

# **10GBASE-T**

## **Cabling Ad Hoc**

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# Ad Hoc Cabling Measurements

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- **Measurement Data Collection for Modeling Task Group:**
- **Class D and Class E channel characterization**  
(per ISO/IEC 11801 2nd ed) : **Transmission parameters required.**
  - **Frequency characterization required:  $1 \text{ MHz} \leq f \leq 500 \text{ MHz}$**
  - **Frequency characterization optional:  $500 \text{ MHz} < f \leq 1 \text{ GHz}$**
- **Provide measured data exhibiting worst case relative to the limit**

# Measurement Parameters

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- Insertion Loss
- Return Loss
- Pair-to-Pair NEXT
- Power Sum NEXT
- Pair-to-Pair ELFEXT
- Power Sum ELFEXT
- Propagation delay
- Delay skew
- Unbalance attenuation (optional)
- DC loop resistance
- DC resistance unbalance

# Measurement Topologies

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- Three measurement topologies: Channel Configurations:  
100 meters – Class D and Class E

Step 1: Measure Cable

B



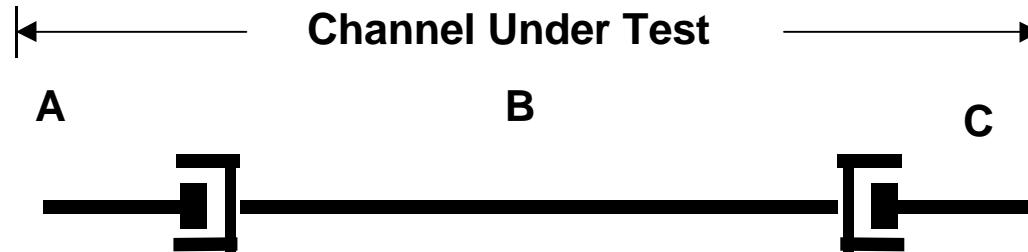
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# Measurement Topologies

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**Step 2: Interconnect - TO Model - 100 meters**



**A= 5 meters, B= 90 meters, C=5 meters**

**A and C = work area and equipment cord:**

**B= 90 meters horizontal cable**

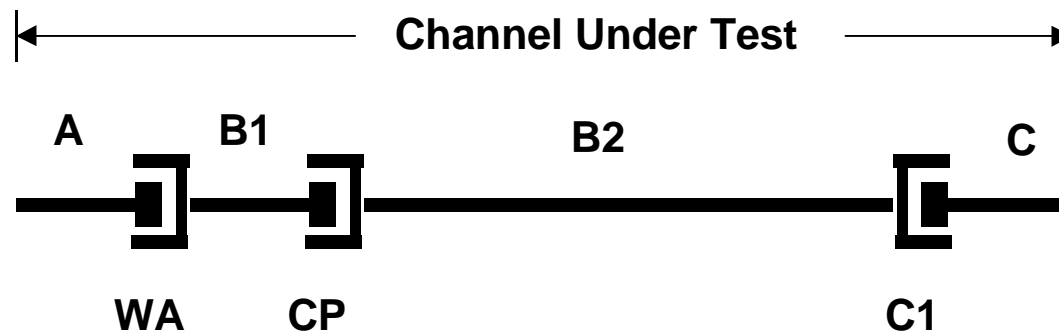
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# Measurement Topologies

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## Step 3. Interconnect – CP – TO Model – 100 meters



**A= 5 meters, B1= 5 meters of CP Cable cut from B,  
B2=85 meters of horizontal cable cut from B, C= 5 meters  
B1= CP cable, B2 =horizontal cable ,  
A and C = work area and equipment cord:**

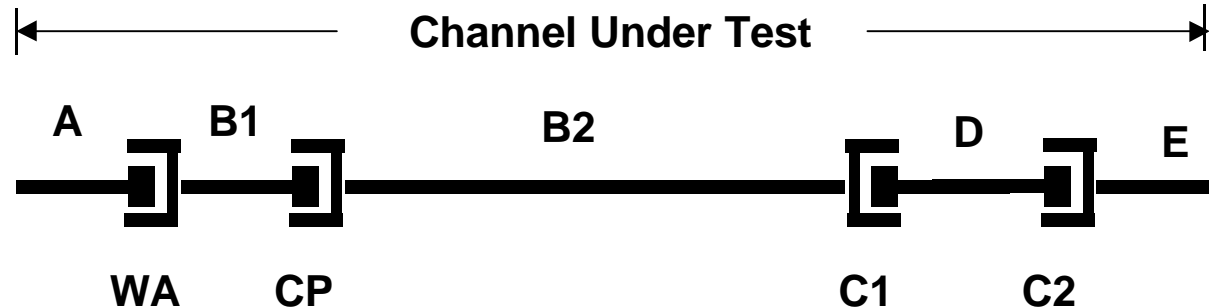
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# Measurement Topologies

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## Step 4. Cross-connect – CP – TO Model – 100 meters



A= 5 meters, B1= 5 meters of CP Cable cut from B,

B2=85 meters of horizontal cable cut from B,

D= 3 meters, E= 2 meters

B1= CP cable, B2= horizontal cable:

A,D and E= work area, patch cord, and equipment cord

# Participating Companies

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- **SolarFlare Communications**
- **Siemon Company**
- **Panduit Corporation**
- **Nordx/CDT**



# Measurement collation in process:

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