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ROOM FOR IMPROVEMENT IN THE VIDEO CONFERENCING 'SPACE'

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Introduction

ImaginationLancaster is a design-led research group based at a UK university. In 2020 the Covid-19 pandemic dramatically impacted our working practices: our open-plan, mixed-use workspace — which is normally abuzz with teaching, research and regular public events — fell quiet. We adapted quickly: digital platforms became our de-facto workspaces; a 'Virtual Kitchen' channel was created for informal conversations (harking after our office's communal kitchen); bi-weekly 'Coffee and Cake' sessions moved online; seminars and lectures became video presentations.

Despite the reliability and fidelity of video conferencing — which proved invaluable to our team and is a testament to modern connectivity and compression — we quickly became familiar with some of its limitations. For example, the fatigue associated with lengthy calls (Wiederhold, 2020) and social challenges posed by lack of physical presence in a shared space (Kilteni et al, 2012).

An advantage of our office is the ability to glance at a colleague and, if appropriate, to have brief, informal, discussions. Moreover, the process of physically moving around the space inevitably leads to unplanned interactions, which have been shown to be an important part of knowledge work (Woods, 2014). These emergent properties of physical presence are important, and whilst Microsoft Teams was found to be effective for formal meetings and was quickly adapted as an organization-wide collaboration platform, it failed to replicate many aspects of physical space.

In response, we ran several experiments with the Gather Town (forthwith Gather) platform, which utilizes a spatial metaphor to initiate video chats. In this paper we report on how Gather was used to recreate aspects of interactions which are ordinarily afforded by being physically co-located. We note where this has been successful, and where it has not. Through this discussion we explore how a sense of place can be

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evoked when digital collaboration employs spaciality as a key heuristic, concluding with discussion points on the potential future of digital collaboration technologies.

Gathering in the Office

Gather is a video-conferencing platform. As with similar platforms (Zoom, Teams, Skype), it allows two or more users connected via computers to have audio/video conversations. The unique element of Gather is how those conversations are initiated. Gather conversations exist within 'spaces'. When entering a Gather space, users choose an avatar, which is then placed into a 2D environment. These environments, reminiscent of a top-down video game, can be navigated by the avatar. When avatars are near each other a video connection is established between them. This spatial metaphor means that users can seamlessly join and leave conversations by moving their avatar around the space.

Members of ImaginationLancaster, including the authors, created several custom-designed Gather spaces including: a virtual office where each team member has a personal desk area; a variety of virtual teaching areas from a faithful recreation of our workshop to a fantastical spaceship inspired seminar space; and other Gather spaces created specifically for the purpose of sharing research and hosting research conversations.

We asked members of the team to treat the virtual office like they did the physical environment. This included 'sitting' at their desks when they are at work, moving to the shared kitchen space for informal conversations during break times, and having scheduled discussions in formal meeting 'rooms'. Many found positive benefits to the informality, with desks that were quickly individually personalized, and new opportunities for chance encounters and conversations.

Gathering in Groups

In-person seminars and workshops, for teaching or research, often ask participants to split into smaller groups to work on a problem before reporting back. 'Breakout Rooms' attempt to recreate this, but the 'feel' of colocation is illusive. The limitations of video-conferencing play into this, for example eye contact is limited. Moreover, the way breakout rooms are implemented impacts on the experience too: participants are 'assigned' to rooms in a way which feels quite unnatural; breakout rooms automatically 'close' at a given time ejecting those inside them unceremoniously; and it is difficult for the instructor to 'hover' with a group to check on their progress. Another problematic theme with remote teaching is lack of engagement — attendees with cameras off not making any effort to interact. The experiments using Gather's interaction mechanic in teaching spaces were intended to address these challenges. Initial feedback from students and staff was positive, especially from those not comfortable talking in larger groups.

Gathering at Conferences

The pandemic led to many conferences pivoting to running online. Alongside the intellectual elements of conferences (e.g., paper presentations and workshops), platforms like Gather have (e.g., at AolR2020) been deployed to recreate the social, liminal spaces (coffee breaks, etc.). One of our experiments, featured at the CHI2020 conference, is a research paper which *is* a Gather space. This exploratory approach collapses the paper content and the presentation medium into a single entity. As opposed to a video presentation, conference attendees are invited 'inside' the paper where they can view the content as well as converse with each other and the authors. Test events went well, and the submission was reviewed favorably.

Challenges and Opportunities

Whilst each of these experiments have worked, they also surfaced challenges. Despite its success when in use, the virtual office has since fallen silent. During a busy period, critical mass of users was lost and sustaining use was difficult. Similarly, although the interactions afforded by Gather offered significant improvements for teaching and seminars there is a trade-off in audio/video quality for more traditional 'one-to-many' type presentations. We also note accessibility concerns (of Gather, as well as many other digital tools). In the case of the 'Gather-as-Paper' approach, it was tested at the CHI conference in May 2021, and we were keen to observe how it was received, and whether it will inspire the conference organizers to reconsider the relationship social spaces and paper sessions.

Our experiments with Gather have vividly highlighted a range of points for discussion. Remote communication is fundamentally different to in person communication. Because of these differences, replacing offices, seminars and conferences in a 'like-for-like' manner will likely be sources of tension. With that said, when deployed sensitively, remote communication technologies — as demonstrated during the pandemic — can profoundly revolutionize how we live and work. Remote communication can emancipate us from 20th century conventions, providing a new independence — something which is necessary when considering our global challenges (e.g., climate change). We must remember that the way we utilize digital tools must also be independent, and not remain tied to unchallenged concepts of what remote communication is. With simple reframing, our existing technologies can operate in profoundly different ways; our experiments with Gather show this. With all these points in mind, we suggest that Internet scholars should focus not on recreating our physical world online, but instead reimagining it as an independent way of 'being' in its own right.

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