App makes virtual clothes fitting faster

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New technology could place the fitting room in the palm of the shopper's hand. Credit: Thinkstock

The dress doesn't fit; the colour clashes; the neckline is most unflattering. They're all things it's best to work out before you buy, but too often don't. However, a new generation of virtual shopping could consign such retail headaches to history.

Advanced Analytics experts at the University of Technology, Sydney (UTS) are honing an application they hope will put [mobile phone technology](#) at the forefront of fashion marketing by helping shoppers to get the purchase right first time.

Associate Professor Jian Zhang and his colleague Associate Professor Qiang Wu foresee a day when a shopper will use her mobile phone to generate a composite image of her form and allow her to "try on" items of clothing.

For the past year, Dr Zhang and Dr Wu have been working on the project in partnership with Huawei, the Chinese telecommunications giant whose smartphone is the third-highest seller in China's hotly contested mobile market.

An international technology convention held this year in Beijing, and attended by more than 5000 delegates, provided a catwalk of sorts for the virtual clothes shopping app. Professor Jie Lu, Associate Dean in the UTS Faculty of Engineering and IT, showed it off and says she was rewarded with strong industry interest in future collaboration.

"In the future, we hope a shopper will be able to use the application to identify items they're interested in and generate a shopping list," says Dr Zhang. He envisages users doing that in-store, to hone several garments to a shortlist, or while shopping online.

The app employs augmented reality (AR) imaging, a composite of virtual and true reality. Dr Wu says three challenges needed to be overcome to produce a workable image: identifying physical specifics and weeding out extraneous background "noise"; matching clothes to the human form; and allowing for the clothes to track body movements.

Technology has come a long way since the era of fledgling e-commerce

sites such as Carnaby Street-based boo.com, which was a high-profile casualty when the dotcom bubble burst 15 years ago.

Dr Zhang and his collaborators say the beauty and novelty of their design lies in its mobility – shoppers seated at a desktop computer can already use virtual clothes-fitting technology, but none can do it on the run.

They point to the increasing number of transactions done with mobile technology, and say retailers have no choice but to move with the trend. Analysts who have tracked the rise of Chinese e-commerce group Alibaba have noted strong growth in mobile sales. Revenue share from mobile shopping was 40 per cent in the first quarter of this year, up from 12 per cent in the corresponding quarter last year – and the retail sector generally is reporting increasing use of [mobile technology](#) for online transactions.

Retail investors will guide the researchers' work in the next phase, Dr Zhang says. Any clothing database paired with the augmented reality shopper must be able to adapt to retailers' needs.

Marketing expert Dr Bruce Perrott, of the UTS Business School, says such an app could capture the imagination in that important target market – the young, fashionable woman who is at ease shopping online but is also happy to spend her money in bricks-and-mortar shops.

Dr Perrott says many retailers are struggling because they have not worked out how to engage customers and ensure their loyalty in the way, for example, that Apple has. They are spooked by the online realm, but not winning offline either.

"Traditional retail doesn't engage the customer … it's an antiquated model that does not deliver one of the best rewards for retailers, and that is loyalty, repeat purchasing," says Dr Perrott.

"Engagement is not about selling but about providing value [for the customer]."

Recognised models of customer decision-making list "post-purchase behaviour" as the final important stage, says Dr Perrott, and "that's what Apple has nailed … that loyalty, that willingness to buy again and again."

Dr Perrott says retailers need to develop strategies that embrace both the online and offline worlds and are easy to use. A young woman might well browse in a well-known store, pull out her phone and "try on" some items to make her shortlist, then make her purchase.

For Dr Zhang and Dr Wu, with their development having received concept approval on certain key technologies, that target market is the key to what comes next.

"Our aim now is to attract attention from industry … there is a lot of space for development and IP generation. Our door is always open to different companies," Dr Zhang says. "And there is no doubt retailers will have to move with the [shopping] trends."

Provided by University of Technology, Sydney