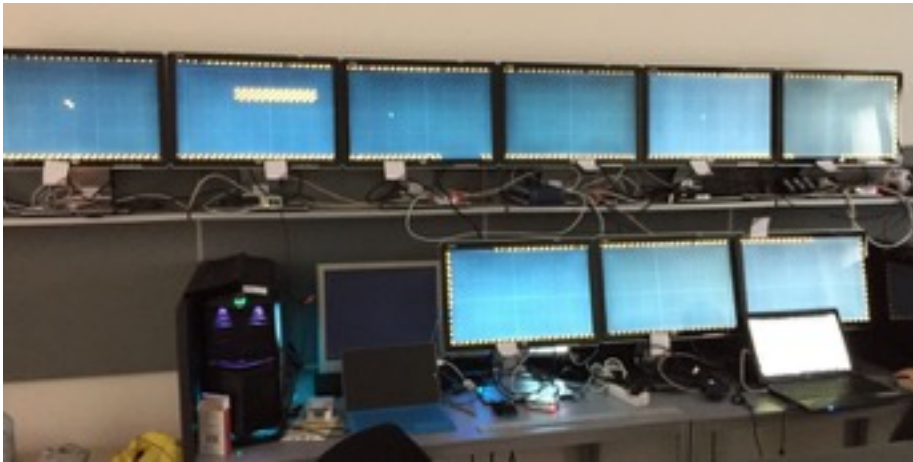


# MuMu-Game

## Multiplayer Multiple Unit



### Multiplayer Multiple Unit

The idea of **Multiplayer Multiple Units** (MuMu) is based on the concept of traditional network games with some adaptations.

A **central server** that hosts the actual game sends game state updates to several units which would be called *clients* in an traditional network game. However, in this setup all units are placed at the same location in an arbitrary spacial arrangement. Each units displays a certain view to the game world according to its physical position.

players will stand in front of the phalanx of units and use either a wireless **game controller** or a **smart phone** to control their character in the game.

In order to reduce costs and energy consumption the low power and inexpensive **Raspberry Pi** microcomputer is used for rendering. A Raspberry Pi combined with a standard computer monitor represent a Unit.

A **high performance C++ game engine**, tailored for the Raspberry Pi is used to achieve high frame rates and decent 2D renderings.

This arrangement has several advantages compared to traditional solutions with a few big screens or video projectors:

- ▶ Arbitrary arrangement of screens
- ▶ High resolution even compared to 4K or even 8K video projectors
- ▶ Novelty in contrast to traditional large public displays setups
- ▶ Inexpensive
- ▶ Scaleable and flexible