<< NOTE FROM BOB SULTAN: This document supplies text for portions of 802.1Qbg subclause 42.2.2 discussed during the November 2010 Plenary meeting. Features supported by this text are:

1) A VID value can be supplied on the VDP Response when the network allocates VID values;
2) A GroupID provides global identification for a VLAN. The VLAN may be associated with a different VID value in each local region of the network (for example, in each rack). The GroupID need not be specified when the VLAN is known by a single VID value throughout the network. The GroupID can be specified in the VDP Associate Request or Response;
3) The term 'filter' is introduced to indicate a set of VID values or <MAC, VID> values that identifies traffic associated with a specific VSI. The filter is used, for example, to apply a VSI-type to the traffic associated with a particular VSI;
4) The TLV fields that were previously identified as 'MAC/VLAN format' and 'MAC/VLANs' in D1.2 are now known as 'Filter Info format' and 'Filter Info' respectively.
5) Four 'Filter Info formats' are currently defined (VID, MAC/VID, GroupID/VID, GroupID/MAC/VID), but other 'Filter Info formats' may be specified in the future;
6) The 'Partial' MAC/VID format, which appeared in the previous version of this subclause, is no longer needed.

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<< NOTE FROM BOB SULTAN: The proposed modifications described in this document were discussed at the 12/7/10 EVB weekly phone conference. This version respresents changes made as a result of that discussion. The following additional issues were discussed:

1) It was suggested that a bit be added to the EV,B TLV to indicate whether GroupID-to-VID mapping is supported by the edge-bridge or requested by the end-station; there were differing opinions as to whether this is necessary; the conclusion was that this can be handled by means of comment against the draft;
2) The document does not currently provide use-cases for the various types of filter values that can be applied to a VSI (e.g., VID only, MAC/VID, MAC only); it was suggested that text for this is not normative and could appear in an appendix; there was no conclusion as to whether such information is necessary;
3) It was suggested that the VDP state machines be examined to determine whether or not any change is necessary based on the modifications contained in this document;

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42.2.2 VDP TLV definition

VDP supports VSI discovery and configuration across a channel interconnecting an EVB Station and an EVB Bridge. VDP TLVs are exchanged between the EVB Station and the EVB Bridge in support of this protocol. Figure 42-1 illustrates the format of the VDP TLV.

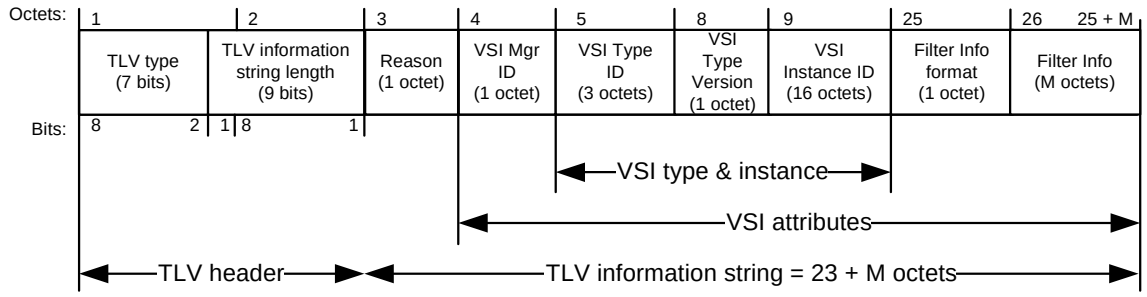

Figure 42-1—VDP TLV

The VDP TLV field definitions are contained in subclauses 42.2.2.1 through 42.2.2.8. The semantics of the VDP TLV types are defined in subclause 42.2.3.

<< Editor's note: The following text replaces the D1.2 text for subclauses 42.2.2.7 through 42.2.2.10.>>

42.2.2.7 Filter Info format

The Filter Info format field specifies the format of the Filter Info field (42.2.2.8).

Table 42-1—Filter Info format values

Filter Info Format	Value
VID	0x01
MAC/VID	0x02
GroupID/VID	0x03
GroupID/MAC/VID	0x04
Reserved for future standardization	0x05 through 0xFF

The Filter Info formats defined by this standard are shown in Table 42-1.

42.2.2.8 Filter Info field

The Filter Info field contains information from which a filter can be contructed. The filter is a set of VID values or a set of MAC/VID values. The MAC address in a MAC/VID value is an individual MAC address. The filter is applied to an EVB Station-facing Bridge Port in order to identify traffic associated with a particular VSI. This allows a VSI-type, for example, to be applied to the identified VSI.

The Filter Info field can also contain information that is not part of the filter. In particular, the Filter Info field can contain GroupID values. Like the VID, the GroupID identifies a VLAN. When the number of VLANs in the network is less than 4095, each VLAN can be assigned a VID value that is global within the network.

When the number of VLANs in the network exceeds 4094, a VID can be associated with a VLAN in one region of the network and with a different VLAN in another region of the network. In this case, the VLAN is uniquely and globally identified by a GroupID. The VLAN is locally identified by a VID in each region of the network in which the VLAN is present.

When VLANs are identified by GroupID, the EVB Station has knowledge of the GroupID but it does not, in general, know the corresponding VID to be used by traffic associated with the VLAN. The EVB Bridge is aware of, or can obtain knowledge of, the VID associated with the specified GroupID. Thus, the EVB Station can send GroupID values to the EVB Bridge via the Filter Info field of the VDP Request. The EVB Bridge can map GroupID values to local VID values. The VID is included in the filter constructed by the EVB Bridge and is returned with its corresponding GroupID to the EVB Station via the VDP Response.

42.2.2.8.1 VID Filter Info format

The VID Filter Info format specifies that the Format Info field contains a set of VID values to be associated with the VSI Instance (42.2.2.6).

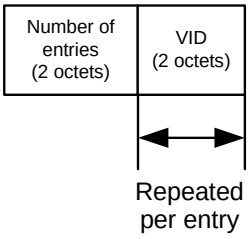

Figure 42-2—VID Filter Info format

The number of VID values in the sequence is specified by the Number of entries field. Figure 42-2 illustrates the VID Filter Info format.

The Filter Info field can specify a VID value of 0x000 which is known as the null VID (see Table 9-2). When the null VID is specified, it is the only VID specified in the Filter Info field (ie., the Number of entries field is assigned the value one). Use of the null VID indicates that the set of VID values associated with the VSI is supplied by the EVB Bridge. The EVB Bridge can obtain VID values or GroupID values from the VSI-type whose identity is specified by the VSI-type information in the VDP Request. If the VSI-type specifies GroupID values, each GroupID is mapped to a corresponding local VID. For this purpose, the EVB Bridge maintains, or has access to, the mapping between GroupID values and local VID values. The set of VID values is returned to the EVB Station via the VDP Response.

<<NOTE FROM BOB SULTAN: The *method* of applying a ‘default VSI-type’ to an S-channel’ (see below) seems clear, but the use-case for this capability is not well explained. It is suggested that someone who requires this function provide a brief explanation of how the ‘default VSI-type’ is used. Further, the Filter Info field is not needed in the case of the ‘default VSI-type’ as a ‘filter’ is not needed to identify traffic associated with the channel (as it would be with a VSI). It follows that it might be better to simply identify the ‘default VSI-type’ by specifying a reserved value for the VSI-ID and omit the filter info in this case. >>

The Filter Info field can specify a VID value of 0xFFF which is known as the wildcard VID (see Table 9-2). When the wildcard VID is specified, it is the only VID specified in the Filter Info field (ie., the Number of entries field is assigned the value one). Use of the wildcard VID value indicates that the VSI-type specified by the VDP Request is designated as the default VSI-type applied to the EVB Station-facing Bridge Port associated with the S-channel.

42.2.2.8.2 MAC/VID Filter Info format

The MAC/VID Filter Info format indicates that the Format Info field specifies a sequence of MAC/VID value pairs to be associated with the VSI Instance (42.2.2.6).

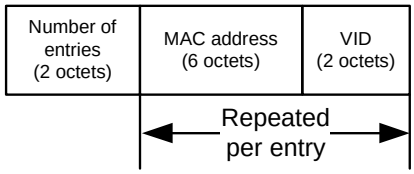

Figure 42-3—MAC/VID filter format

The number of MAC/VID pair values is specified by the field Number of Filter Info entries. Figure 42-3 illustrates the MAC/VID Filter Info format of the Filter Info field.

The Filter Info field can specify the null VID for any entry. When the null VID is specified, filtering is based only on the MAC address. That is, the filter entry is 'MAC-only'.

42.2.2.8.3 GroupID/VID Filter Info format

The GroupID/VID Filter Info format indicates that the Format Info field specifies a sequence of GroupID/VID pairs to be associated with the VSI Instance (42.2.2.6). The number of GroupID/VID pairs is specified by the Number of entries field.

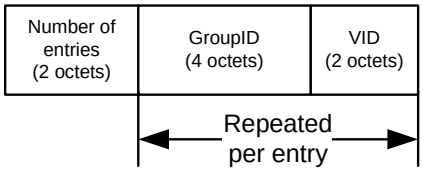

Figure 42-4—GroupID/VID filter format

Figure 42-4 illustrates the GroupID/VID Filter Info format of the Filter Info field.

The null VID (0x000) can be associated with the GroupID value when the GroupID/VID filter format is specified in the VDP Request. In this case, the EVB Bridge is expected to supply the corresponding local VID value in the VDP Response. For this purpose, the EVB Bridge maintains, or has access to, the mapping between GroupID and local VID.

42.2.2.8.4 GroupID/MAC/VID Filter Info format

The GroupID/MAC/VID Filter Info format indicates that the Filter Info field specifies a sequence of GroupID/MAC/VID triples associated with the VSI Instance (42.2.2.6). The number of GroupID/MAC/VID triples is specified by Number of entries.

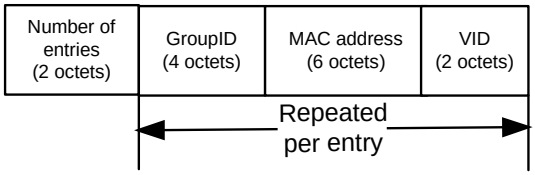

Figure 42-5—GroupID/MAC/VID filter format

Figure 42-5 illustrates the GroupID/MAC/VID Filter Info format of the Filter Info field.

The null VID (0x000) can be associated with a GroupID value when the GroupID/MAC/VID filter format is specified in the VDP Request. In this case, the EVB Bridge is expected to supply the corresponding local VID value in the VDP Response. For this purpose, the EVB Bridge maintains, or has access to, the mapping between GroupID and local VID.