



# **Communicator for iPhone**

User Guide

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**Document Version 1** 





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# 1 About Communicator for iPhone

Communicator for iPhone provides the following communication features:

- Voice Calling (VoIP)
- Voice Calling (Circuit Switched)
- BroadWorks Call Settings



# 2 Get Started

This section contains the essential information for getting started with Communicator.

### 2.1 Installation

The iPhone client can be downloaded from Apple App Store.

# 2.2 Sign In

When you first launch the application, you are prompted to sign in.

- 1) If displayed, enter the device configuration address (Uniform Resource Identifier [URI]) provided by your service provider.
- 2) Enter your BroadWorks user name and password.
- 3) Select whether you would like Communicator to remember your password.
- Select whether you would like Communicator to sign you in automatically on subsequent launches.
- 5) Tap Sign In.

**NOTE**: Once user is signed in, the application does not ask again for the username and password until the user signs out. The login is preserved even if the application is terminated or the device is restarted.

With basic sign-in, there are options on the emergency call pop-up:

- Ok Sign-in completes and the user can use the client.
- Cancel Sign-in is canceled and the user is returned in the Sign In screen.

Depending on your service provider settings, the client may have a Forgot Password link on the login dialog box allowing retrieval of forgotten passwords. The functionality for retrieving the password is provided by the service provider.



# 3 Main Tabs

When you start Communicator for the first time, the *Contacts* list is empty. Use the *search* field to find people and add them to your *Contacts* list. Contacts can also be added manually by tapping the **Add** button.

lcon	Description
	<b>Contacts</b> – View your buddy list and local contacts or search for directory contacts.
##	Call – Make calls.
	<b>History</b> – View incoming, outgoing, and missed calls.



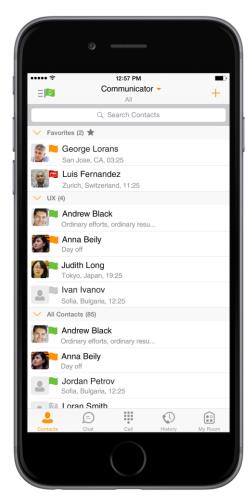


Figure 1 Main View

The main view contains a number of tabs that present information about the contacts and communications options available as follows:

- Contacts
- Call
- History

The Communicator default tab is "Contacts" and in the soft phone view, the default tab is "Directory".



## 4 Contacts

The iPhone client shows contact groups created from the Desktop or Tablet devices. The contacts groups cannot be created or edited from the iPhone client.

- The Contacts tab contains:
- Communicator Contacts
  - All
  - Online
- Contact Directories
  - Local Address Book
  - Directory

*Directory* provides the company directory contacts. The *Local* contact list provides the contacts from the local phone book.

### 4.1 Contact Card

The contact card displays information about a contact based on the contact type. This includes Communicator contacts, Local address book contacts, and contacts from directory search results.

### 4.2 Add Contacts

In the Add Contact screen, enter the contact's information and then click **Done**.

Add a local contact by selecting the option *Add Local Contact* from the plus icon in the navigation bar. The option *Add Local Contact* opens the native Address Book for adding a new contact from the local phone book.

### 4.3 Edit Contacts

Tap a contact entry from the *Contacts* list to open a contact card. *Edit* button opens the *Contact Information* dialog box where you can add, edit, or remove information.

- Unsubscribe removes the presence relationship between you and that contact.
- Remove contact deletes the contact from your Contacts list.



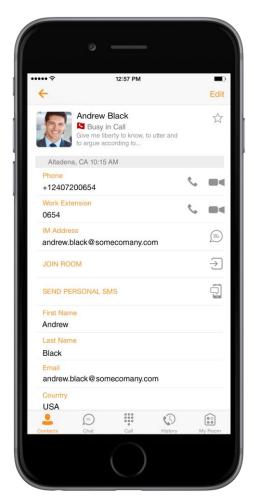


Figure 2 Edit Contact

### 4.4 Filters

There are four contact filters available from the Contacts tab:

- All Shows all contacts.
- Online Shows only the contacts that are currently online.
- Local Address Book Shows the contacts from your local phone book.
- Directory Shows the contacts from a company directory (which requires a search).

### Contacts sorting and ordering:

■ Local contacts are ordered in groups by letter, based on the first letter of their display name. There is no further ordering within the group.

All contacts whose display name starts with non-Latin characters are put in the # group.

The display name of a local contact is taken from first name, middle name, and last name. If names are missing, the display name is taken from the *JID* field.

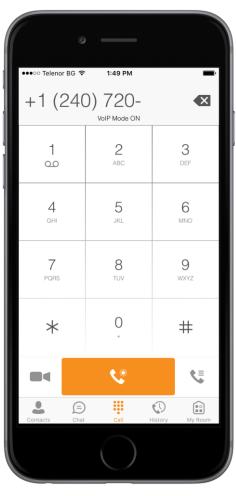
If all of the above are missing, then the phone number is used for display name.

■ All Contacts with Groups are ordered like in the native app, based on phone settings: Settings → Mail, Contacts, Calendars → Contacts → Sort Order.



### 5 Audio Calls

### 5.1 Dial Pad Tab



The *Dial Pad* tab displays a dial pad and a text field used to enter numbers. The dial pad is one of the options used to make audio calls. There are buttons below the dial pad: Call and Dial pad menu that are configurable by the service provider. The top text field also has a delete button that, when pressed, deletes one character at a time.

A badge notification appears on the *Dial Pail* box. A long press on the "1" digit connects you to the voice mail box. When there is no voice mail in your voice mail box, no notification badge is shown.

The *Dial Pad* menu can contain three options: VoIP Mode, Pull Call, and Retrieve Call.

Figure 3 Dial Pad Tab

### 5.1.1 VolP Calling Mode

Communicator Mobile supports an option that allows a user to switch easily between VoIP and Mobile calling modes.

- VoIP calls use WiFi or the carrier data network.
- Mobile calls use the carrier circuit-switched network.

Users can switch between VoIP and Mobile through the *Dial Pad* menu. An indication of the currently selected mode is displayed on the Dial pad.

- VoIP Mode On:
  - Outgoing and incoming calls use VoIP over WiFi or data network.
- VoIP Mode Off:
  - Outgoing and incoming calls use the mobile circuit-switched network.



VoIP calls over the carrier data network are dependent on the quality of the network and may incur additional charges. As such, there are options for an operator or end user to disable VoIP calls over the carrier data network (3G, 4G, or LTE) if needed. Users can control this behavior in *Call Settings* → *VoIP Calls*. There are two options:

- WiFi only: VoIP calls are only allowed only WiFi.
- All Networks: VoIP calls are only allowed on any data network.

### 5.2 Make Audio Calls

Make an audio call using one of the following methods:

- Choose a contact from contact list and tap on the headset icon for an audio call.
- From search results, open a contact card and tap on the headset icon audio call.
- Open the dial pad, enter a phone number, and tap the Call button.
- On the Call History list, tap a call entry.

### 5.3 Answer Call

An incoming call is indicated by a ringtone. There are two options on the incoming call screen: *Answer* and *Decline*. If you decline the call, it causes the line to sound busy at the caller's end and they know that you rejected the call.

If user is in the middle of a VoIP call and receives an incoming cellular call, the VoIP call is put on hold right away before answering/declining it.

If the iOS device (iPhone or iPad) is locked and there is an incoming VoIP call, a notification is displayed to the user on the locked screen, accompanied with an alerting sound and vibration.

If the device is in silent mode, the Communicator notification is accompanied by multiple vibrations. Vibrations are played until the call is answered locally, answered on another location, or redirected to voice mail or another number, or after a predefined timeout.

The incoming call ring volume when the application is in background is controlled by the Ringer volume when the phone is unlocked. The volume of the incoming call ring when the application is in foreground is controlled only during active alerting of an incoming call.



# 5.4 Communicator In Call Actions



Figure 4 In Call Screen

You can perform the following actions from the In Call screen:

- End a call
- Mute the microphone
- Enable / Disable Speaker\*
- Open the key pad
- Adjust the volume
- Place a call on hold
- Make a new call
- Transfer a call Attended
- Transfer a call Unattended
- Make a conference
- Park a call
- Transfer a call to circuit-switched call



- Add more participants (in conference call only)
- Merge two separate calls
- Swap two separate calls
- View participants (on a conference call)

### 5.5 Missed Calls and New Messages

Notifications (for example, for missed calls or new messages) are shown as badges on the tab icons.

# 5.6 Message Waiting Indicator and Voice Mail Access

If you have pending voice mail (VM) messages, then a badge is displayed on the *Call* tab icon with indicating the number of pending VM messages.

The voice mail is accessible with a long press of the dial pad digit "1" (similar to how it is done on a regular mobile keyboard).

# 5.7 Business Line Call Back

Communicator allows you to originate a circuit-switched call using your business line identity. This is done using the basic Call Back functionality on BroadWorks.

Call Back is available if you have the Remote Office assigned. The application checks to see whether one of these services is provisioned with a phone number that matches the mobile number. If it is provisioned this way, it provides you with the option to make calls

**NOTE**: The following functionality is only available for iOS.

### 5.8 Contact Name Lookup for Incoming Calls and Call Logs

When receiving a call, Communicator searches for the name in the following sources and in the following order: Enterprise directories, Local Contact, *P-Identifier* header (SIP), and *From* header (SIP). If the number matches one of the contacts, the name is shown on the incoming call screen.

### 5.9 Call Waiting

You can have one active call at any one time if you receive a new incoming call and accept it. The existing call is put on hold and you can change between these two calls by using the Hold and Unhold buttons.

### 5.10 N-Way Calling (Conference)

Communicator supports network SIP-based conference calls. While on a two-way audio call, you can add more participants by using the **Conference** button. It opens the Address Book on the device to search for and select the new participant. Once the conference is established, the participants are shown on the *Device* screen.

The other way to create a Conference call or to add participants to an existing Conference is to make a second new call and then select the *merge* option.



### 5.11 New Call

The client supports starting a new call while in an ongoing call. The steps are as follows:

- 1) Establish a call with a remote party.
- 2) Initiate second call using the new call button.
- 3) Select a contact and then choose a number. After the new call is established, the first call is put on hold. You can also swap the two calls or to merge it in conference.

### 5.12 Call Transfer

The client supports transferring VoIP calls to another party. Two modes of transfer are supported:

- Attended Transfer Establish a call with a remote party. Select a contact then choose a number. Select the *call first* option. If the call is successfully established, you can talk with the third party privately before completing the transfer by pressing the **Complete** button.
- Unattended Transfer Establish a call with a remote party. Select a contact and then choose a number. Select the *Transfer* option and the transfer is completed.

### 5.13 Call Pull

Call Pull can be used in scenarios where a user has two endpoints, for example, a VoIP desk phone and a mobile phone with Communicator. If the user has an active call on the desk phone, then this call can be transferred seamlessly to the mobile phone using the **Call Pull** button. Depending on the application, dialing settings, and service configuration, the call can be pulled as a VoIP or circuit-switched call to the mobile phone. There is no interruption to the voice call.

**NOTE**: Call Pull is not possible when there is an ongoing circuit-switched call on the iPhone. This is regardless if the circuit-switched call is mobile (personal) or business (anchored at BroadWorks). Call Pull requires initiating a VoIP call and iOS initiating a VoIP call during a circuit-switched call.

### 5.14 Call Park

The Call Park service allows a "parking" user to park a call against a "parked against" extension. The "parked" user is placed on hold until a user retrieves the parked call. If the call is not retrieved within the provisioned recall time, then the parked call is reverted and presented to the "recall" user.

### 5.15 Security Classification

The Communicator client provides the ability to specify the security classification of calls and chats.

The security classification of a call party is determined by the security classification set at the BroadWorks Enterprise level; all users within the organization inherit that security classification. Security levels are configurable on the server side, but there is always at least one security level, that is, "Unclassified".

In addition, each user can change the security classification for the duration of the call via their handset. The user can change the security classification to a level less than or equal to their configured security classification.



For calls, the security classification can be changed during a call by a user and it works with supplementary services such as Call Transfer and Conference.

For chat, the security classification is displayed but cannot be changed.

# 5.16 Bluetooth Support

You can perform audio calls from a compatible Bluetooth headset. The System requirements section in the *Communicator for Desktop and Mobile Product Guide* lists the headsets that have been tested, although other Bluetooth devices should also work.

Communicator Mobile iOS supports mute and volume control from the Bluetooth headset; however, answer and hang up are only supported from the application.

#### 5.17 Mid-Call Controls for Circuit-switched Business Calls

Communicator Mobile provides mid-call control services for business circuit-switched calls that are anchored at BroadWorks. This functionality is available for:

- Call Back circuit-switched calls initiated from the Communicator client via the native phone dialer.
- Incoming circuit-switch calls delivered to the mobile phone via Remote Office location.

Supported mid-call control services are:

- Hold / Resume. For more than one call, this functionality requires BroadWorks Call Control to be turned ON for the location.
- Transfer
- Conference (limited to five participants)
- Swap. Requires BroadWorks Call Control to be turned ON for the location.
- End call





Figure 5 Call Started

After initiating a Call Back call or after receiving a business circuit-switched call, the user can return to the main screen and launch Communicator to the foreground. At this point, the application brings a Mid-Call Control screen (shown in the previous figure) which can be used to manage the call.

For Call Back outgoing calls, Communicator for iOS displays a local notification after the remote party accepts the call with information that the user can click on the notification in order to return to Communicator and control the call.



# 6 Call History

The client supports displaying basic and enhanced BroadWorks Call History.

Communicator can also show information about Hunt Groups and call duration, which is only available as part of enhanced call logs.

From the segmented controls, the Call History can be set to show all or missed calls.

On the list of calls, there are icons indicating whether a call was incoming, outgoing, or missed.

The list of the call items consists of an icon showing what kind of call it was (a green arrow means incoming, a blue arrow means outgoing, a red arrow means missed, and a green group icon means hunt group). It also shows the name, number, and *Unavailable* status for the caller. Below the name it shows the number, if available, and below the number, it shows the date and time of the call.

In the Call Details screen the user can find information about the duration of the call.

Call History makes it easy for you to redial and call back when you miss a call or when you want to dial a contact with whom you have recently spoken.

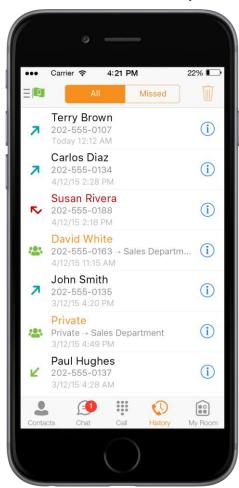


Figure 6 Call History



# 7 Side Navigation

The side navigation contains the following items:

- My status
- Call Settings
- Preferences
- Queues
- Test Call
- About
- Version
- Help
- Sign out

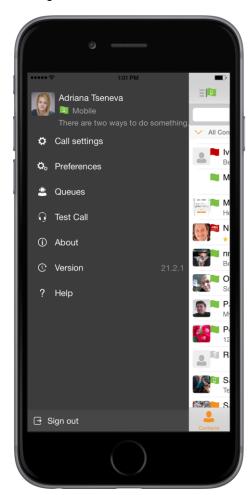


Figure 7 Side Navigation



### 7.1 My Status

You can set your own availability by tapping on your personal status from the side navigation. It opens the *My status* screen where you can change your avatar, personal message, and availability status.

**NOTE**: Availability can also be referred to as presence status, which was the term used in previous versions of Communicator.

You can enter a status message into the area next to the avatar. This status text is shown in your friends' *Contacts* lists.

### 7.1.1 Availability Rules

Availability Rules allow a user to configure calling rules associated with each of the availability states. When the availability state is triggered, the associated rule is applied.

Each availability rule can be configured with one of the following options:

- No Rules
- Forward to Number
- Silent Alerting

# 7.2 Call Settings

The client supports the following BroadWorks service management features, allowing BroadWorks supplementary services to be turned on or off using the native client *Call Settings* screen:

# **Call Options**

- VoIP Call
- Block My Caller ID
- Dialing Service
- iPhone Number

### **Call Forwarding**

- When Not Reachable
- When Busy
- Always
- When No Answer
- Do Not Disturb
- Personal Assistant

## **Incoming Calls**

- Simultaneous Ring
- BroadWorks Remote Office



### 7.2.1 Call Forwarding

By tapping on a different *Call Forward* option, you can enter a number to forward your calls as follows: Call Forward Always, When Busy, When No Answer, or When Not Reachable.

### 7.2.2 Personal Assistant

Personal Assistant allows configuring an announcement to be played to callers when the called party is not available. The announcement notifies the caller of the reason the called party is not available, optionally providing information on when the called party will return and whether there is an attendant to attend the call. Based on that, the caller can make a better decision on calling back, transferring to an attendant, or leaving a voice message.

Personal Assistant options can be configured in Call Settings. The following options are available:

- Presence different than None
- Until
- Transfer number
- Ring Splash

Select "None" for Presence to disable Personal Assistant.

#### 7.2.3 Do Not Disturb

When you activate this service, all calls are typically blocked by the server and sent to voice mail.

### 7.2.4 Remote Office

This service allows the use of any phone as the office phone from a charging and numbering perspective. For instance, a hotel room phone can be used as the office phone.

Enable Remote Office and specify a phone number to be used as the Remote Office number.

### 7.3 Preferences

The client supports the following preferences:

- Language
- Troubleshooting
- Remember password
- Sign in automatically
- Caller ID Lookup

The preferences available through Sign In screen are as follows:

- Language
- Version
- Device ID
- Help
- About



Troubleshooting

### 7.3.1 Language Support

The client is prepared for localization and can be delivered in any language. Currently, the client is available in the following languages:

- U.S. English
- French
- French (Canadian)
- German
- Italian
- Spanish (European)
- Spanish (Latin America)
- Korean
- Japanese
- Chinese

Additional languages are available upon request as part of a customization project.

## 7.3.2 Troubleshooting

The troubleshooting function can be used if there are issues encountered with the application. It collects and sends diagnostic information to a predefined support e-mail address that is configurable via the branding process. This helps support personnel to identify the issues. The information sent consists of the application and media engine diagnostic logs.

Troubleshooting is managed by a menu entry in *Settings*. It can be accessed from two places in the client:

- From the Settings button on the Sign In screen This opens the screen that contains the help and troubleshooting-related entries. This can be used before the user has signed in, which is most often for cases when a user has issues with signing in or with connectivity.
- From the *Preferences* screen, accessible from the Side navigation. This is available while the user is logged in.

Troubleshooting options:

- Console logging Option for getting logs in a development environment. The device should be connected to a PC/MAC and the logs to appear real-time in the console.
- File Logging Saves logs to the device memory for subsequent sending by e-mail.
- **PN logging** Includes push notification related information (only when push notifications are enabled).
- Crash reporting Sends crash logs to crash report.
- **Display Diagnostic Info in Calls** Displays information about ongoing calls like the codec type.



### 7.3.3 Caller ID Lookup

When there is an incoming call, Communicator matches it by searching in the contact list, local address book, and BroadWorks directory. To improve the performance, Communicator for iPhone provides the ability to turn on/off searching in the local address book.

### 7.3.4 Device ID

Communicator has the ability to lock the user to a single desktop or mobile device, so that the software cannot be used on other hardware. The iPhone user can copy the Device ID from *Preferences* before signing into the application and provide it to the company administrator. The administrator locks Communicator to the reported device and the user can sign in only from this device.

### 7.4 Call Center Agent (Queues)

Communicator allows a user to join and leave Call Center Queues and set their Automatic Call Distribution (ACD) status. This functionality is available based on the configuration and services assigned to the user.

To view the currently assigned queues, join and leave queues, and change state, use the Queues entry in the side navigation menu.

### 7.5 Test Call

The client provides the ability to perform an audio test call to an echo number. Note that the echo service is provided and enabled by the service provider.

A common example of using an echo service is:

Press Test Call to initiate a call to the echo service, then follow the operator's instructions until you hear back your recorded message.

### 7.6 Help Page

The client provides web-based help that can be launched from the Settings view.

### 7.7 Sign Out

You can sign out at the bottom of the left-side navigation drawer.

# 8 Communicator and iPhone Settings

From iPhone Settings → Communicator, the user can allow Communicator to access:

- Contacts
- Microphone
- Camera
- Notifications
- Cellular Data

It is recommended that Communicator have access to all of the resources in the previous list.

In addition, the user can configure the type of notifications they want to get with Communicator:



- Allow Notifications
- Show in Notification Center
- Sounds
- Badge App Icon
- Show on Lock Screen

It is recommended for all of the items in the previous list to be enabled.

In addition, it is recommended to configure the option Alert style when unlocked to "Alerts".



### 9 Search

Communicator supports search in Communicator Contacts and Contact Directories. The search is performed in a separate input field in the *Contacts* tab. Depending on the selected filter (All, Online, Local Address Book, or Directories), search results display contacts only from the current selected category.

In addition to results from the Enterprise Directory, the search is also performed in several more search sources:

- User's Personal Phone List
- Group's Common Phone List
- Enterprise's Common Phone List

The enhanced search is applied for both contacts searching initiated by the user and upon receiving an incoming call, and searching for a display name corresponding to an unknown number.

Communicator for iOS also supports search in an LDAP-compatible directory like Microsoft Exchange. If the device e-mail and contact applications are synchronized with Microsoft Exchange or a compatible e-mail provider, Communicator can look up contacts from the directory Global Address List (GAL). This search is available through Contacts, Local Address Book, All Contacts with Groups, Groups, and GAL.



### 10 Push Notifications

# 10.1 Push Notifications for Incoming Calls

Communicator introduces support for Push Notifications for Incoming Calls.

Mobile client applications use push notifications to get alerted for incoming calls and for accepting calls as VoIP.

When there is new call, a push notification is sent to the client, which is presented to the user as either platform-specific visual notification or in the user interface of the client application.

From a user experience standpoint, accepting a call works in the same way for both pushenabled clients and non-push-enabled clients.

On iOS, when the client is in the background, the call is presented to the user with an iOS-specific local notification (alert or banner). When the client is in the foreground, the call is presented with an application-specific *Incoming Call* screen with Answer and Decline buttons.

On Android, the call is presented to the user with an application-specific *Incoming Call* screen with Answer and Decline buttons.

Outgoing VoIP calls are performed with SIP registration on demand, which is transparent to the user. The SIP registration is done only when the user initiates the VoIP call.

In addition to push notifications for new calls, the solution also supports push notifications for new voice mail.

**NOTE**: Using push notifications for calls with Apple Watch:

When using push notifications for calls and Apple Watch, notifications go to the iPhone or the Apple Watch, depending on the device that is being used. When there is an incoming call and the phone is locked, the notification is only shown on the watch. The user can see the notification on the watch but cannot pick up the call from the watch. For more information, see the following Apple support document: <a href="https://support.apple.com/en-us/HT204791">https://support.apple.com/en-us/HT204791</a>.



# 11 Multi-Device Support

Communicator provides support for users with multiple devices. This includes several features:

- Retrieving one's own presence notifications when another client updates the user's presence. The client updates its own status based on the information it receives from the server.
- Accepting a shared presence invitation in one client is also recognized by another client and both clients start receiving presence updates.
- A new presence subscription made in one client is recognized in another. If the contact blocks the invitation, then there are presence notifications sent from the server to all of the user's clients indicating that the subscription was terminated. This information is shown to the user. If the client receives two presence authorization requests from two or more devices for the same user, it only shows one request to the user.
- Removing a contact from a contact list in one device is recognized in another client and the contact list is updated (that is, the contact is removed) in the other client as well.

# 11.1 Message History and Message Read Status Synchronization

Communicator introduces support for synchronizing message history and message read status on all devices.

- Message history is retrieved and synchronized on all devices. This includes all received and sent messages, even if the particular user device is not online when a message is received or sent.
- Message history is fetched when the mobile application is brought from the background to the foreground, or during certain time periods when receiving messages in the background.

**NOTE**: Received messages are immediately available on all logged clients, while sent messages are synchronized when the message history is fetched from the server.

 Messages read status is also synchronized when a message is read on another device and unread message counts are appropriately updated on badges.

**NOTE**: The application icon badge for unread messages is updated only if the application is running in the background.



# **Acronyms and Abbreviations**

APN Access Point Name

ACD Automatic Call Distribution

CC Country Codes

CLIP Calling Line Identification Presentation

CLIR Calling Line Identification Restriction

CS Circuit Switched

DSCP Differentiated Services Code Point

FMC Fixed-Mobile Covergence

GAL Global Address List

HTTP Hypertext Transfer Protocol

HTTPS Hypertext Transfer Protocol Secure Sockets

IM&P Instant Messaging and Availability

IMRN IP Multimedia Routing Number

IP Internet Protocol

JID Jabber Identifier

LTE Long Term Evolution

NAT Network Address Translation

PBX Private Branch Exchange

PIN Personal Identification Number

QoS Quality of Service

RCS Rich Communication Suite
RTCP Real-Time Control Protocol
SBC Session Border Controller

SIP Session Initiation Protocol

TN Telephone Number

ToS Type of Service

UC Unified Communications

UI User Interface

URI Uniform Resource Identifier
URL Uniform Resource Locator

UX User Experience



VM Voice Mail

VoIP Voice Over IP

VPN Virtual Private Network

WebRTC Web Real-Time Communication

XR Extended Report

Xsi Xtended Services Interface



# Appendix A: Third Party Software and Copyright

This software uses XMPP Framework from

https://github.com/robbiehanson/XMPPFramework and license from https://github.com/robbiehanson/XMPPFramework/blob/master/copying.txt.

This software uses CocoaAsyncSocket from

https://github.com/robbiehanson/CocoaAsyncSocket (public domain).

This software uses CocoaLumberjack from

https://github.com/robbiehanson/CocoaLumberjack and license from https://github.com/robbiehanson/CocoaLumberjack/blob/master/LICENSE.txt.

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