

WHAT'S NEXT



ADRIAN DAVID CHEOK

Keio-NUS QUTE Center

BY STEVE MOLLMAN

These days, millions of people tote a camera-equipped phone that packs serious sensor capabilities.

For instance, the latest iPhone—or handset based on Google's Android platform—can pinpoint your location, thanks to assisted GPS. It also knows how the phone is being tilted in your hand and in what direction you're pointing it, among other things.

With the flood of new apps that leverage such features, there's no stopping the layers of information you can receive on your smartphone.

The Sekai Camera app (free on iTunes) lets you share "air tags"—virtual sticky-notes tied to a specific location—around Tokyo with other users of the same app. Say you pass by a cool bookstore that's been tagged because it has a great collection of foreign magazines. View the shop through your phone and the tag pops up on the screen. With the app Nearest Tube (\$1.99), arrows on the handset guide you to the nearest underground rail station in London. And apps such as Tweet 360 and TwittARound (both 99 U.S. cents) can tell you—whichever direction you face—who within your Twitter network is up ahead.

Welcome to the new world of augmented reality, where through inventive apps, virtual information tied to real-world locations—when you view them through your smartphone—appears on your handset screen.

Of course, it's nothing new to Adrian David Cheok. With a penchant for tinkering—as a youth in Australia, he loved to disassemble and reassemble everything from electronic toys to his Apple II computer—and a comfort level with different realities (he has Chinese-Malaysian roots on his father's side and Greek on his mother's), Mr. Cheok found himself drawn early on to the field of augmented reality, a once-obscure discipline that is now of-the-moment.

Today, the 38-year-old is director of the National University of Singapore's Mixed Reality Lab, where he

Another in a series of articles pondering the shape of things to come

strives to inspire his Ph.D. students with his inimitable spirit of tinkering. He also doubles as a professor at Keio University in Tokyo. It's a long-distance juggling act that has him, his Japanese wife and their 3-year-old daughter splitting their time between Singapore and Japan.

Weekend Journal Asia recently caught a few minutes with the busy Mr. Cheok to talk about his life and where augmented reality might take us next.

Where do you like to vacation?

Last year, I traveled nearly 200,000 miles, and that's been pretty constant for the last five or six years. So now I really don't like to travel. I hate airports and airplanes now. If I have any free time, I spend it with my daughter.

Do you prefer Japan or Singapore?

They both have pros and cons. The research support is amazing in Singapore. It's a nice and easy city to live in. Japan is more interesting from a life-style perspective. There's so much traditional and modern culture.

How do you view your role in the field?

I would like my Ph.D. students to be the inventors and to make the next stage of invention. And if I can make some benefit to society, especially young people, using AR [augmented reality], that's one of my big goals now. I really think this next generation is totally different. They're the first generation to grow up totally digital. I think that we can make really new kinds of learning, so playing and learning become one. I think that's what I want to do at the next stage.

What's next for augmented reality?

In two years, it'll be almost standard for the smartphone. You point your phone at the bus stop and see when the next bus is coming.

What about further into the future?

In 2015, we may see that we can do AR directly onto our...spectacles or sunglasses. Then you don't need to look at the phone screen anymore. Let's say you're at a party and you know you've met someone before but you can't quite remember. If you've got this tiny display...you can look at someone to see who they are, when was the last time you met them, where you met them last. It's a kind of augmented memory.

After 10 years time we'll be able to have some kind of direct brain interface. Now you use a Web browser to search Google or something, but if you really can project directly onto your eyes [through a contact lens] or direct information into your brain, you maybe can just walk on the street, think of a question, and directly get the answer from Google without any external device. Virtual reality can merge with our brains.

Steve Mollman is a writer based in Asia.

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