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Information technology – Generic cabling for customer premises

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CONTENTS

INFORMATION TECHNOLOGY – GENERIC CABLING FOR CUSTOMER PREMISES

FOREWORD

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10) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

International Standard ISO/IEC 11801 was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

This consolidated version of ISO/IEC 11801 consists of the second edition (2002) and its Amendment 1(2008) as well as its Corrigenda 1 (September 2002), 2 (December 2002) and 3 (September 2008).

The technical content is therefore identical to the base edition and its amendment and has been prepared for user convenience.

It bears the edition number 2.1.

A vertical line in the margin shows where the base publication has been modified by amendment 1.

The significant changes with respect to the first edition and its amendments are listed in Annex I.

This International Standard has taken into account requirements specified in application standards listed in Annex F. It refers to International Standards for components and test methods whenever appropriate International Standards are available.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This International Standard has been approved by vote of the member bodies, and the voting results for both the base publication and its Amendment 1 may be obtained from the address given on the second title page.

INTRODUCTION

Within customer premises, the importance of the cabling infrastructure is similar to that of other fundamental building utilities such as heating, lighting and mains power. As with other utilities, interruptions to service can have a serious impact. Poor quality of service due to lack of design foresight, use of inappropriate components, incorrect installation, poor administration or inadequate support can threaten an organisation's effectiveness.

Historically, the cabling within premises comprised both application specific and multipurpose networks. The original edition of this standard enabled a controlled migration to generic cabling and the reduction in the use of application-specific cabling.

The subsequent growth of generic cabling designed in accordance with ISO/IEC 11801 has

a) contributed to the economy and growth of Information and Communications Technology (ICT),

b) supported the development of high data rate applications based upon a defined cabling model, and

c) initiated development of cabling with a performance surpassing the performance classes specified in ISO/IEC 11801:1995 and ISO/IEC 11801 Ed1.2:2000.

NOTE ISO/IEC 11801, edition 1.2 consists of edition 1.0 (1995) and its amendments 1 (1999) and 2 (1999).

This second edition of ISO/IEC 11801 has been developed to reflect these increased demands and opportunities.

This International Standard provides:

a) users with an application independent generic cabling system capable of supporting a wide range of applications;

b) users with a flexible cabling scheme such that modifications are both easy and economical;

c) building professionals (for example, architects) with guidance allowing the accommodation of cabling before specific requirements are known; that is, in the initial planning either for construction or refurbishment;

d) industry and applications standardization bodies with a cabling system which supports current products and provides a basis for future product development.

This International Standard specifies a multi-vendor cabling system which may be implemented with material from single and multiple sources, and is related to:

a) international standards for cabling components developed by committees of the IEC, for example copper cables and connectors as well as optical fibre cables and connectors (see Clause 2 and bibliography);

b) standards for the installation and operation of information technology cabling as well as for the testing of installed cabling (see Clause 2 and bibliography);

c) applications developed by technical committees of the IEC, by subcommittees of ISO/IEC JTC 1 and by study groups of ITU-T, for example for LANs and ISDN;

d) planning and installation guides which take into account the needs of specific applications for the configuration and the use of cabling systems on customer premises(ISO/IEC 14709 series).

Physical layer requirements for the applications listed in Annex F have been analysed to determine their compatibility with cabling classes specified in this standard. These application requirements, together with statistics concerning the topology of premises and the model described in 7.2, have been used to develop the requirements for Classes A to D and the optical class cabling systems. New Classes E and F have been developed in anticipation of future network technologies.