

**Interpretation Number :** 1  
**Topic:** 10BASE-T Transmit Voltage Template  
**Relevant Clauses:** 14.3.1.2.1  
**Classification:** Unambiguous

### **Interpretation Request**

In reference to Figure 14-9, Voltage template in Clause 14, 10BASE-T:

The template voltage appears to be normalised to +/- 1.0 Volts. How is the template adjusted for the maximum and minimum voltages allowed?

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### **Interpretation for IEEE Std 802.3-1996**

The standard clearly states in subclause 14.3.1.2.1 that "the template voltage may be scaled by a factor of 0.9 to 1.1".

**Interpretation Number :** 2  
**Topic:** 10BASE-T Transmit Voltage Template  
**Relevant Clauses:** 14.3.1.2.1  
**Classification:** Unambiguous

### **Interpretation Request**

In reference to Figure 14-9, Voltage template in Clause 14, 10BASE-T:

Subclause 14.3.1.2.1 states that the peak differential output at TD is between 2.2V and 2.8V, how does this relate to the template?

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### **Interpretation for IEEE Std 802.3-1996**

The standard clearly states in subclause 14.3.1.2.1 that "The peak differential voltage on the TD circuit when terminated with a 100 Ohms resistive load shall be between 2.2V and 2.8V for all data sequences." This sentence does not refer to the voltage template Figure 14-9.

**Interpretation Number :** 3  
**Topic:** 10BASE-T Transmit Voltage Template  
**Relevant Clauses:** 14.3.1.2.1  
**Classification:** Unambiguous

### **Interpretation Request**

In reference to Figure 14-9, Voltage template in Clause 14, 10BASE-T:

Subclause 14.3.1.2.1 states that the template voltage may be scaled by 0.9 to 1.1. Does this mean that all  $V_0$  values stated in Table 14-1 may be multiplied by these factors to give an acceptable voltage range?

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### **Interpretation for IEEE Std 802.3-1996**

The standard clearly states in subclause 14.3.1.2.1 that the "Voltage and time coordinates for inflection points on Figure 14-9 are given in Table 14-1." They are merely that and nothing more.

**Interpretation Number :** 4  
**Topic:** 10BASE-T Transmit Voltage Template  
**Relevant Clauses:** 14.3.1.2.1  
**Classification:** Unambiguous

### **Interpretation Request**

In reference to Figure 14-9, Voltage template in Clause 14, 10BASE-T:

Is it correct that the Time (horizontal axis) of Fig 14-9 is not affected by the scaling; only the Voltage (vertical axis)?

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### **Interpretation for IEEE Std 802.3-1996**

The standard clearly states in subclause 14.3.1.2.1 that "the template voltage may be scaled by a factor of 0.9 to 1.1". There is no provision mentioned for scaling the template time axis.

**Interpretation Number :** 5  
**Topic:** 10BASE-T Transmit Voltage Template  
**Relevant Clauses:** 14.3.1.2.1  
**Classification:** Unambiguous

### **Interpretation Request**

In reference to Figure 14-9, Voltage template in Clause 14, 10BASE-T:

The receiver input voltage templates shown in Figure 14-16 and 14-17 do not match up with the transmitter plus cable model template shown in Figure 14-9. For example the rise/fall times and minimum/maximum voltages do not correspond. How can we reconcile the differences?

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### **Interpretation for IEEE Std 802.3-1996**

The transmitter template is for checking transmitter output conformance and the receiver templates are for checking receiver input conformance.