Report on try-and-error for connecting vuzix blade with several apps.

1. TeamViewer Remote control

At first, I notice that to connect these 2 applications, we need to have a code between the devices, as show in Image 1. Then, when the connection stablishes, the things you can do is to control the glasses form the computer (Image 2) and transfer files offline, meaning that you can transfer videos that are already recorded.

This app will not help us, as we need to make a streaming/real time video transfer, AND ALSO, the need of a code that we need to input between apps, make impossible the connection without a user interaction.

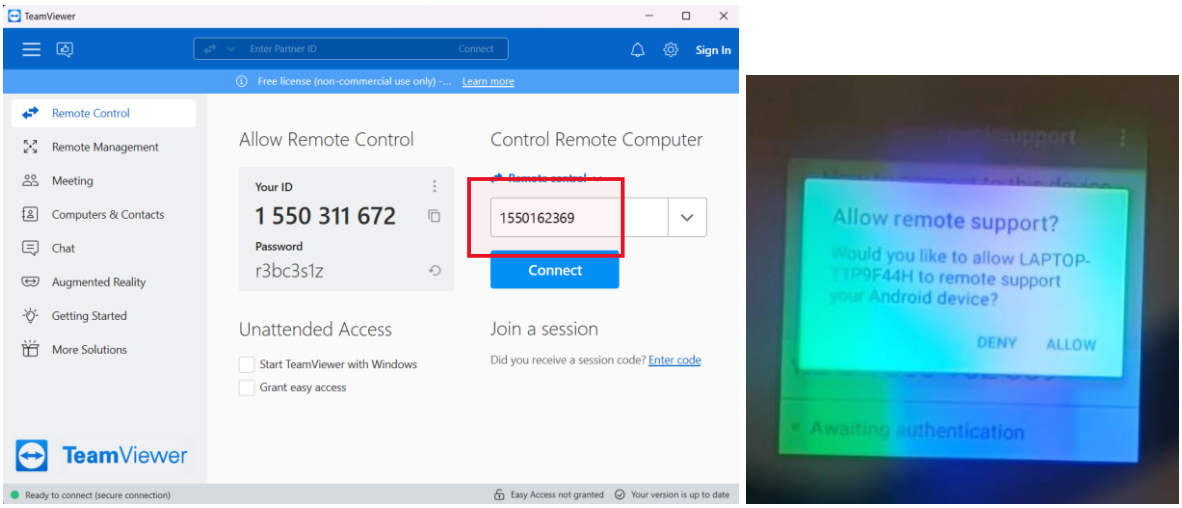


Image 1. Team viewer laptop and glasses panels.

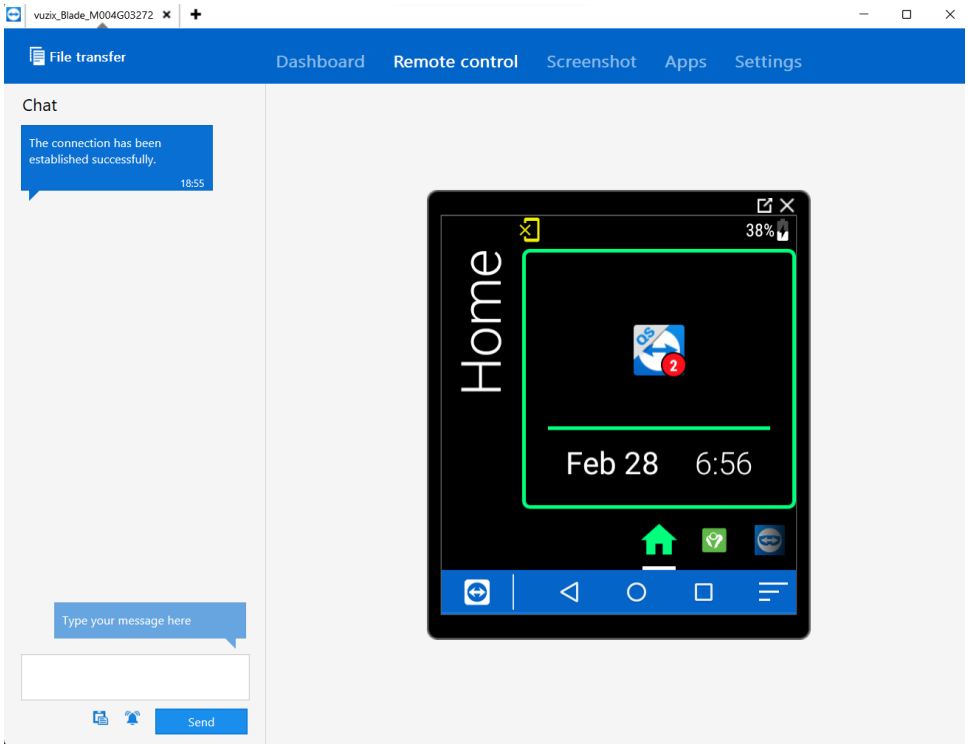


Image 2. Team viewer remote control feature.

2. TeamViewer AR Assist

Same as the first app, both apps need a code for connecting between each other (Image 3), this code makes available a videocall between the camera in the glasses and the laptop or cell phone. The call needs to be started from the laptop and its received in the glasses, where the user needs to accept the call (Image 4 and 5). When the connection stablishes, the laptop user sees what the camera is recording, also it can record the meeting or videocall and store it in the laptop for later. It can make annotations and comments in the glasses field of vision.

This app will not be of much use due to the initial code between laptop and glasses, as the last app. Also, as it is only a videocall, the only useful thing is to storage the video for later but no as a online video transfer, like the objective of this project. It would be useful to access the code or features that the app presents, so it can be possible not only to storage the video on the laptop, but in both, and most important, to skip the part of user interaction to make a quicker connection.

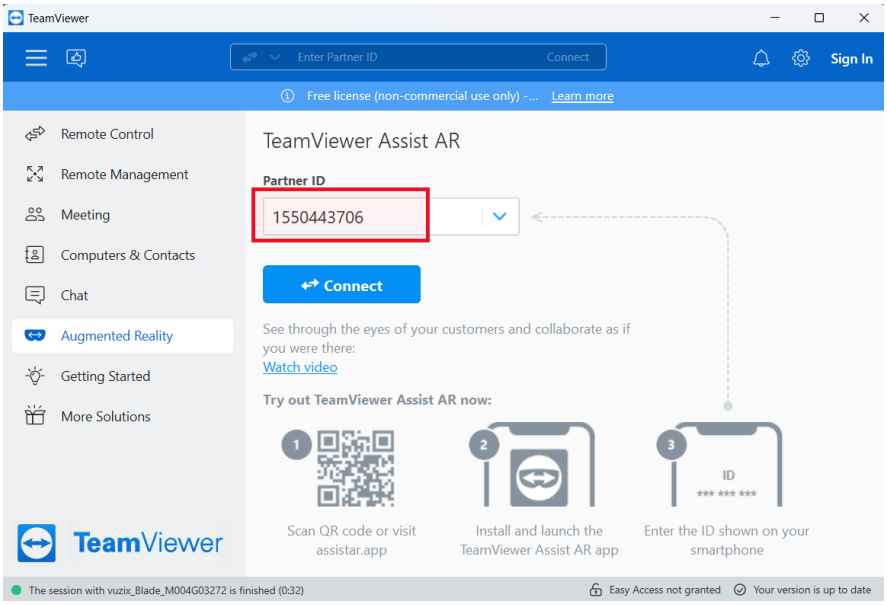


Image 3. Team viewer AR assist laptop panel.

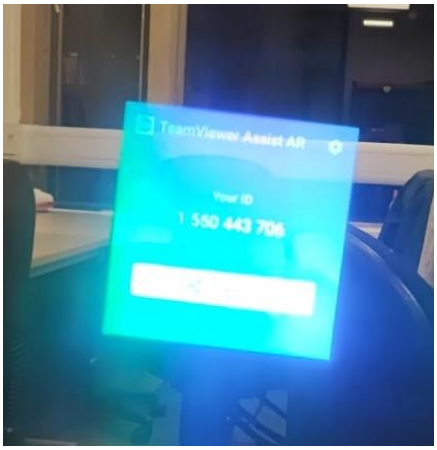


Image 4. Team viewer AR assist glasses panel.

Image 5. Team viewer AR assist incoming call.

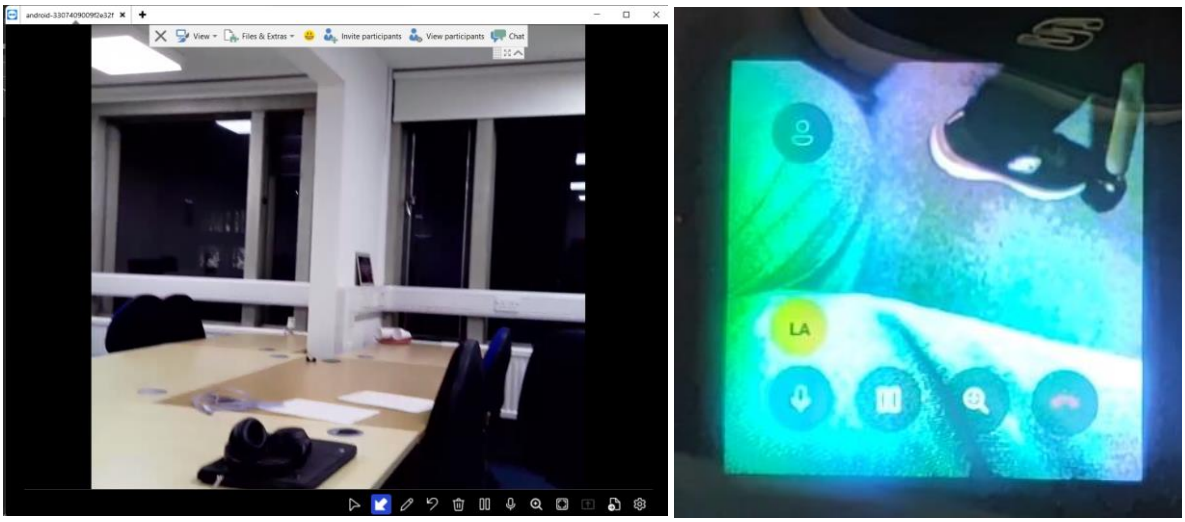


Image 6. Videocall from laptop and glasses view.

3. Vuzix connectivity GitHubs

Looking through other options, I found this vuzix connectivity package from a personal GitHub online. *The problem with this package is that it only works for IOS systems.*

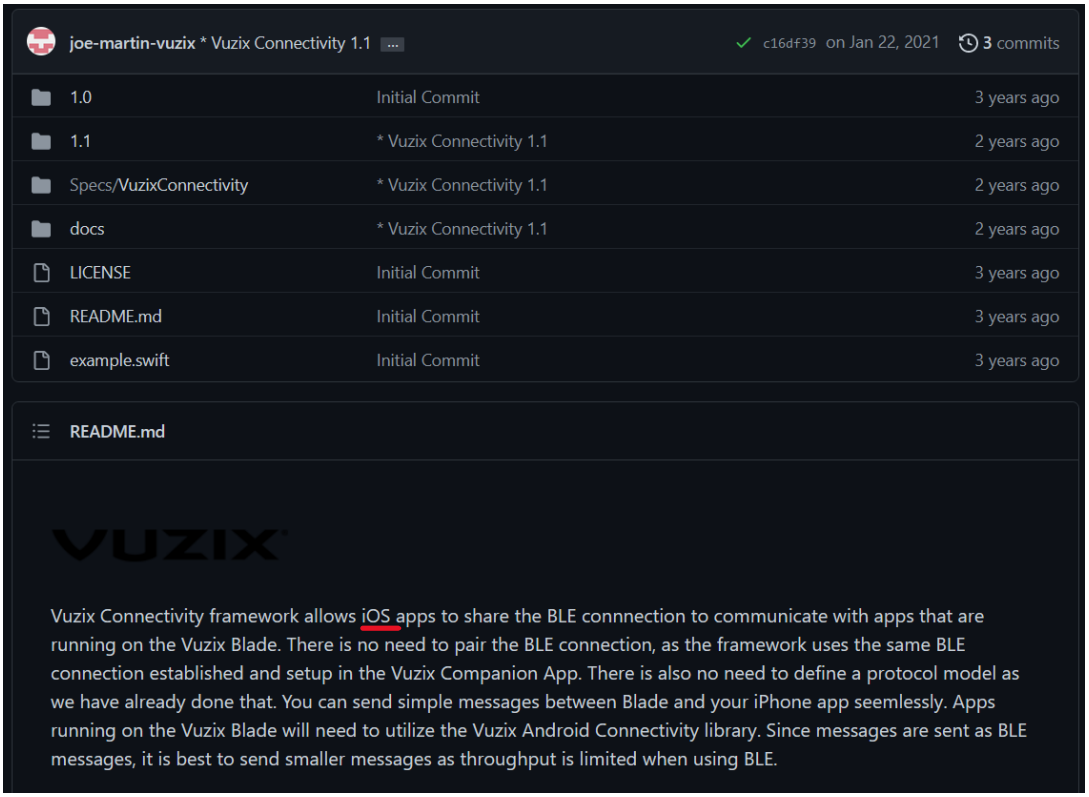


Image 7. GitHub repository for IOS app-glasses connectivity.

Then, I found another GitHub repository about connectivity for Android, but this one was in Japanese and require downloading an apk that do not come with the repository, so it cannot run. *Since there is no apk where to use the repository, these options if of no use.*

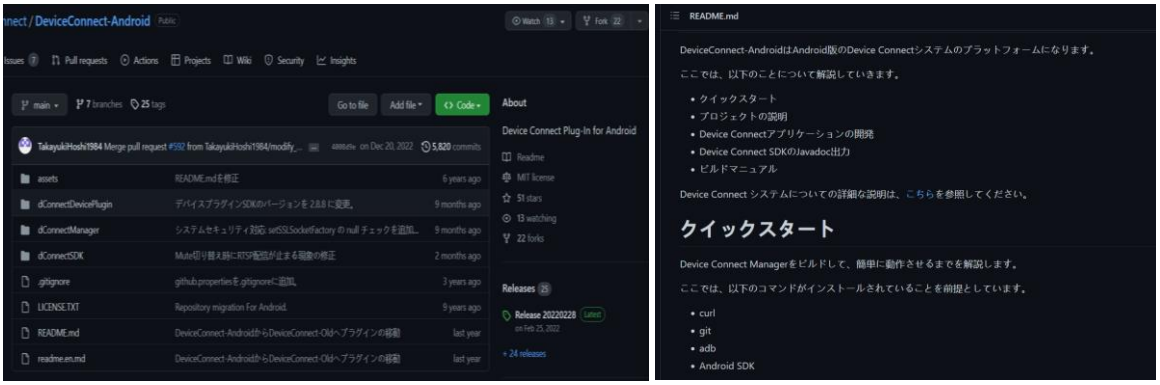


Image 8. GitHub repository for Android app-glasses connectivity.

4. Sample Vuzix Blade Project

This sample project is the guide that offers Vuzix to develop an app on the glasses and have access to each of the features on them, in this case the important one is the speakers and the camera. This can be found on one of the Vuzix Help Centre pages and provides much of the downloadable that are needed.

This is the main try that I've made and the one that I think will work best. The first 3 images (Images 9, 10 and 11) show the requirements that the page mention for this sample project to function. This are to import the device profile from the xml provided; Change the layout for it not to be constrained; and add the implementation on the "Gradle: App" file specifically.

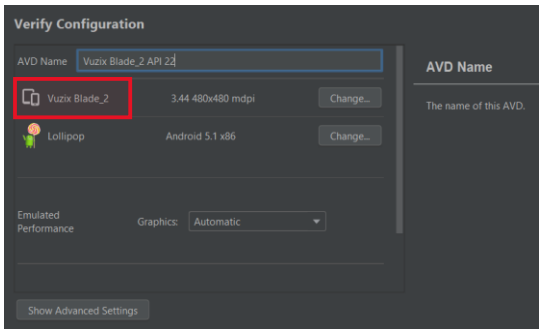


Image 9. Device profile imported correctly.

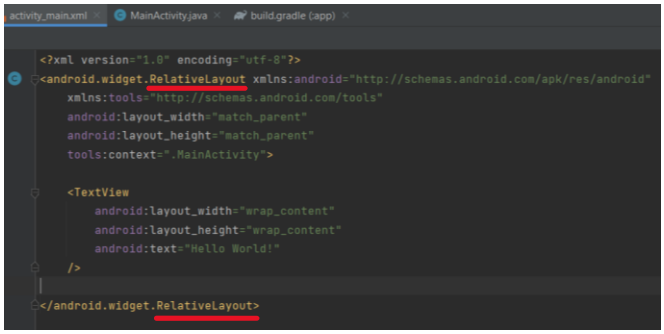


Image 10. Layer not constrained.

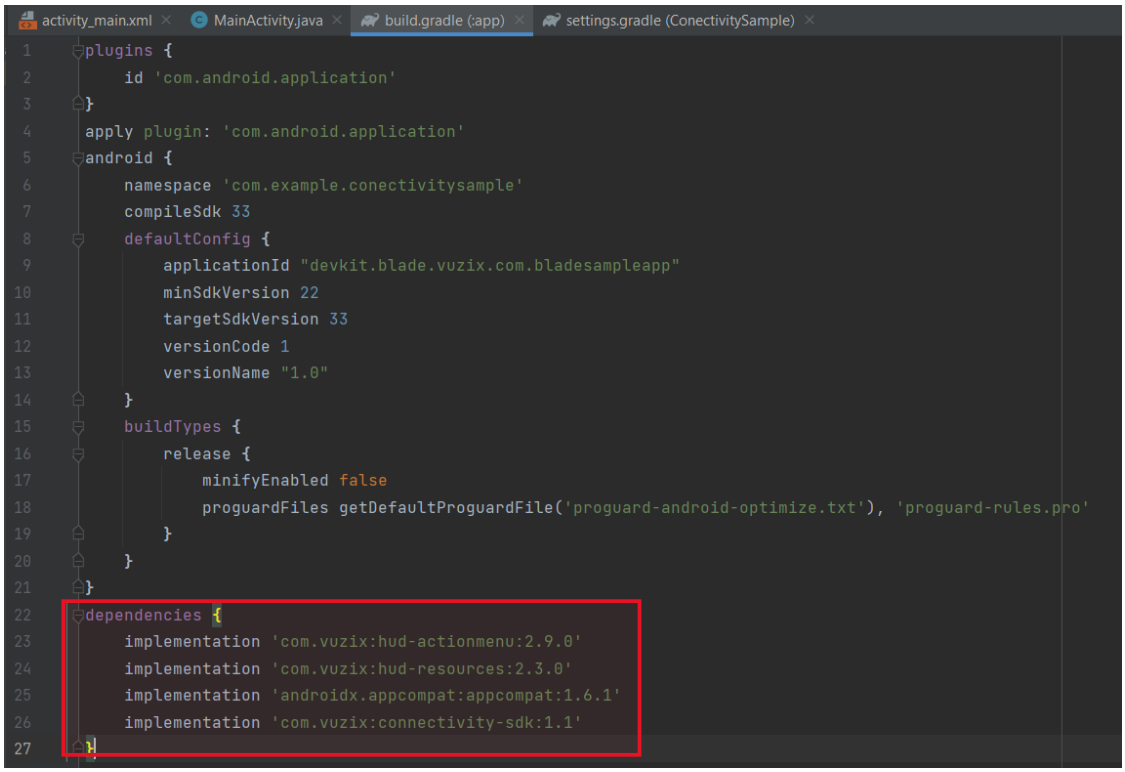


Image 11. Implementation libraries selected.

And, after having all this, when building the project, it supposed to load all the libraries and import them into the project for future usage, these libraries will give access to the camera and speaker, as well as running the app on the glasses. However, it gives a warning, because it could not solve the implementation correctly (Image 12), and that when running the project to test, it gives an error because there are no libraries to access the features of the glasses (Image 13):

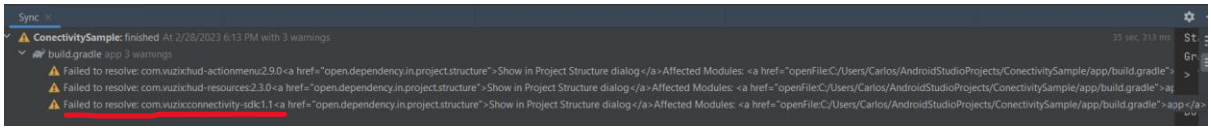


Image 12. Warning that the implementation could not be done.

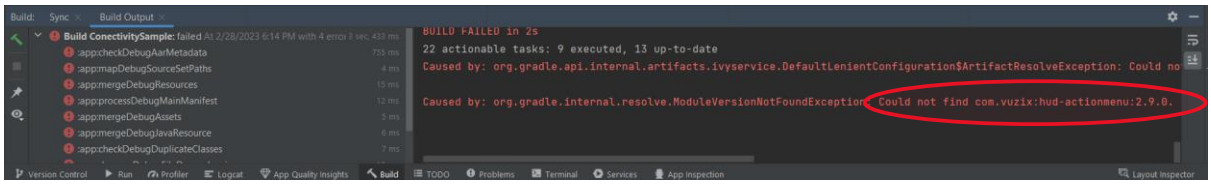


Image 13. Error of not building the project because of the missing libraries.

5. Alterdesk Glasses

This app says that is possible to make a streaming video between the glasses and the app (which can be used either on the phone, laptop or other glasses), and make an exchange of files. *However, it says specifically that it is a messaging app, it means that it will need much of a user interaction, thing that we are trying to avoid, also, as a messaging app, we do not have access to the code, and need to make several accounts with subscription for each device.*

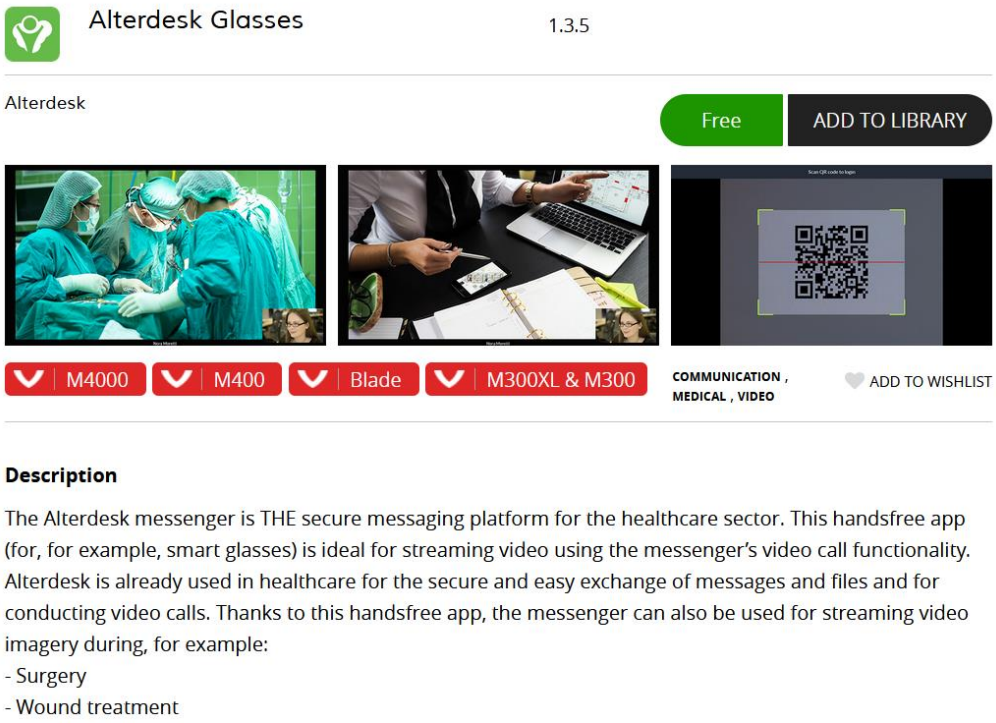


Image 14. Alter Desk Glasses app description of Vuzix Store.

6. Vuzix View

This app is from the developer Vuzix and says that you can stream and make file transfers, which may be the need for the project. *Nevertheless, when trying to connect the glasses to the computer it asks for a IP address, when writing down the one that the glasses give, it does nothing. BUT I've read that it can function with wire connection via USB, and I have not tried that.*

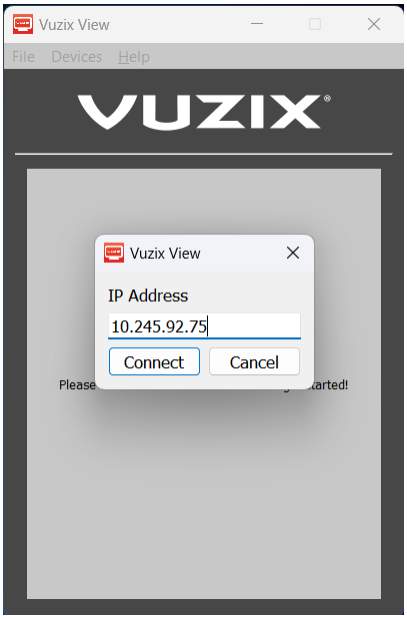
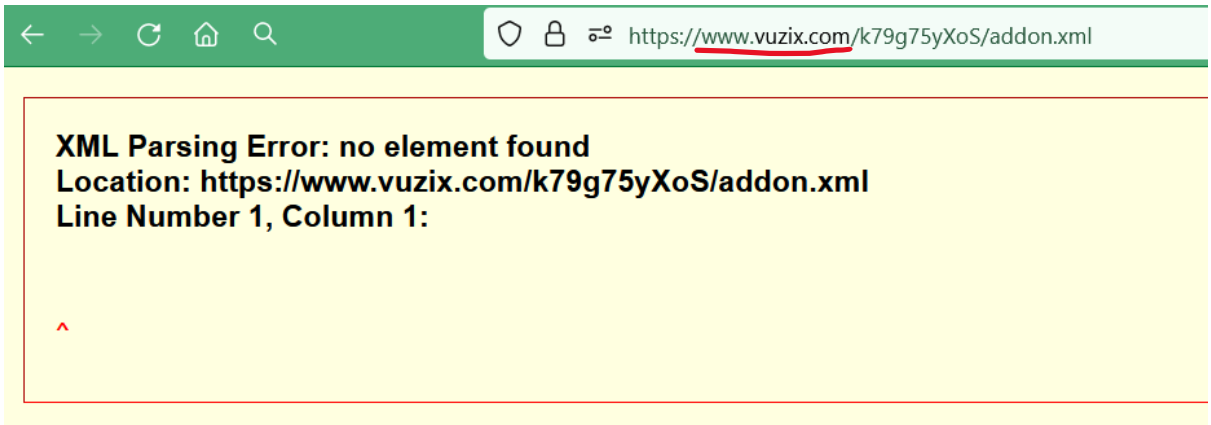
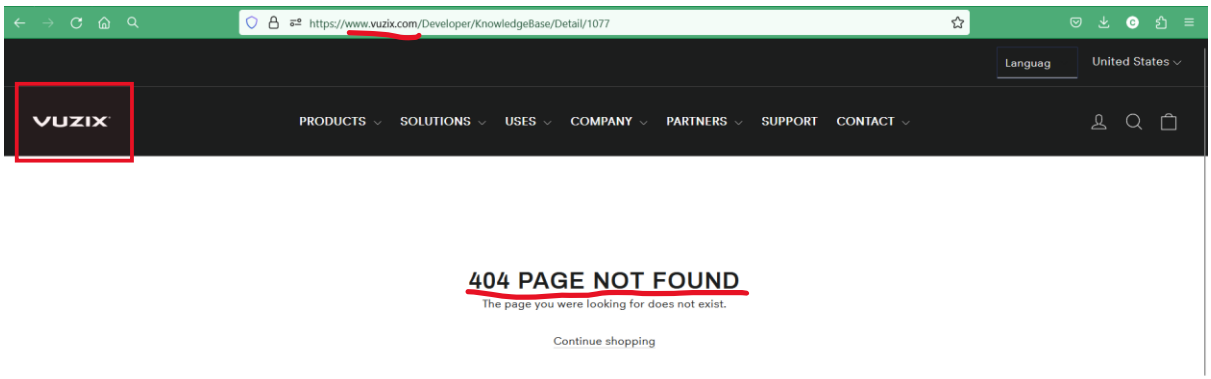


Image 15. Vuzix View attempt of wireless connection through Wi-Fi with glasses IP address.

7. EXTRA: *I tried many web pages that were from vuzix, but there are many pages that are down or un-updated, that makes a little more difficult to find the right path to make the connection because main links that may work, may need something from other link that is down and make the whole try ineffective. Examples of this are in the following images.*





References:

- Martin, J. (2021) Vuzix Connectivity. GitHub. https://github.com/Vuzix/VuzixConnectivity
- Hoshi, T. (2022) Device Connect-Android. GitHub. https://github.com/DeviceConnect/DeviceConnect-Android
- Powell, C. (2023) Vuzix Help Centre. https://intercom.help/vuzix/en/articles/5954698-overview
- Vuzix App Store. (n.d.) Alter Desk Glasses. https://apps.vuzix.com/app/alterdesk-glasses
- Vuzix App Store. (n.d.) TeamViewer AR Assist. https://apps.vuzix.com/app/teamviewer-assist-ar-pilot
- Vuzix App Store. (n.d.) TeamViewer Quick Support. https://apps.vuzix.com/app/quicksupport