

---

---

**Ergonomics of human-system  
interaction —**

**Part 125:  
Guidance on visual presentation of  
information**

**iTeh STANDARD PREVIEW** *Ergonomie de l'interaction homme-système —*

**(standards.iteh.ai)** *Partie 125: Recommandations relatives à la présentation visuelle  
d'informations*

ISO 9241-125:2017

<https://standards.iteh.ai/catalog/standards/sist/6f01b865-46f6-45ab-9cdc-eadb10aabe8e/iso-9241-125-2017>



**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

ISO 9241-125:2017

<https://standards.iteh.ai/catalog/standards/sist/6f01b865-46f6-45ab-9cdc-eadb10aabe8e/iso-9241-125-2017>



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

# Contents

	Page
<b>Foreword</b> .....	<b>vii</b>
<b>Introduction</b> .....	<b>viii</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Application of ISO 9241-125</b> .....	<b>7</b>
4.1 Accessibility.....	7
4.2 General guidance for presentation of information.....	7
4.3 Guidance on the presentation of visual information.....	7
4.4 General issues for the display of visual information.....	8
4.4.1 Legibility of characters and symbols.....	8
4.4.2 Character height.....	8
4.4.3 Scaling visually presented information.....	8
<b>5 Visual structuring of information</b> .....	<b>8</b>
5.1 Arranging and labelling information.....	8
5.1.1 Information location.....	8
5.1.2 Required information.....	8
5.1.3 Consistent location of areas.....	8
5.1.4 Density of displayed information.....	9
5.1.5 Distinction of groups.....	9
5.1.6 Sequencing.....	10
5.1.7 Use of conventions.....	11
5.1.8 Functional grouping.....	11
5.1.9 Arrangement of groups for rapid detection and discrimination.....	11
5.1.10 Consistency with paper forms.....	11
5.1.11 Labelling user interface elements.....	11
5.1.12 Label designation.....	11
5.1.13 Grammatical construction of labels.....	11
5.1.14 Label position.....	11
5.1.15 Label position for individual check boxes or radio buttons.....	12
5.1.16 Separation of labels and associated information.....	12
5.1.17 Label format and alignment.....	12
5.1.18 Labels for units of measurement.....	12
5.1.19 Differentiating objects of identical type.....	12
5.2 Using windows to present information.....	12
5.2.1 Appropriateness of windows.....	12
5.2.2 Multiple windows.....	13
5.2.3 Selection of window format.....	13
<b>6 Using user interface elements to organize information</b> .....	<b>14</b>
6.1 Lists.....	14
6.1.1 List structure.....	14
6.1.2 Item separation.....	14
6.1.3 Alphabetic information.....	14
6.1.4 Numeric information.....	14
6.1.5 Fixed font size.....	14
6.1.6 Item numbering.....	15
6.1.7 Indication of relative position of displayed information.....	15
6.1.8 Indication of list continuation.....	15
6.2 Tables.....	15
6.2.1 List organization in tables.....	15
6.2.2 Maintaining column and row headings.....	16
6.2.3 Spacing as a visual technique for grouping information.....	16

6.2.4	Column spacing.....	16
6.3	Entry fields.....	16
6.3.1	Entry field format.....	16
6.3.2	Entry field length.....	17
6.4	Windows.....	17
6.4.1	Unique window identification.....	17
6.4.2	Application information.....	17
6.4.3	Default window parameters.....	17
6.4.4	Consistent window appearance within an application.....	17
6.4.5	Consistent window appearance within a multi-application environment.....	17
6.4.6	Indication of primary/secondary window relationships.....	18
6.4.7	Identification of window control elements.....	18
6.4.8	Location of window control elements.....	18
6.4.9	Size and location across sessions.....	18
6.4.10	Duplicate or split windows.....	18
6.4.11	Resizing windows.....	18
6.4.12	Resizing window panes.....	18
6.4.13	Predictable new window location.....	18
6.4.14	New windows offset.....	18
6.4.15	New window on top.....	18
6.4.16	Placement and size of new window.....	19
6.4.17	Placement of secondary windows.....	19
6.4.18	Warning for application termination.....	19
6.4.19	Restoring hidden windows.....	19
6.4.20	Identification cues for iconified window.....	19
6.4.21	Predictable position of an icon representing a window.....	19
6.4.22	Visual cue in icon for important events.....	19
6.4.23	Discriminable cue for application status.....	19
6.4.24	Discriminable cue for restored windows.....	20
6.4.25	Identification cues for restored window.....	20
6.4.26	Input cursor location.....	20
6.4.27	Visual cues for window with focus.....	20
6.4.28	Manipulation of the size of windows.....	20
6.4.29	Feedback provided during resize.....	20
6.4.30	Original size indicator during resize.....	20
6.4.31	Independence of resize dimensions.....	20
6.4.32	Scaling.....	21
6.4.33	Sizing effects on window contents.....	21
6.4.34	Scrolling and paging.....	21
6.4.35	Moving window contents in multiple units.....	21
6.4.36	Provide scrolling by smallest meaningful unit.....	21
6.4.37	Provide scrolling by large units.....	21
6.4.38	Consistent direction of scrolling.....	21
6.4.39	Visual cue for group membership.....	22
<b>7</b>	<b>Graphical objects.....</b>	<b>22</b>
7.1	Cursors and pointers.....	22
7.1.1	Designation of cursor and pointer position.....	22
7.1.2	Cursor occlusion of characters.....	22
7.1.3	Cursor and pointer location.....	22
7.1.4	Cursor “home” position.....	22
7.1.5	Initial position for entry fields.....	22
7.1.6	Point designation accuracy.....	22
7.1.7	Different cursors/pointers.....	22
7.1.8	Active cursor/pointer.....	23
7.1.9	Multiple cursors and pointers.....	23
7.2	Icons.....	23
7.2.1	Guidance on design and use of icons.....	23
7.2.2	Text alternative for icons.....	23

	7.2.3	Neutral icons .....	23
	7.2.4	Cross-cultural icons.....	23
	7.2.5	Ease of learning.....	24
	7.2.6	Icons containing consistent cues .....	24
	7.2.7	National or international graphics.....	24
	7.2.8	Reuse of existing icons.....	24
	7.2.9	User guidance for icons.....	24
<b>8</b>		<b>Coding techniques.....</b>	<b>24</b>
	8.1	General recommendations for codes.....	24
	8.1.1	Introduction.....	24
	8.1.2	Meeting user expectations.....	25
	8.1.3	Explaining codes.....	25
	8.1.4	Distinctiveness of codes.....	25
	8.1.5	Consistent coding.....	25
	8.1.6	Meaningfulness.....	25
	8.1.7	Access to meaning of code.....	25
	8.1.8	Use of standards or conventional meaning.....	26
	8.1.9	Rules of code construction.....	26
	8.1.10	Codes for missing information.....	26
	8.1.11	Partitioning long information items.....	26
	8.2	Alphanumeric coding.....	26
	8.2.1	Length of character strings.....	26
	8.2.2	Alphabetic vs. numeric codes.....	26
	8.2.3	Same meaning for upper and lower case characters.....	26
	8.2.4	Visually similar alphanumeric characters.....	27
	8.2.5	Length of abbreviations.....	27
	8.2.6	Abbreviations of different length.....	27
	8.2.7	Truncation.....	27
	8.2.8	Deviation from the rules of code construction for abbreviations.....	27
	8.2.9	Conventional and task related abbreviations.....	27
	8.3	Graphical coding.....	27
	8.3.1	Distinctive states of user-interface elements.....	27
	8.3.2	Levels of graphical codes.....	27
	8.3.3	Three-dimensional coding.....	28
	8.3.4	Coding with geometric shapes.....	28
	8.3.5	Coding with different types of lines.....	28
	8.3.6	Line orientation.....	28
	8.4	Colour coding.....	28
	8.4.1	Redundant colour coding.....	28
	8.4.2	Colour coding for people with colour deficits.....	28
	8.4.3	Legend showing colour codes.....	29
	8.4.4	Redundant codes displayed in legends.....	29
	8.4.5	Different use of one colour.....	29
	8.4.6	Limiting the number of colours.....	29
	8.4.7	Colour assignment to categories of information.....	29
	8.4.8	Colour coding conventions.....	30
	8.4.9	Number of colours used.....	30
	8.4.10	Assignments based on cultural conventions.....	30
	8.4.11	Cross-cultural design.....	30
	8.4.12	Colour assignments for special and temporary states.....	30
	8.4.13	Continuous scales.....	30
	8.4.14	Coding differences.....	31
	8.4.15	Coding relative values.....	31
	8.4.16	Ordered coding.....	31
	8.4.17	Consistency of colour codes.....	31
	8.4.18	Change of state.....	31
	8.4.19	Additional guidance on the use of colour.....	31
	8.5	Markers.....	32

8.5.1	Special symbols for markers.....	32
8.5.2	Markers for multiple selection.....	32
8.5.3	Unique use of symbols for markers.....	32
8.5.4	Positioning of markers.....	32
8.6	Other coding techniques.....	33
8.6.1	Blink coding.....	33
8.6.2	Highlighting by blinking.....	33
8.6.3	Size coding.....	33
8.6.4	Luminance (brightness) coding.....	33
8.6.5	Relative Lightness Levels.....	33
8.6.6	Image polarity reversal.....	33
8.6.7	Underlining.....	33
8.6.8	Coding of areas using different coding techniques.....	34
<b>9</b>	<b>Use of Colour.....</b>	<b>34</b>
9.1	General recommendations.....	34
9.2	Specific guidance on using colour.....	34
9.2.1	Avoiding presentation of information by colour alone.....	34
9.2.2	Overuse of colours.....	34
9.2.3	Colour interpretation from memory colour.....	35
9.2.4	Colour limits for visual search.....	35
9.2.5	Use of focal colours when accurate colour identification is needed.....	35
9.2.6	Size of character strings, data fields, and symbols when presented with colour.....	35
9.2.7	Accurate colour discrimination.....	36
9.2.8	Events in the visual periphery.....	36
9.2.9	Object separation.....	36
9.2.10	Background colours.....	36
9.2.11	Foreground and background colours for text.....	36
9.2.12	Continuous reading.....	37
9.2.13	Unintended depth effects.....	37
9.2.14	Size and the use of blue.....	37
9.2.15	Blue and red on dark backgrounds.....	37
9.2.16	Spectrally extreme colours.....	37
9.2.17	Improved colour identification.....	38
9.2.18	Contrast.....	38
9.2.19	Contrast enhancement.....	38
9.2.20	Realistic colours.....	39
9.2.21	Drawing attention.....	39
9.2.22	Restricted use of warning colours.....	39
	<b>Bibliography.....</b>	<b>40</b>

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](http://standards.iteh.ai) (standards.iteh.ai)

The committee responsible for this document is ISO/TC 159, *Ergonomics*, Subcommittee SC 4, *Ergonomics of human-system interaction*.  
ISO 9241-125:2017  
<https://standards.iteh.ai/catalog/standards/sist/6f01b865-46f6-45ab-9cdc->

This first edition of ISO 9241-125, together with ISO 9241-112, cancels and replaces ISO 9241-12:1998, which has been technically revised with the following changes:

- specific guidance relating to the presentation of visual information has been updated and extended (recommendations for presentation of information in other modalities will be addressed in future parts of ISO 9241);
- the characteristics of presented information have been elaborated with respect to ISO 9241-112;
- textual descriptions of the figures (alt text) have been added to enhance accessibility for sight-impaired users (in PDF, these are “pop-ups” which appear when the cursor is passed over the figure).

A list of all parts in the ISO 9241 series can be found on the ISO website.

## Introduction

ISO 9241 is a multi-part International Standard that deals with both the hardware and software ergonomic aspects of human-system interaction.

ISO 9241-125 is intended for use by the following types of users:

- a) the user interface designer, who will apply it during the development process.
- b) the buyer, who will reference it during the product procurement process, and whose end users will gain from the potential benefits it provides.
- c) project managers who are responsible for managing development processes.
- d) designers of user interface development tools to be used by interface designers.
- e) writers of software industry user-interface guidelines to be used by interface designers, e.g. “interface style guides”.

Guidance relating to presenting information provided in International Standards is intended to be applied to user-interface guidelines published by industry sources.

The ultimate beneficiary of this document will be the end user of the presented information. Although it is unlikely that the end user will read the standard or even know of its existence, its application by designers, buyers, and evaluators should provide user interfaces that are more usable, consistent and that enable greater productivity.

**ITeH STANDARD PREVIEW**

This document consists of general recommendations and conditional recommendations concerning presentation of information. General recommendations apply to most users, tasks, environments, and technology. In contrast, conditional recommendations are recommendations that apply only within the specific context for which they are relevant (e.g. particular kinds of users, tasks, environments, technology). Conditional recommendations have an “if-then” structure. The recommendations were developed primarily by reviewing the existing relevant literature and empirical evidence, then generalizing and formulating this work into recommendations for use by the interface designer and/or evaluator.



# Ergonomics of human-system interaction —

## Part 125:

# Guidance on visual presentation of information

## 1 Scope

This document provides guidance for the visual presentation of information controlled by software, irrespective of the device. It includes specific properties such as the syntactic or semantic aspects of information, e.g. coding techniques, and gives provisions for the organization of information taking account of human perception and memory capabilities. Those of its provisions that do not apply to specific types of visual interfaces clearly indicate any limitations to their applicability. It does not address specific details of charts, graphs or information visualization.

This document can be utilized throughout the design process (e.g. as specification and guidance for designers during design or as a basis for heuristic evaluation). Its provisions for the presentation of information depend upon the visual design approach, the task, the user, the environment and the single or multiple technologies that might be used for presenting the information. Consequently, this document cannot be applied without knowledge of the context of use. It is not intended to be used as a prescriptive set of rules to be applied in its entirety but rather assumes that the designer has proper information available concerning task and user requirements and understands the use of available technology.

Some of the provisions of this document are based on Latin-based language usage and might not apply, or might need to be modified, for use with languages that use other alphabets. In applying those that assume a specific language base (e.g. alphabetic ordering of coding information, items in a list), it is important that care is taken to follow its intent of the standard when translation is required to a different language.

This document does not address auditory or tactile/haptic presentation of information or modality shifting for the presentation of visual information in other modalities.

NOTE ISO 9241-112 provides high-level ergonomic guidance that applies to all modalities.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9241-171:2008, *Ergonomics of human-system interaction — Part 171: Guidance on software accessibility*

## 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:

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

**3.1  
accessibility**

extent to which products, systems, services, environments and facilities can be used by people from a population with the widest range of user needs, characteristics and capabilities to achieve identified goals in identified contexts of use

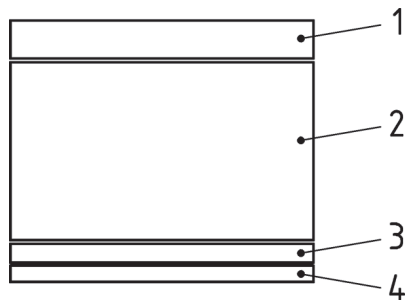
Note 1 to entry: Context of use includes direct use or use supported by assistive technologies.

[SOURCE: ISO 9241-112:2017, 3.15]

**3.2  
area**

section or region of a display or window

Note 1 to entry: [Figure 1](#) shows an example of a possible layout of different areas.



**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[ISO 9241-125:2017](#)

<https://standards.iteh.ai/catalog/standards/sist/6f01b865-46f6-45ab-9cdc-eadb10aabe8e/iso-9241-125-2017>

**Key**

- 1 identification area
- 2 input/output area
- 3 control area
- 4 message area

**Figure 1 — Possible layout of different areas**

**3.2.1  
identification area**

area ([3.2](#)) where the title of the displayed information is provided

Note 1 to entry: The identification area can include an indication of the user's current location and task. It may also identify an application, file, or working environment.

**3.2.2  
input/output area**

area ([3.2](#)) where information is received from users and/or presented to users

Note 1 to entry: This terms recognizes that an area can be used for both input and output, but does not necessarily have to be used for both.

**3.2.3  
control area**

area ([3.2](#)) where control information and/or controls (user-interface elements) for interaction, command entry and command selection is provided

Note 1 to entry: Control information and/or controls (user-interface elements) for interaction, command entry and command selection may be positioned also to other parts of the display, e.g. the input/output area.

**3.2.4****message area**

*area* (3.2) where information such as status updates and/or other information e.g. is provided

Note 1 to entry: Information can include error messages, progress indication, feedback.

Note 2 to entry: Messages may be positioned also to other parts of the display, e.g. the input/output area.

**3.3****code**

technique for representing information by a system of alphanumeric characters, graphical symbols or visual techniques

Note 1 to entry: In general, alphanumeric codes are shorter than the full text needed to express the information content

Note 2 to entry: The term “code” is not to be confused with the terms “code” or “coding” in the computer science context, in which these terms refer to the instructions contained in an executable software program and the process of writing the instructions that comprise a software program.

Note 3 to entry: Visual techniques can include font, colour, highlighting.

**3.3.1****mnemonic code**

*code* (3.3) that is meaningful to the user and has some association with the words it represents

Note 1 to entry: Mnemonic codes frequently consist of alphanumeric characters, making them easier to learn and recall. Many mnemonic codes are abbreviations.

**3.4****cursor**

visual indication of where the user interaction via keyboard (or keyboard emulator) will occur

[SOURCE: ISO 9241-171:2008, 3.10] <https://standards.iteh.ai/catalog/standards/sist/6f01b865-46f6-45ab-9cdc-jadb10aabe8e/iso-9241-125-2017>

**3.5****field**

user-interface element in which data is entered or presented

**3.5.1****entry field****input field**

*field* (3.5) in which users can input data or edit displayed data

**3.5.2****read-only field****protected field**

*field* (3.5) that contains data that cannot be modified by the user

**3.6****focal colour**

colour that is easily remembered and expressed by a short colour word (red, pink, yellow, blue, green, purple, orange, brown, grey, black, and white)

[SOURCE: ANSI HFES 200.5:2008, Clause 4, modified]

**3.7****group**

set of information items or user interface elements that are semantically related and perceptually distinct

[SOURCE: ISO 9241-112:2017, 3.14]

### 3.8

#### **highlighting**

display technique for emphasizing critical or important information and making it perceptually prominent

EXAMPLE Image polarity reversal, blinking, underscoring, use of colour, contrast enhancement (i.e. brightness coding), addition of graphics (e.g. draw a box around), size.

### 3.9

#### **hue**

attribute of a visual sensation according to which an *area* (3.2) appears to be similar to one of the perceived colours red, yellow, green or blue, or a combination of two of them

[SOURCE: ISO 9241-302:2008, 3.2.18]

### 3.10

#### **icon**

user interface symbol representing an object, action, and/or function

[SOURCE: ISO/IEC 11581-10:2010, 3.4, modified — Removal of the phrase “of the computer” and the Notes to entry.]

### 3.11

#### **label**

short, descriptive title for an entry or *read-only field* (3.5.2), table, control or other user-interface element

Note 1 to entry: In some applications, labels are classified as read-only fields.

Note 2 to entry: Labels include headings, field prompts, descriptive text (e.g. icon labels).

### 3.12

#### **legibility**

ability for unambiguous identification of single characters or symbols that may be presented in a non-contextual format

[SOURCE: ISO 9241-302:2008, 3.3.35]

### 3.13

#### **list**

horizontal or vertical sequential presentation of items in a display

Note 1 to entry: Items in a list can change according to the states of the application.

### 3.14

#### **marker**

symbol that is used for indicating a status or drawing attention to an item

EXAMPLE “\*” is frequently used to indicate a required field.

### 3.15

#### **pointer**

graphical symbol that is moved on the screen according to manipulations or movements of a pointing device

Note 1 to entry: Users can interact with elements displayed on the screen by moving the pointer to that location and starting the interaction.

[SOURCE: ISO 9241-16:1999, 3.15]

**3.16****saturation**

chromaticness or colourfulness of an *area* (3.2) judged in proportion to its brightness

[SOURCE: ISO 9241-302:2008, 3.2.23]

**3.17****spectrally extreme colour**

extreme blue and extreme red

[SOURCE: ISO 9241-302:2008, 3.2.24, modified — Note to entry removed.]

**3.18****table**

orderly displayed data

Note 1 to entry: A table is often organized as a number of lists arranged in parallel columns or rectangular arrays, which are related to each other following a specific rule.

**3.19****user-interface element**

user-interface object

entity of the user interface that is presented to the user by the software

[SOURCE: ISO 9241-171:2008, 3.38, modified — Example and notes to entry removed.]

**3.20****window**

independently controllable region on the display screen, used to present objects and/or conduct a dialogue with a user

Note 1 to entry: A window is usually rectangular and delimited by a border.

<https://standards.iteh.ai/catalog/standards/sist/6101b865-46f6-45ab-9cdc-eadb10aabe8e/iso-9241-125-2017>

**3.20.1****primary window**

*window* (3.20) that represents an operating system, an application, or an object

Note 1 to entry: It is possible to have more than one primary window presented at the same time.

**3.20.2****secondary window**

*window* (3.20) arising out of user interaction with a *primary window* (3.20.1) displayed in the course of a dialogue

Note 1 to entry: A secondary window can also be a system initiated window.

**3.21****windowing format**

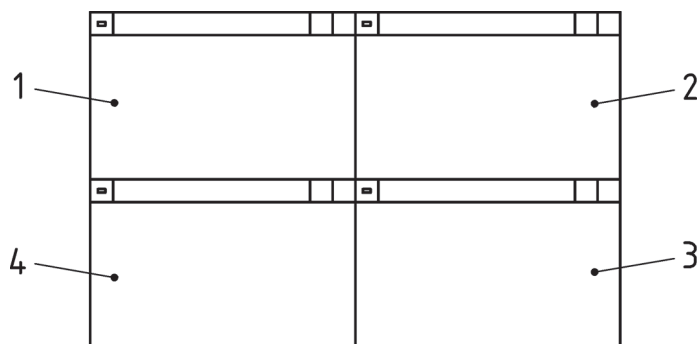
arrangement of multiple *windows* (3.20) which are displayed simultaneously

Note 1 to entry: There are several types of windowing formats such as tiled, overlapping, and mixed format.

**3.21.1****tiled window format**

side by side window format

format in which *windows* (3.20) are placed side by side and do not overlap



**Key**

- 1 window 1
- 2 window 2
- 3 window 3
- 4 window 4

**Figure 2 — Illustration of a tiled window format**

**3.21.2**

**overlapping window format**

format in which *windows* (3.20) partially or completely overlap each other



**Key**

- 1 window 1
- 2 window 2
- 3 window 3

**Figure 3 — Illustration of an overlapping window format**

**3.21.3**

**mixed windowing format**

format in which *tiled window formats* (3.21.1) and *overlapping window formats* (3.21.2) are combined

Note 1 to entry: The initial format can be tiled, but overlapping windows can be used to display transitory elements such as prompts and advisory messages.

## 4 Application of ISO 9241-125

### 4.1 Accessibility

Visual presentation of information shall be in accordance with ISO 9241-171, which gives specific requirements and recommendations for the presentation of information in the visual modality and the presentation of the same information in different modalities.

NOTE Conformity with ISO 9241-171 is achieved by satisfying all of its applicable requirements and by the provision of a systematic list stating how all of its applicable recommendations have been met (ISO 9241-171:2008, 7.2).

### 4.2 General guidance for presentation of information

The general principles provided by ISO 9241-112 should be applied to the presentation of visual information in the design of user interfaces. Each principle is accompanied by a non-exhaustive list of illustrative recommendations at various levels of detail. The principles are as follows.

#### — Detectability

Presented information is detectable if the information is presented so that it will be recognized as present.

#### — Freedom from distraction

Presented information is free from distractions if the information is presented so that required information will be perceived without other presented information interfering with its perception.

#### — Discriminability

Presented information is discriminable if the information is presented such that discrete items or groups of items can be accurately differentiated and if the items of information are presented in a manner that supports their association with or differentiation from other items or groups of items.

#### — Interpretability

Presented information is interpretable if it will be comprehended as intended.

#### — Conciseness

Information presentation is concise if only the necessary information is presented.

#### — Consistency (internal and external)

Presented information is consistent if items of information with similar intent are presented similarly and items of information with different intent are presented in different style and form within and across the interactive systems and the user's environment.

Guidance on *internal* consistency is related to the consistent use of conventions within the interactive system.

Guidance on *external* consistency is related to conventions known to the user from external sources.

### 4.3 Guidance on the presentation of visual information

Presentation of information in the visual modality should enable the user to perform tasks (e.g. search for information on the display) effectively, efficiently and with satisfaction.

The provisions for the presentation of visual information of this document support the general principles given in ISO 9241-112.