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Information technology — Affective computing user interface (AUI) —

Part 1: **Model**

Technologies de l'information — interface pour la reconnaissance et la simulation des émotions —

Partie 1: Modèle

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Foreword

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 35, *User interfaces*.

A list of all parts in the ISO/IEC 30150 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

Introduction

Affective computing individualizes user experience based on user needs and characteristics to achieve better outcomes, including: increased effectiveness, efficiency, satisfaction, and user experience.

It is important to consider affective characteristics of humans in the design and presentation of human-computer interactions. Affective computing builds a harmonious human-computer environment by enabling computing-based systems to recognize, interpret and simulate human affects. Affective applications promise new insights into what people are feeling and can better serve their needs.

Limitations on affective computing include diverse affective characteristics currently used and the way to interpret and reply to these affective characteristics.

A general, standardized and systematic model is needed to facilitate applying affective computing within human-computer interaction regarding usability and accessibility.

This document presents a systematically defined model for affective computing user interfaces (AUI) and topics for AUI standardization. This can be important to establish the core and foundation of AUI and their applications.

This document is intended to be utilized as a reference (for guidance) for developers of systems that want to meet the needs of diverse users.

Future parts of the ISO/IEC 30150 series will provide additional guidance on implementation of AUI.

Information technology — Affective computing user interface (AUI) —

Part 1: Model

1 Scope

This document establishes a model for affective computing user interfaces (AUI). Annex B also suggests topics for AUI standardization.

This document does not specify the implementation of affective computing.

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 terminology databases for use in standardization at the following addresses:

— IEC Electropedia: available at https://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
affective computing user interface
AUI
user interface that includes the use of *affective characteristics* (3.3) to meet users' affective needs

Note 1 to entry: AUI can be implemented in software or hardware.

3.2
affective computing
collection, recognition, strategy and presentation of *affective characteristics* (3.3) of human-computer interactions

3.3
affective characteristic
particular type of affect that is believed to be useful

3.4
affect representation
general and computable model that can be used for *affective characteristic recognition* (3.6) and presentation within a computing-based system

3.5
dimensional affective space
combination of several *affective characteristics* (3.3) that can be represented as a set of dimensions

Note 1 to entry: Each affective characteristic can have a range of values (e.g. from strongly positive to strongly negative, or between two alternatives) that can form the basis of dimension in affective dimensional space.