

# RETHINKING CREATIVITY

ETH Meets You in Davos  
During the World Economic Forum's Annual Meeting  
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## PuppetPhone

PuppetPhone allows a person to control an augmented reality puppet using a smartphone. The virtual character responds naturally and in real-time to the user's motion and remains at a fixed distance to the phone.

When playing with toys, people cherish grasping them and manipulating them freely. They imagine characters, create stories and solve quests by moving the toys around and putting them in diverse situations. A frustrating aspect of physical toys is that they are inanimate; they follow the player's gestures like a lifeless and unconscious ragdoll. The player's imagination then has to fill the secondary motions with compelling animations like walking, jumping and kicking.

Playing in virtual worlds tackles this shortcoming because the computer can generate full character animations with very little input. PuppetPhone implements a novel interaction metaphor that reduces the gap between physical toys and virtual characters. The user moves a smartphone around, and a puppet displayed using augmented reality responds in real-time. The virtual character moves in order to follow the user's gestures, as if it were attached to the phone with a rigid stick. This yields a natural interaction, similar to moving a physical toy, and the puppet now feels alive because its movements are augmented with compelling animations.

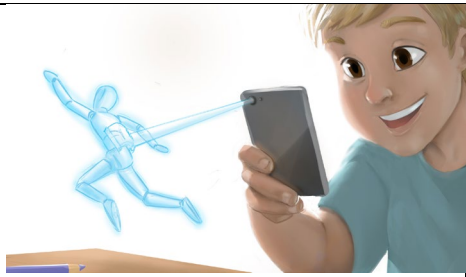
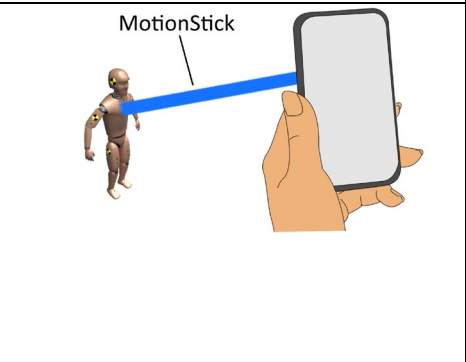
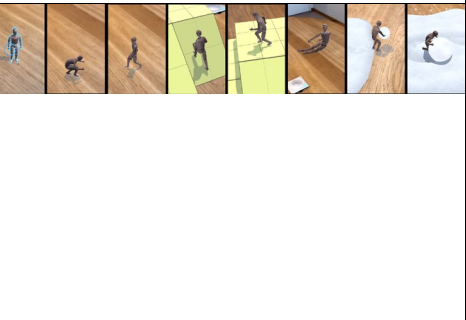
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## Publications

R. Anderegg, L. Ciccone, R. W. Sumner, **PuppetPhone: Puppeteering Virtual Characters Using a Smartphone**, MIG '18 Proceedings of the 11th ACM SIGGRAPH Conference on Motion, Interaction and Games (Limassol, Cyprus, November 8-10, 2018)

## Images and Video Material

The following photographs and the video footage can be downloaded free of charge for non-commercial use or in news publications provided images are appropriately credited noting the copyright and photographer.

	<p>Puppet Phone allows a person to control an augmented reality puppet using a smartphone. The virtual character responds naturally and in real-time to the user's motion and remains at a fixed distance to the phone.</p> <p>Image credit: <b>ETH Zurich / Game Technology Center</b></p>
	<p>Using the "Motion Stick"-technique, a virtual character is manipulated as if it was attached to the end of an imaginary stick fixed to the smartphone.</p> <p>Image credit: <b>ETH Zurich / Game Technology Center</b></p>
	<p>This images depicts the virtual puppet controlled by the user engaging in various activities.</p> <p>Image credit: <b>ETH Zurich / Game Technology Center</b></p>