Cat5e cable to a connector

of the of the of the CAT 5 e CAT 5 de s the Category 5, which is a network standard establishedby the Electronic Industries Association and Telecommunications Industry Association (EIA/TIA). It is in widespread use, and it is an Ethernet cable that is designed to support transfer rates up to 1gb per second. It has superseded the category 5 cables technology, which theoretically supports a maximum speed of 100 Mbit/s. These cables circumvent cross talk and other leakages. The CAT 5 cable consists of 4 pairs of twisted cable; and each of the four pairs in a Cat 5 cable has a different but exact number of twists per metre, in order to minimize crosstalk between the pairs (Nikkel).

The four wire pairs in the cable are color coded with 4 colors; namely, green, blue, orange and brown. Four wires in the cable have solid coloration, while the other four are a combination of these colors, painted in stripes onto a white background. These four pairs are twisted together and housed in a single jacket. The specific ordering of the colors differs, in accordance with the scheme employed. There are two color code standards; namely, the EIA/TIA 568A and EIA/TIA 568B, which are used to terminate the cable at the RJ45 ends (Nikkel).

Between similar devices, such as a PC to PC connection, a crossover cable would be required. Hence in this case, one end would employ the 568B standard, whereas the other end must utilize the 568A standard. When unlike devices are required to be connected, like a PC card to a hub, a straight through cable is used. In this case, both the RJ45 connectors comply with the same color code standard, either 568A or 568B (Nikkel).

(Byard)

Steps to terminate the cable to the connector

First, the covering sheath of the cat 5 cable at the end is to be removed.

Then, the pairs are to be untwisted and the colored wires are to be arranged, as per the required 568A or 568B standard. This is shown in the image appended below:

(EIA/TIA 568A & 568B Standard)

After this the individual wires are to be trimmed and inserted into the RJ45 connector, ensuring that all the wires are properly placed inside the connector. Thereafter, a crimping tool has to be employed, in order to fasten the cable to the connector. The length of the wire is to be minimized to the extent possible, as longer wires tend to decrease the transfer speeds. A similar procedure is to be followed at the other end of the cable, in order to obtain an Ethernet cable.

The CAT 5e Ethernet cable offers a fast and reliable way of transferring information between network cables. However without the use of an amplification device they can only be used up to a length of 100 metres, as per the standard set out by the EIA/TIA. The required color coded combination is to be chosen depending on the application required, so that a straight through or a cross over cable would be suitable, in a specific environment.

Works Cited

Byard, Larry F. Color – Code Standards. 9 August 2004. 25 July 2010 .

EIA/TIA 568A & 568B Standard . 25 July 2010 .

Nikkel, Steven. How to wire Ethernet Cables. 11 July 2010. 25 July 2010 .