Mindtree

Welcome to possible

Mindtree contribution to the new testing standard.

ISO / IEC 29119 Software Testing is a new international standard developed by the ISO / IEC JTC1 / SC7 working group. This project aims to produce an international standard for software testing. This standard covers the entire software testing lifecycle, through the analysis, design, development and maintenance of any software product or system.

Mindtree, as part of NASSCOM, is part of this working group and contributes effectively towards the development of this standard. Process Evangelist Sylvia Veeraraghavan, Vice President, Testing Business, Mindtree has editorial responsibilities for the Part 2 of this standard. The Process Evangelist team at Mindtree plays a key role in reviewing all the other parts of the standard and ensures that the developed standards are tuned to services industry and Indian context.

ISO / IEC 29119 – The working group and its role

The working group for this new standard comprises of testing and process veterans from 11+ countries. The group meets for one week, every 6 months, at the same time as the bi-yearly plenary and interim meetings of the ISO / IEC JTC1 / SC7 Software and Systems Engineering sub-committee.

ISO 29119 – Scope and structure

Part 1: Concepts and vocabulary
Part 1 of the standard aims to give a general overview of the standard and software testing concepts. It also provides a vocabulary of software testing terms that covers the entire software testing lifecycle.

Part 2: Test process
Part 2 of the standard covers a generic testing process model that can be used within any software development and testing lifecycle. This process will be based on a four-layer testing process that covers:

- Organizational test specifications, such as organizational test policy and organizational test strategy
- Test management
- Fundamental test process

Part 3: Test documentation
Part 3 of the standard covers test documentation across the entire software testing lifecycle. This includes templates across all layers of the 29119 software testing process model, including:

- Organizational test policy process
- Organizational test strategy process
- Project test management process
- Fundamental test process

Part 4: Test techniques
Part 4 of the standard covers software testing techniques across all types of testing. Static: Reviews, inspections, walkthroughs. Functional: black-box, white-box. Non-functional: Performance, security. Usability and experience-based: Error guessing, exploratory.

Summary

The new testing standard plugs gaps and brings clarity to definitions in some of the existing standards. A few of these areas include:

- Organizational processes and documents
- Organizational test policy and test strategy
- Processes for project test management
- Some common functional testing techniques:
    - BS 7925 only covers unit testing
    - No coverage of "higher level" techniques, such as use case testing
- Non-functional testing techniques such as security, performance and usability
- Practitioners do not know which standard to follow

The standard replaces a number of the older IEEE and BSI standards for software testing:
- IEEE 829 test documentation
- IEEE 1008 unit testing
- BS 7925-1 vocabulary of terms in software testing
- BS 7925-2 software component testing standard

ISO / IEC 29119 provides practitioners with testing guidelines that cover all aspects of the testing lifecycle. The new standard addresses the gaps in current processes and provides a consistent set of definitions, processes, procedures and techniques.

The standard has been adopted by ISO, IEEE, Standards Australia and national standards bodies around the world.

About Mindtree

Mindtree is a global information technology solutions company with revenues of over USD 400 million. Our team of 11,000 experts engineer meaningful technology solutions to help businesses and societies flourish. We enable our customers achieve competitive advantage through flexible and global delivery models, agile methodologies and expert frameworks.