PROVEN At a Glance

We believe that: «High Quality» Software-intensive Systems will improve our lives for a better future.

Since 2014
We provide engineering services and solutions to increase the quality of products and services of our customers.

Quality
We take part in critical projects as a reliable partner for aerospace, automotive, finance and telecom industries.
# PROVEN Information Technologies

## Team
- 55+ staff
- 50+ engineers
- 40% female ratio
- ISTQB, PMP certified
- Happy Employees 😊

## Quality
- CMMI-DEV compliant processes
- ISO 9001:2015 certified
- Agile Development

## Facility
- Hacettepe University Technopolis
- 500 m²
- National and NATO Secret Facility Clearance

## Collaboration
- R&D Projects with Universities
- Joint Education Programs
- Public Community Seminars

## Our Products and Tools
- ProVER – Proven Verification Framework
- TestINT – Test Framework for AI Based Systems
- ROBITOR – Robotic Test Automation System (Patent Pending)
- CACTUS – Enterprise System and Team Management and Monitoring
About Us

Process Improvement

- CMMI-ACQ Consultancy
- CMMI-DEV Consultancy
- Testing Services Setup

Avionics System Verification

- Embedded Systems Verification
- Supplier Quality Assurance Services

Software Development

- C4I Solutions
- Simulator/Emulator Software
- R&D Projects
- Agile Software Development

Testing Services

- System Test Services
- Software Testing Services
- International System Testing Services – AeroSpace Industry
- Automotive SPICE Consultancy

Test Software Dev.

- C4I Systems/Software Verification
- DO178 Compliance Services
- PROVEN Academy Trainings
- ROBITOR – Test Automation Robot

2014

2015-16

2017-18

2019

2020
About Us
SW Development Solutions and Platforms

Custom Sw Development – Test Tools Development – Embedded Sw Development
Desktop Applications / Web Applications / Mobile Applications (iOS and Android)

Test Services and Solutions


Process Improvement and Training
CMMI v2.0, SPICE, Automotive SPICE, TMMI
Standards and Infrastructure

At a Glance

Standards
DO-178B/C & CMMI DEV/ACQ/SRV & ISO 15504 (33000) / Automotive SPICE

Programming Languages

Operating Systems
Linux, UNIX, MS Windows, Green Hills Integrity

Environment
Teleric Test Studio / Test Complete / Selenium / Cypress / Eggplant / Visual Studio Coded UI / Apache Jmeter / Soap UI / LDRA / Vectorcast Cover / TFS / Jira / Redmine / GIT/ Bitbucket / SVN
Solution Areas

At a Glance

Big Data Analysis Solutions
AI Based Systems/Solutions
Simulation Systems
Mission Management and Messaging

Command & Control Systems
Automotive Systems
Avionics Systems
Satellite Ground Control Systems
Capabilities/Solutions

Software Development
- C4I Based Software Development Solutions
- Control Software for Servo Motor Systems
- Messaging and Mission Control Software
- Simulator/Emulator
- Robotic Test Software
- R&D Projects (AI and Big Data Solutions)

Engineering Services
- System and Software Testing Services
- ISTQB Certified Engineers
- TMMI Compliance
- DO -178 Verification
- DO -178 Consultancy

QA and Process Improvement
- CMMI DEV/SVC/ACQ
- SPICE – ISO15504
- Automotive SPICE
- TMMI
- Supplier Quality Assurance Services

Training
- SW Engineering
- Test and Verification
- Project and Process Management
- Safety Critical Systems
- DO-178, DO-254
• We have highly matured ways to manage «Change» in needs; our development teams apply agile practices;

• We use an efficient development environment and tool ecosystem that enable us provide continuously integrated products.

• We provide fast solutions with highly reusable components for quick and tested solutions to our customers

• We have a knowledgeable team on system and software engineering methodologies

• We develop high quality and well-tested code
Our Software Development Services

- Custom Software Development
- Test Tool Development
- Embedded Software Development
Custom Software Development

• PROVEN’s goal is to be your reliable technology partner, helping your business accelerate the development of desktop, mobile & web-based apps with a highly motivated team that focuses on moving your business forward.

• Software Languages
  • Java, C#, C++, python...

• Tools and Technologies
  • JavaFX, Java Spring (Spring MVC, Spring Cloud, Spring Boot, Spring Data, Spring Security), Hibernate, OSGI
  • Microsoft Visual Studio, Eclipse
  • GIT, JIRA, Bitbucket, SVN
Test Tool Development

• In order to effectively develop and test large-scale and complex software intensive systems, test automation tools and test software such as emulators / simulators are needed.

• Proven Teams, have expertise in developing the following Test tools:
  • Test Automation Software
  • Emulator Software
  • Simulation Systems
  • Test Data Analytics Solutions
Embedded Software Development

Software development on real-time operating systems
  • Embedded software development on microcontrollers
  • Safety Critical software development
  • Card Support Software and Driver development for newly developed hardware
  • Development of data communication layer software between internal and external units
  • Preparation of software development process documents for developed software

Software Languages: C, C++, Python, Matlab

Operating systems: Green Hills Integrity, Wind River VxWorks, QNX, Linux

Tools: Green Hills MULTI, Microsoft Visual Studio, Eclipse, Pic C Compiler, Atlassian JIRA, IBM Rational Clearcase, IBM Rational Clearquest, Tortoise SVN, IBM Rational DOORS, Vector Cast Cover

Our Products & Solutions

Developed by PROVEN

ProVER - Proven Verification Framework

TestINT - Test Framework for AI Based Systems

CACTUS - Enterprise System and Team Management/Monitoring Tool

ROBITOR - Robotic Test Automation System (Patent Pending)
ProVER offers the automotive industry test engineers, a tool for integration tests for lab and in vehicle testing, enabling engineers to:

- analyze messages sent to and from ECUs,
- analyze performance indicators
- Detect root causes of errors

Capabilities include:

- Easy analysis of errors, real-time resolution, performance on high bus load environments and a flexible solution
- Visualization of routing tables
- Automatic failure detection
- Integrate with existing data-logging systems
- AI based anomaly detection

ProVER provides tools to create simplicity in other domains such as Automotive, Aerospace, Rail and Medical industry to reduce development costs and ensure quality.
Enterprise System and Team Management & Monitoring Solution

provides managers of enterprise systems, and event managers with an easy-to-use tool to overview and manage large-scale enterprise systems, and systems of systems by communicating the right information, to the right people at the right time and let them respond to incidents on-time

Cactus, provides the managers with the capability to increase the situational awareness by displaying all incidents and alerts received from various systems and personnel

Increased visibility with faster response time
Response actions with higher awareness
High visibility for all operations
Modular and extendible infrastructure
Measurement and Performance analytical capabilities

With its microservice infrastructure, CACTUS can be easily integrated with current systems and easily extended to include multiple systems and customized to our customers’ needs
Robotic Test Automation System *(patent pending)*

ROBITOR is an efficient, 24/7 operability, cost effective and error minimizing automated testing system. ROBITOR executes defined tests like a human operator, minimizing human errors, increasing precision and decreasing test activity costs.

We introduce Robotics Technology to System testing for utilizing the test engineering workforce more effectively.

ROBITOR provides opportunity to utilize test engineering work force in higher value-added tasks by transferring the routine activities to robots. Creates an infrastructure for machine learning in testing.
Platforms are transforming into autonomous systems with AI capabilities. Traditional test techniques and tools are not adequate to verify these systems. TestINT is a testing framework focused on safety critical systems which include AI features.

TestINT helps companies increase the quality and reliability of their products.

TestINT is configurable, adaptable, extendible and enables selection of different test methods.
• Why Choose PROVEN for your test/verification needs?
  • More than 10+ happy customers with 50+ projects since 2014 with high customer retention ratio
  • ISTQB certified engineering services with our dedicated teams
  • Our experience in safety critical systems brings the discipline to our work
  • Our test teams are knowledgeable in SW and Systems Development Lifecycles
  • We believe in A G I L E practices and apply them at all levels
  • We have a strong reputation in the testing services field
  • We use test automation tools; and develop custom solutions when needed
  • We 🖤 Testing and increasing the product/service quality of our customers
Problems in Testing Domain

- Project-based variable staffing needs
- Insufficient test automation
- Difficulty of specializing in testing
- Software engineers' preference of software over testing
- Difficulty in recruiting test personnel in desired qualifications
- Lack of senior test personnel
EXPERIENCED AND COMPETENT TESTING PERSONNEL
Expanding pool of test engineers

ACCUMULATED KNOWLEDGE IN TEST AUTOMATION
Ever-developing knowhow in test automation

TESTING FOCUS
Process-oriented systematic testing approach at each step of the life cycle

CONTINUING EDUCATION
Test Engineering trainings supporting the career path

EXPERTISE
Horizontal and vertical specialization
User Interface (GUI) Tests
RANOREX, TESTCOMPLETE, SELENIUM, FITNESSE, AND SIMILAR TOOLS

Embedded Software Tests
INHOUSE TEST TOOLS, EMULATORS/SIMULATORS, VECTORCAST, RAPITEST, LDRA

Performance Tests
HP LOADRUNNER, TELERIX TEST STUDIO, MICROSOFT TEST MANAGER, JMETE, AND SIMILAR TOOLS
Flexible Solution
Alternatives

- Test Package Responsibility
- Service Level Agreements - SLA Approach
- Staff Outsourcing Services
- Fast/Adaptive/Effective Testing Solutions at Proven Offices or Clients' Facilities
• Supplier Quality Assurance Services
  • Work product technical reviews
  • Supplier Audits
  • QA and Test Governance

• Process Engineering Services
  • Process Improvement CMMI/TMMI/SPICE/Automotive SPICE
  • AS-IS Analysis / GAP Analysis
  • Business Process Analysis
  • System/Software Requirements Analysis
Training

PROVEN-EKY01 - RTCA/DO-178C and Certification
PROVEN-EKY02 - RTCA/DO-330 and Tool Qualification
PROVEN-EKY03 - RTCA/DO-331 and Model-based Development
PROVEN-EKY04 - Software Requirement Process in Safety Critical Systems
PROVEN-EKY05 - Software Validation Process in Safety Critical Systems
PROVEN-EKY06 - Testing and Structural Coverage Analysis Process from DO-178C Perspective

Trainings

PROVEN-GGY01 - Requirement Analysis
PROVEN-GGY02 - Requirements and Scope Management
PROVEN-SY01 - Process Analysis and Improvement
PROVEN-SY02 - CMMI: Introduction and Basic Concepts
PROVEN-SY03 - SPICE - ISO 15504 (new ISO 33000): Introduction and Basic Concepts
PROVEN-KTS01 - Quality Oriented Software Engineering
PROVEN-KTS02 - Software Testing Techniques
PROVEN-KTS03 - Advanced Software Testing Techniques
PROVEN-PY01 - Applied Project Management (PMBOK Compliant)
Why PROVEN?

Proven Track Record
Reliable partner with a track record of successful projects

Proven Processes
High Quality Software Work Products
PROVEN Processes ensuring high quality deliverables

Flexible solutions
Customizable Software Products
Custom Software Development with alternative delivery methods
- Software package delivery and responsibility
- Test package responsibility
- Flexible Outsource services in software lifecycle (test, software development, quality assurance)
THANK YOU
FOR MORE INFORMATION

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