DATE: 24th Oct, 2005  
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REQUESTED REVISION:  
STANDARD: IEEE Std 802.3-2005  
CLAUSE NUMBER: 57  
CLAUSE TITLE: Operations, Administration, and Maintenance (OAM)  

PROPOSED REVISION TEXT:

In subclause "57.4.3.3 Variable Request OAMPDU", add following paragraph:

The Variable Request OAMPDU Data field may contain one or more Variable Containers, to determine the scope of subsequent Variable Descriptors, as described in 57.6.2.

In subclause "57.6.2 Variable Containers", add following paragraphs:

Additionally, a special Variable Container with Variable Branch and Leaf values corresponding to an object identification number (such as 7/330 for a PME ID, or 7/282 for an EPON LLID), Variable Width equal to 2, and Variable Value equal to a 2-octet identification number, may be used in a Variable Request OAMPDU to select a particular instance of a managed object of which multiple instances exist in the remote MIB. The Variable Value identifies which instance is being addressed. Subsequent Variable Descriptors shall be understood to target the attributes of the selected instance until an other instance selector is received or the Variable Request OAMPDU ends. Each instance selector shall be acknowledged with a Variable Container indicating the same Branch/Leaf and the identifier that was selected, preceding the concerned variables. If no explicit instance selection has taken place, all instances of the concerned object are addressed. In this case, each subsequent Variable Descriptor shall be understood to consecutively target the attributes of all existing instances until an instance selector is received or the Variable Request OAMPDU ends.

If the Variable Width field is set to 0xFF in an instance selector, all instances of the concerned object are addressed. Each subsequent Variable Descriptor shall be understood to consecutively target the attributes of all existing instances until an other instance selector is received or the Variable Request OAMPDU ends. The Variable Containers returned by the far-end OAM client may be transmitted in one or more OAMPDUs, respecting the OAMPDU size limitations.

NOTE---In the case of PME Aggregation, each PME is identified by a bit position in a 32-bit string during the Handshake process. This position
should be transformed into a number between 0 and 31 before transmission in the Variable Value field.

In subclause "57.6.3 Parsing", add enumeration (f):

(f) Detection of a Variable Container in a Variable Request OAMPDU indicates that subsequent Variable Descriptors shall be applied to the instance of the managed object corresponding to the identification number expressed in the Variable Value field of the Variable Container. In the corresponding Variable Response OAMPDU, a Variable Container indicating the selected instance shall immediately precede the Variable Containers pertaining to objects of which a particular instance was selected.

RATIONALE FOR REVISION:

In the case of PME Aggregation (bonding), there are multiple instances of the PME object. Currently, there is no way to remotely read the attributes of these different instances. This solution introduces a simple way to select the desired PME prior to requesting particular attributes that have to be read out.

IMPACT ON EXISTING NETWORKS:

The behavior currently mandated by the standard is unaffected, but the new functionality is obviously not supported.

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| Please attach supporting material, if any                            |
| Submit to:-- Bob Grow, Chair IEEE 802.3                             |
| E-Mail: Bob.Grow@intel.com                                          |
|                                                                 |
| +------- For official 802.3 use -------------------------------------+ |
| REV REQ NUMBER: 1174                                                |
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For information about this Revision Request see -
http://www.ieee802.org/3/maint/requests/revision_history.html#REQ1174

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