



Cheng-Hsin Hsu showed off his Nokia cell phone and its mobile TV capability.

## Mobile TV coming to Canada?

Kian Khoshnevis, ctvbc.ca

What if you could watch the big game at the beach, or the finale of your favourite show on a bus ride home?

A couple of years ago, this was nothing more than a dream for Canadians.

But today, thanks to a Simon Fraser University doctorate student, it may become a reality.

In an interview with ctvbc.ca, a seasoned software and networking engineer Cheng-Hsin Hsu showed off his Nokia cellphone; playing on it, "The Colbert Report" on CTV.

Hsu has developed award-winning technology that would allow for mobile devices to broadcast live TV.

He and his team of researchers, SFU graduate students Yi Liu and Cong Ly, and supervisor Dr. Mohamed Hefeeda, have designed algorithms, prototypes of mobile TV base stations that let wireless devices such as cell phones quickly receive TV programming.

Similar technologies are used in Europe and Asia, allowing mobile users to receive a variety of TV channels.

But Hsu said these technologies are sensitive, making them quite unreliable.

"The technology has been there for a couple of years, but not here," Hsu said. "There are clearly some problems with it that prevent its deployment in North America. We are trying to optimize the broadcast networks to a stage where Canadian TV companies will consider them."

Through his research at SFU's Surrey, B.C., campus, the Taiwan native has made breakthroughs in optimizing the performance of mobile TV broadcasts.

Hsu has made cellphones broadcast more channels at once while reducing their channel switching delay. He has also improved their overall broadcast quality while prolonging their battery life -- features that lack in existing mobile devices that broadcast TV overseas.

Hsu hopes to sell his advanced technology to equipment manufacturers to make mobile TV a viable service for Canadian cell phone carriers.

"When we design new algorithms, we want more people to use them and have a benefit on their lives," Hsu



SFU doctorate student Cheng-Hsin Hsu has come up with breakthrough technology that would allow mobile devices to broadcast live TV programming.

said. "We want to have an impact on society and that's what we will try to do in the future by looking for companies that are interested in our base station."

Hsu has been in contact with Nokia as well as UDCast, a French equipment manufacturer, who are both interested in his work.

He believes mobile TV would be an enticing service for Canadians.

"I feel Canada has a huge potential for a mobile TV market," Hsu said. "Canadian cities like Vancouver have great public transit systems allowing more people to take buses and trains, and these people are surely the potential users for mobile TV services."

Hsu's prototype won him the best demo award at the Association for Computing Machinery conferences in 2008 and 2009. His current research has directed him towards establishing mobile TV broadcasts through wi-fi and other types of wireless networks.

He hopes to soon find a job where he can popularize mobile TV in North America.

And let's hope he does, so maybe in the next couple of years, you won't miss the winning goal, rushing to get to a TV.

### **News coverage would benefit from mobile TV**

CTV currently offers Bell, Telus, and Rogers customers on-demand clips from an assortment of CTV programming like MuchMusic, The Comedy Network, and TSN.

But currently no television broadcaster provides live programming due to the lack of a mobile TV system in Canada.

Mark Sikstrom, the executive producer of [ctv.ca](http://ctv.ca), said news stations such as CTV would greatly benefit from a Canadian mobile TV system to deliver news to its viewers on cell phones.

"With the increase in the number of people with smart phones and the increase of minutes spent browsing the web on mobile devices, it would be a significant growing market for us," Sikstrom told [ctvbc.ca](http://ctvbc.ca). "People would be able to access our coverage wherever they are, not just in front of a TV or a desktop computer."

Sikstrom said live mobile TV would be a useful medium through which news stations could deliver breaking news, for example the 9-11 attacks, the unrest in Iran, and election results.

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