

# An Intelligence for Cross-world Collaboration, Real and Virtual

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## Introduction

An artificial intelligence (AI) manifests itself as an environment that links the virtual and real. The AI provides a mechanism for collaboration, but has its own motivation. Avatars can move objects in the real world and vice versa. Border crossing between virtual worlds implies a meta-logical system that transcends all worlds. Providing collaboration between real world people and avatars (where the avatars and the real people are equal players) leads to insight into the meta-logic. The AI emphasises the meta-logical barriers.

## Media

It is a multimedia installation utilising of the following:

- Electro-mechanical devices
- a 3D webcam
- SecondLife or other global, multi-user, immersive virtual environment

## Description

The manifestation is a physical space with a wall projection that bridges the real and virtual worlds.

Humans entering the space see the projected virtual world (VW) space. Avatars in the VW space see the humans represented by avatars: their movements in real life are tracked by a 3D webcam. The humans and avatars work on an apparatus, parts of which are in “real life”, and parts of which are in the VW space. Once the apparatus is arranged into a configuration, the apparatus performs a series of actions that move between the VW and real life. Avatars and humans are rewarded for participation.

The AI has its own logic and motivations that are autonomous of the actions of either set of participants. What neither side knows is that the software which controls the space can also set off special effects, making it appear as if one side has attacked or threatened the other. The AI may decide to interfere (cause a grievance) or to help.

## Images

A short timewise but BIG ( 400 MB ) avi of the prototype can be downloaded from <http://virtual.weltec.ac.nz/crossworld.avi>.