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Information technology – Customer premises cabling – Planning and installation guide to support ISO/IEC 8802-5 token ring stations

Technologie de l'information –
Câblage des locaux de clients – Guide de planification et d'installation pour les stations en anneau à jetons de l'ISO/CEI 8802-5

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Clause Page

Foreword 5
1 Scope 7
1.1 Normative references 7

2 Definitions and abbreviations 8

3 Topology in principle 11
3.1 System overview 11
3.2 Basic topology 11
3.3 Using bridges in a token ring network 17

4 Guidelines for topological parameters 18
4.1 Building rings using the recommended topology and distances 20

5 Requirements on cabling 22
5.1 Requirements on STP cabling 22
5.2 Other cabling 22

6 Cabling topology 22
6.1 Content of chapter 22
6.2 Planning considerations 23
6.3 Cabling structure 23
6.3.1 Trunk cabling 23
6.3.2 Lobe cabling 23
6.3.3 Cable length 23
6.3.4 Cable length for optical fibre cables 23
6.4 Positioning cabling components 23
6.4.1 Centralised arrangement 23
6.4.2 Decentralised arrangement 24
6.4.3 Placement of concentrators 25
6.5 Lobe and Trunk Cable Connections 25

7 Guidelines for determining allowable network configurations 26
7.1 Attenuation Limits 28

8 Guidelines for documentation 29
8.1 General Guidelines 29
8.2 Example 29

9 Relevant safety standards 32

10 Installation considerations 33
10.1 Purpose 33
10.2 Recommended separation distances to power lines 33
10.2.1 Recommended separation for STP cables 33
10.2.2 Recommended cable separation for optical fibre cables 33
10.3 Telecommunications Closet Considerations 34
10.3.1 Telecommunications closet location 34
10.3.2 Cable installation in ducts 34
10.4 Guidelines for cabling between telecommunications closets 34
10.4.1 Guidelines for balanced cabling between telecommunications closets 34
10.4.2 Guidelines for optical fibre cabling between telecommunications closets 34
10.5 Bonding the equipment to ground 34

11 Use of unshielded twisted pair as an alternative medium for lobes for 4 Mbit/s token ring operation 35
11.1 Scope 35
11.2 Overview 35
11.3 Unshielded twisted pair cabling characteristics 35
11.3.1 Cable construction 35
11.3.2 Attenuation 35
11.3.3 Near end crosstalk (NEXT) attenuation 36
11.3.4 Characteristic impedance 36

Withdrawn

Clause Page

11.4 Medium Interface Connection 37
11.5 Cable Routing 38
11.6 Bit error rate 38
11.7 Safety 38
11.7.1 Installation and maintenance guidelines 38
11.8 Outlet administration 38
11.9 Future work 38

12 Testing of installed cabling 39

Figures

1, Basic topology for token ring circuits 12
2, Partitioning of PHY and medium 13
3, Basic Topology for Token Ring Circuits 14
4, Trunk cabling with back-up paths 15
5, Trunk cabling with back-up path in use 15
6, General Topology of Trunk Path for token ring 17
7, Example of a Network with Bridges and a Backbone Ring 18
8, Topology of Customer Premises Cabling 20
9, Centralized concentrator arrangement 24
10, Decentralised Concentrator Arrangement 25
11, Transmission path continuity at the TCU 26
12, Multi-Telecommunications closet configuration 27
13, Restored ring for worst case 28
14, Building labels 30
15, Horizontal labels 31
16, Work area outlet labels 32
17, Near end crosstalk attenuation 36
18, Pin assignment for IEC 603-7 connector, front view 37

Tables

1, Cabling Limits, General Guidelines 19
2, Cabling limits, detailed trunk cabling guidelines 19
3, 150 Ω Shielded twisted pair cable characteristics for 4 and 16 Mbit/s 22
4, Minimum cable separation from sources of interference 33
5, Maximum recommended cable attenuation 36
6, Attachment to the modular data connector 37

Withdrawn

Foreword

ISO (the International Organization for Standardization) and IEC (teh International Electrotechnical Commision) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical commitees establisshed by their respective organizations to deal with particular field of thechnical activity. ISO and IEC technical commitees collaborate in fields of mutual interest. Other international organizations, govermental and non-govermental, in liason with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC1.

ISO/IEC 12075, which is atechnical report of type 3, has been prepared by ISO/IEC Joint Technical Committee JTC 1/SC 25.

The main task of technical committes is to prepare International Standards. In exceptional circumstances a technical committee may propose the publication of a technical report of one of the following types:

- type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;

- type 2, when the subject is still inder technical development or where for any other reason there is the future but not immediste possibility of an agreement on an International Stanndard;

- type 3, when a technical commitee has collected data of a different kind from that which is normally published as an International Standard ("state of the art" for example).

Technical reports of types 1 and 2 are subject to review within three years of publication, to decide wether they can be transformed into International Standards. Technical reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid og useful.

In many cases, information in this technical report is subject to change. The working group expect to re-issue and update this report on a periodic basis to supply the international community with the latest information on evolving standardization activities.

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Information technology - Customer premises cabling

Planning and installation guide to support ISO/IEC 8802-5 token ring stations

1 Scope

The purpose of this technical report is to sypplement the token ring standard ISO/IEC 8802-5, and the annex "Information technology - Local and metropolitan area networks - Token ring access method and physical layer specification - Recommended practice for use of unshielded twisted pair cable (UTP) for token ring data transmission at 4 Mbps." with information relating to suitable transmission media and installation guidance, without placing undue constraint on implementers regarding detailed sizing and configuration. The recommendations and topologies outlined here draw on and are complementary to the ISO/IEC generic cabling Standard, 11801, under development at the approval of this guide.

This report therefore includes the following:

- a description and recommended values of characteristics of the appropriate elements within a token ring network;
- the cabling system topology with recommended distances;
- transmission requirements of suitable medium for 4 and 16 Mbit/s token rings;
- guidelines for the design, planning and installation of cabling systems to support 4 and 16 Mbit/s token rings;
- guidance on documentation and labelling to support token rings.

The procedure to check the suitability of installed cabling to support 4 or 16 Mbit/s token rings is a topic for future study.

This technical report addresses the use of both shielded and unshielded lobe cabling. Unless otherwise noted within the text, all cabling recommendations specifically refer to using 150 Ω shielded twisted pair lobe cabling.

When ISO 8802-5 is reissued this report should be updated to realign with both that guide and the Generic wiring standard.

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1.1 Normative references

The following normative documents contain provisions which, through reference in the text, constitute provisions of this technical report. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this technical report are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 96-1: 1986, Radio-frequencey cables-Part 1: General requirements and measuring methods.

IEC 603-7: 1990, Connetors for frequencies below 3 MHz for use with printed boards - Part 7: Detail specification for connectors, 8-way, included fixed and free connectors with common mating features.

ISO/IEC 8802-5: 1992,Information processing systems - Local and metropolitan area networks - Part 5: Token ring access method and physical layer specifications.

ISO/IEC 11801: General cabling standard (under consideration)