Qcast App (iOS) guide

Ver. 1.0

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Introduction

QCast app is just one component of a more articulated solution designed for real-time and live video/audio streaming operations performed by users typically belonging to a business organization. App users can use it to interact with a controlling station, called QCastStudio, this is a Windows-based application, or with other QCast App users.

The app user is pre-registered by Quintetto into the database of QCast enabled users and is associated to a specific domain. A domain typically identifies the business organization (company) the user belongs to. All users of a given company are members of the same domain. In special cases the same user can be a member of two or more domains.

The pre-registered user receives by Quintetto the user name and password credentials he/she needs to log into the app after having installed it to his/her smartphone.

Prerequisites

To enable the proper and seamless running of QCast solution please ensure that the following hardware and software prerequisites are met at the start.
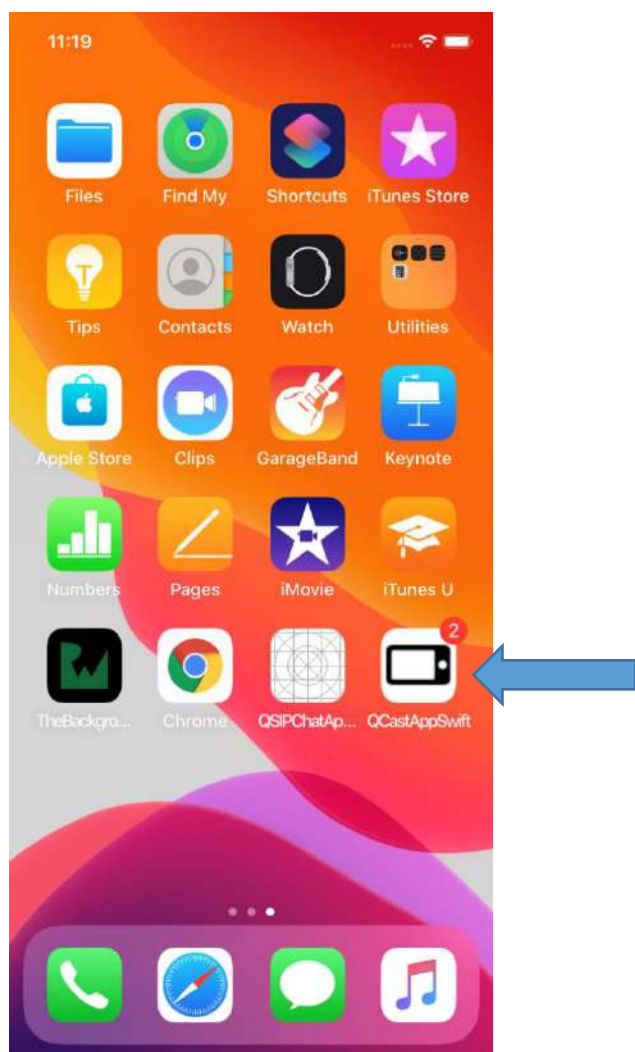
Hardware

The currently supported iPhone models are listed below:

- iPhone 12 series
- iPhone 11 series
- iPhone XR
- iPhone XS
- iPhone XS Max

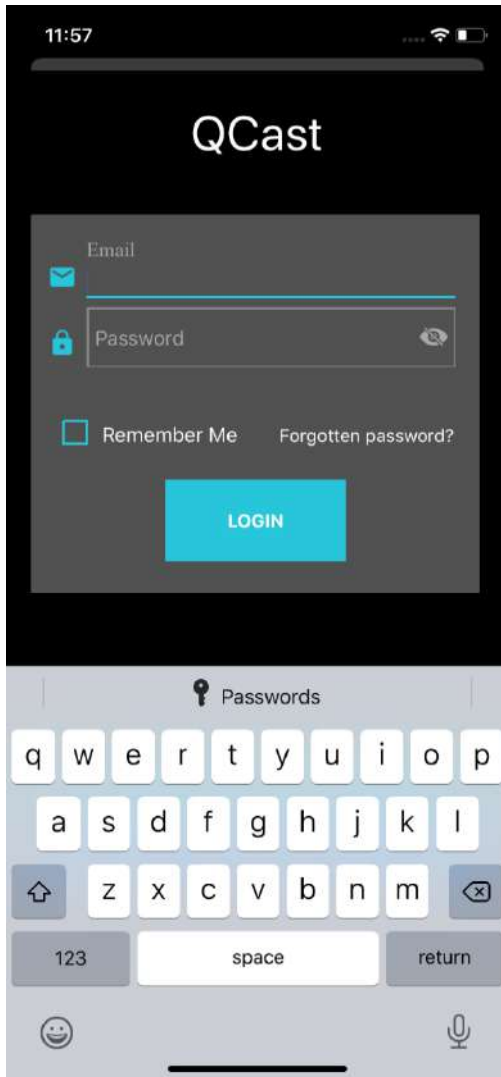All models must be running iOS version 13 or higher for proper operation of the app.

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Starting the App

To start QCast App look for the icon in the list of Apps in your smartphone.

Login and login credentials

Tap QCast App icon to start the application. The App will open into the Login/Registration windows.

You have already been registered as a user of QCast App. Use the login credentials associated to you to log into the App.
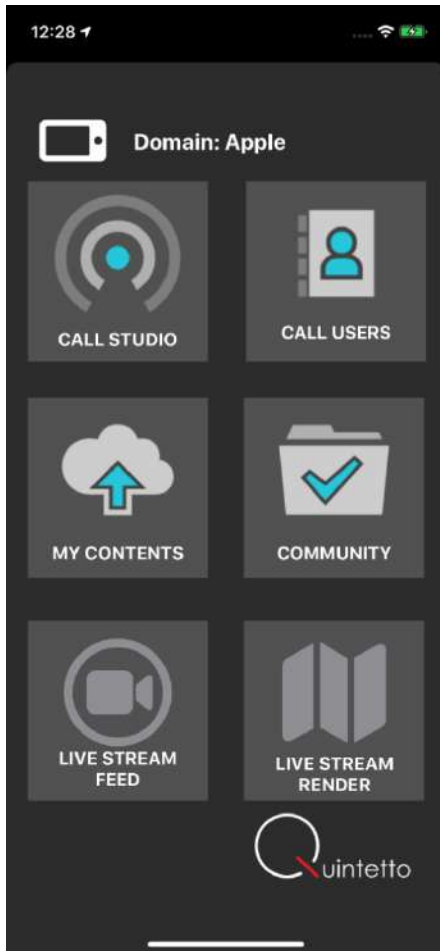
Your login credentials are:

Email: apple-test@quintetto.it
Password: {Quint-90-Apple-58}

After you have typed your email and assigned password tap LOGIN button.

Domain name

The domain you have been assigned to will be shown at the top of the app home page as: **Domain: <domain name>**

In your case the assigned domain name is **Apple**.

Permissions request

If you have successfully logged then before entering the main window of the App you will see the following permission request pop-ups:

1. Permission to access the Camera
2. Permission to access the Photo
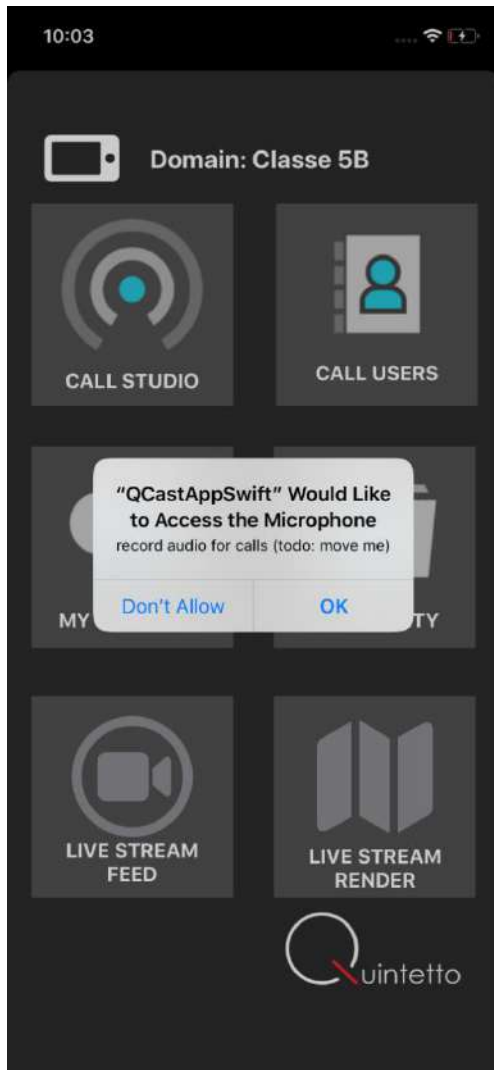3. Permission to access the Microphone

These permissions are necessary to allow the various video and audio stream functions to work properly.

Tap OK to both of them. These permission requests will be shown only the first time after the App installation or if you install a newer version.
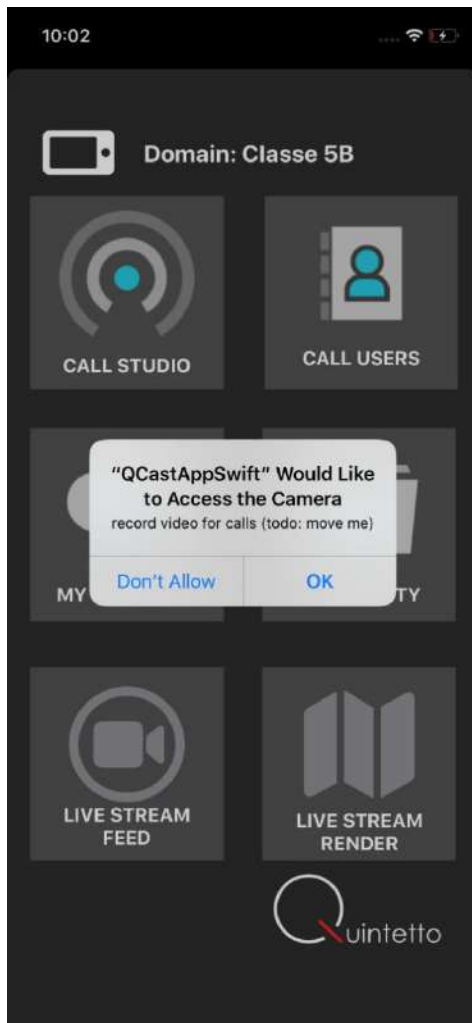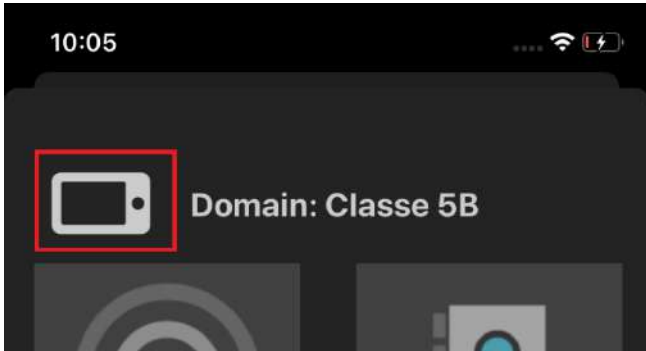
1.
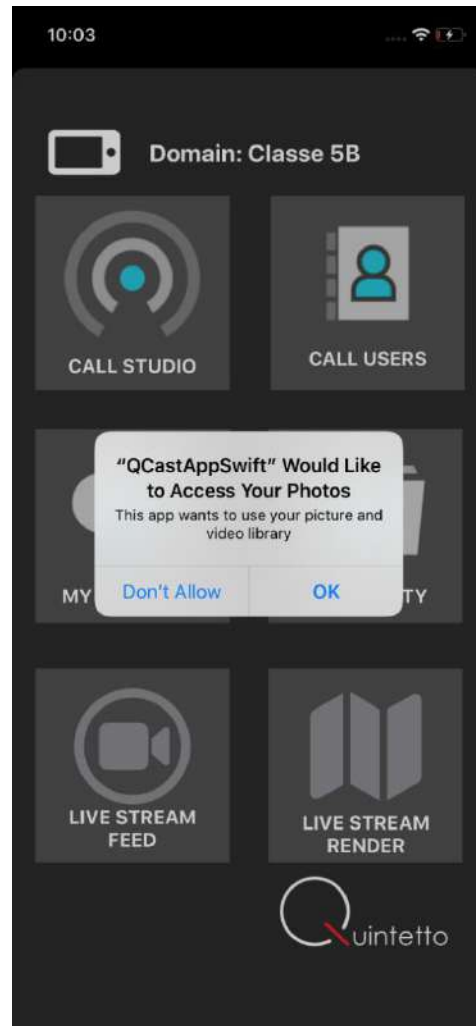
2.

2.

App settings

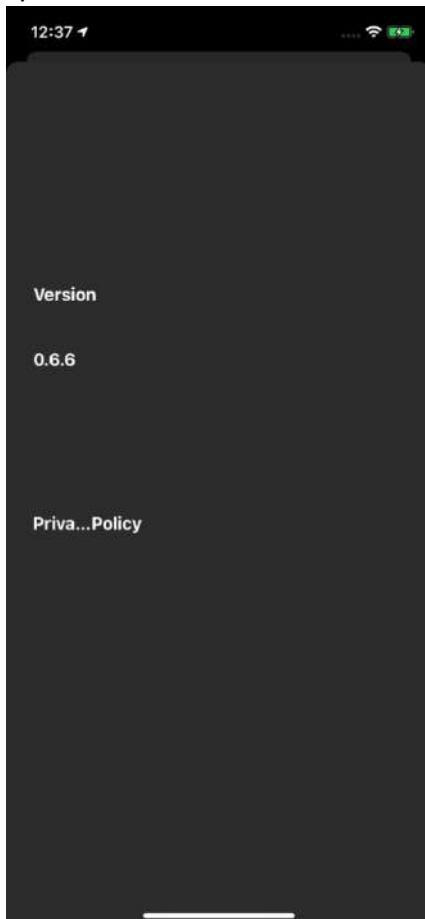To access the app settings section tap the icon located to the left of Domain: <domain name>
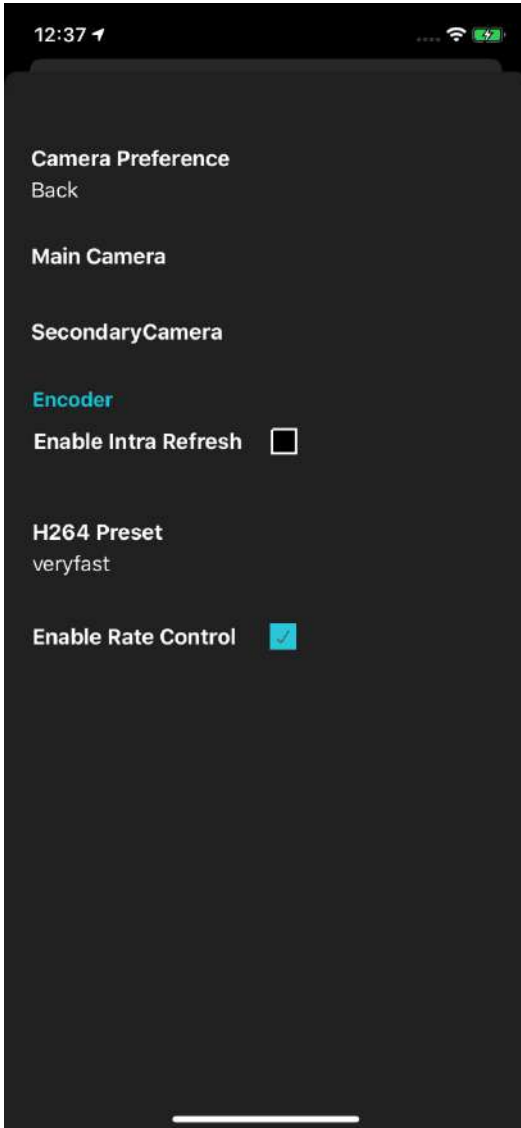
In the displayed window tap Settings

General

In General you can find the information about the App version and the link to the Privacy Policy.

Media

In Media you can select and set your preferences how the app is going to use the cameras of the smartphone.

Camera Preference

Under Camera Preference you can see the current, active setting.

Tap **Camera Preference** to enter the menu that lets you select the cameras combination that the app will utilize in CALL STUDIO, CALL USERS and LIVE STREAM FEED functions choosing from the following alternative options:

- Front (the Selfie camera is used)
- Back (the Rear facing camera is used)
- Both – Single Flow (Front and Back cameras, together). Single flow indicates that the frames from each camera are combined in a single stream.
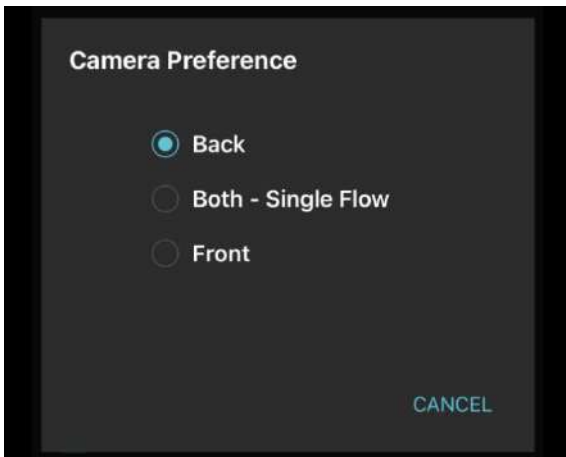
Just tap the desired setting to enable it.

Main Camera, Secondary Camera

Next, Main Camera and Secondary camera let you select the resolution of each camera from the following predefined list of supported alternatives.
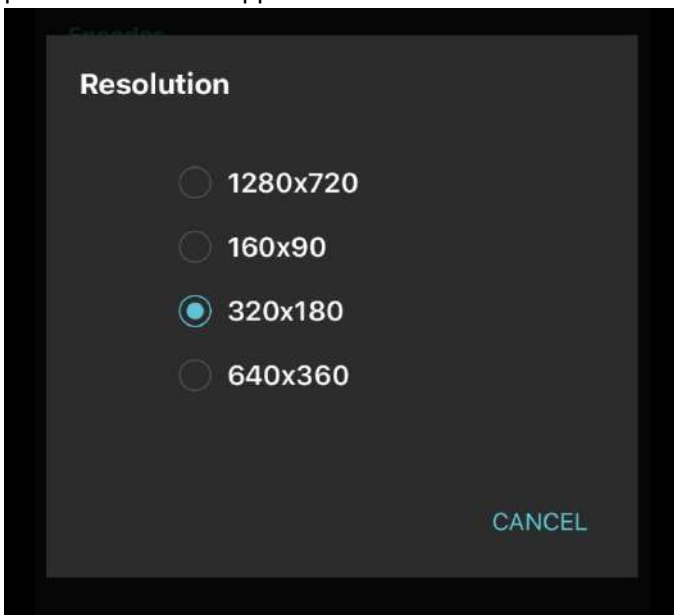
NOTE: The default resolution set for the cameras is 320x180. Higher resolutions may be set if you are confident of network speed and bandwidth availability in the network environment you are going to operate the app.

Encoder

This section of the Media settings exposes options used by the H264 encoding standard. Do not modify these settings without prior consultation with Quintetto.
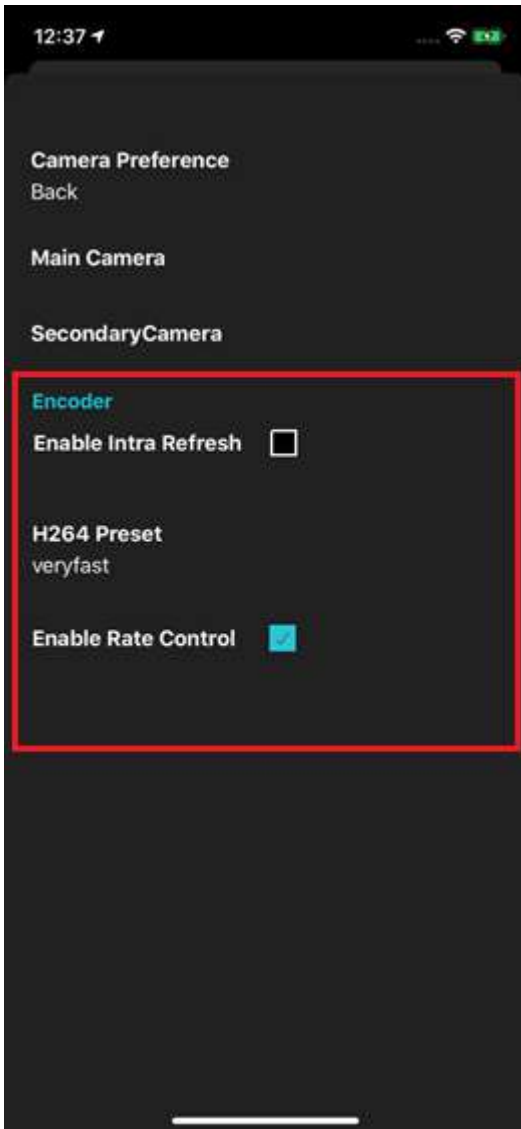
User profile

The User Profile setting displays the personal data of the user logged into the App, the domain or domains list the user belongs to, and manages the app logout function.
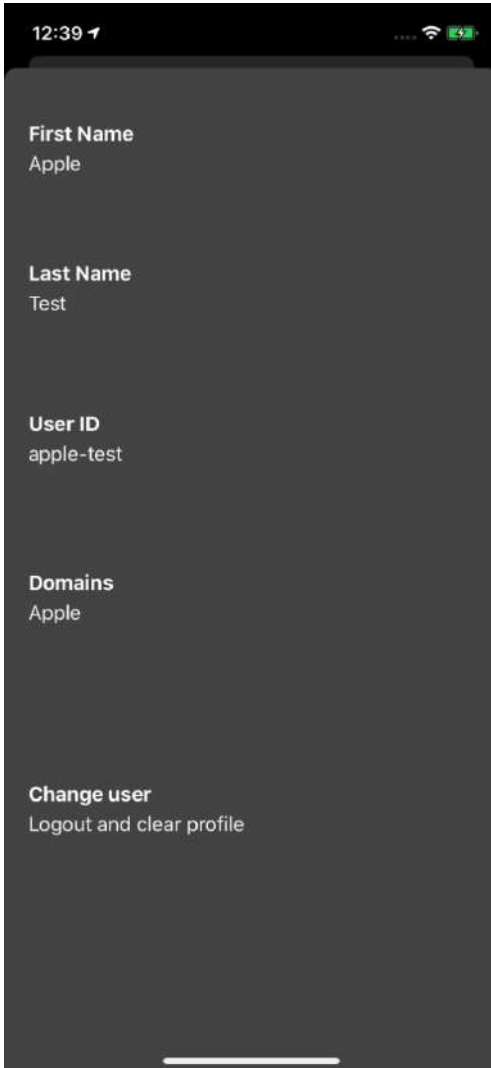
Domain selection

In case you belong to two or more domains and want to switch the app connection from one domain to another tap Domain to display the list of domains and select the domain the app will use with all the functions.
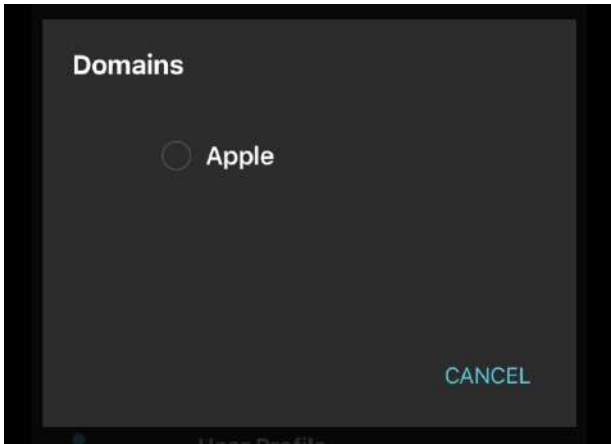
Change User

Tap change user to logout from the App. The login window will be displayed and you need to enter your login credentials in order to be able to access all app functions. Refer to Log in and login credentials for guidance.

APP Functions

All functions exported by the app are accessible from the app home page.

CALL STUDIO

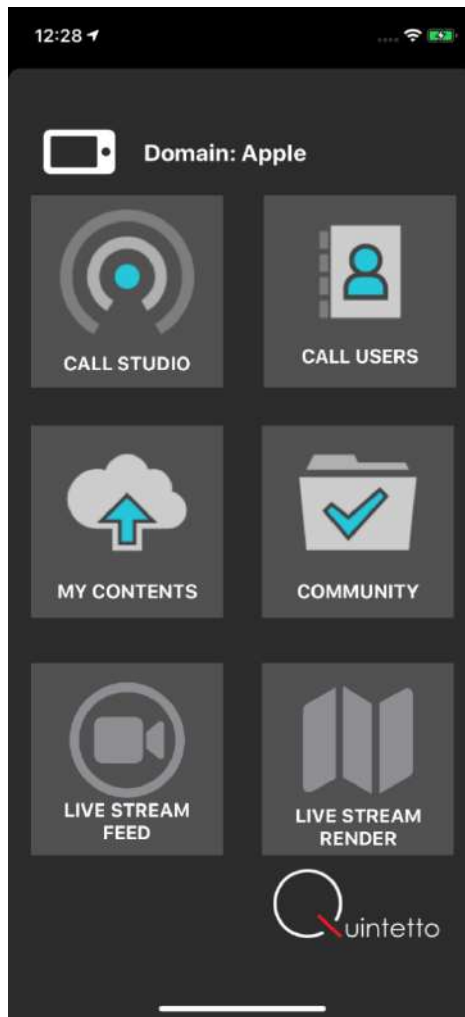The Call Studio function connects the user to the QCastStudio control station run by an operator. QCastStudio is a Windows based application that is designed to work with QCast app.

In order to operate in Call Studio modality the following prerequisites are required:

1. A QCastStudio session must be active
2. The active QCastStudio session must operate with to the same domain of the QCast app user

In case an active session for the specific domain is not available the app user will see the following warning message:
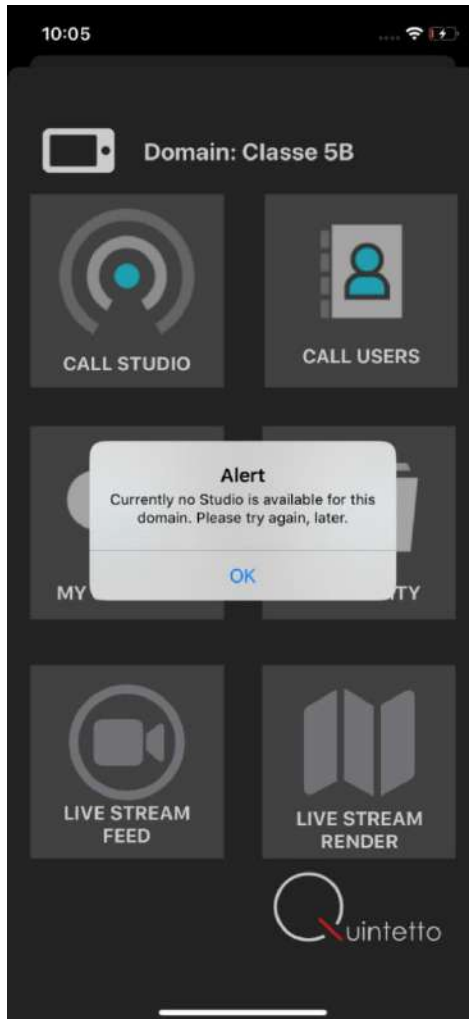
When at least one active session is available the user will see the information to help identifying the session. In the example below the information details:

- Test-230421-1: this is a free text typed by the QCastStudio operator to label the session
- Demo Canteri: First and Last name of the QCastStudio operator, displayed after successfully logging into the application
- 23-04-2021 10:10:19 : date and starting time of the session

The second image shows what is displayed when more than one active session is available. In this example there are two active sessions.
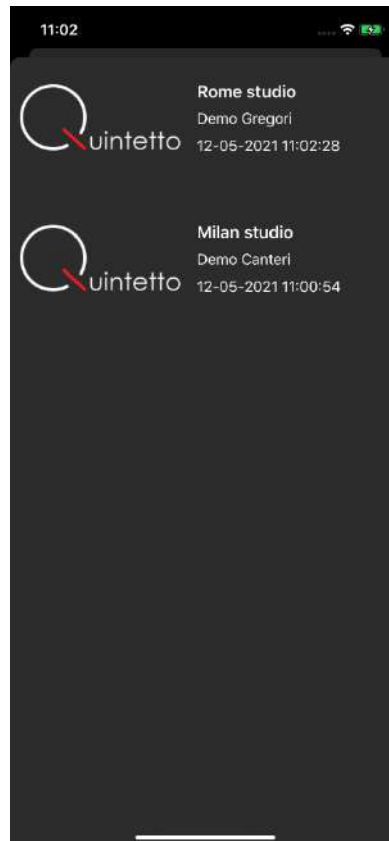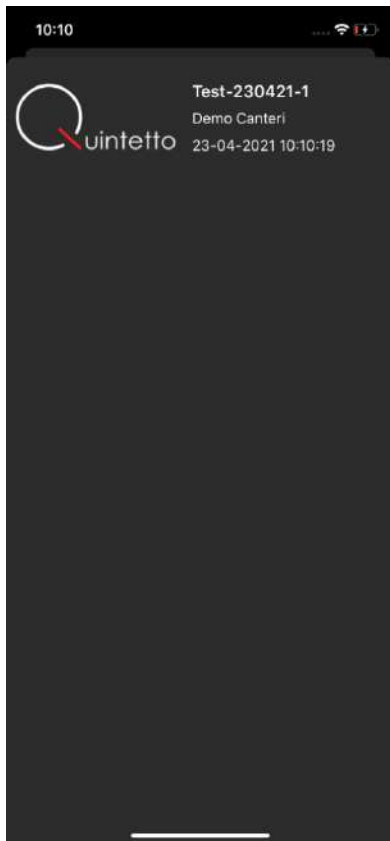
The user must tap the area with the session information to select and join the desired session.
This is the window that opens up after the selection.
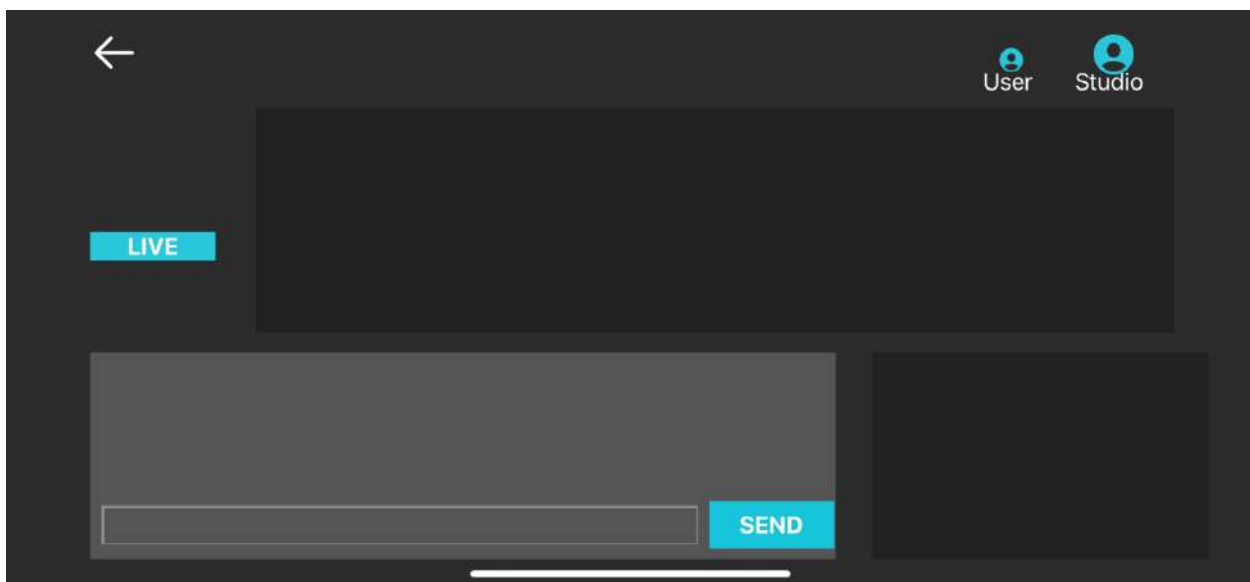
This is the stand-by state in Call Studio modality.
The app user can call the studio by tapping the LIVE button on the left had side or wait for the studio call.
In this state the user can exchange text messages with the QCastStudio operator by using the chat functionality.

Call Studio - Chat

Tap the text bar to the left of SEND button to activate the keyboard as shown below
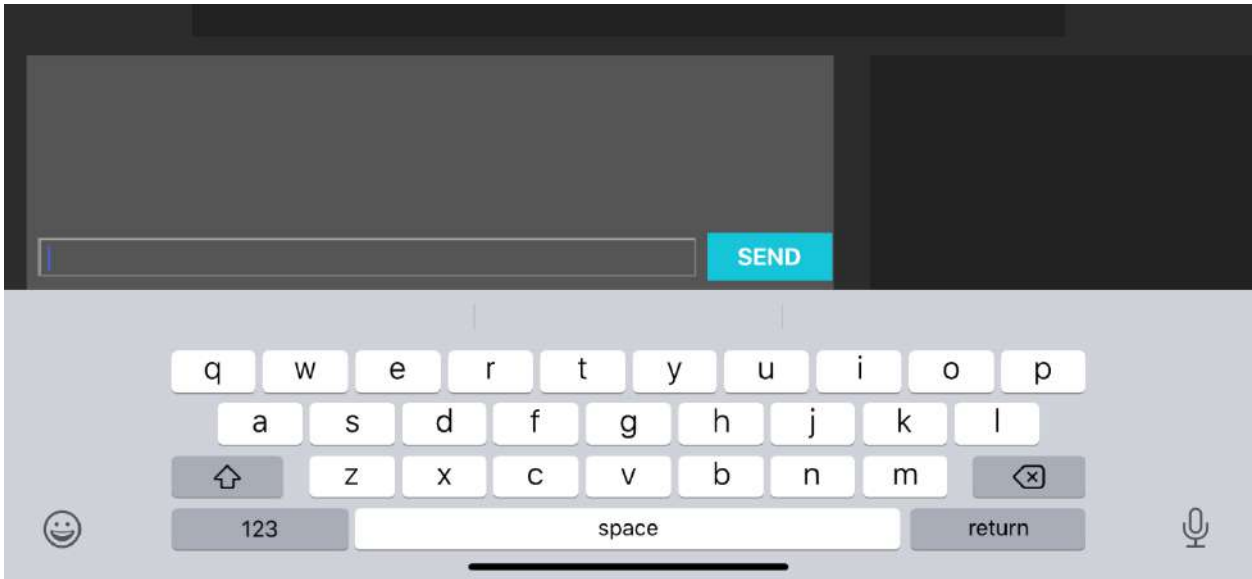
Type the text, it will be shown in the text bar.
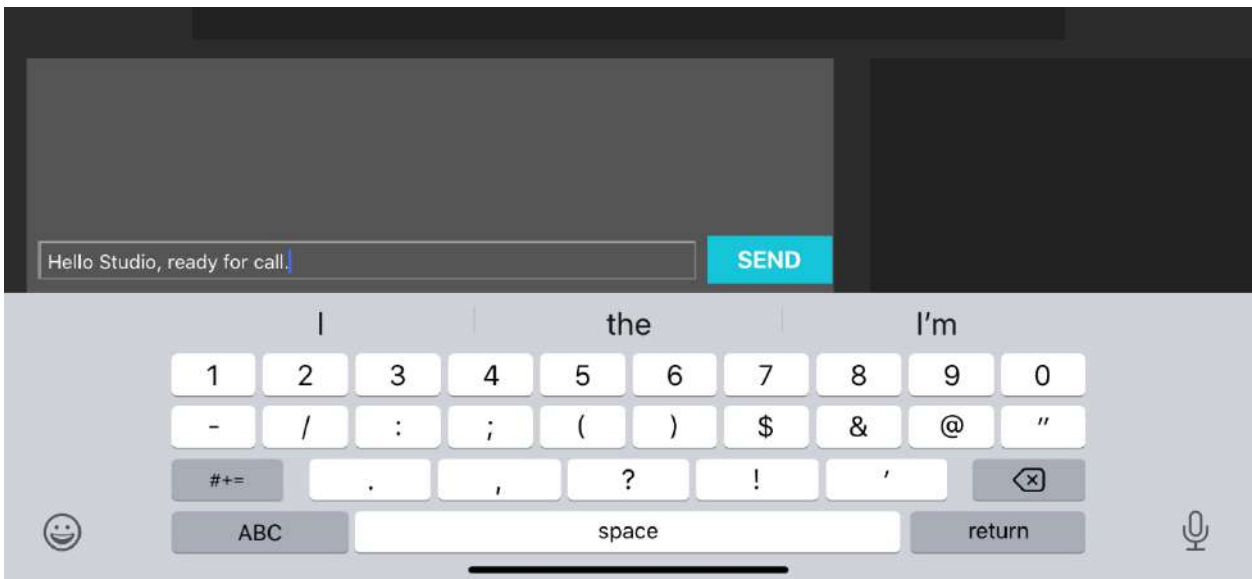
Tap SEND button to transmit the text. The sent text will be displayed as shown here.

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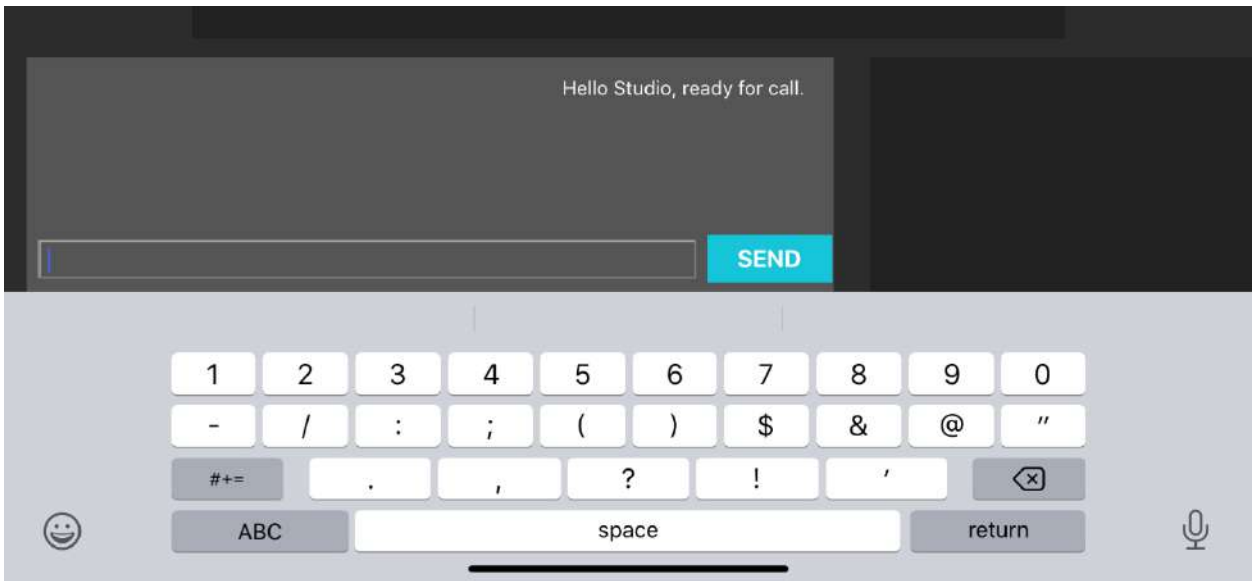
Tap the area of the chat box to hide the keyboard. All sent messages are shown aligned to the right.
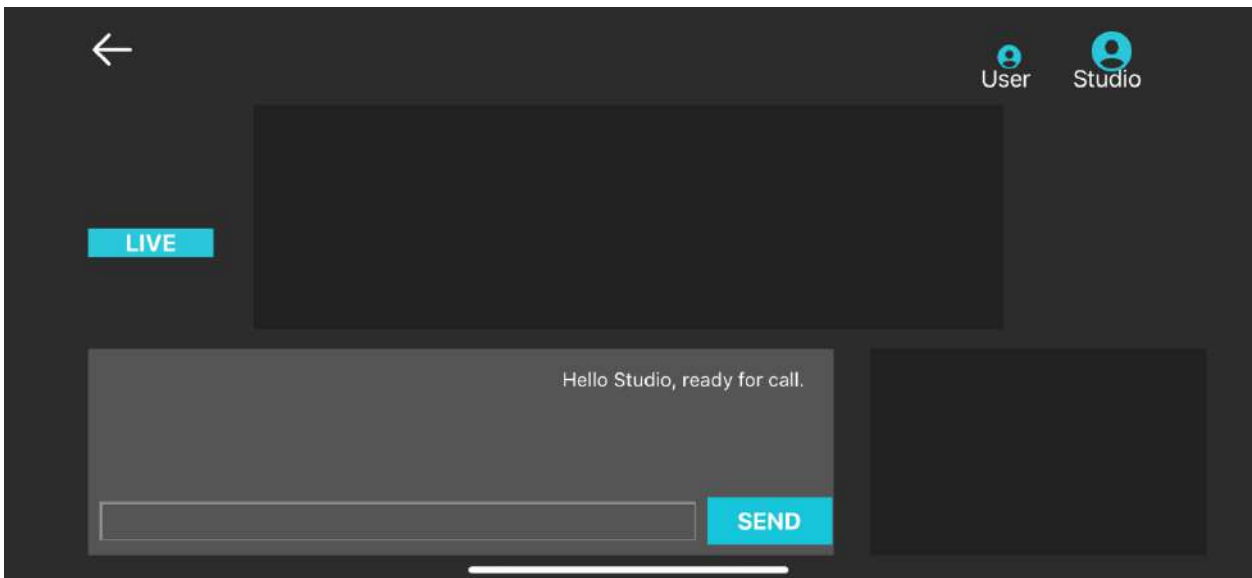
The incoming messages will be shown aligned to the left.
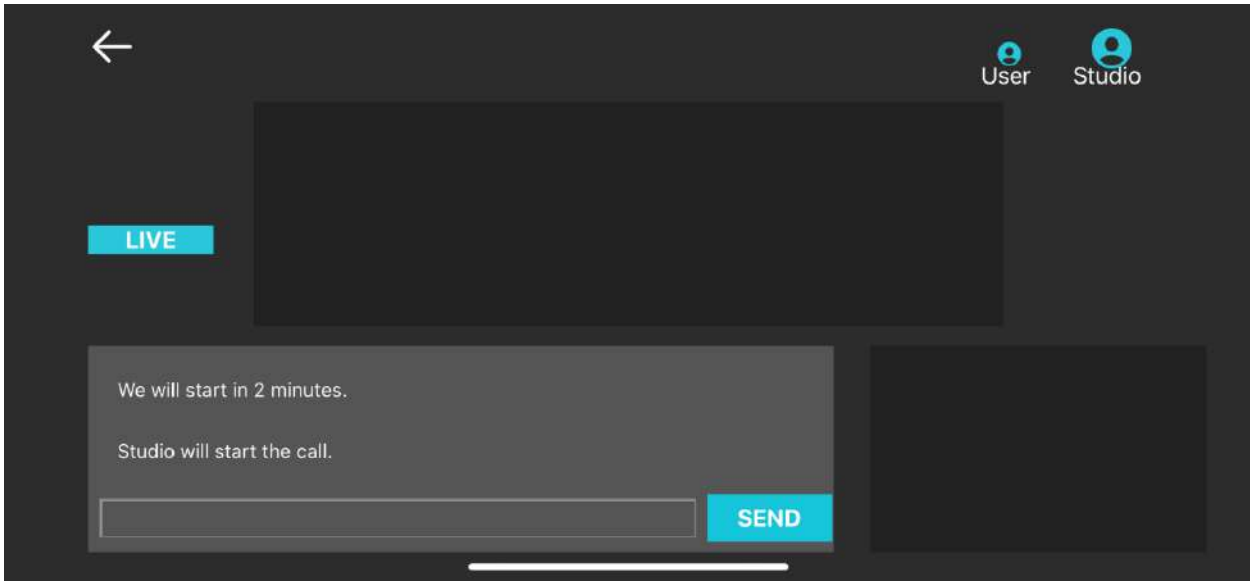
You can scroll the chat box to view previous messages by moving a finger over the chat box area.

Call Studio – Incoming call

When QCastStudio operator starts the call, the incoming call notification will be shown as follows
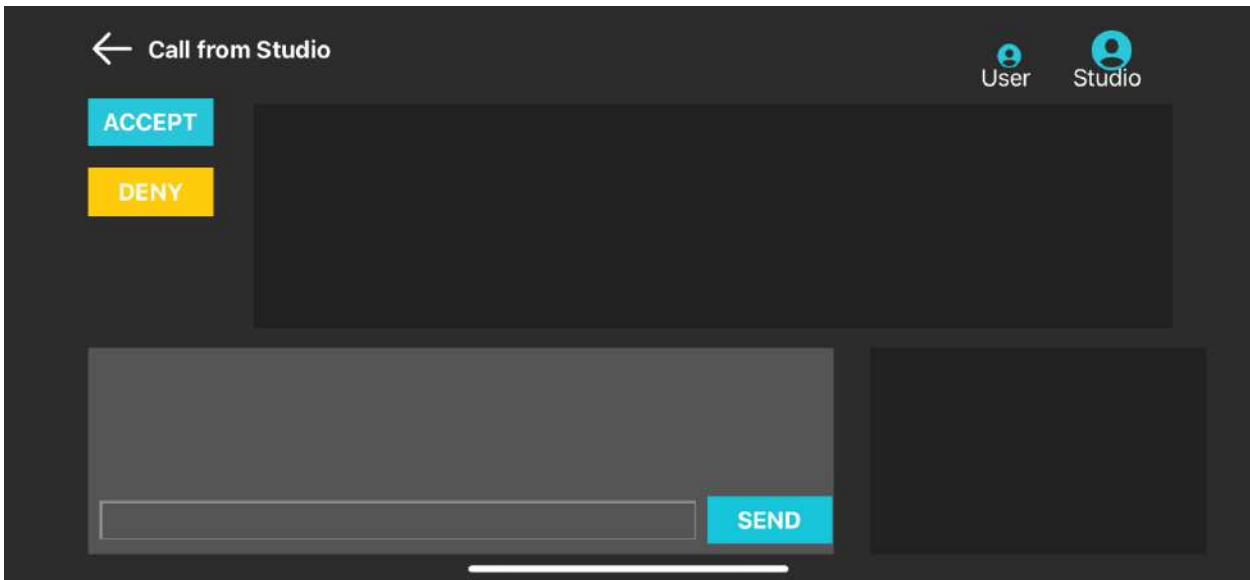
Tap ACCEPT to answer and enter in call modality or tap DENY to refuse the call.

Call Studio – Outgoing call

To call QCastStudio tap the LIVE button. The app window will change as follows

Calling at the top left hand corner is the indication that you are dialing to all the studio.

The STOP button lets you end the call and return to stand-by mode.

Call Studio – Call in progress

When the incoming or outgoing call is answered the video and audio connection between the App user and QCastStudio operator is established. Below an example of the cameras previews that will be displayed inside the app window.

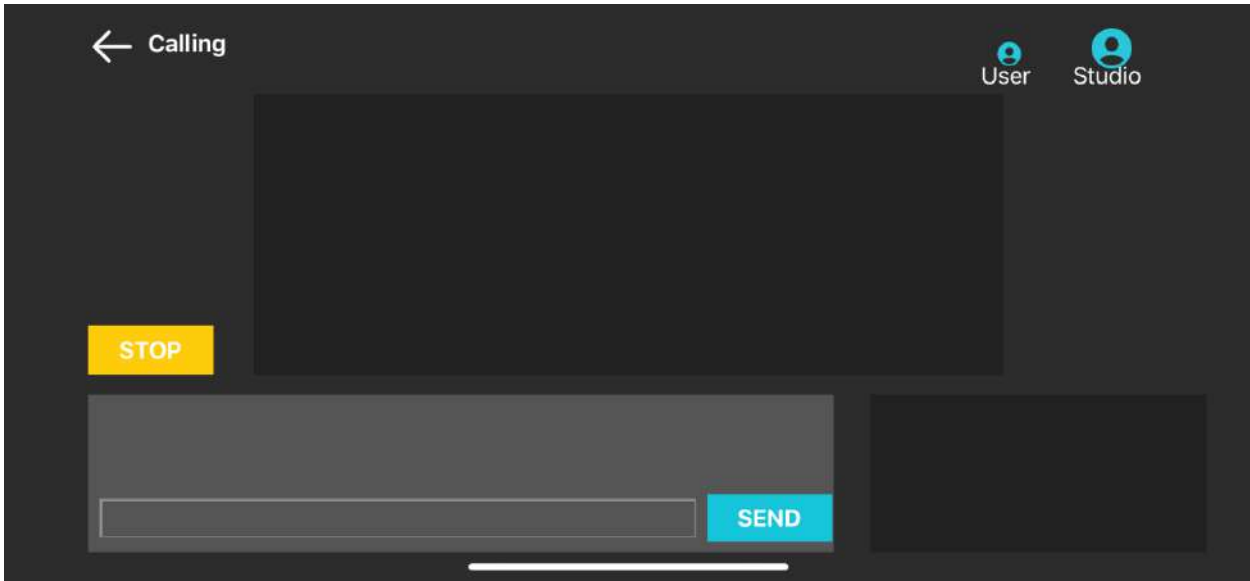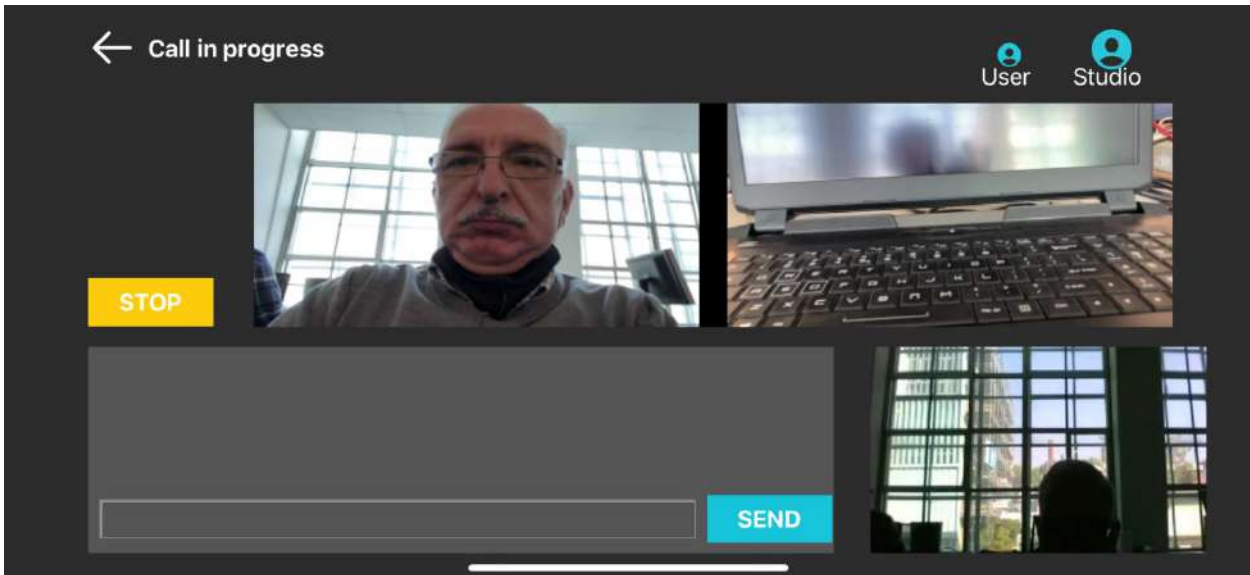In the top area the smartphone Front and Rear cameras previews are displayed if you have configured the Camera Preference to Both-single flow, otherwise the top area will show the preview of the front or rear camera based on which has been set in Camera Preference.

In the bottom right corner the preview of the frames coming from the QCastStudio camera is displayed.

If you are operating the app in single camera mode you have the possibility of toggling, on the fly, between front and rear camera by just tapping the camera preview. This does not change the preferences you have set in Camera Preference.

Call Studio – Call On-Hold

When you are connected to QCastStudio in a live call the studio operator may place the call on temporary On-Hold state. In this state the preview of the studio camera will be turned off and a on-hold tune will be played by the smartphone.
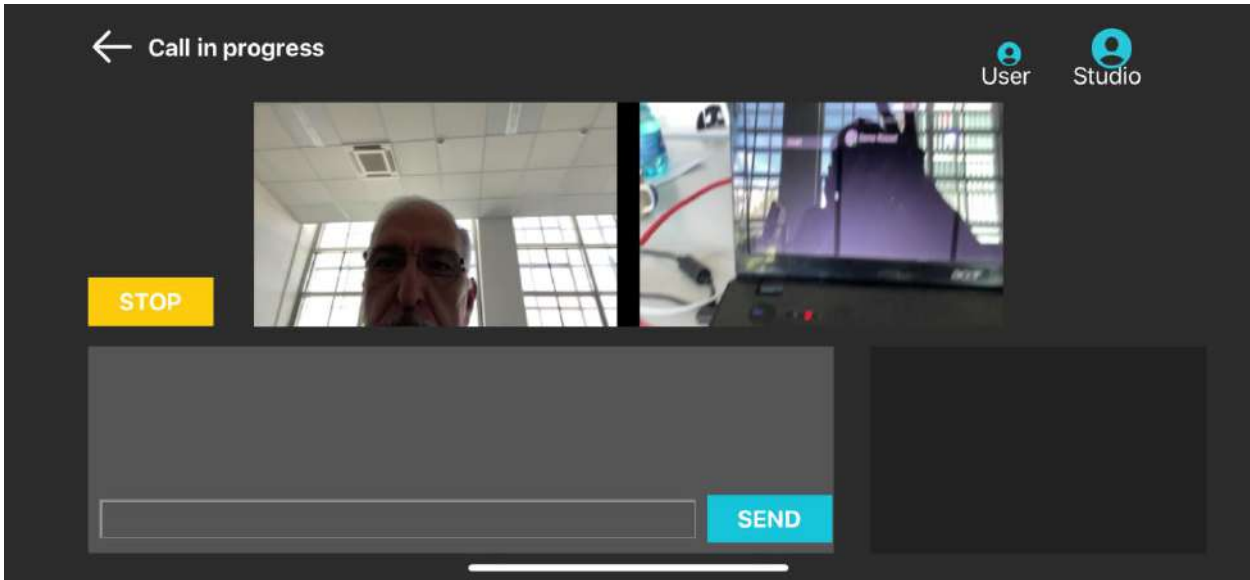
Call Studio – Call terminated

The call may the terminated by the app user by tapping the STOP button or by the studio operator by clicking Hang-up. A Call terminated status will be displayed in the top left hand side of the app window.
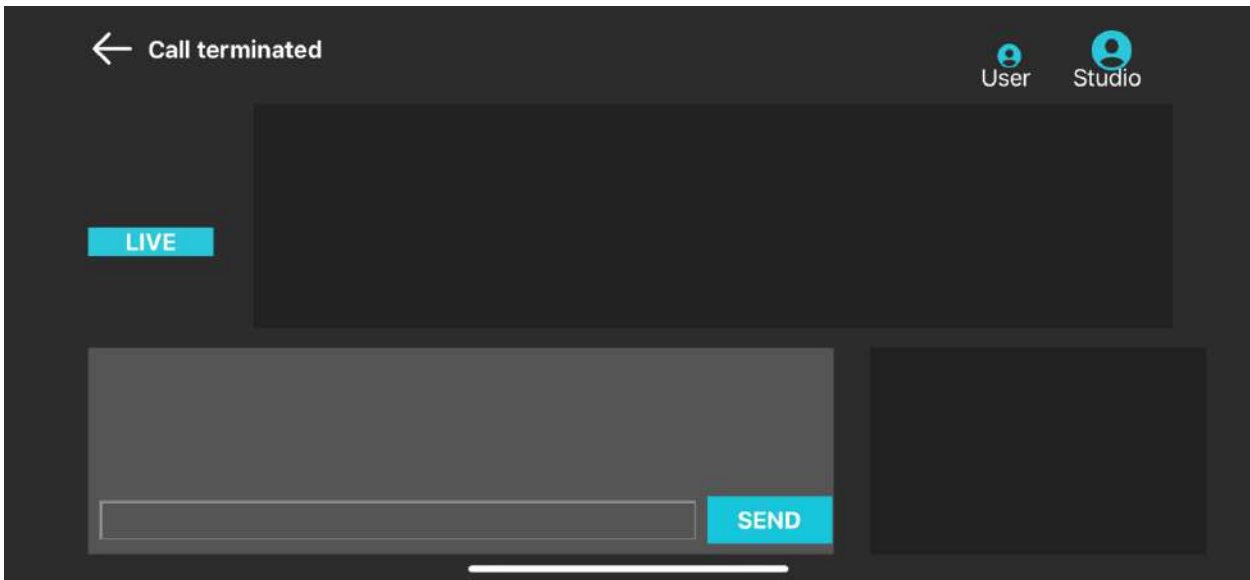
CALL USERS

The Call Users function enables the video audio call between two QCast app users. The mandatory prerequisite for using this function is that the called user must be a member of the same domain. Likewise you can receive a call notification by another QCast app user that is a member of the same domain you belong to.

LIMITATION: When the called smartphone is in stand-by mode (black screen) either with or without the lock screen passcode security feature enabled the call notification is received but the user cannot answer the call. This limitation will be removed in a future update of the app.

Call Users – Incoming call

Depending on the version of iOS operating system installed in the smartphone the incoming call notification will be displayed as in either one of the two images below. The name of the caller is displayed in the notification.
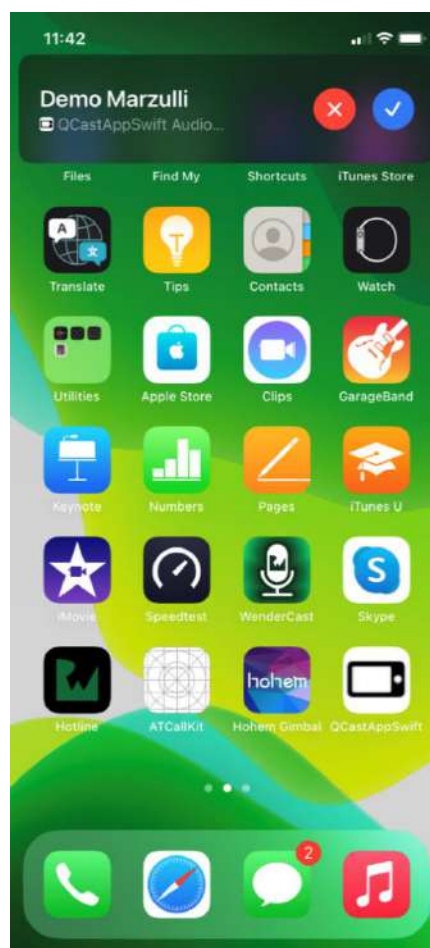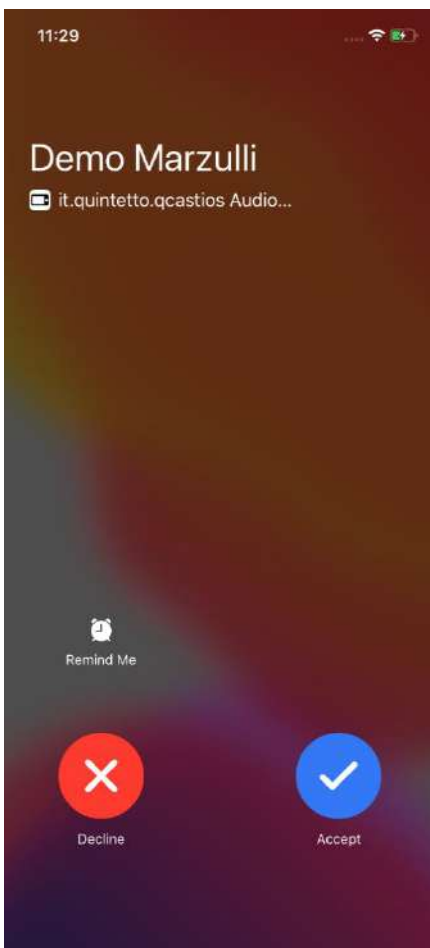
The next image shows the call notification received when you have the QCast app open and in foreground.
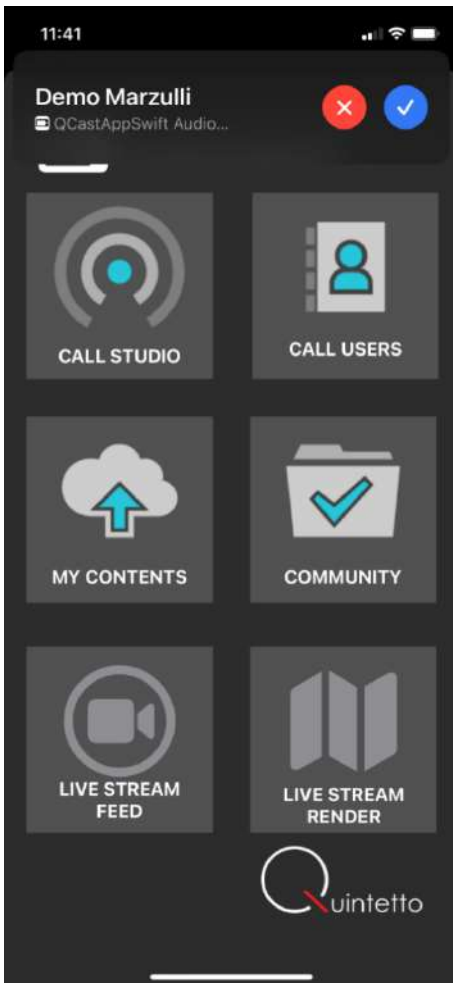
Tap the blue Check Mark appearing in the notification message to accept the call and enter in Call Users mode. Tap the red X to refuse the call.

Call Users – Starting a call

Tap CALL USERS, the app will display the list of users that are members of the same domain as the QCast user.

To call one of the users just tap the user's name. The image below show an example of a domain with its list of members.
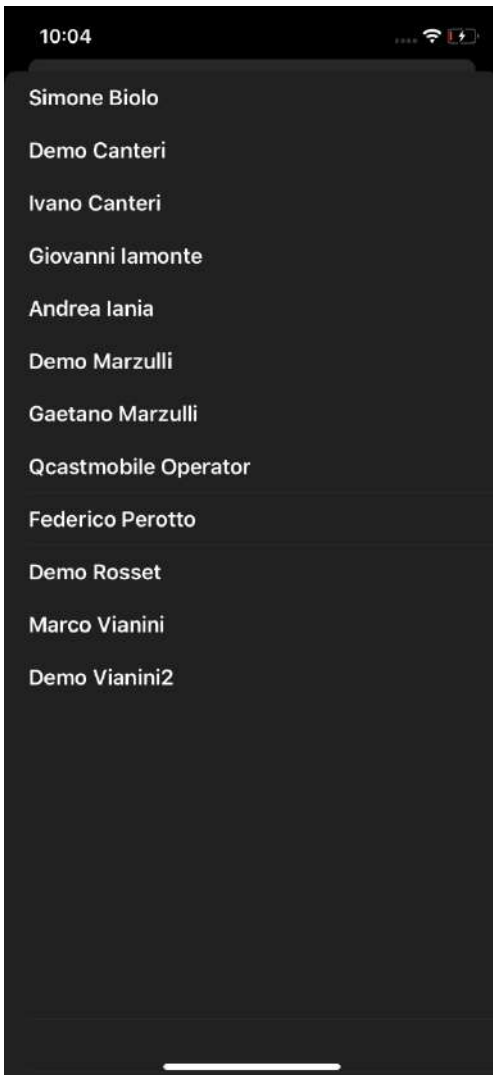
Once you tap the desired user name the call will be started.

Call in progress

When the call is in progress the cameras preview of the configured cameras of both calling and called user smartphone will be shown by the app as in the example below.
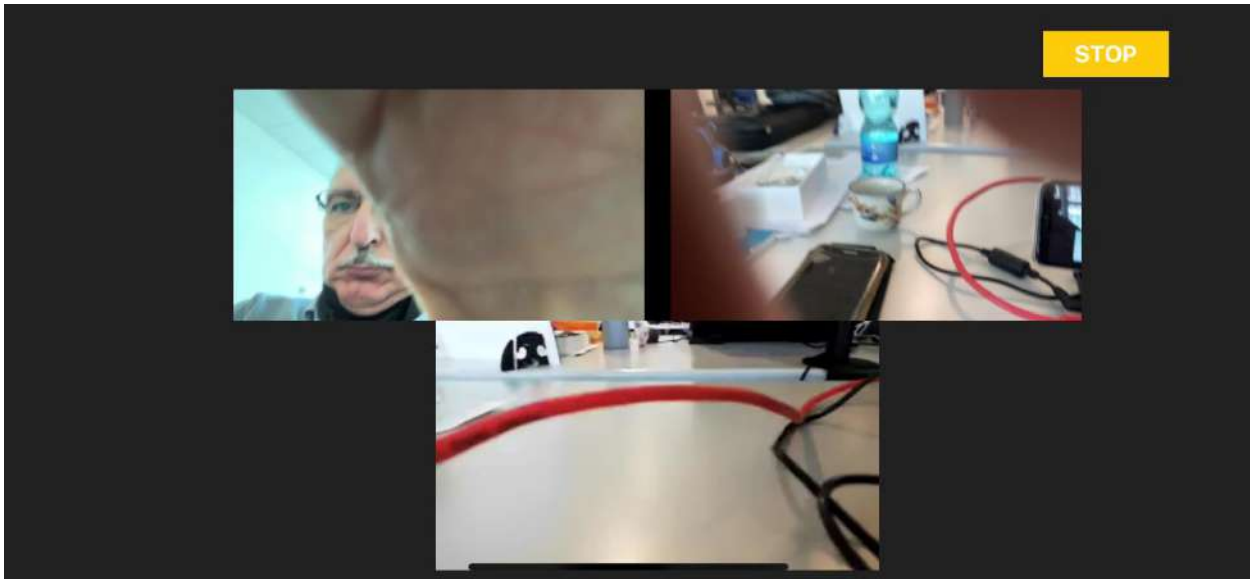
The calling user will see the preview of his/her smartphone camera(s) in the top section of the screen and the preview of the called user smartphone camera(s) in the bottom section of the screen.

Both users can freely talk to each other.

Either user can terminate the call by tapping the STOP button.

MY CONTENTS

The app provides the option to upload in a private area of QCast web application, at https://qcast.quintetto.it, multimedia contents (mainly videos in mp4 format). The private area is reserved to the user in the user assigned domain.

The contents uploaded to this area can be viewed by the user and by the QCast web site administrator only. The site administrator has the authority to remove the stored contents or to share the content with other domain users by moving it to the Community page of the domain.
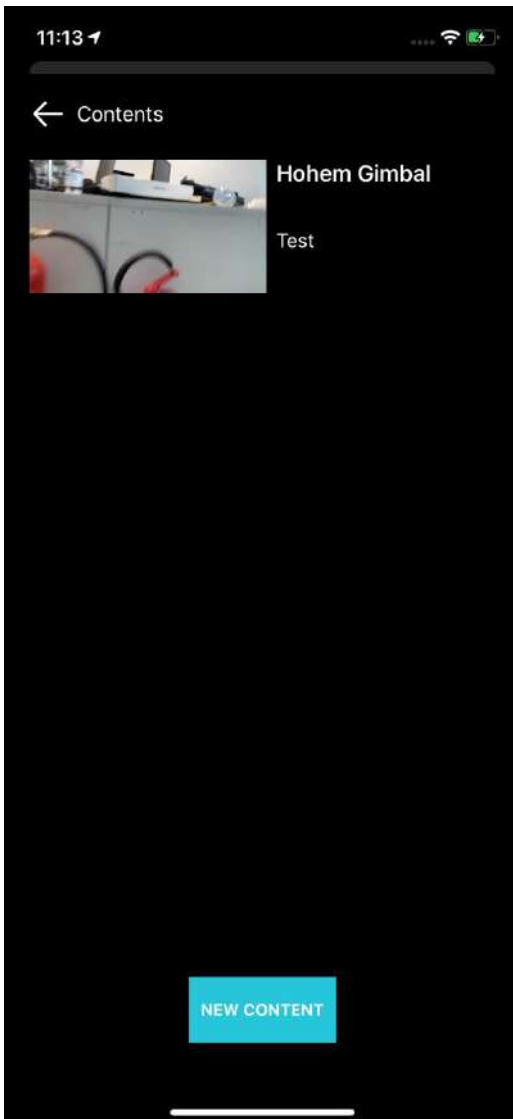
By tapping My Contents you enter the page that will show you the video contents, if any, stored in the private area.

Tap the video preview or video information area to start playing the video.

Tap the arrow ← to go back to the app home page.

Load a video

Tap **New Content** to select the new video that you wish to upload to the private area. The following window will appear where you should select the video to upload by tapping **CHOOSE A VIDEO**, give it a Title and a Description and then tap **SEND** button to upload it.

The example below shows the sequence of steps to perform to choose and upload a video.
Once you have selected the video a preview and the video file name will be displayed as shown by the third image to the right. Tap SEND to upload it. Depending on video size and network bandwidth the uploading process may require more or less time (under 30 seconds - 1 minute in most cases)
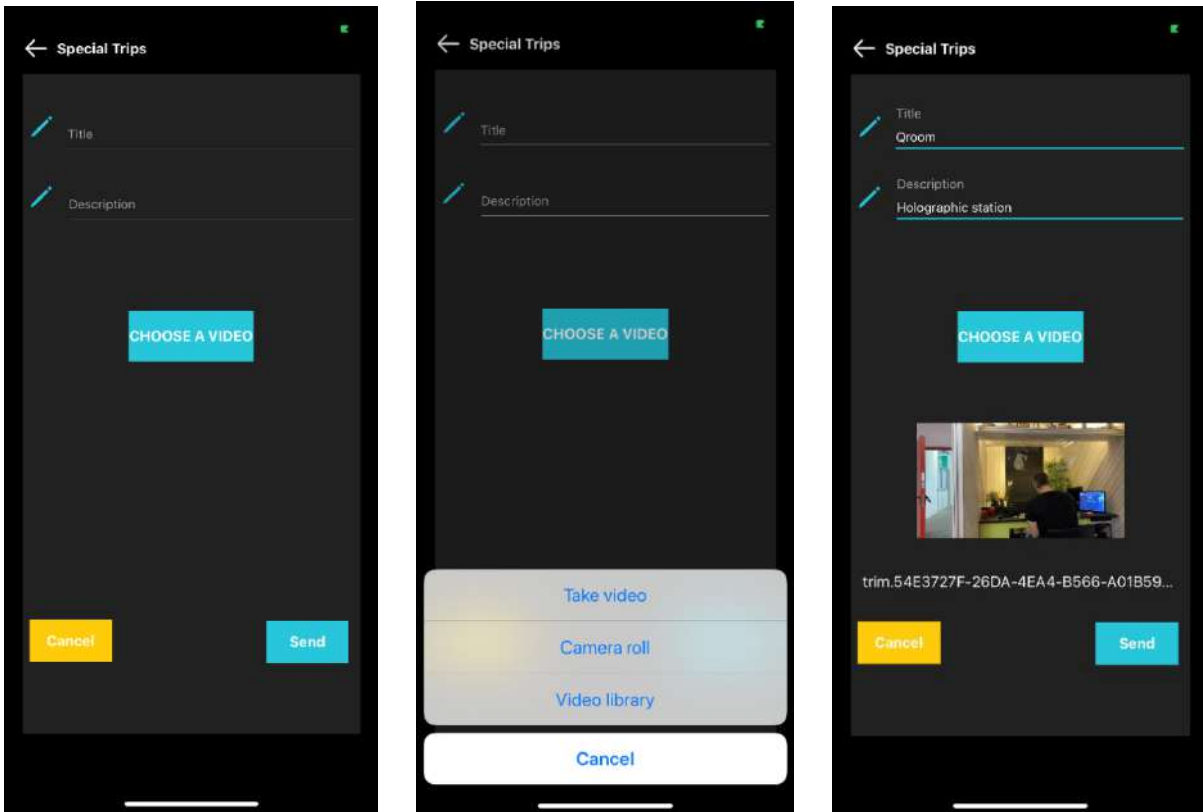
Tap CANCEL to abort the video content upload.

Tap the arrow ← to go back to the app home page.

Once the video is successfully uploaded it will be shown in the list of videos present in the private area.

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COMMUNITY

Tap **COMMUNITY** to view the list of video contents, if any, available in the shared area of the domain you belong to. To view a video just tap the area containing the specific video preview image and information, this will start the video to play.
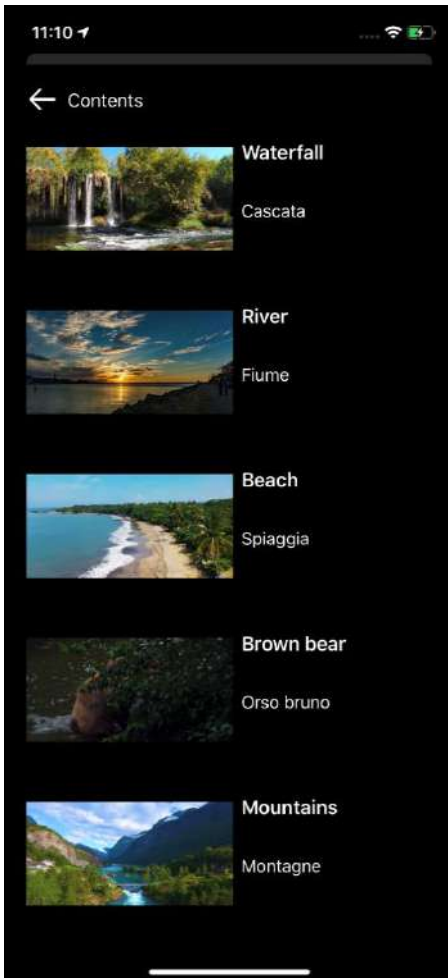
LIVE STREAM FEED

The LIVE STREAM FEED function lets you produce a audio-video stream, using the smartphone camera(s). You can share the stream, live, with the other members of the domain you belong to and, optionally, upload it to Facebook or YouTube social platforms to share it with your social friends.
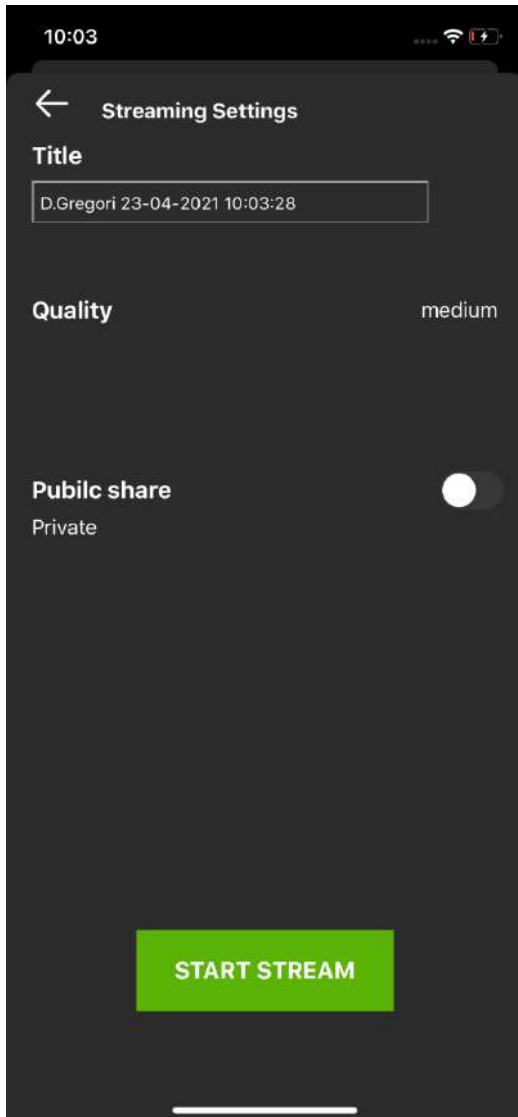
Fig.1   **Fig. 2**

Tap the arrow ← to go back to the app home page.
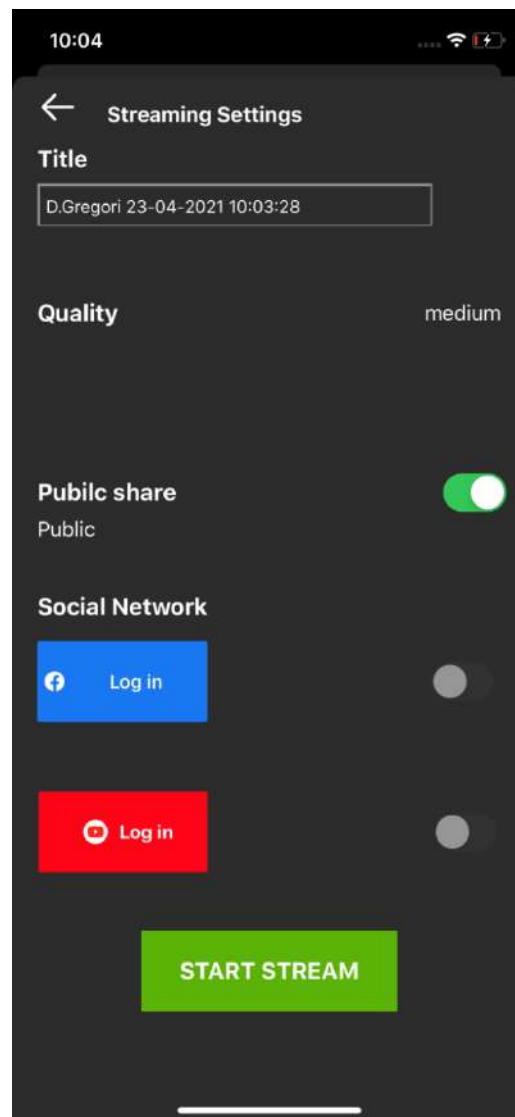
Selecting camera(s)

The app will use the camera(s) based on the settings in **Media – Camera Preference**, therefore you should check those settings to ensure you have the intended camera(s) enabled for the stream, selecting from Front, Back, Both-Single Flow

Streaming settings

When you enter LIVE STREAM FEED the displayed image is the one shown in Fig.1 above.

Title field just shows your name and the current date and time. This information will be used to title the stream that will be produced.

Quality field lets you select the resolution from 3 alternative settings: **Low** (320x180), **Medium** (640x360), **High** (1280x720). This selection is possible when the selected camera is either Front or Back. If you have selected the Both-Single Flow setting than the application will always use a fixed resolution, this you cannot change.

Public Share field is set by default to **Private**. This means that the stream you will produce can be viewed by members of your current domain only. By tapping the button to the right you can change the setting to **Public.** In Public mode you have the option of streaming the video to either Facebook or YouTube or both, at the same time. You must have a valid Facebook or YouTube account that you must log-in first to enable the stream uploading while shooting the video.

Logging into Facebook or YouTube account

Tap the Facebook button (blue colored) or the YouTube button (red colored) to bring forward their respective login page. In either case a pop-up window will be displayed asking permission to connect to Facebook or Google, respectively.
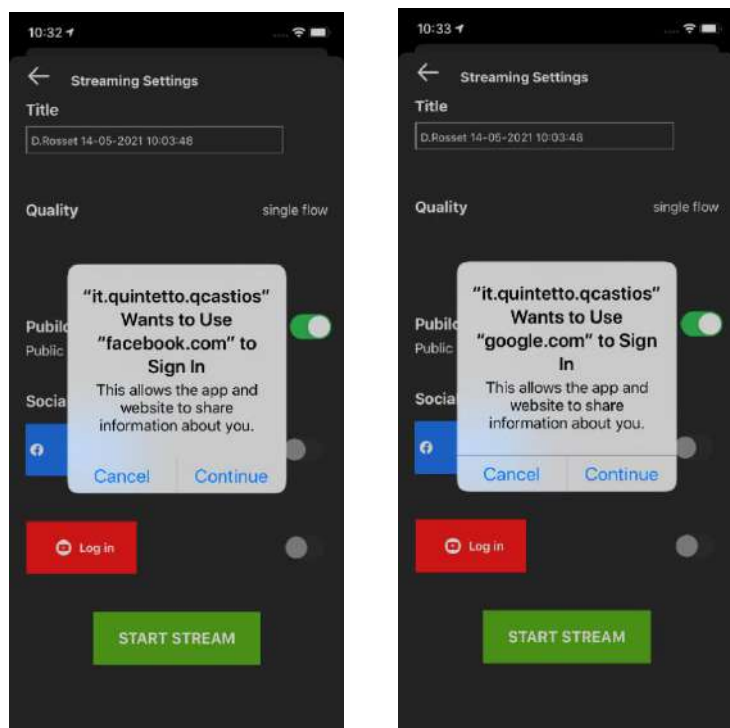
Tap Continue to go to the select social platform login page. Tap Cancel to return to the Streaming Settings page.

Below you can see the login page displayed by Facebook and Google (YouTube).
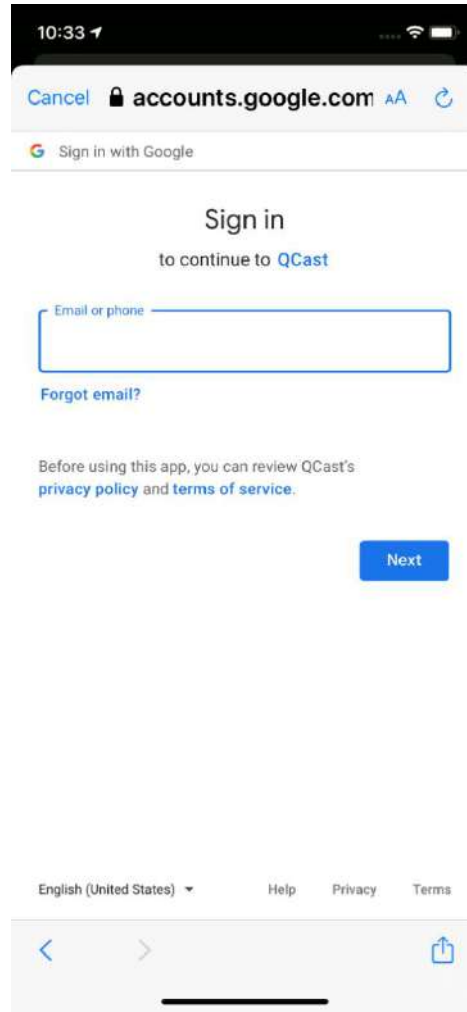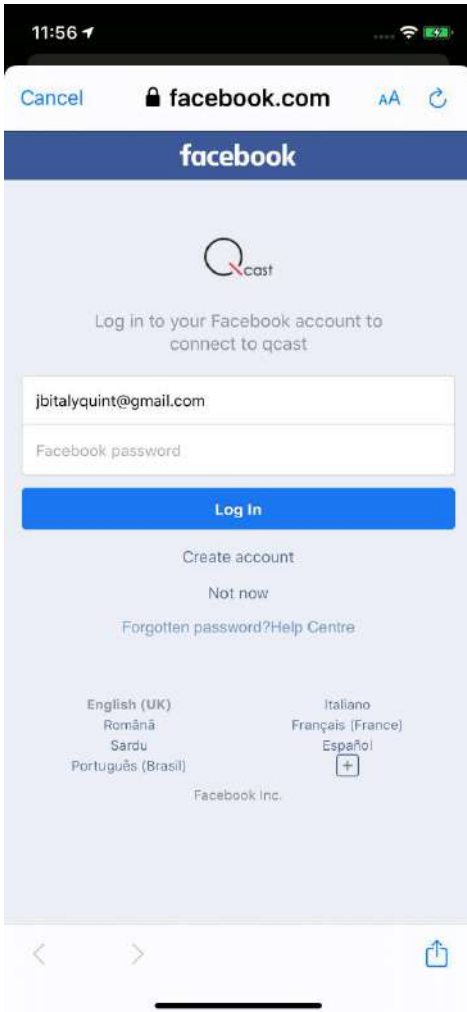
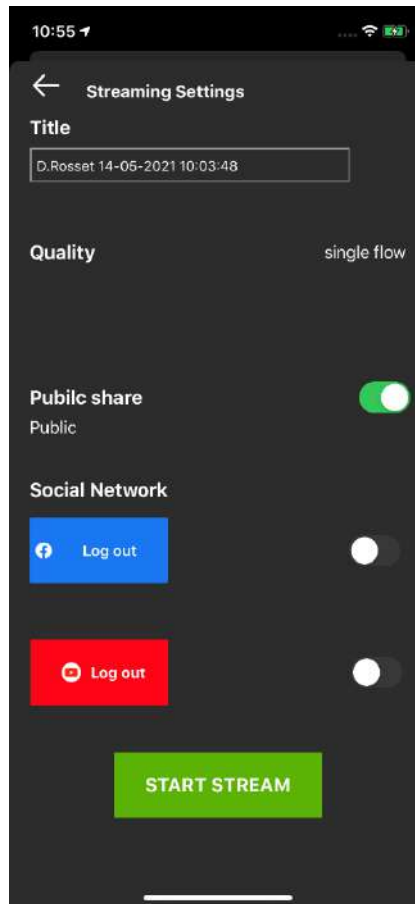After you have successfully logged in the status dot to the right will change color from grey to white and the text Log out will be shown in the marker for Facebook or YouTube, respectively. Refer to the examples below.
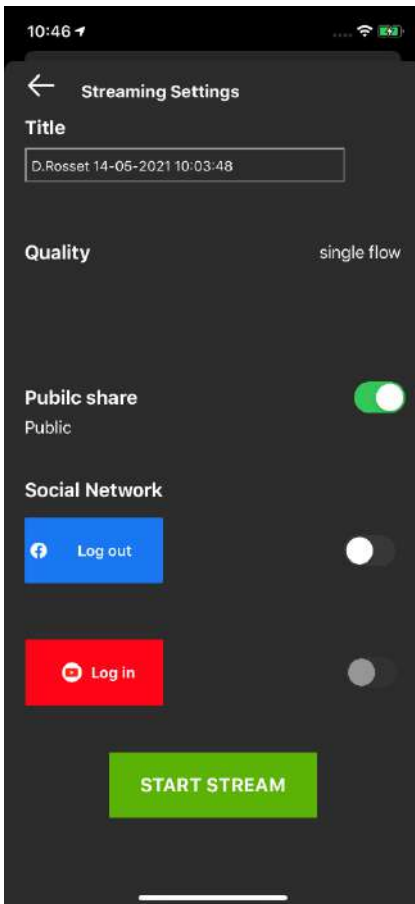
To log out of the selected social platform tap the blue square, for Facebook, and the red square for Google (YouTube). The corresponding status dot will change color from white to grey.

Playing the stream

Once you have all desired settings in place you can start shooting your stream. Tap START STREAM button to activate the shooting with the configured camera(s).
The stream window will open in landscape mode as shown in the examples below.
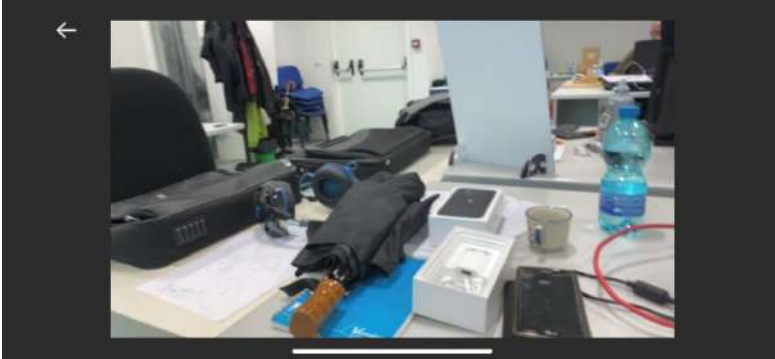
Single camera stream

Both cameras stream

To stop the stream just tap the arrow ← in the top left hand corner.

LIVE STREAM RENDER

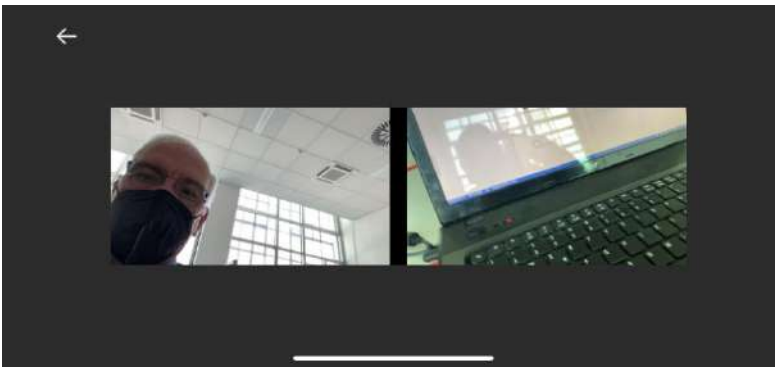This function lets you watch live streams that other members of your current domain may be shooting in that very moment.

When one or more streams are playing out you will see the stream titles displayed in **Stream List**.
To view any one of the listed streams just tap the stream title, wait few seconds for the connection with QCast RTMP stream server to be established and you will see and hear the live stream being shot at that very moment.

To stop viewing the stream tap the arrow ← in the top left hand corner.

You can then select another title if there are other live streams being shot by domain members. The list is automatically refreshed as live streams are started or stopped.

In case you wish to see the location where the listed streams are being tap **Map** in the top right hand corner to open Apple map. A blue dot will indicate your current location, provided you have granted the permission to the app to geo-localize your smartphone. You will see one or more red markers appearing in the map in correspondence of the location where current streams are being shot. You may have to zoom in or to zoom out the displayed map depending on how geographically close or spread out are the live streams being played out in that moment. Tap the red marker of the stream you wish to view to open it in your smartphone.

Below an example of listed stream titles …
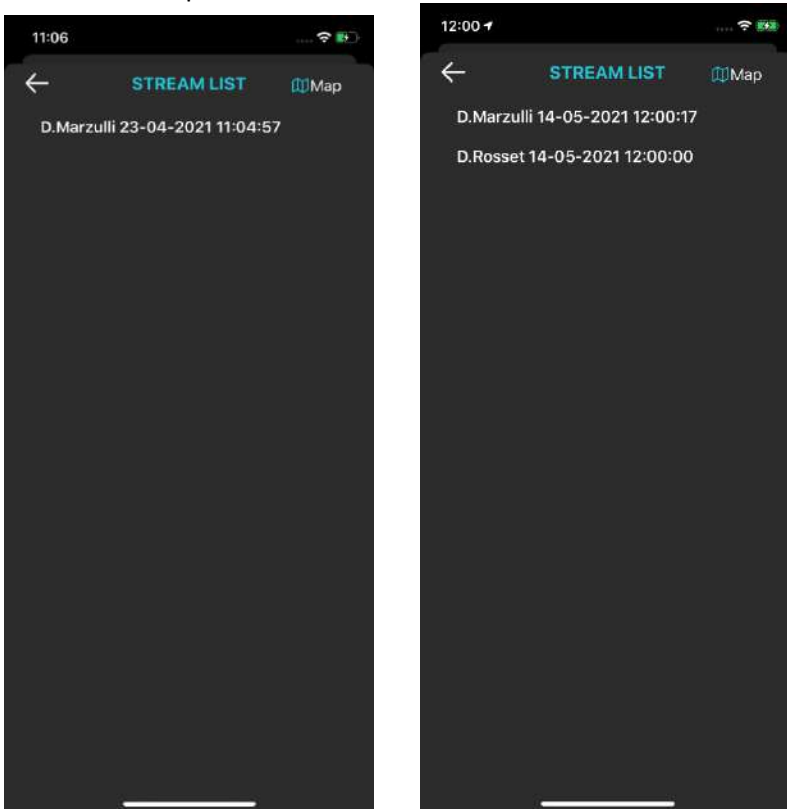
… and an example of stream titles viewed on the map.
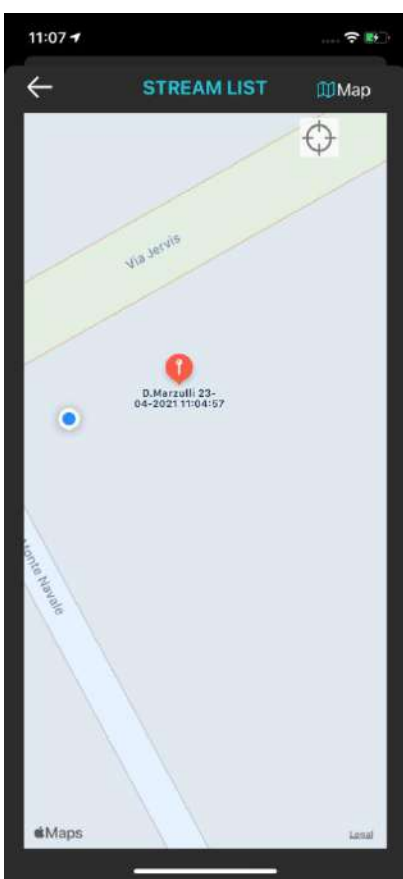
In order to view the selected title just tap the red marker.

Tap Map to return to the Stream List page, tap the arrow ← to return to the app home page.

Live stream reproduction

Regardless of how you select the stream to view, from the list or from the map, the video-audio stream will appear in your smartphone as in the examples below.
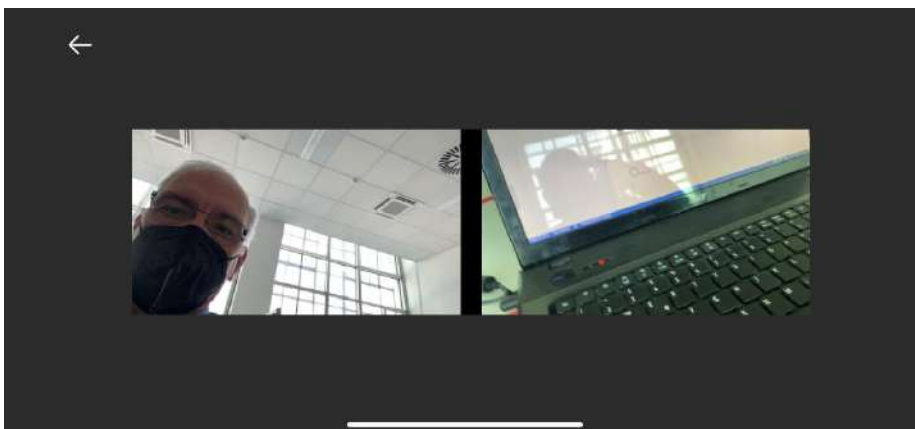
The stream is being produced with front and rear camera.
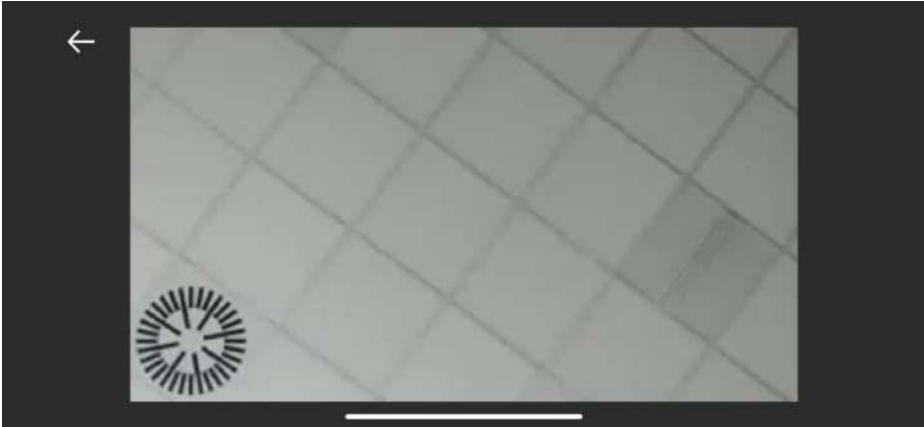
The stream is being produced with a single camera, either front or back.

Mobile network and Wi-Fi network

QCast app is designed to work with both mobile 4G networks and with Wi-fi networks.

The app manages a mostly seamless switch between mobile and wi-fi networks during utilization of the app functions. When engaged in either a Call Studio or Call Users call the switch over from one type of network to the other may result in a very brief (around 1 second) interruption of the call that is automatically restored after the network switch is completed.

The app will also try to adjust automatically to oscillations in available bandwidth if you have the Enable Rate Control option on in Media settings.

Description of possible errors

This section describes the most likely errors that may be reported by the app.

1) Incorrect credentials when logging in: the error shown will be a pop-up with the message Unable to log in with provided credentials.
   Make sure you have typed the email and password correctly

2) There is no network connection available. The error will show with the pop-up message:
    No network connection: URL SessionTask failed with error: The internet connection appears to be offline.
   Check your smartphone settings and mobile network signal. Eventually turn on the Wi-Fi option if you can connect to an available Wi-Fi network

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