Standard Glossary of Terms used in Software Testing

Version 3.1

Expert Improving the Test Process Terms

International Software Testing Qualifications Board

acceptance testing

Ref: After IEEE 610   **See Also:** user acceptance testing

Formal testing with respect to user needs, requirements, and business processes conducted to determine whether or not a system satisfies the acceptance criteria and to enable the user, customers or other authorized entity to determine whether or not to accept the system.

acting (IDEAL)

See Also: IDEAL

The phase within the IDEAL model where the improvements are developed, put into practice, and deployed across the organization. The acting phase consists of the activities: create solution, pilot/test solution, refine solution and implement solution.

Agile software development

A group of software development methodologies based on iterative incremental development, where requirements and solutions evolve through collaboration between self-organizing cross-functional teams.

Agile testing

See Also: test-driven development

Testing practice for a project using Agile software development methodologies, incorporating techniques and methods, such as extreme programming (XP), treating development as the customer of testing and emphasizing the test-first design paradigm.

alpha testing

Simulated or actual operational testing by potential users/customers or an independent test team at the developers' site, but outside the development organization. Alpha testing is often employed for commercial off-the-shelf software as a form of internal acceptance testing.

anomaly

Ref: IEEE 1044   **See Also:** defect, error, fault, failure, incident, problem

Any condition that deviates from expectation based on requirements specifications, design documents, user documents, standards, etc., or from someone's perception or experience. Anomalies may be found during, but not limited to, reviewing, testing, analysis, compilation, or use of software products or applicable documentation.

assessment report

See Also: process assessment

A document summarizing the assessment results, e.g., conclusions, recommendations and findings.

assessor

A person who conducts an assessment. Any member of an assessment team.

audit

Ref: IEEE 1028

An independent evaluation of software products or processes to ascertain compliance to standards, guidelines, specifications, and/or procedures based on objective criteria, including documents that specify: the form or content of the products to be produced, the process by which the products shall be produced, and how compliance to standards or guidelines shall be measured.

balanced scorecard

See Also: corporate dashboard, scorecard

A strategic tool for measuring whether the operational activities of a company are aligned with its objectives in terms of business vision and strategy.

best practice

A superior method or innovative practice that contributes to the improved performance of an organization under given context, usually recognized as "best" by other peer organizations.

beta testing

Synonyms: field testing

Operational testing by potential and/or existing users/customers at an external site not otherwise involved with the developers, to determine whether or not a component or system satisfies the user/customer needs and fits within the business processes. Beta testing is often employed as a form of external acceptance testing for commercial off-the-shelf software in order to acquire feedback from the market.

Capability Maturity Model Integration (CMMI)

Ref: CMMI

A framework that describes the key elements of an effective product development and maintenance process. The Capability Maturity Model Integration covers best-practices for planning, engineering and managing product development and maintenance.

CAST

See Also: test automation

Acronym for Computer Aided Software Testing.

causal analysis

Ref: CMMI

The analysis of defects to determine their root cause.

cause-effect diagram

Ref: After Juran

Synonyms: fishbone diagram , Ishikawa diagram

A graphical representation used to organize and display the interrelationships of various possible root causes of a problem. Possible causes of a real or potential defect or failure are organized in categories and subcategories in a horizontal tree-structure, with the (potential) defect or failure as the root node.

cause-effect graph

A graphical representation of inputs and/or stimuli (causes) with their associated outputs (effects), which can be used to design test cases.

certification

The process of confirming that a component, system or person complies with its specified requirements, e.g., by passing an exam.

change management

See Also: configuration management

(1) A structured approach to transitioning individuals and organizations from a current state to a desired future state. (2) Controlled way to effect a change, or a proposed change, to a product or service.

code

Ref: IEEE 610

Computer instructions and data definitions expressed in a programming language or in a form output by an assembler, compiler or other translator.

code coverage

An analysis method that determines which parts of the software have been executed (covered) by the test suite and which parts have not been executed, e.g., statement coverage, decision coverage or condition coverage.

codependent behavior

Excessive emotional or psychological dependence on another person, specifically in trying to change that person's current (undesirable) behavior while supporting them in continuing that behavior. For example, in software testing, complaining about late delivery to test and yet enjoying the necessary "heroism", working additional hours to make up time when delivery is running late, therefore reinforcing the lateness.

complexity

See Also: cyclomatic complexity

The degree to which a component or system has a design and/or internal structure that is difficult to understand, maintain and verify.

compliance

Ref: ISO 9126

The capability of the software product to adhere to standards, conventions or regulations in laws and similar prescriptions.

component

Synonyms: module , unit

A minimal software item that can be tested in isolation.

configuration management

Ref: IEEE 610

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 compliance with specified requirements.

content-based model

Synonyms: content reference model

A process model providing a detailed description of good engineering practices, e.g., test practices.

continuous representation

Ref: CMMI

A capability maturity model structure wherein capability levels provide a recommended order for approaching process improvement within specified process areas.

corporate dashboard

See Also: balanced scorecard, dashboard

A dashboard-style representation of the status of corporate performance data.

cost of quality

The total costs incurred on quality activities and issues and often split into prevention costs, appraisal costs, internal failure costs and external failure costs.

coverage

Synonyms: test coverage

The degree, expressed as a percentage, to which a specified coverage item has been exercised by a test suite

critical success factor

An element necessary for an organization or project to achieve its mission. Critical success factors are the critical factors or activities required for ensuring the success.

Critical Testing Processes (CTP)

See Also: content-based model

A content-based model for test process improvement built around twelve critical processes. These include highly visible processes, by which peers and management judge competence and mission-critical processes in which performance affects the company's profits and reputation.

custom software

Synonyms: bespoke software

Software developed specifically for a set of users or customers. The opposite is commercial off-the-shelf software.

decision

A program point at which the control flow has two or more alternative routes. A node with two or more links to separate branches.

defect

Synonyms: bug , fault , problem

A flaw in a component or system that can cause the component or system to fail to perform its required function, e.g., an incorrect statement or data definition. A defect, if encountered during execution, may cause a failure of the component or system.

defect density

Synonyms: fault density

The number of defects identified in a component or system divided by the size of the component or system (expressed in standard measurement terms, e.g., lines-of-code, number of classes or function points).

Defect Detection Percentage (DDP)

See Also: escaped defects

Synonyms: Fault Detection Percentage (FDP)

The number of defects found by a test level, divided by the number found by that test level and any other means afterwards.

defect management

Ref: After IEEE 1044

Synonyms: problem management

The process of recognizing, investigating, taking action and disposing of defects. It involves recording defects, classifying them and identifying the impact.

deliverable

Any (work) product that must be delivered to someone other than the (work) product's author.

Deming cycle

Ref: After Deming

An iterative four-step problem-solving process (plan-do-check-act) typically used in process improvement.

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diagnosing (IDEAL)

See Also: IDEAL

The phase within the IDEAL model where it is determined where one is, relative to where one wants to be. The diagnosing phase consists of the activities to characterize current and desired states and develop recommendations.

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domain

The set from which valid input and/or output values can be selected.

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dynamic testing

Testing that involves the execution of the software of a component or system.

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effectiveness

See Also: efficiency

The capability of producing an intended result.

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efficiency

Ref: ISO 9126

(1) The capability of the software product to provide appropriate performance, relative to the amount of resources used, under stated conditions. (2) The capability of a process to produce the intended outcome, relative to the amount of resources used.

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emotional intelligence

The ability, capacity, and skill to identify, assess, and manage the emotions of one's self, of others, and of groups.

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error

Ref: After IEEE 610

Synonyms: mistake

A human action that produces an incorrect result.

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establishing (IDEAL)

See Also: IDEAL

The phase within the IDEAL model where the specifics of how an organization will reach its destination are planned. The establishing phase consists of the activities set priorities, develop approach and plan actions.

European Foundation for Quality Management excellence model (EFQM)

A non-prescriptive framework for an organization's quality management system, defined and owned by the European Foundation for Quality Management, based on five 'Enabling' criteria (covering what an organization does), and four 'Results' criteria (covering what an organization achieves).

exit criteria

Ref: After Gilb and Graham

Synonyms: completion criteria , test completion criteria

The set of generic and specific conditions, agreed upon with the stakeholders for permitting a process to be officially completed. The purpose of exit criteria is to prevent a task from being considered completed when there are still outstanding parts of the task which have not been finished. Exit criteria are used to report against and to plan when to stop testing.

exploratory testing

Ref: After Bach

An informal test design technique where the tester actively controls the design of the tests as those tests are performed and uses information gained while testing to design new and better tests.

Extreme Programming (XP)

See Also: Agile software development

A software engineering methodology used within Agile software development whereby core practices are programming in pairs, doing extensive code review, unit testing of all code, and simplicity and clarity in code.

fail

Synonyms: test fail

A test is deemed to fail if its actual result does not match its expected result.

failure

Ref: After Fenton

Deviation of the component or system from its expected delivery, service or result.

Failure Mode and Effect Analysis (FMEA)

See Also: Failure Mode, Effect and Criticality Analysis

Synonyms: Software Failure Mode and Effect Analysis

A systematic approach to risk identification and analysis of identifying possible modes of failure and attempting to prevent their occurrence.

Fault Tree Analysis (FTA)

Synonyms: Software Fault Tree Analysis

A technique used to analyze the causes of faults (defects). The technique visually models how logical relationships between failures, human errors, and external events can combine to cause specific faults to disclose.

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feature

Ref: After IEEE 1008

Synonyms: software feature

An attribute of a component or system specified or implied by requirements documentation (for example reliability, usability or design constraints).

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functionality

Ref: ISO 9126

The capability of the software product to provide functions which meet stated and implied needs when the software is used under specified conditions.

Goal Question Metric (GQM)

An approach to software measurement using a three-level model conceptual level (goal), operational level (question) and quantitative level (metric).

IDEAL

An organizational improvement model that serves as a roadmap for initiating, planning, and implementing improvement actions. The IDEAL model is named for the five phases it describes: initiating, diagnosing, establishing, acting, and learning.

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incident management

Ref: After IEEE 1044

The process of recognizing, investigating, taking action and disposing of incidents. It involves logging incidents, classifying them and identifying the impact.

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indicator

Ref: ISO 14598

A measure that can be used to estimate or predict another measure.

initiating (IDEAL)

See Also: IDEAL

The phase within the IDEAL model where the groundwork is laid for a successful improvement effort. The initiating phase consists of the activities: set context, build sponsorship and charter infrastructure.

input

A variable (whether stored within a component or outside) that is read by a component.

inspection

Ref: After IEEE 610, IEEE 1028   **See Also:** peer review

A type of peer review that relies on visual examination of documents to detect defects, e.g., violations of development standards and non-conformance to higher level documentation. The most formal review technique and therefore always based on a documented procedure.

integration

The process of combining components or systems into larger assemblies.

integration testing

See Also: component integration testing, system integration testing

Testing performed to expose defects in the interfaces and in the interactions between integrated components o systems.

interoperability

Ref: After ISO 9126   **See Also:** functionality

The capability of the software product to interact with one or more specified components or systems.

lead assessor

The person who leads an assessment. In some cases, for instance CMMI and TMMi when formal assessments are conducted, the lead assessor must be accredited and formally trained.

learning (IDEAL)

See Also: IDEAL

The phase within the IDEAL model where one learns from experiences and improves one's ability to adopt new processes and technologies in the future. The learning phase consists of the activities: analyze and validate, and propose future actions.

lifecycle model

Ref: CMMI   **See Also:** software lifecycle

A partitioning of the life of a product or project into phases.

maintainability

Ref: ISO 9126

The ease with which a software product can be modified to correct defects, modified to meet new requirements, modified to make future maintenance easier, or adapted to a changed environment.

maintenance

Ref: IEEE 1219

Modification of a software product after delivery to correct defects, to improve performance or other attributes, or to adapt the product to a modified environment.

manufacturing-based quality

Ref: After Garvin   **See Also:** product-based quality, transcendent-based quality, user-based quality, value-based quality

A view of quality, whereby quality is measured by the degree to which a product or service conforms to its intended design and requirements. Quality arises from the process(es) used.

master test plan

See Also: test plan

A test plan that typically addresses multiple test levels.

maturity

Ref: ISO 9126   **See Also:** Capability Maturity Model Integration, Test Maturity Model integration, reliability

(1) The capability of an organization with respect to the effectiveness and efficiency of its processes and work practices. (2) The capability of the software product to avoid failure as a result of defects in the software.

maturity level

Ref: TMMi

Degree of process improvement across a predefined set of process areas in which all goals in the set are attained.

maturity model

A structured collection of elements that describe certain aspects of maturity in an organization, and aid in the definition and understanding of an organization's processes. A maturity model often provides a common language, shared vision and framework for prioritizing improvement actions.

mean time between failures (MTBF)

See Also: reliability growth model

The arithmetic mean (average) time between failures of a system. The MTBF is typically part of a reliability growth model that assumes the failed system is immediately repaired, as a part of a defect fixing process.

mean time to repair (MTTR)

The arithmetic mean (average) time a system will take to recover from any failure. This typically includes testing to insure that the defect has been resolved.

measure

Ref: ISO 14598

The number or category assigned to an attribute of an entity by making a measurement.

measurement

Ref: ISO 14598

The process of assigning a number or category to an entity to describe an attribute of that entity.

metric

Ref: ISO 14598

A measurement scale and the method used for measurement.

milestone

A point in time in a project at which defined (intermediate) deliverables and results should be ready.

mind map

A diagram used to represent words, ideas, tasks, or other items linked to and arranged around a central keyword or idea. Mind maps are used to generate, visualize, structure, and classify ideas, and as an aid in study, organization, problem solving, decision making, and writing.

moderator

Synonyms: inspection leader

The leader and main person responsible for an inspection or other review process.

Pareto analysis

A statistical technique in decision making that is used for selection of a limited number of factors that produce significant overall effect. In terms of quality improvement, a large majority of problems (80%) are produced by a few key causes (20%).

pass

Synonyms: test pass

A test is deemed to pass if its actual result matches its expected result.

path

Synonyms: control flow path

A sequence of events, e.g., executable statements, of a component or system from an entry point to an exit point.

performance

Ref: After IEEE 610   **See Also:** efficiency

Synonyms: time behavior

The degree to which a system or component accomplishes its designated functions within given constraints regarding processing time and throughput rate.

performance indicator

Ref: CMMI

Synonyms: key performance indicator

A high-level metric of effectiveness and/or efficiency used to guide and control progressive development, e.g., lead-time slip for software development.

pointer

Ref: IEEE 610

A data item that specifies the location of another data item. For example, a data item that specifies the address of the next employee record to be processed.

portability

Ref: ISO 9126

The ease with which the software product can be transferred from one hardware or software environment to another.

priority

The level of (business) importance assigned to an item, e.g., defect.

process

Ref: ISO 12207

A set of interrelated activities, which transform inputs into outputs.

process assessment

Ref: after ISO 15504

A disciplined evaluation of an organization's software processes against a reference model.

process improvement

Ref: CMMI

A program of activities designed to improve the performance and maturity of the organization's processes, and the result of such a program.

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process model

A framework wherein processes of the same nature are classified into a overall model, e.g., a test improvement model.

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product-based quality

Ref: After Garvin   **See Also:** manufacturing-based quality, quality attribute, transcendent-based quality, user-based quality, value-based quality

A view of quality, wherein quality is based on a well-defined set of quality attributes. These attributes must be measured in an objective and quantitative way. Differences in the quality of products of the same type can be traced back to the way the specific quality attributes have been implemented.

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project

Ref: ISO 9000

A project is a unique set of coordinated and controlled activities with start and finish dates undertaken to achieve an objective conforming to specific requirements, including the constraints of time, cost and resources.

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project retrospective

A structured way to capture lessons learned and to create specific action plans for improving on the next project or next project phase.

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project risk

See Also: risk

A risk related to management and control of the (test) project, e.g., lack of staffing, strict deadlines, changing requirements, etc.

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quality

Ref: After IEEE 610

The degree to which a component, system or process meets specified requirements and/or user/customer needs and expectations.

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quality assurance

Ref: ISO 9000

Part of quality management focused on providing confidence that quality requirements will be fulfilled.

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quality attribute

Ref: IEEE 610

Synonyms: quality characteristic , software product characteristic , software quality characteristic

A feature or characteristic that affects an item's quality.

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quality control

Ref: after ISO 8402

The operational techniques and activities, part of quality management, that are focused on fulfilling quality requirements.

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quality management

Ref: ISO 9000

Coordinated activities to direct and control an organization with regard to quality. Direction and control with regard to quality generally includes the establishment of the quality policy and quality objectives, quality planning, quality control, quality assurance and quality improvement.

Rational Unified Process (RUP)

A proprietary adaptable iterative software development process framework consisting of four project lifecycle phases: inception, elaboration, construction and transition.

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reliability

Ref: ISO 9126

The ability of the software product to perform its required functions under stated conditions for a specified period of time, or for a specified number of operations.

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requirement

Ref: After IEEE 610

A condition or capability needed by a user to solve a problem or achieve an objective that must be met or possessed by a system or system component to satisfy a contract, standard, specification, or other formally imposed document.

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result

See Also: actual result, expected result

Synonyms: outcome , test outcome , test result

The consequence/outcome of the execution of a test. It includes outputs to screens, changes to data, reports, and communication messages sent out.

retrospective meeting

Synonyms: post-project meeting

A meeting at the end of a project during which the project team members evaluate the project and learn lessons that can be applied to the next project.

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review

Ref: After IEEE 1028

An evaluation of a product or project status to ascertain discrepancies from planned results and to recommend improvements. Examples include management review, informal review, technical review, inspection, and walkthrough.

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risk

A factor that could result in future negative consequences.

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risk level

Synonyms: risk exposure

The importance of a risk as defined by its characteristics impact and likelihood. The level of risk can be used to determine the intensity of testing to be performed. A risk level can be expressed either qualitatively (e.g., high, medium, low) or quantitatively.

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risk management

Systematic application of procedures and practices to the tasks of identifying, analyzing, prioritizing, and controlling risk.

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root cause

Ref: CMMI

A source of a defect such that if it is removed, the occurrence of the defect type is decreased or removed.

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root cause analysis

An analysis technique aimed at identifying the root causes of defects. By directing corrective measures at root causes, it is hoped that the likelihood of defect recurrence will be minimized.

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safety critical system

A system whose failure or malfunction may result in death or serious injury to people, or loss or severe damage to equipment, or environmental harm.

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scalability

Ref: After Gerrard

The capability of the software product to be upgraded to accommodate increased loads.

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scrum

See Also: Agile software development

An iterative incremental framework for managing projects commonly used with Agile software development.

security

Ref: ISO 9126   **See Also:** functionality

Attributes of software products that bear on its ability to prevent unauthorized access, whether accidental or deliberate, to programs and data.

severity

Ref: After IEEE 610

The degree of impact that a defect has on the development or operation of a component or system.

software

Ref: IEEE 610

Computer programs, procedures, and possibly associated documentation and data pertaining to the operation of a computer system.

software lifecycle

The period of time that begins when a software product is conceived and ends when the software is no longer available for use. The software lifecycle typically includes a concept phase, requirements phase, design phase, implementation phase, test phase, installation and checkout phase, operation and maintenance phase, and sometimes, retirement phase. Note these phases may overlap or be performed iteratively.

software process improvement (SPI)

Ref: After CMMI

A program of activities designed to improve the performance and maturity of the organization's software processes and the results of such a program.

software quality

Ref: After ISO 9126   **See Also:** quality

The totality of functionality and features of a software product that bear on its ability to satisfy stated or implied needs.

specification

Ref: After IEEE 610

A document that specifies, ideally in a complete, precise and verifiable manner, the requirements, design, behavior, or other characteristics of a component or system, and, often, the procedures for determining whethe these provisions have been satisfied.

staged representation

See Also: CMMI

A model structure wherein attaining the goals of a set of process areas establishes a maturity level; each level builds a foundation for subsequent levels.

standard

Ref: After CMMI

Formal, possibly mandatory, set of requirements developed and used to prescribe consistent approaches to the way of working or to provide guidelines (e.g., ISO/IEC standards, IEEE standards, and organizational standards).

statement

Synonyms: source statement

An entity in a programming language, which is typically the smallest indivisible unit of execution.

static analyzer

Synonyms: analyzer , static analysis tool

A tool that carries out static analysis.

static testing

Testing of a software development artifact, e.g., requirements, design or code, without execution of these artifacts, e.g., reviews or static analysis.

suitability

Ref: ISO 9126   **See Also:** functionality

The capability of the software product to provide an appropriate set of functions for specified tasks and user objectives.

system

Ref: IEEE 610

A collection of components organized to accomplish a specific function or set of functions.

Systematic Test and Evaluation Process (STEP)

See Also: content-based model

A structured testing methodology, also used as a content-based model for improving the testing process. Systematic Test and Evaluation Process (STEP) does not require that improvements occur in a specific order.

test

Ref: IEEE 829

A set of one or more test cases.

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test analysis

The process of analyzing the test basis and defining test objectives.

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test approach

The implementation of the test strategy for a specific project. It typically includes the decisions made that follow based on the (test) project's goal and the risk assessment carried out, starting points regarding the test process, the test design techniques to be applied, exit criteria and test types to be performed.

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test case

Ref: After IEEE 610

A set of input values, execution preconditions, expected results and execution postconditions, developed for a particular objective or test condition, such as to exercise a particular program path or to verify compliance with a specific requirement.

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test charter

See Also: exploratory testing

Synonyms: charter

A statement of test objectives, and possibly test ideas about how to test. Test charters are used in exploratory testing.

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test closure

See Also: test process

During the test closure phase of a test process data is collected from completed activities to consolidate experience, testware, facts and numbers. The test closure phase consists of finalizing and archiving the testware and evaluating the test process, including preparation of a test evaluation report.

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test data

Data that exists (for example, in a database) before a test is executed, and that affects or is affected by the component or system under test.

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test design

See Also: test design specification

The process of transforming general test objectives into tangible test conditions and test cases.

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test environment

Ref: After IEEE 610

Synonyms: test bed , test rig

An environment containing hardware, instrumentation, simulators, software tools, and other support elements needed to conduct a test.

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test estimation

The calculated approximation of a result related to various aspects of testing (e.g., effort spent, completion date, costs involved, number of test cases, etc.) which is usable even if input data may be incomplete, uncertain, or noisy.

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test execution

The process of running a test on the component or system under test, producing actual result(s).

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test execution phase

Ref: IEEE 610

The period of time in a software development lifecycle during which the components of a software product are executed, and the software product is evaluated to determine whether or not requirements have been satisfied.

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test implementation

The process of developing and prioritizing test procedures, creating test data and, optionally, preparing test harnesses and writing automated test scripts.

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test improvement plan

Ref: After CMMI

A plan for achieving organizational test process improvement objectives based on a thorough understanding of the current strengths and weaknesses of the organization's test processes and test process assets.

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test level

Ref: After TMap

Synonyms: test stage

A group of test activities that are organized and managed together. A test level is linked to the responsibilities in a project. Examples of test levels are component test, integration test, system test and acceptance test.

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test management

The planning, estimating, monitoring and control of test activities, typically carried out by a test manager.

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test management tool

A tool that provides support to the test management and control part of a test process. It often has several capabilities, such as testware management, scheduling of tests, the logging of results, progress tracking, incident management and test reporting.

test manager

Synonyms: test leader

The person responsible for project management of testing activities and resources, and evaluation of a test object. The individual who directs, controls, administers, plans and regulates the evaluation of a test object.

Test Maturity Model integration (TMMi)

A five-level staged framework for test process improvement, related to the Capability Maturity Model Integration (CMMI), that describes the key elements of an effective test process.

test monitoring

See Also: test management

A test management task that deals with the activities related to periodically checking the status of a test project. Reports are prepared that compare the actuals to that which was planned.

test objective

A reason or purpose for designing and executing a test.

test phase

Ref: After Gerrard

A distinct set of test activities collected into a manageable phase of a project, e.g., the execution activities of a test level.

test plan

Ref: After IEEE 829

A document describing the scope, approach, resources and schedule of intended test activities. It identifies amongst others test items, the features to be tested, the testing tasks, who will do each task, degree of tester independence, the test environment, the test design techniques and entry and exit criteria to be used, and the rationale for their choice, and any risks requiring contingency planning. It is a record of the test planning process.

test planning

The activity of establishing or updating a test plan.

test policy

A high-level document describing the principles, approach and major objectives of the organization regarding testing.

test process

The fundamental test process comprises test planning and control, test analysis and design, test implementation and execution, evaluating exit criteria and reporting, and test closure activities.

test process group (TPG)

Ref: After CMMI

A collection of (test) specialists who facilitate the definition, maintenance, and improvement of the test processes used by an organization.

test process improvement manifesto

Ref: Veenendaal08

A statement that echoes the Agile manifesto, and defines values for improving the testing process. The values are: flexibility over detailed processes, best practices over templates, deployment orientation over process orientation, peer reviews over quality assurance (departments), business driven over model-driven.

test process improver

A person implementing improvements in the test process based on a test improvement plan.

test progress report

Synonyms: test report

A document summarizing testing activities and results, produced at regular intervals, to report progress of testing activities against a baseline (such as the original test plan) and to communicate risks and alternatives requiring a decision to management.

test reporting

See Also: test process

Collecting and analyzing data from testing activities and subsequently consolidating the data in a report to inform stakeholders.

test session

See Also: exploratory testing

An uninterrupted period of time spent in executing tests. In exploratory testing, each test session is focused on a charter, but testers can also explore new opportunities or issues during a session. The tester creates and executes on the fly and records their progress.

test specification

A document that consists of a test design specification, test case specification and/or test procedure specification.

test strategy

A high-level description of the test levels to be performed and the testing within those levels for an organization or programme (one or more projects).

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test tool

Ref: TMap   **See Also:** CAST

A software product that supports one or more test activities, such as planning and control, specification, building initial files and data, test execution and test analysis.

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testability review

Ref: After TMap

A detailed check of the test basis to determine whether the test basis is at an adequate quality level to act as an input document for the test process.

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tester

A skilled professional who is involved in the testing of a component or system.

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testing

The process consisting of all lifecycle activities, both static and dynamic, concerned with planning, preparation and evaluation of software products and related work products to determine that they satisfy specified requirements, to demonstrate that they are fit for purpose and to detect defects.

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testware

Ref: After Fewster and Graham

Artifacts produced during the test process required to plan, design, and execute tests, such as documentation, scripts, inputs, expected results, set-up and clear-up procedures, files, databases, environment, and any additional software or utilities used in testing.

Total Quality Management (TQM)

Ref: After ISO 8402

An organization-wide management approach centered on quality, based on the participation of all members of the organization and aiming at long-term success through customer satisfaction, and benefits to all members of the organization and to society. Total Quality Management consists of planning, organizing, directing, control, and assurance.

TPI Next

A continuous business-driven framework for test process improvement that describes the key elements of an effective and efficient test process.

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traceability

See Also: horizontal traceability, vertical traceability

The ability to identify related items in documentation and software, such as requirements with associated tests.

transactional analysis

The analysis of transactions between people and within people's minds; a transaction is defined as a stimulus plus a response. Transactions take place between people and between the ego states (personality segments) within one person's mind.

transcendent-based quality

Ref: After Garvin   **See Also:** manufacturing-based quality, product-based quality, user-based quality, value-based quality

A view of quality, wherein quality cannot be precisely defined, but we know it when we see it, or are aware of its absence when it is missing. Quality depends on the perception and affective feelings of an individual or group of individuals toward a product.

usability

Ref: ISO 9126

The capability of the software to be understood, learned, used and attractive to the user when used under specified conditions.

user-based quality

Ref: after Garvin   **See Also:** manufacturing-based quality, product-based quality, transcendent-based quality, value-based quality

A view of quality, wherein quality is the capacity to satisfy needs, wants and desires of the user(s). A product or service that does not fulfill user needs is unlikely to find any users. This is a context dependent, contingent approach to quality since different business characteristics require different qualities of a product.

V-model

A framework to describe the software development lifecycle activities from requirements specification to maintenance. The V-model illustrates how testing activities can be integrated into each phase of the software development lifecycle.

validation

Ref: ISO 9000

Confirmation by examination and through provision of objective evidence that the requirements for a specific intended use or application have been fulfilled.

value-based quality

Ref: After Garvin   **See Also:** manufacturing-based quality, product-based quality, transcendent-based quality, user-based quality

A view of quality wherein quality is defined by price. A quality product or service is one that provides desired performance at an acceptable cost. Quality is determined by means of a decision process with stakeholders on trade-offs between time, effort and cost aspects.

verification

Ref: ISO 9000

Confirmation by examination and through provision of objective evidence that specified requirements have been fulfilled.

walkthrough

Ref: Freedman and Weinberg, IEEE 1028   **See Also:** peer review

Synonyms: structured walkthrough

A step-by-step presentation by the author of a document in order to gather information and to establish a common understanding of its content.