

# ISO 9241-115:2024-03 (E)

## Ergonomics of human-system interaction - Part 115: Guidance on conceptual design, user-system interaction design, user interface design and navigation design

<b>Contents</b>		<b>Page</b>
	<b>Foreword</b> .....	<b>v</b>
	<b>Introduction</b> .....	<b>vi</b>
<b>1</b>	<b>Scope</b> .....	<b>1</b>
<b>2</b>	<b>Normative references</b> .....	<b>1</b>
<b>3</b>	<b>Terms and definitions</b> .....	<b>1</b>
	3.1 Major subjects of designs.....	1
	3.2 Modelling.....	2
	3.3 Context of use, user needs and user requirements.....	3
	3.4 Outcomes of use.....	4
	3.5 Interactions and content.....	5
	3.6 Navigation techniques.....	7
	3.7 Links.....	7
<b>4</b>	<b>Human-centred design in the context of this document</b> .....	<b>9</b>
	4.1 Human-centred design activities.....	9
	4.2 General guidance.....	9
	4.2.1 Mental model of the user.....	9
	4.2.2 Support of appropriate user interface technology.....	9
	4.2.3 Constraints on design.....	9
	4.2.4 Overall consistency.....	10
	4.2.5 Aesthetics.....	10
	4.2.6 Accessibility.....	10
<b>5</b>	<b>Conceptual design</b> .....	<b>10</b>
	5.1 General.....	10
	5.2 Contents of a conceptual design.....	11
<b>6</b>	<b>User-system interaction design</b> .....	<b>11</b>
	6.1 General.....	11
	6.2 Types of interactions.....	12
	6.3 The design of interaction scenarios.....	12
	6.4 Compatibility of interaction scenarios.....	12
	6.5 The design of user actions to be supported by the system.....	12
	6.6 Interactions from the user's perspective.....	12
<b>7</b>	<b>User interface design</b> .....	<b>13</b>
	7.1 General.....	13
	7.2 Contents of a user interface design.....	13
	7.2.1 Structure.....	13
	7.2.2 User interface instances.....	13
	7.2.3 User interface elements.....	14
	7.3 Information architecture.....	14
	7.3.1 Purpose of an information architecture.....	14
	7.3.2 Contents of an information architecture.....	14
	7.4 Information design.....	15
	7.5 Design recommendations.....	15
	7.5.1 User interface.....	15
	7.5.2 User interface instances.....	15
	7.5.3 User interface elements.....	16
	7.5.4 Supporting different target devices.....	16

	7.5.5	Accessibility.....	17
	7.5.6	Innovative solutions.....	17
<b>8</b>		<b>Navigation design.....</b>	<b>17</b>
	8.1	General.....	17
	8.2	Contents of navigation sequence design.....	18
	8.3	Navigation with additional user interface elements.....	18
	8.4	Use of navigation structures.....	18
	8.4.1	Use of linear structures.....	18
	8.4.2	Navigation in linear structures.....	18
	8.4.3	Use of tree structures.....	18
	8.4.4	Navigation in tree structures.....	18
	8.4.5	Use of network structures.....	19
	8.4.6	Navigation in network structures.....	19
	8.4.7	Navigation in hybrid structures.....	19
	8.4.8	Navigation in dynamic structures.....	19
	8.4.9	Determining navigation techniques.....	19
	8.5	Guidance on the design of navigation to meet user needs.....	20
	8.5.1	Minimizing user effort.....	20
	8.5.2	Providing alternative navigation paths.....	20
	8.5.3	Returning to an interrupted task.....	20
	8.5.4	Supporting exploration.....	20
	8.6	Guidance related to the use of links for navigation.....	20
	8.6.1	Use of links.....	20
	8.6.2	Use of system-activated links.....	20
	8.6.3	Use of user-activated links.....	21
	8.6.4	Use of permanent links.....	21
	8.6.5	Use of temporal links.....	21
	8.6.6	Duration of temporal links.....	21
	8.6.7	Avoiding temporal link errors.....	21
	8.6.8	Use of computed links.....	21
	8.6.9	Recognizing computed links.....	22
	8.6.10	Use of user-defined links.....	22
	8.6.11	Supporting multiple sets of user-defined links.....	22
	8.6.12	Discriminability of links.....	22
	8.7	Guidance related to the use of general navigation functions.....	23
	8.7.1	Providing users with navigation information.....	23
	8.7.2	Providing search capabilities.....	23
	8.8	Navigating across sessions.....	23
	8.8.1	Saving the current state.....	23
	8.8.2	Returning to a saved state.....	23
	8.8.3	Restarting at a previous state.....	23
	8.8.4	Exiting.....	24
		<b>Bibliography.....</b>	<b>25</b>