



# Generic Software Certification

## Test Specification

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## SUMMARY OF REVISIONS

<b>Version</b>	<b>Date</b>	<b>Author(s)</b>	<b>Comments</b>
0.1	07.07.2005	John Hammink	Generic version written from existing base specs.
0.2	02.08.2005	Tiit Paananen	I reordered use-cases according to API 1.3 functionality documentation.
0.3	15.09.2005	Tiit Paananen	Added checklist for developer Also described in more detail the use cases

# 1. Introduction

## 1.1 Purpose

**Test Specification** specifies inputs, predicted results, and a set of execution conditions for a test item.

## 1.2 Scope

This document contains a generic certification test plan for all software solutions which integrate with Skype. This test specification covers all software solutions which integrate with Skype in some way.

For specific solution types, it may be necessary in the future to add specific requirements per solution type.

This document also contains checklist of all Skype API calls. Before certification tests developer should mark what calls are used in his software and tests are limited to those calls.

## 1.3 Definitions

**Application:** Vendor application that interacts with Skype.

**Certification:** An endorsement from Skype that a third-party vendor meets Skype's own criteria for a co-labeled solution.

**CPM:** Certification Project Manager. Manager on Skype Business Development side who handles logo assignment and business arrangements with the vendor.

**Criticality:** Does the failure of this feature/requirement render this solution unusable?

**CTM:** Certification Technical Manager. Manager on Skype research and development who analyses new solutions and oversees test execution against test items.

**CTU:** Certification Test Unit. The team at a physical location, which actually carries out the tests.

**Failure:** A bug or malfunction in the solution that renders it unusable.

**Fault:** A bug or malfunction that is an inconvenience or annoyance.

**FOQ: Frequency of occurrence.** This is the number of times that a requirement, feature must be consulted or used within the timeframe

**Pass/Fail Criteria:** Decision rules used to determine whether a software item or a software feature passes or fails a test.

**Priority 1 test procedures:** Priority 1 level procedures should cover the basic functionality, most common operations of the product on nominal level. I.e. They are not fancy error handling, problem recovery tests.

**Priority 2 test procedures:** Priority 2 level procedures with the priority 1 test cases cover all the functionality of the product and the most common operations are tested better. So there is some error-handling test, boundary tests, stress tests, etc. especially for the common operations.

**Priority 3 test procedures:** Priority 3 level procedures are mainly to test rare situations in common operations and to test rare operations more thoroughly. These are mainly error handling, stress tests, load tests, boundary tests, etc.

**Product:** Part of solution provided by submitting vendor, usually includes application.

**Purpose:** Statement of the requirement that the test case supports.

**Solution:** Whole solution, which consists of vendor application and related applications, any other drivers, hardware accessories, and latest Skype version.

**Test Log:** A document containing test results and recommendation metrics according to a test specification for a given test item.

**Test Specification:** A document specifying inputs, predicted results, sequence of actions for the execution of a test, and a set of execution conditions for a test item.

**Timeframe (TF):** (duration of time sample for feature/requirement execution). For our purposes: 1 day.

**Vendor:** Manufacturer who is submitting a solution for certification.

### 1.3.1 Test Classes

**Nominal:** This class of tests addresses the basic functional aspect of items being tested. It demonstrates the item's ability to perform well within its defined bounds.

**Boundary:** Tests in this class are used to verify the items functionality at the value limits of its defined boundaries. Tests in this class are also used to test known or suspected peculiarities.

**Error Guessing:** Tests in this class are used to test known or suspected peculiarities. These may be areas of the design that are particularly complex or areas of the design where a lot of other defects have been found.

**Stress:** Tests in this class are designed to determine how the item performs under extreme or unusual load conditions.

**Performance:** This class of tests is used to determine the point at which the functional performance of an item degrades in speed or accuracy while still within its operational boundaries.

**Error Handling:** Tests in this class are designed to specifically generate error conditions to test the item's ability to recover from errors.

**System Failure Recovery:** These tests are used to verify an item's ability to handle and recover from catastrophic conditions. Testing data recovery from a power outage is an example of this class of tests.

## 2. Non-Functional requirements

### 2.1 Skype Trademark requirements

#### 2.1.1 Priority: 1 API Charter should be followed

**Revision:** 1.0

**Purpose:** Rules and legal implications regarding Skype API charter should be followed.

#### 2.1.2 Priority: 1 Skype Icons should be as dictated in Skype Brand Manual

**Revision:** 1.0

**Purpose:** Icons in application should be as dictated in Skype Brand Manual.

#### 2.1.3 Priority: 1 Product must use proper "Skype Certified" notifier on packaging

**Revision:** 1.0

**Purpose:** Packaging may show "...for Skype";

“...works with Skype”;  
“...certified by Skype”.

In addition, product may use Skype logo (according to Skype Brand Manual) on packaging.

Product may use Skype Certified Logo on marketing materials.

#### **2.1.4 Priority: 1 Product may not use name “Skype” in the product name**

**Revision:** 1.0

**Purpose:** Product may not use the string “Skype” in the product name.

## **2.2 Product submission and out-of-box requirements**

### **2.2.1 Priority: 1 Submission format and contents**

**Revision:** 1.0

**Purpose:** Solution should contain all elements the end-user would get; so that we can simulate the end-user experience as much as possible.

Submission contains all elements required to test the solution (except PC and Skype).

### **2.2.2 Priority: 1 Documentation**

**Revision:** 1.0

**Purpose:** End-User documentation for any solution should be unambiguous and explicitly document **SETUP AND ALL OPERATIONS** of the product. User should not at any point have to guess how to do something; or perform some supported operation.

Documentation should adhere to the user-documentation checklist.

### **2.2.3 Priority: 1 Version and build number for ALL solution components**

**Revision:** 1.0

**Purpose:** Every component – hardware (if relevant) and software – has a unique version and build number that can be referred to during testing.

## **2.3 Attractiveness requirements**

### **2.3.1 Priority: 2 Looks**

**Revision:** 1.0

**Purpose:** Subjective measure. Does the product generally look nice in the OS desktop environment?

### **2.3.2 Priority: 3 Enhance desktop environment**

**Revision:** 1.0

**Purpose:** Subjective measure. Does the product enhance the appearance of the OS desktop or make it appear more cluttered?

### **2.3.3 Priority: 3 Attractiveness – complement desktop environment**

**Revision:** 1.0

**Purpose:** Subjective measure. Does the product stand out nicely from the desktop without "sticking out" like a loud necktie?

## **2.4 General Usefulness requirements**

### **2.4.1 Priority: 1 Improved user experience**

**Revision:** 1.0

**Purpose:** Does the product seamlessly integrate the Skype calling/conference experience to the software product in question?

Or does this integration ultimately undermine the quality of the experience?

### **2.4.2 Priority: 1 Convenience**

**Revision:** 1.0

**Purpose:** Does the product's integration with Skype actually make Skyping more (or less) convenient than simply using the standalone Skype application?

## **3. Functional requirements**

### **3.1 Application Installation requirements**

#### **3.1.1 Priority: 1 Straight forward installation**

**Revision:** 1.0

**Purpose:** Installation process must be automatic: from accessing installation media only "Yes" or "Next" buttons are pressed.

User does not have to backtrack or consult multiple sources of information.

#### **3.1.2 Priority: 1 Solution Setup time**

**Revision:** 1.0

**Purpose:** Solution can be setup in a reasonable time.

No solution requires >10 minutes without consulting documentation.

Ideally any solution can be set up in < 5 minutes without consulting documentation.

#### **3.1.3 Priority: 2 ISO Country list.**

**Revision:** 1.0

**Purpose:** Applications (and setup) should support standard ISO list of countries where applicable rather than vendor-defined list.

#### **3.1.4 Priority: 1 All changes documented**

**Revision:** 1.0

**Purpose:** All changes to the system by installing the product are explained in product documentation.

#### **3.1.5 Priority: 1 No undesirable changes**

**Revision:** 1.0

**Purpose:** Subjective measure.

The solution setup does not make any undesirable changes to the system.

For example:

Setup does not change boot order in BIOS;

Setup does not install software or make configuration changes that affect PC or application performance.

### 3.1.6 Priority: 3 Installing application to alternate drives

**Revision:** 1.0

**Purpose:** Application/drivers must be installable to alternate drives e.g. "D:\Program Files". as well as default "C:\Program files." Application must detect system files installed on other drives.

### 3.1.7 Priority: 1 Installing without autorun

**Revision:** 1.0

**Purpose:** If installation does not autorun, it must be made clear to user how to manually run it.

### 3.1.8 Priority: 2 Skype upgrade prompts notification

**Revision:** 1.0

**Purpose:** If installation requires an upgrade of Skype, then this user is notified during installation.

### 3.1.9 Priority: 2 Application upgrade is automatic

**Revision:** 1.0

**Purpose:** Application is upgraded automatically when new versions become available.

### 3.1.10 Priority: 2 No restart necessary

**Revision:** 1.0

**Purpose:** It is preferable that user need not restart system after installing the product.

### 3.1.11 Priority: 1 WINDOWS: Adding program launch icon

**Revision:** 1.0

**Purpose:** WINDOWS: Program launch icon added to start menu after installation.

### 3.1.12 Priority: 1 WINDOWS: Control Panel=>Add/Remove programs

**Revision:** 1.0

**Purpose:** WINDOWS: Icon added to Control Panel => Add remove programs.

### 3.1.13 Priority: 2 WINDOWS: Uninstall icon to program group

**Revision:** 1.0

**Purpose:** WINDOWS: Uninstall icon added to program group.

### 3.1.14 Priority: 2 Uninstalling application(s)

**Revision:** 1.0

**Purpose:** Uninstall program must completely remove all installed files and registry settings.

## 3.2 Application information requirements

### 3.2.1 Priority: 1 Application Publisher should be clearly identified

**Revision:** 1.0

**Purpose:** Application publisher should be clearly identified, e.g. in splash screen.

### 3.2.2 Priority: 1 Application Privacy implications should be clear

**Revision:** 1.0

**Purpose:** Application privacy implications should be clear, e.g. in splash or information screen.

### 3.2.3 Priority: 1 Application rights to use, distribute, deploy should be clearly identified

**Revision:** 1.0

**Purpose:** Application rights to use, distribute, redeploy should be clearly identified, e.g. in splash or information screen.

## 3.3 Application requirements

### 3.3.1 Priority: 2 Application launches within reasonable time

**Revision:** 1.0

**Purpose:** Any application or support application launches within a reasonable time of system startup if configured to do so.

Any delays in application startup are shown with a progress indicator.

### 3.3.2 Priority: 2 Application invokes system tray icon

**Revision:** 1.0

**Purpose:** Application, when launched, invokes a system tray icon.

Right-clicking systray icons should present an option to shutdown the application completely.

### 3.3.3 Priority: 1 Voice/Sound not set low/muted by default

**Revision:** 1.0

**Purpose:** If voice is processed through a hardware device, default configuration after setup is neither low nor muted.

### 3.3.4 Priority: 2 Application default settings reset

**Revision:** 1.0

**Purpose:** Application allows user to reset application to default settings.

### 3.3.5 Priority: 1 Application exit gracefully

**Revision:** 1.0

**Purpose:** User must be able to exit gracefully from the application at any point.

### 3.3.6 Priority: 3 Application controls useful and non-redundant

**Revision:** 1.0

**Purpose:** Application lists, checkboxes and menu items must instigate a valid action or actions.

### **3.3.7 Priority: 1 Application handles situation where Skype not installed**

**Revision:** 1.0

**Purpose:** Application gracefully handles situation where Skype is not installed.

### **3.3.8 Priority: 1 Application handles situation where Skype is closed**

**Revision:** 1.0

**Purpose:** Application gracefully handles situation where Skype is closed.

### **3.3.9 Priority: 2 Application menu and selection items clear and understandable**

**Revision:** 1.0

**Purpose:** All application menu and selection items must be clearly understandable.

### **3.3.10 Priority: 3 Application graphics maximize display use**

**Revision:** 1.0

**Purpose:** Application graphics must be designed to maximize display use.

### **3.3.11 Priority: 1 Application screen content readable**

**Revision:** 1.0

**Purpose:** All application screen content is readable to the naked eye.

### **3.3.12 Priority: 2 Application graphics scaled accordingly**

**Revision:** 1.0

**Purpose:** Application graphics should be scaled appropriately to the target display size.

### **3.3.13 Priority: 1 Preserve application state upon restart**

**Revision:** 1.0

**Purpose:** Application preserves same state after being restarted.

### **3.3.14 Priority: 1 GUI Text is not truncated**

**Revision:** 1.0

**Purpose:** Application GUI text is not truncated.

### **3.3.15 Priority: 2 No inappropriate text in GUI**

**Revision:** 1.0

**Purpose:** Software application (client or device) must not contain inappropriate graphics or text.

### **3.3.16 Priority: 1 Error messages understandable**

**Revision:** 1.0

**Purpose:** Application/driver error messages are clearly understandable.

### **3.3.17 Priority: 2 No unnecessary screen repaint**

**Revision:** 1.0

**Purpose:** Application does not cause any unnecessary screen repaint.

### 3.3.18 Priority: 3 Notification messages displayed once

**Revision:** 1.0

**Purpose:** Application notification messages are not displayed more than once.

### 3.3.19 Priority: 3 Non-active icons are greyed out

**Revision:** 1.0

**Purpose:** Non-active icons are greyed out.

### 3.3.20 Priority: 1 Application should support multiple user profiles on XP

**Revision:** 1.0

**Purpose:** Application should support multiple user profiles on XP.

## 4. Solution Functionality/Compatibility requirements

Requirements in this section verify that Skype usability and functionality work in a similar fashion as the native Skype application.

The reason for this is that we do not want the end-user to learn a new paradigm – tricks learned with “native” Skype should thus apply in a Skype-integrated application.

Cases regarding specific functionality can be marked as “N/A” in the testlogs if they do not apply.

### 4.1 High-Level Functionality

#### 4.1.1 Priority: 1 Solution passes precursory pass of its functionality.

**Revision:** 1.0

**Purpose:** Solution passes a high-level, cursory pass of its basic functionality.

**Env. Needs:** Same as basic needs for this section, plus user manual available.

**Input:** Using the user manual as input, verify that a selection of documented operations/use-cases work as written.

**Output:** Operations work as intended. Operations invoke no errors native to the device or application.

#### 4.1.2 Priority: 1 Solution works with Skype intuitively

**Revision:** 1.0

**Purpose:** Solution does supported operations with Skype in an obvious, intuitive way, e.g. can move between Skype tabs, select contacts, Dial PSTN, initiate, hold and terminate calls.

This is according to what operations the solution supports.

### 4.2 Connection Management requirements

#### 4.2.1 Priority: 1 Application should identify itself correctly to Skype

**Revision:** 1.0

**Purpose:** When application tries to access Skype’s API, it should identify itself truthfully. Purpose of API access should be clear.

#### 4.2.2 Priority: 1 Application should correctly determine which API protocol to use

**Revision:** 1.0

**Purpose:** When application tries to access Skype's API, it should determine the correct API protocol to use.

### 4.3 Call Management requirements

#### 4.3.1 Priority: 1 Solution enables user to place a call as in Skype

**Revision:** 1.0

**Purpose:** Solution enables user to initiate a call as in native Skype application. Application should reflect Skype response with call ID and status information. In detail: Application must show to user that call is initiated. Call button inactive, hangup button active.  
Application must show user the status of the call (connecting, ringing, call refused)  
Application must show user the duration of the call and current status (on hold, held remotely, finished)  
Application must enable user to hold call or hang-up the call.

**Input:** Make call with application and monitor the progress. Accept the call and also hang up while ringing.

**Output:** Application behaves during the call in the same way as Skype does.

#### 4.3.2 Priority: 1 Solution enable user to receive calls as in Skype

**Revision:** 1.0

**Purpose:** Solution is alerting user about the call and giving him button for answer or decline.

#### 4.3.3 Priority: 1 Solution "call" icons should change to "hang up" icons when call is initiated

**Revision:** 1.0

**Purpose:** Solution call icons should change to "hang up" icons when call is initiated.

#### 4.3.4 Priority: 1 Solution enables user to hold a call as in Skype

**Revision:** 1.0

**Purpose:** Solution enables user to hold a call as in native Skype application.

#### 4.3.5 Priority: 1 Solution enables user to mute a call as in Skype

**Revision:** 1.0

**Purpose:** Solution enables user to mute a call as in native Skype application.

#### 4.3.6 Priority: 1 Solution enables user to terminate a call as in Skype

**Revision:** 1.0

**Purpose:** Solution enables user to terminate a call as in native Skype application.

#### 4.3.7 Priority: 1 Solution routes back to user understandable error information

**Revision:** 1.0

**Purpose:** Solution displays to user error messages specified in Skype API and these give accurate and correct information about the error.

**4.3.8 Priority: 2 Solution enables to connect the call to a conference call**

Revision: 1.0

Purpose: Solution is able to connect call with another call to form a conference or to join to existing conference.

**4.3.9 Priority: 2 Solution enables to forward DTMF tones as in Skype**

Revision: 1.0

Purpose: Solution can forward DTMF tones to PSTN network as in Skype. The quality of call depends of PSTN terminating partner.

**4.3.10 Priority: 2 Solution is able to show missed call information**

Revision: 1.0

Purpose: Solution is able to show missed calls information and it is possible to remove missed calls from list.

**4.4 Voice Mail requirements****4.4.1 Priority: 1 Solution enables user to leave voicemail messages**

Revision: 1.0

Purpose: Solution enables user to leave messages to other party

**4.4.2 Priority: 1 Solution enables user to get new message notifications**

Revision: 1.0

Purpose: Solution enables user to get new message notifications as in Skype.

**4.4.3 Priority: 1 Solution enables user to list messages**

Revision: 1.0

Purpose: Solution enables user to list messages as in Skype.

**4.4.4 Priority: 1 Solution enables user to play messages**

Revision: 1.0

Purpose: Solution enables user to play messages as in Skype.

**4.4.5 Priority: 1 Solution enables user to delete messages**

Revision: 1.0

Purpose: Solution enables user to delete messages

**4.4.6 Priority: 1 Solution enables user to play greeting**

Revision: 1.0

Purpose: Solution enables user to play VM greeting as in Skype.

**4.4.7 Priority: 1 Solution enables user to edit greeting**

Revision: 1.0

Purpose: Solution enables user to edit VM greeting as in Skype.

## 4.5 Chat Initialization requirements

### 4.5.1 Priority: 1 Solution enables user to start chat as in Skype

Revision: 1.0

**Purpose:** Solution enables user to start a chat (IM) and set topic as in Skype native application.

### 4.5.2 Priority: 1 Solution enables user to view chat history as in Skype

Revision: 1.0

**Purpose:** Solution enables user to view IM history with a specific user as in Skype native application.

### 4.5.3 Priority: 1 Solution enables user to send an IM message as in Skype

Revision: 1.0

**Purpose:** Solution enables user to send an IM message to a specific user as in Skype native application.

### 4.5.4 Priority: 1 Solution enables user to read an IM message as in Skype

Revision: 1.0

**Purpose:** Solution enables user to read an IM message from a specific user as in Skype native application.

### 4.5.5 Priority: 1 Incoming messages identify sender and the time sent

Revision: 1.0

**Purpose:** If supported, incoming messages should clearly identify the sender and the time sent.

### 4.5.6 Priority: 1 Outgoing messages must be explicitly authorized by the user

Revision: 1.0

**Purpose:** If supported, every (first) message sent must be explicitly authorized by receiving user.

### 4.5.7 Priority: 1 Outgoing messages can be sent to only one user at a time

Revision: 1.0

**Purpose:** If supported, messages may only be sent to one user at a time.

### 4.5.8 Priority: 2 Solution enables to retrieve chat messages

Revision: 1.0

**Purpose:** Returns list of chat messages identifiers for given chat.

### 4.5.9 Priority: 2 Solution enables to retrieve chat's recent messages

Revision: 1.0

**Purpose:** Returns list of chatmessages identifiers for recent chatmessages in given chat. Recent chatmessages are these which are shown when window of the existing chat is re-opened.

### 4.5.10 Priority: 1 Solution marks chat messages as seen

Revision: 1.0

**Purpose:** If message has not been received it is shown in unable to send status until other party has received the message.

## 4.6 Chat Conference requirements

### 4.6.1 Priority: 1 Solution enables user to add a user to a chat as in Skype

**Revision:** 1.0

**Purpose:** Solution enables user "Add to chat" and thus initiate multi-user chats.

### 4.6.2 Priority: 1 Solution enables user to leave a chat as in Skype

**Revision:** 1.0

**Purpose:** Solution enables user leave a chat as in Skype native application.

### 4.6.3 Priority: 1 Solution enables user to read a multi-chat message as in Skype

**Revision:** 1.0

**Purpose:** Solution enables user to read a multi-chat message as in Skype native application.

### 4.6.4 Priority: 1 Solution enables user to send a multi-chat message as in Skype

**Revision:** 1.0

**Purpose:** Solution enables user to send a multi-chat message as in Skype native application.

### 4.6.5 Priority: 1 Solution enables user to list participants in a multi-chat message as in Skype

**Revision:** 1.0

**Purpose:** Solution enables user to list participants in a multi-chat message as in Skype native application.

## 4.7 Profile Management requirements

### 4.7.1 Priority: 1 Solution enables user to change status as in Skype

**Revision:** 1.0

**Purpose:** Solution enables user to change presence status using same or similar steps as in Skype native application.

Presence status is broadcasted accordingly.

### 4.7.2 Priority: 1 Solution enables user to change avatar as in Skype

**Revision:** 1.0

**Purpose:** Solution enables user to change avatar using same or similar steps as in Skype native application.

### 4.7.3 Priority: 1 Solution enables user to view profile properties as in Skype

**Revision:** 1.0

**Purpose:** Solution enables user to view profile properties using same or similar steps as in Skype native application.

### 4.7.4 Priority: 1 Solution enables user to edit profile properties as in Skype

**Revision:** 1.0

**Purpose:** Solution enables user to edit profile properties using same or similar steps as in Skype native application.

**4.7.5 Priority: 1 Solution enables user to view/broadcast current SkypeOut credit level in Euros**

**Revision:** 1.0

**Purpose:** Solution enables user to view/broadcast current SkypeOut credit level in Euros.

**4.8 Contact Management requirements****4.8.1 Priority: 1 Solution enables user to list contacts as in Skype**

**Revision:** 1.0

**Purpose:** Solution enables user to list contacts as in Skype native application.

Contacts should be in the following order:

- i. Online (A-Z)
- ii. Offline (A-Z)
- iii. SkypeOut (A-Z)
- iv. Unknown (A-Z)

Contacts are listed by "<Full Name>, <Skype Name>."

**4.8.2 Priority: 1 Solution enables user to display presence properly as in Skype**

**Revision:** 1.0

**Purpose:** Presence is displayed appropriately for each contact.

Presence should be updated within acceptable time frame for presence change.

**4.8.3 Priority: 1 Solution enables user to filter contacts as in Skype**

**Revision:** 1.0

**Purpose:** Solution enables user to filter contacts as in Skype native application.

**4.8.4 Priority: 1 Solution enables user to add contacts as in Skype**

**Revision:** 1.0

**Purpose:** Solution enables user to add contacts as in Skype native application.

**4.8.5 Priority: 1 Solution enables user to remove contacts as in Skype**

**Revision:** 1.0

**Purpose:** Solution enables user to remove contacts as in Skype native application.

**4.8.6 Priority: 1 Solution enables user to search contacts as in Skype**

**Revision:** 1.0

**Purpose:** Solution enables user to search contacts as in Skype native application.

**4.8.7 Priority: 1 Solution enables user to request authorization from users as in Skype**

**Revision:** 1.0

**Purpose:** Solution enables user to request authorization from users as in Skype native application.

**4.8.8 Priority: 1 Solution enables user to block authorization requests from users as in Skype**

**Revision:** 1.0

**Purpose:** Solution enables user to block authorization requests from users as in Skype native application.

All contact authorization must first be approved by the user.

#### **4.8.9 Priority: 1 Solution enables user to allow authorization requests from users as in Skype**

**Revision:** 1.0

**Purpose:** Solution enables user to allow authorization requests from users as in Skype native application.

#### **4.8.10 Priority: 1 Solution enables user to block users as in Skype**

**Revision:** 1.0

**Purpose:** Solution enables user to block users as in Skype native application.

#### **4.8.11 Priority: 1 Solution enables user to unblock users as in Skype**

**Revision:** 1.0

**Purpose:** Solution enables user to unblock blocked users as in Skype native application.

#### **4.8.12 Priority: 1 Solution enables user to view user profile as in Skype**

**Revision:** 1.0

**Purpose:** Solution enables user to view another user's profile as in Skype native application.

#### **4.8.13 Priority: 1 Solution enables user to view user presence as in Skype**

**Revision:** 1.0

**Purpose:** Solution enables user to view another user's presence as in Skype native application.

### **4.9 Clearing**

#### **4.9.1 Priority: 2 Solution enables user to clear history**

**Revision:** 1.0

**Purpose:** Solution enables user to clear chat, voicemail and call history as in Skype

### **4.10 Device presence, control, ringing, and call-status requirements**

#### **4.10.1 Priority: 1 Solution enables user to control audio-in/out devices**

**Revision:** 1.0

**Purpose:** Solution enables user to control audio-in/out devices and to change or mute them during the call if needed.

#### **4.10.2 Priority: 1 Solution rings/notifies according to Skype status**

**Revision:** 1.0

**Purpose:** Solution provides call or IM notification based on Skype status, e.g. does not ring or invoke messages on *DND*, but does do so on *Online*.

#### **4.10.3 Priority: 1 Solution Call status reflects Skype instance call status**

**Revision:** 1.0

**Purpose:** Call in progress to user "Bubba" shows "Bubba" on both application and Skype instance); does not show call to self.

#### **4.10.4 Priority: 2 Solution enables user to set ringtones**

Revision: 1.0

**Purpose:** User is able to set and change ringtone files for different alarms and rings.

### **4.11 File Transfer requirements**

#### **4.11.1 Priority: 1 Solution enables user to transfer files as in Skype**

Revision: 1.0

**Purpose:** Solution enables user to initiate file transfer as in Skype native application.

#### **4.11.2 Priority: 1 Solution enables user to accept transferred files as in Skype**

Revision: 1.0

**Purpose:** Solution enables user to accept transferred files as in Skype native application.

#### **4.11.3 Priority: 1 Solution will never initiate/accept file transfer without user input**

Revision: 1.0

**Purpose:** Solution will neither initiate file transfer nor accept transferred files without user input.

### **4.12 Voice Conference requirements**

#### **4.12.1 Priority: 1 Solution enables user to host a voice conference as in Skype**

Revision: 1.0

**Purpose:** Solution enables user to host a voice conference as in Skype.

#### **4.12.2 Priority: 1 Solution enables user to invite participants to voice conference as in Skype**

Revision: 1.0

**Purpose:** Solution enables user to invite participants to a voice conference as in Skype.

#### **4.12.3 Priority: 1 Solution enables user to leave voice conference as in Skype**

Revision: 1.0

**Purpose:** Solution enables non-host user to leave voice conference as in Skype.

#### **4.12.4 Priority: 1 Solution enables user to list participants of voice conference as in Skype**

Revision: 1.0

**Purpose:** Solution enables user to list voice conference participants as in Skype.

### **4.13 Call Forwarding requirements**

#### **4.13.1 Priority: 1 Solution enables user to enable call forwarding as in Skype**

Revision: 1.0

**Purpose:** Solution enables user to enable call forwarding as in Skype.

#### **4.13.2 Priority: 1 Solution enables user to disable call forwarding as in Skype**

Revision: 1.0

**Purpose:** Solution enables user to disable call forwarding as in Skype.

#### **4.13.3 Priority: 1 Solution enables user to edit forwarding number as in Skype**

**Revision:** 1.0

**Purpose:** Solution enables user to edit forwarding number as in Skype.

## **5. Reliability requirements**

### **5.1 Error- and resource-usage requirements**

#### **5.1.1 Priority: 1 Solution does not render Skype unusable**

**Revision:** 1.0

**Purpose:** Application does not disable or render Skype functions unusable.

#### **5.1.2 Priority: 1 Solution does not create errors when without API access**

**Revision:** 1.0

**Purpose:** Application does not create errors when denied access to Skype API.

#### **5.1.3 Priority: 1 Solution does not create errors when restarted on the fly**

**Revision:** 1.0

**Purpose:** Application does not create errors when restarted on the fly.

#### **5.1.4 Priority: 1 Application does not connect to Skype without permission**

**Revision:** 1.0

**Purpose:** Application does not connect to Skype API without permission.

#### **5.1.5 Priority: 1 Application graceful in zero-memory condition**

**Revision:** 1.0

**Purpose:** Application responds gracefully in zero-memory condition.

#### **5.1.6 Priority: 1 Application does not freeze itself or Skype**

**Revision:** 1.0

**Purpose:** Application does not freeze itself or Skype application.

#### **5.1.7 Priority: 2 Application gives visible feedback on transition state**

**Revision:** 1.0

**Purpose:** Application gives visible feedback that it is not frozen.

#### **5.1.8 Priority: 2 Solution functions without errors on all supported Skype versions**

**Revision:** 1.0

**Purpose:** Application functions without errors on all supported Skype versions.

#### **5.1.9 Priority: 1 Solution graceful when no network services**

**Revision:** 1.0

**Purpose:** Application performs gracefully when network services are not available.

## 5.2 Voice Quality requirements

### 5.2.1 Priority: 1 Voice input/output quality

**Revision:** 1.0

**Purpose:** If solution processes voice I/O through a separate hardware device then sound quality is not degraded to the extent that it becomes unusable.

## 5.3 Reliability requirements

### 5.3.1 Priority: 1 Solution reliability

**Revision:** 1.0

**Purpose:** Solution does not fail in the field in < 1 month.

# 6. List of environments, test material, and test tools

## 6.1 List of Environments

### 6.1.1 Priority: 1, WinXP-2.4 GHz-Celeron R – 512 RAM

Windows XP Workstation

2.40 GHz

Celeron R

512 MB of RAM

### 6.1.2 Priority: 2, Win2k-> 400 MHz-PIII– 128 RAM

Windows 2000 workstation

400 MHz or greater

Pentium III or greater

128 MB of RAM or greater.