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

GB/T 38634.4-2020

**Systems and software engineering - Software testing - Part 4:
Test techniques**

系统与软件工程 软件测试 第4部分：测试技术

(English Translation)

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1 Scope

This part of GB/T 38634 defines the test design techniques used in GB/T 38634.2 test design and implementation.

This section is applicable to but not limited to testers, test managers, developers and project managers, especially those responsible for managing and implementing software. Personnel testing the software.

2.1 Intended use

The normative requirements of this part are contained in Chapter 5 and Chapter 6: Since certain projects or organizations may not need to use this definition Therefore, the implementation of this part usually involves selecting a set of technologies suitable for the project or organization. Organizations or individuals can A way to declare compliance with the provisions of this section. full compliance or tailored compliance. The organization or individual should declare whether it requires complete or tailored compliance with this section.

2.2 Full compliance

By demonstrating that all of the selected technology set in Chapter 5 (not empty) and/or the corresponding test coverage measurement methods in Chapter 6 are met Requirements (ie sentences described as "should") can be claimed to be fully compliant.

Example: An organization can choose to meet only one technology, such as boundary value analysis. In this case, the organization only needs to provide evidence that they have met the technical requirements. The technical requirements can be claimed to meet this part.

2.3 Tailoring compliance

By proving that the selected requirements from the selected technology set (not empty) and/or the corresponding test coverage measurement method have been met Set to achieve tailoring compliance. In the case of tailoring, such as not fully following the technology defined in Chapter 5 or the measurement norms defined in Chapter 6 Requests, should provide reasons (whether it is tailored directly or tailored by reference). All tailoring decisions should document their reasons, including considerations Any applicable risks. Tailoring should be negotiated by stakeholders.

3 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 38634.1 System and Software Engineering Software Testing Part 1: Concepts and Definitions (GB/T 38634.1-2020, ISO /IEC /IEEE29119-1.2013, MOD)

GB/T 38634.2 System and Software Engineering Software Testing Part 2: Test Process

(GB/T 38634.2-2020, ISO /IEC /IEEE29119-2.2013, MOD)

GB/T 38634.3 System and Software Engineering Software Testing Part 3: Test Document
(GB/T 38634.3-2020, ISO /IEC /IEEE29119-3.2013, MOD)

4 Terms and definitions

The following terms and definitions apply to this document.

4.1 Backus Paradigm

A formal metalanguage. Used to define the grammar of a language in text format.

4.2 Basic choice

See basic value (4.3).

4.3 Basic value

Enter the value of the parameter in the "basic selection test", usually based on the representative value or typical value of the parameter. Also called basic select.

4.4 Calculation using c-use

See calculation data usage (4.5).

4.5 Calculation data usage

In any type of statement, the use of variable values.

4.6 Condition

Boolean expressions that do not contain Boolean operators.

4.7 Control flow

The sequence of operations performed during the run of the test item.

4.8 Control flow subpath

The sequence of executable statements in the test item.

4.9 Data definition

Variable assignment statement. Also called variable definition.

4.10 Data definition calculation use pair

Data definition and subsequent calculation of data usage, where data usage is the value defined in the data definition.

4.11 Data definition predicates use pairs

Data usage of data definition and subsequent predicates, where data usage is the value defined in the data definition.

4.12 Data definition usage

Data definition and subsequent data usage, where data usage is the value defined in the data definition.

4.13 Data usage

Executable statements to access variable values.

4.14 Judgement result

The result of the decision formula can be used to determine the direction of control flow selection.

4.15 Decision rule

A combination of conditions (also called causes) and actions (also called results) that produce a specific result in the decision table test and cause-effect diagram.

4.16 Define the use

of Data definition and subsequent predicate data use or calculated data use, where data use is the value defined in the use data definition.

4.17 Define the usage path

The control flow sub-path from variable definition to predicate use (p-use) or computational use (c-use).

4.18 Entry point

The point in the test item where the test item starts to execute

Note: The entry point is the executable statement of the test item, which can be selected by an external process as the starting point of one or more paths through the test item. It is usually a test The first executable statement in the item.