



The **University of Calgary**, **University of Munich**, and **Columbia University** worked jointly to figure out a way to use a smartphone to project the phone's display on to external displays nearby.

The team describes its technology approach, **Virtual Projection**, as "borrowing available display space in the environment."

Virtual Projection "is based on tracking a handheld device without an optical projector and allows selecting a target display on which to position, scale, and orient an item in a single gesture."

The user holds up the smartphone to the computer screen, the phone camera captures and compares images from the screen to work out location -- the system relies on tracking where the phone is being pointed--and passes information back to the computer screen via wifi to project on the screen.

Multiple users can place images on the same screen if the users want the images to mingle together.

Watch [Virtual Projection](#)