

ICS 11.180.01  
CCS C 30



**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB/T 42818.1-2023**

---

**Cognitive accessibility - Part 1: General guidelines**

认知无障碍 第1部分：一般指南

**(English Translation)**

**Issued on: August 6, 2023**

**Implemented on: August 6, 2023**

---

**Issued by: State Administration for Market Regulation, China National  
Standardization Administration**

## Table of Contents

Introduction

1 Scope

2 Normative reference documents

3 Terms and Definitions

4 Implementation recommendation

5 Motivation and Focus

5.1 Overview

5.2 Incentive method

5.3 Attention, and feedback

6 Representation and Understanding

6.1 Overview

6.2 Multiple ways of representation and understanding

6.3 Spatial positioning and understanding of numerical values and sizes

6.4 Simple, understandable and reasonable design

7 Action

7.1 Overview

7.2 Expression

7.3 Organization, planning and time management

7.4 Flexibility and equal opportunities

7.5 Provide support for task completion

Appendix A (informative) Checklist 15 for following the recommendations in this document

Reference

## Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting.

This document is Part 1 of GB/T 42818 "Cognitive Accessibility". GB/T 42818 has released the following parts.

---Part 1: General guidance.

This document is equivalent to ISO 21801-1:2020 "Cognitive Accessibility Part 1: General

Guidance".

This document has made the following minimal editorial changes.

---Figure 1a) The traditional characters of Chinese graphic symbols are changed to simplified characters.

Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents.

## Introduction

Cognitive impairment can affect anyone, and the effects may be temporary or permanent. Cognitive impairment can affect a person's.

ability.

---The ability to perceive information, including vision, hearing and touch. For example, reduced vision may lead to recognition of text, pictures or other visual input.

Difficulty entering;

---The ability to maintain, shift and allocate attention, such as a reduced ability to filter unwanted stimuli (such as sound, light), or perform multitasking difficulty;

---The ability to record and store information and retrieve it when needed, including storing and maintaining new pieces of information, knowledge and skills, retrieving and Maintain previous pieces of information, knowledge and skills;

---Communication ability, including verbal and non-verbal understanding and expression;

---Orientation, including navigation in space and terrain;

---Activity execution, including solving problems, organizing, planning, implementing a plan or strategy and adjusting strategies in a timely manner, initiating and Conduct and terminate activities;

---Abstract thinking and reasoning abilities, such as understanding generalizations, correlations, and causal relationships;

---The ability to understand and manage numbers and time, such as calculations or understanding concepts of money, size, or the passage of time.

Systematic design and construction of environments can significantly reduce activity limitations and participation restrictions for people with cognitive disabilities. Common design used in standards the UD (UD) method facilitates user access to cognitive software mainstream systems. Universal design methods help improve the functionality of systems and build environments and comfort.

It is generally believed that mainstream systems are more affordable than rehabilitation

assistive devices and have higher social acceptance. Access to mainstream systems is unrestricted, which helps the general public to understand and integrate people with intellectual disabilities into society. Relevant information on the cognitive needs of people with cognitive impairment and how activities and environmental factors can be adapted to increase participation is quite extensive. Designers and manufacturers of mainstream systems understand these needs and help build accessible and functional mainstream systems.

Although referred to as cognitive "accessibility," this document also uses the concept of "usability" to ensure that design principles are based on the unique experience of the user. experience, not the ability of ordinary people.

This document is organized around the following three concepts, each of which presents a set of guidelines.

---Motivation and focus;

---Representation and understanding;

---action.

This document is a general guide for the design and development of all cognitively accessible systems. In specific fields or contexts, more detailed cognitive accessibility standards and guidelines, see References [6] and [7].

When developing the above-mentioned mainstream systems and rehabilitation assistive devices for people with cognitive impairment, it is very important to involve people with cognitive impairment and their families.

important.

GB/T 42818 aims to specify the design and development requirements for cognitive accessibility systems and is intended to be composed of two parts.

---Part 1: General guidance. The purpose is to provide guidelines for the design and development of cognitively accessible systems.

---Part 2: Report. The purpose is to specify reporting requirements for cognitive accessibility of systems based on the recommendations given in Part 1.

Cognitive Accessibility Part 1: General Guidelines

## 1 Scope

This document provides guidance for the design and development of cognitively accessible systems, including products, services, and built environments.

This document is relevant to both mainstream systems and systems designed specifically

for people with functional impairments.

This document is limited to guidance related to cognitive accessibility.

**Note 1:** This document recognizes that different sensory perceptions may have an impact on cognitive accessibility.

**Note 2:** The following guidelines in this document are beneficial to all users. Failure to follow the guidelines may result in some potential users being unable to use the system.

This document is relevant to all types of systems, however, for some types of systems only special recommendations can be followed.

---Some suggestions relate to established systems (such as non-computerized consumer products or user manuals);

---Some recommendations apply to systems that contain a certain level of computer-based processing (such as microwave ovens or ICT systems);

---Some recommendations apply to systems that support personalization and use advanced computer processing (such as applications in smartphones);

---Some suggestions apply to systems that are a combination of the above systems.

## 2 Normative reference documents

This document has no normative references.

## 3 Terms and definitions

The following terms and definitions apply to this document.

accessibility

Products, systems (3.5), services, environments and facilities can be used in specific application scenarios by people with the widest range of needs, characteristics and capabilities the extent to which it is used to achieve a specific goal.

**Note:** Application scenarios include direct use or use with assistive technology support.

[Source. ISO 9241-112:2017,3.15] 3.2 cognition the mental activity or process of acquiring knowledge and understanding through thinking, experience and various senses.

**NOTE:** Specific cognitive functions include perception, attention, memory, language functions (verbal and nonverbal), reasoning, planning, problem solving, decision-making, reading, and calculation. recognize Cognition interacts with overall mental functions (such as awareness, energy, motivation) and emotional functions (such as emotions,, and self-regulation).

System (3.5) can be used by people with the widest range of needs, cognitive characteristics and abilities to achieve specific goals in specific application scenarios.