" results and results from the Responder MEP to the Controller MEP are "backward" results. All performance calculations are performed by the Controller MEP, and results are only available on the Controller MEP.

In a dual-ended session a Controller MEP sends SOAM PM PDUs towards a Sink MEP. There are no responses sent towards the Controller MEP. Results from the Controller MEP to Sink MEP are known as "forward" in the result tables. All performance calculations are performed by the Sink MEP, and results are only available on the Sink MEP. Two dual-ended sessions can exist on an EVC or OVC where SOAM PDUs are sent in both directions.

PM Sessions of type LMM/LMR, SLM/SLR, or DMM/DMR are single-ended types. PM Sessions of type 1DM, 1SL, or CCM are dual-ended types.

- Controller MEPs send SOAM PM PDUs of type LMM, SLM, 1SL, DMM, CCM, or 1DM and receive SOAM PM PDUs of type LMR, SLR, and DMR.
- Responder MEPs send SOAM PM PDUs of type LMR, SLR, or DMR and receive SOAM PM PDUs of type LMM, SLM, or DMM.
- Sink MEPs receive SOAM PM PDUs of type 1SL, CCM or 1DM.

7. SOAM PM MIB Overview

The SOAM PM MIB is divided into a number of different object groupings: the PM MIB MEP Objects, PM MIB Loss Measurement Objects, PM MIB Delay Measurement Objects, TCA Objects, and SOAM PM notifications.

This document treats the terms 'average' and 'arithmetic mean' as synonymous terms and consistently uses 'average' in object names and definitions.

7.1 PM MIB Per MEP Objects

The PM MIB Per MEP Objects are defined in the ***mefSoamPmMepTable***. The ***mefSoamPmMepTable*** augments the ***dot1agCfmMepEntry*** found in the CFM MIB. It includes objects that are locally defined for an individual MEP that are used throughout the specific PM Sessions associated with the particular MEP.

- ***mefSoamPmMepOperNextIndex*** - Indicates the next available index for row creation in the LM and DM configuration tables of a PM session on a MEP
- ***mefSoamPmMepLmSingleEndedResponder*** - Indicates whether single-ended Loss Measurements (LMM) Responders are enabled on a MEP
- ***mefSoamPmMepSlmSingleEndedResponder*** - Indicates whether single-ended Synthetic Loss Measurements (SLM) Responders are enabled on a MEP
- ***mefSoamPmMepDmSingleEndedResponder*** - Indicates whether single-ended Delay Measurements (DMM) Responders are enabled on a MEP

Single-ended responders are either enabled or not and the three objects in this table for single-ended responders are the only configuration items needed for a responder to operate on a MEP.

7.2 PM MIB Loss Measurement (LM) Objects

The Loss Measurement Objects are defined in six separate tables: mefSoamLmCfgTable, mefLmMeasuredStatsTable, mefSoamLmCurrentAvailStatsTable, mefSoamLmCurrentStatsTable, mefSoamLmHistoryAvailStatsTable, and mefSoamLmHistoryStatsTable.

7.2.1 LM Configuration Table

The ***mefSoamLmCfgTable*** includes configuration objects for the Loss Measurement PM Session. It uses the same indices that a MEP configuration does: ***dot1agCfmMdIndex***, ***dot1agCfmMaIndex***, and ***dot1agCfmMepIdentifier***, as well as ***mefSoamLmCfgIndex***, the specific LM Session number on a MEP.

A Loss Measurement Session is created on an existing MEP by first accessing the ***mefSoamPmMepOperNextIndex*** object and using this value as the ***mefSoamLmCfgIndex*** during row creation.

A single Loss Measurement Session can be used to measure Frame Loss, Frame Loss Ratio, Availability, and Resiliency between a given pair of MEPs, for a given CoS Frame Set. Group Availability is beyond the scope of this MIB since it is primarily a function of the EMS/NMS.

Configuration/status options are organized into eight general categories.

- LM Session type, version, session enable, and counter enables:
  - ***mefSoamLmCfgType*** - LM PM Session type
  - ***mefSoamCfgVersion*** - G.8013/Y.1731 SOAM PM PDU format version
  - ***mefSoamLmCfgEnabled*** - PM Session enable
  - ***mefSoamLmCfgMeasurementEnable*** - Specific PM Session measurement enables
  - ***mefSoamLmCfgSessionType*** - PM Session duration selection of Proactive or On-Demand
  - ***mefSoamLmCfgTcaNextIndex*** - PM Session next available TCA index number
- LM Session PDU transmission frequency and Measurement Interval size:
  - ***mefSoamLmCfgMessagePeriod*** - Interval between transmission of SOAM PM PDUs
  - ***mefSoamLmCfgMeasurementInterval*** - PM Session Measurement Interval. Calculations within a Measurement Interval are based upon a small time intervals Δt (delta_t) as configured by ***mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus.***
  - ***mefSoamLmCfgNumIntervalsStored*** - Number of completed PM Session Measurement Intervals stored
- LM Session PDU composition and length:
  - ***mefSoamLmCfgPriority*** - SOAM PM PDU frame priority
  - ***mefSoamLmCfgCosType*** - SOAM PM PDU CoS type selection of VLAN ID, VLAN ID plus priority, or VLAN ID plus priority and DEI
  - ***mefSoamLmCfgFrameSize*** - ***mefSoamLmCfgCosType*** SOAM PM PDU frame size
  - ***mefSoamLmCfgDataPattern*** - SOAM PDU Data TLV fill pattern
  - ***mefSoamLmCfgTestTlvIncluded*** - Selection between Test TLV or Data TLV fill
  - ***mefSoamLmCfgTestTlvPattern*** - SOAM PDU Test TLV fill pattern

- ***mefSoamLmCfgDei*** - Drop Eligible Indicator
- ***mefSoamLmTestId*** - SLM/1SL Test ID

- LM Session peer partner selection:
  - ***mefSoamLmCfgDestMacAddress*** - Target or Destination MAC Address Field to be transmitted
  - ***mefSoamLmCfgDestMepId*** - Target MEP ID of the target MEP
  - ***mefSoamLmCfgDestIsMepId*** - Selection of the type of target MEP association: MEP or Destination MAC Address
  - ***mefSoamLmCfgSourceMacAddress*** - Selection of the source MAC Address field for the Sink MEP
- LM Session start, stop, and repetition selection:
  - ***mefSoamLmCfgAlignMeasurementIntervals*** - PM Session time of day hour alignment
  - ***mefSoamLmCfgAlignMeasurementOffset*** - PM Session offset from time of day
  - ***mefSoamLmCfgStartTimeType*** - PM Session start time type, i.e. immediate, fixed, or relative
  - ***mefSoamLmCfgFixedStartDateAndTime*** - PM Session fixed UTC start time
  - ***mefSoamLmCfgRelativeStartTime*** - PM Session relative start time
  - ***mefSoamLmCfgStopTimeType*** - PM Session stop time type, i.e. none, fixed, or relative
  - ***mefSoamLmCfgFixedStopDateAndTime*** - PM Session fixed UTC stop time
  - ***mefSoamLmCfgRelativeStopTime*** - PM Session relative stop time
  - ***mefSoamLmCfgRepetitionTime*** - PM Session time between starts of a Measurement Interval
- LM Session availability configuration:
  - ***mefSoamLmCfgAvailabilityMeasurementInterval*** - PM Session Availabilty Measurement Interval Calculations within a Availability Measurement Interval are based upon a small time intervals Δt (delta_t) as configured by ***mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus.***
  - ***mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus*** - Number of consecutive SOAM PM PDUs to be used in evaluating availability or FLR over a small time interval or Δt (delta_t)
  - ***mefSoamLmCfgAvailabilityFlrThreshold*** - Availability threshold to be used in evaluating availability and unability status
  - ***mefSoamLmCfgAvailabilityNumConsecutiveIntervals*** - Number of consecutive Δt intervals to be used to determine the change in the availability status for each Δt interval, in other words a sliding window of width $n \Delta t$ is used to determine availability

- ***mefSoamLmCfgAvailabilityNumConsecutiveHighFlr*** - Configurable number of consecutive p Δt intervals to be used in assessing CHLI in the sliding window to qualify a Δt interval as a CHLI

- LM Session parameters for status:
  - ***mefSoamLmCfgSessionStatus*** - Current status of the PM Session
- LM Session history statistic table clear:
  - ***mefSoamLmCfgHistoryClear*** - Object when written clears the PM Session history table

Alignment with MEF 10.3 is supported via the LM Session Availability configuration parameters where:

- ***mefSoamLmCfgAvailabilityNumConsecutiveIntervals*** is equivalent to MEF 10.3 parameter "n".
- ***mefSoamLmCfgAvailabilityFlrThreshold*** is equivalent to MEF 10.3 parameter "*C*".
- ***mefSoamLmCfgAvailabilityNumConsecutiveHighFlr*** is equivalent to 'p'.
- ***mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus*** times mefSoamLmCfgMessagePeriod for SLM/LMM/CCM is equivalent to MEF 10.3 parameter "Δt".

7.2.2 LM Measured Statistic Table

The LM Measured Statistic Table, ***mefSoamLmMeasuredStatsTable***, is created automatically when a LM session is created and contains the Loss Measurement statistic information from the last received SOAM PDU. It uses the same indices as the ***mefSoamLmCfgTable*** table.

- ***mefSoamLmMeasuredStatsForwardFlr*** - Last PM Session Forward FLR
- ***mefSoamLmMeasuredStatsBackwardFlr*** - Last PM Session Backward FLR
- ***mefSoamLmMeasuredStatsAvailForwardStatus*** - Last PM Session Forward Availabilty status
- ***mefSoamLmMeasuredStatsAvailBackwardStatus*** - Last PM Session Backward Availability status
- ***mefSoamLmMeasuredStatsAvailForwardLastTransitionTime*** - Last PM Session Forward Availability Status transition time
- ***mefSoamLmMeasuredStatsAvailBackwardLastTransitionTime*** - Last PM Session Backward Availability Status transition time

7.2.3 LM Current Availability Statistic Table

The LM Current Availability Statistic Table, ***mefSoamLmCurrentAvailStatsTable***, is created automatically when a LM session is created and contains the Availability statistics for the current availability Measurement Interval. It uses the same indices as the ***mefSoamLmCfgTable*** table,

but the Measurement Interval (***mefSoamLmCfgAvailabilityMeasurementInterval***) is independent of the interval used for the ***mefSoamLmCurrentStatsTable*** (***mefSoamLmCfgMeasurementInterval***).

At the beginning of each availability Measurement Interval the values in the Current Availability Statistic Table are copied to a new row in the ***mefSoamLmHistoryAvailStatsTable*** and the Current Availability Statistic Table counter and status values are reset to zero and the start time is updated to the new Measurement Interval start time.

The LM Current Availability Statistic Table objects are organized into four categories.

- LM Availability interval start time and elapsed time:
  - ***mefSoamLmCurrentAvailStatsIndex*** - Current Availability Measurement Interval for this PM Session
  - ***mefSoamLmCurrentAvailStatsStartTime*** - Current Availability Measurement Interval start time
  - ***mefSoamLmCurrentAvailStatsElapsedTime*** - Current Availability Measurement Interval elapsed time
- LM Availability interval suspect status:
  - ***mefSoamLmCurrentAvailStatsSuspect*** - Current Availability Measurement Interval suspect indicator
- LM Availability high loss, and consecutive high loss:
  - ***mefSoamLmCurrentAvailStatsForwardHighLoss*** - Current Availability Measurement Interval Forward HLI
  - ***mefSoamLmCurrentAvailStatsBackwardHighLoss*** - Current Availability Measurement Interval Backward HLI
  - ***mefSoamLmCurrentAvailStatsForwardConsecutiveHighLoss*** - Current Availability Measurement Interval Forward CHLI
  - ***mefSoamLmCurrentAvailStatsBackwardConsecutiveHighLoss***- Current Availability Measurement Interval Backward CHLI
- LM Availability available and unavailable Δt intervals counters
  - ***mefSoamLmCurrentAvailStatsForwardAvailable*** - Current Availability Measurement Interval Forward Availability Δt intervals
  - ***mefSoamLmCurrentAvailStatsBackwardAvailable*** - Current Availability Measurement Interval Backward Availability Δt intervals
  - ***mefSoamLmCurrentAvailStatsForwardUnavailable*** - Current Availability Measurement Interval Forward Unavailability Δt intervals
  - ***mefSoamLmCurrentAvailStatsBackwardUnavailable*** - Current Availability Measurement Interval Backward Unavailability Δt intervals
- LM Availability FLR counters

- ***mefSoamLmCurrentAvailForwardMinFlr*** - Current Availability Measurement Interval Forward minimum FLR
- ***mefSoamLmCurrentAvailForwardMaxFlr*** - Current Availability Measurement Interval Forward maximum FLR
- ***mefSoamLmCurrentAvailForwardAvgFlr*** - Current Availability Measurement Interval Forward average FLR
- ***mefSoamLmCurrentAvailBackwardMinFlr*** - Current Availability Measurement Interval Backward minimum FLR
- ***mefSoamLmCurrentAvailBackwardMaxFlr*** - Current Availability Measurement Interval Backward maximum FLR
- ***mefSoamLmCurrentAvailBackwardAvgFlr*** - Current Availability Measurement Interval Backward average FLR

7.2.4 LM Current Statistic Table

The LM Current Statistic Table, ***mefSoamLmCurrentStatsTable***, is created automatically when a LM session is created and contains the currently enabled statistic counters and statuses for the current Measurement Interval. It uses the same indices as the ***mefSoamLmCfgTable*** table, but the Measurement Interval (***mefSoamLmCfgMeasurementInterval***) is independent of the interval used for the ***mefSoamLmCurrentAvailStatsTable*** (***mefSoamLmCfgAvailabilityMeasurementInterval***).

At the beginning of each Measurement Interval the values in the Current Statistic Table are copied to a new row in the ***mefSoamLmHistoryStatsTable*** and the Current Statistic Table counter and status values are reset to zero and the start time is updated to the Measurement Interval start time.

The LM Current Statistic Table objects are organized into five categories.

- LM interval start time and elapsed time:
  - ***mefSoamLmCurrentStatsIndex*** - Current Measurement Interval for this PM Session
  - ***mefSoamLmCurrentStatsStartTime*** - Current Measurement Interval start time
  - ***mefSoamLmCurrentStatsElapsedTime*** - Current Measurement Interval elapsed time
- LM interval suspect status:
  - ***mefSoamLmCurrentStatsSuspect*** - Current Measurement Interval suspect indicator
- LM forward transmitted/received frames, minimum, maximum and average (arithmetic mean) frame loss ratio, available and unavailable counters:
  - ***mefSoamLmCurrentStatsForwardTransmittedFrames***- Current Measurement Interval Forward transmitted frames

- ***mefSoamLmCurrentStatsForwardReceivedFrames*** - Current Measurement Interval Forward received frames
- ***mefSoamLmCurrentStatsForwardMinFlr*** - Current Measurement Interval Forward minimum FLR
- ***mefSoamLmCurrentStatsForwardMaxFlr*** - Current Measurement Interval Forward maximum FLR
- ***mefSoamLmCurrentStatsForwardAvgFlr*** - Current Measurement Interval Forward average FLR

- LM backward transmitted/received frames, minimum, maximum and average (arithmetic mean) frame loss ratio, available and unavailable counters:
  - ***mefSoamLmCurrentStatsBackwardTransmittedFrames*** - Current Measurement Interval Backward transmitted frames
  - ***mefSoamLmCurrentStatsBackwardReceivedFrames*** - Current Measurement Interval Backward received frames
  - ***mefSoamLmCurrentStatsBackwardMinFlr*** - Current Measurement Interval Backward minimum FLR
  - ***mefSoamLmCurrentStatsBackwardMaxFlr*** - Current Measurement Interval Backward maximum FLR
  - ***mefSoamLmCurrentStatsBackwardAvgFlr*** - Current Measurement Interval Backward average FLR
- LM initiated and received measurement counts:
  - ***mefSoamLmCurrentStatsSoamPdusSent*** - Current Measurement Interval SOAM PM PDUs transmitted
  - ***mefSoamLmCurrentStatsSoamPdusReceived*** - Current Measurement Interval SOAM PM PDUs received

7.2.5 LM Availability History Statistic Table

The LM Availability History Statistic Table, ***mefSoamLmHistoryAvailStatsTable***, is created automatically when the first availability Measurement Interval completes in a LM session. A new row is created as each availability Measurement Interval is completed with the information from the completed ***mefSoamLmCurrentAvailStatsTable*** entry. The duration of each availability Measurement Interval is determined by ***mefSoamLmCfgAvailabilityMeasurementInterval*** and is independent of the Measurement Interval used for the ***mefSoamLmHistoryStatsTable***. The oldest row can be deleted after a period of time, but is mandatory to be persistent for 32 completed Measurement Intervals and recommended to be persistent for 96 completed Measurement Intervals.

The LM Availability History Statistic Table uses the same indices as the ***mefSoamLmCfgTable*** table as well as the one additional index, the ***mefSoamLmHistoryAvailStatsIndex*** number.

The LM Availability History Statistic Table contains the same four categories as the ***mefSoamLmCurrentAvailStatsTable*** table, except the first category is interval end time and elapsed time.

The objects are the same except they are listed as "History" instead of "Current".

7.2.6 LM History Statistic Table

The LM History Statistic Table, ***mefSoamLmHistoryStatsTable***, is created automatically when the first Measurement Interval completes in a LM session. A new row is created as each Measurement Interval is completed with the information from the completed ***mefSoamLmCurrentStatsTable*** entry. The duration of each Measurement Interval is determined by ***mefSoamLmCfgMeasurementInterval*** and is independent of the Availability Measurement Interval used for the ***mefSoamLmHistoryAvailStatsTable***. The oldest row can be deleted after a period of time, but is mandatory to be persistent for 32 completed Measurement Intervals and recommended to be persistent for 96 completed Measurement Intervals.

The LM History Statistic Table uses the same indices as the ***mefSoamLmCfgTable*** table as well as the one additional index, the ***mefSoamLmHistoryStatsIndex*** number.

The LM History Statistic Table contains the same five categories as the ***mefSoamLmCurrentStatsTable*** table, except the first category is interval end time and elapsed time.

The objects are the same except they are listed as "History" instead of "Current".

7.3 PM MIB Delay Measurement (DM) Objects

The Delay Measurement Objects are defined in three pairs of tables: mefSoamDmCfgTable and mefSoamDmCfgMeasBinTable, mefSoamDmCurrentStatsXTable and mefSoamDmCurrentStatsBinsTable, and mefSoamDmHistoryStatsXTable and mefSoamDmHistoryStatsBinsTable, and the mefDmMeasuredStatsTable.

7.3.1 DM Configuration Table

The ***mefSoamDmCfgTable*** includes configuration objects for the Delay Measurement PM session. It uses the same indices that a MEP configuration does: ***dot1agCfmMdIndex***, ***dot1agCfmMaIndex***, and ***dot1agCfmMepIdentifier***, as well as ***mefSoamDmCfgIndex***, the specific DM PM Session number on a MEP.

A Delay Measurement Session is created on an existing MEP by first accessing the ***mefSoamPmMepOperNextIndex*** object and using this value as the ***mefSoamDmCfgIndex*** during row creation.

A single Delay Measurement Session tracks Inter-Frame Delay, Frame Delay Variation, and Frame Delay Range.

Configuration/status options are organized into eight general categories.

- DM Session type, session enable, and counter enables:
    - ***mefSoamDmCfgType*** - DM PM Session type

- ***mefSoamDmCfgVersion*** - G.8013/Y.1731 SOAM PM PDU format version
- ***mefSoamDmCfgEnabled*** - PM Session enable
- ***mefSoamDmCfgMeasurementEnable*** - Specific PM Session measurement enables
- ***mefSoamDmCfgSessionType*** - PM Session duration selection of Proactive or On-Demand
- ***mefSoamDmCfgTcaNextIndex*** - PM Session next available TCA index number

- DM Session PDU transmission frequency and Measurement Interval size:
  - ***mefSoamDmMessagePeriod*** - Interval between transmission of SOAM PM PDUs
  - ***mefSoamDmCfgMeasurementInterval*** - PM Session Measurement Interval
  - ***mefSoamDmCfgNumIntervalsStored*** - Number of completed PM Session Measurement Intervals stored
- DM Session PDU composition and length:
  - ***mefSoamDmCfgPriority*** - SOAM PM PDU frame priority
  - ***mefSoamDmCfgCosType*** - SOAM PM PDU CoS type selection of VLAN ID, VLAN ID plus priority, or VLAN ID plus priority and DEI
  - ***mefSoamDmCfgFrameSize*** - SOAM PM PDU frame size
  - ***mefSoamDmCfgDataPattern*** - SOAM PDU Data TLV fill pattern
  - ***mefSoamDmCfgTestTlvIncluded*** - Selection between Test TLV or Data TLV fill
  - ***mefSoamDmCfgTestTlvPattern*** - SOAM PDU Test TLV fill pattern
  - ***mefSoamDmCfgDei*** - Drop Eligible Indicator
- DM Session peer partner selection:
  - ***mefSoamDmCfgDestMacAddress*** - Target or Destination MAC Address Field to be transmitted
  - ***mefSoamDmCfgDestMepId*** - Target MEP ID of the target MEP
  - ***mefSoamDmCfgDestIsMepId*** - Selection of the type of target MEP association: MEP or Destination MAC Address
  - ***mefSoamDmCfgSourceMacAddress*** - Selection of the source MAC Address field for the Sink MEP
- DM Session start, stop, and repetition selection:
  - ***mefSoamDmCfgAlignMeasurementIntervals*** - PM Session time of day hour alignment
  - ***mefSoamDmCfgAlignMeasurementOffset*** - PM Session offset from time of day
  - ***mefSoamDmCfgStartTimeType*** - PM Session start time type, i.e. immediate, fixed, or relative

- ***mefSoamDmCfgFixedStartDateAndTime*** - PM Session fixed UTC start time
- ***mefSoamDmCfgRelativeStartTime*** - PM Session relative start time
- ***mefSoamDmCfgStopTimeType*** - PM Session stop time type, i.e. none, fixed, or relative
- ***mefSoamDmCfgFixedStopDateAndTime*** - PM Session fixed UTC stop time
- ***mefSoamDmCfgRelativeStopTime*** - PM Session relative stop time
- ***mefSoamDmCfgRepetitionTime*** - PM Session time between starts of a Measurement Interval

- DM Session measurement bin configuration:
  - ***mefSoamDmCfgNumMeasBinsPerFrameDelayInterval*** - DM PM Session number of measurement bins per Frame Delay interval
  - ***mefSoamDmCfgNumMeasBinsPerInterFrameDelayVariationInterval*** - DM PM Session number of measurement bins per Inter-Frame Delay interval
  - ***mefSoamDmCfgInterFrameDelayVariationSelectionOffset*** DM PM Session offset for Inter-Frame Delay Variation measurements
  - ***mefSoamDmCfgNumMeasBinsPerFrameDelayRangeInterval*** - DM PM Session number of measurement bins per Frame Delay Range interval
- DM Session status:
  - ***mefSoamDmCfgSessionStatus*** - Current status of the PM Session
- DM Session history statistic table clear:
  - ***mefSoamDmCfgHistoryClear*** - Object when written clears the PM Session history table

7.3.2 DM Configuration Bin Table

The ***mefSoamDmCfgMeasBinTable*** includes configuration objects for the Delay Measurement Bin PM Session. It uses the same indices as the ***mefSoamDmCfgTable*** as well as the ***mefSoamDmCfgMeasBinType*** and ***mefSoamDmCfgMeasBinNumber***.

For each row the ***mefSoamDmCfgMeasBinLowerBound*** is selected, which defines the lower boundary of each bin. The set of bin boundaries indicates the time range for each of the defined bins.

For example the selection of five bins via either the mefSoamDmCfgNumMeasBinsPerFrameDelayInterval or mefSoamDmCfgNumMeasBinsPerInterFrameDelayVariationInterval or mefSoamDmCfgNumMeasBinsPerFrameDelayRangeInterval objects, results in the set of default values for the mefSoamDmCfgMeasBinLowerBound of {0, 5000, 10000, 15000, 20000}. These values creates bins with the following lower and upper boundaries:

Bin	mefSoamDmCfg	Lower	Upper

number	MeasBinLowerBound Default Values	boundary	boundary
1	0	≥ 0µs	< 5,000µs
2	5000	≥ 5,000µs	< 10,000µs
3	10000	≥ 10,000µs	< 15,000µs
4	15000	≥ 15,000µs	< 20,000µs
5	20000	≥ 20,000µs	< infinity

Table 2 – Delay Measurement Bin Default Boundaries

These default values can be updated based upon changing the individual ***mefSoamDmCfgMeasBinLowerBound*** object value in each row.

7.3.3 DM Measured Statistic Table

The original DM Measured Statistic Table found in MEF 36 [17], the ***mefSoamDmMeasuredStatsTable*** has been deprecated and has been removed from this document.

The DM Measured Statistic Table, ***mefSoamDmMeasuredStatsXTable***, is created automatically when a DM session is created and contains the Delay Measurement statistic information from the last received SOAM PDU. It uses the same indices as the ***mefSoamDmCfgTable*** table.

- ***mefSoamDmMeasuredStatsXFrameDelayTwoWay*** - Last PM Session Two-Way Frame Delay
- ***mefSoamDmMeasuredStatsXFrameDelayForward*** - Last PM Session Forward Frame Delay
- ***mefSoamDmMeasuredStatsXFrameDelayBackward*** - Last PM Session Backward Frame Delay
- ***mefSoamDmMeasuredStatsXIfdvTwoWay*** - Last PM Session Two-Way Inter-Frame Delay
- ***mefSoamDmMeasuredStatsXIfdvForward*** - Last PM Session Forward Inter-Frame Delay
- ***mefSoamDmMeasuredStatsXIfdvBackward*** - Last PM Session Backward Inter-Frame Delay

7.3.4 DM Current Statistic Table

The original DM Current Statistic Table found in MEF 36 [17], the ***mefSoamDmCurrentStatsTable*** has been deprecated and has been removed from this document.

The DM Current Statistic Table, ***mefSoamDmCurrentStatsXTable***, is created automatically when a DM session is created and contains the currently enabled statistic counters and statuses

for the current Measurement Interval. It uses the same indices as the ***mefSoamDmCfgTable*** table.

At the beginning of each Measurement Interval the values in the Current Statistic Table are copied to a new row in the ***mefSoamDmHistoryStatsXTable*** and the Current Statistic Table values and statuses are reset to zero and the start time is updated to the Measurement Interval start time.

The DM Current Statistic Table objects are organized into six categories.

- DM interval start time and elapsed time:
  - ***mefSoamDmCurrentStatsXIndex*** - Current Measurement Interval for this PM Session
  - ***mefSoamDmCurrentStatsXStartTime*** - Current Measurement Interval start time
  - ***mefSoamDmCurrentStatsXElapsedTime*** - Current Measurement Interval elapsed time
- DM interval suspect status:
  - ***mefSoamDmCurrentStatsXSuspect*** - Current Measurement Interval suspect indicator
- DM frame delay two-way, forward, and backward min, max, and average (arithmetic mean) counters:
  - ***mefSoamDmCurrentStatsXFrameDelayTwoWayMin*** - Current Measurement Interval Frame Delay Two-Way minimum
  - ***mefSoamDmCurrentStatsXFrameDelayTwoWayMax*** - Current Measurement Interval Frame Delay Two-Way Frame maximum
  - ***mefSoamDmCurrentStatsXFrameDelayTwoWayAvg*** - Current Measurement Interval Frame Delay Two-Way average
  - ***mefSoamDmCurrentStatsXFrameDelayForwardMin*** - Current Measurement Interval Frame Delay Forward minimum
  - ***mefSoamDmCurrentStatsXFrameDelayForwardMax*** - Current Measurement Interval Frame Delay Forward maximum
  - ***mefSoamDmCurrentStatsXFrameDelayForwardAvg*** - Current Measurement Interval Frame Delay Forward average
  - ***mefSoamDmCurrentStatsXFrameDelayBackwardMin*** - Current Measurement Interval Frame Delay Backward minimum
  - ***mefSoamDmCurrentStatsXFrameDelayBackwardMax*** - Current Measurement Interval Frame Delay Backward maximum
  - ***mefSoamDmCurrentStatsXFrameDelayBackwardAvg*** - Current Measurement Interval Frame Delay Backward average
- DM inter-frame delay variation two-way, forward, and backward min, max, and average (arithmetic mean) counters:

- ***mefSoamDmCurrentStatsXIfdvForwardMax*** - Current Measurement Interval Inter-Frame Delay Forward maximum
- ***mefSoamDmCurrentStatsXIfdvForwardAvg*** - Current Measurement Interval Inter-Frame Delay Forward average
- ***mefSoamDmCurrentStatsXIfdvBackwardMax*** - Current Measurement Interval Inter-Frame Delay Backward maximum
- ***mefSoamDmCurrentStatsXIfdvBackwardAvg*** - Current Measurement Interval Inter-Frame Delay Backward average
- ***mefSoamDmCurrentStatsXIfdvTwoWayMax*** - Current Measurement Interval Inter-Frame Delay Two-Way maximum
- ***mefSoamDmCurrentStatsXIfdvTwoWayAvg*** - Current Measurement Interval Inter-Frame Delay Two-Way average

- DM frame delay range two-way, forward, and backward, max, and average (arithmetic mean) counters:
  - ***mefSoamDmCurrentStatsXFrameDelayRangeForwardMax*** - Current Measurement Interval Frame Delay Range Forward maximum
  - ***mefSoamDmCurrentStatsXFrameDelayRangeForwardAvg*** - Current Measurement Interval Frame Delay Range Forward maximum
  - ***mefSoamDmCurrentStatsXFrameDelayRangeBackwardMax*** - Current Measurement Interval Frame Delay Range Backward maximum
  - ***mefSoamDmCurrentStatsXFrameDelayRangeBackwardAvg*** - Current Measurement Interval Frame Delay Range Backward average
  - ***mefSoamDmCurrentStatsXFrameDelayRangeTwoWayMax*** - Current Measurement Interval Frame Delay Range Two-Way maximum
  - ***mefSoamDmCurrentStatsXFrameDelayRangeTwoWayAvg*** - Current Measurement Interval Frame Delay Range Two-Way average
- DM initiated and received measurement counts:
  - ***mefSoamDmCurrentStatsXSoamPdusSent*** - Current Measurement Interval SOAM PM PDUs transmitted
  - ***mefSoamDmCurrentStatsXSoamPdusReceived*** - Current Measurement Interval SOAM PM PDUs received

7.3.5 DM Current Statistic Bins Table

The DM Current Statistic Bins Table, ***mefSoamDmCurrentStatsBinsTable***, is created automatically when a DM session is created and contains the currently enabled statistic bin counters for the current Measurement Interval. It uses the same indices as the ***mefSoamDmCfgMeasBinTable***.

At the beginning of each Measurement Interval the values in the Current Bin Statistic Table are copied to a new row, one for each bin number, in the ***mefSoamDmHistoryStatsXBinsTable*** and the Current Statistic Bins Table values are reset to zero.

The DM Current Bin Statistic Table contains one object per row per bin, ***mefSoamDmCurrentStatsBinsCounter***, which indicates a count for the specific bin.

7.3.6 DM History Statistic Table

The original DM History Statistic Table found in MEF 36 [17], the ***mefSoamDmHistoryStatsTable*** has been deprecated and has been removed from this document.

The DM History Statistic Table, ***mefSoamDmHistoryStatsXTable***, is created automatically when the first Measurement Interval completes in a DM session. A new row is created as each Measurement Interval is completed with the information from the completed ***mefSoamDmCurrentStatsXTable*** entry. The oldest row can be deleted after a period of time, but is mandatory to be persistent for 32 completed Measurement Intervals and recommended to be persistent for 96 completed Measurement Intervals.

The DM History Statistic Table uses the same indices as the ***mefSoamDmCfgTable*** table as well as the one additional index, the ***mefSoamDmHistoryStatsXIndex*** number.

The DM History Statistic Table contains the same five categories as the ***mefSoamDmCurrentStatsXTable*** table, except the first category is interval end time and elapsed time.

The objects are the same except they are listed as "History" instead of "Current".

7.3.7 DM History Bin Statistic Table

The DM History Bin Statistic Table, ***mefSoamDmHistoryStatsBinTable***, is created automatically when the first Measurement Interval completes in a DM session. One row for each bin is created as each Measurement Interval is completed with the information from the completed ***mefSoamDmCurrentStatsBinsTable*** entry. The oldest rows can be deleted after a period of time, but it is mandatory to be persistent for 32 completed Measurement Intervals and recommended to be persistent for 96 completed Measurement Intervals.

The DM History Statistic Bins Table uses the same indices as the ***mefSoamDmCfgBinsTable*** table as well as the one additional index the ***mefSoamDmHistoryStatsXIndex*** number.

The DM History Bin Statistic Table contains the same object as the ***mefSoamDmCurrentStatsBinsTable*** table, except it is listed as "History" instead of "Current".

7.4 PM MIB Threshold Crossing Alert Configuration Objects

The original Threshold Crossing Alert (TCA) configuration tables found in MEF 36 [17], the ***mefSoamDmThresholdCfgTable*** and the ***mefSoamLmThresholdCfgTable*** have been deprecated and have been removed from this document.

There are two groups of Threshold Crossing Alert (TCA) configuration tables: the ***mefSoamDmTcaCfgTable***, used for DM thresholds, and the ***mefSoamLmTcaCfgTable***, used for the LM thresholds.

Each table configures specific thresholds for either the DM or LM PM Session.

The main purpose of the TCA notifications is to indicate when a specific performance metric has not been met and to provide a notification of the event.

If two SNMP managers try to "create" the same row at the same time, the first creation attempt would succeed, the second creation attempt would result in an error. The second creation attempt would then need to select a new index value to create a new row.

Two types of TCAs are supported: (1) "stateless", that is generated when the measured value is above the threshold during a Measurement Interval; and (2) "stateful", that is generated when a threshold is exceeded (SET) and again when the values falls below (CLEAR) the threshold in a Measurement Interval. These two types are described further below.

Both types of TCA notifications can be supported in an NE.

7.4.1 Stateless

When a measurement value is above the threshold for a specific performance metric for a specific PM Session within a Measurement Interval **and** the specific measurement counter is enabled **and** the specific threshold is enabled **and** the TCA "stateless" notification is enabled **and** a PM MIB Stateless TCA notification has not already been generated during this Measurement Interval, a PM MIB TCA notification is generated.

7.4.2 Stateful Threshold Set/Clear

When a measurement value exceeds the the threshold for a specific performance metric for a specific PM session within a Measurement Interval **and** the specific measurement counter is enabled **and** the specific threshold is enabled **and** the TCA "stateful" notification is enabled **and** the previous measurement value did not exceed the threshold a PM MIB Set TCA notification is generated.

When a measurement value does not exceed the the clear threshold for a specific performance metric for a specific PM session at the end of a Measurement Interval **and** the specific measurement counter is enabled **and** the specific threshold is enabled **and** the TCA "stateful" notification is enabled **and** the previous measurement value was exceeded at some point during (or at the end of) the previous measurement interval a PM MIB Clear TCA notification is generated.

7.4.3 LM Threshold Crossing Alerts (TCA)

The ***mefSoamLmTcaCfgTable*** is configured after the LM PM Session is configured. Rows are not automatically created. Each threshold is individually enabled via the ***mefSoamLmTcaCfgEnable*** object after it has been created. One or more TCAs can be created per PM Session. The same metric can be used to create multiple threshold levels that can be acted upon in different ways.

The ***mefSoamLmTcaCfgTable*** includes configuration objects for the LM PM Session TCA. It uses the same indices that the LM PM Session does: ***dot1agCfmMdIndex***, ***dot1agCfmMaIndex***, and ***dot1agCfmMepIdentifier***, and ***mefSoamLmCfgIndex***, as well as ***mefSoamLmTcaCfgIndex***, the specific LM PM Session TCA, and ***mefSoamLmTcaCfgType***, the specific type of LM PM Session TCA.

A LM PM Session TCA is created on a specific PM Session by first accessing the next available index number, ***mefSoamLmCfgTcaNextIndex*** object and using this value as the ***mefSoamLmTcaCfgIndex*** during row creation.

The following TCA configuration options are supported:

- ***mefSoamLmTcaCfgEnable*** - Specific TCA enable
- ***mefSoamLmTcaCfgType*** - TCA PM metric selection (used as an index for the ***mefSoamLmTcaCfgTable***)
- ***mefSoamLmTcaCfgAlarmType*** - Selection of TCA to be either 'stateless' or 'stateful'
- ***mefSoamLmTcaCfgThresholdValue*** - TCA threshold value for stateless or stateful TCA SET
- ***mefSoamLmTcaCfgClearValue*** - TCA threshold value for stateful TCA CLEAR
- ***mefSoamLmTcaCfgAlarmCurrentState*** - Current state of the TCA notification

The following LM thresholds are supported via the ***mefSoamLmTcaCfgType*** object:

- HLI Forward Direction
- CHLI Forward Direction
- HLI Backward Direction
- CHLI Backward Direction

7.4.4 DM Threshold Crossing Alerts (TCA)

The ***mefSoamDmTcaCfgTable*** is configured after the DM PM Session is configured. Rows are not automatically created. Each threshold is individually enabled via the ***mefSoamDmTcaCfgEnable*** object after it has been created. One or more TCAs can be created per PM Session. The same metric can be used to create multiple threshold levels that can acted upon in different ways.

The ***mefSoamDmTcaCfgTable*** includes configuration objects for the DM PM Session TCA. It uses the same indices that the DM PM Session does: ***dot1agCfmMdIndex***, ***dot1agCfmMaIndex***, and ***dot1agCfmMepIdentifier***, and ***mefSoamDmCfgIndex***, as well as ***mefSoamDmTcaCfgIndex***, the specific DM PM Session TCA, and ***mefSoamDmTcaCfgType***, the specific type of DM PM Session TCA.

A DM PM Session TCA is created on a specific PM Session by first accessing the next available index number, ***mefSoamDmCfgTcaNextIndex*** object and using this value as the ***mefSoamDmTcaCfgIndex*** during row creation.

The following TCA configuration options are supported:

- ***mefSoamDmTcaCfgEnable*** - Specific TCA enable
- ***mefSoamDmTcaCfgType*** - TCA PM metric selection: Forward/Backward/Two-Way FD/FDR/IFDV bin value and maximum value (used as an index for the ***mefSoamDmTcaCfgTable***)
- ***mefSoamDmTcaCfgAlarmType*** - Selection of TCA to be either 'stateless' or 'stateful'
- ***mefSoamDmTcaCfgBinNumber*** - Bin value 'k' needed for bin types of TCAs, UBC(k)
- ***mefSoamDmTcaCfgThresholdValue*** - TCA threshold value for stateless or stateful TCA SET
- ***mefSoamDmTcaCfgClearValue*** - TCA threshold value for stateful TCA CLEAR
- ***mefSoamDmTcaCfgAlarmCurrentState*** - Current state of the TCA notification

The following DM thresholds are supported via the ***mefSoamDmTcaCfgType*** object:

- Frame Delay Forward Bin
- Frame Delay Forward Max
- Frame Delay Range Forward Bin
- Frame Delay Range Forward Max
- Inter-Frame Delay Variation Forward Bin
- Inter-Frame Delay Variation Forward Max
- Frame Delay Backward Bin
- Frame Delay Backward Max
- Frame Delay Range Backward Bin
- Frame Delay Range Backward Max
- Inter-Frame Delay Variation Backward Bin
- Inter-Frame Delay Variation Backward Max
- Frame Delay Two-Way Bin
- Frame Delay Two-Way Max
- Frame Delay Two-Way Forward Bin
- Frame Delay Two-Way Forward Max
- Inter-Frame Delay Variation Two-Way Bin
- Inter-Frame Delay Variation Two-Way Max

7.5 PM MIB Notifications

The following objects are specific to notifications and are included in the list of objects for the specific SOAM PM notifications:

- ***mefSoamPmNotificationObjDateAndTime*** - contains the UTC time and date at the time that the notification event is detected
- ***mefSoamPmNotificationObjThresholdId*** - contains the Object Identifier of the object that caused the generation of the threshold notification
- ***mefSoamPmNotificationObjThresholdConfig*** - contains the configured threshold value of the object that caused the generation of the threshold notification
- ***mefSoamPmNotificationObjThresholdValue*** - contains the measured value of the object at the time of generation of the notification
- ***mefSoamPmNotificationObjSuspect*** - contains the suspect flag for the current Measurement Interval in which the notification was generated
- ***mefSoamPmNotificationObjCrossingType*** - contains the type of notification crossing
- ***mefSoamPmNotificationObjDestinationMep*** - contains the MAC address of the destinion MEP associated with the notification event
- ***mefSoamPmNotificationObjDestinationMepId*** - contains the MEP Identifier of the destinion MEP associated with the notification event
- ***mefSoamPmNotificationObjPriority*** - contains the CoS priority associated with the notification event
- ***mefSoamPmNotificationObjMeasurementInterval*** - contains the time at the start of the Measurement Interval associated with the notification event
- ***mefSoamPmNotificationObjSeverity*** - contains the serverity of the notification event
- ***mefSoamPmNotificationObjAvailabilityStatus*** - contains the availability status change for the notification event

The following objects configure notifications:

- ***mefSoamPmNotificationCfgAlarmInterval*** - contains the shortest time interval in seconds between the generation of the same notification type per PM Session.
- ***mefSoamPmNotificationCfgAlarmEnable*** - Enables/Disables specific types of notification.

The following SOAM PM notifications can be generated:

- ***mefSoamAvailabilityChangeAlarm*** - is sent when the state of the availability of the indicated service changes
- ***mefSoamLmSessionStartStopAlarm*** - is sent when the state of the LM session changes
- ***mefSoamDmSessionStartStopAlarm*** - is sent when the state of the DM session changes
- ***mefSoamPmThresholdCrossingAlarm*** - is sent when the value of the threshold crossing object from mefSoamLmThresholdCfgTable, mefSoamLmTcaCfgTable, mefSoamDmThresholdCfgTable, or mefSoamDmTcaCfgTable as indicated by the mefSoamPmNotificationThresholdId is crossed.

For a notification to be sent the applicable measurement counter needs to be enabled and for TCA notifications a threshold needs to be configured and crossed during a Measurement Interval.

7.6 PM MIB Conformance and Compliance

There are two conformances items: the ***mefSoamPmMibCompliances*** section and the ***mefSoamPmMibGroups*** conformance group.

The units of conformance are organized into the following mandatory groups:

- mefSoamPmMepMandatoryGroup
- mefSoamLmCfgMandatoryGroup
- mefSoamLmMeasuredStatsMandatoryGroup
- mefSoamLmCurrentAvailStatsMandatoryGroup
- mefSoamLmCurrentStatsMandatoryGroup
- mefSoamLmHistoryAvailStatsMandatoryGroup
- mefSoamLmHistoryStatsMandatoryGroup
- mefSoamDmCfgMandatoryGroup
- mefSoamDmCfgMeasBinMandatoryGroup
- mefSoamDmCurrentStatsMandatoryGroup
- mefSoamDmCurrentStatsBinsMandatoryGroup
- mefSoamDmHistoryStatsMandatoryGroup
- mefSoamDmHistoryStatsBinsMandatoryGroup
- mefSoamPmNotificationsMandatoryGroup
- mefSoamPmNotificationCfgMandatoryGroup
- mefSoamPmNotificationObjMandatoryGroup

The units of conformance are organized into the following optional groups:

- mefSoamLmCfgOptionalGroup
- mefSoamLmMeasuredStatsOptionalGroup
- mefSoamLmCurrentAvailStatsOptionalGroup
- mefSoamLmCurrentStatsOptionalGroup
- mefSoamLmHistoryAvailStatsOptionalGroup
- mefSoamLmHistoryStatsOptionalGroup
- mefSoamDmCfgOptionalGroup
- mefSoamDmMeasuredStatsOptionalGroup

- mefSoamDmCurrentStatsOptionalGroup
- mefSoamDmHistoryStatsOptionalGroup
- mefSoamPmNotificationsOptionalGroup
- mefSoamPmNotificationObjOptionalGroup
- mefSoamLmTcaOptionalGroup
- mefSoamDmTcaOptional Group

There is one compliance group, ***mefSoamPmMibCompliance***, that contains all the units of conformance groups.

8. SOAM PM MIB Requirements

The SOAM PM MIB defines the managed objects necessary to support SOAM PM functionality. Its primary point of reference is the MEF 35.1 [14].

The SOAM PM MIB implements the SOAM PM functionality as defined in the MEF 17 [10] and MEF 35.1 [14]. It includes much of the PM functionality defined in ITU-T G.8013/Y.1731 [22].

The SOAM PM MIB is divided into the following groups:

- ***mefSoamPmMep*** - defines the SOAM PM local MEP objects necessary to support the general setup and configuration of SOAM PM functions at a MEP
- ***mefSoamPmLmObjects*** **-** defines the configuration objects necessary to the support the Loss Measurement session and the current and history results tables
- ***mefSoamPmDmObjects*** **-** defines the configuration objects necessary to support the Delay Measurement session and the current and history results tables
- ***mefSoamPmNotificationCfg*** – defines the configuration objects necessary to control generation of SOAM PM notifications
- ***mefSoamPmNotificationObj*** - defines the notification objects necessary to fully define and report SOAM PM notifications
- ***mefSoamPmNotifications*** - defines the notifications necessary to implement the SOAM PM functionality

[R1] The ***mefSoamPmMep*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality except for the ***mefSoamPmMepLmSingleEndedResponder*** object.

[D1] The ***mefSoamPmMep*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R2] The mefSoamLmCfgType **SHALL** support values of 'lmLmm' and 'lmSlm'.

[D2] All values of mefSoamLmCfgType **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R3] The ***mefSoamLmCfgTable*** of the ***mefSoamPmLmObjects*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality except for the mefSoamLmCfgVersion, mefSoamLmCfgDataPattern, mefSoamLmCfgTestTlvIncluded, mefSoamLmCfgTestTlvPattern, mefSoamLmCfgAlignMeasurementIntervals, mefSoamLmCfgAlignMeasurementOffset, mefSoamLmCfgSessionStatus, mefSoamLmCfgHistoryClear, and mefSoamLmCfgTcaNextIndex objects.

[D3] The ***mefSoamLmCfgTable*** of the ***mefSoamPmLmObjects*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R4] Setting ***mefSoamLmCfgMeasurementInterval*** and ***mefSoamLmCfgAvailabilityMeasurementInterval*** to the same value **SHALL** be supported.

[O1] Setting ***mefSoamLmCfgMeasurementInterval*** and ***mefSoamLmCfgAvailabilityMeasurementInterval*** to different values **MAY** be supported.

[R5] The ***mefSoamLmMeasuredStatsTable*** of the ***mefSoamPmLmObjects*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality except for the mefSoamLmMeasuredStatsForwardFlr, and mefSoamLmMeasuredStatsBackwardFlr, objects.

[D4] The ***mefSoamLmMeasuredStatsTable*** of the ***mefSoamPmLmObjects*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R6] The ***mefSoamLmCurrentAvailStatsTable*** of the ***mefSoamPmLmObjects*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality except for the mefSoamLmCurrentAvailStatsForwardMinFlr, mefSoamLmCurrentAvailStatsForwardMaxFlr, mefSoamLmCurrentAvailStatsForwardAvgFlr, mefSoamLmCurrentAvailStatsBackwardMinFlr, mefSoamLmCurrentAvailStatsBackwardMaxFlr, and mefSoamLmCurrentAvailStatsBackwardAvgFlr objects.

[D5] The ***mefSoamLmCurrentAvailStatsTable*** of the ***mefSoamPmLmObjects*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R7] The ***mefSoamLmCurrentStatsTable*** of the ***mefSoamPmLmObjects*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality except for the mefSoamLmCurrentStatsForwardMinFlr, mefSoamLmCurrentStatsForwardMaxFlr, mefSoamLmCurrentStatsForwardAvgFlr, mefSoamLmCurrentStatsBackwardMinFlr, mefSoamLmCurrentStatsBackwardMaxFlr, and mefSoamLmCurrentStatsBackwardAvgFlr objects.

[D6] The ***mefSoamLmCurrentStatsTable*** of the ***mefSoamPmLmObjects*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R8] The ***mefSoamLmHistoryAvailStatsTable*** of the ***mefSoamPmLmObjects*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality except for the mefSoamLmHistoryAvailStatsForwardMinFlr, mefSoamLmHistoryAvailStatsForwardMaxFlr, mefSoamLmHistoryAvailStatsForwardAvgFlr, mefSoamLmHistoryAvailStatsBackwardMinFlr, mefSoamLmHistoryAvailStatsBackwardMaxFlr, and mefSoamLmHistoryAvailStatsBackwardAvgFlr objects.

[D7] The ***mefSoamLmHistoryAvailStatsTable*** of the ***mefSoamPmLmObjects*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R9] The ***mefSoamLmHistoryStatsTable*** of the ***mefSoamPmLmObjects*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality except for the mefSoamLmHistoryStatsForwardMinFlr, mefSoamLmHistoryStatsForwardMaxFlr, mefSoamLmHistoryStatsForwardAvgFlr, mefSoamLmHistoryStatsBackwardMinFlr, mefSoamLmHistoryStatsBackwardMaxFlr, and mefSoamLmHistoryStatsBackwardAvgFlr, objects.

[D8] The ***mefSoamLmHistoryStatsTable*** of the ***mefSoamPmLmObjects*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R10] The mefSoamDmCfgType **SHALL** support the value of 'dmDmm'.

[D9] All values of mefSoamDmCfgType **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R11] The ***mefSoamDmCfgTable*** of the ***mefSoamPmDmObjects*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality except for the mefSoamDmCfgVersion, mefSoamDmCfgDataPattern, mefSoamDmCfgTestTlvIncluded, mefSoamDmCfgTestTlvPattern, mefSoamDmCfgSourceMacAddress, mefSoamDmCfgAlignMeasurementOffset, mefSoamDmCfgInterFrameDelayVariationSelectionOffset, mefSoamDmCfgSessionStatus, mefSoamDmCfgHistoryClear, mefSoamDmCfgTcaNextObject objects.

[D10] The ***mefSoamDmCfgTable*** of the ***mefSoamPmDmObjects*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R12] The ***mefSoamDmCfgMeasBinTable*** of the ***mefSoamPmDmObjects*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality.

[R13] The ***mefSoamDmMeasuredStatsXTable*** of the ***mefSoamPmDmObjects*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality except for the mefSoamDmMeasuredStatsXIfdvTwoWay object.

[D11] The ***mefSoamDmMeasuredStatsXTable*** of the ***mefSoamPmDmObjects*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R14] The ***mefSoamDmCurrentStatsXTable*** of the ***mefSoamPmDmObjects*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality except for the mefSoamDmCurrentStatsXIfdvTwoWayMax, mefSoamDmCurrentStatsXIfdvTwoWayAvg, mefSoamDmCurrentStatsXFrameDelayRangeTwoWayMax, mefSoamDmCurrentStatsXFrameDelayRangeTwoWayAvg objects.

[D12] The ***mefSoamDmCurrentStatsXTable*** of the ***mefSoamPmDmObjects*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R15] The ***mefSoamDmCurrentStatsBinsTable*** of the ***mefSoamPmDmObjects*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality.

[R16] The ***mefSoamDmHistoryStatsXTable*** of the ***mefSoamPmDmObjects*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality except for the mefSoamDmHistoryStatsXIfdvTwoWayMax, mefSoamDmHistoryStatsXIfdvTwoWayAvg, mefSoamDmHistoryStatsXFrameDelayRangeTwoWayMax, mefSoamDmHistoryStatsXFrameDelayRangeTwoWayAvg objects.

[D13] The ***mefSoamDmHistoryStatsXTable*** of the ***mefSoamPmDmObjects*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R17] The ***mefSoamDmHistoryStatsBinsTable*** of the ***mefSoamPmDmObjects*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality.

[D14] The ***mefSoamLmTcaCfgTable*** of the ***mefSoamPmLmObjects*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[D15] The ***mefSoamDmTcaCfgTable*** of the ***mefSoamPmDmObjects*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R18] The ***mefSoamPmNotificationCfg*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality.

[D16] The ***mefSoamPmNotificationObj*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

[R19] The ***mefSoamPmNotifications*** group **SHALL** be supported for devices that are compliant with SOAM PM functionality, except for the mefSoamPmThresholdCrossingAlarm notification.

[D17] The ***mefSoamPmNotifications*** group **SHOULD** be supported for devices that are compliant with SOAM PM functionality.

9. SOAM PM MIB Definitions

```
MEF-SOAM-PM-MIB DEFINITIONS ::= BEGIN
  IMPORTS
    NOTIFICATION-TYPE, MODULE-IDENTITY, OBJECT-TYPE, Unsigned32,
    Gauge32, enterprises, Integer32
             FROM SNMPv2-SMI         -- RFC 2578
    RowStatus, TruthValue, MacAddress, DateAndTime, TimeInterval
             FROM SNMPv2-TC          -- RFC 2579
    OBJECT-GROUP, NOTIFICATION-GROUP, MODULE-COMPLIANCE
             FROM SNMPv2-CONF        -- RFC 2580
    dot1agCfmMdIndex, dot1agCfmMaIndex, dot1agCfmMepIdentifier, dot1agCfmMepEntry,
    Dot1afCfmIndexIntegerNextFree, Dot1agCfmMepIdOrZero, Dot1agCfmMepId
             FROM IEEE8021-CFM-MIB   -- IEEE 802.1Q
    IEEE8021PriorityValue
        FROM IEEE8021-TC-MIB    -- IEEE 802.1Q
    MefSoamTcOperationTimeType, MefSoamTcDataPatternType, MefSoamTcTestPatternType,
    MefSoamTcAvailabilityType, MefSoamTcDelayMeasurementBinType,
    MefSoamTcMeasurementPeriodType, MefSoamTcSessionType, MefSoamTcStatusType
             FROM MEF-SOAM-TC-MIB;

mefSoamPmMib MODULE-IDENTITY
    LAST-UPDATED    "201503301200Z" -- March 30, 2015
    ORGANIZATION    "Metro Ethernet Forum"
    CONTACT-INFO
       "Web URL: http://metroethernetforum.org/
        E-mail:  mibs@metroethernetforum.org
        Postal:  Metro Ethernet Forum
                 6033 W. Century Boulevard, Suite 830
                 Los Angeles, CA 90045
                 U.S.A.
        Phone:   +1 310-642-2800
        Fax:     +1 310-642-2808"
    DESCRIPTION
            "This MIB module contains the management objects for the
            management of Ethernet Services Operations, Administration
            and Maintenance for Performance Monitoring.

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            All rights reserved.

    ********************************************************************
    Reference Overview

    A number of base documents have been used to create the Textual Conventions
    MIB, the SOAM-PM MIB and SOAM-FM extension MIB. The following are the
    abbreviations for the baseline documents:

    [MEF10.3] refers to MEF 10.3 'Ethernet Services Attributes Phase 3',
       October 2013
    [MEF35.1] refers to MEF 35.1 'Service OAM Performance Monitoring
        Implementation Agreement', July 2014
    [Y.1731] refers to ITU-T G.8013,Y.1731 'OAM functions and mechanisms for
        Ethernet based networks', November 2013
    ********************************************************************
"

    REVISION        "201503301200Z" -- March 30, 2015
    DESCRIPTION
            "MEF 36.1 Initial Version."
```

```
    REVISION        "201201131200Z" -- January 13, 2012
    DESCRIPTION
            "Initial Version."
    ::= { enterprises mef(15007) mefSoam(1) 3 }

-- ****************************************************************************
-- Object definitions in the SOAM PM MIB Module
-- ****************************************************************************
mefSoamPmNotifications  OBJECT IDENTIFIER ::= { mefSoamPmMib 0 }
mefSoamPmMibObjects     OBJECT IDENTIFIER ::= { mefSoamPmMib 1 }
mefSoamPmMibConformance OBJECT IDENTIFIER ::= { mefSoamPmMib 2 }

-- ****************************************************************************
-- Groups in the SOAM PM MIB Module
-- ****************************************************************************
mefSoamPmMep             OBJECT IDENTIFIER ::= { mefSoamPmMibObjects 1 }
mefSoamPmLmObjects       OBJECT IDENTIFIER ::= { mefSoamPmMibObjects 2 }
mefSoamPmDmObjects       OBJECT IDENTIFIER ::= { mefSoamPmMibObjects 3 }
mefSoamPmNotificationCfg OBJECT IDENTIFIER ::= { mefSoamPmMibObjects 4 }
mefSoamPmNotificationObj OBJECT IDENTIFIER ::= { mefSoamPmMibObjects 5 }

-- ****************************************************************************
-- Ethernet MEP Performance Monitoring Configuration
-- ****************************************************************************

mefSoamPmMepTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamPmMepEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This table is an extension of the dot1agCfmMepTable and rows
        are automatically added or deleted from this table based upon row
        creation and destruction of the dot1agCfmMepTable.

        This table represents the local MEP PM configuration table. The
        primary purpose of this table is provide local parameters for the
        SOAM PM function found in [G.8013/Y.1731] and [MEF35.1] and
        Instantiated at a MEP.
       "
    REFERENCE
       "[Y.1731], [MEF35.1]"
    ::= { mefSoamPmMep 1 }

mefSoamPmMepEntry OBJECT-TYPE
    SYNTAX      MefSoamPmMepEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "The conceptual row of mefSoamPmMepTable."
    AUGMENTS {
             dot1agCfmMepEntry
             }
    ::= { mefSoamPmMepTable 1 }

MefSoamPmMepEntry ::= SEQUENCE {
      mefSoamPmMepOperNextIndex               Dot1afCfmIndexIntegerNextFree,
      mefSoamPmMepLmSingleEndedResponder      TruthValue,
      mefSoamPmMepSlmSingleEndedResponder     TruthValue,
      mefSoamPmMepDmSingleEndedResponder      TruthValue
    }

mefSoamPmMepOperNextIndex OBJECT-TYPE
    SYNTAX      Dot1afCfmIndexIntegerNextFree
```

```
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains an unused value for a PM session number on a
        MEP that can be used for either LM or DM sessions, or a zero to
        indicate that none exist. This value needs to be read in order to
        find an available index for row-creation of a PM session on a MEP and
        then used when a row is created. This value is automatically updated
        by the SNMP Agent after the row is created.

        Referential integrity is necessary, i.e., the index needs to be
        persistent upon a reboot or restart of a device.  The index
        is never to be reused for other PM sessions on the same MEP while this
        session is active, or until it wraps to zero.  The index value keeps
        increasing up to that time. This is to facilitate access control based
        on a fixed index for an EMS, since the index is not reused.

        This object is an extension of the dot1agCfmMepTable and the object is
        automatically added or deleted based upon row creation and destruction
        of the dot1agCfmMepTable.
       "
    ::= { mefSoamPmMepEntry 1 }

mefSoamPmMepLmSingleEndedResponder OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
       "This object specifies whether the Loss Measurement (LMM) single-ended
        Responder is enabled.

        The value 'true' indicates the single-ended Loss Measurement Responder
        is enabled and if a LMM message is received a LMR will be sent in reply.

        The value 'false' indicates the single-ended Loss Measurement Responder
        is disabled. If a LMM message is received no response will be sent and
        the message will be discarded.

        This object needs to be persistent upon reboot or restart of a device.

        A MEP can be both a single-ended Responder and Controller simultaneously.
       "
    DEFVAL { true }
    ::= { mefSoamPmMepEntry 2 }

mefSoamPmMepSlmSingleEndedResponder OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
       "This object specifies whether the Synthetic Loss Measurement (SLM)
        single-ended Responder is enabled.

        The value 'true' indicates the single-ended SLM Responder is enabled and
        if a SLM message is received a SLR will be sent in reply.

        The value 'false' indicates the single-ended SLM Responder is disabled.
        If a SLM message is received no response will be sent and the message
        will be discarded.

        This object needs to be persistent upon reboot or restart of a device.

        A MEP can be both a single-ended Responder and Controller simultaneously.
       "
```

```
    DEFVAL { true }
    ::= { mefSoamPmMepEntry 3 }

mefSoamPmMepDmSingleEndedResponder OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
       "This object specifies whether the Delay Measurement (DMM) single
        ended Responder is enabled.

        The value 'true' indicates the single-ended Delay Measurement Responder
        is enabled and if a DMM message is received a DMR will be sent in reply.

        The value 'false' indicates the single-ended Delay Measurement Responder
        is disabled. If a DMM message is received no response will be sent and
        the message will be discarded.

        This object needs to be persistent upon reboot or restart of a device.

        A MEP can be both a single-ended Responder and Controller simultaneously.
       "
    DEFVAL { true }
    ::= { mefSoamPmMepEntry 4 }

-- ****************************************************************************
-- Ethernet Loss Measurement Configuration Table
-- ****************************************************************************

mefSoamLmCfgTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamLmCfgEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This table includes configuration objects and operations for the
        Frame Loss Measurement function defined in [Y.1731] and [MEF35.1].

        Each row in the table represents a Loss Measurement session for
        the defined MEP. This table uses four indices. The first three indices
        are the indices of the Maintenance Domain, Maintenance Association, and
        MEP tables. The fourth index is the specific LM session on the selected
        MEP. A Loss Measurement session is created on an existing MEP by first
        accessing the mefSoamPmMepOperNextIndex object and using this value as
        the mefSoamLmCfgIndex in the row creation.

        Some writable objects in this table are only applicable in certain cases
        (as described under each object), and attempts to write values for them
        in other cases will be ignored.

        The writable objects in this table need to be persistent upon reboot
        or restart of a device.
       "
    REFERENCE
       "[MEF35.1] R68, O7-O8; [Y.1731]"
    ::= { mefSoamPmLmObjects 1 }

mefSoamLmCfgEntry OBJECT-TYPE
    SYNTAX      MefSoamLmCfgEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
            "The conceptual row of mefSoamLmCfgTable."
    INDEX { dot1agCfmMdIndex,
            dot1agCfmMaIndex,
```

```
            dot1agCfmMepIdentifier,
            mefSoamLmCfgIndex
          }
    ::= { mefSoamLmCfgTable 1 }

MefSoamLmCfgEntry ::= SEQUENCE {
    mefSoamLmCfgIndex                                   Unsigned32,
    mefSoamLmCfgType                                    INTEGER,
    mefSoamLmCfgVersion                                 Unsigned32,
    mefSoamLmCfgEnabled                                 TruthValue,
    mefSoamLmCfgMeasurementEnable                       BITS,
    mefSoamLmCfgMessagePeriod                           MefSoamTcMeasurementPeriodType,

    mefSoamLmCfgPriority                                IEEE8021PriorityValue,
    mefSoamLmCfgFrameSize                               Unsigned32,
    mefSoamLmCfgDataPattern                             MefSoamTcDataPatternType,
    mefSoamLmCfgTestTlvIncluded                         TruthValue,
    mefSoamLmCfgTestTlvPattern                          MefSoamTcTestPatternType,
    mefSoamLmCfgMeasurementInterval                     Unsigned32,
    mefSoamLmCfgNumIntervalsStored                      Unsigned32,

    mefSoamLmCfgDestMacAddress                          MacAddress,
    mefSoamLmCfgDestMepId                               Dot1agCfmMepIdOrZero,
    mefSoamLmCfgDestIsMepId                             TruthValue,

    mefSoamLmCfgStartTimeType                           MefSoamTcOperationTimeType,
    mefSoamLmCfgFixedStartDateAndTime                   DateAndTime,
    mefSoamLmCfgRelativeStartTime                       TimeInterval,
    mefSoamLmCfgStopTimeType                            MefSoamTcOperationTimeType,
    mefSoamLmCfgFixedStopDateAndTime                    DateAndTime,
    mefSoamLmCfgRelativeStopTime                        TimeInterval,
    mefSoamLmCfgRepetitionTime                          Unsigned32,
    mefSoamLmCfgAlignMeasurementIntervals               TruthValue,
    mefSoamLmCfgAlignMeasurementOffset                  Unsigned32,

    mefSoamLmCfgAvailabilityMeasurementInterval         Unsigned32,
    mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus      Unsigned32,
    mefSoamLmCfgAvailabilityFlrThreshold                Unsigned32,
    mefSoamLmCfgAvailabilityNumConsecutiveIntervals     Unsigned32,
    mefSoamLmCfgAvailabilityNumConsecutiveHighFlr       Unsigned32,

    mefSoamLmCfgSessionType                             MefSoamTcSessionType,
    mefSoamLmCfgSessionStatus                           MefSoamTcStatusType,

    mefSoamLmCfgHistoryClear                            TruthValue,
    mefSoamLmCfgRowStatus                               RowStatus,
    mefSoamLmCfgCosType                                 INTEGER,
    mefSoamLmCfgSourceMacAddress                        MacAddress,
    mefSoamLmCfgTcaNextIndex                            Unsigned32,
    mefSoamLmCfgDei                                     INTEGER,
    mefSoamLmTestId                                     Unsigned32
}

mefSoamLmCfgIndex
OBJECT-TYPE
    SYNTAX      Unsigned32(1..4294967295)
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "An index to the Loss Measurement Configuration table which indicates
        the specific measurement session for the MEP.

        mefSoamPmMepOperNextIndex needs to be inspected to find an
        available index for row-creation.
```

```
        Referential integrity is necessary, i.e., the index needs to be
        persistent upon a reboot or restart of a device.  The index
        is never reused for other PM sessions on the same MEP while this
        session is active.  The index value keeps increasing until it
        wraps to 0. This is to facilitate access control based
        on a fixed index for an EMS, since the index is not reused.
       "
    REFERENCE
       "[MEF35.1] R1"
    ::= { mefSoamLmCfgEntry 1 }

mefSoamLmCfgType OBJECT-TYPE
    SYNTAX      INTEGER {
                  lmLmm   (1),
                  lmSlm   (2),
                  lmCcm   (3),
                  lm1SlTx (4),
                  lm1SlRx (5)
                }
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies what type of Loss Measurement
        will be performed.

        lmLmm(1)        LMM SOAM PDU generated and received LMR responses tracked
        lmSlm(2)        SLM SOAM PDU generated and received SLR responses tracked
        lmCcm(3)        CCM SOAM PDU generated and received CCM PDUs tracked
        lm1SlTx(4)      1SL SOAM PDU generated (one-way measurements are made by
                          the receiver)
        lm1SlRx(5)      1SL SOAM PDU received and tracked (one-way measurements)

        The lmSlm value is required. The lmLmm, lmCcm, lm1SlTx, and lm1SlRx values
        are optional.

        The lmCcm loss measurement values are only valid for a point-to-point
        MEG. Multipoint MEGs may give unreliable loss measurements.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[Y.1731] [MEF35.1] R53, R68, O7, CR37, CR47, O8"
    DEFVAL { lmSlm }
    ::= { mefSoamLmCfgEntry 2 }

mefSoamLmCfgVersion OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object indicates the version of the PDUs used to perform
        Loss Measurement.

        The value is placed in the Version field of the PDU and indicates
        that the PDU format used is the format defined in G.8013/Y.1731 with
        that version.

        The exact PDUs to use are specified by this object in combination with
        mefSoamLmCfgType.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
```

```
        "
    REFERENCE
        "[Y.1731]"
    DEFVAL { 0 }
    ::= { mefSoamLmCfgEntry 3 }

mefSoamLmCfgEnabled OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "This object specifies whether the Loss Measurement session
         is enabled.

         The value 'true' indicates the Loss Measurement session is enabled and
         SOAM PDUs are sent and/or measurements are collected when the session
         is running according to the scheduling objects (start time, stop time,
         etc.).

         The value 'false' indicates the Loss Measurement session is disabled
         and SOAM PDUs are not sent and/or measurements collected.

         For a Loss Measurement session to be removed the row is
         deleted in order to release internal resources.

         This object can written/modified after row creation time.

         If the LM session is enabled it resumes after shutdown/restart.

         If the LM session is disabled the current Measurement Interval is
         stopped, if it in process at the time, and all the in process calculations
         for the partially completed Measurement Interval are finalized.

         This object does not affect whether the single-ended Responder is
         enabled or not, which is enabled or disabled by the
         mefSoamPmMepLmSingleEndedResponder and
         mefSoamPmMepSlmSingleEndedResponder objects.
        "
    REFERENCE
        "[MEF35.1] R3-R5, O1, R12-R13"
    DEFVAL { true }
    ::= { mefSoamLmCfgEntry 4 }

mefSoamLmCfgMeasurementEnable OBJECT-TYPE
    SYNTAX      BITS {
                      bForwardTransmitedFrames(0),
                      bForwardReceivedFrames(1),
                      bForwardMinFlr(2),
                      bForwardMaxFlr(3),
                      bForwardAvgFlr(4),
                      bBackwardTransmitedFrames(5),
                      bBackwardReceivedFrames(6),
                      bBackwardMinFlr(7),
                      bBackwardMaxFlr(8),
                      bBackwardAvgFlr(9),
                      bSoamPdusSent(10),
                      bSoamPdusReceived (11),

                      bAvailForwardHighLoss(12),
                      bAvailForwardConsecutiveHighLoss(13),
                      bAvailForwardAvailable(14),
                      bAvailForwardUnavailable(15),
                      bAvailForwardMinFlr(16),
                      bAvailForwardMaxFlr(17),
```

```
                    bAvailForwardAvgFlr(18),

                    bAvailBackwardHighLoss(19),
                    bAvailBackwardConsecutiveHighLoss(20),
                    bAvailBackwardAvailable(21),
                    bAvailBackwardUnavailable(22),
                    bAvailBackwardMinFlr(23),
                    bAvailBackwardMaxFlr(24),
                    bAvailBackwardAvgFlr(25),

                    bMeasuredStatsForwardMeasuredFlr(26),
                    bMeasuredStatsBackwardMeasuredFlr(27),
                    bMeasuredStatsAvailForwardStatus(28),
                    bMeasuredStatsAvailBackwardStatus(29)
                }
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "A vector of bits that indicates the type of SOAM LM counters found
        in the mefSoamLmMeasuredStatsTable, mefSoamLmCurrentStatsTable,
        mefSoamLmHistoryStatsTable, mefSoamLmCurrentAvailStatsTable and
        mefSoamLmHistoryAvailStatsTable that are enabled.

        A bit set to '1' enables the specific SOAM LM counter. A bit set to
        '0' disables the SOAM LM counter.

        If a particular SOAM LM counter is not supported the BIT value is
        set to '0'.

        Not all SOAM LM counters are supported for all SOAM LM types.

        This object can only be written at row creation time and cannot be
        modified once it has been created.

        bForwardTransmitedFrames (0)
            Enables/disables the mefSoamLmCurrentStatsForwardTransmittedFrames
            and mefSoamLmHistoryStatsForwardTransmittedFrames counters.
        bForwardReceivedFrames(1)
            Enables/disables the mefSoamLmCurrentStatsForwardReceivedFrames
            and mefSoamLmHistoryStatsForwardReceivedFrames counters.
        bForwardMinFlr(2)
            Enables/disables the mefSoamLmCurrentStatsForwardMinFlr
            and mefSoamLmHistoryStatsForwardMinFlr counters.
        bForwardMaxFlr(3)
            Enables/disables the mefSoamLmCurrentStatsForwardMaxFlr
            and mefSoamLmHistoryStatsForwardMaxFlr counters.
        bForwardAvgFlr(4)
            Enables/disables the mefSoamLmCurrentStatsForwardAvgFlr
            and mefSoamLmHistoryStatsForwardAvgFlr counters.
        bBackwardTransmitedFrames(5)
            Enables/disables the mefSoamLmCurrentStatsBackwardTransmittedFrames
            and mefSoamLmHistoryStatsBackwardTransmittedFrames counters.
        bBackwardReceivedFrames(6)
            Enables/disables the mefSoamLmCurrentStatsBackwardReceivedFrames
            and mefSoamLmHistoryStatsBackwardReceivedFrames counters.
        bBackwardMinFlr(7)
            Enables/disables the mefSoamLmCurrentStatsBackwardMinFlr
            and mefSoamLmHistoryStatsBackwardMinFlr counters.
        bBackwardMaxFlr(8)
            Enables/disables the mefSoamLmCurrentStatsBackwardMaxFlr
            and mefSoamLmHistoryStatsBackwardMaxFlr counters.
        bBackwardAvgFlr(9)
            Enables/disables the mefSoamLmCurrentStatsBackwardAvgFlr
            and mefSoamLmHistoryStatsBackwardAvgFlr counters.
```

```
        bSoamPdusSent (10)
            Enables/disables the mefSoamLmCurrentStatsSoamPdusSent
            and mefSoamLmHistoryStatsSoamPdusSent counters.
        bSoamPdusReceivedbReceivedMeasurements (11)
            Enables/disables the mefSoamLmCurrentStatsSoamPdusReceived
            and mefSoamLmHistoryStatsSoamPdusReceived counters.

        bAvailForwardHighLoss(12)
            Enables/disables the mefSoamLmCurrentAvailStatsForwardHighLoss
            and mefSoamLmHistoryAvailStatsForwardHighLoss counters.
        bAvailForwardConsecutiveHighLoss(13)
            Enables/disables the mefSoamLmCurrentAvailStatsForwardConsecutiveHighLoss
            and mefSoamLmHistoryAvailStatsForwardConsecutiveHighLoss counters.
        bAvailForwardAvailable(14)
            Enables/disables the mefSoamLmCurrentAvailStatsForwardAvailable
            and mefSoamLmHistoryAvailStatsForwardAvailable counters.
        bAvailForwardUnavailable(15)
            Enables/disables the mefSoamLmCurrentAvailStatsForwardUnavailable
            and mefSoamLmHistoryAvailStatsForwardUnavailable counters.
        bAvailForwardMinFlr(16)
            Enables/disables the mefSoamLmCurrentAvailStatsForwardMinFlr
            and mefSoamLmHistoryAvailStatsForwardMinFlr counters.
        bAvailForwardMaxFlr(17)
            Enables/disables the mefSoamLmCurrentAvailStatsForwardMaxFlr
            and mefSoamLmHistoryAvailStatsForwardMaxFlr counters.
        bAvailForwardAvgFlr(18)
            Enables/disables the mefSoamLmCurrentAvailStatsForwardAvgFlr
            and mefSoamLmHistoryAvailStatsForwardAvgFlr counters.

        bAvailBackwardHighLoss(19)
            Enables/disables the mefSoamLmCurrentAvailStatsBackwardHighLoss
            and mefSoamLmHistoryAvailStatsBackwardHighLoss counters.
        bAvailBackwardConsecutiveHighLoss(20)
            Enables/disables the mefSoamLmCurrentAvailStatsBackwardConsecutiveHighLoss
            and mefSoamLmHistoryAvailStatsBackwardConsecutiveHighLoss counters.
        bAvailBackwardAvailable(21)
            Enables/disables the mefSoamLmCurrentAvailStatsBackwardAvailable
            and mefSoamLmHistoryAvailStatsBackwardAvailable counters.
        bAvailBackwardUnavailable(22)
            Enables/disables the mefSoamLmCurrentAvailStatsBackwardUnavailable
            and mefSoamLmHistoryAvailStatsBackwardUnavailable counters.
        bAvailBackwardMinFlr(23)
            Enables/disables the mefSoamLmCurrentAvailStatsBackwardMinFlr
            and mefSoamLmHistoryAvailStatsBackwardMinFlr counters.
        bAvailBackwardMaxFlr(24)
            Enables/disables the mefSoamLmCurrentAvailStatsBackwardMaxFlr
            and mefSoamLmHistoryAvailStatsBackwardMaxFlr counters.
        bAvailBackwardAvgFlr(25)
            Enables/disables the mefSoamLmCurrentAvailStatsBackwardAvgFlr
            and mefSoamLmHistoryAvailStatsBackwardAvgFlr counters.

        bMeasuredStatsForwardMeasuredFlr(26)
            Enables/disables the mefSoamLmMeasuredStatsForwardFlr counter.
        bMeasuredStatsBackwardMeasuredFlr(27)
            Enables/disables the mefSoamLmMeasuredStatsBackwardFlr counter.
        bMeasuredStatsAvailForwardStatus(28)
            Enables/disables the mefSoamLmMeasuredStatsAvailForwardStatus counter.
        bMeasuredStatsAvailBackwardStatus(29)
            Enables/disables the mefSoamLmMeasuredStatsAvailBackwardStatus counter.
      "
    REFERENCE
       "[Y.1731]"
    DEFVAL { { } }
    ::= { mefSoamLmCfgEntry 5 }
```

```
mefSoamLmCfgMessagePeriod OBJECT-TYPE
    SYNTAX      MefSoamTcMeasurementPeriodType
    UNITS       "ms"
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the interval between Loss Measurement
        OAM message transmission. For Loss Measurement monitoring
        applications the default value is 100 ms for SLM/SLR and 1000ms for
        LMM/LMR.

        This object is not applicable if mefSoamLmCfgType is set to lmCcm
        and is ignored for that Loss Measurement Type.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R74-R75, D27-D28, CR44-CR45, CD11, CR54-CR55, CD12-CD13"
    DEFVAL { 100 }
    ::= { mefSoamLmCfgEntry 6 }


mefSoamLmCfgPriority OBJECT-TYPE
    SYNTAX      IEEE8021PriorityValue
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the Loss Measurement OAM message priority
        as well as the priority of the service/OAM traffic to be monitored.
        Only frames of the same Class of Service are counted.

        The default value is to be the value which yields the lowest frame
        loss.

        This object is not applicable if mefSoamLmCfgType is set to lmCcm.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R70-R73, CR40-CR43, CR51-CR53"
    ::= { mefSoamLmCfgEntry 7 }

mefSoamLmCfgFrameSize OBJECT-TYPE
    SYNTAX      Unsigned32 (64..9600)
    UNITS       "bytes"
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the Loss Measurement frame size between
        64 bytes and the maximum transmission unit of the EVC.

        The range of frame sizes from 64 through 2000 octets need to be
        supported, and the range of frame sizes from 2001 through 9600 octets
        is suggested be supported.

        The adjustment to the frame size of the standard frame size is
        accomplished by the addition of a Data or Test TLV. A Data or Test TLV
        is only added to the frame if the frame size is greater than 64 bytes.

        This object is only valid for the entity transmitting the Loss
        Measurement frames, type 'lmSlm' or 'lm1SlTx', and is ignored by the
```

```
        entity receiving frames. It is not applicable for the 'lmCcm'
        or 'lm1SlRx' types.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R76-R77, D29-D30, CR56-CR57, CD14-CD15; [Y.1731]"
    DEFVAL { 64 }
    ::= { mefSoamLmCfgEntry 8 }

mefSoamLmCfgDataPattern OBJECT-TYPE
    SYNTAX      MefSoamTcDataPatternType
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the LM data pattern included in a Data TLV
        when the size of the LM frame is determined by the
        mefSoamLmFrameSize object and mefSoamLmTestTlvIncluded is 'false'.

        If the frame size object does not define the LM frame size or
        mefSoamLmTestTlvIncluded is 'true' the value of this object is
        ignored.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    DEFVAL { zeroPattern }
    ::= { mefSoamLmCfgEntry 9 }

mefSoamLmCfgTestTlvIncluded OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "Indicates whether a Test TLV or Data TLV is included when the size
        of the LM frame is determined by the mefSoamLmFrameSize object.

        A value of 'true' indicates that the Test TLV is to be included. A
        value of 'false' indicates that the Data TLV is to be included.

        If the frame size object does not define the LM frame size
        the value of this object is ignored.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[Y.1731] 9.3"
    DEFVAL { false }
    ::= { mefSoamLmCfgEntry 10 }

mefSoamLmCfgTestTlvPattern OBJECT-TYPE
    SYNTAX      MefSoamTcTestPatternType
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the type of test pattern to be
        sent in the LM frame Test TLV when the size of LM PDU is
        determined by the mefSoamLmFrameSize object and
        mefSoamLmTestTlvIncluded is 'true'. If the frame size object
        does not define the LM frame size or mefSoamLmTestTlvIncluded
        is 'false' the value of this object is ignored.
```

```
        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    DEFVAL { null }
    ::= { mefSoamLmCfgEntry 11 }

mefSoamLmCfgMeasurementInterval OBJECT-TYPE
    SYNTAX      Unsigned32 (1..525600)
    UNITS       "minutes"
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the Measurement Interval for FLR statistics, in minutes.

        A Measurement Interval of 15 minutes needs to be supported, other intervals
        may be supported. Calculations within a Measurement Interval are based upon
        a small time interval delta_t as configured by
        mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus.

        The default for Proactive PM Sessions is 15 minutes and for On-Demand PM
        Sessions is 5 minutes.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R15-R17, D3"
    DEFVAL { 15 }
    ::= { mefSoamLmCfgEntry 12 }

mefSoamLmCfgNumIntervalsStored OBJECT-TYPE
    SYNTAX      Unsigned32 (2..1000)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the number of completed Measurement Intervals
        to store in the history statistic table (mefSoamLmHistoryStatsTable)
        and the history availability statistic table
        (mefSoamLmHistoryAvailStatsTable).

        At least 32 completed Measurement Intervals need to be stored. 96
        Measurement Intervals are recommended to be stored.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R21, D9, D10"
    DEFVAL { 32 }
    ::= { mefSoamLmCfgEntry 13 }

mefSoamLmCfgDestMacAddress OBJECT-TYPE
    SYNTAX      MacAddress
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "The Target or Destination MAC Address Field to be transmitted.

        If mefSoamLmCfgType is 'lmCcm', the destination MAC address is always a
        multicast address indicating the level of the MEG: 01-80-c2-00-00-3y,
        where y is the level of the MEG. An error is returned if this object
        is set to any other value.

        If mefSoamLmCfgType is 'lmLmm' or 'lmSlm', the destination address is
```

```
        the unicast address of the destination MEP. An error is returned if
        this object is set to a multicast address.

        If mefSoamLmCfgType is 'lm1SlTx', the destination address is normally the
        unicast address of the destination MEP, but can be a multicast address
        indicating the level of the MEG: 01-80-c2-00-00-3y, where y is the
        level of the MEG.  An error is returned if this object is set to any
        other multicast address.

        If mefSoamLmCfgType is 'lm11SlRx', this object is ignored.

        This address will be used if the value of the object
        mefSoamLmDestIsMepId is 'false'.

        This object is only valid for the entity transmitting the
        SOAM LM frames and is ignored by the entity receiving
        SOAM LM frames.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R69, CR39, CR48, CR50"
    ::= { mefSoamLmCfgEntry 14 }

mefSoamLmCfgDestMepId OBJECT-TYPE
    SYNTAX      Dot1agCfmMepIdOrZero
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "The Maintenance association End Point Identifier of
        another MEP in the same Maintenance Association to which
        the SOAM LM frame is to be sent.

        This address will be used if the value of the column
        mefSoamLmDestIsMepId is 'true'. A value of zero
        means that the destination MEP ID has not been configured.

        This object is only valid for the entity transmitting the Loss
        Measurement frames, types 'lmLmm', 'lmSlm', and 'lm1slTx'. It is not
        applicable for the 'lmCcm' or 'lm1slRx types.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R69, CR39, CR48"
    DEFVAL { 0 }
    ::= { mefSoamLmCfgEntry 15 }

mefSoamLmCfgDestIsMepId OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "A value of 'true' indicates that MEPID of the target MEP is used for
        SOAM LM frame transmission.

        A value of 'false' indicates that the MAC address of the
        target MEP is used for SOAM LM frame transmission.

        This object is only valid for the entity transmitting the Loss
        Measurement frames, types 'lmLmm', 'lmSlm', and 'lm1SlTx'. It is not
        applicable for the 'lmCcm' or 'lm1SlRx' types.
```

```
        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R69, CR39, CR48, CR50"
    DEFVAL { true }
    ::= { mefSoamLmCfgEntry 16 }

mefSoamLmCfgStartTimeType OBJECT-TYPE
    SYNTAX      MefSoamTcOperationTimeType
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the type of start time of the SOAM LM
        session. The start time can be disabled (none), immediate, relative,
        or fixed.

        The value of 'none' is illegal and a write error will be returned
        if this value is used.

        The value of 'immediate' starts the SOAM LM session when the
        mefSoamLmCfgEnabled is true.

        The value of 'fixed' starts the SOAM LM session when the
        mefSoamLmFixedStartDateAndTime is less than or equal to the current
        system date and time and mefSoamLmCfgEnabled is true. This value is used
        to implement an On-Demand fixed time PM session.

        The value of 'relative' starts the SOAM LM session when the current
        system date and time minus the mefSoamLmRelativeStartTime is greater
        than or equal to the system date and time when the mefSoamLmStartTimeType
        object was written and mefSoamLmCfgEnabled is true. This value is used
        to implement an On-Demand relative time PM session.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R7, D1"
    DEFVAL { immediate }
    ::= { mefSoamLmCfgEntry 17 }

mefSoamLmCfgFixedStartDateAndTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the fixed UTC start date/time for the
        SOAM Loss Measurement session. This object is used only used if
        mefSoamLmStartTimeType is 'fixed' and is ignored otherwise.

        The default value is year 0000, month 01, day 01, time 00:00:00.00.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R8"
    DEFVAL { '0000010100000000'H }
    ::= { mefSoamLmCfgEntry 18 }

mefSoamLmCfgRelativeStartTime  OBJECT-TYPE
    SYNTAX      TimeInterval
```

```
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the relative start time, from the
        current system time, for the SOAM LM session.  This
        object is used only if mefSoamLmStartTimeType is 'relative' and is
        ignored otherwise.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R8"
    DEFVAL { 0 }
    ::= { mefSoamLmCfgEntry 19 }

mefSoamLmCfgStopTimeType OBJECT-TYPE
    SYNTAX      MefSoamTcOperationTimeType
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the type of stop time to terminate the
        SOAM LM session. The stop time can be forever (none), relative, or
        fixed.

        The value of 'none' indicates that the SOAM LM session never ends once it
        has started unless it the session is disabled.

        The value of 'immediate' is illegal and a write error will be returned
        if this value is used.

        The value of 'fixed' stops the SOAM LM session when the
        mefSoamLmFixedStopDateAndTime is less than or equal
        to the current system date and time. This
        value is used to implement an On-Demand fixed time PM session.

        The value of 'relative' stops the SOAM LM session when the time
        indicated by mefSoamLmRelativeStopTime has passed since the session
        start time as determined by the mefSoamLmCfgStartTimeType,
        mefSoamLmCfgFixedStartDateAndTime and mefSoamLmCfgRelativeStartTime
        objects. This value is used to implement an On-Demand relative time
        PM session.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R9-R10, D2"
    DEFVAL { none }
    ::= { mefSoamLmCfgEntry 20 }

mefSoamLmCfgFixedStopDateAndTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the fixed UTC stop date/time for the
        SOAM Loss Measurement session. This object is used only used
        if mefSoamLmStopTimeType is 'fixed' and is ignored otherwise.

        The default value is year 0000, month 01, day 01, time 00:00:00.00.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
```

```
        "
    REFERENCE
        "[MEF35.1] R10-R11"
    DEFVAL { '0000010100000000'H }
    ::= { mefSoamLmCfgEntry 21 }

mefSoamLmCfgRelativeStopTime OBJECT-TYPE
    SYNTAX      TimeInterval
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "This object specifies the relative stop time, from the
         session start time, to stop the SOAM LM session.  This
         object is used only if mefSoamLmStopTimeType is 'relative' and is
         ignored otherwise.

         This object can only be written at row creation time and cannot be
         modified once it has been created.
        "
    REFERENCE
        "[MEF35.1] R10-R11"
    DEFVAL { 0 }
    ::= { mefSoamLmCfgEntry 22 }

mefSoamLmCfgRepetitionTime OBJECT-TYPE
    SYNTAX      Unsigned32 (0..31536000)
    UNITS       "seconds"
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "This object specifies a configurable repetition time between
         Measurement Intervals in a Loss Measurement session, in seconds.

         If the value is 0 (none), there is no time gap between the end of one
         Measurement Interval and the start of a new Measurement Interval.
         This is the normal usage case.

         If the value is greater than 0 but less than or equal to the measurement
         interval, an error is returned.

         If the value is greater than one Measurement Interval there is time gap
         between the end of one Measurement Interval and the start of the next
         Measurement Interval.  The repetition time specifies the time between
         the start of consecutive Measurement Intervals; hence the gap between
         the end of one Measurement Interval and the start of the next is equal
         to the difference between the repetition time and the measurement
         interval.  During this gap, no SOAM PDUs are sent for this session and
         no measurements are made.

         This object can only be written at row creation time and cannot be
         modified once it has been created.
        "
    REFERENCE
        "[MEF35.1] R18, D4, R19-R20"
    DEFVAL { 0 }
    ::= { mefSoamLmCfgEntry 23 }

mefSoamLmCfgAlignMeasurementIntervals OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "This object specifies whether the Measurement Intervals for
         the Loss Measurement session are aligned with a zero offset to
```

```
        real time.

        The value 'true' indicates that each Measurement Interval starts
        at a time which is aligned to NE time source hour, if the repetition
        time (or the Measurement Interval, if the repetition time is 0) is
        a factor of an hour, i.e. 60min/15min = 4. For instance, a
        Measurement Interval/repetition time of 15 minutes would stop/start
        the Measurement Interval at 0, 15, 30, and 45 minutes of an hour. A
        Measurement Interval/Repetition Time of 7 minutes would not align
        to the hour since 7 minutes is NOT a factor of an hour, i.e.
        60min/7min = 8.6.  In this case the behavior is the same as if the
        object is set to 'false'.

        The value 'false' indicates that the first Measurement Interval starts
        at an arbitrary time and each subsequent Measurement Interval starts
        at a time which is determined by mefSoamLmCfgRepetitionTime.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] D5-D7"
    DEFVAL { true }
    ::= { mefSoamLmCfgEntry 24 }

mefSoamLmCfgAlignMeasurementOffset OBJECT-TYPE
    SYNTAX      Unsigned32 (0..525600)
    UNITS       "minutes"
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the offset in minutes from the time of day value
        if mefSoamLmCfgAlignMeasurementIntervals is 'true' and the repetition
        time is a factor of 60 minutes. If not, the value of this object
        is ignored.

        If the Measurement Interval is 15 minutes and
        mefSoamLmCfgAlignMeasurementIntervals is true and if this object was
        set to 5 minutes, the Measurement Intervals would start at 5, 20, 35, 50
        minutes past each hour.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] D8"
    DEFVAL { 0 }
    ::= { mefSoamLmCfgEntry 25 }

mefSoamLmCfgAvailabilityMeasurementInterval OBJECT-TYPE
    SYNTAX      Unsigned32 (1..525600)
    UNITS       "minutes"
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the availability Measurement Interval in
        minutes.

        An Availability Measurement Interval of 15 minutes is to be supported,
        other intervals can be supported. Calculations within a Availability
        Measurement Interval are based upon a small time interval delta_t
        as configured by
        mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus.
```

```
        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R15-R17, D3"
    DEFVAL { 15 }
    ::= { mefSoamLmCfgEntry 26 }

mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus OBJECT-TYPE
    SYNTAX      Unsigned32 (1..1000000)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies a configurable number of consecutive
        loss measurement PDUs to be used in evaluating the
        availability/unavailability status and FLR of each small time interval,
        'delta_t', per MEF 10.3.  Loss Measurement PDUs (LMMs, CCMs or
        SLMs) are sent regularly with a period defined by
        mefSoamLmCfgMessagePeriod.  Therefore, this object, when
        multiplied by mefSoamLmCfgMessagePeriod, is equivalent to
        the Availability parameter of 'delta_t' as specified by MEF 10.3.

        If the mefSoamLmCfgType is lmLMM or lmCCM, this object defines the
        number of LMM or CCM PDUs transmitted during each 'delta_t' period.
        The Availability flr for a given 'delta_t' can be calculated based
        on the counters in the last LMM/R or CCM during this 'delta_t' and
        the last LMM/R or CCM in the previous 'delta_t'.

        If the mefSoamLmCfgType is lmSLM, this object defines the number
        of SLM PDUs transmitted during each 'delta_t' period.  The
        Availability flr for a given 'delta_t' is calculated based on the
        number of those SLM PDUs that are lost.

        If the mefSoamLmCfgType is lmLMM or lmCCM, the number range of 1
        through 300 must be supported. The number range of 300 through 1000000
        may be supported, but is not mandatory.

        If the mefSoamLmCfgType is lmSLM, the number range of 10 through
        3000 must be supported. The number range of 3000 through 1000000
        may be supported, but is not mandatory.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF10.3] Section 8.8; [MEF35.1] R78-R80, D31-D32, CR58-CR60, CD16-CD17"
    DEFVAL { 10 }
    ::= { mefSoamLmCfgEntry 27 }

mefSoamLmCfgAvailabilityFlrThreshold OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies a configurable availability threshold to be
        used in evaluating the availability/unavailability status of an
        delta_t interval per MEF 10.3. The availability threshold range
        of 0.00 (0) through 1.00 (100000) is supported. This parameter is
        equivalent to the Availability parameter of 'C' as specified by
        MEF 10.3.

        Units are in milli-percent, where 1 indicates 0.001 percent.
```

```
        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF10.3] Section 8.8; [MEF35.1] R81-R82, D33, CR61-CR62, CD18"
    DEFVAL { 50000 }
    ::= { mefSoamLmCfgEntry 28 }

mefSoamLmCfgAvailabilityNumConsecutiveIntervals OBJECT-TYPE
    SYNTAX      Unsigned32 (1..1000)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies a configurable number of consecutive
        delta_t intervals (n delta_t) to be used to determine a change in the
        availability status as indicated by MEF 10.3. This parameter is
        equivalent to the Availability parameter of 'n' as specified
        by MEF 10.3. Availability for each delta_t interval is a sliding
        window based upon a width n delta_t.

        The number range of 1 through 10 must be supported. The number range
        of 1 through 1000 may be supported, but is not mandatory.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF10.3] Section 8.8; [MEF35.1] R78-R80, D31-D32, CR58-CR60, CD16-CD17"
    DEFVAL { 10 }
    ::= { mefSoamLmCfgEntry 29 }

mefSoamLmCfgAvailabilityNumConsecutiveHighFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (1..1000)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies a configurable number of consecutive
        delta_t intervals to be used for assessing CHLI in the sliding window.
        This parameter is equivalent to the Resiliency parameter of 'p' as
        specified by MEF 10.3.

        mefSoamLmCfgAvailabilityNumConsecutiveHighFlr must be strictly less than
        mefSoamLmCfgAvailabilityNumConsecutiveIntervals. If not, the count of high
        loss intervals over time, mefSoamLmAvailabilityHighLoss, and the count
        of consecutive high loss levels, mefSoamLmAvailabilityConsecutiveHighLoss,
        is disabled.

        The number range of 1 through 10 must be supported. The number range
        of 1 through 1000 may be supported, but is not mandatory.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF10.3] Section 8.8; [MEF35.1] R86-R87, D34-D35, CR66-CR67, CD19-CD20"
    DEFVAL { 5 }
    ::= { mefSoamLmCfgEntry 30 }

mefSoamLmCfgSessionType OBJECT-TYPE
    SYNTAX      MefSoamTcSessionType
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object indicates whether the current session is defined to
```

```
        be 'Proactive' or 'On-Demand'. A value of 'proactive'
        indicates the current session is 'Proactive'. A value of 'onDemand'
        indicates the current session is 'On-Demand'.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R2"
    DEFVAL { proactive }
    ::= { mefSoamLmCfgEntry 31 }

mefSoamLmCfgSessionStatus OBJECT-TYPE
    SYNTAX      MefSoamTcStatusType
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object indicates the current status of the LM session. A value
        of 'active' indicates the current LM session is active, i.e. the current
        time lies between the start time and the stop time, and
        mefSoamLmCfgEnabled is true. A value of 'notActive' indicates the
        current LM session is not active, i.e. it has not started yet, has
        stopped upon reaching the stop time, or is disabled.
       "
    ::= { mefSoamLmCfgEntry 32 }

mefSoamLmCfgHistoryClear OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object when written clears the Loss Measurement history
        Table (mefSoamLmHistoryStatsTable) - all rows are deleted.
        When read the value always returns 'false'.

        Writing this value does not change the current stat table,
        nor any of the items in the configuration table.
        Writing this value during row creation has no effect.
       "
    DEFVAL { false }
    ::= { mefSoamLmCfgEntry 33 }

mefSoamLmCfgRowStatus OBJECT-TYPE
    SYNTAX      RowStatus
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "The status of the row.

        The writable columns in a row cannot be changed if the row
        is active, except for mefSoamLmCfgHistoryClear and mefSoamLmCfgEnabled
        objects. All columns must have a valid value before a row
        can be activated.
       "
   ::= { mefSoamLmCfgEntry 34 }

mefSoamLmCfgCosType OBJECT-TYPE
    SYNTAX      INTEGER {
        vlan   (1),
        pcp    (2),
        dei    (3)
    }
    MAX-ACCESS  read-create
    STATUS      current
```

```
    DESCRIPTION
       "This object selects the LM measurement CoS association

        vlan(1)  SOAM PM session is based upon VLAN ID only
        pcp(2)   SOAM PM session is based upon a combination of VLAN ID and
                 priority (PCP)
        dei(3)   SOAM PM session is based upon a combination of VLAN ID and
                 priority (PCP)_and DEI

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R71, R73"
    ::= { mefSoamLmCfgEntry 35 }

mefSoamLmCfgSourceMacAddress OBJECT-TYPE
    SYNTAX      MacAddress
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "The Source MAC Address Field of the received SOAM LM session PDUs.

        If mefSoamLmCfgType is 'lm1SlRx' this object indicates the source
        address of the lm1SlTx LM session.

        This object is only valid for mefSoamLmCfgType set to 'lm1SlRx'. It is
        ignored for mefSoamLmCfgType set to 'lmLmm', 'lmSlm', 'lmCcm', and
        'lmSlTx'.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] CR49"
    ::= { mefSoamLmCfgEntry 36 }

mefSoamLmCfgTcaNextIndex OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains an unused value for a TCA on the specific LM PM
        Session or a zero to indicate that none exist. This value needs to
        be read in order to find an available index for row-creation of a
        TCA and then is used when a row is created. This value is
        automatically updated by the SNMP Agent after the row is created.

        Referential integrity is necessary, i.e., the index needs to be
        persistent upon a reboot or restart of a device.  The index
        is never to be reused for other PM sessions on the same MEP while this
        session is active, or until it wraps to zero.  The index value keeps
        increasing up to that time. This is to facilitate access control based
        on a fixed index for an EMS, since the index is not reused.
       "
    REFERENCE
       "[MEF35.1] O4, CR21, CO2"
    ::= { mefSoamLmCfgEntry 37 }

mefSoamLmCfgDei OBJECT-TYPE
    SYNTAX      INTEGER {
                  noDei   (0),
                  setDei  (1)
                }
```

```
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the setting of the DEI when mefSoamLmCfgCosType
        is configured to 'dei'. The value of this object is ignored if
        mefSoamLmCfgCosType is set to 'vlan' or 'pcp'

        noDei(0)        DEI is set to 0
        setDei(1)       DEI is set to 1

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[Y.1731] [MEF35.1] R71, R73, CR43, CR53"
    DEFVAL { noDei }
    ::= { mefSoamLmCfgEntry 38 }

mefSoamLmTestId OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the Test ID if mefSoamLmCfgType is set to
        'lmSlm', 'lm1SlTx', 'lm1SlRx'. The value of this objecdt is ignored
        if mefSoamLmCfgType is set to 'lmLmm' or 'lmCcm'.

        For 'lmSlm' and 'lm1SlTx' it is the value of the transmitted Test ID
        field in the SLM and 1SL PDU.

        For 'lm1SlRx' it is the value of the received 1SLM PDU Test ID field.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] Section 16.4; [Y.1731]"
    DEFVAL { 0 }
    ::= { mefSoamLmCfgEntry 39 }


-- ****************************************************************************
-- Ethernet Loss Measurement Measured Statistic Table
-- ****************************************************************************

mefSoamLmMeasuredStatsTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamLmMeasuredStatsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This object contains the last measured results for a SOAM Loss
        Measurement session.

        Each row in the table represents a Loss Measurement session for
        the defined MEP. This table uses four indices. The first three indices
        are the indices of the Maintenance Domain, Maintenance Association, and
        MEP tables. The fourth index is the specific LM session on the selected
        MEP.

        Instances of this managed object are created automatically
        by the SNMP Agent when the Loss Measurement session is running.

        Each object in this table applies only if the corresponding bit is set in
        mefSoamLmCfgMeasurementEnable.
```

```
         The objects in this table do not need to be persistent upon reboot
         or restart of a device.
        "
    REFERENCE
       "[MEF35.1] R6, R14, D10, D19"
    ::= { mefSoamPmLmObjects 2 }

mefSoamLmMeasuredStatsEntry OBJECT-TYPE
    SYNTAX      MefSoamLmMeasuredStatsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "The conceptual row of mefSoamLmMeasuredStatsTable"
    INDEX      {
               dot1agCfmMdIndex,
               dot1agCfmMaIndex,
               dot1agCfmMepIdentifier,
               mefSoamLmCfgIndex
               }
    ::= { mefSoamLmMeasuredStatsTable 1 }

MefSoamLmMeasuredStatsEntry ::= SEQUENCE {
    mefSoamLmMeasuredStatsForwardFlr           Unsigned32,
    mefSoamLmMeasuredStatsBackwardFlr          Unsigned32,
    mefSoamLmMeasuredStatsAvailForwardStatus   MefSoamTcAvailabilityType,
    mefSoamLmMeasuredStatsAvailBackwardStatus  MefSoamTcAvailabilityType,
    mefSoamLmMeasuredStatsAvailForwardLastTransitionTime DateAndTime,
    mefSoamLmMeasuredStatsAvailBackwardLastTransitionTime  DateAndTime
}

mefSoamLmMeasuredStatsForwardFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the last frame loss ratio in the forward direction
        calculated by this MEP. The FLR value
        is a ratio that is expressed as a percent with a value of 0 (ratio
        0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] D36, CD21"
    ::= { mefSoamLmMeasuredStatsEntry 1 }

mefSoamLmMeasuredStatsBackwardFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the last frame loss ratio in the backward direction
        calculated by this MEP. The FLR value
        is a ratio that is expressed as a percent with a value of 0 (ratio
        0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
```

```
        or 'lm1SlRx'.       "
    REFERENCE
       "[MEF35.1] D36, CD21"
    ::= { mefSoamLmMeasuredStatsEntry 2 }

mefSoamLmMeasuredStatsAvailForwardStatus OBJECT-TYPE
    SYNTAX      MefSoamTcAvailabilityType
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object indicates the availability status (the outcome of the
        last known delta_t interval) in the forward direction.
        Note that the status of an delta_t interval is not known until
        the loss for a number of subsequent delta_t intervals has been
        calculated (as determined by
        mefSoamLmCfgAvailabilityNumConsecutiveIntervals)

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] R83, CR63"
    ::= { mefSoamLmMeasuredStatsEntry 3 }

mefSoamLmMeasuredStatsAvailBackwardStatus OBJECT-TYPE
    SYNTAX      MefSoamTcAvailabilityType
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object indicates the availability status (the outcome of the
        last delta_t interval) in the backward direction.
        Note that the status of an delta_t interval is not known until
        the loss for a number of subsequent delta_t intervals has been
        calculated (as determined by
        mefSoamLmCfgAvailabilityNumConsecutiveIntervals)

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] R83, CR63"
    ::= { mefSoamLmMeasuredStatsEntry 4 }

mefSoamLmMeasuredStatsAvailForwardLastTransitionTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object indicates the UTC time of the last transition
        between available and unavailable in the forward direction.

        If there have been no transitions since the Loss Measurement
        Session was started, this is set to 0.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] R83-R84, CR63-CR64"
    ::= { mefSoamLmMeasuredStatsEntry 5 }

mefSoamLmMeasuredStatsAvailBackwardLastTransitionTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
```

```
        "This object indicates the UTC time of the last transition
         between available and unavailable in the backward direction.

         If there have been no transitions since the Loss Measurement
         Session was started, this is set to 0.

         The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
         or 'lm1SlRx'.
        "
    REFERENCE
        "[MEF35.1] R83-R84, CR63-CR64"
    ::= { mefSoamLmMeasuredStatsEntry 6 }

-- ****************************************************************************
-- Ethernet Loss Measurement Current Availability Statistic Table
-- ****************************************************************************

mefSoamLmCurrentAvailStatsTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamLmCurrentAvailStatsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This object contains the current results for a SOAM Loss Measurement
         session for availability statistics gathered during the interval
         indicated by mefSoamLmCfgAvailabilityMeasurementInterval.

         Each row in the table represents a Loss Measurement session for
         the defined MEP. This table uses four indices. The first three indices
         are the indices of the Maintenance Domain, Maintenance Association, and
         MEP tables. The fourth index is the specific LM session on the selected
         MEP.

         Instances of this managed object are created automatically
         by the SNMP Agent when the Loss Measurement session is running.

         The objects in this table apply regardless of the value of
         mefSoamLmCfgType unless otherwise specified in the object description.

         Except for mefSoamLmCurrentAvailStatsIndex,
         mefSoamLmCurrentAvailStatsStartTime, mefSoamLmCurrentAvailStatsElapsedTime
         and mefSoamLmCurrentAvailStatsSuspect, each object in this table applies
         only if the corresponding bit is set in mefSoamLmCfgMeasurementEnable.

         The objects in this table may be persistent upon reboot or restart
         of a device.
        "
    REFERENCE
        "[MEF35.1] R6, R14, D10, D19"
    ::= { mefSoamPmLmObjects 3 }

mefSoamLmCurrentAvailStatsEntry OBJECT-TYPE
    SYNTAX      MefSoamLmCurrentAvailStatsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The conceptual row of mefSoamLmCurrentAvailStatsTable"
    INDEX       {
                dot1agCfmMdIndex,
                dot1agCfmMaIndex,
                dot1agCfmMepIdentifier,
                mefSoamLmCfgIndex
                }
    ::= { mefSoamLmCurrentAvailStatsTable 1 }
```

```
MefSoamLmCurrentAvailStatsEntry ::= SEQUENCE {
    mefSoamLmCurrentAvailStatsIndex                Unsigned32,
    mefSoamLmCurrentAvailStatsStartTime            DateAndTime,
    mefSoamLmCurrentAvailStatsElapsedTime          TimeInterval,
    mefSoamLmCurrentAvailStatsSuspect              TruthValue,

    mefSoamLmCurrentAvailStatsForwardHighLoss      Unsigned32,
    mefSoamLmCurrentAvailStatsBackwardHighLoss     Unsigned32,
    mefSoamLmCurrentAvailStatsForwardConsecutiveHighLoss  Unsigned32,
    mefSoamLmCurrentAvailStatsBackwardConsecutiveHighLoss  Unsigned32,

    mefSoamLmCurrentAvailStatsForwardAvailable     Gauge32,
    mefSoamLmCurrentAvailStatsBackwardAvailable    Gauge32,
    mefSoamLmCurrentAvailStatsForwardUnavailable   Gauge32,
    mefSoamLmCurrentAvailStatsBackwardUnavailable  Gauge32,
    mefSoamLmCurrentAvailStatsForwardMinFlr        Unsigned32,
    mefSoamLmCurrentAvailStatsForwardMaxFlr        Unsigned32,
    mefSoamLmCurrentAvailStatsForwardAvgFlr        Unsigned32,
    mefSoamLmCurrentAvailStatsBackwardMinFlr       Unsigned32,
    mefSoamLmCurrentAvailStatsBackwardMaxFlr       Unsigned32,
    mefSoamLmCurrentAvailStatsBackwardAvgFlr       Unsigned32
}

mefSoamLmCurrentAvailStatsIndex OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The index for the current availability Measurement Interval for this
        PM session.  This value will become the value for
        mefSoamLmHistoryAvailStatsIndex once the Measurement Interval
        is completed.  The duration of the Measurement Interval is specified
        by mefSoamLmCfgAvailabilityMeasurementInterval.

        Measurement Interval indices are assigned sequentially by
        the SNMP Agent.  The first Measurement Interval that occurs after
        the session is started is assigned index 1.
       "
    REFERENCE
       "[MEF35.1] R21, D9-D10"
    ::= { mefSoamLmCurrentAvailStatsEntry 1 }

mefSoamLmCurrentAvailStatsStartTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The UTC time that the current Measurement Interval started.
       "
    REFERENCE
       "[MEF35.1] R22, R88, CR46, CR68"
    ::= { mefSoamLmCurrentAvailStatsEntry 2 }

mefSoamLmCurrentAvailStatsElapsedTime OBJECT-TYPE
    SYNTAX      TimeInterval
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The time that the current Measurement Interval has been running, in 0.01
        seconds.
       "
    REFERENCE
       "[MEF35.1] R24, R88, CR46, CR68"
    ::= { mefSoamLmCurrentAvailStatsEntry 3 }
```

```
mefSoamLmCurrentAvailStatsSuspect OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "Whether the Measurement Interval has been marked as suspect.

        The object is set to false at the start of a measurement
        interval. It is set to true when there is a discontinuity in the
        performance measurements during the Measurement Interval.  Conditions
        for a discontinuity include, but are not limited to the following:

        1 - Loss of connectivity between the Controller MEP and the
            Responder MEP
        2 - The local time-of-day clock is adjusted by at least 10 seconds
        3 - The conducting of performance measurements is started part
            way through a Measurement Interval (in the case that the
            Measurement Intervals are not aligned with the start time
            Of the PM Session).
        4 - The conducting of a performance measurement is halted before the
            current Measurement Interval is completed
        5 - A local test, failure, or reconfiguration that disrupts service
        6 - A Measurement Interval that coincides with a Maintenance Interval
       "
    REFERENCE
       "[MEF35.1] R39-R42"
    ::= { mefSoamLmCurrentAvailStatsEntry 4 }

mefSoamLmCurrentAvailStatsForwardHighLoss OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object is the number of high loss intervals (HLI) over
        time in the forward direction.

        The value starts at 0 and increments for every HLI that occurs.
        This parameter is equivalent to 'L Sub T' found in MEF 10.3.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF10.3] 8.8; [MEF35.1] R88, CR68"
    ::= { mefSoamLmCurrentAvailStatsEntry 5 }

mefSoamLmCurrentAvailStatsBackwardHighLoss OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object is the number of high loss intervals (HLI) over
        time in the backwards direction.

        The value starts at 0 and increments for every HLI that occurs.
        This parameter is equivalent to 'L Sub T' found in MEF 10.3.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF10.3] 8.8; [MEF35.1] R88"
    ::= { mefSoamLmCurrentAvailStatsEntry 6 }
```

```
mefSoamLmCurrentAvailStatsForwardConsecutiveHighLoss OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object is the number of consecutive high loss intervals
        (CHLI) over time in the forward direction.

        The value starts at 0 and increments for every HLI that occurs
        that is determined to fall within a CHLI.
        This parameter is equivalent to 'B Sub T' found in MEF 10.3.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF10.3] 8.8; [MEF35.1] R88, CR68"
    ::= { mefSoamLmCurrentAvailStatsEntry 7 }

mefSoamLmCurrentAvailStatsBackwardConsecutiveHighLoss OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object is the number of consecutive high loss intervals
        (CHLI) over time in the backward direction.

        The value starts at 0 and increments for every HLI that occurs
        that is determined to fall within a CHLI.
        This parameter is equivalent to 'B Sub T' found in MEF 10.3.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF10.3] 8.8; [MEF35.1] R88"
    ::= { mefSoamLmCurrentAvailStatsEntry 8 }

mefSoamLmCurrentAvailStatsForwardAvailable OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of delta_t intervals
        evaluated as available in the forward direction by this MEP during
        this Measurement Interval.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] R88, CR68; [MEF10.3]"
    ::= { mefSoamLmCurrentAvailStatsEntry 9 }

mefSoamLmCurrentAvailStatsBackwardAvailable OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of delta_t intervals
        evaluated as available in the backward direction by this MEP during
        this Measurement Interval.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
```

```
    REFERENCE
       "[MEF35.1] R88"
    ::= { mefSoamLmCurrentAvailStatsEntry 10 }

mefSoamLmCurrentAvailStatsForwardUnavailable OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of delta_t intervals
        evaluated as unavailable in the forward direction by this MEP during
        this Measurement Interval.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] R88, CR68"
    ::= { mefSoamLmCurrentAvailStatsEntry 11 }

mefSoamLmCurrentAvailStatsBackwardUnavailable OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of delta_t intervals
        evaluated as unavailable in the backward direction by this MEP
        during this Measurement Interval.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] R88"
    ::= { mefSoamLmCurrentAvailStatsEntry 12 }

mefSoamLmCurrentAvailStatsForwardMinFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the minimum one-way availability flr in the forward
        direction, from among the set of availability flr values calculated by
        the MEP in this Measurement Interval.  There is one availability flr
        value for each 'delta_t' time period within the Measurement Interval, as
        specified in MEF 10.3.

        The flr value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] D36, CD21"
    ::= { mefSoamLmCurrentAvailStatsEntry 13 }

mefSoamLmCurrentAvailStatsForwardMaxFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
```

```
        "This object contains the maximum one-way availability flr in the forward
         direction, from among the set of availability flr values calculated by
         the MEP in this Measurement Interval.  There is one availability flr
         value for each 'delta_t' time period within the Measurement Interval, as
         specified in MEF 10.3.

         The flr value is a ratio that is expressed as a
         percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

         Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] D36, CD21"
    ::= { mefSoamLmCurrentAvailStatsEntry 14 }

mefSoamLmCurrentAvailStatsForwardAvgFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way availability flr in the forward
        direction, from among the set of availability flr values calculated by
        the MEP in this Measurement Interval.  There is one availability flr
        value for each 'delta_t' time period within the Measurement Interval, as
        specified in MEF 10.3.

        The flr value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] D36, CD21"
    ::= { mefSoamLmCurrentAvailStatsEntry 15 }

mefSoamLmCurrentAvailStatsBackwardMinFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the minimum one-way availability flr in the backward
        direction, from among the set of availability flr values calculated by
        the MEP in this Measurement Interval.  There is one availability flr
        value for each 'delta_t' time period within the Measurement Interval, as
        specified in MEF 10.3.

        The flr value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] D36"
    ::= { mefSoamLmCurrentAvailStatsEntry 16 }
```

```
mefSoamLmCurrentAvailStatsBackwardMaxFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way availability flr in the backward
        direction, from among the set of availability flr values calculated by
        the MEP in this Measurement Interval.  There is one availability flr
        value for each 'delta_t' time period within the Measurement Interval, as
        specified in MEF 10.3.

        The flr value is a ratio that is expressed
        as a percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
      "
    REFERENCE
       "[MEF35.1] D36"
    ::= { mefSoamLmCurrentAvailStatsEntry 17 }

mefSoamLmCurrentAvailStatsBackwardAvgFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way availability flr in the backward
        direction, from among the set of availability flr values calculated by
        the MEP in this Measurement Interval.  There is one availability flr
        value for each 'delta_t' time period within the Measurement Interval, as
        specified in MEF 10.3.

        The flr value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] D36"
    ::= { mefSoamLmCurrentAvailStatsEntry 18 }


-- ****************************************************************************
--  Ethernet Loss Measurement Current Statistic Table
-- ****************************************************************************

mefSoamLmCurrentStatsTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamLmCurrentStatsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This table contains the results for the current Measurement
        Interval in a SOAM Loss Measurement session gathered during the interval
        indicated by mefSoamLmCfgMeasurementInterval.

        A row in this table is created automatically
        by the SNMP Agent when the Loss Measurement session is configured.
```

```
        Each row in the table represents the current statistics for a Loss
        Measurement session for the defined MEP. This table uses four indices.
        The first three indices are the indices of the Maintenance Domain,
        Maintenance Association, and MEP tables. The fourth index is the
        specific LM session on the selected MEP. There may be more than one
        LM session per MEP. The main use case for this is to allow multiple
        CoS instances to be operating simultaneously for a MEP.

        The objects in this table apply regardless of the value of
        mefSoamLmCfgType unless otherwise specified in the object description.

        Except for mefSoamLmCurrentStatsIndex, mefSoamLmCurrentStatsStartTime,
        mefSoamLmCurrentStatsElapsedTime and mefSoamLmCurrentStatsSuspect,
        each object in this table applies only if the corresponding bit is set in
        mefSoamLmCfgMeasurementEnable.


        The objects in this table do not need to be persistent upon reboot or
        restart of a device.
       "
    REFERENCE
       "[MEF35.1] R6, R14, D10, D19"
    ::= { mefSoamPmLmObjects 4 }

mefSoamLmCurrentStatsEntry OBJECT-TYPE
    SYNTAX      MefSoamLmCurrentStatsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
            "The conceptual row of mefSoamLmCurrentStatsTable"
    INDEX      {
               dot1agCfmMdIndex,
               dot1agCfmMaIndex,
               dot1agCfmMepIdentifier,
               mefSoamLmCfgIndex
               }
    ::= { mefSoamLmCurrentStatsTable 1 }

MefSoamLmCurrentStatsEntry ::= SEQUENCE {
    mefSoamLmCurrentStatsIndex                    Unsigned32,
    mefSoamLmCurrentStatsStartTime                DateAndTime,
    mefSoamLmCurrentStatsElapsedTime              TimeInterval,
    mefSoamLmCurrentStatsSuspect                  TruthValue,
    mefSoamLmCurrentStatsForwardTransmittedFrames  Gauge32,
    mefSoamLmCurrentStatsForwardReceivedFrames     Gauge32,
    mefSoamLmCurrentStatsForwardMinFlr             Unsigned32,
    mefSoamLmCurrentStatsForwardMaxFlr             Unsigned32,
    mefSoamLmCurrentStatsForwardAvgFlr             Unsigned32,
    mefSoamLmCurrentStatsBackwardTransmittedFrames Gauge32,
    mefSoamLmCurrentStatsBackwardReceivedFrames    Gauge32,
    mefSoamLmCurrentStatsBackwardMinFlr            Unsigned32,
    mefSoamLmCurrentStatsBackwardMaxFlr            Unsigned32,
    mefSoamLmCurrentStatsBackwardAvgFlr            Unsigned32,
    mefSoamLmCurrentStatsSoamPdusSent              Gauge32,
    mefSoamLmCurrentStatsSoamPdusReceived          Gauge32
}

mefSoamLmCurrentStatsIndex OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The index for the current Measurement Interval for this
```

```
        PM session.  This value will become the value for
        mefSoamLmHistoryStatsIndex once the Measurement Interval
        is completed.

        Measurement Interval indices are assigned sequentially by
        the SNMP Agent.  The first Measurement Interval that occurs after
        the session is started is assigned index 1.
       "
    REFERENCE
       "[MEF35.1] R21, D9-D10"
    ::= { mefSoamLmCurrentStatsEntry 1 }

mefSoamLmCurrentStatsStartTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The UTC time that the current Measurement Interval started.
       "
    REFERENCE
       "[MEF35.1] R22, R88, CR46, CR68"
    ::= { mefSoamLmCurrentStatsEntry 2 }

mefSoamLmCurrentStatsElapsedTime OBJECT-TYPE
    SYNTAX      TimeInterval
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The time that the current Measurement Interval has been running, in 0.01
        seconds.
       "
    REFERENCE
       "[MEF35.1] R24, R88, CR46, CR68"
    ::= { mefSoamLmCurrentStatsEntry 3 }

mefSoamLmCurrentStatsSuspect OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "Whether the Measurement Interval has been marked as suspect.

        The object is set to false at the start of a measurement
        interval. It is set to true when there is a discontinuity in the
        performance measurements during the Measurement Interval.  Conditions
        for a discontinuity include, but are not limited to the following:

        1 - Loss of connectivity between the Controller MEP and the
            Responder MEP
        2 - The local time-of-day clock is adjusted by at least 10 seconds
        3 - The conducting of performance measurements is started part
            way through a Measurement Interval (in the case that the
            Measurement Intervals are not aligned with the start time
            Of the PM Session).
        4 - The conducting of a performance measurement is halted before the
            current Measurement Interval is completed
        5 - A local test, failure, or reconfiguration that disrupts service
        6 - A Measurement Interval that coincides with a Maintenance Interval
       "
    REFERENCE
       "[MEF35.1] R39-R42"
    ::= { mefSoamLmCurrentStatsEntry 4 }

mefSoamLmCurrentStatsForwardTransmittedFrames OBJECT-TYPE
```

```
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of frames transmitted in the
        forward direction by this MEP.

        For a PM Session of types lmLmm and lmCcm this includes Ethernet
        Service Frames and SOAM PDUs that are in a higher MEG level only.

        For a PM Session of type lmSlm this includes the count of SOAM
        ETH-SLM frames only.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] R88, CR46, CR68"
    ::= { mefSoamLmCurrentStatsEntry 5 }

mefSoamLmCurrentStatsForwardReceivedFrames OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of frames received in the
        forward direction by this MEP.

        For a PM Session of types 'lmLmm' and 'lmCcm' this includes Ethernet
        Service Frames and SOAM PDUs that are in a higher MEG level only.

        For a PM Session of types 'lmSlm' or 'lm1SlRxthis includes the count of
        SOAM ETH-SLM frames only.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] R88, CR46, CR68"
    ::= { mefSoamLmCurrentStatsEntry 6 }

mefSoamLmCurrentStatsForwardMinFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the minimum one-way frame loss
        ratio in the forward direction calculated by this MEP for this
        Measurement Interval.

        This object is calculated based upon the small time intervals,
        delta_t, found within the Measurement Interval as
        configured by mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus.

        The FLR value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] D36, CD21"
    ::= { mefSoamLmCurrentStatsEntry 7 }
```

```
mefSoamLmCurrentStatsForwardMaxFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way frame loss
        ratio in the forward direction calculated by this MEP for this
        Measurement Interval.

        This object is calculated based upon the small time intervals,
        delta_t, found within the Measurement Interval as
        configured by mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus.

        The FLR value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
      "
    REFERENCE
       "[MEF35.1] D36, CD21"
    ::= { mefSoamLmCurrentStatsEntry 8 }

mefSoamLmCurrentStatsForwardAvgFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way frame loss
        ratio in the forward direction calculated by this MEP for this
        Measurement Interval.

        This object is calculated based upon the small time intervals,
        delta_t, found within the Measurement Interval as
        configured by mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus.

        The FLR value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] D36, CD21"
    ::= { mefSoamLmCurrentStatsEntry 9 }

mefSoamLmCurrentStatsBackwardTransmittedFrames OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of frames transmitted in the
        backward direction by this MEP.

        For a PM Session of type 'lmLmm' and 'lmCcm' this includes Ethernet
        Service Frames and SOAM PDUs that are in a higher MEG level only.

        For a PM Session of type 'lmSlm' this includes the count of SOAM
        ETH-SLM frames only.
```

```
         The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
         or 'lm1SlRx'.
        "
    REFERENCE
       "[MEF35.1] R88, CR46"
    ::= { mefSoamLmCurrentStatsEntry 10 }

mefSoamLmCurrentStatsBackwardReceivedFrames OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of frames received in the
        backward direction by this MEP.

        For a PM Session of type 'lmLmm' this includes Ethernet
        Service Frames and SOAM PDUs that are in a higher MEG level only.

        For a PM Session of type 'lmSlm' this includes the count of SOAM
        ETH-SLM frames only.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] R88, CR46"
    ::= { mefSoamLmCurrentStatsEntry 11 }

mefSoamLmCurrentStatsBackwardMinFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the minimum one-way frame loss
        ratio in the backward direction calculated by this MEP for
        this Measurement Interval.

        This object is calculated based upon the small time intervals,
        delta_t, found within the Measurement Interval as
        configured by mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus.

        The FLR value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] D36"
    ::= { mefSoamLmCurrentStatsEntry 12 }

mefSoamLmCurrentStatsBackwardMaxFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way frame loss
        ratio in the backward direction calculated by this MEP for
        this Measurement Interval.
```

```
        This object is calculated based upon the small time intervals,
        delta_t, found within the Measurement Interval as
        configured by mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus.

        The FLR value is a ratio that is expressed
        as a percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
      "
    REFERENCE
       "[MEF35.1] D36"
    ::= { mefSoamLmCurrentStatsEntry 13 }

mefSoamLmCurrentStatsBackwardAvgFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way frame loss
        ratio in the backward direction calculated by this MEP for
        this Measurement Interval.

        This object is calculated based upon the small time intervals,
        delta_t, found within the Measurement Interval as
        configured by mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus.

        The FLR value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] D36"
    ::= { mefSoamLmCurrentStatsEntry 14 }

mefSoamLmCurrentStatsSoamPdusSent OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the count of the number of SOAM PDUs sent
        during this Measurement Interval.

        This object applies when mefSoamLmCfgType is 'lmLmm', 'lmSlm',
        'lmCcm', or 'lm1SlTx'. It indicates the number of LMM, CCM, or SLM SOAM
        frames transmitted.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] R88, CR46, CR68"
    ::= { mefSoamLmCurrentStatsEntry 15 }

mefSoamLmCurrentStatsSoamPdusReceived OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
```

```
    DESCRIPTION
       "This object contains the count of the number of SOAM PDUs
        PDUs received in this Measurement Interval.

        This object applies when mefSoamLmCfgType is 'lmLmm', 'lmSlm',
        'lmCcm', or 'lm1SlRx'. This object indicates the number of LMR, CCM,
        or SLR SOAM frames received.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] R88, CR46, CR68"
    ::= { mefSoamLmCurrentStatsEntry 16 }

-- ****************************************************************************
-- Ethernet Loss Measurement Availability History Statistic Table
-- ****************************************************************************

mefSoamLmHistoryAvailStatsTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamLmHistoryAvailStatsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This table contains the results for availability history Measurement
        Intervals in a SOAM Loss Measurement session.

        Rows of this table object are created automatically
        by the SNMP Agent when the Loss Measurement session is running and a
        Measurement Interval is completed.

        Each row in the table represents the history statistics for a Loss
        Measurement session availability Measurement Interval for the defined
        MEP. This table uses five indices. The first three indices are the indices
        of the Maintenance Domain, Maintenance Association, and MEP tables.
        The fourth index is the specific LM session on the selected MEP. The
        fifth index index the specific Measurement Interval.

        At least 32 completed Measurement Intervals are to be supported. 96
        completed Measurement Intervals are recommended to be supported. If
        there are at least 32 rows in the table and a new Measurement Interval
        completes and a new row is to be added to the table, the oldest completed
        Measurement Interval can be deleted (row deletion). If the availability
        Measurement Interval is other than 15 minutes then a minimum of 8 hours of
        completed Measurement Intervals are to be supported and 24 hours are
        recommended to be supported.

        Except for mefSoamLmHistoryAvailStatsIndex,
        mefSoamLmHistoryAvailStatsEndTime, mefSoamLmHistoryAvailStatsElapsedTime and
        mefSoamLmHistoryAvailStatsSuspect, each object in this table applies only
        if the corresponding bit is set in mefSoamLmCfgMeasurementEnable.

        The rows and objects in this table are to be persistent upon reboot
        or restart of a device.
       "
    REFERENCE
       "[MEF35.1] R6, R14, D9-D10, R25"
    ::= { mefSoamPmLmObjects 5 }

mefSoamLmHistoryAvailStatsEntry OBJECT-TYPE
    SYNTAX      MefSoamLmHistoryAvailStatsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
            "The conceptual row of mefSoamLmHistoryAvailStatsTable"
```

```
    INDEX      {
               dot1agCfmMdIndex,
               dot1agCfmMaIndex,
               dot1agCfmMepIdentifier,
               mefSoamLmCfgIndex,
               mefSoamLmHistoryAvailStatsIndex
               }
    ::= { mefSoamLmHistoryAvailStatsTable 1 }

MefSoamLmHistoryAvailStatsEntry ::= SEQUENCE {
    mefSoamLmHistoryAvailStatsIndex                  Unsigned32,
    mefSoamLmHistoryAvailStatsEndTime                DateAndTime,
    mefSoamLmHistoryAvailStatsElapsedTime            TimeInterval,
    mefSoamLmHistoryAvailStatsSuspect                TruthValue,
    mefSoamLmHistoryAvailStatsForwardHighLoss        Unsigned32,
    mefSoamLmHistoryAvailStatsBackwardHighLoss       Unsigned32,
    mefSoamLmHistoryAvailStatsForwardConsecutiveHighLoss  Unsigned32,
    mefSoamLmHistoryAvailStatsBackwardConsecutiveHighLoss  Unsigned32,

    mefSoamLmHistoryAvailStatsForwardAvailable       Gauge32,
    mefSoamLmHistoryAvailStatsBackwardAvailable      Gauge32,
    mefSoamLmHistoryAvailStatsForwardUnavailable     Gauge32,
    mefSoamLmHistoryAvailStatsBackwardUnavailable    Gauge32,
    mefSoamLmHistoryAvailStatsForwardMinFlr          Unsigned32,
    mefSoamLmHistoryAvailStatsForwardMaxFlr          Unsigned32,
    mefSoamLmHistoryAvailStatsForwardAvgFlr          Unsigned32,
    mefSoamLmHistoryAvailStatsBackwardMinFlr         Unsigned32,
    mefSoamLmHistoryAvailStatsBackwardMaxFlr         Unsigned32,
    mefSoamLmHistoryAvailStatsBackwardAvgFlr         Unsigned32
}

mefSoamLmHistoryAvailStatsIndex OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "The index for the availability Measurement Interval within this
        PM session.

        Measurement Interval indices are assigned sequentially by
        the SNMP Agent.  The first Measurement Interval that occurs after
        the session is started is assigned index 1.  Measurement Intervals
        for availability (stored in this table) are based on
        mefSoamLmCfgAvailabilityMeasurementInterval and are indexed independently
        of Measurement Intervals for FLR (stored in mefSoamLmHistoryStatsTable).

        Referential integrity is necessary, i.e., the index needs to be
        persistent upon a reboot or restart of a device.  The index
        is never reused while this session is active until it wraps to zero.
        The index value keeps increasing up to that time.
       "
    REFERENCE
       "[MEF35.1] R21, D9-D10"
    ::= { mefSoamLmHistoryAvailStatsEntry 1 }

mefSoamLmHistoryAvailStatsEndTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The UTC time that the Measurement Interval ended.
       "
    REFERENCE
       "[MEF35.1] R23, R88, CR46, CR68"
```

```
    ::= { mefSoamLmHistoryAvailStatsEntry 2 }

mefSoamLmHistoryAvailStatsElapsedTime OBJECT-TYPE
    SYNTAX      TimeInterval
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The length of time that the Measurement Interval ran for,
        in 0.01 seconds.
       "
    REFERENCE
       "[MEF35.1] R24, R88, CR46, CR68"
    ::= { mefSoamLmHistoryAvailStatsEntry 3 }

mefSoamLmHistoryAvailStatsSuspect OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "Whether the Measurement Interval has been marked as suspect.

        The object is set to true when there is a discontinuity in the
        performance measurements during the Measurement Interval.  Conditions
        for a discontinuity include, but are not limited to the following:

        1 - Loss of connectivity between the Controller MEP and the
            Responder MEP
        2 - The local time-of-day clock is adjusted by at least 10 seconds
        3 - The conducting of performance measurements is started part
            way through a Measurement Interval (in the case that the
            Measurement Intervals are not aligned with the start time
            Of the PM Session).
        4 - The conducting of a performance measurement is halted before the
            current Measurement Interval is completed
        5 - A local test, failure, or reconfiguration that disrupts service
        6 - A Measurement Interval that coincides with a Maintenance Interval
       "
    REFERENCE
       "[MEF35.1] R39-R42"
    ::= { mefSoamLmHistoryAvailStatsEntry 4 }

mefSoamLmHistoryAvailStatsForwardHighLoss OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object is the number of high loss intervals (HLI) over
        time in the forward direction.

        The value starts at 0 and increments for every HLI that occurs.
        This parameter is equivalent to 'L Sub T' found in MEF 10.3.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF10.3] 8.8; [MEF35.1] R88, CR68"
    ::= { mefSoamLmHistoryAvailStatsEntry 5 }

mefSoamLmHistoryAvailStatsBackwardHighLoss OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object is the number of high loss intervals (HLI) over
```

```
        time in the backward direction.

        The value starts at 0 and increments for every HLI that occurs.
        This parameter is equivalent to 'L Sub T' found in MEF 10.3.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF10.3] 8.8; [MEF35.1] R88, CR68"
    ::= { mefSoamLmHistoryAvailStatsEntry 6 }

mefSoamLmHistoryAvailStatsForwardConsecutiveHighLoss OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object is the number of consecutive high loss intervals
        (CHLI) over time in the forward direction.

        The value starts at 0 and increments for every HLI that occurs
        that is determined to fall within a CHLI.
        This parameter is equivalent to 'B Sub T' found in MEF 10.3.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF10.3] 8.8; [MEF35.1] R88, CR68"
    ::= { mefSoamLmHistoryAvailStatsEntry 7 }

mefSoamLmHistoryAvailStatsBackwardConsecutiveHighLoss OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object is the number of consecutive high loss intervals
        (CHLI) over time in the forward direction.

        The value starts at 0 and increments for every HLI that occurs
        that is determined to fall within a CHLI.
        This parameter is equivalent to 'B Sub T' found in MEF 10.3.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF10.3] 8.8; [MEF35.1] R88"
    ::= { mefSoamLmHistoryAvailStatsEntry 8 }

mefSoamLmHistoryAvailStatsForwardAvailable OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of delta_t intervals
        evaluated as available in the forward direction by this MEP during
        this Measurement Interval.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] R88, CR68; [MEF10.3]"
    ::= { mefSoamLmHistoryAvailStatsEntry 9 }
```

```
mefSoamLmHistoryAvailStatsBackwardAvailable OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of delta_t intervals
        evaluated as available in the backward direction by this MEP during
        this Measurement Interval.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] R88"
    ::= { mefSoamLmHistoryAvailStatsEntry 10 }

mefSoamLmHistoryAvailStatsForwardUnavailable OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of delta_t intervals
        evaluated as unavailable in the forward direction by this MEP during
        this Measurement Interval.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] R88, CR68"
    ::= { mefSoamLmHistoryAvailStatsEntry 11 }


mefSoamLmHistoryAvailStatsBackwardUnavailable OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of delta_t intervals
        evaluated as unavailable in the backward direction by this MEP
        during this Measurement Interval.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] R88"
    ::= { mefSoamLmHistoryAvailStatsEntry 12 }

mefSoamLmHistoryAvailStatsForwardMinFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the minimum one-way availability flr in the forward
        direction, from among the set of availability flr values calculated by
        the MEP in this Measurement Interval.  There is one availability flr
        value for each 'delta_t' time period within the Measurement Interval, as
        specified in MEF 10.3.

        The flr value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.
```

```
        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
        "
    REFERENCE
        "[MEF35.1] D36, CD21"
    ::= { mefSoamLmHistoryAvailStatsEntry 13 }

mefSoamLmHistoryAvailStatsForwardMaxFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object contains the maximum one-way availability flr in the forward
         direction, from among the set of availability flr values calculated by
         the MEP in this Measurement Interval.  There is one availability flr
         value for each 'delta_t' time period within the Measurement Interval, as
         specified in MEF 10.3.

         The flr value is a ratio that is expressed as a
         percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

         Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
        "[MEF35.1] D36, CD21"
    ::= { mefSoamLmHistoryAvailStatsEntry 14 }

mefSoamLmHistoryAvailStatsForwardAvgFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object contains the average one-way availability flr in the forward
         direction, from among the set of availability flr values calculated by
         the MEP in this Measurement Interval.  There is one availability flr
         value for each 'delta_t' time period within the Measurement Interval, as
         specified in MEF 10.3.

         The flr value is a ratio that is expressed as a
         percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

         Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
        "
    REFERENCE
        "[MEF35.1] D36, CD21"
    ::= { mefSoamLmHistoryAvailStatsEntry 15 }

mefSoamLmHistoryAvailStatsBackwardMinFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object contains the minimum one-way availability flr in the backward
         direction, from among the set of availability flr values calculated by
         the MEP in this Measurement Interval.  There is one availability flr
         value for each 'delta_t' time period within the Measurement Interval, as
         specified in MEF 10.3.
```

```
        The flr value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] D36"
    ::= { mefSoamLmHistoryAvailStatsEntry 16 }

mefSoamLmHistoryAvailStatsBackwardMaxFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way availability flr in the backward
        direction, from among the set of availability flr values calculated by
        the MEP in this Measurement Interval.  There is one availability flr
        value for each 'delta_t' time period within the Measurement Interval, as
        specified in MEF 10.3.

        The flr value is a ratio that is expressed
        as a percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
      "
    REFERENCE
       "[MEF35.1] D36"
    ::= { mefSoamLmHistoryAvailStatsEntry 17 }

mefSoamLmHistoryAvailStatsBackwardAvgFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way availability flr in the backward
        direction, from among the set of availability flr values calculated by
        the MEP in this Measurement Interval.  There is one availability flr
        value for each 'delta_t' time period within the Measurement Interval, as
        specified in MEF 10.3.

        The flr value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] D36"
    ::= { mefSoamLmHistoryAvailStatsEntry 18 }


-- ****************************************************************************
-- Ethernet Loss Measurement Loss History Statistic Table
```

```
-- ****************************************************************************

mefSoamLmHistoryStatsTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamLmHistoryStatsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This table contains the results for history Measurement
        Intervals in a SOAM Loss Measurement session.

        Rows of this table object are created automatically
        by the SNMP Agent when the Loss Measurement session is running and a
        Measurement Interval is completed.

        Each row in the table represents the history statistics for a Loss
        Measurement session Measurement Interval for the defined MEP. This
        table uses five indices. The first three indices are the indices of
        the Maintenance Domain, Maintenance Association, and MEP tables. The
        fourth index is the specific LM session on the selected MEP. The fifth
        index index the specific Measurement Interval.

        At least 32 completed Measurement Intervals are to be supported. 96
        completed Measurement Intervals are recommended to be supported. If
        there are at least 32 rows in the table and a new Measurement Interval
        completes and a new row is to be added to the table, the oldest completed
        Measurement Interval may be deleted (row deletion). If the measurement
        interval is other than 15 minutes then a minimum of 8 hours of
        completed Measurement Intervals are to be supported and 24 hours are
        recommended to be supported.

        Except for mefSoamLmHistoryStatsIndex, mefSoamLmHistoryStatsEndTime,
        mefSoamLmHistoryStatsElapsedTime and mefSoamLmHistoryStatsSuspect,
        each object in this table applies only if the corresponding bit is set in
        mefSoamLmCfgMeasurementEnable.

        The rows and objects in this table are to be persistent upon reboot
        or restart of a device.
       "
    REFERENCE
       "[MEF35.1] R6, R14, R21, D9-D10, R25"
    ::= { mefSoamPmLmObjects 6 }

mefSoamLmHistoryStatsEntry OBJECT-TYPE
    SYNTAX      MefSoamLmHistoryStatsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
            "The conceptual row of mefSoamLmHistoryStatsTable"
    INDEX       {
                dot1agCfmMdIndex,
                dot1agCfmMaIndex,
                dot1agCfmMepIdentifier,
                mefSoamLmCfgIndex,
                mefSoamLmHistoryStatsIndex
                }
    ::= { mefSoamLmHistoryStatsTable 1 }

MefSoamLmHistoryStatsEntry ::= SEQUENCE {
    mefSoamLmHistoryStatsIndex                      Unsigned32,
    mefSoamLmHistoryStatsEndTime                    DateAndTime,
    mefSoamLmHistoryStatsElapsedTime                TimeInterval,
    mefSoamLmHistoryStatsSuspect                    TruthValue,
    mefSoamLmHistoryStatsForwardTransmittedFrames   Gauge32,
    mefSoamLmHistoryStatsForwardReceivedFrames      Gauge32,
```

```
    mefSoamLmHistoryStatsForwardMinFlr             Unsigned32,
    mefSoamLmHistoryStatsForwardMaxFlr             Unsigned32,
    mefSoamLmHistoryStatsForwardAvgFlr             Unsigned32,
    mefSoamLmHistoryStatsBackwardTransmittedFrames Gauge32,
    mefSoamLmHistoryStatsBackwardReceivedFrames    Gauge32,
    mefSoamLmHistoryStatsBackwardMinFlr            Unsigned32,
    mefSoamLmHistoryStatsBackwardMaxFlr            Unsigned32,
    mefSoamLmHistoryStatsBackwardAvgFlr            Unsigned32,
    mefSoamLmHistoryStatsSoamPdusSent              Gauge32,
    mefSoamLmHistoryStatsSoamPdusReceived          Gauge32
}

mefSoamLmHistoryStatsIndex OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "The index for the Measurement Interval within this
        PM session.

        Measurement Interval indices are assigned sequentially by
        the SNMP Agent.  The first Measurement Interval that occurs after
        the session is started is assigned index 1. Measurement Intervals
        for FLR (stored in this table) are based on
        mefSoamLmCfgMeasurementInterval and are indexed independently
        of Measurement Intervals for availability (stored in
        mefSoamLmHistoryAvailStatsTable).

        Referential integrity is necessary, i.e., the index needs to be
        persistent upon a reboot or restart of a device.  The index
        is never reused while this session is active until it wraps to zero.
        The index value keeps increasing up to that time.
       "
    REFERENCE
       "[MEF35.1] R21, D9-D10"
    ::= { mefSoamLmHistoryStatsEntry 1 }

mefSoamLmHistoryStatsEndTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The UTC time that the Measurement Interval ended.
       "
    REFERENCE
       "[MEF35.1] R23, R88, CR46, CR68"
    ::= { mefSoamLmHistoryStatsEntry 2 }

mefSoamLmHistoryStatsElapsedTime OBJECT-TYPE
    SYNTAX      TimeInterval
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The length of time that the Measurement Interval ran for,
        in 0.01 seconds.
       "
    REFERENCE
       "[MEF35.1] R24, R88, CR46, CR68"
    ::= { mefSoamLmHistoryStatsEntry 3 }

mefSoamLmHistoryStatsSuspect OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-only
    STATUS      current
```

```
    DESCRIPTION
       "Whether the Measurement Interval has been marked as suspect.

        The object is set to true when there is a discontinuity in the
        performance measurements during the Measurement Interval.  Conditions
        for a discontinuity include, but are not limited to the following:

        1 - Loss of connectivity between the Controller MEP and the
            Responder MEP
        2 - The local time-of-day clock is adjusted by at least 10 seconds
        3 - The conducting of performance measurements is started part
            way through a Measurement Interval (in the case that the
            Measurement Intervals are not aligned with the start time
            Of the PM Session).
        4 - The conducting of a performance measurement is halted before the
            current Measurement Interval is completed
        5 - A local test, failure, or reconfiguration that disrupts service
        6 - A Measurement Interval that coincides with a Maintenance Interval
       "
    REFERENCE
       "[MEF35.1] R39-R42"
    ::= { mefSoamLmHistoryStatsEntry 4 }

mefSoamLmHistoryStatsForwardTransmittedFrames OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of frames transmitted in the
        forward direction by this MEP.

        For a PM Session of types 'lmLmm' and 'lmCcm' this includes Ethernet
        Service Frames and SOAM PDUs that are in a higher MEG level only.

        For a PM Session of type 'lmSlm' and 'lm1SlTx' this includes the count
        of OAM ETH-SLM frames only.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] R88, CR46, CR68"
    ::= { mefSoamLmHistoryStatsEntry 5 }

mefSoamLmHistoryStatsForwardReceivedFrames OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of frames received in the
        forward direction by this MEP.

        For a PM Session of types 'lmLmm' and 'lmCcm' this includes Ethernet
        Service Frames and SOAM PDUs that are in a higher MEG level only.

        For a PM Session of type 'lmSlm' and 'lmSlRx' this includes the count
        of OAM ETH-SLM frames only.
       "
    REFERENCE
       "[MEF35.1] R88, CR46, CR68"
    ::= { mefSoamLmHistoryStatsEntry 6 }

mefSoamLmHistoryStatsForwardMinFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
```

```
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the minimum one-way frame loss
        ratio in the forward direction calculated by this MEP for this
        Measurement Interval. The FLR value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1]  D36, CD21"
    ::= { mefSoamLmHistoryStatsEntry 7 }

mefSoamLmHistoryStatsForwardMaxFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way frame loss
        ratio in the forward direction calculated by this MEP for this
        Measurement Interval. The FLR value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] D36, CD21"
    ::= { mefSoamLmHistoryStatsEntry 8 }

mefSoamLmHistoryStatsForwardAvgFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way frame loss
        ratio in the forward direction calculated by this MEP for this
        Measurement Interval. The FLR value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
       "
    REFERENCE
       "[MEF35.1] D36, CD21"
    ::= { mefSoamLmHistoryStatsEntry 9 }

mefSoamLmHistoryStatsBackwardTransmittedFrames OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of frames transmitted in the
        backward direction by this MEP.

        For a PM Session of type lmLmm and lmCcm this includes Ethernet
        Service Frames and SOAM PDUs that are in a higher MEG level only.
```

```
        For a PM Session of types lmSlm this includes the count of SOAM
        ETH-SLM frames only.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] R88, CR46"
    ::= { mefSoamLmHistoryStatsEntry 10 }

mefSoamLmHistoryStatsBackwardReceivedFrames OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the number of frames received in the
        backward direction by this MEP.

        For a PM Session of type lmLmm and lmCcm this includes Ethernet
        Service Frames and SOAM PDUs that are in a higher MEG level only.

        For a PM Session of types lmSlm this includes the count of SOAM
        ETH-SLM frames only.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
       "
    REFERENCE
       "[MEF35.1] R88, CR46"
    ::= { mefSoamLmHistoryStatsEntry 11 }

mefSoamLmHistoryStatsBackwardMinFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the minimum one-way frame loss
        ratio in the backward direction calculated by this MEP for
        this Measurement Interval. The FLR value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.

        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
      "
    REFERENCE
       "[MEF35.1] D36"
    ::= { mefSoamLmHistoryStatsEntry 12 }

mefSoamLmHistoryStatsBackwardMaxFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way frame loss
        ratio in the backward direction calculated by this MEP for
        this Measurement Interval. The FLR value is a ratio that is expressed as a
        percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

        Units are in milli-percent, where 1 indicates 0.001 percent.
```

```
        The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
        or 'lm1SlRx'.
      "
    REFERENCE
      "[MEF35.1] D36"
    ::= { mefSoamLmHistoryStatsEntry 13 }

mefSoamLmHistoryStatsBackwardAvgFlr OBJECT-TYPE
    SYNTAX      Unsigned32 (0..100000)
    UNITS       "milli-percent"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
      "This object contains the average one-way frame loss
       ratio in the backward direction calculated by this MEP for
       this Measurement Interval. The FLR value is a ratio that is expressed as a
       percent with a value of 0 (ratio 0.00) through 100000 (ratio 1.00).

       Units are in milli-percent, where 1 indicates 0.001 percent.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'
       or 'lm1SlRx'.
      "
    REFERENCE
      "[MEF35.1] D36"
    ::= { mefSoamLmHistoryStatsEntry 14 }

mefSoamLmHistoryStatsSoamPdusSent OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
      "This object contains the count of the number of SOAM PDUs sent
       during this Measurement Interval.

       This object applies when mefSoamLmCfgType is 'lmLmm', 'lmSlm',
       'lmCcm', or 'lm1SlTx'. It indicates the number of LMM, CCM, or SLM SOAM
       frames transmitted.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlRx'.
      "
    REFERENCE
      "[MEF35.1] R88, CR46, CR68"
    ::= { mefSoamLmHistoryStatsEntry 15 }

mefSoamLmHistoryStatsSoamPdusReceived OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
      "This object contains the count of the number of SOAM
       PDUs received in this Measurement Interval.

       This object applies when mefSoamLmCfgType is 'lmLmm', 'lmSlm',
       'lmCcm', or 'lm1SlRx'. This object indicates the number of LMR, CCM,
       or SLR SOAM frames received.

       The value of this object is undefined if mefSoamLmCfgType is 'lm1SlTx'.
      "
    REFERENCE
      "[MEF35.1] R88, CR46, CR68"
    ::= { mefSoamLmHistoryStatsEntry 16 }
```

```
-- ****************************************************************************
-- Ethernet Delay Measurement Configuration Table
-- ****************************************************************************

mefSoamDmCfgTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamDmCfgEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This table includes configuration objects and operations for the
        Delay Measurement function.

        Each row in the table represents a Delay Measurement session for
        the defined MEP. This table uses four indices. The first three indices
        are the indices of the Maintenance Domain, Maintenance Association, and
        MEP tables. The fourth index is the specific DM session on the selected
        MEP.

        A Delay Measurement session is created on an existing MEP by first
        accessing the mefSoamDmOperNextIndex object and using this value as
        the mefSoamDmCfgIndex in the row creation.

        Some writable objects in this table are only applicable in certain cases
        (as described under each object), and attempts to write values for them
        in other cases will be ignored.

        The writable objects in this table need to be persistent upon reboot
        or restart of a device.
       "
    REFERENCE
       "[MEF35.1] R53, O6; [Y.1731]"
    ::= { mefSoamPmDmObjects 1 }

mefSoamDmCfgEntry OBJECT-TYPE
    SYNTAX      MefSoamDmCfgEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
            "The conceptual row of mefSoamDmCfgTable."
    INDEX      {
                dot1agCfmMdIndex,
                dot1agCfmMaIndex,
                dot1agCfmMepIdentifier,
                mefSoamDmCfgIndex
               }
    ::= { mefSoamDmCfgTable 1 }

MefSoamDmCfgEntry ::= SEQUENCE {
    mefSoamDmCfgIndex                       Unsigned32,
    mefSoamDmCfgType                        INTEGER,
    mefSoamDmCfgVersion                     Unsigned32,
    mefSoamDmCfgEnabled                     TruthValue,
    mefSoamDmCfgMeasurementEnable           BITS,
    mefSoamDmCfgMessagePeriod               MefSoamTcMeasurementPeriodType,

    mefSoamDmCfgPriority                    IEEE8021PriorityValue,
    mefSoamDmCfgFrameSize                   Unsigned32,
    mefSoamDmCfgDataPattern                 MefSoamTcDataPatternType,
    mefSoamDmCfgTestTlvIncluded             TruthValue,
    mefSoamDmCfgTestTlvPattern              MefSoamTcTestPatternType,
    mefSoamDmCfgMeasurementInterval         Unsigned32,
    mefSoamDmCfgNumIntervalsStored          Unsigned32,

    mefSoamDmCfgDestMacAddress              MacAddress,
```

```
    mefSoamDmCfgDestMepId                               Dot1agCfmMepIdOrZero,
    mefSoamDmCfgDestIsMepId                             TruthValue,
    mefSoamDmCfgSourceMacAddress                        MacAddress,

    mefSoamDmCfgStartTimeType                           MefSoamTcOperationTimeType,
    mefSoamDmCfgFixedStartDateAndTime                   DateAndTime,
    mefSoamDmCfgRelativeStartTime                       TimeInterval,
    mefSoamDmCfgStopTimeType                            MefSoamTcOperationTimeType,
    mefSoamDmCfgFixedStopDateAndTime                    DateAndTime,
    mefSoamDmCfgRelativeStopTime                        TimeInterval,
    mefSoamDmCfgRepetitionTime                          Unsigned32,

    mefSoamDmCfgAlignMeasurementIntervals               TruthValue,
    mefSoamDmCfgAlignMeasurementOffset                  Unsigned32,
    mefSoamDmCfgNumMeasBinsPerFrameDelayInterval        Unsigned32,
    mefSoamDmCfgNumMeasBinsPerInterFrameDelayVariationInterval
                                                        Unsigned32,
    mefSoamDmCfgInterFrameDelayVariationSelectionOffset
                                                        Unsigned32,
    mefSoamDmCfgNumMeasBinsPerFrameDelayRangeInterval Unsigned32,

    mefSoamDmCfgSessionType                             MefSoamTcSessionType,
    mefSoamDmCfgSessionStatus                           MefSoamTcStatusType,
    mefSoamDmCfgHistoryClear                            TruthValue,
    mefSoamDmCfgRowStatus                               RowStatus,
    mefSoamDmCfgCosType                                 INTEGER,
    mefSoamDmCfgTcaNextIndex                            Unsigned32,
    mefSoamDmCfgDei                                     INTEGER
}

mefSoamDmCfgIndex
OBJECT-TYPE
    SYNTAX      Unsigned32(1..4294967295)
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "An index to the Delay Measurement Configuration table which indicates
        the specific measurement session for the MEP.

        mefSoamPmMepOperNextIndex needs to be inspected to find an
        available index for row-creation.

        Referential integrity is necessary, i.e., the index needs to be
        persistent upon a reboot or restart of a device.  The index
        is never reused for other PM sessions on the same MEP while this
        session is active.  The index value keeps increasing until it
        wraps to zero. This is to facilitate access control based
        on a fixed index for an EMS, since the index is not reused.
       "
    REFERENCE
       "[MEF35.1] R1"
    ::= { mefSoamDmCfgEntry 1 }

mefSoamDmCfgType OBJECT-TYPE
    SYNTAX      INTEGER {
                  dmDmm   (1),
                  dm1DmTx (2),
                  dm1DmRx (3)
                }
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object indicates what type of Delay Measurement is to
        be performed.
```

```
        dmDmm(1)         DMM SOAM PDU generated, DMR responses received
                         (one-way or two-way measurements)
        dm1DmTx(2)       1DM SOAM PDU generated (one-way measurements are made by
                         the receiver)
        dm1DmRx(3)       1DM SOAM PDU received and tracked (one-way measurements)

        The exact PDUs to use are specified by this object in combination with
        mefSoamDmCfgVersion.

        The value dmDmm is required. The values dm1DmTx and dm1DmRx are optional.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R52, R54, O6, CR23"
    ::= { mefSoamDmCfgEntry 2 }

mefSoamDmCfgVersion OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object indicates the version of the PDUs used to perform
        Delay Measurement.

        Version 0 indicates the PDU formats defined in Y.1731-2008.
        Version 1 indicates the PDU formats defined in Y.1731-2011.

        The exact PDUs to use are specified by this object in combination with
        mefSoamDmCfgType.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[Y.1731]"
    DEFVAL { 0 }
    ::= { mefSoamDmCfgEntry 3 }

mefSoamDmCfgEnabled OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies whether the Delay Measurement session is
        enabled.

        The value 'true' indicates the Delay Measurement session is enabled AND
        SOAM PDUs are sent and/or measurements are collected when the session
        is running according to the scheduling objects (start time, stop time,
        etc.).

        The value 'false' indicates the Delay Measurement session is disabled
        AND SOAM PDUs are not sent and/or measurements collected.

        For a Delay Measurement session to be removed the row is deleted in
        order to release internal resources.

        This object can written/modified after row creation time.

        If the DM session is enabled it resumes after shutdown/restart.
```

```
        If the DM session is disabled the current Measurement Interval is
        stopped, if it in process at the time, and all the in process calculations
        for the partially completed Measurement Interval are finalized.

        This object does not affect whether the single-ended Responder is
        enabled or not, which is enabled or disabled by the
        mefSoamPmMepDmSingleEndedResponder object.
       "
    REFERENCE
       "[MEF35.1] R3-R5, O1, R12-R13"
    DEFVAL { true }
    ::= { mefSoamDmCfgEntry 4 }

mefSoamDmCfgMeasurementEnable OBJECT-TYPE
    SYNTAX      BITS {
                     bSoamPdusSent(0),
                     bSoamPdusReceived(1),
                     bFrameDelayTwoWayBins(2),
                     bFrameDelayTwoWayMin(3),
                     bFrameDelayTwoWayMax(4),
                     bFrameDelayTwoWayAvg(5),
                     bFrameDelayForwardBins(6),
                     bFrameDelayForwardMin(7),
                     bFrameDelayForwardMax(8),
                     bFrameDelayForwardAvg(9),
                     bFrameDelayBackwardBins(10),
                     bFrameDelayBackwardMin(11),
                     bFrameDelayBackwardMax(12),
                     bFrameDelayBackwardAvg(13),
                     bIfdvForwardBins(14),
                     bIfdvForwardMax(16),
                     bIfdvForwardAvg(17),
                     bIfdvBackwardBins(18),
                     bIfdvBackwardMax(20),
                     bIfdvBackwardAvg(21),
                     bIfdvTwoWayBins(22),
                     bIfdvTwoWayMax(24),
                     bIfdvTwoWayAvg(25),
                     bFrameDelayRangeForwardBins(26),
                     bFrameDelayRangeForwardMax(27),
                     bFrameDelayRangeForwardAvg(28),
                     bFrameDelayRangeBackwardBins(29),
                     bFrameDelayRangeBackwardMax(30),
                     bFrameDelayRangeBackwardAvg(31),
                     bFrameDelayRangeTwoWayBins(32),
                     bFrameDelayRangeTwoWayMax(33),
                     bFrameDelayRangeTwoWayAvg(34),
                     bMeasuredStatsFrameDelayTwoWay(35),
                     bMeasuredStatsFrameDelayForward(36),
                     bMeasuredStatsFrameDelayBackward(37),
                     bMeasuredStatsIfdvTwoWay(38),
                     bMeasuredStatsIfdvForward(39),
                     bMeasuredStatsIfdvBackward(40)
                }
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "A vector of bits that indicates the type of SOAM DM counters that
        are enabled.

        A bit set to '1' enables the specific SOAM DM counter.

        A bit set to '0' disables the SOAM DM counter.
```

```
        If a particular SOAM DM counter is not supported the BIT value is
        set to '0'.

        Not all SOAM DM counters are supported for all SOAM DM types.

        This object can only be written at row creation time and cannot be
        modified once it has been created.

        bSoamPdusSent(0)
            Enables/disables the mefSoamDmCurrentStatsXSoamPdusSent
            and mefSoamDmHistoryStatsXSoamPdusSent counters.
        bSoamPdusReceived(1)
            Enables/disables the mefSoamDmCurrentStatsXSoamPdusReceived
            and mefSoamDmHistoryStatsXSoamPdusReceived counters.
        bFrameDelayTwoWayBins(2)
            Enables/disables the mefSoamDmCurrentStatsBinsEntry counter
            and the mefSoamDmHistoryStatsBinsEntry counter
            when the mefSoamDmCfgMeasBinType is 'twoWayFrameDelay'.
        bFrameDelayTwoWayMin(3)
            Enables/disables the mefSoamDmCurrentStatsXFrameDelayTwoWayMin
            and mefSoamDmHistoryStatsXFrameDelayTwoWayMin counters.
        bFrameDelayTwoWayMax(4)
            Enables/disables the mefSoamDmCurrentStatsXFrameDelayTwoWayMax
            and mefSoamDmHistoryStatsXFrameDelayTwoWayMax counters.
        bFrameDelayTwoWayAvg(5)
            Enables/disables the mefSoamDmCurrentStatsXFrameDelayTwoWayAvg
            and mefSoamDmHistoryStatsXFrameDelayTwoWayAvg counters.
        bFrameDelayForwardBins(6)
            Enables/disables the mefSoamDmCurrentStatsBinsEntry counter
            and the mefSoamDmHistoryStatsBinsEntry counter
            when the mefSoamDmCfgMeasBinType is 'forwardFrameDelay'.
        bFrameDelayForwardMin(7)
            Enables/disables the mefSoamDmCurrentStatsXFrameDelayForwardMin
            and mefSoamDmHistoryStatsXFrameDelayForwardMin counters.
        bFrameDelayForwardMax(8)
            Enables/disables the mefSoamDmCurrentStatsXFrameDelayForwardMax
            and mefSoamDmHistoryStatsXFrameDelayForwardMax counters.
        bFrameDelayForwardAvg(9)
            Enables/disables the mefSoamDmCurrentStatsXFrameDelayForwardAvg
            and mefSoamDmHistoryStatsXFrameDelayForwardAvg counters.
        bFrameDelayBackwardBins(10)
            Enables/disables the mefSoamDmCurrentStatsBinsEntry counter
            and the mefSoamDmHistoryStatsBinsEntry counter
            when the mefSoamDmCfgMeasBinType is 'backwardFrameDelay'.
        bFrameDelayBackwardMin(11)
            Enables/disables the mefSoamDmCurrentStatsXFrameDelayBackwardMin
            and mefSoamDmHistoryStatsXFrameDelayBackwardMin counters.
        bFrameDelayBackwardMax(12)
            Enables/disables the mefSoamDmCurrentStatsXFrameDelayBackwardMax
            and mefSoamDmHistoryStatsXFrameDelayBackwardMax counters.
        bFrameDelayBackwardAvg(13)
            Enables/disables the mefSoamDmCurrentStatsXFrameDelayBackwardAvg
            and mefSoamDmHistoryStatsXFrameDelayBackwardAvg counters.
        bIfdvForwardBins(14)
            Enables/disables the mefSoamDmCurrentStatsBinsEntry counter
            and the mefSoamDmHistoryStatsBinsEntry counter
            when the mefSoamDmCfgMeasBinType is 'forwardIfdv'.
        bIfdvForwardMax(16)
            Enables/disables the mefSoamDmCurrentStatsXIfdvForwardMax
            and mefSoamDmHistoryStatsXIfdvForwardMax counters.
        bIfdvForwardAvg(17)
            Enables/disables the mefSoamDmCurrentStatsXIfdvForwardAvg
            and mefSoamDmHistoryStatsXIfdvForwardAvg counters.
        bIfdvBackwardBins(18)
```

```
        Enables/disables the mefSoamDmCurrentStatsBinsEntry counter
        and the mefSoamDmHistoryStatsBinsEntry counter
        when the mefSoamDmCfgMeasBinType is 'backwardIfdv'.
    bIfdvBackwardMax(20)
        Enables/disables the mefSoamDmCurrentStatsXIfdvBackwardMax
        and mefSoamDmHistoryStatsXIfdvBackwardMax counters.
    bIfdvBackwardAvg(21)
        Enables/disables the mefSoamDmCurrentStatsXIfdvBackwardAvg
        and mefSoamDmHistoryStatsXIfdvBackwardAvg counters.
    bIfdvTwoWayBins(22)
        Enables/disables the mefSoamDmCurrentStatsBinsEntry counter
        and the mefSoamDmHistoryStatsBinsEntry counter
        when the mefSoamDmCfgMeasBinType is 'twoWayIfdv'.
    bIfdvTwoWayMax(24)
        Enables/disables the mefSoamDmCurrentStatsXIfdvTwoWayMax
        and mefSoamDmHistoryStatsXIfdvTwoWayMax counters.
    bIfdvTwoWayAvg(25)
        Enables/disables the mefSoamDmCurrentStatsXIfdvTwoWayAvg
        and mefSoamDmHistoryStatsXIfdvTwoWayAvg counters.
    bFrameDelayRangeForwardBins(26)
        Enables/disables the mefSoamDmCurrentStatsBinsEntry counter
        and the mefSoamDmHistoryStatsBinsEntry counter
        when the mefSoamDmCfgMeasBinType is 'forwardFrameDelayRange'.
    bFrameDelayRangeForwardMax(27)
        Enables/disables the mefSoamDmCurrentStatsXFrameDelayRangeForwardMax
        and mefSoamDmHistoryStatsXFrameDelayRangeForwardMax counters.
    bFrameDelayRangeForwardAvg(28)
        Enables/disables the mefSoamDmCurrentStatsXFrameDelayRangeForwardAvg
        and mefSoamDmHistoryStatsXFrameDelayRangeForwardAvg counters.
    bFrameDelayRangeBackwardBins(29)
        Enables/disables the mefSoamDmCurrentStatsBinsEntry counter
        and the mefSoamDmHistoryStatsBinsEntry counter
        when the mefSoamDmCfgMeasBinType is 'backwardFrameDelayRange'.
    bFrameDelayRangeBackwardMax(30)
        Enables/disables the mefSoamDmCurrentStatsXFrameDelayRangeBackwardMax
        and mefSoamDmHistoryStatsXFrameDelayRangeBackwardMax counters.
    bFrameDelayRangeBackwardAvg(31)
        Enables/disables the mefSoamDmCurrentStatsXFrameDelayRangeBackwardAvg
        and mefSoamDmHistoryStatsXFrameDelayRangeBackwardAvg counters.
    bFrameDelayRangeTwoWayBins(32)
        Enables/disables the mefSoamDmCurrentStatsBinsEntry counter
        and the mefSoamDmHistoryStatsBinsEntry counter
        when the mefSoamDmCfgMeasBinType is 'twoWayFrameDelayRange'.
    bFrameDelayRangeTwoWayMax(33)
        Enables/disables the mefSoamDmCurrentStatsXFrameDelayRangeTwoWayMax
        and mefSoamDmHistoryStatsXFrameDelayRangeTwoWayMax counters.
    bFrameDelayRangeTwoWayAvg(34)
        Enables/disables the mefSoamDmCurrentStatsXFrameDelayRangeTwoWayAvg
        and mefSoamDmHistoryStatsXFrameDelayRangeTwoWayAvg counters.
    bMeasuredStatsFrameDelayTwoWay(35)
        Enables/disables the mefSoamDmMeasuredStatsXFrameDelayTwoWay
        counter.
    bMeasuredStatsFrameDelayForward(36)
        Enables/disables the mefSoamDmMeasuredStatsXFrameDelayForward
        counter.
    bMeasuredStatsFrameDelayBackward(37)
        Enables/disables the mefSoamDmMeasuredStatsXFrameDelayBackward
        counter.
    bMeasuredStatsIfdvTwoWay(38)
        Enables/disables the mefSoamDmMeasuredStatsXIfdvTwoWay
        counter.
    bMeasuredStatsIfdvForward(39)
        Enables/disables the mefSoamDmMeasuredStatsXIfdvForward
        counter.
```

```
        bMeasuredStatsIfdvBackward(40)
            Enables/disables the mefSoamDmMeasuredStatsXIfdvBackward
            counter.
        "
    REFERENCE
        "[MEF35.1]"
    DEFVAL { { } }
    ::= { mefSoamDmCfgEntry 5 }

mefSoamDmCfgMessagePeriod OBJECT-TYPE
    SYNTAX      MefSoamTcMeasurementPeriodType
    UNITS       "ms"
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "This object specifies the interval between Delay Measurement
         OAM message transmission. For Delay Measurement monitoring
         applications, the default value is 1000 ms.

         This object can only be written at row creation time and cannot be
         modified once it has been created.
        "
    REFERENCE
        "[MEF35.1] R61-R62, D21, CR30-CR31, CD5"
    DEFVAL { 1000 }
    ::= { mefSoamDmCfgEntry 6 }

mefSoamDmCfgPriority OBJECT-TYPE
    SYNTAX      IEEE8021PriorityValue
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "This object specifies the priority of frames with
         Delay Measurement OAM message information.

         The default value is to be the value which yields the lowest frame
         loss.

         This object can only be written at row creation time and cannot be
         modified once it has been created.
        "
    REFERENCE
        "[MEF35.1] R57-R60, CR27-CR29"
    ::= { mefSoamDmCfgEntry 7 }

mefSoamDmCfgFrameSize OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "This object specifies the Delay Measurement frame size between
         64 bytes and the maximum transmission unit of the EVC.

         The range of frame sizes from 64 through 2000 octets need to be
         supported, and the range of frame sizes from 2001 through 9600 octets
         is suggested to be supported.

         The adjustment to the frame size of the standard frame size is
         accomplished by the addition of a Data or Test TLV. A Data or Test TLV
         is only added to the frame if the frame size is greater than 64 bytes.

         This object is only valid for the entity transmitting the Delay
         Measurement frames (dmDmm, dm1DmTx) and is ignored by the entity
         receiving frames.
```

```
        In addition, this object is not valid when mefSoamDmCfgVersion is 0.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R63-R64, D22-D23, CR32-CR33, CD6-CD7"
    DEFVAL { 64 }
    ::= { mefSoamDmCfgEntry 8 }

mefSoamDmCfgDataPattern OBJECT-TYPE
    SYNTAX      MefSoamTcDataPatternType
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the DM data pattern included in a Data TLV
        when the size of the DM frame is determined by the
        mefSoamDmFrameSize object and mefSoamDmTestTlvIncluded is 'false'.
        If the frame size object does not define the DM frame size or
        mefSoamDmTestTlvIncluded is 'true' the value of this object is
        ignored.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    DEFVAL { zeroPattern }
    ::= { mefSoamDmCfgEntry 9 }

mefSoamDmCfgTestTlvIncluded OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "Indicates whether a Test TLV or Data TLV is included when the size
        of the DM frame is determined by the mefSoamDmFrameSize object.
        A value of 'true' indicates that the Test TLV is to be included. A
        value of 'false' indicates that the Data TLV is to be included.

        If the frame size object does not define the DM frame size
        the value of this object is ignored.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[Y.1731] 9.3"
    DEFVAL { false }
    ::= { mefSoamDmCfgEntry 10 }

mefSoamDmCfgTestTlvPattern OBJECT-TYPE
    SYNTAX      MefSoamTcTestPatternType
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the type of test pattern to be
        sent in the DM frame Test TLV when the size
        of DM PDU is determined by the mefSoamDmFrameSize object and
        mefSoamDmTestTlvIncluded is 'true'. If the frame size object
        does not define the DM frame size or mefSoamDmTestTlvIncluded
        is 'false' the value of this object is ignored.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
```

```
        "
    DEFVAL { null }
    ::= { mefSoamDmCfgEntry 11 }

mefSoamDmCfgMeasurementInterval OBJECT-TYPE
    SYNTAX      Unsigned32 (1..1440)
    UNITS       "minutes"
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies a Measurement Interval in minutes.

        A Measurement Interval 15 minutes needs to be supported, other intervals
        may be supported.

        The default for Proactive PM Sessions is 15 minutes and for On-Demand PM
        Sessions is 5 minutes.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R15-R17, D3"
    DEFVAL { 15 }
    ::= { mefSoamDmCfgEntry 12 }

mefSoamDmCfgNumIntervalsStored OBJECT-TYPE
    SYNTAX      Unsigned32 (2..1000)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the number of completed Measurement Intervals
        to store in the history statistic table.

        At least 32 completed Measurement Intervals are to be stored. 96
        Measurement Intervals are recommended to be stored.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R21, D9, D10"
    DEFVAL { 32 }
    ::= { mefSoamDmCfgEntry 13 }

mefSoamDmCfgDestMacAddress OBJECT-TYPE
    SYNTAX      MacAddress
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "The Target or Destination MAC Address Field to be transmitted.

        If mefSoamDmCfgType is 'dmDmm', the destination address is to be the
        unicast address of the destination MEP. An error is returned if this
        object is set to a multicast address.

        If mefSoamDmCfgType is 'dm1DmTx', the destination address is normally the
        unicast address of the destination MEP, but can be a multicast address
        indicating the level of the MEG: 01-80-c2-00-00-3y, where y is the
        level of the MEG.  An error is returned if this object is set to any
        other multicast address.

        If mefSoamDmCfgType is 'dm1DmRx', this object is ignored.
```

```
        This address will be used if the value of the object
        mefSoamDmDestIsMepId is 'false'.

        This object is only valid for the entity transmitting the
        SOAM DM frames and is ignored by the entity receiving
        SOAM DM frames.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R56, CR24, CR26"
    ::= { mefSoamDmCfgEntry 14 }

mefSoamDmCfgDestMepId OBJECT-TYPE
    SYNTAX      Dot1agCfmMepIdOrZero
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "The Maintenance association End Point Identifier of
        another MEP in the same Maintenance Association to which
        the SOAM DM frame is to be sent.

        This address will be used if the value of the column
        mefSoamDmDestIsMepId is 'true'. A value of zero
        means that the destination MEP ID has not been configured.

        This object is only valid for the entity transmitting the Delay
        Measurement frames, types 'dmDmm' and 'dm1DmTx'. It is not applicable
        for the 'dm1DmRx' type.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R56, CR24, CR26"
    DEFVAL { 0 }
    ::= { mefSoamDmCfgEntry 15 }

mefSoamDmCfgDestIsMepId OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "A value of 'true' indicates that MEPID of the target MEP is used for
        SOAM DM frame transmission.

        A value of 'false' indicates that the destination MAC address of the
        target MEP is used for SOAM DM frame transmission.

        This object is only valid for the entity transmitting the Delay
        Measurement frames, types 'dmDmm' and 'dm1DmTx'. It is not applicable
        for the 'dm1DmRx' type.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R56, CR24"
    DEFVAL { true }
    ::= { mefSoamDmCfgEntry 16 }

mefSoamDmCfgSourceMacAddress OBJECT-TYPE
    SYNTAX      MacAddress
```

```
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "The Source MAC Address Field of the received SOAM DM session PDUs.

        If mefSoamDmCfgType is dm1DmRx this object indicates the source
        address of the dm1DmTx DM session.

        This object is only valid for mefSoamDmCfgType set to dm1DmRx. It is
        ignored for mefSoamDmCfgType set to dmDmm or dm1DmTx.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] CR25"
    ::= { mefSoamDmCfgEntry 17 }

mefSoamDmCfgStartTimeType OBJECT-TYPE
    SYNTAX      MefSoamTcOperationTimeType
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the type of start time of the SOAM DM
        session. The start time can be disabled (none), immediate, relative,
        or fixed.

        The value of 'none' is illegal and a write error will be returned
        if this value is used.

        The value of 'immediate' starts the SOAM DM session when the
        mefSoamDmCfgEnabled is true.

        The value of 'fixed' starts the SOAM DM session when the
        mefSoamDmFixedStartDateAndTime is less than or equal to the current
        system date and time and mefSoamDmCfgEnabled is true. This value is used
        to implement an On-Demand fixed time PM session.

        The value of 'relative' starts the SOAM DM session when the current
        system date and time minus the mefSoamDmRelativeStartTime is greater than
        or equal to the system date and time when the mefSoamDmStartTimeType
        object was written and mefSoamDmCfgEnabled is true. This value is used
        to implement an On-Demand relative time PM session.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R7, D1"
    DEFVAL { immediate }
    ::= { mefSoamDmCfgEntry 18 }

mefSoamDmCfgFixedStartDateAndTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the fixed UTC start date/time for the
        SOAM Delay Measurement session. This object is used only used if
        mefSoamDmStartTimeType is 'fixed' and is ignored otherwise.

        The default value is year 0000, month 01, day 01, time 00:00:00.00.

        This object can only be written at row creation time and cannot be
```

```
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R8"
    DEFVAL { '0000010100000000'H }
    ::= { mefSoamDmCfgEntry 19 }

mefSoamDmCfgRelativeStartTime  OBJECT-TYPE
    SYNTAX      TimeInterval
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the relative start time, from
        the current system time, for the SOAM DM session. This
        object is used only if mefSoamDmStartTimeType is 'relative'
        and is ignored otherwise.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R8"
    DEFVAL { 0 }
    ::= { mefSoamDmCfgEntry 20 }

mefSoamDmCfgStopTimeType OBJECT-TYPE
    SYNTAX      MefSoamTcOperationTimeType
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the type of stop time to terminate the
        SOAM DM session. The stop time can be forever (none), relative, or
        fixed.

        The value of 'none' indicates that the SOAM DM session never ends once it
        has started unless the session is disabled.

        The value of 'immediate' is illegal and a write error will be returned
        if this value is used.

        The value of 'fixed' stops the SOAM DM session when the
        mefSoamDmFixedStopDateAndTime is less than or equal
        to the current system date. This
        value is used to implement an On-Demand fixed time PM session.

        The value of 'relative' stops the SOAM DM session when the time
        indicated by mefSoamDmRelativeStopTime has passed since the session
        start time as determined by the mefSoamDmCfgStartTimeType,
        mefSoamDmCfgFixedStartDateAndTime and mefSoamDmCfgRelativeStartTime
        objects.
        This value is used to implement an On-Demand relative time PM session.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R9, R10, D2"
    DEFVAL { none }
    ::= { mefSoamDmCfgEntry 21 }

mefSoamDmCfgFixedStopDateAndTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-create
    STATUS      current
```

```
    DESCRIPTION
       "This object specifies the fixed UTC stop date/time for the
        SOAM Delay Measurement session. This object is used only used
        if mefSoamDmStopTimeType is 'fixed' and is ignored otherwise.

        The default value is year 0000, month 01, day 01, time 00:00:00.00.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R10, R11"
    DEFVAL { '0000010100000000'H }
    ::= { mefSoamDmCfgEntry 22 }

mefSoamDmCfgRelativeStopTime OBJECT-TYPE
    SYNTAX      TimeInterval
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the relative stop time, from the
        session start time, to stop the SOAM DM session.  This
        object is used only if mefSoamDmStopTimeType is 'relative' and is
        ignored otherwise.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R10, R11"
    DEFVAL { 0 }
    ::= { mefSoamDmCfgEntry 23 }

mefSoamDmCfgRepetitionTime OBJECT-TYPE
    SYNTAX      Unsigned32 (0..31536000)
    UNITS       "seconds"
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies a configurable repetition time between
        Measurement Intervals in a Delay Measurement session in seconds.

        If the value is 0 (none), there is no time gap between the end of one
        Measurement Interval and the start of a new Measurement Interval.
        This is the normal usage case.

        If the value is greater than one Measurement Interval there is time gap
        between the end of one Measurement Interval and the start of the next
        Measurement Interval.  The repetition time specifies the time between
        the start of consecutive Measurement Intervals; hence the gap between
        the end of one Measurement Interval and the start of the next is equal
        to the difference between the repetition time and the measurement
        interval.  During this gap, no SOAM PDUs are sent for this session and
        no measurements are made.

        If the value is greater 0 but less than or equal to the measurement
        interval, an error is returned.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R18, D4, R19-R20"
    DEFVAL { 0 }
```

```
    ::= { mefSoamDmCfgEntry 24 }

mefSoamDmCfgAlignMeasurementIntervals OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies whether the Measurement Intervals for
        the Delay Measurement session are aligned with a zero offset to
        real time.

        The value 'true' indicates that each Measurement Interval starts
        at a time which is aligned to NE time source hour, if the repetition
        time (or the Measurement Interval, if the repetition time is 0) is
        a factor of an hour, i.e. 60min/15min = 4. For instance, a
        Measurement Interval/Repetition Time of 15 minutes would stop/start
        the Measurement Interval at 0, 15, 30, and 45 minutes of an hour. A
        Measurement Interval/Repetition Time of 7 minutes would not align
        to the hour since 7 minutes is NOT a factor of an hour, i.e.
        60min/7min = 8.6.  In this case the behavior is the same as if the
        object is set to 'false'.

        The value 'false' indicates that the first Measurement Interval starts
        at an arbitrary time and each subsequent Measurement Interval starts
        at a time which is determined by mefSoamLmCfgRepetitionTime.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] D5-D7"
    DEFVAL { true }
    ::= { mefSoamDmCfgEntry 25 }

mefSoamDmCfgAlignMeasurementOffset OBJECT-TYPE
    SYNTAX      Unsigned32 (0..525600)
    UNITS       "minutes"
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the offset in minutes from the time of day value
        if mefSoamDmCfgAlignMeasurementIntervals is 'true' and the repetition
        time is a factor of 60 minutes. If not, the value of this object
        is ignored.

        If the Measurement Interval is 15 minutes and
        mefSoamDmCfgAlignMeasurementIntervals is true and if this object was
        set to 5 minutes, the Measurement Intervals would start at 5, 20, 35, 50
        minutes past each hour.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] D8"
    DEFVAL { 0 }
    ::= { mefSoamDmCfgEntry 26 }

mefSoamDmCfgNumMeasBinsPerFrameDelayInterval OBJECT-TYPE
    SYNTAX      Unsigned32 (2..100)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the number of measurement bins
```

```
        per Measurement Interval for Frame Delay measurements.

        At least 2 bins are to be supported; at least 10 bins are recommended
        to be supported.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
      "
    REFERENCE
       "[MEF35.1] R27, D12, R28, D13"
    DEFVAL { 2 }
    ::= { mefSoamDmCfgEntry 27 }

mefSoamDmCfgNumMeasBinsPerInterFrameDelayVariationInterval OBJECT-TYPE
    SYNTAX      Unsigned32 (2..100)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the number of measurement bins
        per Measurement Interval for Inter-Frame Delay Variation
        measurements.

       The minimum number of measurement bins to be supported is 2. The
       desired number of measurements bins to be supported is 10.

       This object can only be written at row creation time and cannot be
       modified once it has been created.
      "
    REFERENCE
       "[MEF35.1] R29, D14, R30, D15"
    DEFVAL { 2 }
    ::= { mefSoamDmCfgEntry 28 }

mefSoamDmCfgInterFrameDelayVariationSelectionOffset OBJECT-TYPE
    SYNTAX      Unsigned32 (1..100)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the selection offset for
        Inter-Frame Delay Variation measurements.  If this value
        is set to n, then the IFDV is calculated by taking the
        difference in frame delay between frame F and frame (F+n).

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] O5, D24, CO3, CD8"
    DEFVAL { 1 }
    ::= { mefSoamDmCfgEntry 29 }

mefSoamDmCfgNumMeasBinsPerFrameDelayRangeInterval OBJECT-TYPE
    SYNTAX      Unsigned32 (2..100)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the number of measurement bins
        per Measurement Interval for Frame Delay Range measurements.

        At least 2 bins are to be supported; at least 10 bins are recommended
        to be supported.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
```

```
      "
    REFERENCE
       "[MEF35.1] R31, D16, R32, D17"
    DEFVAL { 2 }
    ::= { mefSoamDmCfgEntry 30 }

mefSoamDmCfgSessionType OBJECT-TYPE
    SYNTAX      MefSoamTcSessionType
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object indicates whether the current session is defined to
        be 'Proactive' or 'On-Demand'. A value of 'proactive'
        indicates the current session is 'Proactive'. A value of 'onDemand'
        indicates the current session is 'On-Demand'.

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R2"
    DEFVAL { proactive }
    ::= { mefSoamDmCfgEntry 31 }

mefSoamDmCfgSessionStatus OBJECT-TYPE
    SYNTAX      MefSoamTcStatusType
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object indicates the current status of the DM session. A value
        of 'active' indicates the current DM session is active, i.e. the current
        time lies between the start time and the stop time, and
        mefSoamDmCfgEnabled is true. A value of 'notActive' indicates the
        current DM session is not active, i.e. it has not started yet, has
        stopped upon reaching the stop time, or is disabled.
       "
    ::= { mefSoamDmCfgEntry 32 }

mefSoamDmCfgHistoryClear OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object when written clears the Delay Measurement history
        tables (mefSoamDmHistoryStatsXTable and mefSoamDmHistoryStatsBinsTable)
        - all rows are deleted.  When read the value always returns 'false'.

        Writing this value does not change the current stat table,
        nor any of the items in the configuration table.

        Writing this object at row creation has no effect.
       "
    DEFVAL { false }
    ::= { mefSoamDmCfgEntry 33 }

mefSoamDmCfgRowStatus OBJECT-TYPE
    SYNTAX      RowStatus
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "The status of the row.

        The writable columns in a row cannot be changed if the row
        is active, except for mefSoamDmCfgEnabled and mefSoamDmCfgHistoryClear
```

```
        objects. All columns are to have a valid value before a row
        can be activated.
       "
   ::= { mefSoamDmCfgEntry 34 }

mefSoamDmCfgCosType OBJECT-TYPE
    SYNTAX      INTEGER {
        vlan   (1),
        pcp    (2),
        dei    (3)
    }
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object selects the DM measurement CoS association

        vlan(1)  SOAM PM session is based upon VLAN ID only
        pcp(2)   SOAM PM session is based upon a combination VLAN ID and
                 priority (PCP)
        dei(3)   SOAM PM session is based upon a combination VLAN ID and
                 priority and DEI

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[MEF35.1] R60"
    ::= { mefSoamDmCfgEntry 35 }

mefSoamDmCfgTcaNextIndex OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains an unused value for a TCA on the specific LM PM
        Session or a zero to indicate that none exist. This value needs to
        be read in order to find an available index for row-creation of a
        TCA and then is used when a row is created. This value is
        automatically updated by the SNMP Agent after the row is created.

        Referential integrity is necessary, i.e., the index needs to be
        persistent upon a reboot or restart of a device.  The index
        is never to be reused for other PM sessions on the same MEP while this
        session is active, or until it wraps to zero.  The index value keeps
        increasing up to that time. This is to facilitate access control based
        on a fixed index for an EMS, since the index is not reused.
       "
    REFERENCE
       "[MEF35.1] O4, CR21, CO2"
    ::= { mefSoamDmCfgEntry 36 }

mefSoamDmCfgDei OBJECT-TYPE
    SYNTAX      INTEGER {
                  noDei   (0),
                  setDei  (1)
                }
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object specifies the setting of the DEI when mefSoamDmCfgCosType
        is configured to 'dei'. The value of this object is ignored if
        mefSoamDmCfgCosType is set to 'vlan' or 'pcp'

        noDei(0)        DEI is set to 0
```

```
        setDei(1)       DEI is set to 1

        This object can only be written at row creation time and cannot be
        modified once it has been created.
       "
    REFERENCE
       "[Y.1731] [MEF35.1] R60, R71, R73, CR29"
    DEFVAL { noDei }
    ::= { mefSoamDmCfgEntry 37 }


-- ****************************************************************************
-- Ethernet Delay Measurement Bin Configuration Table
-- ****************************************************************************

mefSoamDmCfgMeasBinTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamDmCfgMeasBinEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This table includes configuration objects for the Delay Measurement
        bins to collect stats.

        Each row in the table is automatically created when the Delay
        Measurement session is defined for the selected MEP. The number of rows
        created is based upon three items: the DM type, the number of bins
        defined for each type, and whether bins are enabled for each type.

        The first four indices are the same as used to create the DM session:
        Maintenance Domain, Maintenance Association, MEP identification, and
        mefSoamDmCfgIndex. The fifth index is the type of bin, and the sixth
        index is the bin number.

        For a dmDmm session all nine types of bins can be created. For a dm1DmmTx
        session no bins are created. For a dm1DmmRx session only types
        forwardFrameDelay, forwardIfdv, and forwardFrameDelayRange can be created.

        The number of bins created for a bin type is based upon: the
        mefSoamDmCfgNumMeasBinsPerFrameDelayInterval object, the
        mefSoamDmCfgNumMeasBinsPerInterFrameDelayVariationInterval object, the
        mefSoamDmCfgNumMeasBinsPerFrameDelayRangeInterval object, and
        the mefSoamDmCfgMeasurementEnable object.

        For instance, if a dmDmm session with Bins per Frame Delay Interval
        set to 5, Bins per Frame Delay Variation Interval set to 3, and Frame
        Delay Range set to 2 (default), all of the appropriate bits set in
        mefSoamDmMeasurementCfgEnable, the following number of rows would be
        created:

        For bin types TwoWayFrameDelay(1), forwardFrameDelay(2), and
        backwardFrameDelay(3) = 5 bins * 3 types = 15 rows

        For bin types TwoWayIfdv(4), forwardIfdv(5), backwardIfdv(6) =
        3 bins * 3 types = 9 rows.

        For bins types twoWayFrameDelayRange(7), forwardFrameDelayRange(8),
        backwardFrameDelayRange(9) =
        2 bins * 3 types = 6 rows.

        This gives a total of 30 rows created for the DMM session example.

        Each value in the bin defaults to 5000us greater than the previous bin,
        with the first bin default value set to 0.
```

```
        For the delay example above (5 bins), the following default values
        would be written to the bins:
              bin 1:     0  (range is 0us <= measurement < 5,000us)
              bin 2:  5000  (range is 5,000us <= measurement < 10,000us)
              bin 3: 10000  (range is 10,000us <= measurement < 15,000us)
              bin 4: 15000  (range is 15,000us <= measurement < 20,000us)
              bin 5: 20000  (range is 20,000us <= measurement < infinity)

        For the delay variation example above (3 bins), the following default
        values would be written to the bins:
              bin 1:     0  (range is 0us <= measurement < 5,000us)
              bin 2:  5000  (range is 5,000us <= measurement < 10,000us)
              bin 3: 10000  (range is 10,000us <= measurement < infinity)

        For the frame delay range example above (2 bins), the following default
        values would be written to the bins:
              bin 1:     0  (range is 0us <= measurement < 5,000us)
              bin 2:  5000  (range is 5,000us <= measurement < infinity)

        The writable objects in this table need to be persistent upon reboot
        or restart of a device.

        Rows are only created if the corresponding measurement type has been enabled
        via the mefSoamDmCfgMeasurementEnable object.
       "
    REFERENCE
       "[MEF35.1] R33-R37, D18, R38"
    ::= { mefSoamPmDmObjects 2 }

mefSoamDmCfgMeasBinEntry OBJECT-TYPE
    SYNTAX      MefSoamDmCfgMeasBinEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
            "The conceptual row of mefSoamDmCfgMeasBinTable."
    INDEX      {
                dot1agCfmMdIndex,
                dot1agCfmMaIndex,
                dot1agCfmMepIdentifier,
                mefSoamDmCfgIndex,
                mefSoamDmCfgMeasBinType,
                mefSoamDmCfgMeasBinNumber
               }
    ::= { mefSoamDmCfgMeasBinTable 1 }

MefSoamDmCfgMeasBinEntry ::= SEQUENCE {
    mefSoamDmCfgMeasBinType                 MefSoamTcDelayMeasurementBinType,
    mefSoamDmCfgMeasBinNumber               Unsigned32,
    mefSoamDmCfgMeasBinLowerBound           Unsigned32
}

mefSoamDmCfgMeasBinType OBJECT-TYPE
    SYNTAX      MefSoamTcDelayMeasurementBinType
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This object specifies whether the bin number is for
        Frame Delay, Inter-Frame Delay Variation, or Frame Delay Range.
       "
    REFERENCE
       "[MEF35.1] R33-R37, D18, R38"
    ::= { mefSoamDmCfgMeasBinEntry 1 }

mefSoamDmCfgMeasBinNumber OBJECT-TYPE
```

```
    SYNTAX      Unsigned32
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This object specifies the bin number for the
        configured boundary.  The first bin has bin number 1.
       "
    REFERENCE
       "[MEF35.1] R33-R37, D18, R38"
    ::= { mefSoamDmCfgMeasBinEntry 2 }

mefSoamDmCfgMeasBinLowerBound OBJECT-TYPE
    SYNTAX      Unsigned32
    UNITS       "microseconds (us)"
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
       "This object specifies the lower boundary for a
        measurement bin. The upper boundary is defined by the next bin
        value or infinite for the last bin defined.
        The measurement boundary for each measurement bin is to
        be larger than the measurement boundary of the preceding
        measurement bin. By default, the next bin is set to 5000us larger
        than the lower bin boundary.

        The values in a bin boundary object represents the time range
        used to segregate delay data into the appropriate statistical
        data bin. For five bins with default values, each bin has the
        following time range:

        bin 1 =     0, range is 0us <= measurement < 5,000us
        bin 2 =  5000, range is 5,000us <= measurement < 10,000us
        bin 3 = 10000, range is 10,000us <= measurement < 15,000us
        bin 4 = 15000, range is 15,000us <= measurement < 20,000us
        bin 5 = 20000, range is 20,000us <= measurement < infinity

        The first bin boundary (mefSoamDmCfgBinNumber set to 1) always contains
        the value of 0. Attempting to write a non-zero value to this bin will
        result in an error.
       "
    REFERENCE
       "[MEF35.1] R33-R37, D18, R38"
    ::= { mefSoamDmCfgMeasBinEntry 3 }


-- ****************************************************************************
-- Ethernet Delay Measurement Measured Statistic Table
-- ****************************************************************************

mefSoamDmMeasuredStatsXTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamDmMeasuredStatsXEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This object contains the last measured results for a SOAM Delay
        Measurement session.

        Each row in the table represents a Delay Measurement session for
        the defined MEP. This table uses four indices. The first three indices
        are the indices of the Maintenance Domain, Maintenance Association,
        and MEP tables. The fourth index is the specific DM session on the
        selected MEP.

        Instances of this managed object are created automatically
```

```
        by the SNMP Agent when the Delay Measurement session is running.

        Each object in this table applies only if the corresponding bit is set in
        mefSoamDmCfgMeasurementEnable.

        The objects in this table do not need to be persistent upon reboot or restart
        of a device.
       "
    REFERENCE
       "[MEF35.1] R6, R14, D10, D19"
    ::= { mefSoamPmDmObjects 10 }

mefSoamDmMeasuredStatsXEntry OBJECT-TYPE
    SYNTAX      MefSoamDmMeasuredStatsXEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "The conceptual row of mefSoamDmMeasuredStatsXTable"
    INDEX      {
               dot1agCfmMdIndex,
               dot1agCfmMaIndex,
               dot1agCfmMepIdentifier,
               mefSoamDmCfgIndex
               }
    ::= { mefSoamDmMeasuredStatsXTable 1 }

MefSoamDmMeasuredStatsXEntry ::= SEQUENCE {
    mefSoamDmMeasuredStatsXFrameDelayTwoWay     Integer32,
    mefSoamDmMeasuredStatsXFrameDelayForward    Integer32,
    mefSoamDmMeasuredStatsXFrameDelayBackward   Integer32,
    mefSoamDmMeasuredStatsXIfdvTwoWay           Integer32,
    mefSoamDmMeasuredStatsXIfdvForward          Integer32,
    mefSoamDmMeasuredStatsXIfdvBackward         Integer32
}

mefSoamDmMeasuredStatsXFrameDelayTwoWay OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the two-way frame delay calculated by this
        MEP from the last received SOAM PDU.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmMeasuredStatsXEntry 1 }

mefSoamDmMeasuredStatsXFrameDelayForward OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the frame delay in the forward direction
        calculated by this MEP from the last received SOAM PDU. The value of this
        object may not be accurate in the absence of sufficiently precise clock
        synchronization.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
```

```
    REFERENCE
       "[MEF35.1] R67"
    ::= { mefSoamDmMeasuredStatsXEntry 2 }

mefSoamDmMeasuredStatsXFrameDelayBackward OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the frame delay in the backward direction
        calculated by this MEP from the last received SOAM PDU. The value of this
        object may not be accurate in the absence of sufficiently precise clock
        synchronization.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
    REFERENCE
       "[MEF35.1] R67"
    ::= { mefSoamDmMeasuredStatsXEntry 3 }

mefSoamDmMeasuredStatsXIfdvTwoWay OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the last two-way inter-frame delay
        interval calculated by this MEP.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    ::= { mefSoamDmMeasuredStatsXEntry 4 }

mefSoamDmMeasuredStatsXIfdvForward OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the last one-way inter-frame delay
        interval in the forward direction calculated by this MEP.

       The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmMeasuredStatsXEntry 5 }

mefSoamDmMeasuredStatsXIfdvBackward OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the last one-way inter-frame delay
        interval in the backward direction calculated by this MEP.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R66"
```

```
    ::= { mefSoamDmMeasuredStatsXEntry 6 }


-- ****************************************************************************
-- Ethernet Delay Measurement Current Statistic Table
-- ****************************************************************************

mefSoamDmCurrentStatsXTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamDmCurrentStatsXEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This table contains the results for the current Measurement
        Interval in a SOAM Delay Measurement session gathered during the interval
        indicated by mefSoamLmCfgMeasurementInterval.

        A row in this table is created automatically
        by the SNMP Agent when the Delay Measurement session is configured.

        Each row in the table represents the current statistics for a Delay
        Measurement session for the defined MEP. This table uses four indices.
        The first three indices are the indices of the Maintenance Domain,
        Maintenance Association, and MEP tables. The fourth index is the
        specific DM session on the selected MEP. There can be more than one
        DM session per MEP.

        The objects in this table apply regardless of the value of
        mefSoamDmCfgType unless otherwise specified in the object description.
        Backward and two-way statistic objects are undefined if mefSoamDmCfgType
        is dm1DmRx.

        Except for mefSoamDmCurrentStatsXIndex, mefSoamDmCurrentStatsXStartTime
        mefSoamDmCurrentStatsXElapsedTime and mefSoamDmCurrentStatsXSuspect,
        each object in this table applies only if the corresponding bit is set in
        mefSoamDmCfgMeasurementEnable.

        The objects in this table do not need to be persistent upon reboot or
        restart of a device.
       "
    REFERENCE
       "[MEF35.1] R6, R14, D10, D19"
    ::= { mefSoamPmDmObjects 11 }

mefSoamDmCurrentStatsXEntry OBJECT-TYPE
    SYNTAX      MefSoamDmCurrentStatsXEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
            "The conceptual row of mefSoamDmCurrentStatsXTable"
    INDEX       {
                dot1agCfmMdIndex,
                dot1agCfmMaIndex,
                dot1agCfmMepIdentifier,
                mefSoamDmCfgIndex
                }
    ::= { mefSoamDmCurrentStatsXTable 1 }

MefSoamDmCurrentStatsXEntry ::= SEQUENCE {
    mefSoamDmCurrentStatsXIndex                     Unsigned32,
    mefSoamDmCurrentStatsXStartTime                 DateAndTime,
    mefSoamDmCurrentStatsXElapsedTime               TimeInterval,
    mefSoamDmCurrentStatsXSuspect                   TruthValue,
    mefSoamDmCurrentStatsXFrameDelayTwoWayMin       Integer32,
    mefSoamDmCurrentStatsXFrameDelayTwoWayMax       Integer32,
```

```
    mefSoamDmCurrentStatsXFrameDelayTwoWayAvg         Integer32,
    mefSoamDmCurrentStatsXFrameDelayForwardMin        Integer32,
    mefSoamDmCurrentStatsXFrameDelayForwardMax        Integer32,
    mefSoamDmCurrentStatsXFrameDelayForwardAvg        Integer32,
    mefSoamDmCurrentStatsXFrameDelayBackwardMin       Integer32,
    mefSoamDmCurrentStatsXFrameDelayBackwardMax       Integer32,
    mefSoamDmCurrentStatsXFrameDelayBackwardAvg       Integer32,
    mefSoamDmCurrentStatsXIfdvForwardMax              Integer32,
    mefSoamDmCurrentStatsXIfdvForwardAvg              Integer32,
    mefSoamDmCurrentStatsXIfdvBackwardMax             Integer32,
    mefSoamDmCurrentStatsXIfdvBackwardAvg             Integer32,
    mefSoamDmCurrentStatsXIfdvTwoWayMax               Integer32,
    mefSoamDmCurrentStatsXIfdvTwoWayAvg               Integer32,
    mefSoamDmCurrentStatsXFrameDelayRangeForwardMax   Integer32,
    mefSoamDmCurrentStatsXFrameDelayRangeForwardAvg   Integer32,
    mefSoamDmCurrentStatsXFrameDelayRangeBackwardMax  Integer32,
    mefSoamDmCurrentStatsXFrameDelayRangeBackwardAvg  Integer32,
    mefSoamDmCurrentStatsXFrameDelayRangeTwoWayMax    Integer32,
    mefSoamDmCurrentStatsXFrameDelayRangeTwoWayAvg    Integer32,
    mefSoamDmCurrentStatsXSoamPdusSent                Gauge32,
    mefSoamDmCurrentStatsXSoamPdusReceived            Gauge32
}

mefSoamDmCurrentStatsXIndex OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The index for the current Measurement Interval for this
        PM session.  This value will become the value for
        mefSoamDmHistoryStatsXIndex once the Measurement Interval
        is completed.

        Measurement Interval indices are assigned sequentially by
        the SNMP Agent.  The first Measurement Interval that occurs after
        the session is started is assigned index 1.
       "
    REFERENCE
       "[MEF35.1] R21, D9-D10"
    ::= { mefSoamDmCurrentStatsXEntry 1 }

mefSoamDmCurrentStatsXStartTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The UTC time that the current Measurement Interval started.
       "
    REFERENCE
       "[MEF35.1] R22, R66, CR35"
    ::= { mefSoamDmCurrentStatsXEntry 2 }

mefSoamDmCurrentStatsXElapsedTime OBJECT-TYPE
    SYNTAX      TimeInterval
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The time that the current Measurement Interval has been running, in 0.01
        seconds.
       "
    REFERENCE
       "[MEF35.1] R24, R66, CR35"
    ::= { mefSoamDmCurrentStatsXEntry 3 }
```

```
mefSoamDmCurrentStatsXSuspect OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "Whether the Measurement Interval has been marked as suspect.

        The object is to be set to false at the start of a measurement
        interval. It is set to true when there is a discontinuity in the
        performance measurements during the Measurement Interval.  Conditions
        for a discontinuity include, but are not limited to the following:

        1 - Loss of connectivity between the Controller MEP and the
            Responder MEP
        2 - The local time-of-day clock is adjusted by at least 10 seconds
        3 - The conducting of performance measurements is started part
            way through a Measurement Interval (in the case that the
            Measurement Intervals are not aligned with the start time
            Of the PM Session).
        4 - The conducting of a performance measurement is halted before the
            current Measurement Interval is completed
        5 - A local test, failure, or reconfiguration that disrupts service
        6 - A Measurement Interval that coincides with a Maintenance Interval
       "
    REFERENCE
       "[MEF35.1] R39-R42"
    ::= { mefSoamDmCurrentStatsXEntry 4 }

mefSoamDmCurrentStatsXFrameDelayTwoWayMin OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the minimum two-way frame delay
        calculated by this MEP for this Measurement Interval.

       The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    ::= { mefSoamDmCurrentStatsXEntry 5 }

mefSoamDmCurrentStatsXFrameDelayTwoWayMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum two-way frame delay
        calculated by this MEP for this Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R67"
    ::= { mefSoamDmCurrentStatsXEntry 6 }

mefSoamDmCurrentStatsXFrameDelayTwoWayAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
```

```
        "This object contains the average two-way frame delay
         calculated by this MEP for this Measurement Interval.

         The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
         or 'dm1DmRx'.
        "
    REFERENCE
        "[MEF35.1] R67"
    ::= { mefSoamDmCurrentStatsXEntry 7 }

mefSoamDmCurrentStatsXFrameDelayForwardMin OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object contains the minimum one-way frame delay
         in the forward direction calculated by this MEP for this
         Measurement Interval. The value of this object may not be accurate
         in the absence of sufficiently precise clock synchronization.

         The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
        "
    REFERENCE
        "[MEF35.1] R67, CR35"
    ::= { mefSoamDmCurrentStatsXEntry 8 }

mefSoamDmCurrentStatsXFrameDelayForwardMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object contains the maximum one-way frame delay
         in the forward direction calculated by this MEP for this
         Measurement Interval. The value of this object may not be accurate
         in the absence of sufficiently precise clock synchronization.

         The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
        "
    REFERENCE
        "[MEF35.1] R67, CR36"
    ::= { mefSoamDmCurrentStatsXEntry 9 }

mefSoamDmCurrentStatsXFrameDelayForwardAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object contains the average one-way frame delay
         in the forward direction calculated by this MEP for this
         Measurement Interval. The value of this object may not be accurate
         in the absence of sufficiently precise clock synchronization.

         The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
        "
    REFERENCE
        "[MEF35.1] R67, CR36"
    ::= { mefSoamDmCurrentStatsXEntry 10 }

mefSoamDmCurrentStatsXFrameDelayBackwardMin OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
```

```
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the minimum one-way frame delay
        in the backward direction calculated by this MEP for this
        Measurement Interval. The value of this object may not be accurate
        in the absence of sufficiently precise clock synchronization.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R67"
    ::= { mefSoamDmCurrentStatsXEntry 11 }

mefSoamDmCurrentStatsXFrameDelayBackwardMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way frame delay
        in the backward direction calculated by this MEP for this
        Measurement Interval. The value of this object may not be accurate
        in the absence of sufficiently precise clock synchronization.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R67"
    ::= { mefSoamDmCurrentStatsXEntry 12 }

mefSoamDmCurrentStatsXFrameDelayBackwardAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way frame delay
        in the backward direction calculated by this MEP for this
        Measurement Interval. The value of this object may not be accurate
        in the absence of sufficiently precise clock synchronization.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R67"
    ::= { mefSoamDmCurrentStatsXEntry 13 }

mefSoamDmCurrentStatsXIfdvForwardMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way inter-frame delay
        interval in the forward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
    REFERENCE
```

```
       "[MEF35.1] R66, CR35"
    ::= { mefSoamDmCurrentStatsXEntry 15 }

mefSoamDmCurrentStatsXIfdvForwardAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way inter-frame delay
        interval in the forward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
    REFERENCE
       "[MEF35.1] R66, CR35"
    ::= { mefSoamDmCurrentStatsXEntry 16 }

mefSoamDmCurrentStatsXIfdvBackwardMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way inter-frame delay
        interval in the backward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmCurrentStatsXEntry 18 }

mefSoamDmCurrentStatsXIfdvBackwardAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way inter-frame delay
        interval in the backward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmCurrentStatsXEntry 19 }

mefSoamDmCurrentStatsXIfdvTwoWayMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum two-way inter-frame delay
        interval calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
```

```
        or 'dm1DmRx'.
       "
    ::= { mefSoamDmCurrentStatsXEntry 21 }

mefSoamDmCurrentStatsXIfdvTwoWayAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average two-way inter-frame delay
        interval calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    ::= { mefSoamDmCurrentStatsXEntry 22 }

mefSoamDmCurrentStatsXFrameDelayRangeForwardMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way frame delay range
        in the forward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
    REFERENCE
       "[MEF35.1] R66, CR35"
    ::= { mefSoamDmCurrentStatsXEntry 23 }

mefSoamDmCurrentStatsXFrameDelayRangeForwardAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way frame delay range
        in the forward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
    REFERENCE
       "[MEF35.1] R66, CR35"
    ::= { mefSoamDmCurrentStatsXEntry 24 }

mefSoamDmCurrentStatsXFrameDelayRangeBackwardMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way frame delay range
        in the backward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
```

```
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmCurrentStatsXEntry 25 }

mefSoamDmCurrentStatsXFrameDelayRangeBackwardAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way frame delay range
        in the backward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmCurrentStatsXEntry 26 }

mefSoamDmCurrentStatsXFrameDelayRangeTwoWayMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum two-way frame delay range
        calculated by this MEP for this Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    ::= { mefSoamDmCurrentStatsXEntry 27 }

mefSoamDmCurrentStatsXFrameDelayRangeTwoWayAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average two-way frame delay range
        calculated by this MEP for this Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    ::= { mefSoamDmCurrentStatsXEntry 28 }

mefSoamDmCurrentStatsXSoamPdusSent OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the count of the number of SOAM PDUs sent
        during this Measurement Interval.

        This object applies when mefSoamDmCfgType is dmDmm or dm1DmTx and
        is undefined if mefSoamDmCfgType is 'dm1DmRx'. It indicates the
        number of DMM or 1DM SOAM frames transmitted.
       "
    REFERENCE
       "[MEF35.1] R66, CR35"
    ::= { mefSoamDmCurrentStatsXEntry 29 }
```

```
mefSoamDmCurrentStatsXSoamPdusReceived OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the count of the number of SOAM
        PDUs received in this Measurement Interval.

        This object indicates the number of DMR and 1DM SOAM frames
        received. This object applies when mefSoamDmCfgType is dmDmm or
        dm1DmRx and is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
    REFERENCE
       "[MEF35.1] R66, CR35"
    ::= { mefSoamDmCurrentStatsXEntry 30 }

-- ****************************************************************************
-- Ethernet Delay Measurement Current Bin Statistic Table
-- ****************************************************************************

mefSoamDmCurrentStatsBinsTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamDmCurrentStatsBinsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This table contains the result bins for the current Measurement
        Interval in a SOAM Delay Measurement session.

        Each row in the table represents the current bin statistics for a
        Delay Measurement session for the defined MEP. This table uses six
        indices. The first three indices are the indices of the Maintenance
        Domain, Maintenance Association, and MEP tables. The fourth index is the
        specific DM session on the selected MEP. The fifth index indicates bin
        type and the sixth indicates the specific bin number.

        A row in this table is created automatically by the SNMP Agent when
        the Delay Measurement session is configured and the bin counter value
        is set to 0.

        The objects in this table are ignored if mefSoamDmCfgType is 1DmTx.

        This table applies only if the corresponding bit is set in
        mefSoamDmCfgMeasurementEnable.

        The objects in this table do not need to be persistent upon reboot
        or restart of a device.
       "
    REFERENCE
       "[MEF35.1] R6, R14, D10, D19"
    ::= { mefSoamPmDmObjects 5 }

mefSoamDmCurrentStatsBinsEntry OBJECT-TYPE
    SYNTAX      MefSoamDmCurrentStatsBinsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
            "The conceptual row of mefSoamDmCurrentStatsBinsTable"
    INDEX       {
                dot1agCfmMdIndex,
                dot1agCfmMaIndex,
                dot1agCfmMepIdentifier,
                mefSoamDmCfgIndex,
                mefSoamDmCfgMeasBinType,
```

```
                mefSoamDmCfgMeasBinNumber
                }
    ::= { mefSoamDmCurrentStatsBinsTable 1 }

MefSoamDmCurrentStatsBinsEntry ::= SEQUENCE {
    mefSoamDmCurrentStatsBinsCounter                Gauge32
}

mefSoamDmCurrentStatsBinsCounter OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the count of the number of completed
        measurements initiated in this Measurement Interval whose value
        falls within the range specified for this bin (that is, greater
        than or equal to the measurement boundary for the bin, and
        (unless the bin is the last bin) less than the measurement
        boundary for the following bin.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
            "
    REFERENCE
       "[MEF35.1] R66-R67, CR35-CR36"
    ::= { mefSoamDmCurrentStatsBinsEntry 1 }


-- ****************************************************************************
-- Ethernet Delay Measurement History Statistic Table
-- ****************************************************************************

mefSoamDmHistoryStatsXTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamDmHistoryStatsXEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This table contains the results for history Measurement
        Intervals in a SOAM Delay Measurement session.

        Rows of this table are created automatically
        by the SNMP Agent when the Delay Measurement session is running and a
        Measurement Interval is completed.

        Each row in the table represents the Measurement Interval history
        statistics for a Delay Measurement session for the defined MEP. This
        table uses five indices. The first three indices are the indices of
        the Maintenance Domain, Maintenance Association, and MEP tables. The
        fourth index is the specific DM session on the selected MEP. The fifth
        index is the Measurement Interval.

        At least 32 completed Measurement Intervals are to be supported. 96
        completed Measurement Intervals are recommended to be supported. If
        there are at least 32 rows in the table and a new Measurement Interval
        completes and a new row is to be added to the table, the oldest completed
        Measurement Interval can be deleted (row deletion). If the measurement
        interval is other than 15 minutes then a minimum of 8 hours of
        completed Measurement Intervals are to be supported and 24 hours are
        recommended to be supported.

        The objects in this table apply regardless of the value of
        mefSoamDmCfgType unless otherwise specified in the object description.
        Backward and two-way statistic objects are undefined if mefSoamDmCfgType
        is dm1DmRx.
```

```
        Except for mefSoamDmHistoryStatsXIndex, mefSoamDmHistoryStatsXEndTime,
        mefSoamDmHistoryStatsXElapsedTime and mefSoamDmHistoryStatsXSuspect,
        each object in this table applies only if the corresponding bit is set in
        mefSoamDmCfgMeasurementEnable.

        The rows and objects in this table are to be persistent upon reboot
        or restart of a device.
       "
    REFERENCE
       "[MEF35.1] R6, R14, R21, D9, R25"
    ::= { mefSoamPmDmObjects 13 }

mefSoamDmHistoryStatsXEntry OBJECT-TYPE
    SYNTAX      MefSoamDmHistoryStatsXEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
            "The conceptual row of mefSoamDmHistoryStatsXTable"
    INDEX      {
               dot1agCfmMdIndex,
               dot1agCfmMaIndex,
               dot1agCfmMepIdentifier,
               mefSoamDmCfgIndex,
               mefSoamDmHistoryStatsXIndex
               }
    ::= { mefSoamDmHistoryStatsXTable 1 }

MefSoamDmHistoryStatsXEntry ::= SEQUENCE {
    mefSoamDmHistoryStatsXIndex                      Unsigned32,
    mefSoamDmHistoryStatsXEndTime                    DateAndTime,
    mefSoamDmHistoryStatsXElapsedTime                TimeInterval,
    mefSoamDmHistoryStatsXSuspect                    TruthValue,
    mefSoamDmHistoryStatsXFrameDelayTwoWayMin        Integer32,
    mefSoamDmHistoryStatsXFrameDelayTwoWayMax        Integer32,
    mefSoamDmHistoryStatsXFrameDelayTwoWayAvg        Integer32,
    mefSoamDmHistoryStatsXFrameDelayForwardMin       Integer32,
    mefSoamDmHistoryStatsXFrameDelayForwardMax       Integer32,
    mefSoamDmHistoryStatsXFrameDelayForwardAvg       Integer32,
    mefSoamDmHistoryStatsXFrameDelayBackwardMin      Integer32,
    mefSoamDmHistoryStatsXFrameDelayBackwardMax      Integer32,
    mefSoamDmHistoryStatsXFrameDelayBackwardAvg      Integer32,
    mefSoamDmHistoryStatsXIfdvForwardMax             Integer32,
    mefSoamDmHistoryStatsXIfdvForwardAvg             Integer32,
    mefSoamDmHistoryStatsXIfdvBackwardMax            Integer32,
    mefSoamDmHistoryStatsXIfdvBackwardAvg            Integer32,
    mefSoamDmHistoryStatsXIfdvTwoWayMax              Integer32,
    mefSoamDmHistoryStatsXIfdvTwoWayAvg              Integer32,
    mefSoamDmHistoryStatsXFrameDelayRangeForwardMax  Integer32,
    mefSoamDmHistoryStatsXFrameDelayRangeForwardAvg  Integer32,
    mefSoamDmHistoryStatsXFrameDelayRangeBackwardMax Integer32,
    mefSoamDmHistoryStatsXFrameDelayRangeBackwardAvg Integer32,
    mefSoamDmHistoryStatsXFrameDelayRangeTwoWayMax   Integer32,
    mefSoamDmHistoryStatsXFrameDelayRangeTwoWayAvg   Integer32,
    mefSoamDmHistoryStatsXSoamPdusSent               Gauge32,
    mefSoamDmHistoryStatsXSoamPdusReceived           Gauge32
}

mefSoamDmHistoryStatsXIndex OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "The index for the Measurement Interval within this
        PM session.
```

```
         Measurement Interval indices are assigned sequentially by
         the SNMP Agent.  The first Measurement Interval that occurs after
         the session is started is assigned index 1.

         Referential integrity is necessary, i.e., the index needs to be
         persistent upon a reboot or restart of a device.  The index
         is never reused while this session is active until it wraps to zero.
         The index value keeps increasing up to that time.
        "
    REFERENCE
       "[MEF35.1] R21, D9-D10"
    ::= { mefSoamDmHistoryStatsXEntry 1 }

mefSoamDmHistoryStatsXEndTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The UTC time that the Measurement Interval ended.
       "
    REFERENCE
       "[MEF35.1] R23, R66, CR35"
    ::= { mefSoamDmHistoryStatsXEntry 2 }

mefSoamDmHistoryStatsXElapsedTime OBJECT-TYPE
    SYNTAX      TimeInterval
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "The length of time that the Measurement Interval ran for,
        in 0.01 seconds.
       "
    REFERENCE
       "[MEF35.1] R24, R66, CR35"
    ::= { mefSoamDmHistoryStatsXEntry 3 }

mefSoamDmHistoryStatsXSuspect OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "Whether the Measurement Interval has been marked as suspect.

        The object is set to true when there is a discontinuity in the
        performance measurements during the Measurement Interval.  Conditions
        for a discontinuity include, but are not limited to the following:

        1 - Loss of connectivity between the Controller MEP and the
            Responder MEP
        2 - The local time-of-day clock is adjusted by at least 10 seconds
        3 - The conducting of performance measurements is started part
            way through a Measurement Interval (in the case that the
            Measurement Intervals are not aligned with the start time
            Of the PM Session).
        4 - The conducting of a performance measurement is halted before the
            current Measurement Interval is completed
        5 - A local test, failure, or reconfiguration that disrupts service
        6 - A Measurement Interval that coincides with a Maintenance Interval
       "
    REFERENCE
       "[MEF35.1] R39-R42"
    ::= { mefSoamDmHistoryStatsXEntry 4 }
```

```
mefSoamDmHistoryStatsXFrameDelayTwoWayMin OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the minimum two-way frame delay
        calculated by this MEP for this Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmHistoryStatsXEntry 5 }

mefSoamDmHistoryStatsXFrameDelayTwoWayMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum two-way frame delay
        calculated by this MEP for this Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmHistoryStatsXEntry 6 }

mefSoamDmHistoryStatsXFrameDelayTwoWayAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average two-way frame delay
        calculated by this MEP for this Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmHistoryStatsXEntry 7 }

mefSoamDmHistoryStatsXFrameDelayForwardMin OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the minimum one-way frame delay
        in the forward direction calculated by this MEP for this
        Measurement Interval. The value of this object may not be accurate
        in the absence of sufficiently precise clock synchronization.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
    REFERENCE
       "[MEF35.1] R66, CR35"
    ::= { mefSoamDmHistoryStatsXEntry 8 }
```

```
mefSoamDmHistoryStatsXFrameDelayForwardMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way frame delay
        in the forward direction calculated by this MEP for this
        Measurement Interval. The value of this object may not be accurate
        in the absence of sufficiently precise clock synchronization.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
    REFERENCE
       "[MEF35.1] R67, CR36"
    ::= { mefSoamDmHistoryStatsXEntry 9 }

mefSoamDmHistoryStatsXFrameDelayForwardAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way frame delay
        in the forward direction calculated by this MEP for this
        Measurement Interval. The value of this object may not be accurate
        in the absence of sufficiently precise clock synchronization.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
    REFERENCE
       "[MEF35.1] R67, CR36"
    ::= { mefSoamDmHistoryStatsXEntry 10 }

mefSoamDmHistoryStatsXFrameDelayBackwardMin OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the minimum one-way frame delay
        in the backward direction calculated by this MEP for this
        Measurement Interval. The value of this object may not be accurate
        in the absence of sufficiently precise clock synchronization.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmHistoryStatsXEntry 11 }

mefSoamDmHistoryStatsXFrameDelayBackwardMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way frame delay
        in the backward direction calculated by this MEP for this
        Measurement Interval. The value of this object may not be accurate
        in the absence of sufficiently precise clock synchronization.
```

```
         The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
         or 'dm1DmRx'.
        "
    REFERENCE
       "[MEF35.1] R67"
    ::= { mefSoamDmHistoryStatsXEntry 12 }

mefSoamDmHistoryStatsXFrameDelayBackwardAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way frame delay
        in the backward direction calculated by this MEP for this
        Measurement Interval. The value of this object may not be accurate
        in the absence of sufficiently precise clock synchronization.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    REFERENCE
       "[MEF35.1] R67"
    ::= { mefSoamDmHistoryStatsXEntry 13 }

mefSoamDmHistoryStatsXIfdvForwardMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way inter-frame delay
        interval in the forward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
    REFERENCE
       "[MEF35.1] R66, CR35"
    ::= { mefSoamDmHistoryStatsXEntry 15 }

mefSoamDmHistoryStatsXIfdvForwardAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way inter-frame delay
        interval in the forward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
    REFERENCE
       "[MEF35.1] R66, CR35"
    ::= { mefSoamDmHistoryStatsXEntry 16 }

mefSoamDmHistoryStatsXIfdvBackwardMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way inter-frame delay
```

```
        interval in the backward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx.
      "
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmHistoryStatsXEntry 18 }

mefSoamDmHistoryStatsXIfdvBackwardAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way inter-frame delay
        interval in the backward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx.
      "
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmHistoryStatsXEntry 19 }

mefSoamDmHistoryStatsXIfdvTwoWayMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum two-way inter-frame delay
        interval calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx.
      "
    ::= { mefSoamDmHistoryStatsXEntry 21 }

mefSoamDmHistoryStatsXIfdvTwoWayAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average two-way inter-frame delay
        interval calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx.
      "
    ::= { mefSoamDmHistoryStatsXEntry 22 }

mefSoamDmHistoryStatsXFrameDelayRangeForwardMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way Frame Delay Range
```

```
        in the forward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
      "
    REFERENCE
       "[MEF35.1] R66, CR35"
    ::= { mefSoamDmHistoryStatsXEntry 23 }

mefSoamDmHistoryStatsXFrameDelayRangeForwardAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way Frame Delay Range
        in the forward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'.
      "
    REFERENCE
       "[MEF35.1] R66, CR35"
    ::= { mefSoamDmHistoryStatsXEntry 24 }

mefSoamDmHistoryStatsXFrameDelayRangeBackwardMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the maximum one-way Frame Delay Range
        in the backward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
      "
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmHistoryStatsXEntry 25 }

mefSoamDmHistoryStatsXFrameDelayRangeBackwardAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average one-way Frame Delay Range
        in the backward direction calculated by this MEP for this
        Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
      "
    REFERENCE
       "[MEF35.1] R66"
    ::= { mefSoamDmHistoryStatsXEntry 26 }

mefSoamDmHistoryStatsXFrameDelayRangeTwoWayMax OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
```

```
    DESCRIPTION
       "This object contains the maximum two-way Frame Delay Range
        calculated by this MEP for this Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
       "
    ::= { mefSoamDmHistoryStatsXEntry 27 }

mefSoamDmHistoryStatsXFrameDelayRangeTwoWayAvg OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the average two-way Frame Delay Range
        calculated by this MEP for this Measurement Interval.

        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
        or 'dm1DmRx'.
      "
    ::= { mefSoamDmHistoryStatsXEntry 28 }

mefSoamDmHistoryStatsXSoamPdusSent OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the count of the number of SOAM PDUs sent
        during this Measurement Interval.

        This object applies when mefSoamDmCfgType is 'dmDmm' or 'dm1DmTx' and
        is undefined if mefSoamDmCfgType is 'dm1DmRx'. It indicates the
        number of DMM or 1DM SOAM frames transmitted.
       "
    REFERENCE
       "[MEF35.1] R66, CR35"
    ::= { mefSoamDmHistoryStatsXEntry 29 }

mefSoamDmHistoryStatsXSoamPdusReceived OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the count of the number of SOAM
        PDUs received in this Measurement Interval.

        This object indicates the number of DMR and 1DM SOAM frames
        received. This object applies when mefSoamDmCfgType is 'dmDmm' or
        'dm1DmRx' and is undefined if mefSoamDmCfgType is 'dm1DmTx'.
       "
    REFERENCE
       "[MEF35.1] R66, CR35"
    ::= { mefSoamDmHistoryStatsXEntry 30 }

-- ****************************************************************************
-- Ethernet Delay Measurement Bin History Statistic Table
-- ****************************************************************************

mefSoamDmHistoryStatsBinsTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamDmHistoryStatsBinsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
```

```
        "This table contains the result bins for the history Measurement
         Intervals in a SOAM Delay Measurement session.

         Rows of this table are created automatically
         by the SNMP Agent when the Delay Measurement session is running and a
         Measurement Interval is completed.

         Each row in the table represents the Measurement Interval history
         statistics for a specific bin in a Delay Measurement session for the
         defined MEP. This table uses seven indices. The first three indices
         are the indices of the Maintenance Domain, Maintenance Association,
         and MEP tables. The fourth index is the specific DM session on the
         selected MEP. The fifth index is the Measurement Interval. The sixth
         index is the specific bin type. The seventh index is the specific bin
         number.

         Rows in this table pertaining to a given Measurement Interval are
         deleted when (and only when) the corresponding row in the
         mefSoamDmHistoryStatsXTable is deleted.

         The objects in this table are ignored if mefSoamDmCfgType is 1DmTx.

         This table applies only if the corresponding bit is set in
         mefSoamDmCfgMeasurementEnable.

         The objects in this table need to be persistent upon reboot
         or restart of a device.
        "
    REFERENCE
       "[MEF35.1] R6, R14, R21, D9-D10, D19"
    ::= { mefSoamPmDmObjects 7 }

mefSoamDmHistoryStatsBinsEntry OBJECT-TYPE
    SYNTAX      MefSoamDmHistoryStatsBinsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
            "The conceptual row of mefSoamDmHistoryStatsBinsTable"
    INDEX       {
                dot1agCfmMdIndex,
                dot1agCfmMaIndex,
                dot1agCfmMepIdentifier,
                mefSoamDmCfgIndex,
                mefSoamDmHistoryStatsXIndex,
                mefSoamDmCfgMeasBinType,
                mefSoamDmCfgMeasBinNumber
                }
    ::= { mefSoamDmHistoryStatsBinsTable 1 }

MefSoamDmHistoryStatsBinsEntry ::= SEQUENCE {
    mefSoamDmHistoryStatsBinsCounter                Gauge32
}

mefSoamDmHistoryStatsBinsCounter OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
       "This object contains the count of the number of completed
        measurements initiated in this Measurement Interval whose value
        falls within the range specified for this bin (that is, greater
        than or equal to the measurement boundary for the bin, and
        (unless the bin is the last bin) less than the measurement
        boundary for the following bin.
```

```
        The value of this object is undefined if mefSoamDmCfgType is 'dm1DmTx'
       "
    REFERENCE
       "[MEF35.1] R66-R67, CR35-CR36"
    ::= { mefSoamDmHistoryStatsBinsEntry 1 }


-- ****************************************************************************
-- Performance Measurement Loss Threshold Crossing Alert Configuration Table
-- ****************************************************************************

mefSoamLmTcaCfgTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamLmTcaCfgEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This table contains the list of Loss Measurement threshold crossing
        alert (TCA) configuration values for LM Performance Monitoring.

        The main purpose of the LM TCA configuration table is to configure
        LM TCA notifications indicating that a specific
        performance metric is not being met.

        Each row in the table represents a Loss Measurement PM Session TCA
        for the defined MEP for a specific Performance Metric.

        This table uses six indices. The first three indices are the indices
        of the Maintenance Domain, Maintenance Association, and MEP tables. The
        fourth index is the specific LM session type on the selected MEP. The
        fifth index is the specific LM session on the selected MEP. The sixth
        index is the specific TCA for a PM metric.

        Rows in this table are not created automatically. A row is created in
        this table to set up a TCA on a configured MEP that has a configured
        LM session for a specific PM metric. The row number used to create
        a new TCA is indicated by the mefSoamLmCfgTcaNextIndex object.

        An NE needs to support at least one TCA per metric per PM session for
        NE SOAM PM compliance. More than on TCA per metric per PM session can
        be supported on the NE.

        In order to enable a threshold measurement the
        mefSoamLmThresholdCfgEnable object is to be set to 'True', TCA is
        enabled and the selected TCA has to have a threshold value configured.
        Non-configured TCA measurements are disabled by default.

        The writable objects in this table need to be persistent upon reboot
        or restart of a device.
       "
    REFERENCE
       "[MEF35.1] O4, CR21, CO2"
    ::= { mefSoamPmLmObjects 8 }

mefSoamLmTcaCfgEntry OBJECT-TYPE
    SYNTAX      MefSoamLmTcaCfgEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
            "The conceptual row of mefSoamLmTcaCfgTable."
    INDEX       {
                dot1agCfmMdIndex,
                dot1agCfmMaIndex,
                dot1agCfmMepIdentifier,
```

```
                mefSoamLmCfgIndex,
                mefSoamLmTcaCfgType,
                mefSoamLmTcaCfgIndex
                }
    ::= {mefSoamLmTcaCfgTable 1 }

MefSoamLmTcaCfgEntry ::= SEQUENCE {
    mefSoamLmTcaCfgIndex               Unsigned32,
    mefSoamLmTcaCfgType                INTEGER,
    mefSoamLmTcaCfgEnable              TruthValue,
    mefSoamLmTcaCfgAlarmType           INTEGER,
    mefSoamLmTcaCfgThresholdValue      Integer32,
    mefSoamLmTcaCfgClearValue          Integer32,
    mefSoamLmTcaCfgAlarmCurrentState   INTEGER,
    mefSoamLmTcaCfgRowStatus           RowStatus
}

mefSoamLmTcaCfgIndex OBJECT-TYPE
    SYNTAX      Unsigned32(1..4294967295)
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "The index of the threshold number for the specific LM
        TCA entry.

        An index value of '1' is to be supported. Other index values
        can be supported.
       "
    REFERENCE
       "[MEF35.1] O4"
    ::= { mefSoamLmTcaCfgEntry 1 }

mefSoamLmTcaCfgType OBJECT-TYPE
    SYNTAX      INTEGER {
        undefined        (0),
        hliForward       (1),
        chliForward      (2),
        hliBackward      (3),
        chliBackward     (4)
    }
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "The index of the specific type of PM Metric that
        is configured for a TCA.

        hliForward(1)     One-way HLI in the forward direction
        chliForward(2)    One-way CHLI in the forward direction
        hliBackward(3)    One-way HLI in the backward direction
        chliBackward(4)   One-way CHLI in the backward direction
       "
    REFERENCE
       "[MEF35.1] CR1"
    ::= { mefSoamLmTcaCfgEntry 2 }

mefSoamLmTcaCfgEnable OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object indicates whether the specific TCA is enabled (active)
        or disabled (inactive).
        True  = TCA enabled (active)
        False = TCA disabled (inactive)
```

```
        "
    REFERENCE
       "[MEF35.1] O4"
   DEFVAL { true }
    ::= { mefSoamLmTcaCfgEntry 3 }

mefSoamLmTcaCfgAlarmType OBJECT-TYPE
    SYNTAX      INTEGER {
        stateless    (1),
        stateful     (2)
    }
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object configures the type of TCA alarm: either stateless or
        stateful configured for a specific TCA.

        stateless(1)  TCA generated in each Measurement Interval in which the
                      threshold is crossed for the specific TCA instance
        stateful(2)   TCA generated in the first Measurement Interval in
                      which the threshold is crossed (SET), or the end of
                      the first Measurement Interval in which the threshold
                      is not crossed (CLEAR) for the specific TCA instance
       "
    REFERENCE
       "[MEF35.1] CR3, CD1, CR4"
    DEFVAL { stateless }
   ::= { mefSoamLmTcaCfgEntry 4 }

mefSoamLmTcaCfgThresholdValue OBJECT-TYPE
    SYNTAX      Integer32
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object is the number of HLI or CHLI delta_t intervals during
        the Availability Measurement Interval and is used to set the stateless
        TCA threshold value or the stateful TCA SET value.
       "
    REFERENCE
       "[MEF35.1] CR4, CR5, CR8"
    DEFVAL { 1 }
    ::= { mefSoamLmTcaCfgEntry 5 }

mefSoamLmTcaCfgClearValue OBJECT-TYPE
    SYNTAX      Integer32
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object is the number of HLI or CHLI delta_t intervals during
        the Availability Measurement Interval and is used to set the stateful TCA
        CLEAR value.

        The value of this object must be less than or equal to
        mefSoamLmTcaCfgThresholdValue.

        The value of this object is ignored if mefSoamLmTcaCfgAlarmType is
        'stateless'.
       "
    REFERENCE
       "[MEF35.1] CR6, CO1, CR7, CR9"
    DEFVAL { 1 }
    ::= { mefSoamLmTcaCfgEntry 6 }

mefSoamLmTcaCfgAlarmCurrentState OBJECT-TYPE
```

```
    SYNTAX      INTEGER {
        inactive    (1),
        active      (2)
    }
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object indicates the current state of the TCA.

        inactive(1)    TCA current state is inactive
        active(2)      TCA current state is active

        Writing this object will result in a TCA notification if the value of
        the object changes state.
       "
    REFERENCE
       "[MEF35.1] O4"
    DEFVAL { inactive }
    ::= { mefSoamLmTcaCfgEntry 7 }

mefSoamLmTcaCfgRowStatus OBJECT-TYPE
    SYNTAX      RowStatus
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "The status of the row.

        The writable columns in a row cannot be changed if the row
        is active. All columns are to have a valid value before a row
        can be activated.
       "
   ::= { mefSoamLmTcaCfgEntry 8 }


-- ****************************************************************************
-- Performance Measurement Delay Threshold Crossing Alert Configuration Table
-- ****************************************************************************

mefSoamDmTcaCfgTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF MefSoamDmTcaCfgEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "This table contains the list of Delay Measurement threshold crossing
        alert (TCA) configuration values for DM Performance Monitoring.

        The main purpose of the DM TCA configuration table is to configure
        DM TCA notifications indicating that a specific
        performance metric is not being met.

        Each row in the table represents a Delay Measurement session TCA
        for the defined MEP for a specific Performance Metric.

        This table uses six indices. The first three indices are the indices
        of the Maintenance Domain, Maintenance Association, and MEP tables. The
        fourth index is the specific LM session type on the selected MEP. The
        fifth index is the specific DM session on the selected MEP. The sixth
        index is the specific TCA for a PM metric.

        Rows in this table are not created automatically. A row is created in
        this table to set up a TCA on a configured MEP that has a configured
        DM session for a specific PM metric.

        An NE needs to support at least one TCA per metric per PM session for
```

```
        NE SOAM PM compliance. More than one TCA per metric per PM session can
        be supported on the NE.

        In order to enable a threshold measurement the specific
        mefSoamDmThresholdCfgEnable object is to be set to 'True', TCA is
        enabled and the selected TCA has to have a threshold value configured.
        Non-configured TCA measurements are disabled by default.

        The writable objects in this table need to be persistent upon reboot
        or restart of a device.
       "
    REFERENCE
       "[MEF35.1] O4, CR21, CO2"
    ::= { mefSoamPmDmObjects 9 }

mefSoamDmTcaCfgEntry OBJECT-TYPE
    SYNTAX      MefSoamDmTcaCfgEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
            "The conceptual row of mefSoamDmTcaCfgTable."
    INDEX       {
                dot1agCfmMdIndex,
                dot1agCfmMaIndex,
                dot1agCfmMepIdentifier,
                mefSoamDmCfgIndex,
                mefSoamDmTcaCfgType,
                mefSoamDmTcaCfgIndex
                }
    ::= {mefSoamDmTcaCfgTable 1 }

MefSoamDmTcaCfgEntry ::= SEQUENCE {
    mefSoamDmTcaCfgIndex               Unsigned32,
    mefSoamDmTcaCfgType                INTEGER,
    mefSoamDmTcaCfgEnable              TruthValue,
    mefSoamDmTcaCfgAlarmType           INTEGER,
    mefSoamDmTcaCfgBinNumber           Unsigned32,
    mefSoamDmTcaCfgThresholdValue      Integer32,
    mefSoamDmTcaCfgClearValue          Integer32,
    mefSoamDmTcaCfgAlarmCurrentState   INTEGER,
    mefSoamDmTcaCfgRowStatus           RowStatus
}

mefSoamDmTcaCfgIndex OBJECT-TYPE
    SYNTAX      Unsigned32(1..4294967295)
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "The index of the threshold number for the specific DM
        TCA entry.

        An index value of '1' is to be supported. Other index values
        can be supported.
       "
    REFERENCE
       "[MEF35.1] O4"
    ::= { mefSoamDmTcaCfgEntry 1 }

mefSoamDmTcaCfgType OBJECT-TYPE
    SYNTAX      INTEGER {
        undefined (0),
        fdForwardBin     (1),
        fdForwardMax     (2),
        fdrForwardBin    (3),
```

```
        fdrForwardMax    (4),
        ifdvForwardBin   (5),
        ifdvForwardMax   (6),

        fdBackwardBin    (7),
        fdBackwardMax    (8),
        fdrBackwardBin   (9),
        fdrBackwardMax   (10),
        ifdvBackwardBin  (11),
        ifdvBackwardMax  (12),

        fdTwoWayBin      (13),
        fdTwoWayMax      (14),
        fdrTwoWayBin     (15),
        fdrTwoWayMax     (16),
        ifdvTwoWayBin    (17),
        ifdvTwoWayMax    (18)
    }
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
       "The index of the specific type of PM Metric that is configured for
        a TCA.

        For those TCAs related to Upper Bin Count (UBC), 'k', as defined
        by mefSoamDmTcaCfgBinNumber, is the specific bin counter for
        bins k and above: UBC(k).

        fdForwardBin(1)    One-way frame delay in the forward direction
                           for UBC(k)
        fdForwardMax(2)    One-way maximum frame delay in the forward direction
        fdrForwardBin(3)   One-way frame delay range in the forward direction
                           for UBC(k)
        fdrForwardMax(4)   One-way maximum frame delay range in the forward
                           direction
        ifdvForwardBin(5)  One-way IFDV in the forward direction
                           for UBC(k)
        ifdvForwardMax(6)  One-way maximum IFDV in the forward direction

        fdBackwardBin(7)   One-way frame delay in the backward direction
                           for UBC(k)
        fdBackwardMax(8)   One-way maximum frame delay in the backward direction
        fdrBackwardBin(9)  One-way frame delay range in the backward direction
                           for UBC(k)
        fdrBackwardMax(10) One-way maximum frame delay range in the backward
                           direction
        ifdvForwardBin(11) One-way IFDV in the forward direction
                           for UBC(k)
        ifdvForwardMax(12) One-way maximum IFDV in the forward direction

        fdTwoWayBin(13)    Two-way frame delay for UBC(k)
        fdTwoWayMax(14)    Two-way maximum frame delay
        fdrTwoWayBin(15)   Two-way frame delay range for UBC(k)
        fdrTwoWayMax(16)   Two-way maximum frame delay range
        ifdvTwoWayBin(17)  Two-way IFDV for UBC(k)
        ifdvTwoWayMax(18)  Two-way maximum IFDV
       "
    REFERENCE
       "[MEF35.1] CR1-CR2"
    ::= { mefSoamDmTcaCfgEntry 2 }

mefSoamDmTcaCfgEnable OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-create
```

```
    STATUS      current
    DESCRIPTION
       "This object indicates whether the specific TCA is enabled (active)
        or disabled (inactive).
        True  = TCA enabled (active)
        False = TCA disabled (inactive)
       "
    REFERENCE
       "[MEF35.1] O4"
    DEFVAL { true }
    ::= { mefSoamDmTcaCfgEntry 3 }

mefSoamDmTcaCfgAlarmType OBJECT-TYPE
    SYNTAX      INTEGER {
        stateless    (1),
        stateful     (2)
    }
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object configures the type of TCA alarm: either stateless or
        stateful configured for a specific TCA.

        stateless(1)  TCA generated in each Measurement Interval in which the
                      threshold is crossed for the specific TCA instance
        stateful(2)   TCA generated in the first Measurement Interval in
                      which the threshold is crossed (SET), or the end of
                      the first Measurement Interval in which the threshold
                      is not crossed (CLEAR) for the specific TCA instance
       "
    REFERENCE
       "[MEF35.1] CR3, CD1, CR4"
    DEFVAL { stateless }
    ::= { mefSoamDmTcaCfgEntry 4 }

mefSoamDmTcaCfgBinNumber OBJECT-TYPE
    SYNTAX      Unsigned32(1..4294967295)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "The specific upper bin number, 'k', for those PM Metrics that are
        related to bin counters k and above, UBC(k), for mefSoamDmTcaCfgType
        is equal to fdForwardBin, fdrForwardBin, ifdvForwardBin,
        fdBackwardBin, fdrBackwardBin, ifdvBackwardBin, fdTwoWayBin,
        fdrTwoWayBin, or ifdvTwoWayBin.

        For other metric types this object value is ignored.
       "
    REFERENCE
       "[MEF35.1] CR1"
    DEFVAL { 1 }
    ::= { mefSoamDmTcaCfgEntry 5 }

mefSoamDmTcaCfgThresholdValue OBJECT-TYPE
    SYNTAX      Integer32
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object is used to set the stateless TCAs threshold value or the
        stateful TCA SET value.

        For TCAs that are related to bins it is the UBC(k) count. For delay
        max TCAs it is the threshold value in microseconds.
       "
```

```
    REFERENCE
       "[MEF35.1] CR4, CR5, CR8"
    DEFVAL { 1 }
    ::= { mefSoamDmTcaCfgEntry 6 }

mefSoamDmTcaCfgClearValue OBJECT-TYPE
    SYNTAX      Integer32
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object is used to set the stateful TCA CLEAR value.

        For TCAs that are related to bins it is the UBC(k) count. For delay
        max TCAs it is the threshold value in microseconds.

        The value of this object must be less than or equal to
        mefSoamDmTcaCfgThresholdValue.

        The value of this object is ignored if mefSoamDmTcaCfgAlarmType is
        'stateless'.
       "
    REFERENCE
       "[MEF35.1] CR6, CO1, CR7, CR9"
   DEFVAL { 1 }
    ::= { mefSoamDmTcaCfgEntry 7 }

mefSoamDmTcaCfgAlarmCurrentState OBJECT-TYPE
    SYNTAX      INTEGER {
        inactive    (1),
        active      (2)
    }
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "This object indicates the current state of the TCA.

        inactive(1)    TCA current state is inactive
        active(2)      TCA current state is active

        Writing this object will result in a TCA notification if the value of
        the object changes state.
       "
    REFERENCE
       "[MEF35.1] O4"
    DEFVAL { inactive }
    ::= { mefSoamDmTcaCfgEntry 8 }

mefSoamDmTcaCfgRowStatus OBJECT-TYPE
    SYNTAX      RowStatus
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
       "The status of the row.

        The writable columns in a row cannot be changed if the row
        is active. All columns are to have a valid value before a row
        can be activated.
       "
   ::= { mefSoamDmTcaCfgEntry 9 }


-- ****************************************************************************
-- Notification Configuration Objects
-- ****************************************************************************
```

```
mefSoamPmNotificationCfgAlarmInterval OBJECT-TYPE
    SYNTAX      Unsigned32 (0..60)
    UNITS       "Seconds"
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
       "A value indicating the shortest time interval in seconds between the
        generation of the same notification type per PM session to the list of
        notification destinations. An agent generates the first notification
        of given type for a given PM session immediately. An agent is not to
        generate a second specific notification of the same type for the same
        MEP for the same session until the time interval has expired. A value
        of zero indicates that all notifications are sent immediately upon
        detection of the condition.
       "
    DEFVAL {5}
    ::= { mefSoamPmNotificationCfg 1 }

mefSoamPmNotificationCfgAlarmEnable OBJECT-TYPE
    SYNTAX      BITS {
                     bAvailabilityChangeAlarm(0),
                     bLmSessionStartStopAlarm(1),
                     bDmSessionStartStopAlarm(2)
                }
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
       "A vector of bits that indicates whether a specific notification is
        enabled. Note that TCA alarms are enabled individually by either
        mefSoamLmTcaCfgEnable or mefSoamDmTcaCfgEnable and not by this
        object.

        A bit set to '1' enables the specific notification generation.

        A bit set to '0' disables the specific notification.

        If a particular alarm is not supported the BIT value of the enable/disable
        is set to '0'.

        bAvailabilityChangeAlarm(0)  enables/disables mefSoamAvailabilityChangeAlarm
        bLmSessionStartStopAlarm(1)  enables/disables mefSoamLmSessionStartStopAlarm
        bDmSessionStartStopAlarm(2)  enables/disables mefSoamDmSessionStartStopAlarm
       "
    DEFVAL { { } }
    ::= { mefSoamPmNotificationCfg 2 }

-- ****************************************************************************
-- Notification Data Objects
-- ****************************************************************************

mefSoamPmNotificationObjDateAndTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  accessible-for-notify
    STATUS      current
    DESCRIPTION
       "This object contains the UTC time and date at the time that
        the notification event is detected, not the time of the notification
        generation.

        This object is used only for notifications. The mechanism to set and keep
        current the date and time is not specified.
       "
    REFERENCE
```

```
       "[MEF35.1] CR22"
    ::= { mefSoamPmNotificationObj 1 }

mefSoamPmNotificationObjThresholdId OBJECT-TYPE
    SYNTAX      OBJECT IDENTIFIER
    MAX-ACCESS  accessible-for-notify
    STATUS      current
    DESCRIPTION
       "The Object Identifier of the object that caused the generation of the
        notification from the mefSoamLmThresholdEntry or mefSoamDmThresholdEntry.

        This object is only used for the notification.
       "
    REFERENCE
       "[MEF35.1] CR22"
    ::= { mefSoamPmNotificationObj 2 }

mefSoamPmNotificationObjThresholdConfig OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  accessible-for-notify
    STATUS      current
    DESCRIPTION
       "The configured threshold value of the object that caused the generation
        of the notification.

        This object is only used for the notification.
       "
    REFERENCE
       "[MEF35.1] CR22"
   ::= { mefSoamPmNotificationObj 3 }

mefSoamPmNotificationObjThresholdValue OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  accessible-for-notify
    STATUS      current
    DESCRIPTION
       "The measured value of the object at the time of the generation of the
        Notification, from the mefSoamLmMeasuredStatsTable,
        mefSoamLmCurrentStatsTable, mefSoamLmCurrentAvailStatsTable,
        mefSoamDmMeasuredStatsXTable or mefSoamDmCurrentStatsXTable.

        This object is only used for the notification.
       "
    REFERENCE
       "[MEF35.1] CR22"
    ::= { mefSoamPmNotificationObj 4 }

mefSoamPmNotificationObjSuspect OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  accessible-for-notify
    STATUS      current
    DESCRIPTION
       "The suspect flag for the current Measurement Interval in which the
        notification was generated from the mefSoamLmCurrentStatsTable,
        mefSoamLmCurrentAvailStatsTable, or mefSoamDmCurrentStatsXTable.

        This object is only used for the notification.
       "
    REFERENCE
       "[MEF35.1] CR22"
    ::= { mefSoamPmNotificationObj 5 }

mefSoamPmNotificationObjCrossingType OBJECT-TYPE
    SYNTAX      INTEGER {
```

```
                  stateless      (1),
                  statefulSet    (2),
                  statefulClear  (3)
                }
    MAX-ACCESS  accessible-for-notify
    STATUS      current
    DESCRIPTION
       "The Notification Crossing Type of the object that caused the generation
        of the notification from the mefSoamLmThresholdEntry or
        mefSoamDmThresholdEntry.

        stateless(1)     indicates that the TCA alarm was stateless

        statefulSet(2)   indicates that the TCA alarm was a stateful
                         TCA SET

        statefulClear(3) indicates that the TCA alarm was a stateful
                         TCA CLEAR

        This object is only used for the notification.
       "
    REFERENCE
       "[MEF35.1] CR22"
    ::= { mefSoamPmNotificationObj 6 }

mefSoamPmNotificationObjDestinationMep OBJECT-TYPE
    SYNTAX MacAddress
    MAX-ACCESS  accessible-for-notify
    STATUS      current
    DESCRIPTION
       "The MAC address of the Destination MEP associated with the notification
        found in either the mefSoamDmCfgTable or mefSoamLmCfgTable.

        This object is only used for the notification.
       "
    REFERENCE
       "[MEF35.1] CR22"
   ::= { mefSoamPmNotificationObj 7 }

mefSoamPmNotificationObjPriority OBJECT-TYPE
    SYNTAX IEEE8021PriorityValue
    MAX-ACCESS  accessible-for-notify
    STATUS      current
    DESCRIPTION
       "The CoS priority of the associated notification found
        in either the mefSoamDmCfgTable or mefSoamLmCfgTable.

        This object is only used for the notification.
       "
    REFERENCE
       "[MEF35.1] CR22"
    ::= { mefSoamPmNotificationObj 8 }

mefSoamPmNotificationObjDestinationMepId OBJECT-TYPE
    SYNTAX Dot1agCfmMepId
    MAX-ACCESS  accessible-for-notify
    STATUS      current
    DESCRIPTION
       "The MEP Identifier of the Destination MEP associated with the
        notification found in either the mefSoamDmCfgTable or
        mefSoamLmCfgTable.

        This object is only used for the notification.
       "
```

```
    REFERENCE
       "[MEF35.1] CR22"
    ::= { mefSoamPmNotificationObj 9 }

mefSoamPmNotificationObjMeasurementInterval OBJECT-TYPE
    SYNTAX DateAndTime
    MAX-ACCESS  accessible-for-notify
    STATUS      current
    DESCRIPTION
       "The UTC time at the start of the Measurement Interval for which the TCA
        was generated.

        This object is only used for the notification.
       "
    REFERENCE
       "[MEF35.1] CR22"
   ::= { mefSoamPmNotificationObj 10 }

mefSoamPmNotificationObjSeverity OBJECT-TYPE
    SYNTAX      INTEGER {
        warning (1),
        info (2)
    }
    MAX-ACCESS  accessible-for-notify
    STATUS      current
    DESCRIPTION
       "The severity of the TCA notification.

        Warning(1)   severity for stateless TCA or stateful TCA SET
        Info(2)      severity for statfule TCA CLEAR

        This object is only used for the notification.
       "
    REFERENCE
       "[MEF35.1] CR22"
    ::= { mefSoamPmNotificationObj 11 }

mefSoamPmNotificationObjAvailabilityStatus OBJECT-TYPE
    SYNTAX Unsigned32
    MAX-ACCESS  accessible-for-notify
    STATUS      current
    DESCRIPTION
       "This object indicates the availability status change for the
        notification.

        Bits 0:1 indicate the state of the Forward Availability
           0x0 = No change to forward availability status
           0x1 = Forward availability status changed to Available
           0x2 = Forward availability status changed to Unavailable
           0x3 = Undefined

        Bits 2:3 indicate the state of the Backward Availability
           0x0 = No change to backward availability status
           0x1 = Backward availability status changed to Available
           0x2 = Backward availability status changed to Unavailable
           0x3 = Undefined

        This object is only used for the notification.
       "
    ::= { mefSoamPmNotificationObj 12 }


-- ****************************************************************************
-- NOTIFICATIONS (TRAPS)
```

```
-- ****************************************************************************

mefSoamAvailabilityChangeAlarm NOTIFICATION-TYPE
    OBJECTS     {
                mefSoamPmNotificationObjDateAndTime,
                mefSoamLmMeasuredStatsAvailForwardStatus,
                mefSoamLmMeasuredStatsAvailBackwardStatus,
                mefSoamLmMeasuredStatsAvailForwardLastTransitionTime,
                mefSoamLmMeasuredStatsAvailBackwardLastTransitionTime,
                mefSoamLmCurrentAvailStatsForwardAvailable,
                mefSoamLmCurrentAvailStatsForwardUnavailable,
                mefSoamLmCurrentAvailStatsBackwardAvailable,
                mefSoamLmCurrentAvailStatsBackwardUnavailable,
                mefSoamPmNotificationObjDestinationMep,
                mefSoamPmNotificationObjPriority,
                mefSoamPmNotificationObjDestinationMepId,
                mefSoamPmNotificationObjAvailabilityStatus
                }
    STATUS      current
    DESCRIPTION
       "An mefSoamAvailabilityChangeAlarm notification is sent when the state of
        mefSoamLmMeasuredStatsAvailForwardStatus or
        mefSoamLmMeasuredStatsAvailBackwardStatus changes.

        The management entity that receives the notification can identify
        the system from the network source address of the notification,
        and can identify the PM session reporting the change
        by the indices in the OID
        mefSoamLmMeasuredStatsAvailForwardLastTransitionTime, including
        dot1agCfmMdIndex, dot1agCfmMaIndex, dot1agCfmMepIdentifier, and
        mefSoamLmCfgIndex.

        An agent is not to generate more than one mefSoamAvailabilityChangeAlarm
        'notification-event' in a given time interval per PM session as
        specified by the mefSoamPmNotificationCfgAlarmInterval.  A
        'notification-event' is the transmission of a single notification to
        a list of notification destinations.

        If additional availability state changes occur within the
        mefSoamPmNotificationCfgAlarmInterval period, then notification
        generation for these changes are suppressed by the agent until
        the current alarm interval expires. At the end of an alarm interval
        period, one notification-event is generated if any availability
        state changes occurred since the start of the alarm interval period.
        In such a case, another alarm interval period is started right away.
       "
    REFERENCE
       "[MEF35.1] R83-R84, CR63-CR64"
    ::= { mefSoamPmNotifications 1 }

mefSoamLmSessionStartStopAlarm NOTIFICATION-TYPE
    OBJECTS     {
                mefSoamLmCfgSessionStatus,
                mefSoamPmNotificationObjDateAndTime,
                mefSoamPmNotificationObjDestinationMep
                }
    STATUS      current
    DESCRIPTION
       "An mefSoamLmSessionStartStopAlarm notification is sent when the state of
        mefSoamLmCfgSessionStatus changes.

        The management entity that receives the notification can identify
        the system from the network source address of the notification,
        and can identify the individual PM session reporting the start/stop
```

```
        by the indices in the OID mefSoamLmCfgSessionStatus, including
        dot1agCfmMdIndex, dot1agCfmMaIndex, dot1agCfmMepIdentifier, and
        mefSoamLmCfgIndex.

        An agent is not to generate more than one mefSoamLmSessionStartStopAlarm
        'notification-event' in a given time interval per LM session as specified
        by the mefSoamPmNotificationCfgAlarmInterval.  A 'notification-event' is
        the transmission of a single notification to a list of notification
        destinations.

        If additional operational state changes occur within the
        mefSoamPmNotificationCfgAlarmInterval period, then notification
        generation for these changes are be suppressed by the agent until
        the current alarm interval expires. At the end of an alarm interval
        period, one notification-event is generated if any operational
        state changes occurred since the start of the alarm interval period. In
        such a case, another alarm interval period is started right away.
      "
    ::= { mefSoamPmNotifications 2 }

mefSoamDmSessionStartStopAlarm NOTIFICATION-TYPE
    OBJECTS     {
                mefSoamDmCfgSessionStatus,
                mefSoamPmNotificationObjDateAndTime,
                mefSoamPmNotificationObjDestinationMep
                }
    STATUS      current
    DESCRIPTION
       "An mefSoamDmSessionStartStopAlarm notification is sent when the state of
        mefSoamDmCfgSessionStatus changes.

        The management entity that receives the notification can identify
        the system from the network source address of the notification,
        and can identify the individual PM session reporting the start/stop
        by the indices in the OID mefSoamDmCfgSessionStatus, including
        dot1agCfmMdIndex, dot1agCfmMaIndex, dot1agCfmMepIdentifier, and
        mefSoamDmCfgIndex.

        An agent is not to generate more than one mefSoamDmSessionStartStopAlarm
        'notification-event' in a given time interval per DM session as specified
        by mefSoamPmNotificationCfgAlarmInterval.  A 'notification-event' is the
        transmission of a single notification to a list of notification
        destinations.

        If additional operational state changes occur within the
        mefSoamPmNotificationCfgAlarmInterval period, then notification generation
        for these changes are suppressed by the agent until the current alarm
        interval expires. At the end of an alarm interval period, one
        notification-event is generated if any operational state changes
        occurred since the start of the alarm interval period. In such a case,
        another alarm interval period is started right away.
      "
    ::= { mefSoamPmNotifications 3 }

mefSoamPmThresholdCrossingAlarm NOTIFICATION-TYPE
    OBJECTS     {
                mefSoamPmNotificationObjCrossingType,
                mefSoamPmNotificationObjThresholdId,
                mefSoamPmNotificationObjThresholdConfig,
                mefSoamPmNotificationObjThresholdValue,
                mefSoamPmNotificationObjSuspect,
                mefSoamPmNotificationObjDateAndTime,
                mefSoamPmNotificationObjDestinationMep,
                mefSoamPmNotificationObjMeasurementInterval,
```

```
            mefSoamPmNotificationObjSeverity
            }
    STATUS      current
    DESCRIPTION
       "An TCA notification is sent if the
        following conditions are met for a particular type.

        For a stateless TCA notification five conditions need to be met:

        a) measurement of the parameter is enabled via the
           mefSoamLmCfgMeasurementEnable for a LM TCA or
           mefSoamDmCfgMeasurementEnable for a DM TCA; and

        b) the parameter threshold is configured in the mefSoamLmTcaCfgTable
           for LM TCA or mefSoamDmTcaCfgTable for DM TCA; and

        c) the TCA type is enabled via the mefSoamLmTcaCfgEnable
           or mefSoamDmTcaCfgEnable; and

        d) the measured value of the parameter exceeds the value configured in
           the mefSoamLmTcaCfgThresholdValue for a LM TCA or
           mefSoamDmTcaCfgThresholdValue for a DM TCA; and

        e) no previous TCA notifications with type
           'stateless' has been sent relating to the same threshold
           in the mefSoamLmTcaCfgTable or mefSoamDmTcaCfgTable during this
           Measurement Interval.

        For a TCA SET (statefulSet) five conditions need to be met:

        a) measurement of the parameter is enabled via the
           mefSoamLmCfgMeasurementEnable for a LM TCA or
           mefSoamDmCfgMeasurementEnable for a DM TCA; and

        b) the parameter threshold is configured in the mefSoamLmTcaCfgTable
           for LM TCA or mefSoamDmTcaCfgTable for DM TCA; and

        c) the TCA type is enabled via the mefSoamLmTcaCfgEnable
           or mefSoamDmTcaCfgEnable; and

        d) the measured value of the parameter exceeds the value configured in
           the mefSoamLmTcaCfgThresholdValue for a LM stateful entry or
           mefSoamDmTcaCfgThresholdValue for a DM stateful entry for this
           Measurement Interval; and

        e) the measured value during the previous measurement interval did not
           exceed the value configured in the mefSoamLmTcaCfgThresholdValue for
           a LM stateful entry or mefSoamDmTcaCfgTable for a DM stateful entry.

        For a TCA CLEAR (statefulClear) five conditions need to be met:

        a) measurement of the parameter is enabled via the
           mefSoamLmCfgMeasurementEnable for a LM TCA or
           mefSoamDmCfgMeasurementEnable for a DM TCA; and

        b) the parameter threshold is configured in the mefSoamLmTcaCfgTable
           for LM TCA or mefSoamDmTcaCfgTable for DM TCA; and

        c) the TCA type is enabled via the mefSoamLmTcaCfgEnable
           or mefSoamDmTcaCfgEnable; and

        d) the measured value of the parameter did not exceed the value
           configured in the mefSoamLmTcaCfgClearValue for a LM stateful entry
           or mefSoamDmTcaCfgClearValue for a DM stateful entry for the
```

```
            Measurement Interval; and

         e) the measured value during the previous measurement interval did
            exceed the value configured in the mefSoamLmTcaCfgClearValue for
            a LM stateful entry or mefSoamDmTcaCfgClearValue for a DM stateful
            entry.

         In the case of thresholds applied to a maximum or average measurement
         counter, the previous measured value is the value of the counter at the
         end of the preceding Measurement Interval.  In the case of thresholds
         applied to the last measured value, it is the previous measured value.

         The management entity that receives the notification can identify
         the system from the network source address of the notification,
         and can identify the LM or DM session reporting the TCA
         by the indices in the mefSoamPmNotificationCfgThresholdId object,
         including dot1agCfmMdIndex, dot1agCfmMaIndex, dot1agCfmMepIdentifier,
         and the mefSoamLmCfgIndex or mefSoamDmCfgIndex.

         An agent is not to generate more than one mefSoamLmThresholdCrossingAlarm
         'notification-event' of a given type (stateless or stateful) per MEP per
         LM or DM session per TCA instance as specified by
         mefSoamPmNotificationCfgAlarmInterval. A 'notification-event' is the
         transmission of a single notification to a list of notification
         destinations.

         If additional TCA events occur within the
         mefSoamPmNotificationCfgAlarmInterval period, then notification
         generation for these changes are suppressed by the agent until
         the current alarm interval expires. At the end of an alarm interval
         period, one notification-event is generated if any TCA
         events occurred since the start of the alarm interval period.
         In such a case, another alarm interval period is started right away.
        "
    REFERENCE
       "[MEF35.1] O4, CR10-CR20, CD2-CD4, CR22
       "
    ::= { mefSoamPmNotifications 4 }


-- ****************************************************************************
-- SOAM-PM MIB Module - Conformance Information
-- ****************************************************************************

mefSoamPmMibCompliances OBJECT IDENTIFIER ::= { mefSoamPmMibConformance 1 }
mefSoamPmMibGroups      OBJECT IDENTIFIER ::= { mefSoamPmMibConformance 2 }

-- ****************************************************************
-- SOAM-PM MIB Units of conformance
-- ****************************************************************

mefSoamPmMepMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamPmMepOperNextIndex,
      mefSoamPmMepSlmSingleEndedResponder,
      mefSoamPmMepDmSingleEndedResponder,
     mefSoamPmMepLmSingleEndedResponder
    }
    STATUS      current
    DESCRIPTION
       "Mandatory objects for the Service OAM PM MEP group."
    ::= { mefSoamPmMibGroups 1 }

mefSoamLmCfgMandatoryGroup OBJECT-GROUP
```

```
    OBJECTS {
      mefSoamLmCfgType,
      mefSoamLmCfgEnabled,
      mefSoamLmCfgMeasurementEnable,
      mefSoamLmCfgMessagePeriod,
      mefSoamLmCfgPriority,
      mefSoamLmCfgFrameSize,
      mefSoamLmCfgMeasurementInterval,
      mefSoamLmCfgNumIntervalsStored,

      mefSoamLmCfgDestMacAddress,
      mefSoamLmCfgDestMepId,
      mefSoamLmCfgDestIsMepId,

      mefSoamLmCfgStartTimeType,
      mefSoamLmCfgFixedStartDateAndTime,
      mefSoamLmCfgRelativeStartTime,
      mefSoamLmCfgStopTimeType,
      mefSoamLmCfgFixedStopDateAndTime,
      mefSoamLmCfgRelativeStopTime,
      mefSoamLmCfgRepetitionTime,

      mefSoamLmCfgAvailabilityMeasurementInterval,
      mefSoamLmCfgAvailabilityNumConsecutiveHighFlr,
     mefSoamLmCfgAvailabilityNumConsecutiveMeasPdus,
      mefSoamLmCfgAvailabilityFlrThreshold,
      mefSoamLmCfgAvailabilityNumConsecutiveIntervals,
      mefSoamLmCfgSessionType,
      mefSoamLmCfgRowStatus,
      mefSoamLmCfgCosType
    }
    STATUS      current
    DESCRIPTION
       "Mandatory objects for the Service OAM LM Configuration group."
    ::= { mefSoamPmMibGroups 3 }

mefSoamLmCfgOptionalGroup OBJECT-GROUP
    OBJECTS {
      mefSoamLmCfgVersion,
      mefSoamLmCfgDataPattern,
      mefSoamLmCfgTestTlvIncluded,
      mefSoamLmCfgTestTlvPattern,
      mefSoamLmCfgAlignMeasurementIntervals,
      mefSoamLmCfgAlignMeasurementOffset,
      mefSoamLmCfgSourceMacAddress,
      mefSoamLmCfgSessionStatus,
      mefSoamLmCfgHistoryClear,
      mefSoamLmCfgTcaNextIndex,
      mefSoamLmCfgDei,
      mefSoamLmTestId
    }
    STATUS      current
    DESCRIPTION
       "Optional objects for the Service OAM LM Configuration group."
    ::= { mefSoamPmMibGroups 4 }

mefSoamLmMeasuredStatsMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamLmMeasuredStatsAvailForwardLastTransitionTime,
      mefSoamLmMeasuredStatsAvailBackwardLastTransitionTime,
      mefSoamLmMeasuredStatsAvailForwardStatus,
      mefSoamLmMeasuredStatsAvailBackwardStatus
    }
    STATUS      current
```

```
    DESCRIPTION
       "Mandatory objects for the Service OAM LM Measured Stats group."
    ::= { mefSoamPmMibGroups 5 }

mefSoamLmMeasuredStatsOptionalGroup OBJECT-GROUP
    OBJECTS {
      mefSoamLmMeasuredStatsForwardFlr,
      mefSoamLmMeasuredStatsBackwardFlr
    }
    STATUS      current
    DESCRIPTION
       "Optional objects for the Service OAM LM Measured Stats group."
    ::= { mefSoamPmMibGroups 6 }

mefSoamLmCurrentAvailStatsMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamLmCurrentAvailStatsIndex,
      mefSoamLmCurrentAvailStatsStartTime,
      mefSoamLmCurrentAvailStatsElapsedTime,
      mefSoamLmCurrentAvailStatsSuspect,
      mefSoamLmCurrentAvailStatsForwardHighLoss,
      mefSoamLmCurrentAvailStatsBackwardHighLoss,
      mefSoamLmCurrentAvailStatsForwardConsecutiveHighLoss,
      mefSoamLmCurrentAvailStatsBackwardConsecutiveHighLoss,
      mefSoamLmCurrentAvailStatsForwardAvailable,
      mefSoamLmCurrentAvailStatsBackwardAvailable,
      mefSoamLmCurrentAvailStatsForwardUnavailable,
      mefSoamLmCurrentAvailStatsBackwardUnavailable
    }
    STATUS      current
    DESCRIPTION
       "Mandatory objects for the Service OAM LM Current Availability group."
    ::= { mefSoamPmMibGroups 7 }

mefSoamLmCurrentAvailStatsOptionalGroup OBJECT-GROUP
    OBJECTS {
      mefSoamLmCurrentAvailStatsForwardMinFlr,
      mefSoamLmCurrentAvailStatsForwardMaxFlr,
      mefSoamLmCurrentAvailStatsForwardAvgFlr,
      mefSoamLmCurrentAvailStatsBackwardMinFlr,
      mefSoamLmCurrentAvailStatsBackwardMaxFlr,
      mefSoamLmCurrentAvailStatsBackwardAvgFlr
    }
    STATUS      current
    DESCRIPTION
       "Optional objects for the Service OAM LM Current Availabilty Stats group."
    ::= { mefSoamPmMibGroups 8 }

mefSoamLmCurrentStatsMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamLmCurrentStatsIndex,
      mefSoamLmCurrentStatsStartTime,
      mefSoamLmCurrentStatsElapsedTime,
      mefSoamLmCurrentStatsSuspect,
      mefSoamLmCurrentStatsForwardTransmittedFrames,
      mefSoamLmCurrentStatsForwardReceivedFrames,
      mefSoamLmCurrentStatsBackwardTransmittedFrames,
      mefSoamLmCurrentStatsBackwardReceivedFrames,
      mefSoamLmCurrentStatsSoamPdusSent,
      mefSoamLmCurrentStatsSoamPdusReceived
    }
    STATUS      current
    DESCRIPTION
       "Mandatory objects for the Service OAM LM current statistics group."
```

```
    ::= { mefSoamPmMibGroups 9 }

mefSoamLmCurrentStatsOptionalGroup OBJECT-GROUP
    OBJECTS {
      mefSoamLmCurrentStatsForwardMinFlr,
      mefSoamLmCurrentStatsForwardMaxFlr,
      mefSoamLmCurrentStatsForwardAvgFlr,
      mefSoamLmCurrentStatsBackwardMinFlr,
      mefSoamLmCurrentStatsBackwardMaxFlr,
      mefSoamLmCurrentStatsBackwardAvgFlr
    }
    STATUS      current
    DESCRIPTION
       "Optional objects for the Service OAM LM Current Stats group."
    ::= { mefSoamPmMibGroups 10 }

mefSoamLmHistoryAvailStatsMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamLmHistoryAvailStatsEndTime,
      mefSoamLmHistoryAvailStatsElapsedTime,
      mefSoamLmHistoryAvailStatsSuspect,
      mefSoamLmHistoryAvailStatsForwardHighLoss,
      mefSoamLmHistoryAvailStatsBackwardHighLoss,
      mefSoamLmHistoryAvailStatsForwardConsecutiveHighLoss,
      mefSoamLmHistoryAvailStatsBackwardConsecutiveHighLoss,
      mefSoamLmHistoryAvailStatsForwardAvailable,
      mefSoamLmHistoryAvailStatsBackwardAvailable,
      mefSoamLmHistoryAvailStatsForwardUnavailable,
      mefSoamLmHistoryAvailStatsBackwardUnavailable
    }
    STATUS      current
    DESCRIPTION
       "Mandatory objects for the Service OAM Availability LM history
        statistics group.
       "
    ::= { mefSoamPmMibGroups 11 }

mefSoamLmHistoryAvailStatsOptionalGroup OBJECT-GROUP
    OBJECTS {
      mefSoamLmHistoryAvailStatsForwardMinFlr,
      mefSoamLmHistoryAvailStatsForwardMaxFlr,
      mefSoamLmHistoryAvailStatsForwardAvgFlr,
      mefSoamLmHistoryAvailStatsBackwardMinFlr,
      mefSoamLmHistoryAvailStatsBackwardMaxFlr,
      mefSoamLmHistoryAvailStatsBackwardAvgFlr
    }
    STATUS      current
    DESCRIPTION
       "Optional objects for the Service OAM Availability LM history
        statistics group.
       "
    ::= { mefSoamPmMibGroups 12 }

mefSoamLmHistoryStatsMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamLmHistoryStatsEndTime,
      mefSoamLmHistoryStatsElapsedTime,
      mefSoamLmHistoryStatsSuspect,
      mefSoamLmHistoryStatsForwardTransmittedFrames,
      mefSoamLmHistoryStatsForwardReceivedFrames,
      mefSoamLmHistoryStatsBackwardTransmittedFrames,
      mefSoamLmHistoryStatsBackwardReceivedFrames,
      mefSoamLmHistoryStatsSoamPdusSent,
      mefSoamLmHistoryStatsSoamPdusReceived
```

```
    }
    STATUS      current
    DESCRIPTION
       "Mandatory objects for the Service OAM LM history statistics group."
    ::= { mefSoamPmMibGroups 13 }

mefSoamLmHistoryStatsOptionalGroup OBJECT-GROUP
    OBJECTS {
      mefSoamLmHistoryStatsForwardMinFlr,
      mefSoamLmHistoryStatsForwardMaxFlr,
      mefSoamLmHistoryStatsForwardAvgFlr,
      mefSoamLmHistoryStatsBackwardMinFlr,
      mefSoamLmHistoryStatsBackwardMaxFlr,
      mefSoamLmHistoryStatsBackwardAvgFlr
    }
    STATUS      current
    DESCRIPTION
       "Optional objects for the Service OAM LM History Stats group."
    ::= { mefSoamPmMibGroups 14 }

mefSoamDmCfgMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamDmCfgType,
      mefSoamDmCfgEnabled,
      mefSoamDmCfgMeasurementEnable,
      mefSoamDmCfgMessagePeriod,

      mefSoamDmCfgPriority,
      mefSoamDmCfgFrameSize,
      mefSoamDmCfgMeasurementInterval,
      mefSoamDmCfgNumIntervalsStored,

      mefSoamDmCfgDestMacAddress,
      mefSoamDmCfgDestMepId,
      mefSoamDmCfgDestIsMepId,

      mefSoamDmCfgStartTimeType,
      mefSoamDmCfgFixedStartDateAndTime,
      mefSoamDmCfgRelativeStartTime,
      mefSoamDmCfgStopTimeType,
      mefSoamDmCfgFixedStopDateAndTime,
      mefSoamDmCfgRelativeStopTime,
      mefSoamDmCfgRepetitionTime,

      mefSoamDmCfgAlignMeasurementIntervals,
      mefSoamDmCfgNumMeasBinsPerFrameDelayInterval,
      mefSoamDmCfgNumMeasBinsPerInterFrameDelayVariationInterval,
      mefSoamDmCfgNumMeasBinsPerFrameDelayRangeInterval,
      mefSoamDmCfgSessionType,
      mefSoamDmCfgRowStatus,
      mefSoamDmCfgCosType
    }
    STATUS      current
    DESCRIPTION
       "Mandatory objects for the Service OAM DM configuration group."
    ::= { mefSoamPmMibGroups 15 }

mefSoamDmCfgOptionalGroup OBJECT-GROUP
    OBJECTS {
      mefSoamDmCfgVersion,
      mefSoamDmCfgDataPattern,
      mefSoamDmCfgTestTlvIncluded,
      mefSoamDmCfgTestTlvPattern,
      mefSoamDmCfgSourceMacAddress,
```

```
      mefSoamDmCfgAlignMeasurementOffset,
      mefSoamDmCfgInterFrameDelayVariationSelectionOffset,
      mefSoamDmCfgSessionStatus,
      mefSoamDmCfgHistoryClear,
      mefSoamDmCfgTcaNextIndex,
      mefSoamDmCfgDei
   }
    STATUS      current
    DESCRIPTION
       "Optional objects for the Service OAM DM Configuration group."
    ::= { mefSoamPmMibGroups 16 }

mefSoamDmCfgMeasBinMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamDmCfgMeasBinLowerBound,
      mefSoamDmMeasuredStatsXFrameDelayForward,
      mefSoamDmMeasuredStatsXFrameDelayBackward,
      mefSoamDmMeasuredStatsXIfdvTwoWay,
      mefSoamDmMeasuredStatsXIfdvForward,
      mefSoamDmMeasuredStatsXIfdvBackward
}
    STATUS      current
    DESCRIPTION
       "Mandatory objects for the Service OAM DM measurement bin configuration
        group."
    ::= { mefSoamPmMibGroups 17 }

mefSoamDmMeasuredStatsOptionalGroup OBJECT-GROUP
    OBJECTS {
      mefSoamDmMeasuredStatsXFrameDelayTwoWay
    }
    STATUS      current
    DESCRIPTION
       "Optional objects for the Service OAM DM Measured Stats group."
    ::= { mefSoamPmMibGroups 18 }

mefSoamDmCurrentStatsMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamDmCurrentStatsXIndex,
      mefSoamDmCurrentStatsXStartTime,
      mefSoamDmCurrentStatsXElapsedTime,
      mefSoamDmCurrentStatsXSuspect,
      mefSoamDmCurrentStatsXFrameDelayTwoWayMin,
      mefSoamDmCurrentStatsXFrameDelayTwoWayMax,
      mefSoamDmCurrentStatsXFrameDelayTwoWayAvg,
      mefSoamDmCurrentStatsXFrameDelayForwardMin,
      mefSoamDmCurrentStatsXFrameDelayForwardMax,
      mefSoamDmCurrentStatsXFrameDelayForwardAvg,
      mefSoamDmCurrentStatsXFrameDelayBackwardMin,
      mefSoamDmCurrentStatsXFrameDelayBackwardMax,
      mefSoamDmCurrentStatsXFrameDelayBackwardAvg,
      mefSoamDmCurrentStatsXIfdvForwardMax,
      mefSoamDmCurrentStatsXIfdvForwardAvg,
      mefSoamDmCurrentStatsXIfdvBackwardMax,
      mefSoamDmCurrentStatsXIfdvBackwardAvg,
      mefSoamDmCurrentStatsXFrameDelayRangeForwardMax,
      mefSoamDmCurrentStatsXFrameDelayRangeForwardAvg,
      mefSoamDmCurrentStatsXFrameDelayRangeBackwardMax,
      mefSoamDmCurrentStatsXFrameDelayRangeBackwardAvg,
      mefSoamDmCurrentStatsXSoamPdusSent,
      mefSoamDmCurrentStatsXSoamPdusReceived
    }
    STATUS      current
    DESCRIPTION
```

```
       "Mandatory objects for the Service OAM DM current statistics group."
    ::= { mefSoamPmMibGroups 19 }

mefSoamDmCurrentStatsOptionalGroup OBJECT-GROUP
    OBJECTS {
      mefSoamDmCurrentStatsXIfdvTwoWayMax,
      mefSoamDmCurrentStatsXIfdvTwoWayAvg,
      mefSoamDmCurrentStatsXFrameDelayRangeTwoWayMax,
      mefSoamDmCurrentStatsXFrameDelayRangeTwoWayAvg
    }
    STATUS      current
    DESCRIPTION
       "Optional objects for the Service OAM DM current statistics group."
    ::= { mefSoamPmMibGroups 20 }

mefSoamDmCurrentStatsBinsMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamDmCurrentStatsBinsCounter
}
    STATUS      current
    DESCRIPTION
       "Mandatory objects for the Service OAM DM current statistics bin
        group."
    ::= { mefSoamPmMibGroups 21 }

mefSoamDmHistoryStatsMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamDmHistoryStatsXEndTime,
      mefSoamDmHistoryStatsXElapsedTime,
      mefSoamDmHistoryStatsXSuspect,
      mefSoamDmHistoryStatsXFrameDelayTwoWayMin,
      mefSoamDmHistoryStatsXFrameDelayTwoWayMax,
      mefSoamDmHistoryStatsXFrameDelayTwoWayAvg,
      mefSoamDmHistoryStatsXFrameDelayForwardMin,
      mefSoamDmHistoryStatsXFrameDelayForwardMax,
      mefSoamDmHistoryStatsXFrameDelayForwardAvg,
      mefSoamDmHistoryStatsXFrameDelayBackwardMin,
      mefSoamDmHistoryStatsXFrameDelayBackwardMax,
      mefSoamDmHistoryStatsXFrameDelayBackwardAvg,
      mefSoamDmHistoryStatsXIfdvForwardMax,
      mefSoamDmHistoryStatsXIfdvForwardAvg,
      mefSoamDmHistoryStatsXIfdvBackwardMax,
      mefSoamDmHistoryStatsXIfdvBackwardAvg,
      mefSoamDmHistoryStatsXFrameDelayRangeForwardMax,
      mefSoamDmHistoryStatsXFrameDelayRangeForwardAvg,
      mefSoamDmHistoryStatsXFrameDelayRangeBackwardMax,
      mefSoamDmHistoryStatsXFrameDelayRangeBackwardAvg,
      mefSoamDmHistoryStatsXSoamPdusSent,
      mefSoamDmHistoryStatsXSoamPdusReceived
    }
    STATUS      current
    DESCRIPTION
       "Mandatory objects for the Service OAM DM history statistics group."
    ::= { mefSoamPmMibGroups 22 }

mefSoamDmHistoryStatsOptionalGroup OBJECT-GROUP
    OBJECTS {
      mefSoamDmHistoryStatsXIfdvTwoWayMax,
      mefSoamDmHistoryStatsXIfdvTwoWayAvg,
      mefSoamDmHistoryStatsXFrameDelayRangeTwoWayMax,
      mefSoamDmHistoryStatsXFrameDelayRangeTwoWayAvg
    }
    STATUS      current
    DESCRIPTION
```

```
       "Optional objects for the Service OAM DM history statistics group."
    ::= { mefSoamPmMibGroups 23 }

mefSoamDmHistoryStatsBinsMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamDmHistoryStatsBinsCounter
}
    STATUS      current
    DESCRIPTION
       "Mandatory objects for the Service OAM DM history statistics
        bin group."
    ::= { mefSoamPmMibGroups 24 }

mefSoamPmNotificationsMandatoryGroup NOTIFICATION-GROUP
    NOTIFICATIONS {
      mefSoamAvailabilityChangeAlarm,
      mefSoamLmSessionStartStopAlarm,
      mefSoamDmSessionStartStopAlarm
    }
    STATUS      current
    DESCRIPTION
       "Mandatory notifications for the SOAM PM Notifications group."
    ::= { mefSoamPmMibGroups 29 }

mefSoamPmNotificationsOptionalGroup NOTIFICATION-GROUP
    NOTIFICATIONS {
            mefSoamPmThresholdCrossingAlarm
    }
    STATUS      current
    DESCRIPTION
       "Optional objects for the Service OAM PM Notifications group."
    ::= { mefSoamPmMibGroups 30 }

mefSoamPmNotificationCfgMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamPmNotificationCfgAlarmInterval,
      mefSoamPmNotificationCfgAlarmEnable
    }
    STATUS      current
    DESCRIPTION
       "Mandatory objects for the SOAM PM Notification Configuration group."
    ::= { mefSoamPmMibGroups 31 }

mefSoamPmNotificationObjMandatoryGroup OBJECT-GROUP
    OBJECTS {
      mefSoamPmNotificationObjDateAndTime,
      mefSoamPmNotificationObjSuspect,
      mefSoamPmNotificationObjDestinationMep,
      mefSoamPmNotificationObjPriority,
      mefSoamPmNotificationObjDestinationMepId,
      mefSoamPmNotificationObjMeasurementInterval,
      mefSoamPmNotificationObjAvailabilityStatus
    }
    STATUS      current
    DESCRIPTION
       "Mandatory objects for the SOAM PM Notification Object group."
    ::= { mefSoamPmMibGroups 32 }

mefSoamPmNotificationObjOptionalGroup OBJECT-GROUP
    OBJECTS {
      mefSoamPmNotificationObjThresholdConfig,
      mefSoamPmNotificationObjThresholdId,
      mefSoamPmNotificationObjThresholdValue,
      mefSoamPmNotificationObjCrossingType,
```

```
      mefSoamPmNotificationObjSeverity
    }
    STATUS      current
    DESCRIPTION
       "Optional objects for the Service OAM PM Notifications group."
    ::= { mefSoamPmMibGroups 33 }

mefSoamLmTcaOptionalGroup OBJECT-GROUP
    OBJECTS {
      mefSoamLmTcaCfgEnable,
      mefSoamLmTcaCfgAlarmType,
      mefSoamLmTcaCfgThresholdValue,
      mefSoamLmTcaCfgClearValue,
      mefSoamLmTcaCfgAlarmCurrentState,
      mefSoamLmTcaCfgRowStatus
    }
    STATUS      current
    DESCRIPTION
       "Optional objects for the Service OAM LM threshold group."
    ::= { mefSoamPmMibGroups 34 }

mefSoamDmTcaOptionalGroup OBJECT-GROUP
OBJECTS {
      mefSoamDmTcaCfgEnable,
      mefSoamDmTcaCfgAlarmType,
      mefSoamDmTcaCfgBinNumber,
      mefSoamDmTcaCfgThresholdValue,
      mefSoamDmTcaCfgClearValue,
      mefSoamDmTcaCfgAlarmCurrentState,
      mefSoamDmTcaCfgRowStatus
    }
    STATUS      current
    DESCRIPTION
       "Optional objects for the Service OAM LM threshold group."
    ::= { mefSoamPmMibGroups 35 }


-- ****************************************************************
-- SOAM-PM MIB Module Compliance statements
-- ****************************************************************

mefSoamPmMibCompliance MODULE-COMPLIANCE
    STATUS       current
    DESCRIPTION "The compliance statement for the Ethernet Service OAM PM MIB."
    MODULE
        MANDATORY-GROUPS {
            mefSoamPmMepMandatoryGroup,
            mefSoamLmCfgMandatoryGroup,
            mefSoamLmMeasuredStatsMandatoryGroup,
            mefSoamLmCurrentAvailStatsMandatoryGroup,
            mefSoamLmCurrentStatsMandatoryGroup,
            mefSoamLmHistoryAvailStatsMandatoryGroup,
            mefSoamLmHistoryStatsMandatoryGroup,
            mefSoamDmCfgMandatoryGroup,
            mefSoamDmCfgMeasBinMandatoryGroup,
            mefSoamDmCurrentStatsMandatoryGroup,
            mefSoamDmCurrentStatsBinsMandatoryGroup,
            mefSoamDmHistoryStatsMandatoryGroup,
            mefSoamDmHistoryStatsBinsMandatoryGroup,
            mefSoamPmNotificationsMandatoryGroup,
            mefSoamPmNotificationCfgMandatoryGroup,
            mefSoamPmNotificationObjMandatoryGroup
        }
```

```
    GROUP mefSoamLmCfgOptionalGroup
    DESCRIPTION "The mefSoamLmCfgOptionalGroup is an optional requirement."

    GROUP mefSoamLmMeasuredStatsOptionalGroup
    DESCRIPTION "The mefSoamLmMeasuredStatsOptionalGroup is an optional requirement."

    GROUP mefSoamLmCurrentAvailStatsOptionalGroup
    DESCRIPTION "The mefSoamLmCurrentAvailStatsOptionalGroup is an optional
        requirement."

    GROUP mefSoamLmCurrentStatsOptionalGroup
    DESCRIPTION "The mefSoamLmCurrentStatsOptionalGroup is an optional requirement."

    GROUP mefSoamLmHistoryAvailStatsOptionalGroup
    DESCRIPTION "The mefSoamLmCurrentStatsOptionalGroup is an optional requirement."

    GROUP mefSoamLmHistoryStatsOptionalGroup
    DESCRIPTION "The mefSoamLmHistoryStatsOptionalGroup is an optional requirement."

    GROUP mefSoamDmCfgOptionalGroup
    DESCRIPTION "The mefSoamDmCfgOptionalGroup is an optional requirement."

    GROUP mefSoamDmMeasuredStatsOptionalGroup
    DESCRIPTION "The mefSoamDmMeasuredStatsOptionalGroup is an optional requirement."

    GROUP mefSoamDmCurrentStatsOptionalGroup
    DESCRIPTION "The mefSoamDmCurrentStatsOptionalGroup is an optional requirement."

    GROUP mefSoamDmHistoryStatsOptionalGroup
    DESCRIPTION "The mefSoamDmHistoryStatsOptionalGroup is an optional requirement."

    GROUP mefSoamPmNotificationsOptionalGroup
    DESCRIPTION "The mefSoamPmNotificationsOptionalGroup is an optional requirement."

    GROUP mefSoamPmNotificationObjOptionalGroup
    DESCRIPTION "The mefSoamPmNotificationObjOptionalGroup is an optional
        requirement."

    GROUP mefSoamLmTcaOptionalGroup
    DESCRIPTION "The mefSoamLmTcaOptionalGroup is an optional
        requirement."

    GROUP mefSoamDmTcaOptionalGroup
    DESCRIPTION "The mefSoamLmTcaOptionalGroup is an optional
        requirement."

    ::= { mefSoamPmMibCompliances 1 }


END
```

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