



Why hike alone when you could be with your virtual friends? (Credit: iStock/Getty Images)

The first day of summer is just two weeks away and that means unplugging from technology and heading out to beaches, barbecues and outdoor activities. Or does it? New Canadian research suggests the next big thing in summertime fun might be video-conferencing.

Tell us about this research

The new research — published in Human-Computer Interaction — comes from Simon Fraser University in British Columbia, and it's all about using live video like Skype or FaceTime or Google Hangouts to share outdoor experiences between friends and family members; basically, video-conferencing while you're outside, having fun.

The researchers recognized that video-conferencing is on the rise in corporate and professional environments, and it's also increasingly popular for family and friends to stay in touch. But most video-conferencing happens indoors, so the question becomes what are some of the ways we might use this technology outside?

Now, outdoor video-conferencing is not hugely popular at the moment. We don't see a lot of people Skyping at the beach, or FaceTiming while they're on a picnic, but the team at Simon Fraser believes it's coming, and that it's a natural extension of the ways in which we use video today. They wanted to get ahead of that trend and investigate the potential, the limitations and the potential challenges.

What types of outdoor activities are we talking about?

To get a better sense of that, I spoke with Carman Neustaedter, a professor at Simon Fraser who worked on this project.

"We're thinking about two people going for a walk and they could live anywhere in the world but they could sort of feel like they're walking together," Neustaedter said. "We've looked at bicycle riding as another basic case, and we've also been studying geocaching, where people could go geocaching but live in completely different areas of the world."

Is it safe to be on a video-conference while riding a bike?

Safety is one of the key issues identified. We've talked before about the dangers of distracted driving and distracted walking, and some of the same safety risks apply to distracted cycling or distracted hiking. If you're paying attention to the screen mounted to your bicycle handlebars, or you're fussing with a camera mounted to your chest as you go on a hike, you're taking attention away from the environment around you.

This highlights the importance of designing these technologies in a thoughtful, considerate way. You can't just take a video-conferencing app that's designed to be used in a boardroom, or on a laptop, and expect it to work well in outdoor use.

In addition to safety concerns, this type of outdoor video-conferencing also raises privacy concerns. How would you feel if you went to the beach, and someone was live streaming video of you to their friends who weren't there?

Neustaedter and his team believe that video-conferencing software needs to be able to address both the privacy concerns and safety issues; it needs to be smarter and more sophisticated than just a basic audio and video feed.

Beyond safety and privacy, what other concerns did the researchers discover?

Through their experiments, the researchers found that video-conferencing can create real challenges when it comes to embodiment or the actual physical aspect of doing something. For example, if you and I decide to go for a walk together, and we're in the same place, everyone around us can see that we're walking together. It's not unusual to see two people walking side by side and talking. The issue arises if you and I are in different cities and decide to go for a walk together connected by a video-conference; that can look really weird to other people and can lead to awkward situations.

"So, for example, a wife was geocaching and she started talking with some bystanders and her husband, who was remotely seeing this, felt completely left out of the conversation because nobody knew he was part of this experience with his wife. So that kind of caused a bit of kerfuffle between them," said Neustaedter.

It's reminiscent of early Bluetooth headsets, which made it hard to tell if someone was on a phone call or talking to themselves.

Is this type of outdoor video-conferencing designed to replace in-person interaction?

It's definitely not designed to replace shared leisure activities where everyone is in the same place. In the same way, a video call can never fully replace the experience of being together in the same room with your colleagues.

When it comes to outdoor activities, there are some things that you simply can't capture through audio and video. I think it's likely we'll start to see more and more of this type of outdoor video-conferencing in the coming years as cameras and screens get better, and bandwidth increases. But what the research coming out of SFU suggests is that we can't just take the same video technology we have today and bring it outside. There are lots of design decisions — big and small — that need to be taken into consideration.

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