



Services conformance testing approaches

International training seminar „Conformance testing“
10-11 December, ZNIIS, Moscow, Russia
Speaker: Denis Alexeitsev



Services conformance testing approaches

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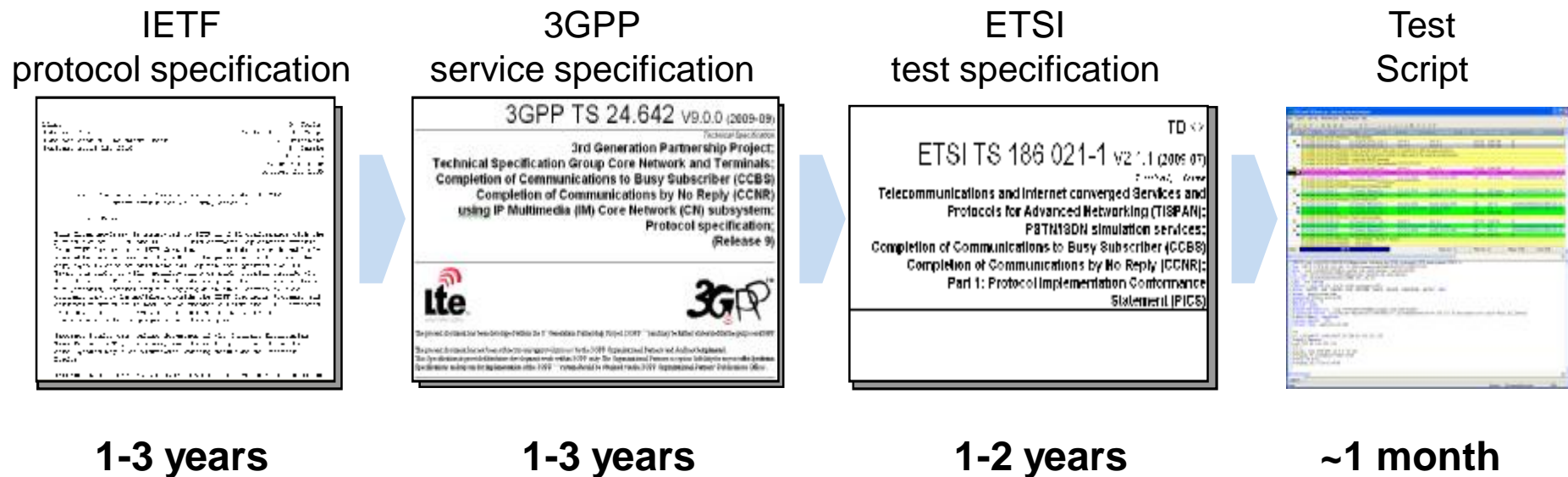
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Specification process

Basis for the testing

The process of service interoperability assurance starts with the specification work and ends with the implementation testing.

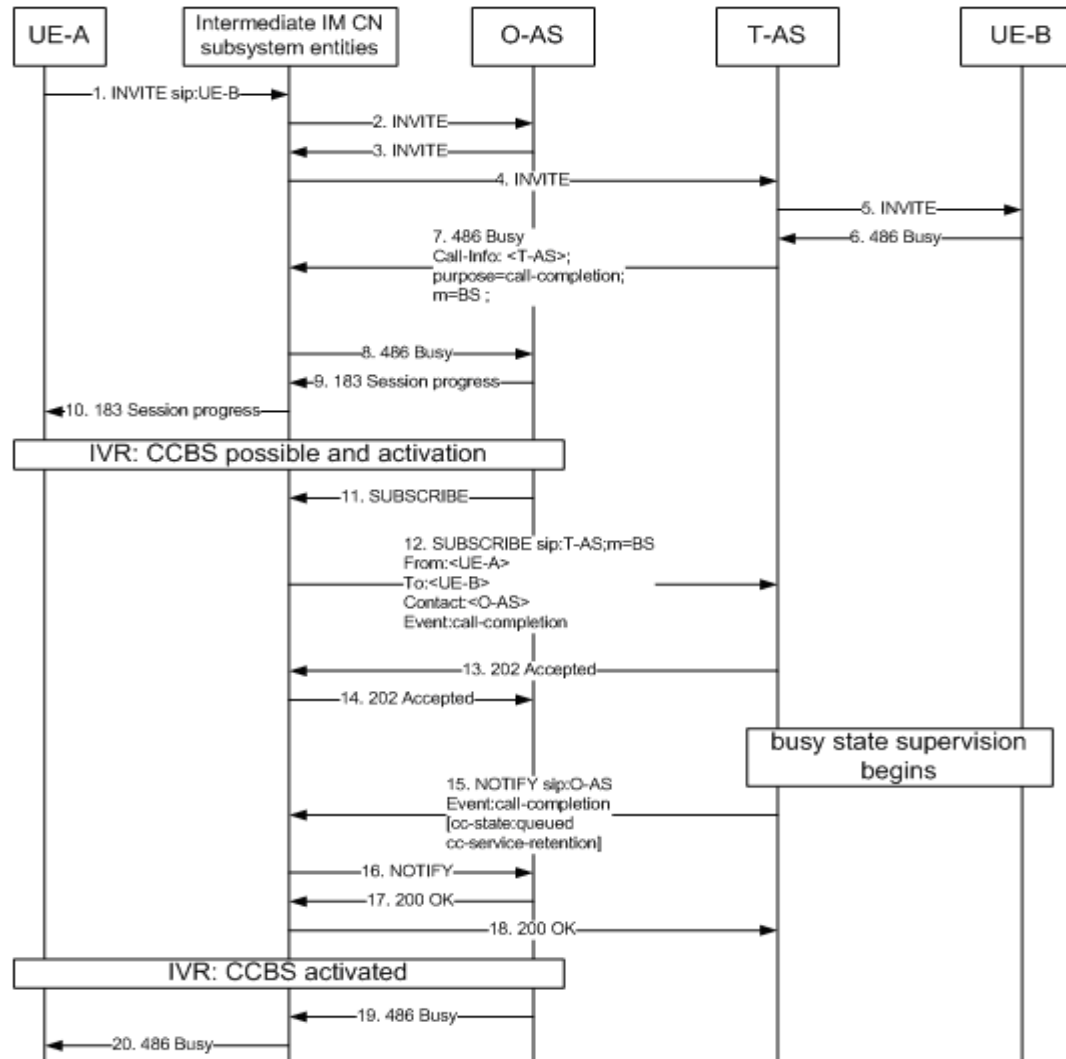


Even with the parallelisation of the standardisation efforts, the whole process may take up to 4 years to complete.



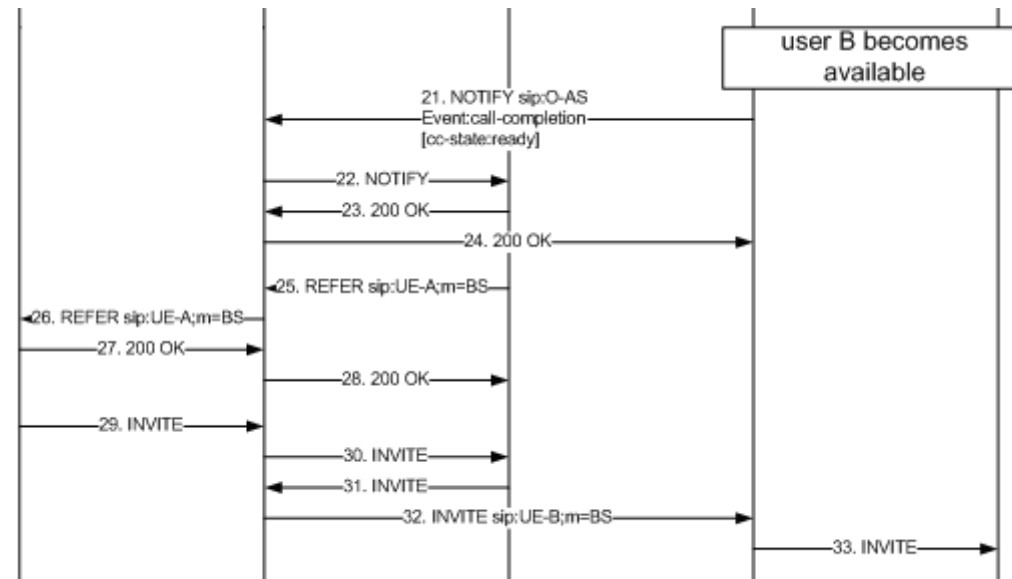
Complexity of services

CCBS service call-flow 1/2



Complexity of services

CCBS service call-flow 1/2



- The idea of service enablers without service specification fails for the complex telephony supplementary services.
- Interoperability of the CCBS service across the single network borders is not feasible without protocol, service and test specification.



Deutsche Telekom testing laboratory

Testing methodology and equipment

Testing methodology for external testing services:

According to the requirements for the testing labs (DIN EN ISO/IEC 17025) the testing lab of Deutsche Telekom is:

- § Legally identifiable.
- § Independent in its assessments from the interests of Deutsche Telekom.
- § Obligated to confidential handling of customer data and testing results.
- § All testing services are based on the methods for the conformance testing according to the ISO 9646 (Conformance testing methodology and framework).

Testing equipment:

§ Test execution for the testing service SS. Nr.7 is performed using the protocol testing equipment K1297 and K1297 Compact Tektronix.



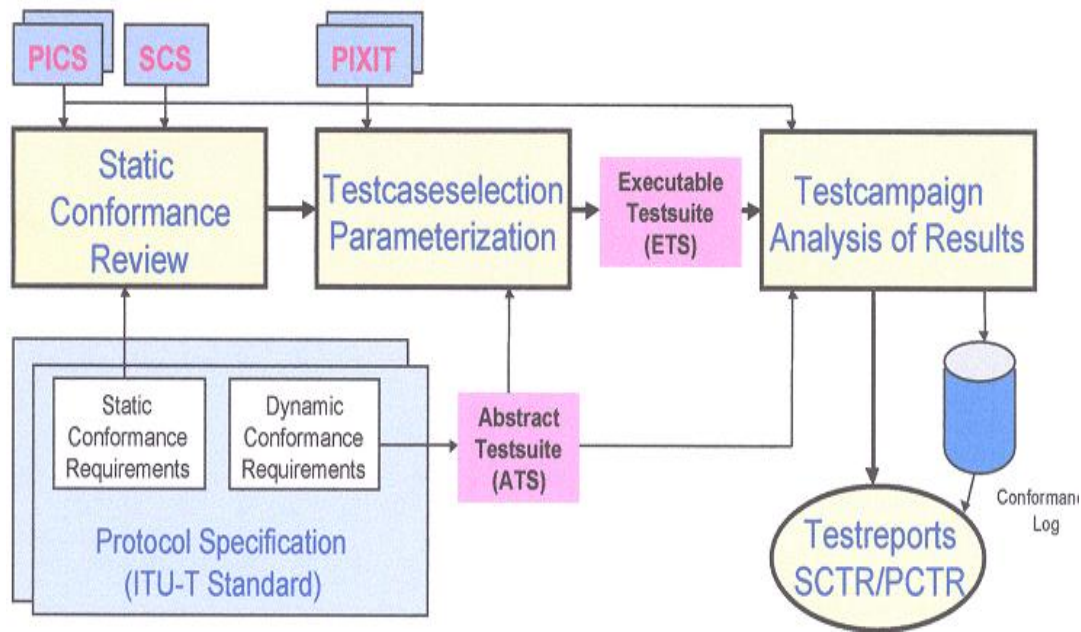
§ Test execution for the testing service VoIP is performed using the protocol testing equipment Spectra2 Tektronix.



Testing process

Conformance Assessment Process

Conformance testing according to ISO 9646



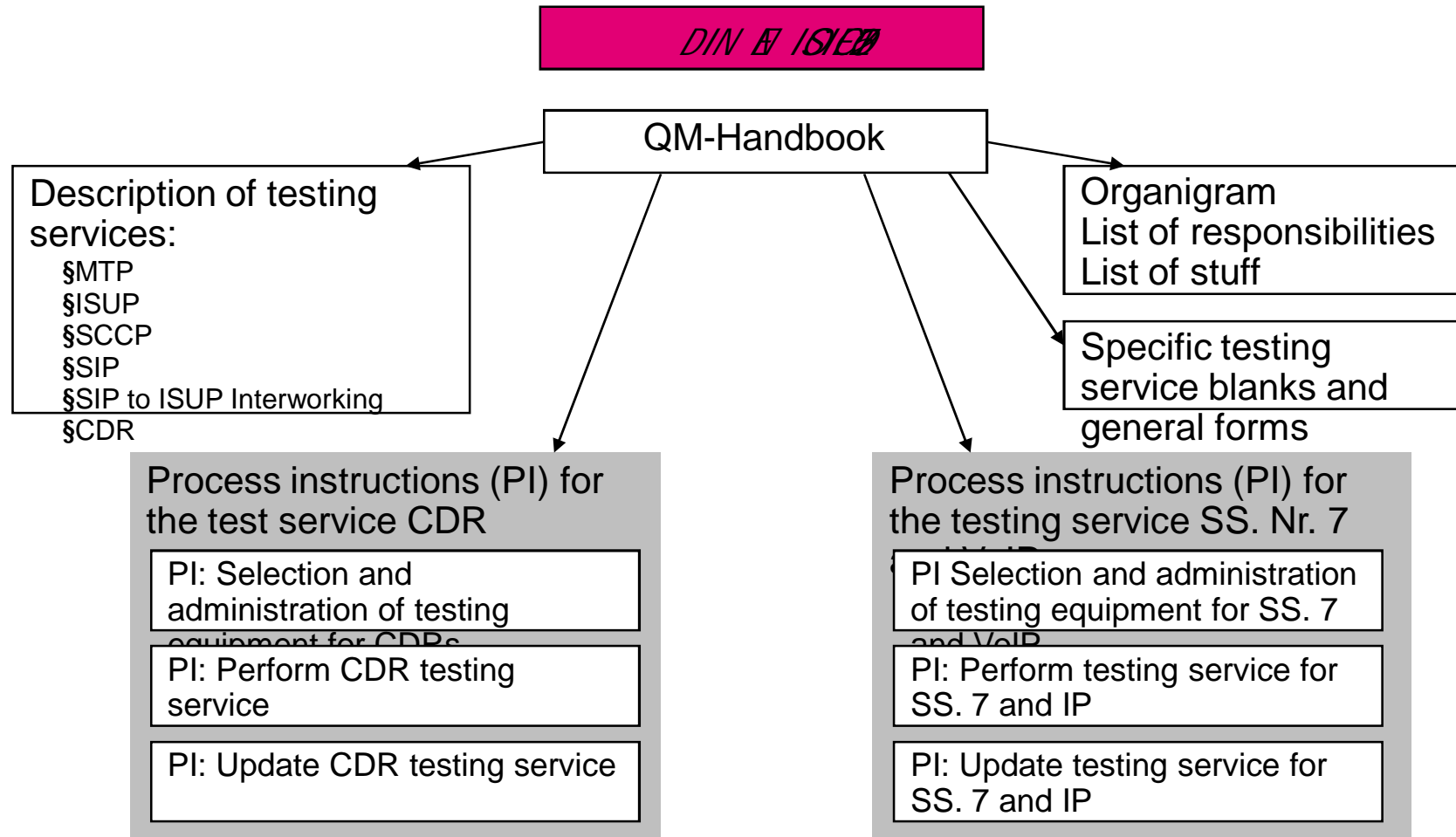
Testing service

- Test preparation
- Test execution
- Evaluation and analysis
- Test reporting
- Confirmation of results



Quality management

Service testing



Backup



Telephony supplementary services

ETSI service and test specifications

TIP and TIR - Terminating Identification Presentation & Restriction
TS 186 005-1 1 2 Part 1: PICS
TS 186 005-2 1 2 Part 2: TSS&TP
TS 186 005-3 1 Part 3: ATS and partial PIXIT proforma specification

OIP and OIR - Originating Identification Presentation & Restriction
TS 186 006-1 1 Part 1: PICS
TS 186 006-2 1 Part 2: TSS&TP
TS 186 006-3 1 Part 3: ATS and partial PIXIT proforma specification

CH - Communication HOLD
TS 186 007-1 1 Part 1: PICS
TS 186 007-2 1 Part 2: TSS&TP
TS 186 007-3 1 Part 3: ATS and partial PIXIT proforma specification

MCID - Malicious Communication Identification
TS 186 018-1 1 Part 1: PICS
TS 186 018-2 1 2 Part 2: TSS&TP

SUB - Subaddressing
TS 186 012-1 1 Part 1: PICS
TS 186 012-2 1 Part 2: TSS&TP

CW - Communication Waiting
TS 186 022-1 2 Part 1: PICS
TS 186 022-2 2 Part 2: TSS&TP

CONF - Conference
TS 186 010-1 2 Part 1: PICS
TS 186 010-2 2 Part 2: TSS&TP

CDIV - Communication Diversion
TS 186 014-1 2 Part 1: PICS
TS 186 014-2 2 Part 2: TSS&TP

ECT - Explicit Communication Transfer
TS 186 015-1 2 Part 1: PICS
TS 186 015-2 2 Part 2: TSS&TP

CUG - Closed User Group
TS 186 016-1 2 Part 1: PICS
TS 186 016-2 2 Part 2: TSS&TP

ACR and CB - Anonymous Communication
Rejection & Communication Barring
TS 186 017-1 1 Part 1: PICS
TS 186 017-2 1 2 Part 2: TSS&TP

CCBS and CCNR - Completion of Communications
to Busy Subscriber & No Reply
TS 186 021-1 2 Part 1: PICS
TS 186 021-2 2 Part 2: TSS&TP

