Semester project: Developing a Game with KATWalkVR.

Main Objective:

Develop a Virtual Reality game compatible with the Kat Walk.

Background:

Kat Walk is a new omni-directional treadmill for virtual reality. It has been designed to be as unrestrictive as possible giving the user 360 degrees of continuous movement within a small space. It is compatible with virtual reality headset such as HTC Vive.
With its built-in and wearable sensors, it is possible to walk/run (forwards and backwards), jump, crouch and sit in the virtual world.

Project Idea:

The laboratory wants to develop a game in virtual reality, which uses the Kat Walk. Unity is used to develop the game. Some interactions need to be added through the Kinect. The game is be easy to set and fully controllable by an external agent. This game is meant to be used as a demo for future open days.

The theme of the game is free but has to be validated by T. Porssut and R. Boulic.

Goal:

- Implement a game in VR.
- Use the Kat Walk , the Kinect and the HTC Vive.
- A demo easy to set and full controllable has to be produced.

Requirements:

- Unity (scripting in C#/DLL in C++)
- 3D geometry and quaternions (Vectors, cross products, rotations)

Information, materials and resource:

Untiy3D game engine: http://unity3d.com/learn
Kinect SDK: *https://www.microsoft.com/en-us/download/details.aspx?id=44561*

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