

DIN EN ISO 9241-110:2020-10 (E)

Ergonomics of human-system interaction - Part 110: Interaction principles (ISO 9241-110:2020)

Contents		Page
European foreword		3
Foreword		4
Introduction		5
1 Scope		6
2 Normative references		6
3 Terms and definitions		6
4 Interaction principles		9
4.1 Overview		9
4.2 Coverage of this set of interaction principles and general design recommendations		10
4.3 Use of the interaction principles in human-centred design		10
4.4 Contribution of the interaction principles to usability		11
4.5 Relationships between interaction principles		11
4.6 Framework for using this document		11
5 Principles and recommendations		13
5.1 Suitability for the user's tasks		13
5.1.1 Principle		13
5.1.2 Recommendations related to identifying suitability of the interactive system for a given task		14
5.1.3 Recommendations related to optimizing effort in task accomplishment		14
5.1.4 Recommendations related to defaults supporting the task		14
5.2 Self-descriptiveness		15
5.2.1 Principle		15
5.2.2 Recommendations related to presence and obviousness of the information		15
5.2.3 Recommendations related to clear indication of processing status		16
5.3 Conformity with user expectations		16
5.3.1 Principle		16
5.3.2 Recommendations related to appropriate system behaviour and responses		17
5.3.3 Recommendations related to consistency (internal and external)		18
5.3.4 Recommendations related to changes in the context of use		18
5.4 Learnability		19
5.4.1 Principle		19
5.4.2 Recommendations related to discovery		19
5.4.3 Recommendations related to exploration		20
5.4.4 Recommendations related to retention		20
5.5 Controllability		20
5.5.1 Principle		20
5.5.2 Recommendations related to interruption by the user		21
5.5.3 Recommendations related to flexibility		21
5.5.4 Recommendations related to individualization		22
5.6 Use error robustness		23
5.6.1 Principle		23
5.6.2 Recommendations related to use error avoidance		23
5.6.3 Recommendations related to use error tolerance		24
5.6.4 Recommendations related to use error recovery		24
5.7 User engagement		25
5.7.1 Principle		25
5.7.2 Recommendations related to motivating the user to use the system		26
5.7.3 Recommendations related to trustworthiness of the system		27
5.7.4 Recommendations related to increasing user involvement with the system		28
Annex A (informative) Checklist to aid in applying the recommendations in this document		29
Bibliography		36