Symmetric Haptic Interactions between Human and Virtual Creatures

We propose a new method for Symmetrical Haptic Interaction System with Virtual Creatures (VCs) in Mixed Reality (MR). In this work, we can interact VCs directly, not only through some tools but also with our fingers. If we touch VCs, **we can see and feel their reaction**. On the other hand, if VC touches us, **we can feel the action from an image and a counterforce**. It also can be experienced by a lot of people at once. Our system enhances the sense of presence and variety of expressions of VCs. At the same time, our system does not disturb manipulations of real objects by our fingers. Therefore, you can also manipulate the real part of the Mixed Reality environment intuitively. **Our system is ideal haptic interface for Mixed Reality and brings us a totally new form of entertainment.**

**Goals of the Project**

People can touch virtual creature directly. We can feel as if we touched the creature, and the virtual creature react against it.

The virtual creature also try to touch people actively. We can also have a touch sensation when they touched us. This is a “Symmetric Haptic Interaction”.

The system can be used in the field of entertainment. The world of enjoying an interaction with VCs with a families, friends, and a sweetheart will come true. In the future, the relationship between people and virtual creatures will approach good relationship like a pet.