



A virtual world where you can hang out with friends
or be by yourself.

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EyeBeam

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Abstract

Tet addresses the disconnect from physicality that makes video conferencing so disorienting. Participants meet in synchronous virtual reality, in a shared space, in which they can chat, explore, and co-inhabit. Or they can move off to be on their own. With its browser-based functionality, users can meet one another on any platform and simulate the experience of co-inhabiting with their bodies in a safe social space, free from the distractions of multiplayer game worlds and the hostility of video conferencing.

Statement of Need

It is unclear whether things will get back to normal in a post-COVID-19 world. One thing for sure is that our reliance on technologies that allow us to perform our tasks and communications remotely and safely is only going to grow. Tools and application like Zoom and Skype have offered the same service for several years only improving on quality and reliability. Now that we have been heavily using these tools, a number of issues are being discovered by users around the world. Referred to as “zoom fatigue”, people from all over the world are starting to sense a rising level of exhaustion due to one conversation after the other, one hour after hour, over video calling and conferencing. This binary interaction we have with a screen while we have conversations over video calling, fulfilled a crucial need during the COVID-19 lockdown, but it also brings to the surface a need for a comprehensive tool that allows the user to be oriented in a virtual space, where they can move around, from and towards their friends. In this world, users can virtually move from one place to another, visiting friends or simply explore this new world.

Project Description

Technology was a source of relief to many people during the COVID-19 worldwide lock-down. Video calls and asynchronous communication technology was the means by which many people could continue their lives and achieve a semblance of normalcy. While technology provided crucial services to people on lock-down, there is evidence that prolonged video conferencing can cause significant anxiety and other psychological issues; at best, constantly sitting in on video calls is exhausting. Furthermore, video conferencing tools exist as artifacts of surveillance capitalism, tracking the attention and monitoring the conversations of its users. These tools, while allowing for communication, are not substitutes for the experience of being in the same space as another human body. Those socially distanced alone at home lack meaningful physical contact, while those socially distanced in shared living spaces have lost access to private space and time.

This project, Tet, addresses the disconnect from physicality that makes video conferencing so disorienting. Participants meet in synchronous virtual reality, in a shared space, in which they can chat, explore, and co-inhabit. Or they can move off to be on their own. With its browser-based functionality, users can meet

one another on any platform and simulate the experience of co-inhabiting with their bodies in a safe social space, free from the distractions of multiplayer game worlds and the hostility of video conferencing.



CONCEPT ART

Virtual reality technology remains an emerging medium that will need to adjust to a post-COVID world. Expensive computer hardware and wearables are an impediment to access, and it is likely that shared hardware may tend to be a germ-risk in future when we are more mindful of social distancing and infection. Tet leverages VR technology in a way that respects social distancing and remains accessible to anyone with Internet access, able to be used seamlessly and simultaneously by VR users of any hardware, including headset, mobile, and desktop. As a free and open-source software project, Tet will be accessible to modders and researchers looking to build on it, and to users looking to build their own worlds to spend time in.

Tet is a free, open-source, accessible alternative to conferencing software; a fun online meeting place that effectively simulates the experience of staying close to your loved ones, and a step toward the democratization of virtual reality technology in a post-COVID world.

Building a better future

Tet is a foundational exploration in virtual embodiment, differing from prior work by being focused on accessibility. With the understanding that VR hardware is expensive, unfit for some bodies, requires processing power that many lack access to, and might be considered unhygienic in a post-COVID world, Tet adapts social VR to a framework that can be accessed by anyone regardless of the user's resources. It is intended to be a source of relief to those suffering from stress brought on by social distancing, and an alternative to exploitative communication tools under surveillance capitalism. Tet generates no metadata and has no interest in monetization. It is open source and can (and should!) be used freely to develop new experiences.

A-Frame

It was originally developed by Mozilla and now, it is an independent open source project maintained by Supermedium. It has grown to be one of the largest VR communities in the world, which ensures the availability of documentation and online assistance.

Benefits of WebVR

A-Frame is an HTML-based, web framework for building online virtual reality (VR) experiences. This makes it an easy tool that can be utilized to create captivating VR experiences developed and delivered on the web. Due to its HTML format, A-Frame can be easily designed and customized with little complexity and technical proficiency, and so can be a great entry point for beginners and users with no background in web development.



A-FRAME LOGO

Synchronous communications

Due to its web-based format, A-Frame experiences can be accessed in real-time by anyone with the link. This allows multiple users to be connected at the same time with synchronous communications.

Accessibility across devices

Using A-Frame allows us to create VR experiences that can live on the web and accessed in real-time from anywhere in the world. It allows virtual reality solutions to be fully accessible with or without a headset from any device, all you need is an internet connection. This can redefine the way we utilize VR experiences and allow us to explore new ways to observe and develop.

Headset compatibility

A-Frame is compatible with most VR headsets, including a DIY cardboard headset. A-Frame is also usable without a headset, simply by navigating through the virtual world using the web-page.

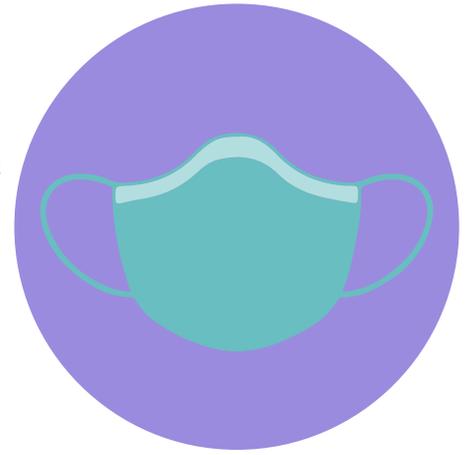
Goals & Objectives

Create an alternative to video-calling

While Tet might not be the ideal solution for business meetings or sensitive conversations, it does however, present a suitable approach for friendly hang-outs. It is a great way to virtually go out of the house and go meet some colleagues or friends for coffee, while still maintaining lockdown policies. Tet gives the users the freedom of movement, and thus allows them to move from conversations and towards others. Tet also allows users to meet at landmarks or at specific locations, simulating a real-life experience.

Create COVID-sensitive VR experiences

Public use of VR headsets can be a high-risk and will be viewed by most people as irresponsible. With VR headsets still come at a high cost, this means that many people might not have any VR experiences in the near future. This presents a challenge to the VR community, a challenge to find a suitable approach to bring VR to people with minimizing the risks. A-Frame allows us to achieve this goal fairly easily, and with combination with a DIY VR headset, users can have custom-made VR experiences safely, from the comfort and safety of their homes.



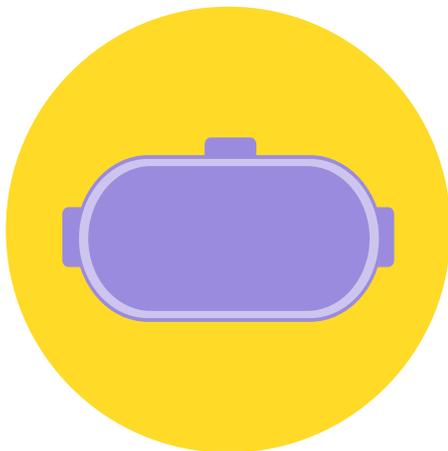
COVID-SENSITIVE VR EXPERIENCES

Create accessible digital spaces that reflect COVID-19 experiences

With millions of people relying more and more on video conferencing applications and tools, surveillance capitalism is quickly rising to become a challenge. The lack of alternatives pushes people to conform and rely on these tools that track and monitor its users without their aware consent. Tet aims to create a space where people can maintain their anonymity and without surveillance or tracking. Tet ensures and supports the democratization of the internet and all digital spaces.

Teach users easy steps on how to customize their own VR spaces

In order to fully benefit of the A-Frame infrastructure, we aim to teach our users basic steps on how to customize and modify their spaces however they please. This important advantage of Tet will create a small, but important, knowledge-base that can empower some of its users in their online presence.



ACCESSIBLE, EASY DIY HEADSETS

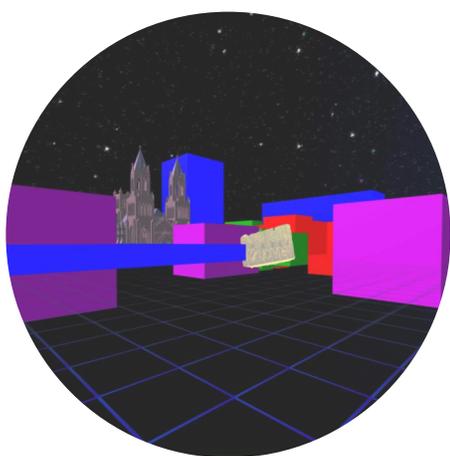
Teach users how to create their own DIY VR headsets

Creating a DIY VR headset from home products is another important benefit of Tet. The process of making the headset will teach the users important information on what it takes to make a headset and have a complete VR experience. Also, this knowledge presents another important democratization of knowledge since the users are empowered to create the devices they need for this experience rather than rely on an established manufacturer.

Project Development

The project will develop from a prototype to an accessible tool, with a carefully designed digital world, artistic vision, communication and world building tools for users, and expansive documentation for modification and remixing by others. User research will examine the efficacy of simulated co-presence and the experience will be tweaked, with features added and adjusted, to best accommodate these insights.

The impact of Tet will be relief to those unable to spend time in physical closeness with others, and to those who need solitude and are unable to find it. It will also serve as research into synchronous VR experience design using minimally expensive hardware and minimally complex tools.



SCREENSHOTS FROM PROOF-OF-CONCEPT

Timeline*

Phase 1

APRIL	
W1	W2
W3 EyeBeam Application	W4

Phase 2

MAY	
W1	W2
W3 Project development	W4

JUNE	
W1	W2
W3	W4

* Timeline subject to change depending on date of commencement of project development.

Our Team

As emerging creative technologists from multidisciplinary international backgrounds, this project is an opportunity to kick-start our three careers as well as helping to pivot our various practices towards a post-COVID context. The lessons learned in this remote collaboration project will guide workflows and best practices for digital and creative technologists in the future. It is a chance to produce meaningful work that will inform and set the tone for projects in the post-COVID world, and access to a community of like-minded creators that we can assist and who can help us in building the future we all want to see.



Nick Alexander

Portfolio

Nick Alexander is a 2020 M. Des. graduate of the Digital Futures program, specialising in uncanny immersive virtual, augmented and mixed reality experiences.



Priya Bandodkar

Portfolio

Priya Bandodkar is an interaction designer and animation specialist currently enrolled as a full-time student entering her second year of the Digital Futures graduate program.



Mazin Chabayta

Portfolio

Mazin Chabayta is an experienced graphic and information designer. As of 2020, Maz is a M. Design graduate of the Digital Futures program from OCAD University. He specializes in physical computing, interdisciplinary design and education.

