

# MEEF

**Introducing the Specifications of the Metro  
Ethernet Forum**

# Introducing the Specifications of the Metro Ethernet Forum

<b>MEF 2</b>	<b>Requirements and Framework for Ethernet Service Protection</b>
<b>MEF 3</b>	<b>Circuit Emulation Service Definitions, Framework and Requirements in Metro Ethernet Networks</b>
<b>MEF 4</b>	<b>Metro Ethernet Network Architecture Framework Part 1: Generic Framework</b>
<b>MEF 6</b>	<b>Metro Ethernet Services Definitions Phase I</b>
<b>MEF 7</b>	<b>EMS-NMS Information Model</b>
<b>MEF 8</b>	<b>Implementation Agreement for the Emulation of PDH Circuits over Metro Ethernet Networks</b>
<b>MEF 9</b>	<b>Abstract Test Suite for Ethernet Services at the UNI</b>
<b>MEF 10</b>	<b>Ethernet Services Attributes Phase I</b>
<b>MEF 11</b>	<b>User Network Interface (UNI) Requirements and Framework</b>
<b>MEF 12</b>	<b>Metro Ethernet Network Architecture Framework Part 2: Ethernet Services Layer</b>
<b>MEF 13</b>	<b>User Network Interface (UNI) Type 1 Implementation Agreement</b>
<b>MEF 14</b>	<b>Abstract Test Suite for Ethernet Services at the UNI</b>
<b>MEF 15</b>	<b>Requirements for Management of Metro Ethernet Phase 1 Network Elements</b>
<b>MEF 16</b>	<b>Ethernet Local Management Interface</b>

\* MEF 10 \* replaced MEF 1 and MEF 5

# This Presentation

- **Purpose**
  - This presentation is intended as an introduction and companion to the MEF 9 Specification
  - MEF 9 Defines the test suite for conformance of Ethernet services and equipment when deployed at the UNI
- **Audience**
  - It is intended for Product Marketing, Engineering staff of member companies and service providers who
    - Would like a quick overview of the specifications and plan to read the specifications in detail
    - Equipment Manufacturers building devices that are designed to conform to MEF Specifications.
    - Service Providers who want to assure their end customers that their services comply with MEF Specifications.
    - Plan to submit their products and services to the MEF certification process
- **Other Documents**
  - Presentations of the other specifications and an overview of all specifications is available on the MEF web site
  - Other materials such as white papers and case studies are also available

# MEF 9: Test Suite for the Ethernet Services

- **Specification**

- Defines the test suite for conformance of Ethernet services and equipment when deployed at the UNI
  - Supports compliance testing of MEF 6, 10,11 Specified required attributes

- **Test Cases**

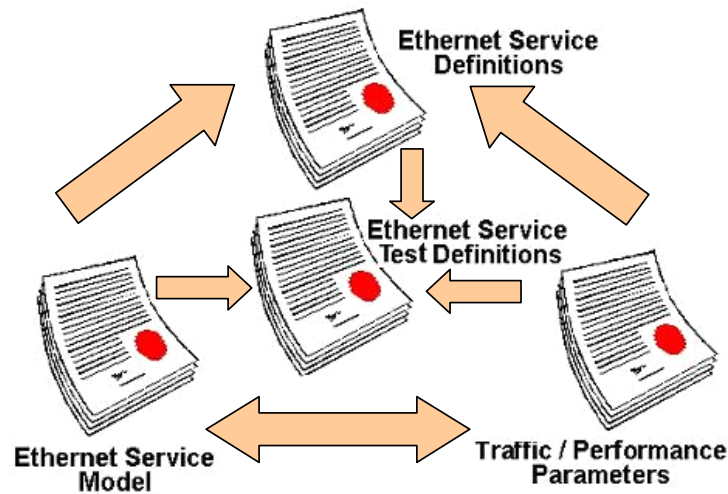
- Test Case 1: Non-looping Frame Delivery
- Test Case 2: EVC Leakage
- Test Case 3: Single Copy Broadcast, Multicast, Unknown DA Frame Delivery in MP-to-MP EVC
- Test Case 4/5/6: Service Frame (Invalid discard, control protocols, conditional delivery)
- Test Case 7/8/9: Service Frame Transparency Tag
- Test Case 10/11: CE-VLAN ID Preservation Untagged/Tagged
- Test Case 12: CE-VLAN CoS Preservation
- Test Case 13: EVC Layer 2 Control Protocol Processing

# Test Suite for the Ethernet Services

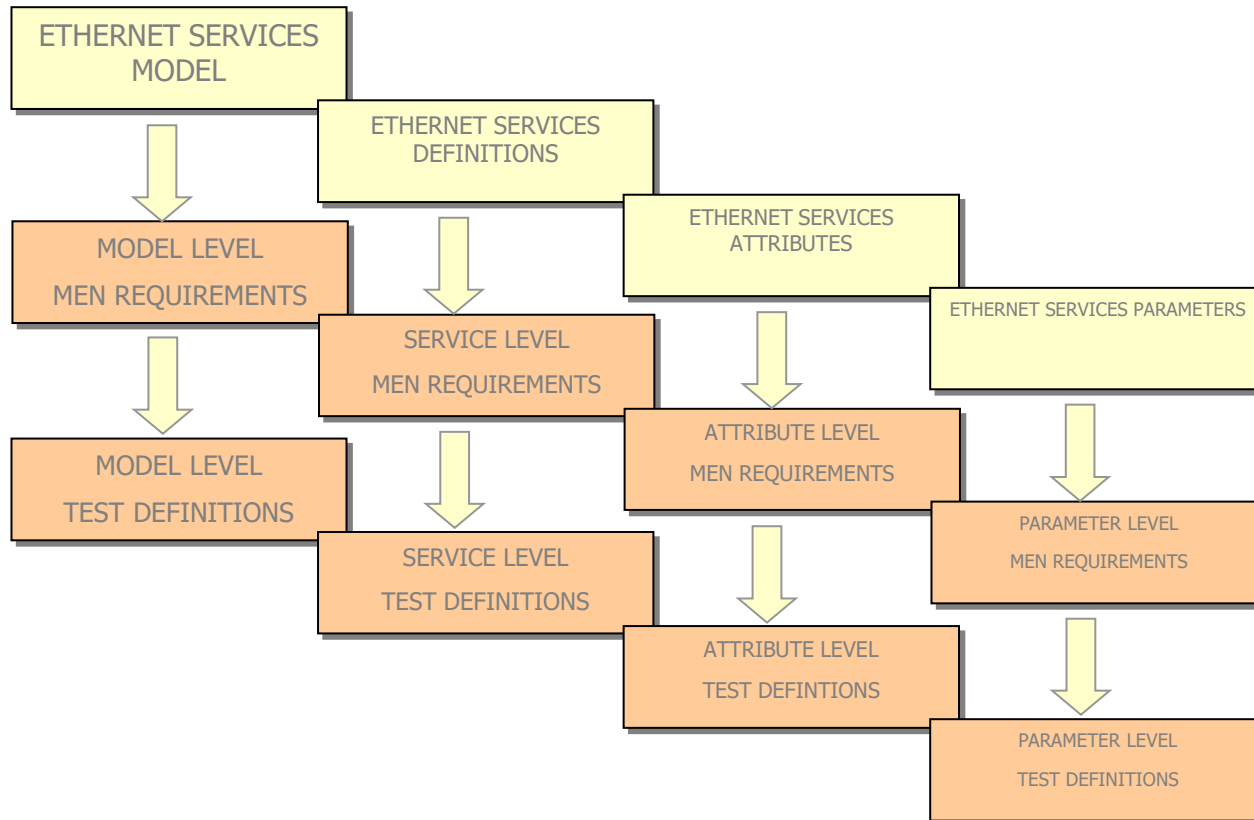
- **MEF 9 Defines the test suite for conformance of Ethernet services and equipment when deployed at the UNI**
  - Supports compliance testing of MEF 6, 10,11  
Specified required attributes

# Relationship between different MEF Specs & Ethernet Services Test Definition document

- **Test the following criteria**
  - functional, conformance, interoperability and performance.



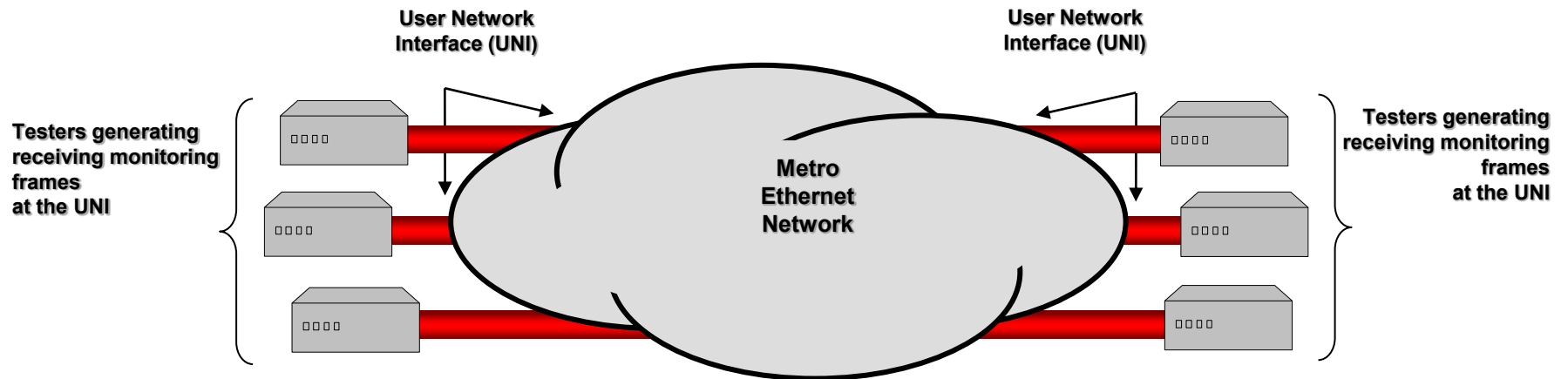
# Relationship between Ethernet Services Documents and Abstract Test Case



- A conceptual schematic of the relationship between the MEF Ethernet Services documents and the derived MEN requirements and correspondingly defined test definitions

# MEF 9 Tests from the Subscriber point of view

Test Bed for Ethernet Services at the UNI



Testers physically attach to the MEN at the UNI

Testers may be attached to the MEN at multiple UNIs



# Key Parameters Tested

- **Test Case 1: Non-looping Frame Delivery**
- **Test Case 2: EVC Leakage**
- **Test Case 3: Single Copy Broadcast, Multicast, Unknown DA Frame Delivery in MP-to-MP EVC**
- **Test Case 4: Service Frame with Invalid FCS Discard**
- **Test Case 5: Service Frame Discard Layer 2 Control Protocols**
- **Test Case 6: Service Frame Conditional Delivery**
- **Test Case 7: Service Frame Transparency Tag Exception 1**
- **Test Case 8: Service Frame Transparency Tag Exception 2**
- **Test Case 9: Service Frame transparency Tag Exception 3**
- **Test Case 10: CE-VLAN ID Preservation Untagged**
- **Test Case 11: CE-VLAN ID Preservation Tagged**
- **Test Case 12: CE-VLAN CoS Preservation**
- **Test Case 13: EVC Layer 2 Control Protocol Processing**

# Example: ABSTRACT TEST CASES FOR ETHERNET SERVICES AT THE UNI

Example: ABSTRACT TEST CASES FOR ETHERNET SERVICES AT THE UNI

Test Name	Name derived from reference document				
Test Definition ID	A punctuated alphanumeric string assigned to each defined requirement and test procedure couple using the following convention: 'one to three letter abbreviated source document name'. 'section number' - 'paragraph number in the section from which requirement is derived'. This number always figures as the last number of an ID. Ethernet Services Model=M; Ethernet Services Definitions=S; Traffic and Performance Parameters for SLs=T. Example: M.6.1-4				
Reference Document Source	Reference document and section (and paragraph when useful for clarity)				
Test Type	Functional, Conformance, Interoperability or Performance				
Test Status	Mandatory, optional				
Requirement Description	Brief description of the service requirement that the MEN MUST or SHOULD satisfy				
Test Object	Succinct description of test purpose				
Test Bed Configuration	Succinct description of test bed configuration				
VLAN ID/EVC Map	INGRESS UNI 'A'			EGRESS UNI 'B'	
	CE-VLAN ID	EVC		CE-VLAN ID	EVC
Test Procedure	Succinct description of the test procedure. CE-VLAN	10	EVC	10	EVC <sub>1</sub>
Units	Units can be time units, rates and counts in integers s most part units used are defined in RFCs 2285, 2544,	Use of other CE-VLAN IDs may be permitted provided that configuration of the CE-VLAN IDs conforms to MEF 1, Section 7.5.1.			
Variables	Variables such as number of UNIs, EVCs and CE-VLAN IDs and frame formats and lengths MUST be described.				
Results	Description of the textual, numerical and/or graphical format in which to display test results. Results can be Pass or Fail.				
Remarks	Description of any particular observations that might effect the test result				

# MEF 9 Conformance Certification

- **MEF 9 to serve as basis for the MEF Conformance Certification Program:**
  - Instill market confidence that Ethernet Services meet MEF specifications
- **Benefits:**
  - Accelerates adoption of MEF specification conformant services
  - Simplifies buying decisions
  - Service Providers and Subscribers value certified services

# For Full Details ...

... visit [www.metroethernetforum.org](http://www.metroethernetforum.org)  
to access the full specification

