

Test Engineering

Effective testing as foundation for high quality products

Selective usage of testing technique

The importance of quality is steadily increasing. In the context of developing products with high complexity it is necessary to put more effort into test engineering to ensure the functionality. Test engineering is one of the most important elements for a successful project starting in the requirements phase and ending in the production phase.

The INVENSITY Center of Excellence Systems Engineering possess long lasting experience with test engineering covering testing techniques, testing methods as well as norms and tools.

Test techniques

- Blackbox/Whitebox
- Explorative

Test methods

- Regression test
- Test automation

Normen % Standards

- IEEE 1028
- ISO/IEC 9126, 29119, 61508
- V-Model XT
- DO-178B
- AQAP 2210
- FDA / Medical Devices

Tools, e.g.:

- Hitex Tessy
- dSpace Productportfolio
- SmartBear Test Complete

Test methods					
Static test		Dynamic test			
Review	Static analysis	Whitebox-Method		Blackbox-Method	
		Control flow based methods	Data flow based methods	Experience based methods	
• Management review	• Control flow analysis • Data flow analysis	• Procedure coverage • Branch coverage • Path coverage • Condition coverage	• Defs / Uses – Test • Required k-Tuples test • Data context coverage	• Äquivalent class creation • Threshold analysis • Application based test case definition • Condition based test case definition • Cause-effect-graph-analysis	
• Technical review					• Explorative testing
• Inspection					
• Walkthrough					
• Audit					

Benefit of our experience in testing

All the expertise in INVENSITY's Center of Excellence Systems Engineering is based on planning, coordinating and implementation of several different projects in changing industrial sectors, e.g. medical, defense, aerospace and automotive. Furthermore the introduction of techniques and methods as well as evaluation of tools is a part of our service. The INVENSITY Center of Excellence Systems Engineering also offers organization and moderation of workshops or meeting in the field of test engineering and similar topics.

Contact

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