TECHNICAL REPORT

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Guidelines for the user interface in multimedia equipment for general purpose use

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

GUIDELINES FOR THE USER INTERFACE IN MULTIMEDIA EQUIPMENT FOR GENERAL PURPOSE USE

FOREWORD

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IEC 61997, which is a technical report, has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
100/144/CDV	100/249/RVC

Full information on the voting for the approval of this technical report can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

The committee has decided that the contents of this publication will remain unchanged until 2006. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

This document which is purely informative is not to be regarded as an International Standard.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

There is growing use of multimedia equipment of every kind both in society and in the home; huge amounts of information are being exchanged both at the individual level and throughout society. However, as things stand it can easily be imagined that when this equipment is brought into the home, the complex and inconvenient operation seen as characteristic of multimedia equipment featuring electronic functions will make the equipment difficult, inconvenient and unprofitable to use; and incorrect operation may lead to confusion.

If the use of various multimedia appliances is to spread together with technological developments and the more advanced use of information, greater care than ever must be taken in the design of user interfaces that will make the equipment easy to use even by ordinary people who have received no special training in operating the equipment. The situation must not be allowed to arise where a multimedia appliance provokes a negative reaction because it is difficult to understand or difficult to use.

The designer is well acquainted with the appliance, the content of the system, and the peripherals; but a person operating the equipment for the first time starts with no knowledge at all.

The purpose of these guidelines is to take note of those inconveniences in the operation of multimedia equipment observed today, and to specify check-points that should be given primary consideration in the development of good multimedia products and systems that the general, non-professional user can use with confidence.

It is difficult to draw up detailed, concrete standards for products that have yet to be manufactured. In addition, the application to various appliances of standards drawn up over a period of time is impracticable in the field of multimedia, which is developing so rapidly. For this reason we believe it is essential for basic, minimum-level user interface guidelines to be drawn up at an early date, even if such guidelines are incomplete as standards.

The items taken up here are those concerned only with the problems of operation and use characteristic of multimedia equipment and systems, and assume the existence of detailed guidelines or standards for user interface recommended by various international bodies. Accordingly, other standards or guidelines as given in the annex should be consulted with regard to detailed ergonomic design standards and design standards shared with other, ordinary appliances.

Observation of these guidelines will lead to the kind of multimedia appliances that will satisfy user expectations, and at the same time will promote free competition in the development of multimedia equipment and systems.

GUIDELINES FOR THE USER INTERFACE IN MULTIMEDIA EQUIPMENT FOR GENERAL PURPOSE USE

1 Scope

This Technical Report applies to the designing of multimedia equipment such as information and communications equipment or audio-video equipment and systems.

In this report, multimedia equipment (systems) refers to equipment or systems mainly intended for use by the general public, either in the home or in public institutions. It is assumed that these products are meant to be used by anyone, including children, adults and senior citizens, using the equipment for the first time without any special previous training.

The scope of the user interface covered by these guidelines is limited to the problems peculiar to multimedia equipment.

Numerical details regarding user interface ergonomics, such as the size and spacing of switches, the expressive use of letters and pictograms, etc. are the province of the ergonomic standards and guidelines being considered by various organizations and are excluded from this report.

2 Reference documents

IEC 60447, *Man-machine-interface (MMI) – Actuating principles*

ISO 9241-10 to ISO 9241-17, *Ergonomic requirements for office work with visual display terminals (VDTs)*

ISO 13407:1999, *Human-centred design process for interactive systems*

ISO 14915-1 and -3:2000, *Software ergonomics for multimedia user interfaces*

ISO 1503: 1977, *Geometrical orientation and directions of movements*

TRON:1994, *Ken Sakamura eds., "TRON Human Interface Standard Handbook", Personal Media Co., 1994, in Japanese*

SIDE: *Structured User Interface Design and Evaluation Method (Research Institute of Human Engineering for Quality Life User Interface Committee*