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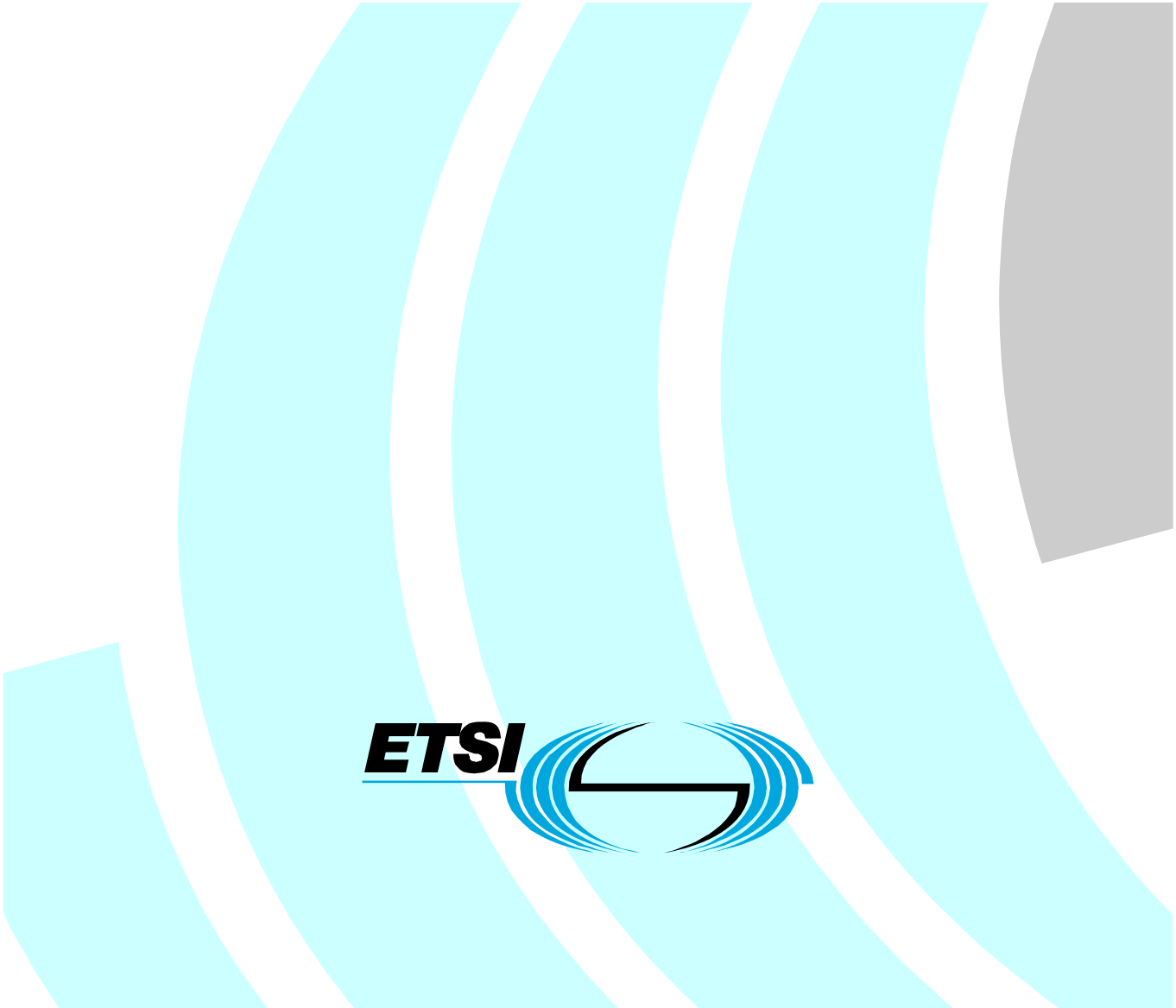
Technical Specification

Technical Committee for IMS Network Testing (INT);
Communication Waiting (CW) using IP Multimedia (IM)
Core Network (CN) subsystem;
Conformance Testing;
Part 2: Test Suite Structure and Test Purposes (TSS&TP)



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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee IMS Network Testing (INT).

The present document is part 2 of a multi-part deliverable covering Communication Waiting (CW) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Testing, as identified below:

Part 1: "Protocol Implementation Conformance Statement (PICS)";

Part 2: "Test Suite Structure and Test Purposes (TSS&TP)";

Part 3: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification".

1 Scope

The present document specifies the Test Suite Structure and Test Purposes of the Communication Waiting (CW) service, based on stage 1 and stage 2 of the ISDN call waiting supplementary services. It provides the protocol details in the IP Multimedia (IM) Core Network (CN) subsystem based on the Session Initiation Protocol (SIP) and the Session Description Protocol (SDP).

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

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2.1 Normative references

The following referenced documents are necessary for the application of the present document.

[1] ETSI TS 124 615 (V8.3.0): "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Communication Waiting (CW) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol Specification (3GPP TS 24.615 version 8.3.0 Release 8)".

[2] ETSI TS 186 022-1: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); PSTN/ISDN simulation services; Communication Waiting (CW); Part 1: Protocol Implementation Conformance Statement (PICS)".

[3] IETF RFC 5621: "Message Body Handling in the Session Initiation Protocol (SIP)".

[4] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".

2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

Not applicable.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 124 615 [1] and the following apply:

Abstract Test Suite (ATS): Refer to ISO/IEC 9646-1 [4].

Implementation Under Test (IUT): Refer to ISO/IEC 9646-1 [4].

PICS proforma: Refer to ISO/IEC 9646-1 [4].

point of control and observation: Refer to ISO/IEC 9646-1 [4].

Protocol Implementation Conformance Statement (PICS): Refer to ISO/IEC 9646-1 [4].

System Under Test (SUT): Refer to ISO/IEC 9646-1 [4].

Test Purpose (TP): Refer to ISO/IEC 9646-1 [4].

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TS 124 615 [1] and the following apply:

TSS Test Suite Structure

4 Test Suite Structure (TSS) and Configuration

Table 1a

CW			
	destination_UE		CW_U01_xxx
	originating_UE		CW_U02_xxx
	AS		CW_N01_xxx
	interaction	CDIV	CW_N02_xxx
	configuration		CW_N03_xxx

4.1 Configuration

The scope of the present document is to test the signalling and procedural aspects of the stage 3 requirements as described in [1]. The stage 3 description respects the requirements to several network entities and also to requirements regarding to end devices. Therefore several interfaces (reference points) are addressed to satisfy the test of the different entities.

Therefore to test the appropriate entities the configurations below are applicable:

Testing of the Application Server: This entity is responsible to perform the service. Hence the ISC interface is the appropriate access point. Figure 1 points to this.

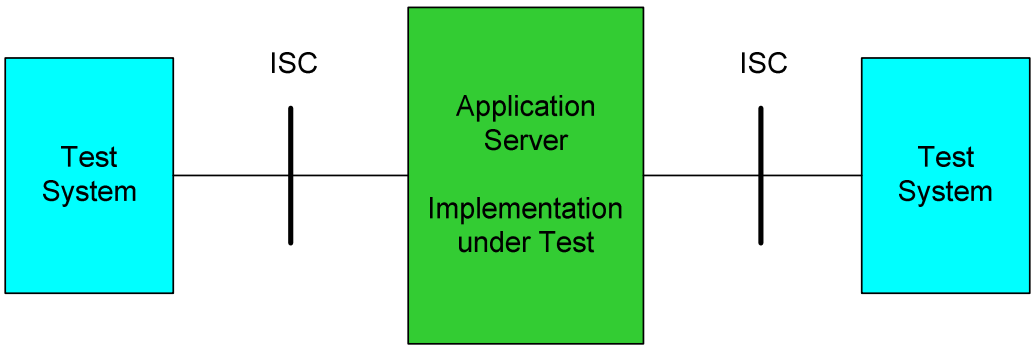

Figure 1: Applicable interface to test AS functionalities

If the ISC interface is not accessible it is also applicable to perform the test of the AS using any NNI (Mw, Mg, Mx) interface (consider figure 2). In case only the Gm interface is accessible this shall be used instead. In this case, be aware that the verification of several requirements is impeded.

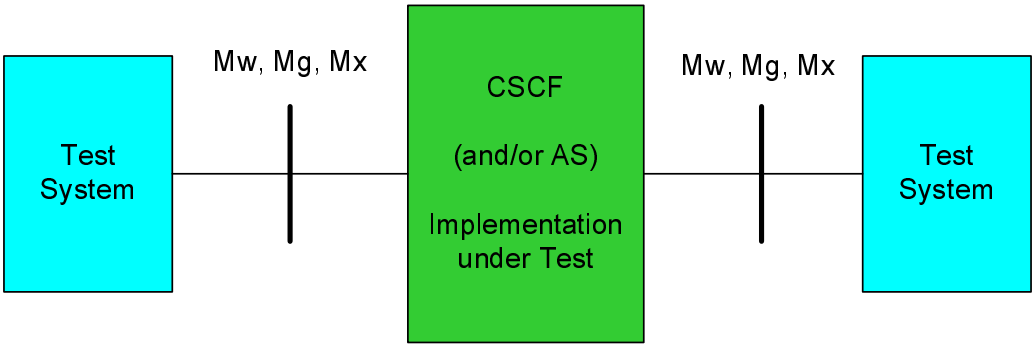

Figure 2: Applicable interfaces to test using the (generic) NNI interface

Figure 3 illustrates the usage of any NNI interface.

Testing of User Equipment: There are several requirements regarding to the end devices. Therefore a special configuration appears

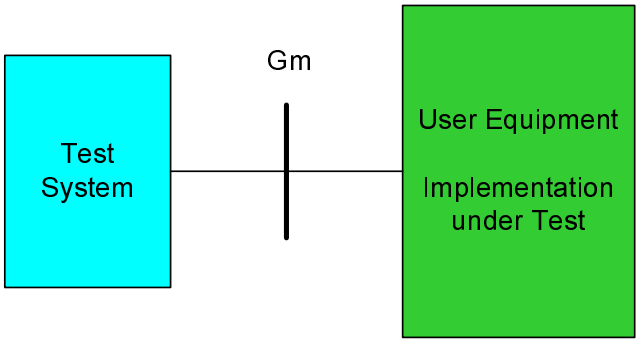

Figure 3: Applicable configuration to test the User Equipment

5 Test Purposes (TP)

5.1 Introduction

For each test requirement a TP is defined.

5.1.1 TP naming convention

TPs are numbered, starting at 001, within each group. Groups are organized according to the TSS. Additional references are added to identify the actual test suite and whether it applies to the network or the user (see table 1).

Table 1: TP identifier naming convention scheme

Identifier: **<ss>_<iut><group>_<nnn>**				
<ss>	=	supplementary service:	e.g. "CW"	
<iut>	=	type of IUT:	U N	User - equipment Network
<group>	=	group	2 digit field representing group reference according to TSS	
<nnn>	=	sequential number	(001-999)	

5.1.2 Test strategy

As the base standard TS 124 615 [1] contains no explicit requirements for testing, the TPs were generated as a result of an analysis of the base standard and the PICS specification TS 186 022-1 [2]. The criteria applied include the following:

- whether or not a test case can be built from the TP is not considered.

5.2 TPs for Communication Waiting (CW)

5.2.1 Test purposes at the destination (user B) UE

TSS	**TP**	**Reference**	**Selection expression**
CW/destination_UE	CW_U01_001	4.5.5.3.2	PICS 2/4

Test purpose
The terminating User Equipment sends a 180 Ringing.

Ensure that the user B User Equipment is able to send a 180 Ringing on receipt of an INVITE with a CW XML MIME attachment indicating Communication Waiting.

Preconditions:

SIP header values:
INVITE: MIME body
Content-Type: application/3gpp-ims+xml
Content_Disposition: 3gpp-alternative-service
MIME XML
ims-3gpp version="1"
alternative-service
action
call-waiting-indication

Comments:

Test System		**User Equipment**
	Establish a confirmed communication	
INVITE	→	
100 Trying	←	
180 Ringing	←	
	Apply post test routine	

TSS	**TP**	**Reference**	**Selection expression**
CW/destination_UE	CW_U01_002	4.5.5.3.2	PICS 2/3 and PICS 2/4

Test purpose
The terminating User Equipment is able to send a Communication Waiting indication in a 180 response.

Ensure that the user B User Equipment is able to send a 180 Ringing containing an Alert-Info header set to <urn:alert:service:call-waiting> on receipt of an INVITE containing a MIME body indicating CW information.

Preconditions:

SIP header values:
180 Ringing Alert-Info: <urn:alert:service:call-waiting>

Comments:

Test System		**User Equipment**
	Establish a confirmed communication	
INVITE	→	
100 Trying	←	
180 Ringing Alert-Info: <urn:alert:service:call-waiting>	←	
	Apply post test routine	

TSS	TP	Reference	Selection expression
CW/destination_UE	CW_U01_003	4.5.5.3.2, RFC 5621 [3]	NOT PICS 2/4

Test purpose

The terminating User Equipment sends a 415 Unsupported Media Type if the received INVITE contains a XML CW MIME attachment indicating CW

Ensure that the user B User Equipment is able to send a 415 Unsupported Media Type if the User Equipment does not support the CW XML MIME attachment indicating Communication Waiting.

Preconditions:

SIP header values:
INVITE: MIME body
Content-Type: application/3gpp-ims+xml
Content_Disposition: 3gpp-alternative-service
MIME XML
ims-3gpp version="1"
alternative-service
action
call-waiting-indication

Comments:

Test System		User Equipment
	Establish a confirmed communication	
INVITE	→	
415 Unsupported Media Type	←	
ACK	→	

TSS	TP	Reference	Selection expression
CW/destination_UE	CW_U01_004	4.5.5.3.3 Case A	PICS 2/4

Test purpose

The terminating User Equipment holds s current communication and accepts the waiting call.

Ensure that the user B User Equipment is able set the current active communication on hold and to accept the waiting communication.

Preconditions:

SIP header values:
INVITE: MIME body
Content-Type: application/3gpp-ims+xml
Content_Disposition: 3gpp-alternative-service
MIME XML
ims-3gpp version="1"
alternative-service
action
call-waiting-indication

Comments:

Test System		User Equipment
	Establish a confirmed communication (1)	
INVITE (2)	→	
100 Trying	←	
180 Ringing (2)	←	
INVITE (1, sendonly)	←	
200 OK INVITE (1, recvonly)	→	
ACK	←	
200 OK INVITE (2)	←	
ACK	→	
	Apply post test routine	

TSS	TP	Reference	Selection expression
CW/destination_UE	CW_U01_005	4.5.5.3.3 Case A	PICS 2/4

Test purpose

The terminating User Equipment is able to release current communication and accepts the waiting call.

Ensure that the user B User Equipment is able release the current active communication and accepts the waiting communication.

Preconditions:

SIP header values:
INVITE: MIME body
Content-Type: application/3gpp-ims+xml
Content_Disposition: 3gpp-alternative-service
MIME XML
ims-3gpp version="1"
alternative-service
action
call-waiting-indication

Comments:

Test System		**User Equipment**
	Establish a confirmed communication (1)	
INVITE (2)	→	
100 Trying	←	
180 Ringing (2)	←	
BYE (1)	←	
200 OK BYE (1)	→	
200 OK INVITE (2)	←	
ACK	→	
	Apply post test routine	

TSS	TP	Reference	Selection expression
CW/destination_UE	CW_U01_006	4.5.5.3.3 Case B	PICS 2/4 AND PICS 3/2

Test purpose

The terminating User Equipment starts timer T_{AS-CW} *and acts on its expiry.*

Ensure that the user B User Equipment is able starts timer T_{AS-CW} and on its expiry sends a 480 Temporary Failure response containing a Reason header indicating cause value 19 (No answer from user(user alerted)).

Preconditions:

SIP header values:
INVITE: MIME body
Content-Type: application/3gpp-ims+xml
Content_Disposition: 3gpp-alternative-service
MIME XML
ims-3gpp version="1"
alternative-service
action
call-waiting-indication

480
Reason header
Cause value=19 No answer from user(user alerted)

Comments:

Test System		User Equipment
	Establish a confirmed communication	
INVITE	→	
100 Trying	←	
180 Ringing	←	
	Start timer T_{AS-CW}	
	Timeout T_{AS-CW}	
480 Temporarily Unavailable	←	
ACK	→	
	Apply post test routine	

TSS	TP	Reference	Selection expression
CW/destination_UE	CW_U01_007	4.5.5.3.3	PICS 2/4

Test purpose
The terminating User Equipment is able to accept release of the waiting call.

Ensure that the user B User Equipment is able apply the terminating UE procedures upon receipt of CANCEL from user C.

Preconditions:

SIP header values:
INVITE: MIME body
Content-Type: application/3gpp-ims+xml
Content_Disposition: 3gpp-alternative-service
MIME XML
ims-3gpp version="1"
alternative-service
action
call-waiting-indication

Comments:

Test System		User Equipment
	Establish a confirmed communication (1)	
INVITE (2)	→	
100 Trying	←	
180 Ringing (2)	←	
CANCEL (2)	→	
200 OK CANCEL (2)	←	
487 Request Terminated	←	
ACK	→	
	Apply post test routine	

TSS	TP	Reference	Selection expression
CW/destination_UE	CW_U01_008	4.5.5.3.3	PICS 2/4

Test purpose
The terminating User Equipment is able to accept release of the waiting call.

Ensure that the user B User Equipment is able apply the terminating UE procedures upon receipt of BYE from user C.

Preconditions:

SIP header values:
INVITE: MIME body
Content-Type: application/3gpp-ims+xml
Content_Disposition: 3gpp-alternative-service
MIME XML
ims-3gpp version="1"
alternative-service
action
call-waiting-indication

Comments:

Test System		User Equipment
	Establish a confirmed communication (1)	
INVITE (2)	→	
100 Trying	←	
180 Ringing (2)	←	
BYE (2)	→	
200 OK BYE (2)	←	
	Apply post test routine	

TSS	TP	Reference	Selection expression
CW/destination_UE	CW_U01_009	4.5.5.3.3	PICS 2/4

Test purpose

The terminating User Equipment is able to accept the waiting call after the current active communication is released by the User A.

Ensure that the user B User Equipment is able to accept the waiting communication after the remote user A released the active communication by sending a CANCEL request

Preconditions:

SIP header values:

INVITE: MIME body
Content-Type: application/3gpp-ims+xml
Content_Disposition: 3gpp-alternative-service
MIME XML
    ims-3gpp version="1"
        alternative-service
            action
                call-waiting-indication

Comments:

Test System		User Equipment
	Establish a confirmed communication (1)	
INVITE (2)	→	
100 Trying	←	
180 Ringing (2)	←	
CANCEL (1)	→	
200 OK CANCEL (1)	←	
487 Request Terminated	←	
ACK	→	
	Prompt user B to accept waiting communication	
200 OK INVITE (2)	←	
ACK	→	
	Apply post test routine	

TSS	**TP**	**Reference**	**Selection expression**
CW/destination_UE	CW_U01_010	4.5.5.3.3	PICS 2/4

Test purpose
The terminating User Equipment is able to accept the waiting call after the current active communication is released by the User A.

Ensure that the user B User Equipment is able to accept the waiting communication after the remote user A released the active communication by sending a BYE request

Preconditions:

SIP header values:
INVITE: MIME body
Content-Type: application/3gpp-ims+xml
Content_Disposition: 3gpp-alternative-service
MIME XML
ims-3gpp version="1"
alternative-service
action
call-waiting-indication

Comments:

Test System		**User Equipment**
	Establish a confirmed communication (1)	
INVITE (2)	→	
100 Trying	←	
180 Ringing (2)	←	
BYE (1)	→	
200 OK BYE (1)	←	
	Prompt user B to accept waiting communication	
200 OK INVITE (2)	←	
ACK	→	
	Apply post test routine	

5.2.2 Test purposes at the originating (user C) UE

TSS	**TP**	**CB reference**	**Selection expression**
CW/originating_UE	CW_U02_001	clause 4.5.2.1	PICS 2/2

Test purpose
The originating user receives the Communication waiting indication.
Ensure that the originating user equipment has the ability to receive the "communication is waiting" indication in the Alert-Info header value <urn:alert:service:call-waiting>.

Preconditions:

SIP header values:
180 Ringing Alert-Info: <urn:alert:service:call-waiting>

Comments:

User Equipment		**Test System**
	→	INVITE
	←	100 Trying
	←	180 Ringing Alert-Info: <urn:alert:service:call-waiting>
	Apply post test routine	

5.2.3 Test purposes at the Application Server

TSS	**TP**	**Reference**	**Selection expression**
CW/AS	CW_N01_001	4.5.5.2 [1]	PICS 1/2 AND NOT PICS 1/3

Test purpose

CW indication determined by approaching NDUB condition. The indication for CW is sent to the terminating user.

Ensure that on receipt of an INVITE request that fulfils the approaching NDUB condition for user B the AS determines that a Communication Waiting condition has occurred. The AS sends an INVITE request to the served user. Ensure that the INVITE contains:

- a MIME body with the "call-waiting-indication" element contained in a "action" element, with that "action" element in turn contained in a "alternative-service" element, with that "alternative-service" element in turn contained in the "ims-3gpp" root element; **and**
- the Content-Type header field is set to "application/3gpp-ims+xml".

The 180 Ringing sent to the originating contains an Alert-Info header indicating Communication Waiting by value <urn:alert:service:call-waiting>

Preconditions: Terminating user subscribes to the CW simulation service

SIP header values:

INVITE: MIME body
Content-Type: application/3gpp-ims+xml
MIME XML
ims-3gpp version="1"
alternative-service
action
call-waiting-indication

180 Ringing: Alert-Info: <urn:alert:service:call-waiting>

Comments:

Test System (ISC towards user C)		**AS**		**Test System (ISC towards user B)**
INVITE	→		→	INVITE
100 Trying	←		←	100 Trying
180 Ringing	←		←	180 Ringing

Apply post test routine

TSS	TP	Reference	Selection expression
CW/AS	CW_N01_002	4.5.5.2 [1]	PICS 1/2 AND PICS 1/3

Test purpose

CW indication determined by approaching NDUB condition. The AS applies an announcement to the originating user.

Ensure that on receipt of an INVITE request that fulfils the approaching NDUB condition for user B the AS determines that a Communication Waiting condition has occurred. The AS sends an INVITE request to the served user. Ensure that the INVITE contains:

- a MIME body with the "call-waiting-indication" element contained in a "action" element, with that "action" element in turn contained in a "alternative-service" element, with that "alternative-service" element in turn contained in the "ims-3gpp" root element; **and**
- the Content-Type header field is set to "application/3gpp-ims+xml".

Ensure that an announcement is applied to the originating user.

Preconditions: Terminating user subscribes to the CW simulation service

SIP header values:
INVITE: MIME body
Content-Type: application/3gpp-ims+xml
MIME XML
ims-3gpp version="1"
alternative-service
action
call-waiting-indication

Comments:

Test System (ISC towards user C)		AS		Test System (ISC towards user B)
INVITE	→		→	INVITE
100 Trying	←		←	100 Trying
180 Ringing	←		←	180 Ringing

Apply announcement to originating user

Apply post test routine

TSS	TP	Reference	Selection expression
CW/AS	CW_N01_003	4.5.5.2 [1]	PICS 1/2

Test purpose

CW indication determined by approaching NDUB condition. Call establishment unsuccessful due to the terminating User Equipment not supporting the CW indication in the received INVITE.

Ensure that on receipt of an INVITE request that fulfils the approaching NDUB condition for user B the AS determines that a Communication Waiting condition has occurred. The AS sends an INVITE request to the served user. Ensure that the INVITE contains:

- a MIME body with the "call-waiting-indication" element contained in a "action" element, with that "action" element in turn contained in a "alternative-service" element, with that "alternative-service" element in turn contained in the "ims-3gpp" root element; **and**
- the Content-Type header field is set to "application/3gpp-ims+xml".

If a 415 Unsupported Media Type final response is received from the terminating user, a 486 Busy Here is sent to the originating user.

Preconditions: Terminating user subscribes to the CW simulation service

SIP header values:
INVITE: MIME body
Content-Type: application/3gpp-ims+xml
MIME XML
ims-3gpp version="1"
alternative-service
action
call-waiting-indication

Comments:

Test System (ISC)		AS		Test System (ISC towards user B)
INVITE	→		→	INVITE
486 Busy Here	←		←	415 Unsupported Media Type
ACK	→		→	ACK

TSS	TP	Reference	Selection expression
CW/AS	CW_N01_004	4.5.5.2 [1]	PICS 1/1

Test purpose

CW indication determined by receiving a 180 (Ringing) response with an Alert-Info header field set to "urn:alert:service:call-waiting".

Ensure that on receipt of a 180 (Ringing) response with an Alert-Info header field set to "urn:alert:service:call-waiting" Communication Waiting is determined. Ensure that the 180 Ringing is passed to the originating user.

Preconditions:

SIP header values:
180 Ringing: Alert-Info: <urn:alert:service:call-waiting>

Comments:

Test System (ISC towards user C)		AS		Test System (ISC towards user B)
INVITE	→		→	INVITE
100 Trying	←		←	100 Trying
180 Ringing Alert-Info <urn:alert:service:call-waiting>	←		←	180 Ringing Alert-Info <urn:alert:service:call-waiting>

Apply post test routine

TSS	TP	Reference	Selection expression
CW/AS	CW_N01_005	4.5.5.2 [1]	PICS 1/1 AND PICS 1/3

Test purpose

CW indication determined by receiving a 180 (Ringing) response with an Alert-Info header field set to "urn:alert:service:call-waiting". An announcement is applied to the originating user.

Ensure that on receipt of a 180 (Ringing) response with an Alert-Info header field set to "urn:alert:service:call-waiting" Communication Waiting is determined. Ensure that an announcement is applied to the originating user. Ensure that the 180 Ringing is passed to the originating user.

Preconditions:

SIP header values:

180 Ringing: Alert-Info: <urn:alert:service:call-waiting>

Comments:

Test System (ISC towards user C)		AS		Test System (ISC towards user B)
INVITE	→		→	INVITE
100 Trying	←		←	100 Trying
180 Ringing Alert-Info <urn:alert:service:call-waiting>	←		←	180 Ringing Alert-Info <urn:alert:service:call-waiting>

Apply announcement to originating user

Apply post test routine

TSS	TP	Reference	Selection expression
CW/AS	CW_N01_006	4.5.5.2 [1]	PICS 1/1 AND PICS 3/1

Test purpose

CW indication determined by receiving a 180 (Ringing) response with an Alert-Info header field set to "urn:alert:service:call-waiting". The T_{AS-CW} *timer expires.*

Ensure that on receipt of a 180 (Ringing) response with an Alert-Info header field set to "urn:alert:service:call-waiting" Communication Waiting is determined. Ensure that the 180 Ringing is passed to the originating user.

Ensure that on expiry of timer T_{AS-CW} the AS sends a CANCEL request containing a Reason header with the protocol set to SIP and the cause set to 408 towards user B and a 480 Temporary Unavailable response containing a Reason header with the cause set to 19 towards user C.

Preconditions:

SIP header values:

180 Ringing: Alert-Info: <urn:alert:service:call-waiting>

480 Temporarily unavailable: Reason: cause=19

CANCEL: Reason: protocol=SIP; cause=408

Comments:

Test System (ISC towards user C)		AS		Test System (ISC towards user B)
INVITE	→		→	INVITE
100 Trying	←		←	100 Trying
180 Ringing Alert-Info <urn:alert:service:call-waiting>	←		←	180 Ringing Alert-Info <urn:alert:service:call-waiting>
		Start timer T_{AS-CW}		
		T_{AS-CW} expired		
480 Temporarily Unavailable	←		→	CANCEL
ACK	→		←	200 OK CANCEL
			←	487 Request Terminated
			→	ACK

5.3 Interaction with other supplementary services

5.3.1 Communication diversion services (CDIV)

TSS	**TP**	**CB reference**	**Selection expression**
CW/interaction/CDIV	CW_N02_001	4.6.8.1	

Test purpose
A Communication Diversion (CFU) activation takes precedence over the Communication Waiting service, CW indication determined by approaching NDUB condition.

Ensure that on receipt of an INVITE request that fulfils the approaching NDUB condition for user B the AS determines that a Communication Waiting condition has occurred. User B has also CFU activated. Ensure that the AS does not send the INVITE request to user B.

Preconditions: Configuration of simulation services via Ut interface is applicable

SIP header values:
HTTP PUT

```
<simservs
    <call-waiting active="true"/>
</simservs>
```

Comments:

Test System (ISC towards user C)		**AS**	**Test System (ISC towards user B)**
INVITE	→		No message
100 Trying	←		

5.4 Test purposes for Service Configuration

TSS	**TP**	**CB reference**	**Selection expression**
CW/int	CW_N03_001	4.8	PICS 1/5

Test purpose
Communication Waiting can successful activated using Ut interface.
Ensure that Communication Waiting can be activated by the user, a XML document is sent to the XCAP server.

Preconditions: Configuration of simulation services via Ut interface is applicable

SIP header values:
HTTP PUT

```
<?xml version="1.0" encoding="UTF-8"?>
<simservs     xmlns="http://uri.etsi.org/ngn/params/xml/simservs/xcap"
              xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <call-waiting active="true"/>
</simservs>
```

Comments:

Test System (Ut)		**XCAP server**
HTTP PUT	→	
HTTP 200 OK PUT	←	

TSS	**TP**	**CB reference**	**Selection expression**
CW/int	CW_N03_002	4.5.1	NOT PICS 1/5
Test purpose *Communication Waiting can successful SIP based activated.* Ensure that Communication Waiting can be activated by the user, the contents of the Request-URI in a SIP INVITE request is used to convey the configuration code to the Application Server that hosts the supplementary service.			
Preconditions: Configuration of simulation services via CW Application Server is applicable			
SIP header values: INVITE: sip:<service code>;phone-context=home1.net;user=dialstring SIP/2.0			
Comments:			

Test System (Ut)		**CW AS**
INVITE	→	
200 OK INVITE	←	
ACK	→	
BYE	→	
200 OK BYE	←	

NOTE: Service code e.g. "***43***".

6 Compliance

An ATS which complies with the present document shall:

a) consist of a set of test cases corresponding to the set or to a subset of the TPs specified in clause 5;

b) use a TSS which is an appropriate subset of the whole of the TSS specified in clause 4;

c) use the same naming conventions for the test groups and test cases;

d) maintain the relationship specified in clause 5 between the test groups and TPs and the entries in the PICS proforma to be used for test case deselection.

In the case of a) or b) above, a subset shall be used only where a particular Abstract Test Method (ATM) makes some TPs untestable. All testable TPs from clause 5 shall be included in a compliant ATS.

History

Document history		
V2.1.1	July 2009	Publication
V3.1.1	August 2011	Publication