IMS networks PSTN/ISDN simulation services conformance testing using ETSI standardized test suites and commercial TTCN-3 test tools

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Cut your software testing expenses

Functional black-box tests automation
Agenda

► Brief introduction to Elvior
► Why do we need standardized test suites?
► ETSI activities in building standard test suites
► Recent IMS standard test suites development
► PSTN/ISDN simulation services conformance testing using ETSI suites
► Challenges to be solved
Elvior in a nutshell

► Elvior is TTCN-3 test tool vendor
► Elvior TestCast TTCN-3 test tool includes TTCN-3 editor, compiler, executive and test analysis tools
► Elvior TestCast MBT edition will be the first integrated TTCN-3 model-based testing tool on the market
► Elvior is member of ETSI – participates actively in work of MTS and INT technical committees
Elvior’s services

► Setup automated test environments
► TTCN-3 testing services
► Model-based testing services
► TTCN-3 and MBT trainings

Support for partners and customers
Why do we need standardized test suites?

- **ETSI test suites increase products interoperability**
  - Standard test suite is a reference implementation
  - Each product manufacturer can use it for conformance
- **Using standard test suites lowers testing costs and shortens time-to-market**
  - Product manufacturers can use ready-made test suites
  - No need to build their own test suites
ETSI activities in building IMS standard test test suites

- IMS test suites development is responsibility of INT TC
- Interested ETSI members propose to create WI to standardize some tests
- If WIs are supported then STFs are formed and financed – STF does the actual work
  - Test specification
  - Abstract test suites (ATS) in TTCN-3
Recent IMS standard test suites

- STF 368: conformance testing of IMS networks
  PSTN/ISDN services
  - Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR)
  - Closed User Group (CUG)
  - Anonymous Communication Rejection (ACR) and Communication Barring (CB)
  - Malicious Communication Identification (MCID)
IMS standard test suites in pipe (3)

- **STF 406:**
  - Message Waiting Indication (MWI)
  - Originated Identification Presentation (OIP)
  - Originated Identification Restriction (OIR)
  - Explicit Communication Transfer (ECT)
  - Conference (CONF)
  - Communication HOLD (CH)
  - Communication Diversion (CDIV)
  - Communication Waiting (CW)
**IMS networks PSTN/ISDN simulation services conformance testing**

- *(SUT)* is as a complete IMS core network
- The interfaces available for the testing are Gm, Mw, Ic and Isc
- Test suite has several configurations of SUT

User Equipment (UE), IMS network, and Application Server (AS) can act in the role of SUT
**PSTN/ISDN simulation services conformance testing (SUT is AS)**

- **SA is built between SUT and TTCN-3 tool**
- **If needed then codecs are developed and integrated to TTCN-3 tool**
- **Standard test suite is downloaded from ETSI**

- **TTCN-3 tests are compiled and executed against SUT**
- **Any TTCN-3 test tool can be used**
Benefits

► Gaining the productivity by shortening the development time of tests
► Ensuring the compatibility to IMS standards
► Improving the interoperability between the products that are all tested using the same test suites
► Any commercial or in-house TTCN-3 test tools can be used
Thank you!
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