Release Notes

Standard Glossary of Terms used in Software Testing

Version 3.3

International Software Testing Qualifications Board

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Release Notes

1.1. Version 3.3 of November 11th, 2019

This new version is a major release supporting the following new Certified Tester Syllabi:
- Foundation Level 2018 V3.1;
- Advanced Level Test Analyst 2019;
- Advanced Level Technical Test Analyst 2019:
- Advanced Level Agile Technical Tester 2019.

Changes have been included based on one of the following reasons:
- Alignment with the new Syllabi, including new key terms;
- Change requests raised by users of the Glossary that are related to terms used in the new Syllabi;
- Changes of the international standards referenced in the Glossary for terms, especially the ISO 25010 Standard for Software Quality.

The changes are categorized in different change types and listed in separate tables below.

1. New terms added

The table below enlists the terms added in this release.

Name	Definition	See Also	Reference	Remark
acceptance test-driven development	A collaborative approach to development in which the team and customers are using the customers own domain language to understand their requirements, which forms the basis for testing a component or system. Acronym: ATDD			Used in CTAL-ATT
accountability	The degree to which the actions of an entity can be traced uniquely to that entity.		After ISO 25010	Used in CTAL-TTA
analyzability	The degree to which it is possible to assess the impact of an intended change to one or more parts of a component or system, to diagnose it for deficiencies or causes of failures, or to identify parts to be modified.		After ISO 25010	Used in CTAL-TTA
authenticity	The degree to which the identity of a subject or resource can be proved to be the one claimed.		ISO 25010	Used in CTAL-TTA

Name	Definition	See Also	Reference	Remark
behavior-driven development	A collaborative approach to development in which the team is focusing on delivering expected behavior of a component or system for the customer, which forms the basis for testing. Acronym: BDD			Used in CTAL-ATT
capacity	The degree to which the maximum limits of a component or system parameter meet requirements.		After ISO 25010	Used in CTAL-TTA
change-related testing	A type of testing initiated by modification to a component or system. See also regression testing, confirmation testing.			Used in CTFL
confidentiality	The degree to which a component or system ensures that data are accessible only to those authorized to have access.		After ISO 25010	Used in CTAL-TTA
continuous integration	A software development procedure merging, integrating and testing all changes as soon as they are committed within an automated process.			Used in CTAL-ATT
continuous testing	An approach that involves a process of testing early, testing often, test everywhere, and automate to obtain feedback on the business risks associated with a software release candidate as rapidly as possible.			Used in CTAL-ATT
epic	A large user story that cannot be delivered as defined within a single iteration or is large enough that it can be split into smaller user stories.		Agile Alliance	Used in CTAL-ATT
freedom from risk	The degree to which a component or system mitigates the potential risk to economic status, living things, health, or the environment.		After ISO 25010	Used in CTAL-TTA
functional completeness	The degree to which the set of functions covers all the specified tasks and user objectives.		ISO 25010	Used in CTAL-TTA
functional correctness	The degree to which a component or system provides the correct results with the needed degree of precision.		ISO 9126	Used in CTAL-TTA
functional suitability	The degree to which a component or system provides functions that meet stated and implied needs when used under specified conditions.		After ISO 25010	Used in CTAL-TA.
integrity	The degree to which a component or system allows only authorized access and modification to a component, a system or data.		After ISO 25010	Used in CTAL-TTA
modularity	The degree to which a system is composed of discrete components such that a change to one component has minimal impact on other components.		After ISO 25010	Used in CTAL-TTA
non-repudiation	The degree to which actions or events can be proven to have taken place, so that the actions or events cannot be repudiated later.		After ISO 25010	Used in CTAL-TTA
reusability	The degree to which a work product can be used in more than one system, or in building other work products.		After ISO 25010	Used in CTAL-TTA

Name	Definition	See Also	Reference	Remark
specification by example	A development technique in which the specification is defined by examples. Acronym: SBE; See also: acceptance test-driven development.			Used in CTAL-ATT
test data preparation	The activity to select data from existing databases or create, generate, manipulate and edit data for testing.			Used in CTAL-TA.
time behavior	The degree to which a component or system can perform its required functions within required response times, processing times and throughput rates.		After ISO 25010	Used in CTAL-TTA
user error protection	The degree to which a component or system protects users against making errors.		After ISO 25010	Used in CTAL-TTA

2. Terms renamed

The table below enlists the terms renamed in this release, with possibly changed definitions.

Name	Definition	Old name	See Also	Reference	Remark
ad hoc review	A review technique performed informally without a structured process.	ad hoc reviewing		After ISO 20246	Align the naming with the other review types, and improve the definition wording
appropriateness recognizability	The degree to which users can recognize whether a component or system is appropriate for their needs.	understandability	functional appropriateness	After ISO 25010	Rename understandability to appropriateness recognizability; align the definition to ISO 25010; add understandability as a synonym; new keyword in CTAL-TA
classification tree technique	A black-box test technique in which test cases are designed using a classification tree.	classification tree method	combinatorial testing	Grochtmann	Rename Classification Tree Method to Classification Tree Technique and improve the definition
command-line interface	A type of interface in which the information is passed in form of command lines.	CLI			Rename the term from CLI to Command-Line Interface; provide a definition; add CLI as an acronym

Name	Definition	Old name	See Also	Reference	Remark
defect-based test technique	A test technique in which test cases are developed from what is known about a specific defect type.	defect-based test design technique			Rename defect-based test design technique to defect-based test technique and improve the definition
functional appropriateness	The degree to which the functions facilitate the accomplishment of specified tasks and objectives.	suitability		ISO 25010	Rename "Suitability" to "Functional Appropriateness"; align the definition to ISO 25010; change the reference to [ISO 25010]; add suitability as a synonym.
functional correctness	The degree to which a component or system provides the correct results with the needed degree of precision.	accuracy		After ISO 25010	Rename accuracy to functional correctness; improve the definition; change the reference to [After ISO 25010]; add accuracy as a synonym.
modifiability	The degree to which a component or system can be changed without introducing defects or degrading existing product quality.	changeability		After ISO 25010	Rename changeability to modifiability; improve the definition; change the reference to [After ISO 25010]; add changeability as a synonym
user interface aesthetics	The degree to which a user interface enables pleasing and satisfying interaction for the user.	attractiveness		ISO 25010	Rename attractiveness to user interface aesthetics; improve the definition; change the reference from [ISO 9126] to [ISO 25010]; add attractiveness as a synonym.

3. Terms changed

The table below enlists the terms with changed definitions in this release, with possible changes in other attributes (Acronym, See Also, reference).

Name	Definition	Acronym	See Also	Reference	Remark
acceptance testing	A test level that focuses on determining whether to accept the system.				Improve and shorten the definition

Name	Definition	Acronym	See Also	Reference	Remark
adaptability	The degree to which a component or system can be adapted for different or evolving hardware, software or other operational or usage environments.			After ISO 25010	Align the definition to ISO 25010
alpha testing	A type of acceptance testing performed in the developer's test environment by roles outside the development organization.				Improve the definition
atomic condition	A condition that does not contain logical operators.				Improve the definition
beta testing	A type of acceptance testing performed at an external site to the developer's test environment by roles outside the development organization.				Improve the definition
black-box test technique	A test technique based on an analysis of the specification of a component or system.				Improve the definition
capture/playback	A test automation approach in which inputs to the test object are recorded during manual testing to generate automated test scripts that can be executed later.				Improve the definition
classification tree	A tree diagram representing test data domains of a test object.				Improve the definition
code coverage	The coverage of code.				Improve the definition
combinatorial testing	A black-box test technique in which test cases are designed to exercise specific combinations of values of several parameters.		classification tree technique, pairwise testing, orthogonal array testing		Improve the definition
commercial off-the-shelf	A type of product developed in an identical format for a large number of customers in the general market.				Improve the definition
compliance	Adherence of the component or system to standards, conventions or regulations in laws and similar prescriptions.				Improve the definition - compliance is not a capability but a property.
component integration testing	Testing in which the test items are interfaces and interactions between integrated components.				Improve the definition
component testing	A test level that focuses on individual hardware or software components.				Improve the definition
condition testing	A white-box test technique in which test cases are designed to exercise outcomes of atomic conditions.				Improve the definition

Name	Definition	Acronym	See Also	Reference	Remark
configuration management	A discipline applying technical and administrative direction and surveillance to identify and document the functional and physical characteristics of a configuration item, control changes to those characteristics, record and report change processing and implementation status, and verify that it complies with specified requirements.				Improve the definition
confirmation testing	A type of change-related testing performed after fixing a defect to confirm that a failure caused by that defect does not reoccur.				Improve the definition
contractual acceptance testing	A type of acceptance testing performed to verify whether a system satisfies its contractual requirements.				Improve the definition
control flow	The sequence in which operations are performed by a business process, component or system.				Improve the definition
control flow analysis	A type of static analysis based on a representation of unique paths for executing a component or system.				Improve the definition
control flow testing	A white-box test technique in which test cases are designed based on control flows.				Improve the definition
cyclomatic complexity	The maximum number of linearly independent paths through a program.			After McCabe	Improve the definition
data flow analysis	A type of static analysis based on the lifecycle of variables.				Improve the definition
data-driven testing	A scripting technique that uses data files to contain the test data and expected results needed to execute the test scripts.				Improve the definition
debugging	The process of finding, analyzing and removing the causes of failures in a component or system.				Improve the definition
decision condition testing	A white-box test technique in which test cases are designed to execute condition outcomes and decision outcomes.				Replace test deign technique with test technique
decision table testing	A black-box test technique in which test cases are designed to exercise the combinations of conditions and the resulting actions shown in a decision table.				Improve the definition
defect management	The process of recognizing, recording, classifying, investigating, resolving and disposing of defects.				Remove the examples from the definition
defect taxonomy	A list of categories designed to identify and classify defects.				Improve the definition
definition-use pair	The association of a definition of a variable with the subsequent use of that variable.				Remove comments from the definition

Name	Definition	Acronym	See Also	Reference	Remark
driver	A temporary component or tool that replaces another component and controls or calls a test item in isolation.				Improve the definition
dynamic analysis	The process of evaluating a component or system based on its behavior during execution.			After ISO 24765	Remove examples from the definition; change the reference to [After ISO 24765]
dynamic testing	Testing that involves the execution of the test item			After ISO 29119	Make the object of testing more explicit; add a reference [After ISO 29119]
efficiency	The degree to which resources are expended in relation to the accuracy and completeness with which a user achieves goals.			After ISO 25010	Improve the definition; change the reference to [After ISO 25010]
equivalence partition	A subset of the value domain of a variable within a component or system in which all values are expected to be treated the same based on the specification			After ISO 29119	Improve the definition; add a reference [After ISO 29119]
experience-based test technique	A test technique only based on the tester's experience, knowledge and intuition.				Improve the definition
exploratory testing	An approach to testing in which tests are dynamically designed and executed based on knowledge, exploration of the test item and the results of previous tests.			After ISO 29119	Improve the definition - fix the grammar
fault seeding	The process of intentionally adding known faults to those already in a component or system to monitor the rate of detection and removal, and to estimate the number of faults remaining.		reliability, robustness	After ISO 24765	Improve the definition; remove comments; change the reference to [After ISO 24765]; add see also references to reliability, robustness.
fault tolerance	The degree to which a component or system operates as intended despite the presence of hardware or software faults.			After ISO 25010	Adapt the definition to the current standard; change the reference to [After ISO 25010]
functional testing	Testing performed to evaluate if a component or system satisfies functional requirements.		black-box testing	After ISO 24765	Improve the definition; change the reference from [ISO 24765] to [After ISO 24765]
heuristic evaluation	An evaluation of a work product that uses a heuristic.				Improve the definition
high-level test case	A test case with abstract preconditions, input data, expected results, postconditions, and actions (where applicable).		low-level test case		Replace the negative statement with a positive statement in the definition

Name	Definition	Acronym	See Also	Reference	Remark
informal review	A type of review that does not follow a defined process and has no formally documented output.				Improve the definition
integration testing	A test level that focuses on interactions between components or systems.				Improve the definition
keyword-driven testing	A scripting technique in which test scripts contain high-level keywords and supporting files that contain low-level scripts that implement those keywords.				Improve the definition
learnability	The degree to which a component or system can be used by specified users to achieve specified goals of learning with satisfaction and freedom from risk in a specified context of use.			After ISO 25010	Improve the definition; change the reference from [ISO 9126] to [After ISO 25010]
low-level test case	A test case with concrete values for preconditions, input data, expected results and postconditions and detailed description of actions (where applicable).		high-level test case		The definition should also include preconditions and postconditions.
memory leak	A memory access failure due to a defect in a program's dynamic store allocation logic that causes it to fail to release memory after it has finished using it.				Remove comments from the definition
moderator	(1) The person responsible for running review meetings. (2) The person who conducts a usability test session. Synonym: facilitator. Remove the see also; fix the links.				Improve the definition
modified condition / decision coverage	The coverage of all single condition outcomes that independently affect a decision outcome that have been exercised by a test suite.	MC/DC			Remove comments from the definition
multiple condition testing	A white-box test technique in which test cases are designed to exercise outcome combinations of atomic conditions.				Replace test deign technique with test technique; replace single condition with atomic condition
neighborhood integration testing	A type of integration testing in which all of the nodes that connect to a given node are the basis for the integration testing.				Improve the definition wording
non-functional testing	Testing performed to evaluate that a component or system complies with non-functional requirements.				Improve the definition
operability	The degree to which a component or system has attributes that make it easy to operate and control.			After ISO 25010	Improve the definition; change the reference from [ISO 9126] to [After ISO 25010]

Name	Definition	Acronym	See Also	Reference	Remark
operational acceptance testing	A type of acceptance testing performed to determine if operations and/or systems administration staff can accept a system.		operational testing		Improve the definition
pairwise integration testing	A type of integration testing that targets pairs of components that work together as shown in a call graph.				Improve the definition wording
pairwise testing	A black-box test technique in which test cases are designed to exercise pairs of parameter-value pairs.			After ISO 29119-4	Improve the definition; add a reference [After ISO 29119-4]
path testing	A white-box test technique in which test cases are designed to execute paths.				Replace test deign technique with test technique
performance testing	performance testing: Testing to determine the performance efficiency of a component or system. Synonym: performance efficiency testing.				Improve the definition
perspective-based reading	A review technique in which a work product is evaluated from the perspective of different stakeholders with the purpose to derive other work products.				Improve the definition
portability	The degree to which a component or system can be transferred from one hardware, software or other operational or usage environment to another.			After ISO 25010	Adapt the definition to the current standard; change the reference to [After ISO 25010]
probe effect	An unintended change in behavior of a component or system caused by measuring it.				Remove the examples from the definition
quality	The degree to which a component or system satisfies the stated and implied needs of its various stakeholders.			After ISO 25010	Improve the definition; change the reference from [ISO 24765] to [After ISO 25010].
quality assurance	Activities focused on providing confidence that quality requirements will be fulfilled.		quality management	After ISO 24765	Improve the definition; add an acronym QA; change the reference from [ISO 9000] to [After ISO 24765]; add a see also reference to quality management.
quality characteristic	A category of quality attributes that bears on work product quality.			ISO 24765	Improve the definition wording; change the reference to [After ISO 25010]
recoverability	The degree to which a component or system can recover the data directly affected by an interruption or a failure and re-establish the desired state of the component or system.		reliability	After ISO 25010	Adapt the definition to the current standard; change the reference to [After ISO 25010]

Name	Definition	Acronym	See Also	Reference	Remark
regression testing	A type of change-related testing to detect whether defects have been introduced or uncovered in unchanged areas of the software.				Improve the definition
regulatory acceptance testing	A type of acceptance testing performed to verify whether a system conforms to relevant laws, policies and regulations.				Improve the definition
reliability growth model	A model that shows the growth in reliability over time of a component or system as a result of the defect removal.				Improve the definition wording
replaceability	The degree to which a component or system can replace another specified component or system for the same purpose in the same environment.			After ISO 25010	Adapt the definition to the current standard; change the reference to [After ISO 25010]
requirements-based testing	An approach to testing in which test cases are designed based on requirements.				Improve the definition
resource utilization	The degree to which the amounts and types of resources used by a product or system, when performing its functions, meet requirements.			After ISO 9126	Adapt the definition to the current standard; change the reference to [After ISO 25010]
review	A type of static testing in which a work product or process is evaluated by one or more individuals to detect defects or to provide improvements.				Improve the definition
risk management	The process for handling risks.			After ISO 24765	Improve the definition
role-based reviewing	A review technique in which a work product is evaluated from the perspective of different stakeholders.				Improve the definition
root cause analysis	An analysis technique aimed at identifying the root cause of a defect.				Improve the definition
scenario-based reviewing	A review technique in which a work product is evaluated to determine its ability to address specific scenarios.				Improve the definition
sequential development model	A type of software development lifecycle model in which a complete system is developed in a linear way of several discrete and successive phases with no overlap between them.				Improve the definition
software usability measurement inventory	A questionnaire-based usability testing tool that measures and benchmarks user experience.	SUMI		Kirakowski93	Improve the definition
state transition testing	A black-box test technique in which test cases are designed to exercise elements of a state transition model.				Improve the definition

Name	Definition	Acronym	See Also	Reference	Remark
statement coverage	The coverage of executable statements.				Improve the definition
static testing	Testing a work product without the work product code being executed.				Improve the definition
system integration testing	A test level that focuses on interactions between systems.				Improve the definition
system testing	A test level that focuses on verifying that a system as a whole meets specified requirements.				Improve the definition
technical review	A type of formal review by a team of technically-qualified personnel that examines the quality of a work product and identifies discrepancies from specifications and standards.				Improve the definition
test automation	The use of software to perform or support test activities.				Improve the definition
test charter	Documentation of the goal or objective for a test session.				Improve the definition
test completion	The activity that makes testware available for later use, leaves test environments in a satisfactory condition and communicates the results of testing to relevant stakeholders.				Improve the definition
test condition	A testable aspect of a component or system identified as a basis for testing.			After ISO 29119	Improve the definition; add a reference [After ISO 29119].
test control	The activity that develops and applies corrective actions to get a test project on track when it deviates from what was planned.				Improve the definition
test data	Data needed for test execution.				Improve the definition
test design	The activity that derives and specifies test cases from test conditions.			After ISO 29119	Improve the definition
test estimation	An approximation related to various aspects of testing.				Improve the definition
test execution	The activity that runs a test on a component or system producing actual results.				Improve the definition
test harness	A test environment comprised of stubs and drivers needed to execute a test suite.				Improve the definition
test management tool	A tool that supports test management.				Improve the definition
test manager	The person responsible for project management of testing activities, resources, and evaluation of a test object.				Improve the definition

Name	Definition	Acronym	See Also	Reference	Remark
test monitoring	The activity that checks the status of testing activities, identifies any variances from planned or expected, and reports status to stakeholders.				Improve the definition
test object	The work product to be tested.				Extend the definition to any work product
test objective	The reason or purpose of testing.				Improve the definition
test progress report	A type of test report produced at regular intervals about the progress of test activities against a baseline, risks, and alternatives requiring a decision.				Improve the definition
test strategy	Documentation aligned with the test policy that describes the generic requirements for testing and details how to perform testing within an organization.			After ISO 29119	Improve the definition
test suite	A set of test scripts or test procedures to be executed in a specific test run.				Improve the definition
test summary report	A type of test report produced at completion milestones that provides an evaluation of the corresponding test items against exit criteria.				Improve the definition
test technique	A procedure used to define test conditions, design test cases, and specify test data.				Improve the definition
test tool	Software or hardware that supports one or more test activities.				Improve the definition
testability	The degree to which test conditions can be established for a component or system, and tests can be performed to determine whether those test conditions have been.			After ISO 25010	Adapt the definition to the current standard
test-driven development	A software development technique in which the test cases are developed, and often automated, and then the software is developed incrementally to pass those test cases.	**TDD**			Improve the definition
tester	A person who performs testing.				Improve the definition
testing	The process consisting of all lifecycle activities, both static and dynamic, concerned with planning, preparation and evaluation of a component or system and related work products to determine that they satisfy specified requirements, to demonstrate that they are fit for purpose and to detect defects.				Improve the definition
unreachable code	Code that is impossible to execute.				Improve the definition

Name	Definition	Acronym	See Also	Reference	Remark
use case	The specification of the behavior of a system with regards to its interaction with its users and any other systems.			After UML	Align the definition with the CTFL Syllabus. Add a reference [After UML 2.5.1]
use case testing	A black-box test technique in which test cases are designed to exercise use case behaviors.				Improve the definition
user acceptance testing	A type of acceptance testing performed to determine if intended users accept the system.		acceptance testing		Improve the definition
user story	A user or business requirement consisting of one sentence expressed in the everyday or business language which is capturing the functionality a user needs, the reason behind it, any non-functional criteria, and also including acceptance criteria.				Improve the definition
user story testing	A black-box test technique in which test cases are designed based on user stories to verify their correct implementation.				Replace test design technique with test technique
website analysis and measurement inventory	A commercial website analysis service providing a questionnaire for measuring user experience and assessing delivery of business goals online.	WAMMI			Improve the definition
white-box test technique	A test technique only based on the internal structure of a component or system.			After ISO 29119	Improve the definition wording; add a reference to [After ISO 29119]

4. Terms removed

Some terms have been removed or will be removed soon, because they are not used as keywords in any syllabus and, in addition, defining them does not add any value:

Name	Remark
configuration management tool	After the retirement of CTFL 2011, it will not be a keyword anymore. The meaning is straightforward.
coverage tool	After the retirement of CTFL 2011, it will not be a keyword anymore. The meaning is straightforward.
facilitator	Remove the term, make it a synonym of moderator.
black-box testing	After the retirement of CTFL 2011, it will not be used anymore.
embedded iterative model	It is neither a keyword, nor a testing term
test script	Remove the term, make it a synonym of test procedure.
accessibility testing	Remove the term when CTAL-TA 2012 retires. It will not be used anymore.
test design tool	Remove the term when CTAL-TA 2012 retires. The meaning is straightforward.
non-functional requirement	Remove the term. Neither a keyword, nor a testing term.
n-switch testing	Remove the term. It is not used in any Syllabus.
safety	Remove the term. It is not a testing term.
stability	Remove the term. It is not a testing term.
information security	Remove the term 'information security' and make it a synonym of security.

5. Synonym updates

There are some updates among the synonyms. Please recall that in the Glossary, 'synonym' denotes an alternative name for a term. Synonyms are commonly used by some communities, but within ISTQB®, they are not the preferred name of the term.

New synonyms:

Term Name	Synonym	Remark
consultative test strategy	directed test strategy	Used in CTFL 2018 v3.1
moderator	facilitator	Facilitator is not a separate term anymore. The definition of moderator has been extended accordingly.
test procedure	test script	Test procedure and test script have the same meaning.
appropriateness recognizability	understandability	Make the former name of the term to a synonym of the new name.
classification tree technique	classification tree method	Make the former name of the term to a synonym of the new name.
functional appropriateness	suitability	Make the former name of the term to a synonym of the new name.
Security	Information security	Remove the term 'information security' and make it a synonym of security.

Term Name	Synonym	Remark
functional correctness	accuracy	Rename accuracy to functional correctness; improve the definition; change the reference to [After ISO 25010]; add accuracy as a synonym
modifiability	changeability	Rename changeability to modifiability; improve the definition; change the reference to [After ISO 25010]; add changeability as a synonym
user interface aesthetics	Attractiveness	Rename attractiveness to user interface aesthetics; improve the definition; change the reference from [ISO 9126] to [ISO 25010]; add attractiveness as a synonym

Removed synonyms:

Term Name	Synonym	Remark
performance efficiency	time behavior	Does not mean the same; more specific than performance efficiency.
performance efficiency	performance	Not used anymore in the same sense.