

Collaborative Whiteboard

Background

To address the gap between online learning and in-person learning, tools which are established and integral features of a classroom and organisation need to be replicated within the digital space.

The goal of a collaborative whiteboard application is to firstly be simple to use for everyone. It is also to ensure that the collaborative nature of the project is easy as well and frictionless as possible.

Problems

At the moment, many collaborative whiteboard projects are heavy, as they are attempting to do more than what is being advertised, they are also dubious with the collaborative part and do not mesh well with presentations.

Joining in a whiteboard session should be akin to joining into teams session that would allow for viewing of previously displayed content to the participant but also new content.

What is needed is the following:

- Application is easy to get started, supports simple input and has sensible defaults. It should work on all major platforms, devices and device types.
- It is easy to share a link to a whiteboard session with another, it can be used as an effectively with other streaming tools.
- Addition to add images via drag and drop should also be allowed to allow for mind-maps and organisation. Consider the use-case as a scrap-boarding exercise.
- The whiteboard should seem endless but a focus on where work is going on is where users just joining should begin.

There are further features to develop but lets aim at having a minimal and simple application that meets the objective above.

Guidance

1. Experiment with a `canvas` element or placing `SVG` elements/constructing `SVG` elements in the DOM like a path.
2. With either method, consider how would keep a history of all the things that have been draw.
3. Use `websockets` to facilitate a sense of real-time communication, simply experiment with websockets by build a chat-client and sending messages between participants

4. Once comfortable with how **websockets** work, consider about the protocol that would need to be developed to standardise the interaction.