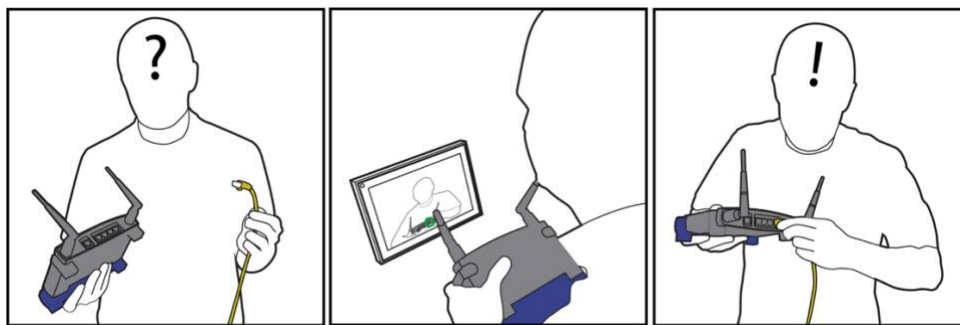


# Telepresence Annotation and Secondary Cameras: Use Cases for Older Adults and Instructional Setup

## Use Cases for Telepresence Activities for Older Adults

Older adults can gain multiple benefits from expanded use of telepresence technology. However, certain limitations of these systems can reduce their utility, and potentially make them too much trouble for the gains that older adults can acquire. This page will explain a few adjustments to telepresence technology, and how they can make certain activities both more useful and fun to perform with older adults.

### Tech Support



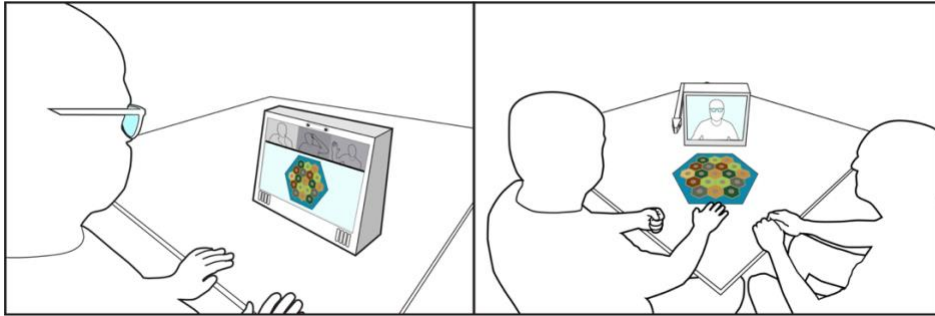
*Conceptual figure depicting how remote troubleshooting with annotation can help an individual resolve a question about their device.*

A common struggle for older adults is that various technologies have great potential to support them in the home, but they are often difficult to set up or maintain. You may have personally experienced the difficulty of talking to older adults over the phone. By utilizing camera-based annotations, you can be on a video-call with another person and point out exactly where to plug something in, what switch to press, or even use drawn arrows to indicate what direction to swipe on a phone for commands.

### Socialization

Older adults, especially during times of isolation such as the COVID-19 pandemic, can easily suffer feelings of isolation and helplessness due to a lack of connection. However, by utilizing annotations and extra camera views, different forms of socialization become available over video calls. You can play board games together, using annotations to indicate where to move your pieces. You can collaborate together on art projects such as scrapbooks, having the materials on a viewable desk, and letting the other person point

out photos, and what may be the best place to put them. Even games of I-spy can be played using the annotations.



*Conceptual graphic of people playing a board game over a telepresence technology.*

## Set-Up Guide

### Desk-Space Camera Setup

The average video call involves two or more people talking to each other, with the shoulders and face visible. This is not ideal for all scenarios however, as there are many forms of in-person human interaction that involve more interactions with the environment. For this reason, we suggest setting up a secondary camera to get the view of the top of a table or desk, to expand the range of activities that can be performed over a video call.

### Annotated Video

Have you ever gotten frustrated over the course of a video call that someone tries to point something out on your side that you can't seem to find? Have you ever been the one attempting to point something out over a video call but the other person can't figure out what you're indicating? For this reason, we suggest that users follow a few tricks in order to be able to draw on a video during a call, so the other person can see their camera feed, with extra indicators of what you're pointing to.

A guide on how to set up camera annotations, as well as a desk space camera can be found here ([Link](#)). The hardware section covers the camera itself, while the software section covers how to utilize the annotations in Zoom on a camera.

Now that we have explained these solutions, we will give 2 scenarios in which they could be useful.

## Build Your Own Annotated Desk Space Camera Setup

Here's how to build your own annotated desk space camera setup. You can use this for tech support of anything that you can fit on a desk.

Things you'll need for Desk-space:

### Hardware

- A computer
- An internet connection
- 2 webcams (1 can be built-in if the computer is a laptop)
- An arm to mount the camera
  - This can be a Mr. Tappy if you want a lightweight but potentially more expensive solution (\$350 <https://www.mrtappy.com/>)
  - This can also be any number of off the shelf camera arms (such as \$45 <https://www.amazon.com/Overhead-3-Section-Detachable-Articulating-Microphone/dp/B0B3WXPR9N/?th=1> )

### Software

- Open Broadcasting Software (<https://obsproject.com/>)
- Zoom (<https://zoom.us/download>)

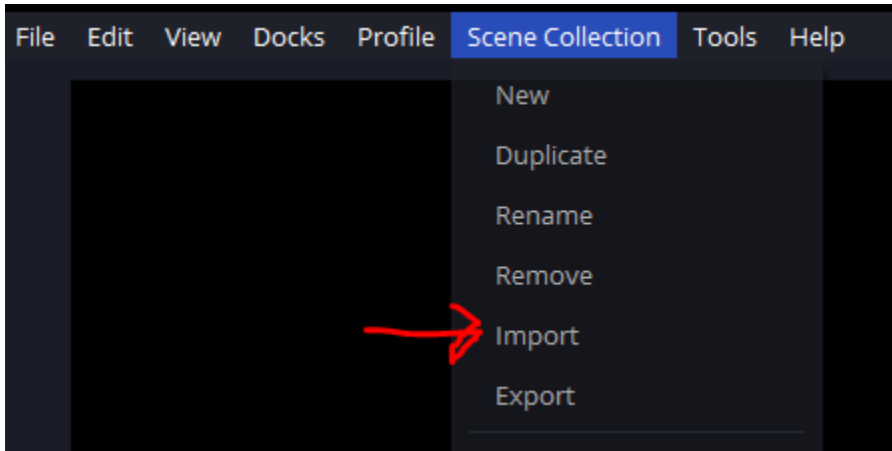
### Setting up the physical Webcam

1. Take the arm mount that you got. Attach the clamp side to a desk.
2. Screw the webcam onto the screw mount on the arm.
3. Bend the arm to where the lens of the camera is facing down onto the desk.
4. Plug the USB part of your webcam into any usb port on the computer you'll be using.

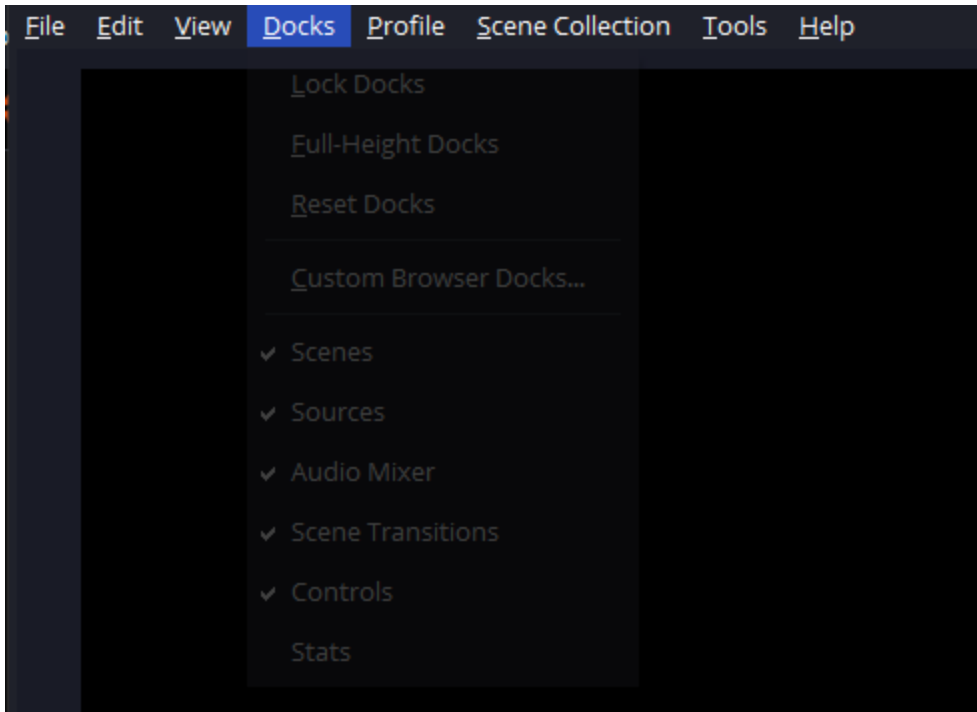
### Setting up OBS

1. Download and install OBS onto the computer (see site above)
2. Download the OBS scene settings zip file from our website:  
[http://publish.illinois.edu/techsagererc/files/2024/11/OBS-cam-layout.json\\_.zip](http://publish.illinois.edu/techsagererc/files/2024/11/OBS-cam-layout.json_.zip)
3. Unzip the file to access JSON file.

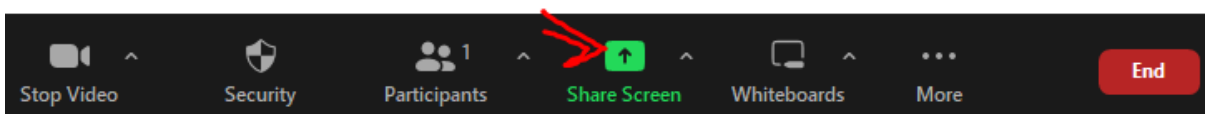
4. When you open OBS, go to the scene collection tab and select Import to import the downloaded scene settings from our website archive.



5. Once your view has a different camera on both the left and right side, go to the Docks tab and uncheck all controls.



6. Now you can open your zoom call. Once you enter the call, click “share screen” and choose the OBS window.



7. From here, simply click the annotate button on the bar to be able to draw on your shared dual camera view.

On future uses of this, you can simply open OBS and follow steps 5 and 6.

Congratulations! You have your own tech setup.