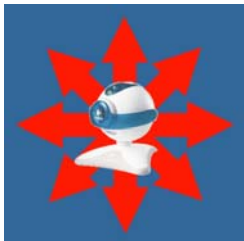




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# Place Cam Version 2

User Guide

Version 2.0

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## Introduction

## General facts

Welcome to Place Cam Version 2, a software product delivering video conferencing group interaction across IP networks to your desktop. Place Cam Version 2 is a server-less multipoint video conferencing software.

In recent years the capabilities of the common internet infrastructure have increased to an extent where data intensive communication services matured to popular, reliable applications. Videoconferencing over IP is such a highly prominent candidate. Therefore video conference applications will be a future standard application within the popular usages of the internet.

Place Cam Version 2 allows you to arrange internal or external meetings on a short-term basis without physical presence of the participants in the conference. It is designed also for IP-based distant learning and can be used for business TV applications. It enables effortless collaboration from your desktop by video conference with your partners.

Place Cam Version 2 supports all IP based transmission-media from the internal company network up to distributed meetings over heterogeneous networks. It has been designed as a lightweight Internet conferencing tool aimed at email level use. By our progressive peer to peer technology Place Cam Version 2 is capable of managing multi point conferences without central Multipoint Control Unit (MCU).

Place Cam Version 2 is especially suited to internet, intranet and wireless desktop video conferencing on a best effort basis, since the audio/video quality can be controlled to adapt the data stream to the available bandwidth.

The system is built instead upon a fast, highly efficient video codec, based on a H.264/AVC implementation. By controlling the coding parameters appropriately, the software permits scaling in bandwidths from 24 to 1440 kbit/s on the fly.

Audio data is compressed using a speech optimized algorithm (SPEEX codec) at 16kHz sampling and with latencies in native encoding below 50 ms. The quality is better than most of the usual speech codecs and telephone standards (G.7xx) can achieve.

Audio and video streams can be transmitted as unicast as well as multicast protocol (please contact [neil@saratogaoceanic.com](mailto:neil@saratogaoceanic.com) for multicast activation). In case of multicast-enabled network segments only one stream has to be sent. This saves bandwidth and makes the system scaleable up to hundreds of clients.

An application-sharing facility is included for collaboration and distance learning. It enables participants to share not only static documents like Power Point files but also

any dynamic PC actions like mouse pointer movements or animations. Thus any conference participants can see and control shared applications if desired.

An interesting feature is the possibility of recording any session including all application sharing activities simultaneously. A/V streams can be stored for later use in use of a video-on-demand streaming server system or a standard web server. Then you can review the complete meeting via your web-browser. So all archived sessions can be accessed and represented fast and easy at any time worldwide in the Internet.

## Specifications

- IP based multipoint videoconferencing software
- no special hardware or server needed
- no central conference server required (MCU)
- The video compression makes use of a fast, highly efficient video algorithm, based on newest H.264/AVC
- collaboration by the use of application sharing
- Audio data is compressed with a speech optimized algorithm variable from 6 to 42 kbit/s at 16kHz sampling
- integrated echo cancellation (req. Windows XP)
- Audio and video streams can be transmitted as unicast as well as multicast
- bit rates can be adjusted from 24 to 1440 kbit/s

## System requirements

- AMD Athlon XP or mobile processor with min. 1.3 GHz or
- Intel Pentium 4 or mobile processor mit min. 1.0 GHz and
- 256 Mbyte RAM or more
- Windows 9x/ME, 2000, XP or NT4 with at least Service Pack 3 installed
- Microsoft DirectX v8.0a/8.1
- graphics card with good 2D acceleration and at least 16 MB

- standard 16 bit full duplex sound card
- headset (or micro and speaker)
- USB camera, video camera with video capture card or fire wire interface
- A credible DSL / Broadband Connection of 1500 Kbit/s download speed and 256 Kbit/s upload speed.

The required minimum performance gradations are:

- video conference for 2 participants: PC with a 900-MHz processor, network connection min. 64kbit/s
- video conference for 3 participants: PC with a 1000MHz processor, network connection min. 128 Kbit/s in down stream
- video conference for more than 3 participants and application sharing: PC with 1300Mhz, 256 Mbyte RAM or more; network connection min. 1 Mbit/s

## Getting started

### Checking your Hardware Settings



This section is meant for the first time users of PC camera and audio device. However, experienced users are also encouraged to check this section before using Place Cam Version 2 to make sure that they have their audio and video system ready.

### Checking the camera

It is highly recommended that you use a PC camera. Most common form of PC cameras is the USB PC cameras (Web Cams). Any USB PC camera that supports the **Video for Windows** format should work fine with Place Cam Version 2. Most of the USB PC cameras available in these days support the **Video for Windows** format.

You can also use the video capture card (Video overlay board) as your video input. Place Cam Version 2 also supports the video input from the video capture cards.

### How to setup a USB PC Camera

The following few tips will help you to prepare your PC camera properly before using Place Cam Version 2.



Fig 1-A-1 A typical USB PC camera

- ⚠ This is what a general USB PC camera looks like. There are tons of USB PC cameras available in the market with different color, shape and look. Please choose a PC camera that supports the image format of RGB 24 and has an image resolution of QCIF or better. When you buy a USB PC camera, please make sure that the package

includes the driver software CD (or any other portable media). Without the proper driver software, you will not be able to use the camera.



Fig 1-A-2 USB male connector

- # This one is the USB connector (Type A USB connector). This one connects the camera to your computer.



Fig 1-A-3 USB female connector on PC back panel

- # This one is the back panel view of your computer with the USB connection ports. You need to connect you USB PC cameras to one of these ports.



It is not necessary that you connect your camera on the rear connectors of your computer. Some computers are shipped with connectors at the front panel. You can use the front side connectors too.

- # You also need to install the camera driver software before using the camera. Please refer to the users' manual that comes along with your camera package to install the camera and the driver software properly.

Most of the camera driver comes with a small utility that enables you to test if the camera is working properly. Please check for such tools on camera manufacturer's program group under program files category. Please test your camera with such tools before using it with other software.

## Checking the Audio System

The audio system enables you to listen to the audio output of movie files, audio files as well as the audio output from live communication software like Place Cam Version 2. It also enables you to record your own voice or to send your voice data during an online conversation.

In order to use a full featured online conferencing, you must have a sound card installed on your computer. Most of today's computers are equipped with a sound card.

To listen to the audio output, you need an audio output device, like the speaker. And you need an input device to be able to send your audio data, like microphone. We highly recommend you to use an audio head-set with microphone.

## How to setup your Audio system

Though this is beyond the scope of this document to discuss how to install and setup your audio device, but the following few tips might be helpful for you to prepare your audio system before using Place Cam Version 2.



Fig 1-B-1 A typical sound card connector panel

- ⚙ This is a typical sound card connector panel. It accepts your audio input and output devices' connectors. Typically these connectors are situated at the back panel of your PC. But there are computers that are shipped with audio connectors in both front and back panel. We recommend you **NOT** to use the front panel's audio connectors as that produces remarkable audio noise and in some cases echo phenomenon.



Fig 1-B-2 Audio output connector of headset



Fig 1-B-3 Audio input (Microphone) connector of headset

- ✚ Connect the connectors of your head-set with microphone properly. Now please do the following test to check if your sound system is working properly.



Fig 1-B-4 Starting windows sound recorder

- ✚ Click Start, point to Programs, point to Accessories, point to Entertainment, and click **Sound Record**

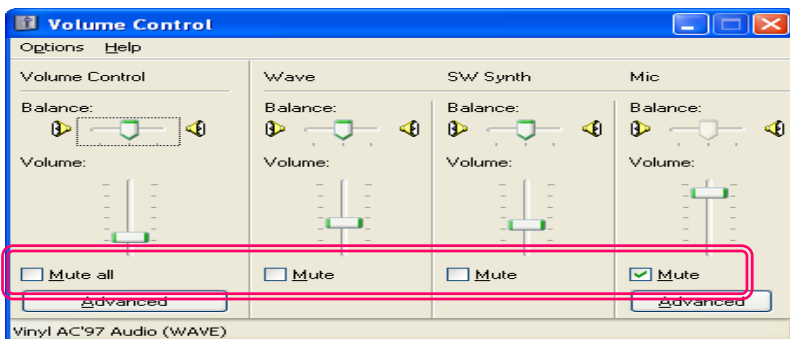
Start → Program File → Accessories → Entertainment → Sound Recorder



Fig 1-B-5 Windows Sound Recorder

- ✦ Click the record button of the sound recorder and start talking in your microphone. You should see the varying audio-out wave as you speak. Please talk for at least 30 sec and then stop recording.
- ✦ Now click the play button and you should be able to listen to your recorded voice. If that does not happen, please check if you have your microphone option enabled on your audio properties. To do this, please do the following
- ✦ Double click on the audio icon on your task bar. You should get the volume control window. Go to the *Options* → *Properties* to get the properties window. Now choose recording and please check if you have **Mic** controls enabled. If not, please enable that, press **OK** and exit volume control window and do the above sound recording test again.

An ideal volume control and recoding control setup should look like below:



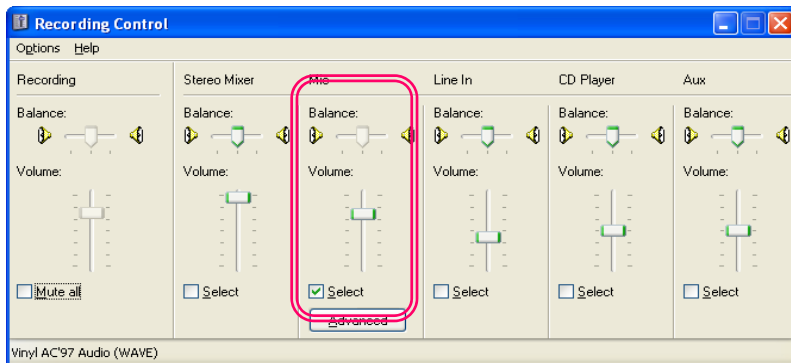


Fig 1-B-6 Volume and recording control windows

For more details about your audio setup and fine tuning, please refer to your audio system manufacturer's manual or web site.

Here we describe how to install Place Cam Version 2. We assume all machines are installed properly.

More technical details will be described also in this chapter.

## Installation

After double click on the setup file (e.g. Place Cam Version 2\_v3.xx-Setup.exe) a Install-Wizard will start to guide you through the set up process. First of all please select your preferred language.

1. A dialog box appears titled
2. A next dialog box appears titled "Choose destination location". Click the >Next< button to accept the default installation directory. If you prefer a different path, click the >Browse< button to choose a different installation directory.
3. In addition you can choose some components which should be installed, like a Place Cam Version 2 desktop-icon or a quick-start tray icon.
4. A next dialog box appears titled "Select program folder". Click the >Next< button to accept the default folder name. Setup will add a shortcut folder called "Place Cam

Version 2" to the "Programs" folder. If you prefer, you can type in a new name, or choose a folder from the existing folders list.

5. At the next box "additional tasks" you can select some online-installations, if you have not installed these applications on your system already. To auto start Place Cam Version 2 minimized at every system boot please select the appropriate option at this step.

6. A progress bar appears while setup copies files to your installation directory. As the case may be the additional software downloads and extra setup wizards will appear.

7. When all the files have been installed, a dialog box appears titled "Completing...". A reboot of your system is necessary when you install Place Cam Version 2 for the first time.

8. After all you can start the windows sound hardware test wizard and the Place Cam Version 2 application directly with the appropriate selection.

9. You will find the program link under Start/Programs/Place Cam Version 2.

## Installing over an earlier version / uninstall

If an older version of Place Cam Version 2 is on your system, you don't have to remove its components to upgrade.

Otherwise, if you like to uninstall Place Cam Version 2 select the uninstall icon in the Place Cam Version 2 start menu program folder or use the windows software tab reachable under Start>Settings>Control Panel>Software.

## Quick-start

After the installation please select Start>Programs>Place Cam 2>Place Cam Version 2 to start the Video Conference over IP (VCoIP) application Place Cam Version 2.

If you start Place Cam Version 2 the very first time you will be asked to type in your

email address. This will announce your address to the system and enables your communication partner to call you by your email address without knowing your IP-address. This makes video conference calling as easy as emailing.

The email address in the upper field can hold a fictitious, not really existing email address. This is only used for identification by your communication partner. In the shown example all participants with the same email ending "...@domain.com" can see your Place Cam Version 2-station in the calling list as callable entry. In the lower field you can insert additional information for identification usage.

There are different possibilities to make a call:  
Select the tab >Connect<, if not active already.

In a calling list you can see participants who are online and direct callable. Select one, use the call button or take a double click on the appropriate entry to call. Another possibility to call is typing in the IP-address or a DNS-Name. A third one would be useful, if you'd like to call a partner with an alternate email-ending, who's not shown in the calling list, but you know he's online. In this case you can type in the email address to call.

Previously called participants or IP addresses, which have been called already before will be listed in the pull down list.

An indication that you connected with the communication partner is the entry in the >Participant<-list on the left site.

Every participant can prevent auto accept calling by clicking the >Auto Accept Calls< switch.

After every established connection the default is muted video and audio.

Video and audio streams will be send to participants as soon as they are activated by clicking the buttons respectively and so permitted by the participants already connected.

The video/audio buttons have 3 stages:

- <mute> audio or video are muted
- <wait> sending audio and/or video is on hold and waiting for permit by remote side
- <active> audio and/or video stream is transmitted

For instance, if a video- or audio request is started in a multipoint conference with 3 participants, then the little hand raise icon will pop up at every participants list. Note, not before one of the participants, who already joined the conference, permits you to send by clicking this icon, audio or video will be transmitted to all participants.

If you click again onto the same box on the displayed icon, then the right to send audio/video will be detracted to this participant. He can recognize the remote initiated eject by switching his video- and audio icons to >mute<.

Sending video or audio always works in this "request-permit" modus, to keep privacy, except for one special case, This is if 2 participants only are connected, on a video- or audio request the <wait>-state will turn directly to >active<.

In activated video mode and in activated video mode the image on the first position shows always your self video independent of active or muted video mode. While connected in activated video mode additionally you can get glance at the compressed self video quality, like all other participants will see. Especially on low bandwidth connections below 128kbit/s you can check the quality and adjust it with the quality slider under the >settings< tab.

If you like to call more conference partners, you can proceed like described above. A maximum of 40 participants can join a conference, where 10 having audio and video at the same time.

Click on >hang-up< to terminate the connection.

All connections that were not initiated from your client will stay alive.

Participants which were connected to the conference through your client will be disconnected also.

If you have still some questions after this quick-start guide, we recommend reading the following pages carefully.

At this point it should be mentioned that technical question will answered by the fastest way by using our message board.

<http://www.Placecam.com/support/contactsupport.php>

# How does Place Cam Version 2 work

Here we describe the handling of Place Cam Version 2.

Note that all settings you make in Place Cam Version 2 will be saved in the “windows registry” and will be also available after a restart.

## The Place Cam Version 2 Connect Screen

### Contact List

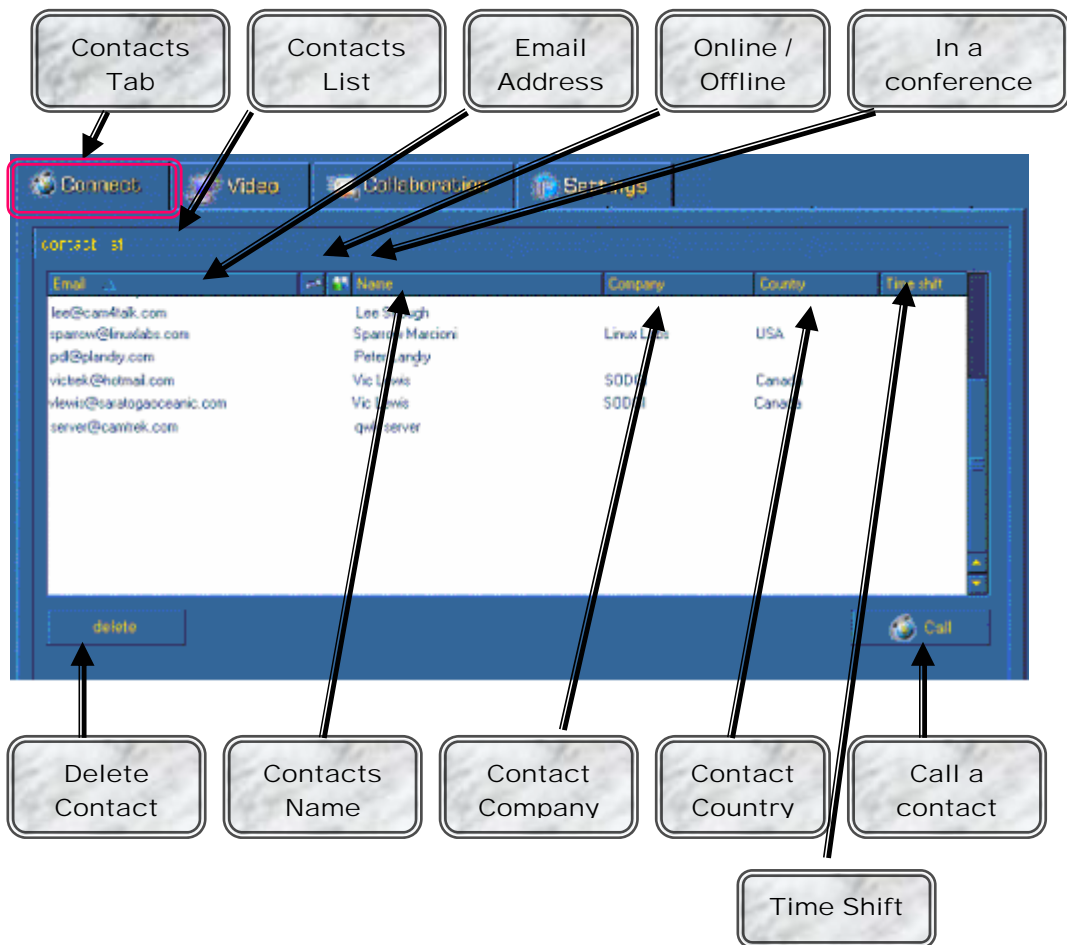
The Contact List allows you to see your friends when they are online and off line.

The contacts list also provides an easy scalable way to call someone, just highlight the persons name and double click or highlight the persons name and depress the call button.

Information contained in the Contact list is as follows:

1. Email address of the contact
2. Online / Offline identifier
3. In conference identifier
4. Contact Name
5. Contact Company
6. Time Shift ( is the time difference between you and the person you are calling)
7. Call Button ( allows you to call a contact)
8. Delete Button ( allows you to delete a contact)

### Contacts List

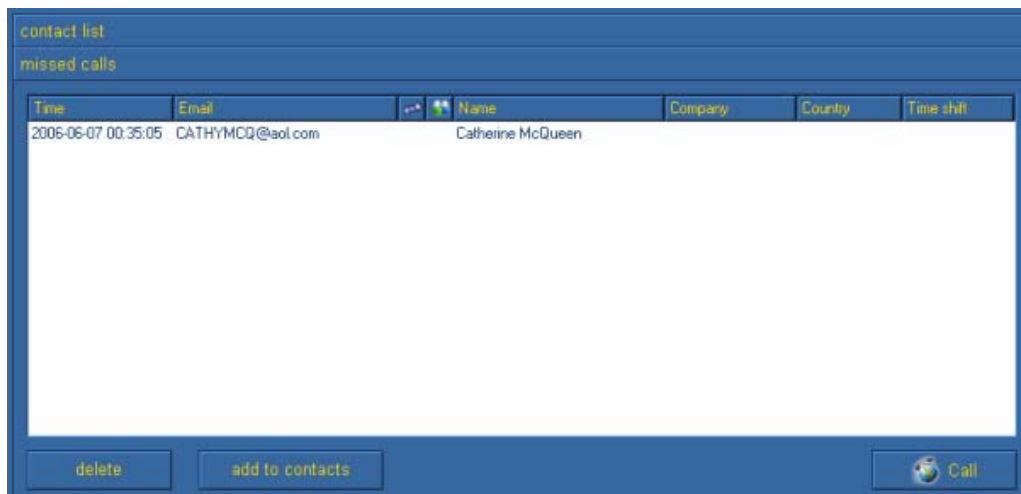


**Note.** Email addresses will only be displayed if the contact accepts your request to add you to their contact list.

## Missed Calls Window

Displays calls you missed while you were online. If someone calls you and you are not available to take the call then the user gets stored in the Missed Call List. You can highlight the user and call the user back from this list. You can also Highlight the user and add them to you Contacts List

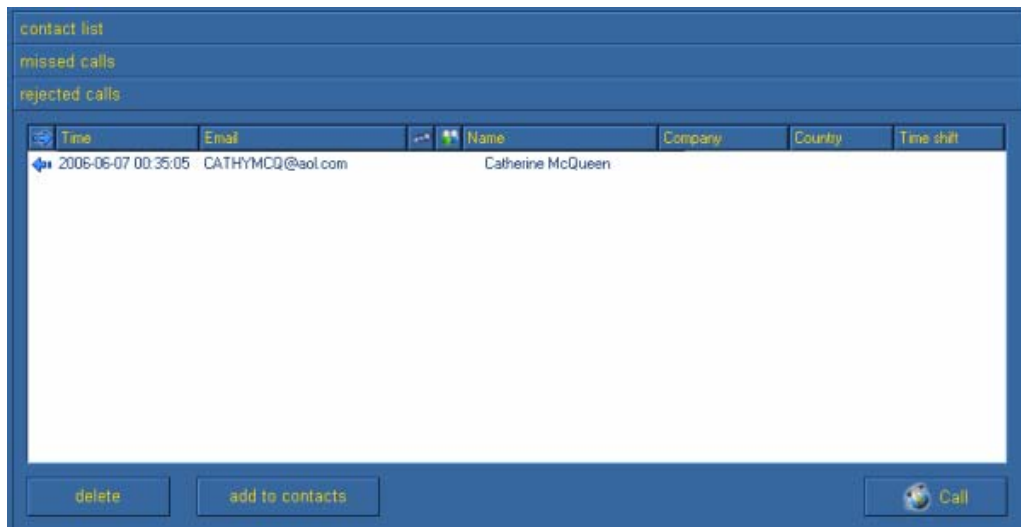
### Missed Call List



## Rejected Calls

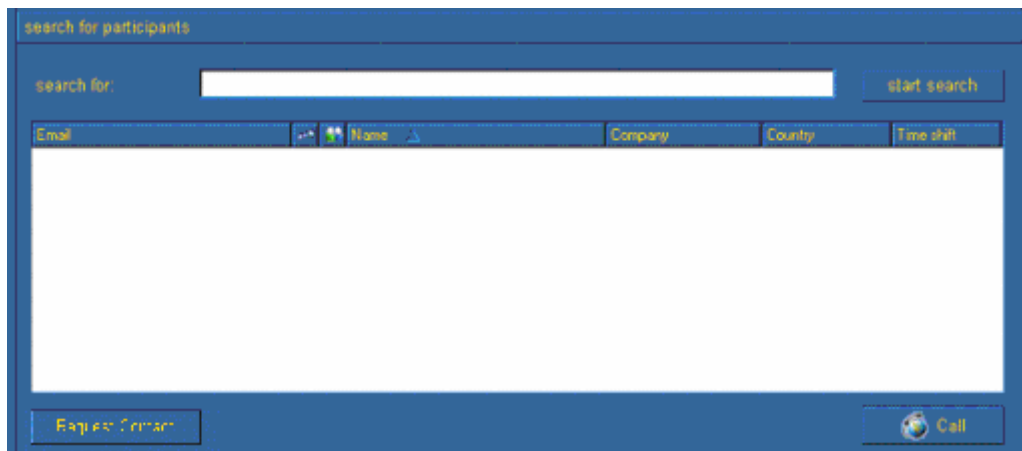
Displays calls you reject while you were online. If someone calls you and you refuse to take the call then the user gets stored in the Rejected Call List. You can highlight the user and call the user back from this list. You can also Highlight the user and add them to you Contacts List

## Rejected Call List



## Search for Contacts

Search for Contact (Participants) allows you to enter the person first name or email address and it shows you the results of a search of the USL server of people who are registered, This can also be used as a wild card search by enter a part of the persons email and the results that show up are the closest match. After you have found the person you have the option of doing two things, add the person to your contacts list or call the person directly by highlighting the name and depressing the call button.



### Request Contact

Allows you to highlight the person in the search list and ask that person if they would like to add you to their contact list.

### Call Button

Allows you to call a person once you have highlighted the persons name in one of the available lists. Contact List, Rejected Calls, Missed Calls, or Search for Participants ( provided that you are on their contact list ).



### Call confirmation / Accepting calls

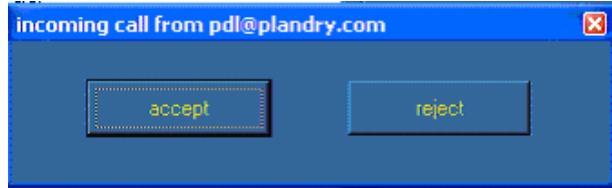
If you like to be called by someone, first of all start the Place Cam Version 2 Software.

Each party can automatically accept calls by the menu option >settings>Auto Accept Calls



If the <Auto Accept Calls> switch is disabled, an "accepting" or "not accepting" box pops up on incoming calls. There will be a calling sound on the standard audio device and additionally a beep in the internal PC speaker.

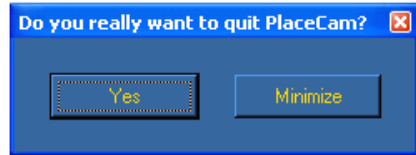
You can accept or reject the incoming call. If you reject, the caller gets the message:



"Call was rejected by the remote party" and in addition a "busy sound" sounds and the reject call appears in the Rejected Call List.

### Place Cam Version 2 standby

If you like to use Place Cam Version 2 in the background, and incoming calls should be announced, then you can minimize Place Cam Version 2 as tray-bar icon over the >minimize< icon in the main application window.



To deactivate the Place Cam Version 2 auto run feature on system boot, simply delete the appropriate icon in your auto run program folder.

### Self video and audio on/off

To be seen by the other conference participants click the camera icon. A little hand-raise icon will pop up at every participants list and your <requested> button turns to <wait>-state. Your video will only displayed if you get a sending eligibility from one of your partners as described above in this manual.



If only 2 participants are connected, on video- or audio request mode, the <wait>-state will turn immediately to >active<.

Independent of your active or muted video and audio mode, you can receive audio and video data of your participants

Because every established video stream increases the bandwidth load to the participants, it is recommended to turn the video off if not needed. Then you are a

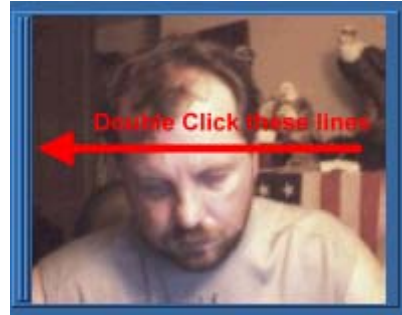
passive listener without a video signal. You can also participate in a conference without any camera.

Hint: It is recommended to speak one after another in a discussion conference, because audio is in full duplex mode.

## Video-scaling

Each participant you are connected with will appear with his own window on your screen.

These windows can be undocked by dragging or double clicking and can be freely shifted around. In Place Cam Version 2 all video frames will be captured in two fixed resolutions of 176x144 pixels (qcif) or 352x288 (cif) pixels. Images with the cif resolution will be automatically put into undocked position. Additionally you can increase/decrease video zooming by pulling on the video frame border. In this case pixels will be interpolated locally on your screen. Switching the self video between the qcif and cif resolution will affect the self video is switching the position on all participant screens. Dragging any other participant's video frame however will interpolate video locally on your screen only.



Additionally, a higher video resolution causes higher traffic load on the connection. This requires higher connection bandwidth and consumes more processing power.

## Collaboration - application sharing

The application sharing integrated in Place Cam Version 2 allows you to transfer any Windows application to all participants. Thus all participants can see and control shared applications if desired without having installed the program. All interactions you make in a shared window including the mouse pointer movements will be transferred to other participants immediately and displayed lossless.

To share a window click the tab >Collaboration<.



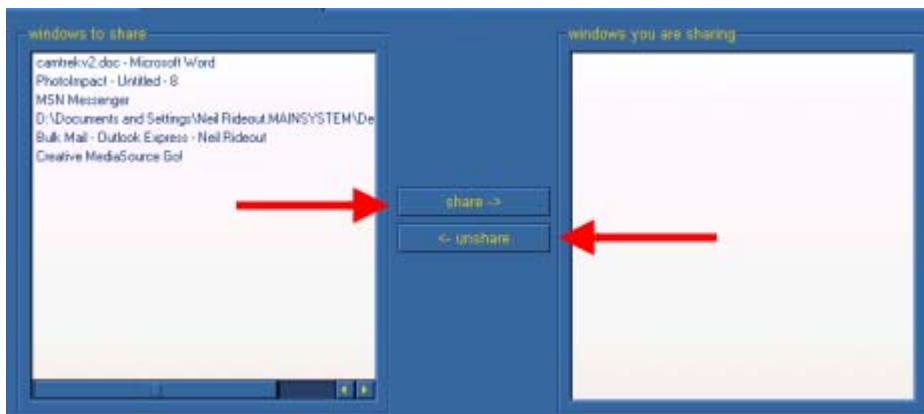
Two windows will pop up.

The left window contains a list of available application windows ready to be shared. The right window list contains the applications which are already shared.

To share a window select the appropriate entry and click the >share< button or double-click on the application alternatively.



All other connected participants will see your shared window immediately. To unshare follow the same procedure backward. If you close the shared window or the whole application your share window will be closed too.



A remote participant can control your shared window with his keyboard and mouse if you give him the authorization.

Remote control can be allowed selective per user by activate/deactivate the box in the participant list. Remote control refers to all actually shared windows. Absolute remote control to the desktop is not possible, because only control data and share-pictures will be transferred between the clients and no document data.

## Bit rate and video settings

Before you can call other participants for the first time you have to configure Place Cam Version 2 in terms of your internet connection speed (e.g. available bit rate).

Therefore please start Place Cam Version 2 and choose tab >Settings<.

The bit rate ruler controls your overall *sending* bandwidth (by default 96 kBit/s). You have to set this bit rate ruler onto your current internet connection speed available to get optimal quality and performance results! This value is an upper threshold which will never exceeded by your audio / video stream.

If you know your connection type, use the following table:

● @ ISDN (1 channel) choose	64 kbit/s
● @ ISDN (2 channels) choose	128 kbit/s
● @ ADSL choose	128 kbit /s
● @ SDSL choose	768 kbit /s
● @ T1/WLAN choose	approx. 1 mbit/s
● @ LAN choose	max. 1,5 mbit/s

If you don't know your connection bandwidth, start with a low bandwidth if there is no lack of quality the band width can be increased step wise. Finally close the bandwidth setting window.



“**Video Quality**” sets the relation between video quality and number of frames per second.

To permit a stable and acceptable audio/video quality Place Cam Version 2 will set automatically the optimal frame rate usage, depending on your bandwidth usage

settings. Pull the ruler to the left means better image quality but lower frame rate. The right ruler position means faster video but with not so good quality.

**Text Chat** Allows users to send text message back and forth within a conference. One of the major benefits of the embedded text chat is that it allows you to send a text chat to all people in the conference or to each individual person.



## Audio settings

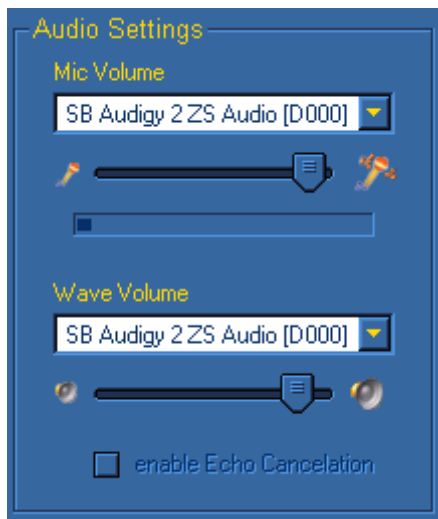
The first bar “**Mic Volume**” controls the sensitivity of your microphone.

Below this you can read the sensitivity response of your microphone. There is an inbuilt silence detector which eliminates noise below a given threshold. If the noise is below the threshold it will be indicated by a red bar..

The second bar “**Wave Volume**” controls the loudness of your audio outputs.

There is also a “**Echo Cancellation**”, included in Place Cam Version 2. It can be turned on or off by the displayed hook. (only available with operation system Windows XP or higher)

If echo cancellation is activated you do not necessarily need the use of a headset with a microphone. You can communicate completely free over standard desktop speaker and a microphone without having reverberations or loops.



## Hints on audio problems

Some USB cameras have an inbuilt microphone, which is usually not in any case useful for this application. If you have an inbuilt USB cam microphone then your PC has more than one audio input device. (your sound card and your USB cam microphone)

Settings for particular input and record devices can not control the audio settings of Place Cam Version 2 directly. First of all you have to close an open Place Cam Version 2 application on to take effect of changes.

Select the link <select sound-playing and recording devices> under the Place Cam Version 2 folder in >Windows start menu programs.

Activate the appropriate device over the start menu >System control>Multimedia>Record the desired object of preference. After this, it is obligatory to restart the Place Cam Version 2 application to take effect.

Note that the microphone input has to be selected in the recording properties of the Windows audio mixer.

Moreover you should check and switch off the microphone (often called) >loop back< in the play properties in case of extreme looping and echoing problems.

Some sound cards provide you with the option of amplifying the level of your microphone. To do this, bring up the audio controls. In the options menu, make sure the Advanced Control menu option is selected. Then use the "Mic Gain" to adjust the boost of the microphone.

## Infobox

Under Info you get some information about your Place Cam Version 2 installation, e.g. version number, serial number of your copy and if it is a trial version the expire date.

Additional information about your private and public IP-address, capture/display mode and the sending bit rate is shown if you are in a conference.

The quality value indicates whether your audio and video data packets were delivered correctly. Audio- and video lags are noticeable on partner if the value is lower than 95%. This can be caused by to low processor power of the receiving site or packet losses on a to small or heavy used network connection.



Info

PlaceCam Version 2.2.2  
Copyright SODGI  
www.placecam.com

Help

Troubleshooting

Send Video	Send Audio	Quality
8.3 fps 65.3 kbit/s	8.2 kbit/s	100% 71 ms

my ip: 142.167.176.34 privat ip: 192.168.1.100 : 6100

Display: YUV2 Hardware Support



### Connections through a firewall / NAT-router

Firewall devices are designed to protect your internal network. If you or your organization has set up a firewall, you must release few ports in order to communicate to outside participants and to allow clients outside the firewall join your conference.

A port refers to a specific location within a computer's TCP/IP stack.

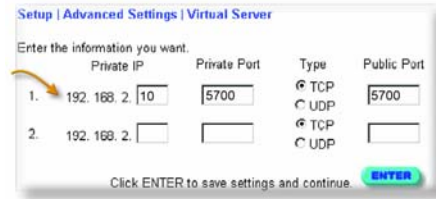
Place Cam Version 2 use port **5700** by default for the audio/video and data communication.

You must open this port in both directions on your firewall. Optional you can open **LDAP-port 389** if you like to use Place Cam Version 2 email dissolving over the lookup service.

If you are behind NAT or a router and you want to be called by another Place Cam Version 2 user, read the following lines carefully. You recognise if you are using NAT under Settings> Info, whereas "my ip" shows the public IP-address and "private ip" shows the private IP-address. The private IP is only displayed of you are behind NAT.

IP-Masquerading/NAT (Network IP Address Translation + Port Mapping) is a technique which allows multiple hosts on a private LAN to share a single IP address. Private LAN addresses must be mapped to registered IP addresses supplied by your Internet Service Provider. This is known as Network Address Translation. (e.g. nobody can call a private IP-address like 192.168.x.x from public network) Port Mapping works by keeping track of source port number e.g. TCP 5700 used by the Place Cam Version 2 application, and mapping this port number to a new number prior to transmission of the packet onto the Internet. A packet received from the Internet will have a destination port number equal to the mapped source port number, and so the original port number and IP addresses can be restored by a table lookup.

A main problem with the concept of NAT is that some applications (FTP is the most notable example) put IP addresses into application layer messages which are transferred between Client and Server. This is a protocol layering violation that in case of FTP can be overcome by using PASV commands.



Place Cam Version 2 supports calling clients behind NAT in combination of Place Cam Version 2 lookup / USL Server usage. Place Cam Version 2 determines your public IP-address and list it temporally on the USL-Server until you close the Place Cam Version 2 application.

If you are behind NAT or a router you can call outside participants but nobody outside can call you because the call does not exceed further your router.

To let your router pass though these packets to the right PC you must activate the service "port-forwarding" on your router. In some cases this feature is called "virtual server" or "special applications". (see figure)

If all conferencing partners are behind NAT or a router, at least one participant should configure port forwarding on the router or use a public IP-address.

Note, working with more than one callable client behind NAT is possible. Please contact us in this case.

## Connection scheme info

For instance, establishing a conference with three participants can be realized in various ways.

After one client calls another client, the first or second client also calls the third client or the third client calls one of the two already connected clients. The called client automatically informs all the other clients about the new one.

The audio/video data streams are established peer-to-peer without a central server. That's why some knowledge about the topology of the network can be important for the connection establishment. The Place Cam Version 2 software processed data streams in a multiple peer-to-peer network comparable to a proxy.

The participant with the largest bandwidth connection should be the party initiator, i.e. he should call all the other participants. Alternatively all other participants could call this one the first.

You are not advised to connect via many ISPs (internet service provider) since any additional "hop" reduces bandwidth and increases latency. Check this by a trace route command. (Type in >tracert [IP-number]> in the command field of windows systems.)

- Place Cam Version 2's default a/v + sharing port is 5700
- Place Cam Version 2 use TCP connections by default
- unicast is the default mode (multicast in extended version)

# Imprint

We hope this guide gives you helpful hints into setting up Place Cam Version 2.  
Please consult Place Cam Version 2 web site for updates and product news.  
<http://www.Place Cam Version 2.com>

If you have any further technical questions or problems please consult our online forum.  
<http://www.Place Cam Version 2.com/support/contactsupport.php>

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Enjoy working with Place Cam Version 2  
Sincerely,

Your Place Cam Version 2 Team  
June 2004