

Haptic robotic glove

Innovation

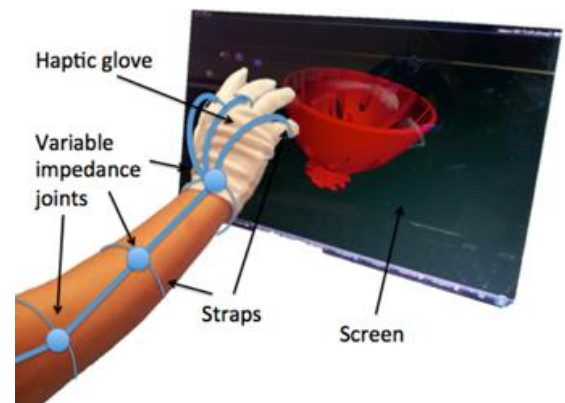
Arts & Digital

What was the question?

Is there a way in which visitors to museums can 'touch' objects that are too precious to be handled?

Who were the collaborators?

Independent creative technologists Fleeta J Chew Siegel and Dan Tagg; Nick Stevens from the Crafts Council; Jelizaveta Konstantinova, Min Li, Dr Thrishantha Nanayakkara and Anuradha Ranasinghe from the Department of Informatics; Professor James Gow and Dr Milena Michalski from the Department of War Studies; and Dr Dirk vom Lehn from the Department of Management.



What did we do?

The Cultural Institute collaborated with the digital creative agency Caper on an Arts & Digital Ideas Lab. *The haptic robotic glove* was one of four R&D projects arising from the lab.

The team created a prototype robotic glove, which allows the wearer to feel as if they are touching a museum object when actually they are following the outline of an image of the object in a virtual environment. The glove is able to mimic the feel of the object, by using micro-vibrators, and can also mimic the sound of a hand touching the object and the hand's position in relation to it.

What was the outcome?

The prototype revealed the potential of the research and the scope to develop it further, such as allowing users to feel differences in temperature or texture of a virtual object. This could boost investigations into human tactile perception and the role sound feedback plays in how we understand touch. There is also potential for the glove to have wider applications in medicine, in museology and in education. Funding is currently being sought to develop the glove further as a commercial product.