

## UTP END-TO-END SYSTEM PERFORMANCE TESTING

This Telecommunications System Bulletin (TSB) addresses field test specifications for post-installation performance measurements.

Specifications include electrical characteristics of field testers, test methods and minimum transmission requirements for UTP cabling systems.

Factors that affect performance include: cable characteristics, connecting hardware, patch cords and cross-connect wiring, total number of connections and the quality of the installation.

TIA/EIA TSB-67 makes reference to two testing configurations.

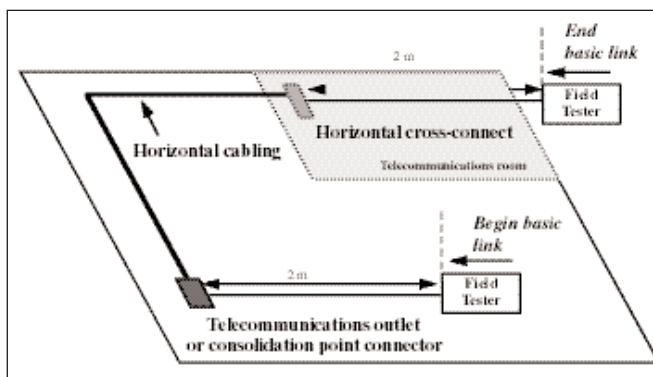
- Basic link test
- Channel test

### BASIC LINK TEST CONFIGURATION

Basic link testing is used to verify the performance of permanently installed cable.

The basic link includes the following components:

- Up to 90 m (295 ft) of horizontal cable
  - Include cable from TR to an optional consolidation point and from the consolidation point to the telecommunications outlet.
- A connection at each end of the horizontal cable
- Up to 2 m of test equipment cord from the main unit of the field tester to the local connection
- Up to 2 m of test equipment cord from the remote connection to the remote unit of the field tester.



Basic Link Test Configuration

There are four basic test parameters that should be completed on each link.

#### Wire Map

- Confirms continuity of all 8 conductors end-to-end
- Indicates any of the following wiring conditions
  - Shorts between pairs
  - Crossed pairs
  - Reversed pairs
  - Split pairs.

#### Length

- Measures the length of a cable by electrical means.

#### Attenuation

- Measures the signal loss in the channel or basic link.

#### Near-end Crosstalk (NEXT) Loss

- Measures the amount of signal coupling from one pair to another
- NEXT is tested from both ends of the basic link (local and remote ends).

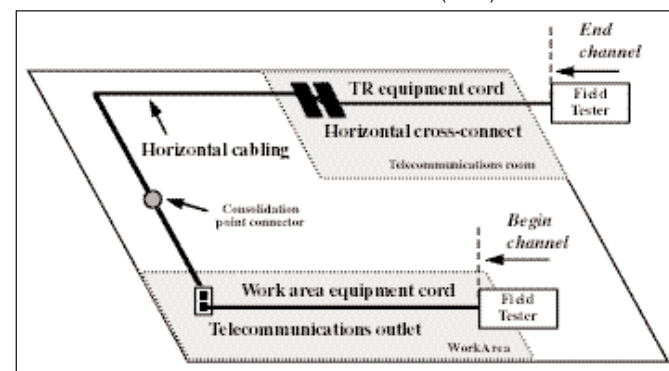
### CHANNEL TEST CONFIGURATION

Channel testing is used to verify the performance of the overall channel.

The channel includes the following components:

- Up to 90 m (295 ft) of horizontal cable
  - Include cable between TR and an optional from the consolidation point and consolidation point to the telecommunications outlet.
- Work area cord
- Telecommunications outlet/connector
- Cross-connections in the telecommunications room
  - Patch cord or jumper wire
  - Telecommunications room equipment cord.

The total length of equipment cords, patch cords and jumper wires and work area cords is not to exceed 10 m (33 ft).



Channel Test Configuration