System Process for Interoperability Requirements and Implementation Testing (SPIRIT)

SPIRIT is a unique process for interoperability management and assurance. Supported by IBM Watson Internet of Things (IoT) Rational software, SPIRIT is a standards-based interoperability assurance approach.

SPIRIT offers various industries an holistic, integrated approach to the specification, installation and testing of complex data interfaces.

The SPIRIT approach focuses on the definition of an integrated and self-consistent set of standards, which define how the individual systems within a system-of–systems coordinate and report actions. We refer to this set of standards as the 'vision'.

Verification asks the question:

'Are we building the product right?'

Validation asks the question:

'Are we building the right product?'

At the heart of the SPIRIT method is a model of the standards that represent the vision. The model ensures that the vision is complete, consistent and correct.

The SPIRIT model verifies the vision.

Benefits

Systematic process for Multi-Platform specifications, test creations and management

Manage standards, requirements and implementation with one solution

Manage the solution in house or let our Subject Matter Experts (SME) assist you

Tailored solutions to meet specific requirements

SPIRIT

The SPIRIT approach is ideally carried out as part of an interoperability assurance testing programme but it can be applied very effectively to acceptance testing of an individual system

DATASHEET

Understanding Interoperability Requirements

✓ Define systems requirement:

use the vision to define individual system requirements which are then matched against the test cases.

✓ Identify minimum number of cases:

the SPIRIT model reveals the logical flow of processing through systems which identifies the minimum number of test cases required for comprehensive validation.

✓ Develop test cases against your vision:

form the basis of a set of standard tests which can be applied to all systems.

✓ Reduce costs with early test case identification:

the SPIRIT approach ensures the development team can collect evidence to support completion of tests from the earliest stages of the development lifecycle.

✓ Integrated with systems development lifecycle:

ensures testing is integrated and allows testing to take place throughout development as opposed to on completion.

✓ Establish interoperability management programme:

by testing against your vision, SPIRIT allows you to automatically establish an interoperability programme by identifying the difference between the system capability and the vision.

✓ 'What if' analysis on change management processes:

a change in vision can be costly if it causes significant knock on changes to implemented systems. SPIRIT evaluates change proposals using 'what if' analysis using the system-of-systems model.

✓ Means for certification:

using standard test cases: make quantitative assessment of system compliance and show your value for certification.

SPIRIT - Working for Industry

SyntheSys has successfully used SPIRIT in several European defence organisations to support Tactical Data Link sustainment programmes. By providing the SPIRIT solution along with Subject Matter Expert (SME) services, SyntheSys has implemented SPIRIT as a highly cost effective solution.

Using SPIRIT, SyntheSys captured specifications of platforms and carried out focused interoperability evaluation between various platforms, both C2 and NonC2.

As part of these projects, SyntheSys has delivered comprehensive training in the use of SPIRIT and has provided additional services to streamline procurement processes.

About SyntheSys

SyntheSys provides defence systems, training, systems and software engineering and technical management services over a spectrum of different industry sectors. Along with distinct support and consultancy services, our innovative product range makes us first choice provider for both large and small organisations. Established in 1988, the company focus is on fusing technical expertise with intuitive software applications to solve common industry challenges.

DATASHEET