DATE: 29th Apr, 2004
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REQUESTED REVISION:
STANDARD: IEEE Std 802.3ae-2002
CLAUSE NUMBER: 45.5.5.16
CLAUSE TITLE: Electrical characteristics

PROPOSED REVISION TEXT:
Make item EC7 optional, as in [N/A]. For details see attached draft.

RATIONALE FOR REVISION:
Item EC7 specifies an IOH of <= -4mA at Vi = 1.0V, and makes it Mandatory. The item refers to Section 45.4.1, where there is appended:-

NOTE - It is possible to implement the MDIO electrical interface using open drain buffers and a weak resistive pull up to a VDD of 1.2V.

The specification refers to Table 45-65, where there is a note 'a' to the corresponding item:-

'a' IOH parameter is not applicable to open drain drivers.

Although a resistive pullup of 50 ohms would meet the IOH spec, this hardly qualifies as a "weak" pullup, and indeed the IOL spec would need to be better than 50 mA to even come close to working.

IMPACT ON EXISTING NETWORKS:
I think any 'open drain' MDIO drivers will have followed the Table 45-65 requirements, rather than EC7. There should then be no impact.
Add the following entry to the end of the table found in subclause 45.5.4.3 ‘Major capabilities/options’:

<table>
<thead>
<tr>
<th>*ODB</th>
<th>Open drain buffer</th>
<th>45.4.1</th>
<th>O</th>
<th>Yes [ ] No [ ]</th>
</tr>
</thead>
</table>

Change PICS entry EC7 found in subclause 45.5.5.16 as follows:

<table>
<thead>
<tr>
<th>EC7</th>
<th>I_{OH}</th>
<th>45.4.1</th>
<th>≤ -4mA at V_{I} = 1.0V</th>
<th>*ODB</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes [ ]</td>
<td>N/A</td>
</tr>
</tbody>
</table>