**Interpretation Number:** 1-11/03
Topic: Conformance Test signal at TP3 for receiver testing
Relevant Clause: 38.6.11
Classification: Unambiguous

## Interpretation Request

In the IEEE Std 802.3 2000 as well as 2002, in Section 38.6.11 "Conformance Test signal at TP3 for receiver testing", a 4th order BT filter is specified in the text and in Figure 38-5. We are in the process of building this test system and the vendors we are working with have stated that not enough information has been provided. Specifically, they have said that the BT coefficient of this filter needs to be specified. Can you provide this information to me? Also, a change to the standard may be in order to include this information.

## Interpretation for IEEE Std 802.3-2002

The standard states in the penultimate paragraph of subclause 38.6.5 that 'A Bessel-Thomson filter is selected to produce the minimum ISI induced eye closure as specified per Table 38-4 for 1000BASE-SX and Table 38-8 for 1000BASE-LX.'

The functional test blocks, including the Bessel-Thomson filter, are intentionally not specified in detail in order to provide maximum flexibility in implementation.

What is specified instead is the behavior required. It is therefore essential that in a real world design without ideal components, the filter response be the response of the assembly of selected components used to implement the function.

The burden is therefore left on the implementer to select the filter such that the behavior, in conjunction with other real world components selected by the implementer, meets the requirements of the specification, specifically in the case of the filter '... the minimum ISI induced eye closure as specified per Table 38-4 for 1000BASE-SX and Table 38-8 for 1000BASE-LX.'.

We believe that specification of the test set up is fully specified.