Software Testing & Certification Laboratory

GS(Good Software)

Certification

Best Choice for Good Quality Trusted Software

TTA Telecommunications Technology Association

CONTENTS

GS Certification

Overview

What is GS Certification?

The GS (Good Software) certification began in 2001 in order to improve the quality of software products and promote the spread of high quality products.

To certify that it is good quality software, we perform systematic testing and evaluate it based on international standards, ISO/IEC 25023, 25051 and 25041. Based on the evaluation results, we issue a GS Certificate according to Article 20 (Good Software Certification) of SOFTWARE PROMOTION ACT.

Purpose

1. Improve the quality of software products by providing software quality   certification
2. Encourage the use of high quality software by promoting certified products which support the sales
   of SME software products and lead to the vitalization of the domestic software industry

Software Types Covered by Testing & Certification

UTM, WAS, DBMS, Operating System, IoT Solution, SCADA, Middleware, etc.
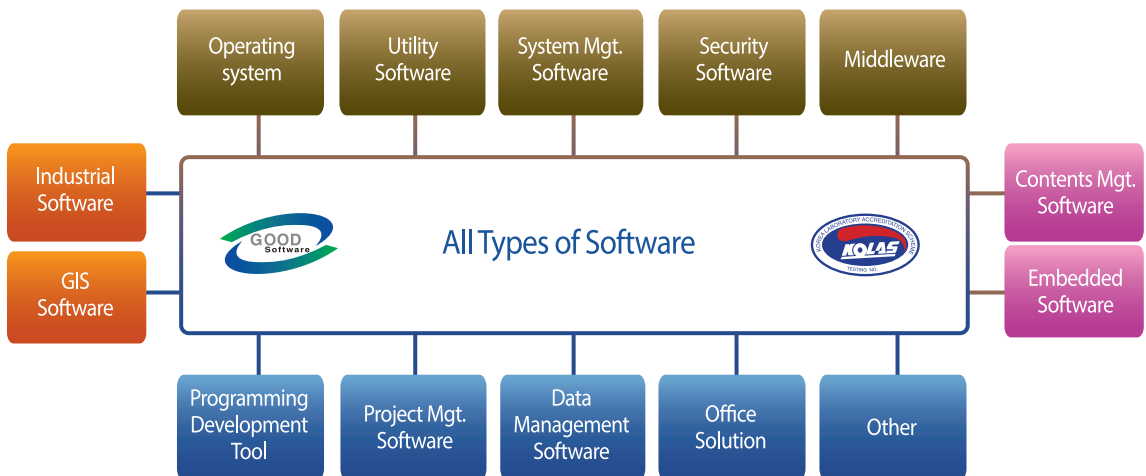
Legal Basis

Legal Basis

SOFTWARE PROMOTION ACT
1) Article 20 (Good Software Certification)
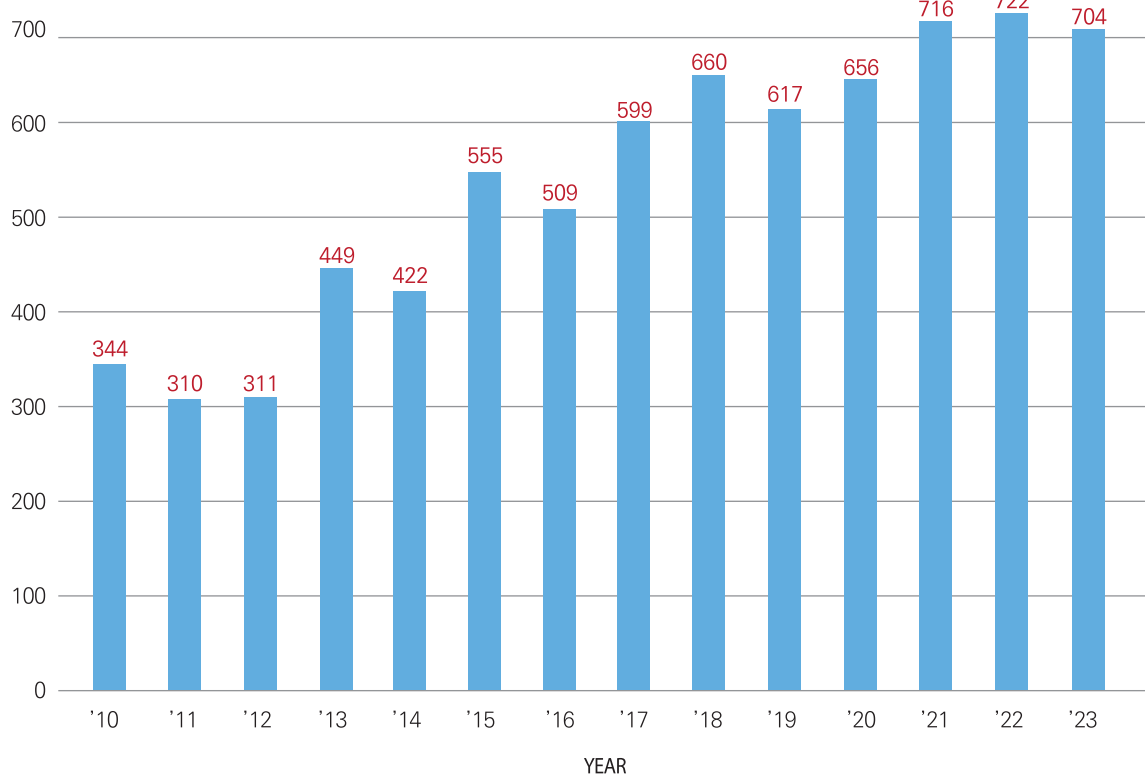
ENFORCEMENT DECREE OF SOFTWARE PROMOTION ACT
1) Article 15 (Award of Quality Certification)
2) Article 16 (Designation of Quality Certifying Institutions)
3) Article 17 (Standards for Quality Certification)

ENFORCEMENT REGULATIONS OF SOFTWARE PROMOTION ACT
1) Article 4 (Application for Quality Certifying)
2) Article 5 (Certification Level and Certificate Mark)
3) Article 6 (Issue Certificate)

Number of GS Certified Products

Number of
Certified Products

YEAR	Number of Certified Products
'10	344
'11	310
'12	311
'13	449
'14	422
'15	555
'16	509
'17	599
'18	660
'19	617
'20	656
'21	716
'22	722
'23	704

Certification Mark and Certificate

Certification Mark

Level 1

Level 2

※ Level 1 is higher than Level 2.
 The Certification ID is assigned with the format of YY-NNNN.
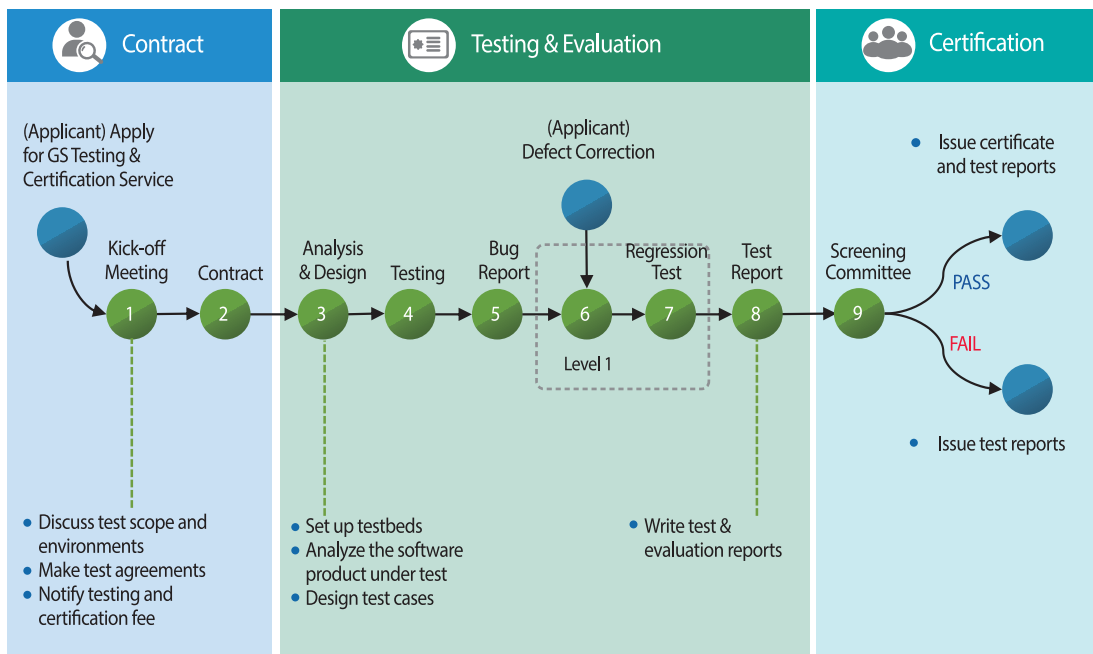
Certificate

Criteria & Process

Certification Criteria

TTA certifies that software is of a high quality in accordance with ISO/IEC 25023, 25051 and 25041.

ISO/IEC 25023	ISO/IEC 25051	ISO/IEC 25041
Measurement of system and software product quality	Requirements for Quality of Ready to Use Software Products and Instruction for testing	Evaluation guide for developers, acquirers and independent evaluators

Evaluation Model

Software Quality

Functional Suitability	Performance Efficiency	Compatibility	Usability	Reliability	Security	Maintainability	Portability	General Requirements
Functional completeness	Time behavior	Co-existence	Appropriateness Recognizability	Maturity	Confidentiality	Analyzability	Adaptability	Requirements for product description
Functional correctness	Resource utilization	Interoperability	Learnability	Availability	Integrity	Modifiability	Installability	Requirements for documentation
Functional appropriateness	Capacity		Operability	Fault tolerance	Non-reputation	Testability	Replaceability	Statement on quality characteristics
			User error protection	Recoverability	Accountability			
			User interface aesthetics		Authenticity			
			Accessibility					

■ Quality characteristic

■ Quality sub-characteristic

Testing and Certification Process

Contract

(Applicant) Apply for GS Testing & Certification Service

1 Kick-off Meeting
2 Contract

- Discuss test scope and environments
- Make test agreements
- Notify testing and certification fee

Testing & Evaluation

(Applicant) Defect Correction

3 Analysis & Design
4 Testing
5 Bug Report
6
7 Regression Test
8 Test Report

Level 1

- Set up testbeds
- Analyze the software product under test
- Design test cases

- Write test & evaluation reports

Certification

- Issue certificate and test reports

9 Screening Committee

PASS

FAIL

- Issue test reports

Step 1.   Testing and Certification Process
Step 2.   Kick-off meeting
           - (TTA) Explain GS testing & certification criteria and process
           - (Applicant) Explain the software product applied for testing & certification
           - (TTA & Applicant) Discuss test and certification scope and make test agreement for product
configurations and testing environments
           - (TTA) Notify the applicant of testing & certification fee
Step 3.   (TTA & Applicant) Contract
Step 4.   (TTA) Analysis & Design
           - Set up testbeds
           - Analyze the software product under test
           - Design test cases
Step 5.   (TTA) Perform testing
           - Perform testing in terms of eight characteristics according to ISO/IEC 25023 and ISO/IEC
25051
           - Report defects and regression test after defect correction
Step 6.   (TTA) Report defects
Step 7.   (Applicant) Defect correction
Step 8.   (TTA) Write test & evaluation reports
Step 9.   Screening committee
Step 10. Issue GS Certificate with test reports
Step 11. Issue test reports

About TTA STCL

TTA

TTA(Telecommunications Technology Association) is the government affiliated organization to support the establishment and dissemination of ICT standards as well as to provide testing & certification services for related ICT technologies.

ICT Standardization

- Publish the TTA standards in ICT areas
- Support international standardization activities for ITU, ISO, IEC, etc
- Cooperate with global standardization organization such as GSC, CJK, etc
- ICT Standards Strategic Map (Rolling Plan)
- Provide consulting services to SMEs and developing countries

Testing & Certification Service

- Test and certify ICT products and services
- Research on testing and ICT technologies
- Provide training of testing methodology

- International testing laboratory accredited by KOLAS (Korea Laboratory Accreditation Scheme)

STCL

Overview

STCL (Software Testing & Certification Laboratory) is the 3rd party software quality certification organization. Since 2001, STCL has been providing various testing and certification services including GS testing certification, Benchmark tests and CC evaluation to improve the quality of SME software.

STCL has been constantly trying to improve SMEs' software quality through testing & certification, the software test training program, OpenLab service and standardization.

Specializing in software testing and certification, STCL is doing its best not only to support SME companies but also to satisfy the customer's needs in the software market.

Objectives

Software Quality Improvement

Provide 3rd-party testing and certification services to support the improvement of software quality and thereby enable buyers to trust the quality of SME software products

Software Industry Vitalization

Encourage the use of good quality software by promoting certified products which support the sales of SME software products and lead to the vitalization of domestic software industry

New Technology Dissemination

Research software testing methodologies and techniques for new technologies such as HPC, TPC, SPC and so on, and provide test training to SME companies

STCL

Testing and Certification Area

Testing and Certification

- GS Testing & Certification
- System Performance Testing & Certification
  (TPC, SPEC and SPC)
- Verification & Validation
- Cloud Computing Quality & Interoperability
  Test
- Quality Inspection for Aviation Safery Facility
- CC(Common Criteria) Evaluation
- Evaluation for Information Security-Ready

- Software BMT(Benchmark Test)
- Software Globalization - I18N/L1ON
  Testing
- Quality Testing for IT System
- Software Interoperability Test
- Software Security Weakness Diagnosis
- Evaluation for ISMS(Information Security
  Management System)
- HPC(High Performance Computing)
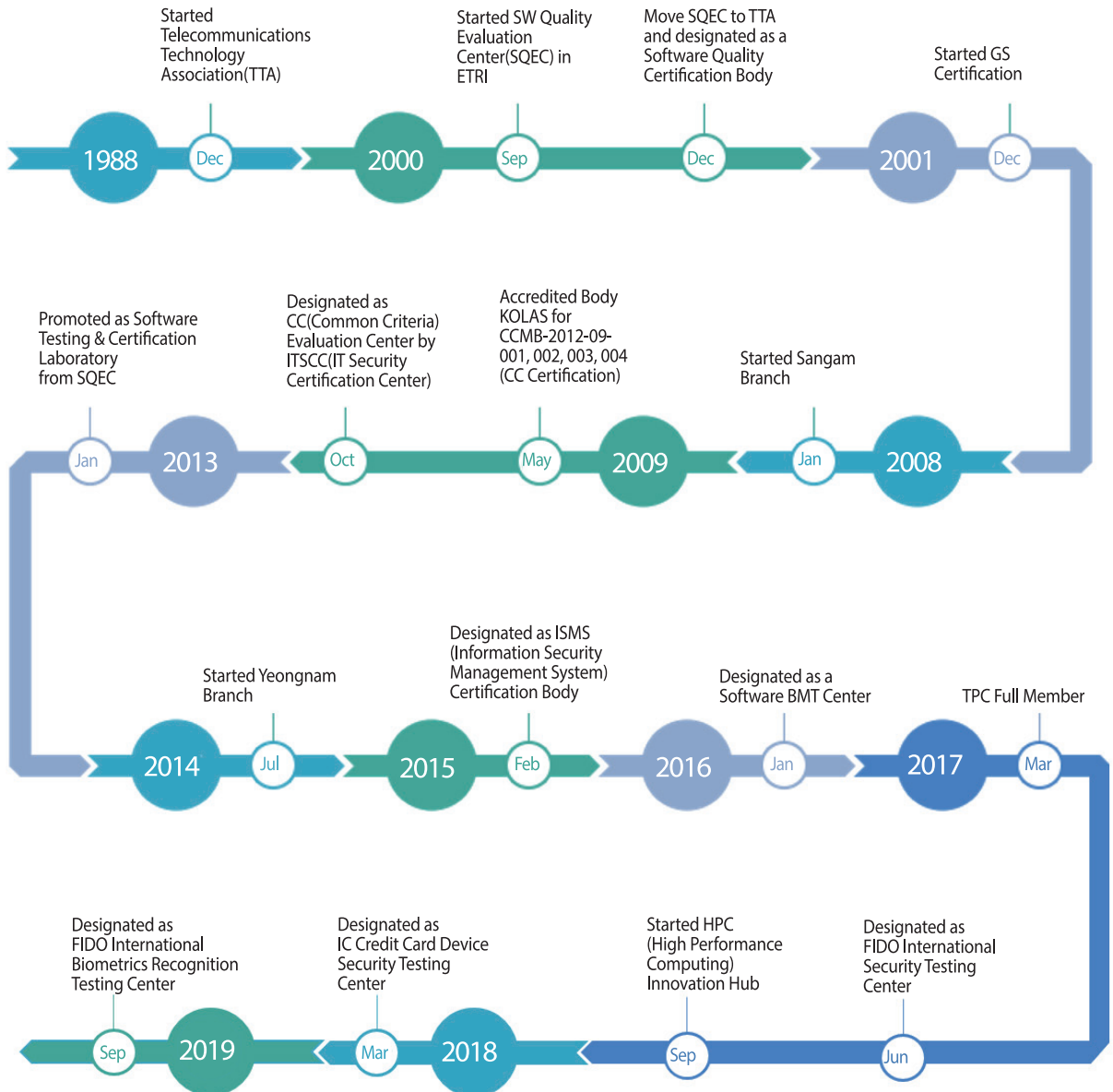 Product Verification

Consulting

- Software System Safety Consulting
- CC Consulting
- Software Globalization - I18N/L1ON
  Consulting
- HPC(High Performance Computing)
  Product Consulting
- Cloud Computing Quality &
  Interoperability Consulting

Open Lab

- Software Testbed Support
- HPC(High Performance Computing)
  Environment Support

STCL

History

Started Telecommunications Technology Association(TTA)

1988 — Dec

Started SW Quality Evaluation Center(SQEC) in ETRI

2000 — Sep

Move SQEC to TTA and designated as a Software Quality Certification Body

Dec

Started GS Certification

2001 — Dec

Promoted as Software Testing & Certification Laboratory from SQEC

Jan — **2013**

Designated as CC(Common Criteria) Evaluation Center by ITSCC(IT Security Certification Center)

Oct

Accredited Body KOLAS for CCMB-2012-09-001, 002, 003, 004 (CC Certification)

May — **2009**

Started Sangam Branch

Jan — **2008**

Started Yeongnam Branch

2014 — Jul

Designated as ISMS (Information Security Management System) Certification Body

2015 — Feb

Designated as a Software BMT Center

2016 — Jan

TPC Full Member

2017 — Mar

Designated as FIDO International Biometrics Recognition Testing Center

Sep — **2019**

Designated as IC Credit Card Device Security Testing Center

Mar — **2018**

Started HPC (High Performance Computing) Innovation Hub

Sep

Designated as FIDO International Security Testing Center

Jun

STCL

Testing and Certification Organization Designated by the Government

Ministry of Science and ICT	Ministry of Science and ICT	Ministry of Science and ICT	Ministry of Science and ICT
Designated as a Software Quality Certification Body (GS Certification) (2000.12)	Designated as CC (Common Criteria) Evaluation Center (2009.10)	Designated as ISMS (Information Security Management System) Certification Center (2015.02)	Designated as Software BMT Center (2016.01)
The Korea federation of ICT organizations	Korea Laboratory Accreditation Scheme(KOLAS)	Korea Laboratory Accreditation Scheme(KOLAS)	Ministry of the Interior and Safety
Designated as Information Security-Ready Evaluation Center (2014.11)	Accredited by KOLAS for CCMB-2012-09-001, 002, 003, 004(CC Certification) (2009.05)	Accredited by KOLAS for ISO/IEC 25023, 25051 (GS Certification) (2011.07)	Designated as Certification Body of Resident Registration Certification(RCC) for Authenticity Ascertaining System(2009.05)
Ministry of SMEs and Startups	Ministry of Land, Infrastructure and Transport	Korea National Police Agency	
Designated as Performance Testing Laboratory (2005.07)	Designated as GIS Software Testing Laboratory (2002.07)	Designated as Certification Body of Education Management System (2004.06)	

Professionality

- Designated as project leaders and co-editors in ISO/IEC JTC1/SC7/WG6

- Research on software testing methodologies and techniques for new technologies such as HPC, TPC, Cloud Computing, IoT, AI and so on

- More than 200 testing experts and well-equipped test infrastructure including 100 server machines, 20 kinds of operating systems, 50 testing automation tools, and so on

Master's 42.3%

Doctorate 6.7%

Breakdown of Degrees Obtained

Bachelor's 51.0%
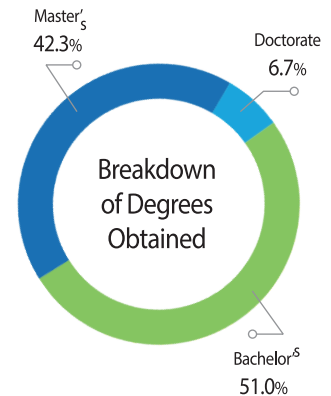
STCL

Experienced

- Tested VDI Solution of Korea Electric Power Corporation

- Tested Unified Ticketing System of Korea Racing Authority

- Verified Online Lottery System of Ministry of Economy and Finance

- Tested Transportation Card System of Seoul City

- Tested United Medical System of Seoul Medical Center

- Tested Airport Facilities Safety Integration System of WAVE TECH

- Verified artifacts of R&D project funded by Ministry of Science and ICT(MSIT)

- Tested Automotive Operating System developed by ETRI

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Chungnam

Daejeon

Gyeonbuk

Jeonbuk

Daegu

Gyeongnam

Ulsan

Gwangju

Busan

Jeonnam

Jeju