

# TECHNICAL REPORT



## Conceptual model of standardization for haptic multimedia systems



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The text of this Technical Report is based on the following documents:

Draft	Report on voting
100/3573/DTR	100/3630/RVDTR

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

The language used for the development of this Technical Report is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

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## INTRODUCTION

The multimedia devices covered by TC 100 used to be primarily stationary audio and video devices, but now comprise mobile and wearable devices, for which it is necessary to consider different specifications from conventional stationary devices. At first, this Technical Report clarifies the conceptual model of haptics issues under the scope of TC 100, and then the details are described to understand the standardization items of haptics-related issues under the scope of TC 100.

## MULTIMEDIA SYSTEMS – HAPTICS – CONCEPTUAL MODEL OF STANDARDIZATION

### 1 Scope

This document describes the conceptual model of vibro-tactile-based haptics in multimedia systems and equipment used in electrical appliances, computer interfaces, automobiles, amusements, and communication devices. This model describes possible standardization items.

NOTE Ergonomic aspects of haptics systems are standardised in the ISO 9241 series. The scope of that standard is focused on the physical specifications of the devices, signal properties and formats to ensure the common use with compatibility among various types of devices in haptics systems.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1

##### **haptic sensation**

sensation, including tactile sensation and kinesthetic sensation perceived by bathyesthesia

#### 3.2

##### **tactile sensation**

sensation detected by skin receptors

#### 3.3

##### **haptic display**

device to produce touch sensation

#### 3.4

##### **tactile display**

device that stimulates the skin receptors

#### 3.5

##### **haptic reproduction**

creating realistic haptic sensation in VR and tele-manipulation, targeting a real sensation

#### 3.6

##### **haptic notification**

notifying a user of necessary information by haptic stimulation